



108 Turnbull Drive Winnipeg MB T: 204-261-1770 C: 204-998-5710

R3V 1X2 www.eliasconsulting.ca www.adjustingtlvs.com alison@eliasconsulting.ca

July 27, 2015 Project: 15-A-167-2

Priya Nayar, P.Eng, BSc, MSc Asset Management Project Engineer Winnipeg Transit 421 Osborne Street Winnipeg MB R3L 2A2

Re: Asbestos Inventory

Elias Occupational Hygiene Consulting Inc. is pleased to submit our Occupational Hygiene Report for the asbestos inventory at 421 Osborne and 1520 Main St.

In order to plan a maintenance program, please call at your convenience. Should you have any questions or require additional assistance please contact Alison Reineke.

For Elias Occupational Hygiene Consulting Inc.

Alison Reineke, BHEc, BSc, CIH, ROH, CRSP Occupational Hygienist

Occupational Hygiene Report

Asbestos Inventory

City of Winnipeg Winnipeg Transit

Project Number 15-A-167-2

Date of Survey: July 8 & 9, 2015 Date of Report: July 27, 2015

Survey Performed by:

Alison Reineke, BHEc, BSc, CIH, ROH, CRSP Elias Occupational Hygiene Consulting Inc. 108 Turnbull Drive Winnipeg, Manitoba R3V 1X2

Winnipeg Transit Asbestos Inventory

SCOPE OF PROJECT / BACKGROUND

This project was carried out in order to fulfill the Manitoba requirements to inspect asbestos containing materials on an annual basis. Asbestos containing materials were inspected at the 421 Osborne St. and 1520 Main St. facilities.

METHOD

The last inventory database (Excel spreadsheet) was used to identify the locations of asbestos containing materials at the two facilities. The asbestos containing materials were visually assessed to determine the condition of the materials. Photographs of materials in need of repair were taken, unfortunately not all the photographs turned out well.

RESULTS AND OBSERVATIONS

The following observations indicate the condition of the asbestos containing materials and the presumed asbestos containing materials as of July 8th and 9th. The results are provided in updated Excel spreadsheets.

421 Osborne St. Building A, Maintenance

See Appendix A for approximate locations marked on a floor plan.

Pipe insulation inside the metal heaters is not readily visible. It may have been removed however without confirmation, asbestos may be present inside the heater which may only be accessible when the heater is taken apart for maintenance. Since any possible asbestos is enclosed there is no significant concern, risk of exposure would only occur during major maintenance activities.

Pipe insulation located above asbestos ceiling tiles was not assessed. Due to the nature of the ceiling tiles, they were not removed, which may disturb the asbestos.

Stairwells

Both maintenance stairwell and public stairwell, stucco need repair



North Offices (Inside Heater Cabinets)

Operations Supervisor's office, pipe elbow needs repair

South Offices

Payroll & Records office, pipe elbow needs repair above ceiling

Women's Washroom

Pipe joint above ceiling needs repair

Second Floor Offices

Manager of HR, pipe fitting inside heater needs repair

Manager of Service Development, pipe fitting inside cabinet needs repair

Stores

Tire Storage, plaster columns, need repair



Receiving Bay, spray on insulation, needs repair



Northwest Corner, isolation gasket of AHU needs repair Body Repair

Body Repair Area (106) near Stores Office, Pipe insulation needs repair



Aisle way East of Paint Booth #4
Plaster columns near washrooms need repair
Locker Area & Washroom
Ceiling tiles need repair
Carpenter Shop

Isolation gasket of AHU needs repair



Paint Booths 1, 2, & 3
Plaster Columns need repair
Booth 1 & 3 - Duct Insulation on bottom corners need repair



General Repair Area (108)

Washroom plaster walls need repair
Parking Meter Repair Room

Floor tiles need repair

421 Osborne St. Building B, Storage Tracks

See Appendix B for approximate locations marked on a floor plan.

The Basement Track Storage Stairwell location was unable to be found. However it has not been removed from inventory on the chance that the location may be recognized at a later date.

Second Level North Lunchroom/Washroom

Wall plaster needs repair



Maintenance Bay 2
Pipe elbow insulation on west wall mid-way needs repair

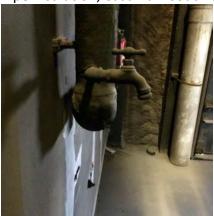
Storage Track 13-24

Pipe insulation, east wall: north end & mid-way needs repair



Storage Track 25-36

Pipe insulation, east wall: south end 2 fittings & mid-way needs repair



Drywall northwest corner needs repair & near NE Sprinkler Room



Northeast Sprinkler Room
Pipe elbow insulation needs repair



1520 Main St.

See Appendix C for approximate locations marked on a floor plan.

Locker Room

Above women's locker room, pipe insulation needs repair



Television Lounge
Pipe insulation needs repair
Area 27 (Storage)

Pipe insulation through the wall cavity, needs repair



DISCUSSION AND CONCLUSIONS

The repairs/removal mentioned above are all relatively minor. They can be repaired using Type 1 asbestos precautions or Type 2.

The priority repairs would be (in order):

421 Osborne, Building A, Maintenance

Manager of HR, pipe fitting inside heater needs repair Manager of Service Development, pipe fitting inside cabinet needs repair Operations Supervisor's office, pipe elbow needs repair

1520 Main St.

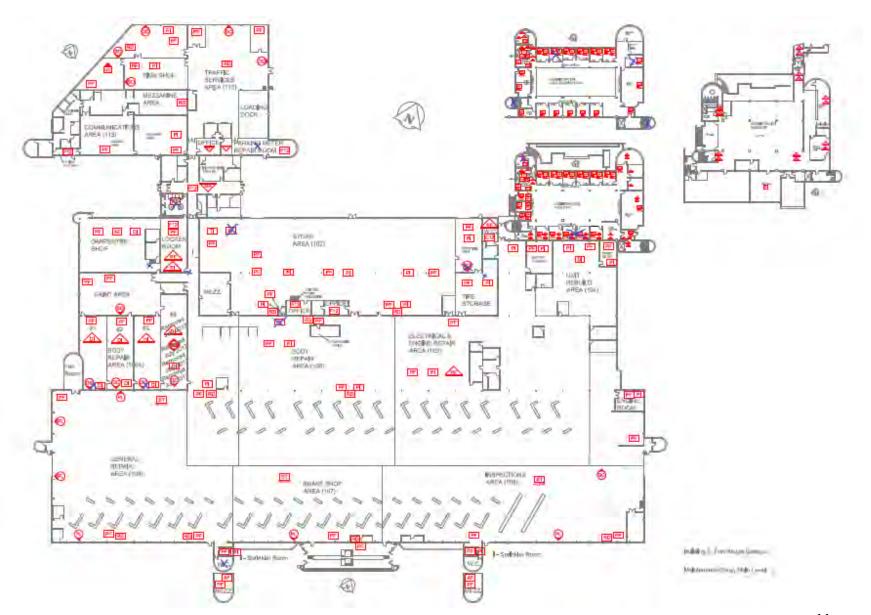
Television Lounge, pipe insulation needs repair

421 Osborne, Building A, Maintenance

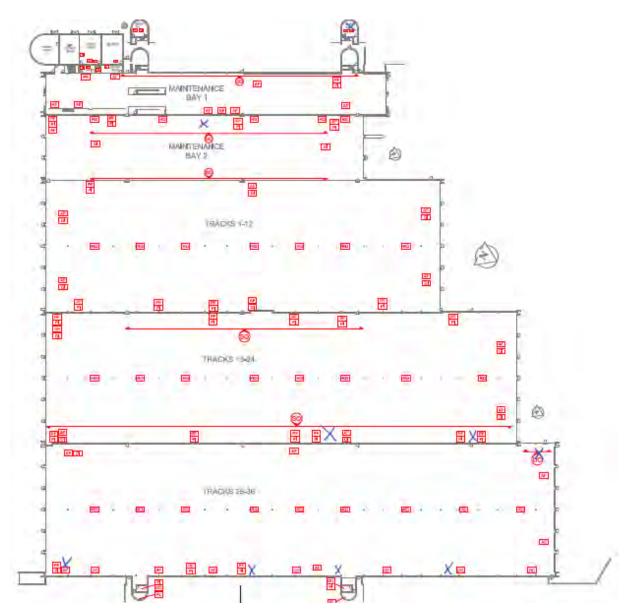
Booth 1 & 3 - Duct Insulation on bottom corners need repair Stairwells, both maintenance stairwell and public stairwell, stucco need repair

Appendix A

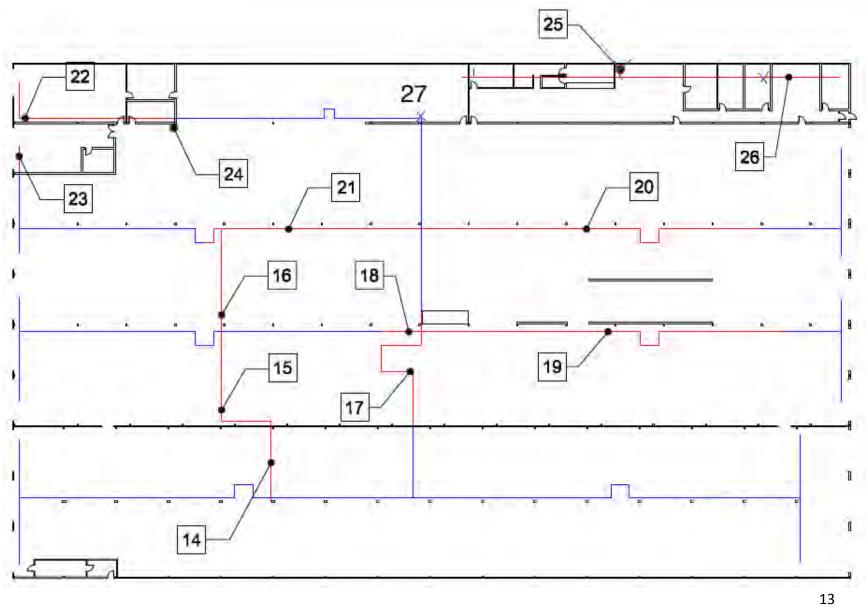
421 Osborne St. Building A, Maintenance

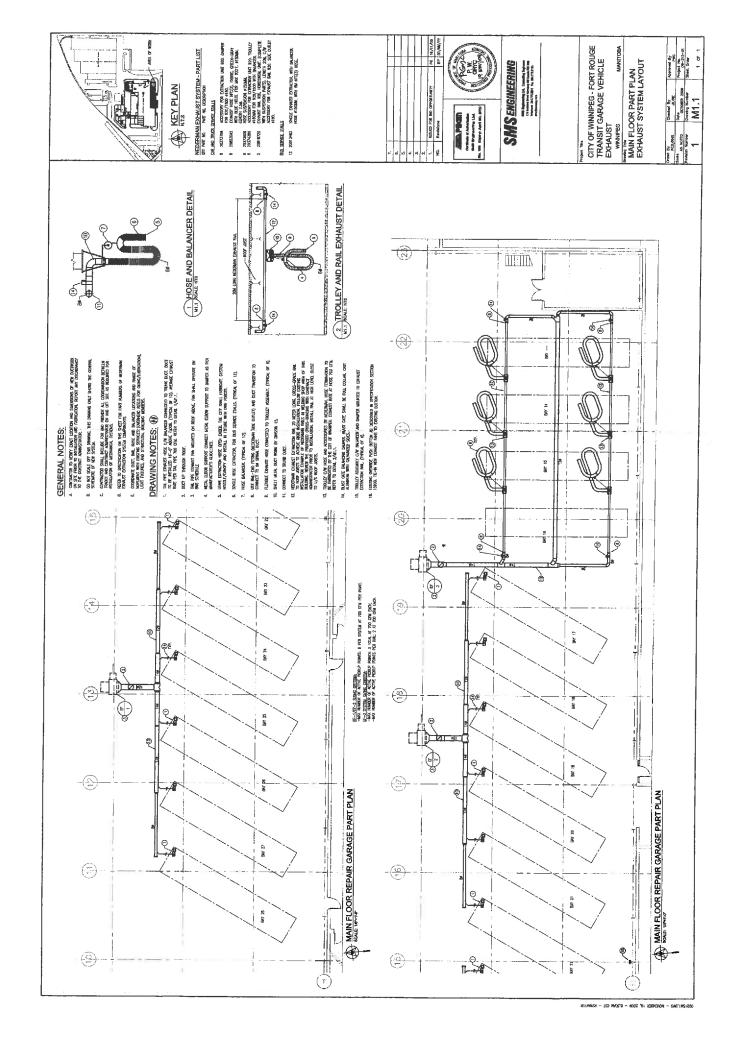


Appendix B **421 Osborne St. Building B, Storage Tracks**



Appendix C 1520 Main St.









Truly innovative oil-free compressed air technologies

Fixed Speed & Regulated Speed



As manufacturers and suppliers of oil-free compressors for over 90 years, CompAir are committed to quality and innovation and understanding the customers' operational and business needs. Nowhere is this more apparent than in the development of our DH range.

Our oil-free compressors are helping industries across the globe to meet and exceed quality and production objectives in food and beverage, pharmaceutical, electronic, healthcare and power generation applications to name but a few.

Today, we remain at the forefront of oil-free compressor technology by understanding the challenges our customers face and by listening to their needs.

In addition, CompAir are committed to developing environmentally friendly solutions that are helping our customers meet the demands of climate change legislation from cutting energy bills and operating more efficiently to reducing their carbon footprint. Please visit

www.compressingcarbon.com for further information.

Why Oil-Free? Contaminant Free... Risk Free

When you choose an oil-free DH range compressor from CompAir, you get a clean, reliable and cost-efficient air supply that benefits your business and your bottom line!

Air purity is critical for many applications where even the tiniest drop of oil can cause product spoilage or damage



production equipment. For this reason, the DH range from CompAir contains absolutely no oil anywhere in the compressor and has been **certified ISO 8573-1 Class Zero (2010) and silicone free**, making it better and safer with simply no risk of oil contamination.

CompAir in action

Our oil-free solutions are proven in thousands of applications across the world, providing high quality, low cost air to manufacturers, processors and operators in a diverse range of industries including:

- Food and beverage
- Automotive

• Engineering & technology

- Pharmaceuticals
- Automotive
- Chemicals
- Electronics



Increasing pressures both commercial and legislative, demand lower environmental impact from your business – issues that our oil-free compressors meet head on.

CompAir DH - your resource for cost savings

The unique design achieves lower speeds combined with lower operating temperatures - both resulting in high efficiency and reduced component wear. Using a single-stage, direct-driven motor without gears or belts, maximises efficiency. Limiting the compressed air to the application demand with regulated speed ensures that no energy is wasted.

OilFREE

Truly innovative oil-free compressed air technologies

CompAir in action

Improved reliability & reduced costs



Rohde & Schwarz GmbH & Co. KG embarked on a programme to upgrade its compressed air supply to CompAir's oil-free DH compressors at its main production plant in Memmingen (Germany). Improved production reliability and reduced compressed air costs have already been achieved, with fast payback and improved efficiency.

"The extra investment costs pay for themselves through lower energy consumption and reduced maintenance expenditure".

Alfred Ahon,

Manufacturing Technology Projects, Rohde & Schwarz.



CompAir DH - delivering the highest quality, oil-free compressed air for all applications

DH - advanced compression technology from CompAir

The use of absolutely no oil negates the issues of contaminated air. No oil - no risks.

- Single-stage, direct-driven compression element maximises efficiency and minimises maintenance
- High quality water injection lubricates, cools and seals the compression process, maximising efficiency
- No gearbox means no need for associated oil lubrication
- Low bearing loads and low speeds mean sealed-for-life bearings can be used, requiring no oil lubrication
- Regulated speed technology available to reduce energy costs
- Comprehensive control ensures safe and reliable operation and includes remote communication capability
- Fully packaged and silenced enclosure reduces noise and simplifies installation

Benefit from high quality features

DH compressors have significantly fewer moving parts than comparable machines, meaning there is less to go wrong, while lower speeds and balanced bearing loads extend the compression element service life for low-cost operation.

With exceptionally low running temperatures of less than 60°C near isothermal compression is achieved.

This also eliminates the need of an internal aftercooler and associated power consumption reducing pressure drop to the minimum.









The largest cost component of a compressor during its lifetime is the power required to run it. CompAir incorporate energy-saving technologies at every stage of the design, delivering a compressor that works harder and smarter.

COMPAIR DH - TRADITIONAL OIL-FREE TECHNOLOGY DOESN'T GET CLOSE

	CompAir DH	Traditional Oil-Free
Oil	No 🗸	Yes
Speed	Up to 3500rpm √	6000 - 25000rpm
Compression Temperature	60°C √	Up to 200°C
Compression Elements	1√	2
Number of Gears	0 🗸	5-7
Number of Bearings	7 ✓	More than 15
Number of Seals	2 ✓	More than 15

High efficiency water purification system

Tried and tested reverse osmosis filtration, provides high quality purified water to lubricate, seal and cool the compression process.

Using a permeate pump the water required is reduced to a minimum.

Balanced Loads = Longest Life

The compression loads are balanced resulting in low bearing loads and highest reliability.

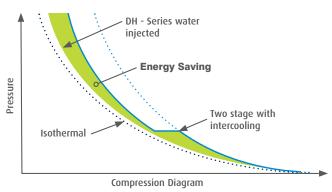


Axial loads act on both sides of the main rotor.



Radial loads act on both the top and underside of the main rotor.

Energy Savings



Water injection means lower temperatures, and lower temperatures mean more efficient compression



Regulated speed technology offers maximum efficiency, cuts energy AND saves money

Perfect response to your individual air demand

Regulated speed compressors from CompAir can efficiently and reliably handle the varying air demand. The right regulated speed compressor in the right application delivers significant energy savings and a stable air supply at constant pressure.

Maximum efficiency at any level of demand cuts energy costs and saves money.

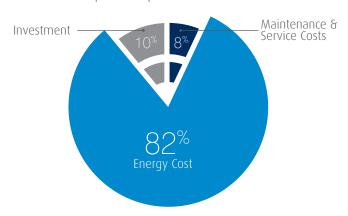
- Excellent efficiency
- High reliability
- Low cost of ownership

airOndemand



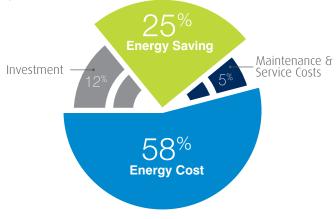
Reduce the cost of ownership and minimise your energy consumption

The largest cost component of a compressor during its lifetime is the power required to run it.



A typical fixed speed compressor operating at 70% load.

Using a regulated speed compressor can easily save 25% energy as it consumes just the energy required to do the job and no more.



A variable speed compressor at 70% load.

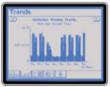


Delcos XL - Innovative touch screen compressor controller

The multilingual control system ensures safe and reliable operation and protects your investment by continuously monitoring the operational parameters - essential for reducing your running costs.

- Precise monitoring for exceptional operational reliability
- High resolution, easy-to-use touch-screen panel
- User-friendly clear structure
- Integrated SD card for in-depth analysis
- Trend diagrams for
 - Network pressure
 - Motor speed (regulated speed models)
 - On load hours / total running hours and average volume flow
 - Weekly average volume flow
- Optional base load sequencing







CompAir in action

Lowering energy costs for world's oldest brewery

A regulated speed, oil-free compressor from CompAir has helped the world's oldest brewery to achieve a 30% **reduction** in its compressed air energy costs.



The brewery opted for a D22H RS compressor featuring PureAir Technology, generating totally oil-free **compressed air**, making it ideally suited for their stringent hygiene requirements.

Regulated speed drive technology matches compressor flow to demand with great efficiency meaning that the unit produces **ONLY the correct volume of air** required by the application at all times.

"Together with CompAir we measured the power consumption of the system and found that the combination of the new compressor and the leak repairs has reduced our electricity consumption by around a third".

Gerd Abstreiter.

Engineering Manager, Weihenstephan Brewery.



Simplified maintenance reduces life cycle costs

Reduced maintenance

Our oil-free compressors are built to last, featuring robust designs and a simple construction, making them easier to maintain. We've also made them easy to operate, featuring a variety of control options to make sure that you are always in charge of your air supply.

The DH range - for total peace of mind

- Significantly fewer moving parts means less to go wrong
- Lower speeds and balanced bearing loads extend the compression element service life to 36,000 hours for low-cost operation
- Cooler operating temperatures reduce component wear
- No oil or oil laden parts to dispose of, saving time and expense

CompAir in action

Increased efficiency & lower costs

The power and supply systems at MVV Energiedienstleistungen West GmbH, in Reken, Germany have been gradually audited over a few years with a view to reducing costs and saving resources.

Two CompAir DH compressors where chosen to replace the existing system - featuring PureAir Technology and generating totally oilfree compressed air.



"Energy efficiency and excellent life cycle costs were important when choosing the new compressors, but the emphasis was also placed on the reliable generation of clean, oil-free compressed air as it is used as plant and process air for food production. The new, incredibly efficient machines represent an investment that will pay for itself through increased efficiency, reduced primary energy consumption and low maintenance costs".

Andrew Bernemann,

Operations Manager, MVV



Compressed air purification

A modern production system and process demands increasing levels of air quality. A CompAir compressed air system utilising the latest technology provides an energy efficient solution at lowest life cycle costs.

Water Cyclone Separator X Series

Designed for efficient removal of bulk liquid contamination from compressed air.



Compressed Air Filter CF Series

Efficient design for water, dust and particle removal.



Condensate Drain Bekomat System

To drain compressed air condensate without loss of compressed air.



Compressed Air Refrigerant Dryer

CompAir offer a full range of energy efficient and environmentally friendly stand alone refrigerant dryers.



Designed to achieve maximum efficiency and gas quality.



Heatless Desiccant Dryers

Series A_XS and A_TX.

Heat Regenerative Desiccant Dryers

Series A_TV and A_RS.



SmartAir Lite & SmartAir Master Multi Compressor Controllers

Sequencers for up to 12 units.





Assure warranty - to ensure your peace of mind!





First Class Compressor - First Class Warranty

The CompAir Assure Warranty and Service programmes will assure you up to 44,000 hours/6 years ¹⁾ peace of mind, and is one of the most generous warranties available in the industry.

Your benefits:

- The Assure warranty is totally free to the compressor owner ²⁾
- The CompAir authorised service provider will deliver a guaranteed quality of service
- An Assure service agreement underpinning the warranty will enable accurate maintenance budgeting and cost of ownership
- The use of genuine CompAir parts and lubricants will maximise compressor life and efficiency

whichever is the soonest
 subject to Terms & Conditions

Relax - you're in good company. From innovative warranties and technical support to rapid parts supply. CompAir's comprehensive Aftermarket programmes ensure optimal performance 365 days of the year.

Genuine spare parts:

Enjoy complete peace of mind with CompAir!

Genuine CompAir spare parts and lubricants ensure that compressed air plant reliability and efficiency is maintained at the highest standards. CompAir spare parts and lubricants are distinguished by the following characteristics:

- Long service life, even under harshest conditions
- Minimal losses contributing to energy savings
- High reliability improving plant "up time"
- Products manufactured within the strictest Quality Assurance Systems

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CompAir DH - Technical Data Fixed Speed - Air And Water Cooled

Model	Cooling Method	Motor Rating		Pressure r g)	Free Air Delivered (m³/min)		Dimensions L x W x H	Noise Level	Weight (kg)
		(kW)			8 bar g*	10 bar g*	(mm)	dB(A)**	
D15H	Air	15	8	10	2.30	1.80	1345 x 880 x 1612	68	672
חכוט	Water	15	0	10	2.30	1.00	1343 X 660 X 1012	65	624
D22H	Air	22		10	3.50	2.89	1345 x 880 x 1612	68	691
UZZN	Water	22	•	10	3.50	2.07	1343 X 660 X 1012	65	643
D37H	Air	37	8	10	5.86	5.04	1722 x 920 x 1659	71	960
U3/H	Water	3/	6	10	3.80	5.04	1722 X 920 X 1039	61	860

Regulated Speed - Air And Water Cooled

Model	Cooling Method	Motor Rating		Pressure r g)		Delivered /min)	Dimensions L x W x H	Noise Level dB(A)**	Weight (kg)
		(kW)	Min.	Max.	Min.*	Max.*	(mm)	(70% load)	
D15H RS	Air	15	5	10	0.32	2.34	1345 x 880 x 1612	67	687
ט וסו א	Water	15	5	10	0.52	2.34	1343 X 660 X 1612	64	639
D22H RS	Air	22	5	10	0.68	3.45	1345 x 880 x 1612	67	687
UZZN K3	Water	22		10	0.00	3.43 1343	1343 X 880 X 1012	64	658
D37H RS	Air	37	5	10	1.09	6.87	1722 x 920 x 1659	71	995
US/II KS	Water	37		10	1.07	0.07	1722 X 720 X 1037	60	895
D50H RS	Air	45	5	10	1.17	7.64	2158 x 1412 x 1971	73	1570
DOULKS	Water	43	,	10	1.17	7.04	2130 X 1412 X 1971	75	1490
D75H RS	Air	75	5	10	1.72	11.39	2158 x 1412 x 1971	75	1890
и/эп кэ	Water	13	3	10	1.72	11.37	2130 X 1412 X 1971	13	1810
D110H RS	Water	110		10	3.04	18.55	2158 x 1412 x 1971	72	2200

^{*} Data measured and stated in accordance with ISO 1217 Edition 4, Annex C & E at the following conditions: Air Intake Pressure 1 bar a / 14.5 psi; Air Intake Temperature 20° C / 68° F; Humidity 0 % (dry)





CompAir in action

Premium air quality eliminates contamination



German bitter and liqueur producer Mast-Jägermeister installed a new bottling line at its Linden facility capable of producing 20,000 bottles per hour.

After assessing several manufacturers' systems, Jägermeister chose two CompAir D75H SR machines offering completely oil-free operation and high energy efficiency.

"Our developers in Simmern combined their expertise in control and drive technology with water injected screw compression, developing an extremely cost effective operation with minimal service costs".

Werner Struck,

Mechanical Engineer, CompAir

^{**} Measured in free field conditions in accordance with ISO 2151, tolerance ± 3 dB (A)



Innovative products & services

Trust CompAir to supply intelligent compressed air solutions







With over 200 years of engineering excellence, the CompAir brand offers an extensive range of highly reliable, energy efficient compressors and accessories to suit all applications.

An extensive network of dedicated CompAir sales companies and distributors across all continents provide global expertise with a truly local service, ensuring our advanced technology is backed up with the right support.

As part of the worldwide Gardner Denver operation, CompAir has consistently been at the forefront of compressed air systems development, culminating in some of the most energy efficient and low environmental impact compressors on the market today, helping customers achieve or surpass their sustainability targets.

CompAir compressed air product range

Advanced Compressor Technology Lubricated

- Rotary Screw
 - > Fixed and Regulated Speed
- Piston
- Portable

Oil-Free

- Water Injected Screw
 - > Fixed and Regulated Speed
- Two Stage Screw
 - > Fixed and Regulated Speed
- Dictor
- High Speed Centrifugal Quantima®

Complete Air Treatment Range

- Filter
- Refrigerant and Desiccant Dryer
- Condensate Management
- Heat of Compression Dryer
- Nitrogen Generator

Modern Control Systems

- CompAir DELCOS Controllers
- SmartAir Master Sequencer

CompAir policy is one of continuous improvement and we therefore reserve the right to alter specifications and prices without prior notice. All products are sold subject to the Company's conditions of sale.

Value Added Services

- Professional Air Audit
- Performance Reporting
- Leak Detection

Leading Customer Support

- Custom Engineered Solutions
- Local Service Centres
- Genuine CompAir Parts and Lubricants

www.compair.com sales@compair.com

AC-03 (LOW PRESSURE COMPRESSOR)



R45n

ENGINEERING DATA SHEET

CCN: 24192569 Rev.: ECN: 82093 Sheet: 1 of 1 Date: 20-Aug-2013

													J .
Model Name	R45N-X100		100	R45N-X110		R45N-X115		R45N-X125		R45N-X135		R45N-X145	
GENERAL PERFORMANCE DATA													
Rated Discharge Pressure	barg (psig)	7 (1	00)	7.5	(110)	8	(115)	8.5	5 (125)	9.5	5 (135)	10	(145)
Minimum Operation Pressure	barg (psig)	4.5 (6	5)	4.5	(65)	4.5	(65)	4.5	(65)	4.5	(65)	4.5	(65)
Capacity FAD @ Max Speed (1)	m³/min (CFM)	7.42 (262)	7.39	(261)	7.28	(257)	7.02	(248)	6.74	(238)	6.46	(22
Capacity FAD @ Min Speed (1)	m³/min (CFM)	1.64	(58)	1.67	(59)	1.67	(59)	1.70	(60)	1.76	(62)	1.78	(63
Turndown Percentage	Percent	78%		77	%	77	%	7	6%	7	4%	7	2%
Maximum Target Operating Pressure (2)	barg (psig)						10 (145)					
Maximum Operating Ambient Temperature	°C (°F)						46 (115)					
Minimum Operating Ambient Temperature	°C (°F)						2 (35)					
Maximum System Temperature Setting	°C (°F)						109	(228)					
Nominal Power - Main Motor	kW (HP)						45.00	(60)					
Main Drive Efficiency (3)	Percent							00%					
Main Motor Efficiency (3)	Percent							70%					
Package Input Power w/Fan - Air Cooled (4)	kW	55.1		56	.6	56	.6		6.7	5	6.0	5	55.2
Specific Power - Air Cooled (4)(5)	kW/m3/min (kW/100cfm)	7.43 (2	21.0)				(22.0)	8.07	(22.9)	8.31	(23.5)	8.55	(24.
	(KW/100ctm)	•	<u>'</u>		,		, ,		, ,		, ,		`
SOUND LEVEL (6) Standard Package - Air Cooled	dB(A)						6	۵					
Standard Fackage - All Cooled	UD(A)							3					
COOLING DATA (@ Maximum Ambient Temperat		-											
Heat Removal Oil Cooler	kW (1000 Btu/hr)	41 (140)	43	(146)	43	(147)	43	(148)	43	(147)	42	(14
Heat Removal Oil and Aftercooler	kW (1000 Btu/hr)	54 (183)	55	(189)	55	(189)	56	(190)	55	(188)	55	(18
Additional Static Pressure (13)	Pa (in H2O)					Se	e docume	nt 2388	3374				
Fan Air Flow	m³/min (cfm)			Nom:	84	(2984)		Max	: 108	(3825)			
Fan Motor Nominal Power	kW						1	.5					
Cooling Air Temperature Rise	°C (°F)	29	(52)	28	(51)	28	(51)	28	(50)	28	(50)	28	(51
Aftercooler CTD, 60 Hz (7)	°C (°F)	8	(15)	8	(15)	8	(15)	8	(15)	8	(15)	8	(15
AIR END DATA													
Male Rotor Speed	rpm	5400)	53	77	52	87	5	106	49	925	4	744
Tip Speed Rotor	m/sec	36.2		36	.1	35	.5	3	4.3	3	3.1	3	31.8
Full Load Shaft Power	kW	48.9		50	.3	50	.3	5	0.4	4	9.7	4	19.0
COOLANT LUBRICATION DATA													
Total Coolant Capacity - Air Cooled	litres (US gal)		2	26 (6.9)									
PIPING CONNECTIONS													
Air Discharge	Inches BSPT/NPT (9)						1.	50					
Package Automatic Condensate Drain	Inches BSPT/NPT (9)						0.	38					
Coolant Drain - Hose Size	Inches							88					
Diameter of Power Inlet	mm / inch					Up	o 4.0" (rer	novable	plate)				
DIMENSIONS & WEIGHT			Base	e Moun	ted								
	('b)		_400			1947	(77)/1114	(44)/ 16	607(63)				
Length Width Height	mm (inches)					.5-1.	. ,		(00)				
	mm (inches)						7760	1711)					
Net Weight - Air Cooled	kg (lb.)						776(° 2406	1711) 8652					
Length, Width, Height Net Weight - Air Cooled GA Drawing Number - Air Cooled FLECTRICAL DATA	, ,			380	'. 3Φ	460\	2406	8652	V. 3Ф	440	V. 3Φ		
Net Weight - Air Cooled GA Drawing Number - Air Cooled ELECTRICAL DATA	, ,			380V	′. 3Ф	460\	2406 7. 3Φ	8652 575	V. 3Ф	440	V. 3Φ		
Net Weight - Air Cooled	, ,			380V			2406	8652 575 DDP)	V. 3Ф 8.7		V. 3Ф 8.6		

50(1/0)

35(1/0)

35(1/0)

150

35(1/0)

150

Electrical Installation

Recommended Supply Cable Size (11)

Maximum Recommended Fuse Rating (11)(12)

Amps

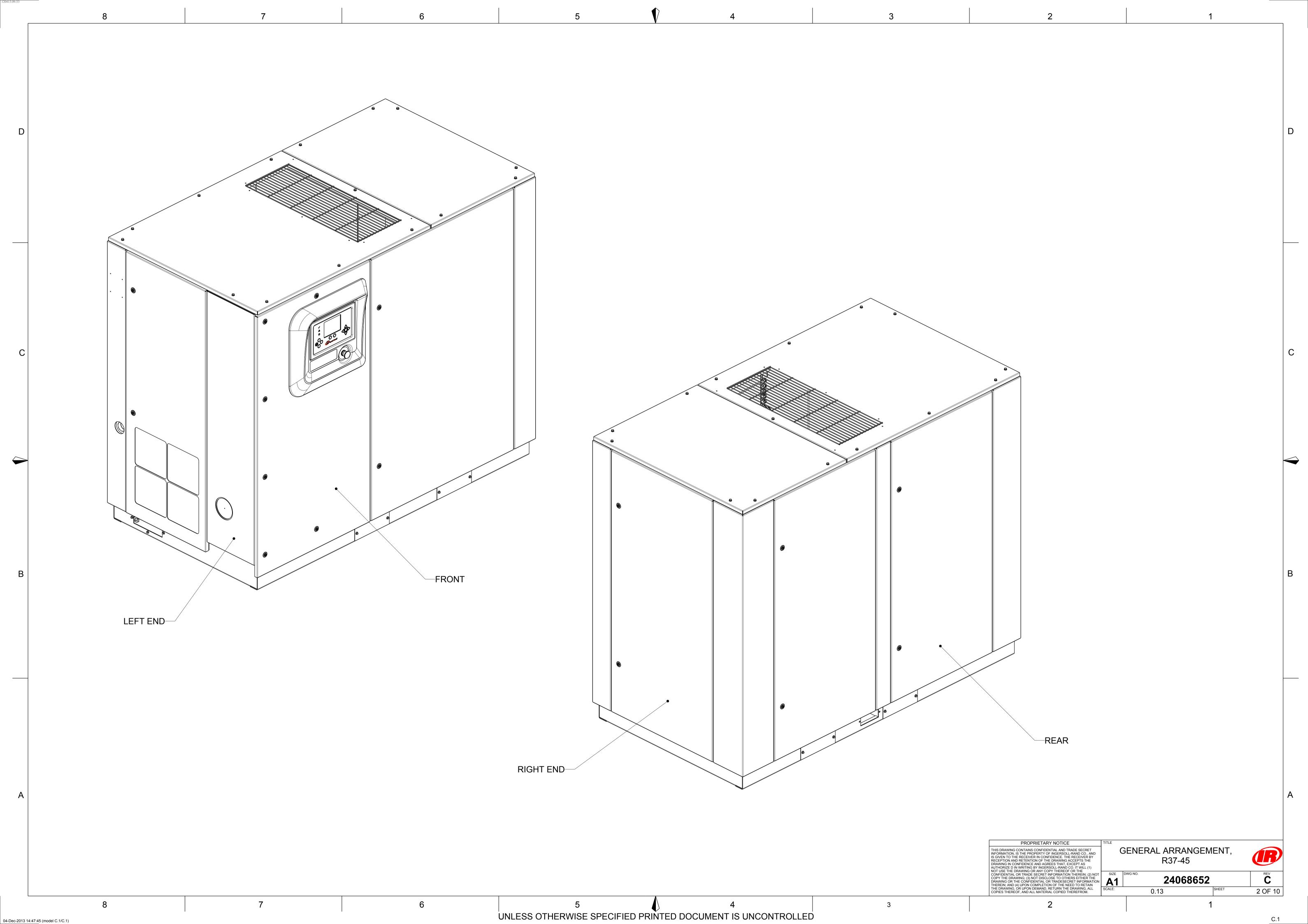
FAD (Free Air Delivery) is full package performance including all losses. Tested per ISO 1217: 2009 Annex C
 Maximum pressure at package discharge, value at which compressor will stop when unit operating at maximum target pressure
 At maximum speed and flow for the given package discharge pressure

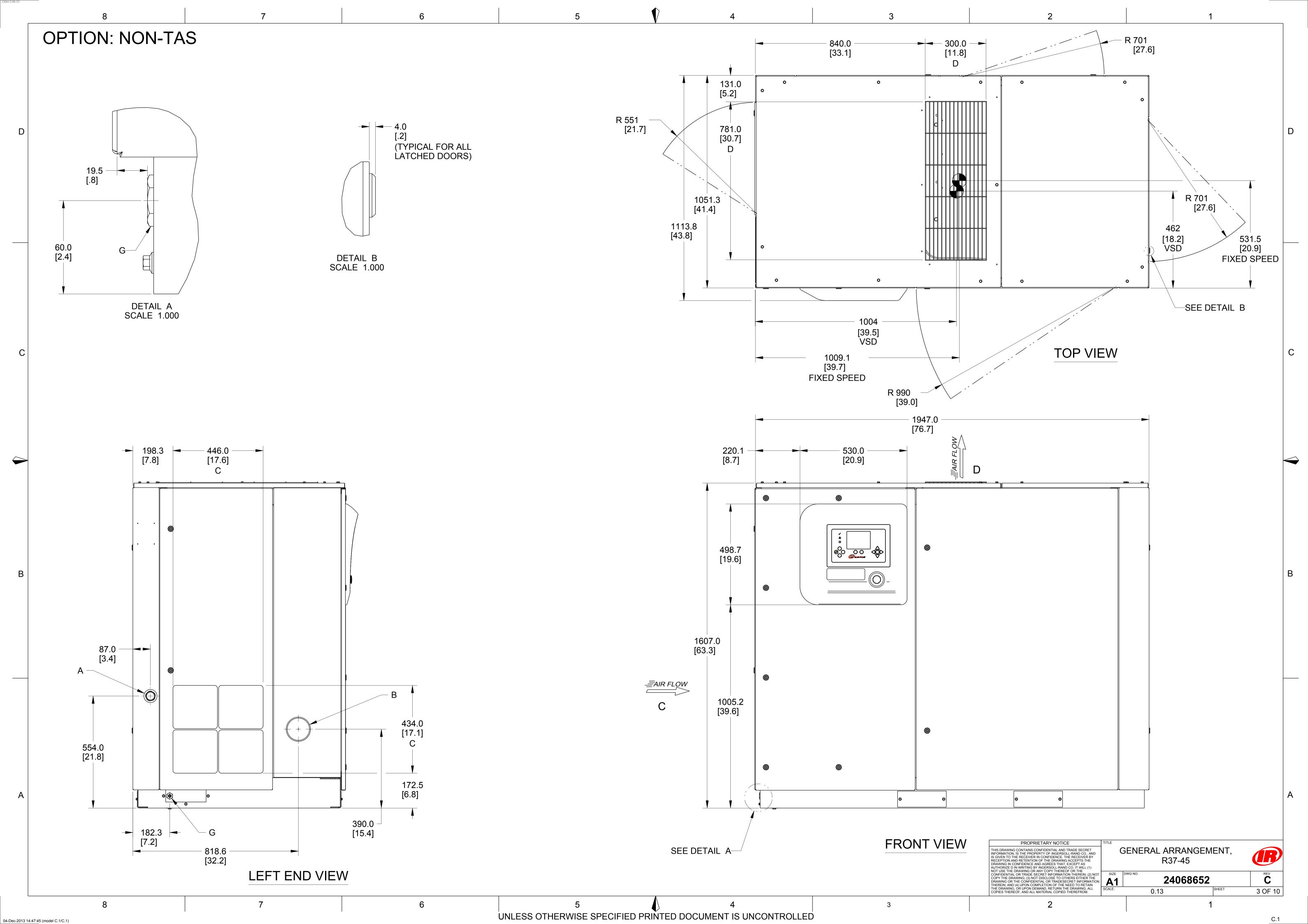
mm²/Cu (AWG or kcmil))

- Measured at rated capacity and rated pressure
- Specific power guaranteed in accordance with ISO 1217 : 2009 Annex C
- (6) Measured in free field conditions per ISO 2151 using Hemispherical Method, with + 3 dB(A) tolerance.
- (7) 40% Relative Humidity Inlet Air and maximum speed (For alternate conditions contact IR)
 (9) BSPT or NPT, depending on regional standard
 (10) Maximum current includes 10% additional current due to fouled filters and elements

- (11) 90° C copper cables. Always apply local electrical codes for sizing cables and fusing.
 (12) Fast Acting Class-J, T or Semiconductor type fuse required. Apply local electrical codes for fuse sizing

120413.09.53	8	7	6	5		4	3	2		1	
	NOTES:							ZONE REV ECN A 80669 ORIGINAL REL	REVISIONS DESCRIPTION FASE	DATE DRAWN 2012JUN05 C. LEAMON	APP'D N Z. WHITLEY
D	, , ,	: R37I (NO DRYER) - 1004 KG (2213 LBS) R45I (NO DRYER) - 1039 KG (2291 LBS) R37N (NO DRYER) - 776 KG (1711 LBS) R45N (NO DRYER) - 776 KG (1711 LBS) R37I (DRYER) - 1094 KG (2411 LBS) R45I (DRYER) - 1129 KG (2490 LBS) R37N (DRYER) - 926 KG (2041 LBS) R45N (DRYER) - 926 KG (2041 LBS)						B 81684 UPDATED THE SHT3 ADDED DOOR 2 PLACES	DRAWING TO LATEST FORMAT OPERATING RADIUS 701 [27.6] AT OPERATING RADIUS 990 [39.0] AN	2013JUN24 P.SADASHIV	IV T.VINCENT
	2. COOLING AIR FLOW: 6500) M ³ /HOUR (3825 CFM)									
	DRAIN DUE TO DIFFEREN	N LINES SEPARATELY TO AN OPEN ICES IN DRAIN PRESSURES. READ ND CHECK LOCAL REGULATIONS.									
	4. LUBRICANT FILL QUANTIT	TY: 26 LITRES (7 US GALLONS)									
	SIDE WITH ELECTRICAL B	NCE ON THREE SIDES 915 MM (36 INCHES BOX 1067 MM (42 INCHES) OR MINIMUM AS ATIONAL ELECTRICAL CODE OR APPLICAB	•								
		LD NOT EXERT ANY UNRESOLVED MOMEN E PIPE OF EQUAL OR GREATER SIZE AT D									
	7. THERE SHOULD BE NO PLUNIT OR USED FOR ANY I	LASTIC OR PVC PIPING ATTACHED TO THIS LINES DOWNSTREAM.	S								
	8. REMOVE THE ISOLATION THE RESTRAINTS CAN BE	N MOUNT RESTRAINTS BEFORE THE INITIA E DISCARDED.	L START.								
С		NG TO AND FROM COMPRESSOR CANNOT WATER TOTAL AIR RESISTANCE.	ADD MORE								С
		DISCHARGE CHECK VALVE, EXTERNAL CH ION VALVE REQUIRED WITHIN 915 MM (36 I DISCHARGE.									
		BE BOLTED TO THE FLOOR WITH FOUR M2 N SHEET 4. SEAL BASE TO FLOOR WITH C									
\hookrightarrow		MMON HEADER WITH A RECIPROCATING OF									
	13. DENOTES CENTER O										
	RESPONSIBILITY OF THE	COMPONENTS NOT SUPPLIED BY INGERSO E CUSTOMER AND SHOULD BE DONE IN AC HE COMPRESSOR DATA PLATE, NATIONAL	CORDANCE WITH								
	15. A BLANK GLAND PLATE	IS PROVIDED FOR ELECTRICAL POWER IN	LET AS INDICATED.								
В		ORS IN A CONFINED SPACE, THE COOLING TED AWAY FROM UNIT TO PREVENT RECIP									В
	CONNECTION LEGEND										
		ARE NPT (UNLESS SPECIFIED OTHERWIS ARE BSPT (UNLESS SPECIFIED OTHERWI									
	A. DISCHARGE AIR: 1.5 IN	NCH (FEMALE)									
	B. ELECTRICAL INLET: BL	LANK PLATE SUPPLIED									
	C. PACKAGE AIR INLET (C	OMPRESSOR)									
	D. PACKAGE AIR EXHAUS	T (COMPRESSOR)									
	E. PACKAGE AIR INLET (DI	RYER)									
	F. PACKAGE AIR EXHAUST	•									
		MOISTURE SEPARATOR): .375 INCH (FEMAI NOT USED ON NO MOISTURE SEPARATOR									
Α	H. CONDENSATE DRAIN (F	FILTER): .375 INCH (FEMALE)									A
	·	DRYER): .375 INCH (FEMALE)				ORT OF THIS DRAWING OR A PRODUCT PRODUCED U.S. EXPORT ADMINISTRATION REGULATIONS MENT RESTRICTIONS OR REGULATIONS.	DO NOT SCALE DRAWING DRAWING CONFORMS TO ASME Y14.5M - 1994	THIRD ANGLE PROJECTION	(P)	gorcoll Dand	
		CH (FEMALE - ERS OPTION ONLY)		ALL DIMENSIONS ARE IN MILLIMETERS [INCHES (IF SHOWN)]	THIS DRAWING CONTAINS CONTINFORMATION, IS THE PROPER	OPRIETARY NOTICE IFIDENTIAL AND TRADE SECRET RTY OF INGERSOLL-RAND CO., AND IS	CAD GENERATED DRAWING NO MANUAL REVISIONS ALLOW	VED CHECKED DATE TIT	E	gersoll Rand	
	L. WATER INLET: 1.0 INCH	(FEMALE - ERS OPTION ONLY)		UNSPECIFIED TOLERANCES:	AND RETENTION OF THE DRAV AND AGREES THAT, EXCEPT A INGERSOLL-RAND CO. IT WILL	(1) NOT USE THE DRAWING OR ANY COPY	UNLESS OTHERWISE SPECIFIED: - REMOVE ALL BURRS AND SHARP CO - WELD SYMBOLS TO BE IN ACCORDA	Z. WHITLEY 2012JUN05 ORNERS APPROVED DATE S. KUMAR 2012JUN05		RRANGEMEN 37-45	41,
				WHOLE : $\pm 13.0[.50]$.X : $\pm 6.0[.25]$ ANGLES : $\pm 1^{\circ}$	THEREOF OR THE CONFIDENT	IAL OR TRADE SECRET INFORMATION RAWING; (3) NOT DISCLOSE TO OTHERS CONFIDENTIAL OR TRADE SECRET 4) UPON COMPLETION OF THE NEED TO	WITH ANSI/AWS A2.4 COPYRIGHT @ 2013	General Arrangement Drawing NOMENCLATURE	IZE ESTIMATED WEIGHT DWG NO.	24068652	REV
			ı	Ingersoll-Rand Industrial Technologies	RETAIN THE DRAWING, OR UPO COPIES THEREOF, AND ALL MA	ON DEMAND, RETURN THE DRAWING, ALL	Ingersoll Rand ALL RIGHTS RESERVED	SCA	■ 0.0 kilogram LE: 0.10 UNIT:	SHEET	1 OF 10
04-Dec-2013 14:47:45 (8	7	6 UN	5 ILESS OTHERWISE SPECIF	IED PRINTED DOCUI	4 MENT IS UNCONTROLLED	3	2		1	C.1
											-··







COMPRESSED AIR SOLUTIONS

AC-01 (HIGH PRESSURE COMPRESSOR)

543 Garwood Ave. Winnipeg, MB R3L 2R2 Ph: (204) 958-6800 Fax: (204) 958-6807 #1 – 3247 Millar Avenue, Saskatoon, SK S7K 5Y3 Ph: (306) 249-9620 Fax: (306) 249-9625

Reciprocating Air Compressor 7100E-V Type 30



Image for reference only

Technical Information:

Capacity: 50 cfm @ 175 psig

Maximum Operating Pressure: 175 psig

Receiver Tank: 120 Gallon Horizontal

Weight: 1035 lbs.

Connection Size: 1" NPT

Dimensions (L x W x H): 71"x 28"x 56"

Additional Engineering Data available upon request

Product Description:

The Type-30 Reciprocating Compressors utilize cast iron pump housings and one-piece connecting rods to provide ruggedness and durability. By combining this ruggedness with matched motors/ starters or gasoline engines, and vertical or horizontal receiver tanks, the Type-30 offers an extended selection of compressor alternatives.

When professional performance is required, Ingersoll Rand Type-30 Air Compressors provide maximum operating pressure, increased air flow and extended duty. For over 75 years, the legendary Type-30 has provided demanding customers with a dependable air supply to meet a variety of applications. The Type-30 models are flexible enough to satisfy a small repair shop's needs or to support heavy-duty, industrial and automotive applications.

Key Features & Benefits:

- 100% Cast Iron Frame and Cylinders
- 360° Cylinder Cooling
- Low Oil Level Switch

- One Piece Connecting Rods
- Splash Lubrication





100

 Ref:
 9820.00

 Page:
 1 of 2

 Date:
 23 Jan.2009

 Cancels:
 All Previous

Point of Manufacture Campbells ille

Bare Details:

Specifications:

Bore: 5.5" & 3" Stroke: 4"

Maximum pressure: 250(17.24) psig(bar)

Sheave OD: 18"
Sheave PD: 17.5"
Inlet size: 1.5" NPT
Discharge size: 1" NPT
Belt Type / Quantity: B/2
Min/Max RPM: 750/1100

Lubrication:

Type: XL300*, All-Season T30 Select**, XL740Ht***

Sump capacity: 2.3(2.2) qt(I)

Tank Details:

Tank size / Configuration: 120 Gal/Horizontal

Pressure rating: 200(13.8); psig(bar)
Codes: Assume ASME Sec VIII & CRN

Motor Details:

AMP draw:

	200 60	2 0 60	60 60	5 5 60
15HP	48.3	42	21	17

Note: Nominal Amps are based on NEC full load amperage rating for this size motor. Actual nameplate amps may vary according to motor design and/or motor manufacturer.

	15 P
Efficiency	*
Motor RPM	1775

^{*} Motors comply with EPACT standards.

^{*} Adjust viscosity to suit ambient conditions, XL300 should not be used in ambients below 40 °F. Use premium quality, non-detergent, single-viscosity petroleum oils with R & O additives.

^{**} Required for duty cycles above 70% load. Check lubricant compatibility sheet before using.

^{***} Required for ambients in excess of 100 °F. Check lubricant compatibility sheet before using.



100

Ref: 9820.00 **Page:** 2 of 2

Date: 23 Jan.2009 Cancels: All Previous

Point of Manufacture Campbells ille

Performance Data:

Bare	Power (P)	Pressure (psig)	Pump Speed (rpm)	Flow (acfm)	ВР
7100	15	75	1100	51.6	13.5
7100	15	125	1100	50.5	15.1
7100	15	175	1100	50.0	16.3

Note: 1) Duplex units multiply capacity by two

Operating En ironment:

Minimum operating temperature: 32(0) deg.F(deg.C)

Maximum operating temperature: 100(37.78) deg.F(deg.C)

Electricals:

Magnetic starter: E-Series standard; Deluxe optional

Pressure switch: Non-adjustable standard; Adjustable optional

Alternator: E-Series standard; Deluxe optional

Dimensions Shipping weight:

	15 P ori ontal Tank
x W x (in):	83 x 36 x 65
Weight (lbs):	1297

Note: For model specific dimensions and weight contact your channel marketing manager.

Notes:

- 1) For specific code requirements like CSA, CRN, ASME contact your channel marketing manager.
- 2) For model specific GA, electrical schematic and fluid flow schematic or any specific information contact your channel marketing manager.

Chubb Edwards 82 Terracon Place Winnipeg, MB R2J 4G7

Tel (204) 633-5248



Fax (204) 632-5341

November 28, 2014

Troy Life & Fire Safety Unit 7 – 1333 Niakwa Road East Winnipeg, Manitoba R2J 3T5

Subject: November 2014-ANNUAL TEST AND MAINTENANCE INSPECTION AGREEMENT Location: Winnipeg Transit, 421 Osborne, Winnipeg, Manitoba

Per the terms of the Preventative Maintenance Agreement with Chubb Edwards, we have completed the test and inspection of the building systems listed below following the requirements of the current Provincial Fire Code.

The tested systems are indicated with $[\sqrt{\ }]$ for satisfactory operation, [X] for unsatisfactory operation, and [Inc] for incomplete work.

[X] Fire Alarm System[X] Emergency Lighting

We enclose our completed test and inspection report for your review. A Certificate of Inspection will only be included for satisfactory operation.

We welcome the opportunity to assist you, should you require additional information and/or service regarding this inspection.

Regards,

Dianna Grosshans Fire Service Billing & Inquiries

Enc.

UTC Fire & Security Canada

Chubb Edwards 82 Terracon Place Winnipeg, MB R2J 4G7 Ph: 204 633 5248



Fire Alarm System Annual Inspection Report

Chubb EDWARDS

BUILDING NAME: Winnipeg Transit	- Fort Rouge Facility			
ADDRESS: 421 Osborne Stre	et CITY:	Winnipeg	PROVINCE: Manitoba	
DATE: November 13, 20	14 SINGL	E STAGE: X	ADDRESSABLE:	x
MANUFACTURER: Notifier	TW	O STAGE:	CONVENTIONAL:	
MODEL NUMBER: NFS-3030		PROP #: 40-212	2-4980	
		-		
		1	VEC NO	AL/A
A. The entire Fire Alarm system has been	n inspected and tested in accordar	nce with	YES NO	N/A
CAN/ULC-S536, Inspection and Testin		1	X	
B The Fire Alarm system documentation system	is on-site and includes a descripti	on of the	х	
C. The Fire Alarm System is FULLY Fund	ctional with NO Deficiencies	I	X	-
D. The Fire Alarm System is NOT FULLY	Functional and has deficiencies	I	X	
E. The Fire Alarm System is Functional V	/ITH Deficiencies noted in this rep	ort	х	
F. A copy of this report will be provided to	the Building Owner or Representa	ative [Х	
G. Other safety equipment testing include Emergency Light This is to certify that the informati		aual Test and Inspection	. Report is correct and complete.	
·	This record is to be maintained by the			
Andrew Fenstad	Chubb Edwards	204-63	33-5248	
Printed name of primary or supervising	Сопралу	Telephon	10	
Signature of primary or supervising technician conducting the inspection	13-994100 Identification # of primary or supervising technician conducting the inspection	-	S nse ID # of primary or supervising on conducting the inspection	
Printed name of the assisting	2			
technician conducting the inspection	Company	Telephon	10	
Signature of the assisting	Identification # of the assisting	"M" Licen	nse ID # of the assisting	į
technician conducting the inspection	technician conducting the Inspection		n conducting the inspection	

Chubb Edwards 82 Terracon Place Winnipeg, MB R2J 4G7 Ph: 204 633 5248



Fire Alarm System Annual Inspection Report

Chubb EDWARDS

INSPECTION PRE-CHECK LIST

				YES	NO
1. Is this system monitore	ed by a Central Mon	itoring Station or Fire	Department?	X	
2. Does this site have Ce	ntral Station ULC co	ertificate posted at the	transmitter.		Х
Monitoring Co		Protelec Alarn	ns		
*Be sure to co	onfirm restoration of	any bypassed connec	tion to the CMS prior to	leaving the site.	
Date:	11/10/2014	Time Offline:			
Date:	11/13/2014	Time Offline:	8:00 16:00		
Date:		Time Offline:			
Date:		Time Offline:			
Date:		Time Offline:			
Do you have auxiliary to elevator homing, fan si			ations, such as	YES	NO
Can these functions be	disabled and tested	d by groups?		<u> </u>	
3. Have building occupar	its been made awar	re of fire alarm testing?	,	Х	
4. Has a pre-determined	time been establish	ed for testing signaling	devices?	Х	
5. Have provisions been	made for acquiring	access to the secured	areas of the building?	Х	
Has an alternative plan department should an			ants and the local fire	Тх	



Fire Alarm System Annual Inspection Report

Chubb EDWARDS

CONTROL UNIT TEST

Control Unit or Transponder Location:	ADMIN BUILDIN	G AT RECEPTION	NC.	•
Control Unit or Transponder Identification:	NOI	DE #1	····	
		YES	NO	N/A
A. Power On visual indicator operates.		X		
B. Common visual trouble signal operates.		X		
C. Common audible trouble signal operates.		X		
D. Trouble signal silence switch operates.		X		
E. Fire alarm system reset operates.		Х		
F. Ground fault tested on both positive and negative initiates tro	ouble signal.	X		
G. Alert signal operates.				X
H. Alarm signal operates.		Х		
I. Automatic transfer from alert signal to alarm signal operates.	(Auto Evac)			X
J. Manual transfer from alert signal to alarm signal operates. (T	otal Evac)			X
K. Automatic transfer from alert signal to alarm signal cancel sw	vitch operates. (AEC)			X
L. Alarm signal silence inhibit function operates. Time:	sec.			X
M. Alarm signal manual silence operates.		X		
N. Alarm signal silence visual indication operates.		Х		
O. Alarm signals, when silenced, automatically reinitiates upon	subsequent alarm.	Х		
P. Alarm signal silence automatic cut-out timer. Time:	min.			Х
Q. Input to Output circuit operation, including anciliary device circhecked for correct program operation, as per the design and	d specifications or			
documented as detailed in Appendix C of CAN/ULC-S536. Se	equence of Operation.	L	-	X
 R. Input circuit, alarm and supervisory operation, including audi operates as intended. 	ble and visual indication	х		
S. Input circuit supervision fault causes a trouble indication.		×		
T. Output circuit currentiates foult courses a travelle and the				
T. Output circuit supervision fault causes a trouble condition		x		



Fire Alarm System Annual Inspection Report

Chubb EDWARDS

CONTROL UNIT TEST

	YES	NO	N/A
U. Output circuit alarm indicators operate			X
V. Lamp Test operates.	X		
W. Coded signal sequences operate not less than the required number of times and the			
correct alarm signal operates thereafter.			X
X. Coded signal sequences are not interrupted by subsequent alarms.			X
Y. Auxiliary device bypass will result in a trouble indication.	X		L_
Z. Main power supply failure initiates trouble signal.	X	I	
AA. Main power supply to emergency power supply transfer operates.	X		<u> </u>
BB. Alarm verification confirmation for smoke detectors only has been verified.			X
CC. Receipt of the system Alarm transmission to the fire signal receiving center.	X		
DD. Receipt of the system Supervisory transmission to the fire signal receiving center.	X		L .
EE. Receipt of the system Trouble transmission to the fire signal receiving center.	X		
FF. Name of the fire signal receiving center recorded on page 2 of this report.	X		
GG. Operation of the fire signal receiving center disconnect (FDR) results in a specific troub	le		
indication at the control unit/transponder, and transmits a trouble signal to the alarm receiving center.		1	x
receiving center.		<u> </u>	



Fire Alarm System Annual Inspection Report

GChubb EDWARDS

CONTROL UNIT TEST

	YES	NO	N/A
A. Input circuit designations correctly identified in relation to connected field devices.	Х		
B. Output circuit designations correctly identified in relation to connected field devices.	X		
C. Correct designations for common control functions and indicators.	X		
D. Plug-in components, modules and cables securely in place.	X		
E. Date, revision and version of firmware/software program installed on system.	January	26, 2010	
Rev.: Ver.:	A003.012.004	ļ	
F. Clean and free of dust and dirt.	X		
G. Fuses in accordance with manufacturers specifications.	Х		
H. Control unit/transponder lock functional.	Х		
I. Termination points for wiring to field devices secure.	Х		
PRINTER TEST			
Printer Location:			
A. Operates per design and specification, or documentation as detailed in Appendix C, Description of Fire Alarm System for Inspection and Test procedures.		· · · · · · · · · · · · · · · · · · ·	х
B. Zone of each alarm initiating device is correctly printed.			x
C. Rated voltage is present at printer.			x
POWER SUPPLY INSPECTION			
A. Fused in accordance with the manufacture's marked rating of the system	X		
B. Adequate to meet the requirements of the system.	X		
C. Control unit power disconnects in accordance with the Canadian Electrical Code.	X		
D. Main power supply feed wiring in accordance with manufacturer's specifications.	Х		
E. Power for ancillary devices is taken from a source separate from the fire alarm power supply	х		
F. Control Unit provides power for ancillary devices and is designed to supply such power. (This includes fire alarm annunciators)	X		



Fire Alarm System Annual Inspection Report

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STANDBY POWER SUPPLY TEST AND INSPECTION

Control Unit or Transponder Location:	A	DMIN BUIL	DING A	AT RECEPTION	ON	
Control Unit or Transponder Identification:			NODE	#1	<u>-</u> .	
A. Duration of Full Load Test as determined by occupancy per C	anadian Bu	ilding Code	(0.08,	0.5, 1, 2 hrs)	0.5	Hours
B. Record battery type as recommended by the manufacturer.	Туре: _	SLA	Volt: _	24	Capacity:	18
C. Battery Voltage & Current - Power Off - Supervisory Condition	· _	25.12		-	0.93	Amps
D. Battery Voltage & Current - Power Off - Full Load Alarm Cond	ition _	24.88	Vdc	-	1.67	Amps
E. Battery Voltage - Power Off - After Full Load Alarm Test	-	24.65	Vdc			
F. Battery Voltage & Current - Power On - After Full Load Alarm	Test _	25.20	Vdc	-	0.38	Amps
G. Recorded calculated Amphour capacity (Per ULC-S536 Appe	ndix F4.1-C	;)		_	23.16	Amphr
H. Correct battery rating as determined by battery calculations ba	ased on full	system loa	ıd.	[NO]
I. Battery rating is greater than 85% of its rated specifications after	er the test a	ind has pas	sed.		YES]
				YES	NO	N/A
J. Terminals clamped tightly, cleaned, and lubricated.				х		
K. Inspected for physical damage/electrolyte leakage.				х		
L. Wet type batteries have correct electrolyte levels.						Х
M. Wet type battery specific gravity is within manufacturer's spec	ification.					X
N. Battery has adequate ventilation in an approved cabinet.				X		
O. Battery in-service date recorded or manufacturer's date code				Date:	MAY	2013
P. Disconnection causes a trouble indication				х		
Q. Indicate type of battery test performed. i) Required supervisory load for 24 hr - followed by the superviso	ha raquirad	full load or	occation	_		1
ii) A silent test by using the load resistor method (Per	ULC-S536					
iii) Silent accelerated test (Per ULC-S536 Appendix Fiv) A battery capacity meter test (Per ULC-S-536 App	•					47
v) Battery replaced annually having current date code		nour capac	ity	-	X	17
as recommended by the Manufacturer						·
R. Generator provides power to the AC circuit serving the fire ala	rm system.					Х
S. Trouble condition at the emergency generator shall result in ar	audible tro	ouble signa	J. [X



Fire Alarm System Annual Inspection Report

GChubb EDWARDS

VOICE COMMUNICATION TEST

Indicate with 'X' if there is NO voice communication system included w	ithin this node	X	
	YES	NO	N/A
A. Power On indicator operates.			Х
B. Common visual trouble indicator operates.			x
C. Common audible trouble signal operates.			Х
D. Trouble signal silence switch operates.			Х
E. All-Call voice paging , including visual indicator, operates.			Х
F. Output circuits for selective voice paging, including visual indicator, operates.			X
 G. Output circuits for selective voice paging trouble operation, including visual indicator, operates. 			х
H. Microphone, including push to talk switch, operates.]	Х
 Operation of the voice paging system does not interfere with initial inhibit time of the fire alarm signal. 		1	X
		· · · · · · · · · · · · · · · · · · ·	
J. All-Call voice paging operates on emergency power supply. (batteries)		l	X
K. Upon failure of one amplifier, system automatically transfers to back-up amplifier.			Х
L. Circuits for emergency telephone call-in, including audible and visual indicators, operate.			Х
M. Circuits for emergency telephone - two way voice communication operates.			X
N. Circuits for emergency telephone trouble operation, including visual indication, operates.			х
O. Emergency telephone operable (dial tone) or in use (busy tone) operate.			X
REMOTE TROUBLE SIGNAL UNIT TEST AND INSPECT	TION		
Remote Trouble Unit Location:			
		•	
A. Input wiring from the control unit or transponder is supervised.			X
B. Visual trouble signal operates.			Х
C. Audible trouble signal operates.			х
D. Audible trouble signal silence operates.			Х



Fire Alarm System Annual Inspection Report



ANNUNCIATOR OR SEQUENTIAL DISPLAY - TEST & INSPECTION

Annunciator or Sequential Display Location:			
Annunciator or Sequential Display Identification:			
	YES	NO	N/A
A. Power On indicator operates.			Х
B. Individual Alarm and Supervisory input zones are clearly indicated, separately designated	d and		
are properly identified.			X
C. Each individual Alarm and Supervisory zone indicator operates - (if N/A see exception)			Х
Exception: Operation of each individual alarm and supervisory zone indication g identical indication, or lights the identical indicators at other annuncia and sequential display(s). A minimum of one alarm zone and one supervisory zone tested at ea annunciator & sequential display to confirm operation.	tor(s),]
Specific method of confirmation:			•
D. Common trouble signal operates.			X
E. Visual indicator test (lamp test) operates.			х
E land visita from partial unit as terranal da is averaged			X
F. Input wiring from control unit or transponder is supervised.			
G. Alarm signal silence visual indicator operates.			Х
H. Switches for ancillary functions operate as per design and specification, or documented as detailed in Appendix C, Description of Fire Alarm System for Inspection and Test			
Procedures.			Х
I. Other ancillary functions visual indicators operate.			X
J. Manual activation of alarm signal and indication operates. (Total Evac Switch)		 	х
K. Displays are visible in installed location.			Х
• •			
L. Operates on emergency power.			Х



Fire Alarm System Annual Inspection Report

GChubb EDWARDS

						_
	DATA COMMUNICATION	N LINK TES	T			
	Communication Link Transponder to Transponder:	DCLA	DCLB	Х	DCLR	
	Communication Link Transponder to Device:	DCLA	DCLB	Х	•	
				YES	NO	N/A
4. C	Confirm that a trouble signal is received at the control unit or to	ransponder un	der open			
	oop fault for each communication link.			Х		
a	Where fault isolation modules are installed in data communicatevices, wiring shall be shorted on the isolated side, annunciated then a field device on the source side shall be operated, at the control unit of transporter.	ation of the faul	t confirmed,			
2	at the control unit or transponder.		<u></u>			X
tı	Where fault isolation in data communication links is provided backers, introduce a short circuit fault and confirm annur operation outside the shorted section between each pair of:					
	a) Control Unit to Control Unit			Х		
	b) Control Unit to Annunciator					х
	c) Control Unit to Remote Transponder		Г	·		Y

ANCILLARY DEVICE LISTINGS

Summary of Ancillary Equipment Installed on this Sy	ystem:
No ancillary devices installed	
AHU Shutdown	х
Pressurization Fans	
Exhaust Fan Shutdown	
Exhaust Fan Startup	
Fire Damper	
Fire Drop Shutter	х
Magnetic Door Holder	х
Magnetic Lock Release	х
Elevator Recall	
Elevator Alternate Recall	
Kitchen Hood Shutdown	
Other	
·	

*NOTE: The equipment reported on this form does not include the actual operational test of the ancillary device



Fire Alarm System Annual Inspection Report



FIELD DEVICE TESTING - LEGEND & NOTES

DEVICE	DESCRIPTION	TYPE	MODEL NO.
M	Manual Station	SPO	8P05
M1	Manual Station		
RHT	Rate of Rise Heat Detector	135	FSP-851A
RHT1	Rate of Rise Heat Detector		
RHT2	Rate of Rise Heat Detector		
HT	Fixed Temperature Heat Detector		
HT1	Fixed Temperature Heat Detector		
HT2	Fixed Temperature Heat Detector		
s	For Smoke Detector sensitivity test see chart on next page	РНОТО	FSP-851A
S1	For Smoke Detector sensitivity test		
S2	tool see chart on next page		
S3	For Manufacturer's Sensitivity Range see chart on next page		
RI	Remote Indicator		
DS	Duct Smoke Detector		
DS1	Duct Smoke Detector		
SFD	Supporting Field Device		L81860
SFD1	Supporting Field Device		
SFD2	Supporting Field Device		
FS	Sprinkler Flow Switch		
F\$1	Sprinkler Flow Switch		
TS	Sprinkler Supervisory Device		·
TS1	Sprinkler Supervisory Device	-	
TS2	Sprinkler Supervisory Device		
PS	Sprinkler Pressure Device		
FP	Sprinkler Water Fire Pump		
GEN	Emergency Generator		
IM.	Isolation Module		
B	Bell		
B1	Bell		
H	Horn or Horn/Strobe Combo		
H1 V	Horn or Horn/Strobe Combo Visual Signal Device		
SP	Cone Type Speaker		
HSP	Horn Type Speaker		
GEN	Emergency Power Generator		
FACP	Fire Alarm Control Panel		
ANN	Fire Alarm Remote Annunciator		
BPS	Booster Power Supply		
AD	Ancillary Device		
AD1	Ancillary Device		
ET	Emergency Telephone		
EOL	End of Line Device		
	2.00 0.000		

It is recommended that smoke detectors in service for over 15 years be replaced.



Fire Alarm System Annual Inspection Report

Chubb EDWARDS

The following notes apply to Appendix E3.2 of CAN/ULC-S536-M04, Individual device records

- Note 1: Smoke detector sensitivity confirmation or sensitivity should be recorded with the individual device.
- Note 2: Smoke detector cleaning or replacement date should be recorded in the remarks column.
- Note 3: Status change including time delays should be recorded with the individual device.
- Note 4: Duct smoke detector pressure differential or positive air flow readings should be recorded with the device.
- Note 5: Time delay settings of the sprinkler flow switch should be recorded with the device.
- Note 6: Sprinkler supervisory devices cause supervisory condition to be annunciated but not an alarm condition.
- Note 7: Upper & lower pressure settings of sprinkler pressure switches should be recorded with the device
- Note 8: Low temperature settings of temperature devices should be recorded with the device.
- Note 9: Identify the specific ancillary device in the remark column.
- Note 10: Identify the date of replacement of any field device in the remark column.
- Note 11: Identify the correct field device operation (e.g. Alarm, trouble, supervision, annunciation) as required.
- Note 12: Identify zone number, circuit number and/or address as required.
- Note 13: Identify conventional field device locations.
- Note 14: Identify active field device and supporting field device locations.
- Note 15: Test and confirm conventional field circuit wiring supervision.
- Note 16: Confirm field device free of damage.
- Note 17: Confirm field device free of foreign substance e.g. Paint

Photoelect

- Note 18: Confirm field device mechanically supported independent of the wiring.
- Note 19: Confirm the field device protective dust shields or covers are removed.

Smoke Detector Sensitivity Ranges

Conventional Devices

OUNTONIA D	011000			
Model	Туре	Range	Tool	Low High
EC10U-3	Ionization	0.69-1.18%	C-PST	140-180mV 500-560mV
EC30U-3	Optical	1.38-3.08%	C-PST	570-630mV 1450-1550mV
EC30DU-3	Optical	1.38-3.08%	N/A	
C2M-PD1	Photoelect	1.90-3.8%	Magnet	7 Flashes 4 flashes
EDW1151A	Ionization	0.8%	MOD400R	Measure & compare to label
EWD2151A	Photoelect	1.8%	MOD400R	Measure & compare to label
EDW1400A	lonization	1.5%	MOD400R	Measure & compare to label
EDW1451A	Ionization	1.5%	MOD400R	Measure & compare to label
EDW2400A	Photoelect	1.4%	MOD400R	Measure & compare to label
SD-2W	Photoelect	0.79-2.46%	N/A	Test meter not required
ESD-4WSJ	Photoelect	0.67-2.46%	N/A	Test meter not required
ESD-SJ	Photoelect	0.67-2.46%	N/A	Test meter not required
6249C	Ionization	0.5%-1.0%	N/A	Test Meter is Obsolete
6250C	Ionization	0.5%-1.0%	N/A	Test Meter is Obsolete
6264C-001	Ionization	0.58%-1.0%	N/A	Test Meter is Obsolete
6264C-005	Ionization	0.71%-2.08%	N/A	Test Meter is Obsolete
6269C	Photoelect	0.65%-2.0%	N/A	Test Meter is Obsolete
6270C	Photoelect	0.65%-2.0%	N/A	Test Meter is Obsolete
intelligent Devic	ces			
Model	Туре	Range	Tool	
SIGA-IS	Ionization	0.7-1.6%	On-screen	
SIGA-IPHS	Multisensor	1.0-3.5%	On-screen	
SIGA-PS	Photoelect	1.0-3.5%	On-screen	
SIGA-PHS	Multisensor	1.0-3.4%	On-screen	
SIGA-SD	Photoelect	0.79-2.46%	On-screen	
1251A	Ionization		On-screen	
1551A	Ionization		On-screen	
2251A	Photoelect		On-screen	

For devices not listed consult the device Manufacturer for Specifications or CFAA NEWS and TIPS at www.cfaa.ca

2551A

On-screen



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ADDITIONAL NODE OR TRANSPONDER TEST

Remote Node or Transponder Location: BUILDING B SOUTHWEST ENTRANCE			
Remote Node or Transponder Identification: NODE #2			
	YES	NO	N/A
Control Unit has Control/D	isplay functions X		l
A. Power On visual indicator operates.	Х		
B. Common visual trouble signal operates.	Х		
C. Common audible trouble signal operates.	Х		
D. Trouble signal silence switch operates.	X		
E. Main power supply failure initiates trouble signal.	X		
F. Ground fault tested on both positive and negative initiates trouble significant significant control of the significant control	gnal. X		
G. Alert signal operates.			Х
H. Alarm signal operates.	Х		
I. Automatic transfer from alert signal to alarm signal operates. (Auto E	Evac)		Х
J. Manual transfer from alert signal to alarm signal operates. (Total Ev	ac)		Х
K. Automatic transfer from alert signal to alarm signal cancel switch op	erates. (AEC)		X
L. Alarm signal manual silence operates.	X		
M. Alarm signal silence visual indication operates.	X		
N. Alarm signals, when silenced, automatically reinitiates upon subseq	uent alarm. X		
O. Input circuit to output circuit operation, including ancillary device circ program operation, as per design and specification, or documentati Appendix C of CAN/ULC-S536.	cuits, for correct on as detailed in X		
P. Input circuit, alarm and supervisory operation, including audible and operates as intended.	visual indication		
S. Input circuit supervision fault causes a trouble indication.	X		
T. Output circuit alarm indicators operate.			Х
U. Output circuit supervision fault causes a trouble condition.	Х		



Fire Alarm System Annual Inspection Report



ADDITIONAL NODE OR TRANSPONDER TEST - cont...

	1/20		
V. Coded signal sequences operate not less than the required number of times and the	YES	NO	N/A
correct alarm signal operates thereafter.			Х
W. Coded signal sequences are not interrupted by subsequent alarms.			Х
X. Fire alarm system reset operates.	Х		
Y. Main power supply to emergency power supply transfer operates.	Х		
Z. Input circuit designations correctly identified in relation to connected field devices.	X		
AA. Output circuit designations correctly identified in relation to connected field devices.	X	in the second	
BB. Correct designations for common control functions and indicators.			Х
CC. Plug-in components, modules and cables securely in place.	Х		
DD. Record the Date, revision and version of firmware/software program. Date: Rev.: Ver.:	n my addison		1 1 H 11 20
EE. Clean and free of dust and dirt.	Х		
FF. Fuses in accordance with manufacturers specifications.	Х	Miles Communication	
GG. Control unit/transponder lock functional.	Х		
HH. Termination points for wiring to field devices secure.	Х		
PRINTER TEST			
Printer Location:			
	YES	NO	N/A
 A. Operates per design and specification, or documentation as detailed in Appendix C, Description of Fire Alarm System for Inspection and Test procedures. 	10		х
B. Zone of each alarm initiating device is correctly printed.		Gerrie -	Х
C. Rated voltage is present at printer.			Х



Fire Alarm System Annual Inspection Report



REMOTE TROUBLE SIGNAL UNIT TEST AND INSPECTION

Х
X
Х
Х
Χ



Fire Alarm System Annual Inspection Report



STANDBY POWER SUPPLY TEST AND INSPECTION

Control Unit or Transponder Location:	BUILDING B SO	UTHWEST ENT	RANCE	ıš
Control Unit or Transponder Identification:	N	IODE #2	Call of 1	
A. Duration of Full Load Test as determined by occupancy per Cdn E	3ldg Code (0.08, 0.5	i, 1, 2 hrs)	0.5	Hours
B. Record battery type as recommended by the manufacturer.	Type: SLA \	/olt:24	Capacity:	18
C. Battery Voltage & Current - Power Off - Supervisory Condition	25.43 V	'dc	0.68	Amps
D. Battery Voltage & Current - Power Off - Full Load Alarm Condition	24.99 V	dc	1.40	Amps
E. Battery Voltage - Power Off - After Full Load Alarm Test	24.86 V	dc		
F. Battery Voltage & Current - Power On - After Full Load Alarm Tes	t <u>25.31</u> V	dc	0.28	Amps
G. Recorded calculated Amphour capacity (Per ULC-S536 Appendix	F4.1-C)		17.07	Amphr
H. Correct battery rating as determined by battery calculations based	d on full system load		YES	
I. Battery voltage is not less than 85% of its rated specification after	this test.		YES	
		YES	NO	N/A
J. Terminals clamped tightly, cleaned, and lubricated.		Х		16.55
K. Inspected for physical damage/electrolyte leakage.		Х		
L. Wet type batteries have correct electrolyte levels.				Х
M. Wet type battery specific gravity is within manufacturer's specifica	ation.			Х
N. Battery has adequate ventilation in an approved cabinet		Х		
O. Battery in-service date recorded or manufacturer's date code		Date:	20	11
P. Disconnection causes a trouble indication		Х		
Q. Indicate type of battery test performed. i) Required supervisory load for 24 hr - followed by the rii) A silent test by using the load resistor method (Per ULiii) Silent accelerated test (Per ULC-S536 Appendix F2) iv) A battery capacity meter test (Per ULC-S-536 Append v) Battery replaced annually having current date code ar as recommended by the Manufacturer	C-S536 Appendix Fix F3)	1)	X	12



Fire Alarm System Annual Inspection Report



VOICE COMMUNICATION TEST

Indicate with 'X' if there is no voice communication system included within this node YES NO N/A A. Power On indicator operates. X B. Common visual trouble indicator operates. C. Common audible trouble signal operates. D. Trouble signal silence switch operates. X E. All-Call voice paging, including visual indicator, operates. F. Output circuits for selective voice paging, including visual indicator, operates. G. Output circuits for selective voice paging trouble operation, including visual indicator, operates. H. Microphone, including push to talk switch, operates. I. Operation of the voice paging system does not interfere with initial inhibit time of the fire alarm signal. J. All-Call voice paging operates on emergency power supply. (batteries) X K. Upon failure of one amplifier, system automatically transfers to back-up amplifier. L. Circuits for emergency telephone call-in, including audible and visual indicators, operate. M. Circuits for emergency telephone - two way voice communication operates. X N. Circuits for emergency telephone trouble operation, including visual indication, operates.

O. Emergency telephone operable (dial tone) or in use (busy tone) operate.



Fire Alarm Annual Inspection Device Listings



BUILDING NAME: Winnipeg Transit - Fort Rouge Facility
BUILDING ADDRESS: 421 Osborne Street

INSPECTION DATE: November 13, 2014
INSPECTED BY: Andrew Fenstad

	_			_	_		-	_							
Location	De	evice	Address	Circuit Number	Sprinkler Waterflow Delay	Smoke Detector Sensitivity	Correctly Installed	Missing	Requires Service or Repairs	Active Operation Confirmed	Annunciation Confirmed	Ground Fault Confirmed	Supervision Confirmed	Decibel Level	Notes (See Summary Page)
BLDG A															
Sprinkler			19		Y			7							
lo Bay East Iso Valve	TS	Z012	01M047		=		Х			Х	Х				- α,
lo Bay Center Iso Valve	TS	Z012	01M017				Х			Х	Χ				1 4 1
LO BAY CENTER FLOW	FS	Z012	01M016	2	37	Į.	Х	9		Х	Х				5.1
LO BAY EAST FLOW	FS	Z012	01M015	9	34	E 19	Х			Х	Х				
HI BAY EAST FLOW	FS	Z012	01M033		74	7	Х			Х	Х				
DUST COL. GLYCOL SYS ISO VALVE	TS	Z020	01M054	ii i	有	1	Х			Х	Х				- E 1
LO BAY WEST FLOW	FS	Z012	01M019		39		Х			Х	X				
LO BAY WEST ISO VLV	TS	Z012	01M020		1		Х			Х	Χ				3 9 1
TRAFFIC SRVS/COMM VLV BLDG A	TS	Z012	01M024	9			Х			Х	X	3			12. [
TRAFFIC SRVS/COMM FLOW BLDG A	FS	Z012	01M025		40		Х			Х	Х				- X 1
DUST COL. GLYCOL SYS ISO VALVE	TS	Z020	01M055			16.	X			Х	X				1 5 1
HI BAY CENTRE ISO VALVE	TS	Z012	1M036				Х		W	Х	Х				
HI BAY EAST ISO VALVE	TS	Z012	01M032				X			Х	X	7			
HI BAY WEST ISO VALVE	TS	Z012	1M039				Х	. 1		Х	X				
HI BAY CENTER FLOW	FS	Z012	1M035		49	THE .	Х			Х	X		- 5		
HI BAY WEST FLOW	FS	Z012	1M040		53		Х			Х	Х				
HI BAY ISO VALVE	TS	Z012	01M043				Х			Х	Х				
LOW W./TRFC SRCS VLV	TS	Z012	01M046			-1	Х		H	Х	Х				
BRANDON MAIN FLOW	FS	Z021	01M042		36		Х			Х	Х				
BLDG B				-											

				×	×	Г	F	×		-	Ė	01D007	Z003	s	S.W OFFICE AREA
				X	×		\vdash	×			_	01D009	Z003	S	S. CENTRE OFFICE AREA
				X	X		$\hat{\vdash}$	×				01D011	Z003	S	S.E OFFICE AREA
				×	×			×		_	_	01M002	Z003	м	S/E STAIR EXIT
				×	×		\vdash	×	<u> </u>	\vdash	F	01D021	Z017	S	TOP OF S/E STAIR
									-	\vdash	_				OFFICE SECOND FLOOR
				×	×		F	×	"	55	8	02L01M030	Z013	FS	TRACKS 25-36 SOUTH FLOW
				×	×		╞	×	٦	30	33	02L01M033	Z013	FS	TRACKS 25-36 NORTH FLOW
				×	×		╞	×	٣	93	29	02L01M029	Z013	FS	TRACKS 13-24 SOUTH FLOW
	Г			×	×		f	×	۳	76	2	02L01M034	Z013	FS	TRACKS 13-24 NORTH FLOW
				×	×		F	×	۴	22	င္ထ	02L01M003	Z013	FS	SERVC BAY/B-SECT FLOW
	┪			×	×	-	╞	×	۴	\$	18	02L01M007	Z013	FS	TRACKS 1-12 N. FLOW
	Г			×	×	_	Ĥ	×		121	2	02L01M004	Z013	FS	TRACKS 1-12 S. FLOW
				×	×		Ĥ	×	_		48	02L01M048	Z013	SI	WEST RISER ISO VLV
				×	×		Բ	×		H	49	02L01M049	Z013	SI	EAST/WEST ISO VLV
				×	×		┝	×	-		45	02L01M045	Z013	ST	EAST RISER ISO VLV
ТОО СОLD ТО ТЕЅТ								-		\vdash	36	02L01M036	Z013	TS	N/E HYDRANT ISO VALVE
				×	×		┝	×		_	47	02L01M047	Z013	TS	TRACKS 1-12 S ISO VALVE
				×	×		F	×		_	8	02L01M008	Z013	15	TRACKS 1-12 N ISO VALVE
	Г			×	×			×	_		8	02L01M005	Z013	ST	SERVICE BAY ISO VALVE
				×	×	-	Ĥ	×	\vdash	_	50	02L01M050	Z013	ST	OSBORNE N MAIN ISO VLV
				×	×		 	×		_	6	02L01M046	Z013	ST	TRACKS 13-24 N ISO VLV
				×	×	-	<u> </u>	×			35	02L01M035	Z013	SI	TRACKS 25-36 N ISO VLV
				×	×		Ê	×		_	43	02L01M043	Z013	TS	TRACKS 13-24 S ISO VLV
				×	×		Ĥ	×		_	4	02L01M044	Z013	SI	TRACKS 25-36 S ISO VLV
				×	×		Ĥ	×	\vdash	\vdash	31	02L01M031	Z013	IS	S.E. ISO VALVES BLDG B
			-	×	×		┝	×	\vdash	_	8	02L01M048	Z012	ΣT	BLDG B ISO VALVE
				×	×		Ĥ	×	"	&	38	02L01M038	Z013	FS	OSBOURNE N MAIN FLOW
	П			×	×		Ĥ	×		21	39	02L01M039	Z013	FS	OSBOURNE S. MAIN FLW
Notes (See Summary Page)	Decibel Level	Supervision Confirmed	Ground Fault Confirmed	Annunciation Confirmed	Active Operation Confirmed	Requires Service or Repairs	Missing	Sensitivity Correctly Installed	Smoke Detector	Sprinkler		Address	Device	De	Location

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Location	De	Device	Address	Circuit Number	Sprinkler Waterflow Delay	Smoke Detector Sensitivity	Correctly Installed	Missing	Requires Service or Repairs	Active Operation Confirmed	Annunciation Confirmed	Ground Fault Confirmed	Supervision Confirmed	Decibel Level	Notes (See Summary Page)
S.W STAIR EXIT	M	Z003	01M003				×			X	×				
N.W. OFFICE AREA	S	Z003	01D008				X			X	×				
N CENTER OFFICE AREA	S	Z003	01D010				X			×	×				
N.E. OFFICE AREA	s	Z003	01D012				X			X	×				
PHOTOCOPY ROOM SECOND FLOOR	R목	Z003	01D027				×			X	×				
ELEVATOR SHAFT	S						L								D4
JANITOR CLOSET SECOND FLOOR	꿐	Z003	01D028				×			×	×				
OFFICE MAIN FLOOR								L							
MAIN ENTRANCE	≤	Z002	01M001				×			X	×				
S.E. OFFICE AREA	s	Z002	01D001				×			X	×				
S CENTER OFFICE AREA	s	Z002	01D002				×			×	×				
S.W. OFFICE AREA	s	Z002	01D003				×			×	×				
WEST VESTEBULE EXIT	8	Z002	01M012				×			×	×				
N.W. OFFICE AREA	တ	Z002	01D004				×			X	×				
N. CENTER OFFICE AREA	S	Z002	01D005				×			×	×				-
N.E. OFFICE AREA	s	Z002	01D006				×			×	×				
EAST OFFICE AREA	s	Z002	01D035				×			X	×				
PHOTOCOPY ROOM MAIN FLR	RHT	Z002	01D025				×			×	×				
JANITOR CLOSET MAIN FLR	굨	Z002	01D026				×			×	×				
OFFICE BASEMENT															
SOUTHEAST STAIR EXIT	3	Z001	01M004				×			×	×				
TIMEKEEPERS ROOM	တ	Z001	01D013				×			×	×				
ADMIN TUNNEL	S	Z001	01D033				×			×	×				
ADMIN TUNNEL	s	Z001	01D015				×			×	×				
ADMIN TUNNEL	s	Z001	01D034				×			×	×				
TUNNEL NORTH EXIT	s	Z001	01M011				×			×	×				
CAFETERIA N.E EXIT	s	Z001	01M010				×			×	×				
CAFETERIA N.W. EXIT	Z	Z001	01M009				×		ŀ	×	×			L	
KITCHEN BACKROOM EXIT	s	Z001	01M008				×	L		×	×				

EXIT TO NEW ADDITION SW

EAST BLISTER HI BAY EAST S.E. BLISTER HI BAY EAST CHASS/DYNO EAST EXIT HI BAY CNT CHASS/DYNO WEST EXIT HI BAY CNT S.W. BLISTER EXIT HI BAY W WEST BLISTER EXIT HI BAY WEST CARPENTER SHOP EXIT LO BAY W

COLUMN AT HOIST 4 HI BAY EAST

20	
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32	

											Ĺ	ST				Ш											Ш	
3	Z	3	3	M	Z	s	M	3	s	s	s	M	M	s	s	DS	RHT	R	뫔	R	뫄	R	R	R H	R	뫔	s	De
Z004	Z015	Z015	Z004	Z004	Z004	Z001	Z001	Z014	Z001	Device																		
01M088	01M029	01M031	01M030	01M034	01M041	01M037	01M038	01M045	01M021	01M028	01M018	01M014	01M013	01D037	01D036	01D031	01D017	01D016	01D023	01D024	01D030	01D018	01D019	01D032	01D022	01D014	01M007	Address
																												Circuit Number
																												Sprinkler Waterflow Delay
																												Smoke Detector Sensitivity
×	×	×	×	X	X	X	X	X	×	×	X	X	X	X	X	X	X	×	X	X	X	X	X	X	X	×	X	Correctly Installed
	_																											Missing
																												Requires Service or Repairs
×	×	×	×	X	X	X	X	Х	Х	Х	X	X	X	X	X	×	×	X	X	X	X	Х	X	X	X	X	X	Active Operation Confirmed
×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	X	×	Annunciation Confirmed
																												Ground Fault Confirmed
																									,			Supervision Confirmed
																												Decibel Level
																							:					Notes (See Summary Page)

STORES REVEIVING BAY LO BAY EAS

NORTH EXIT LOW BAY EAST

BUILDING A

CHIEF TIMEKEEPER'S OFFICE TIMEKEEPER'S STORAGE ROOM

NORTH STORES EXIT LO BAY CENTR

WEST VESTIBULE EXIT EAST VESTIBULE EXIT SF-1 SUPPLY FAN DUCT SMOKE

SIGN UP ROOM EAST

TELE/COMPUTER ROOM

SIGN UP ROOM WEST

ELEVATOR MACHINE ROOM SF1 MECHANICAL ROOM KITCHEN BACKROOM KITCHEN FRONT AREA KITCHEN STORAGE SF2 MECHANICAL RM

SOUTHWEST STAIR EXIT

Location

DISPATCH

Location	D	Device	Address	Circuit Number	Sprinkler Waterflow Delay	Smoke Detector Sensitivity	Correctly Installed	Missing	Requires Service or Repairs	Active Operation Confirmed	Annunciation Confirmed	Ground Fault Confirmed	Supervision Confirmed	Decibel Level	Notes (See Summary Page)
MAINTENANCE ADDITON WEST EXIT	Z	Z004	01M080				×			×	×				
MAINTENANCE ADDITION EAST EXIT	3	Z004	01M087				×			×	×				
NORTHEAST EXIT LOW BAY EAST	3	Z004	01M008				×			×	×				
TRAFFIC SERVICES															
LOADING DOCK EXIT	s	Z006	01M027				X			X	×				
LOOPS AND STOPS EXIT	s	Z005	01M023				×			×	×				
SOUTH OFFICE EXIT	Z	Z005	01M026				×			×	×				
SOUTHEXIT	W	Z006	01M022				×			×	×				
METER REPAIR ROOM	M	Z006	01M044				×			×	×				
BUILDING B															
S.W VESTIBULE EXIT	Z	Z007	02L01M053				×			×	×				
SOUTHWEST EXIT	M	Z007	02L01M001				×			×	×				
WEST EXIT BY MECH RM	М	Z007	02L01M002				X			×	×				
W. EXIT BY MECH ROOM	М	Z007	02L01M052				X			×	×				
WEST CENTRE EXIT	M	Z007	02L01M006				×			×	×				
NORTH WEST EXIT	М	Z007	02L01M009				×			×	×				
NORTHWEST DOOR	M	Z008	02L01M013				X			×	×				
NORTHEXIT	M	Z008	02L01M051				×			×	×				
WEST CENTRE DOOR	M	Z008	02L01M012				×			×	×				
SOUTH EAST DOOR	М	Z008	02L01M014				X			×	×				
TRACK 1 SOUTH DOOR	M	Z009	02L01M015				×			×	×				
TRACK 1 S. CNTRE DOOR TRACKS 1-12	8	Z009	02L01M041				X			×	×				
TRACK 1 N. CNTR DOOR TRACKS 1-12	3	Z009	02L01M016				×			×	×				
TRACK 1 NORTH EXIT TRACKS 1-12	Z	Z009	02L01M017				×			×	×				
TRACK 12 SOUTH DOOR TRACKS 1-12	8	Z009	02L01M018				×			×	×				
TRACK 13 SOUTH DOOR TRACKS 13-24	Z	Z010	02L01M019				×			×	×				
TRACK 13 CENTRE DOOR TRACKS 13-24	S	Z010	02L01M20				×			×	×			Ш	
TRACK 13 NORTH EXIT	s	Z010	02L01M21						×						D3
TRACK 24 NORTH DOOR	3	Z010	02L01M026	L			×			×	×				

	-	<u> </u>	lia.	ı 	T ==	lı.c.	172	172	1	17=-	r -	I _ ·	1	1	-		T==	-											
TRAINING ROOM	KITCHEN FRONT AREA	OUTSIDE MENS WASHROOM	OFFICE BASEMENT HORNS	MAIN FLOOR WEST	MAIN FLOOR EAST	OFFICE HORNS MAIN FLOOR	SECOND FLOOR WEST	SECOND FLOOR EAST	OFFICE HORNS 2ND FLR	HORNS/STROBES	NORTHWEST SERVICE BAY	TUNNEL EAST END	TUNNEL WEST END	TOP OF S/W STAIRS	MECHANICAL ROOM	GAS UTILITY ROOM	ELECTRICAL VAULT	ELECTRICAL ROOM	TREASURY ROOM	TRACK 36 CENTER N.E.	TRACK 36 SOUTH EXIT	TRACK 36 NORTH EXIT	TRACK 25 NORTH EXIT	TRACK 25 SOUTH DOOR	TRACK 24 SOUTH DOOR	TRACK 24 S.CNTR DOOR	TRACK 24 CENTRE DOOR	TRACK 24 N.CENTRE DOOR	Location
Ξ	Ξ	Ξ		I	Ξ		I	I			3	S	s	S	퐄	퐄		RHT	Z	M	3	3	s	s	×	×	3	3	De
											Z007	Z007	Z007	Z019	Z007	Z007		Z007	Z007	Z011	Z011	Z011	Z011	Z011	Z010	Z010	Z010	Z010	Device
											02L01M009	02L01D002	02L01D001	02L01D005	02L01D004	02L01D007		02L0D003	02L0M010	02L0M032	02L0M028	02L01M037	02L01M027	02L01M040	02L01M022	02L01M023	02L01M024	02L01M025	Address
2	2	2		2	2		2	2																					Circuit Number
																													Sprinkler Waterflow Delay
																													Smoke Detector Sensitivity
×	×	×		×	×		×	×			×	×	X	×	×	×		X	X		X	×	X				×	X	Correctly Installed
																				×									Missing
												:												×	×	×		!	Requires Service or Repairs
×	×	×		×	×		×	×			×	×	×	×	×	×		×	×		X	×	X				×	X	Active Operation Confirmed
											×	×	×	×	×	×		X	X		×	×	X				×	×	Annunciation Confirmed
																													Ground Fault Confirmed
																													Supervision Confirmed
	_	L	L		_					_															Ļ	Ļ	_		Decibel Level
																	D4			D2				D3	D3	D3			Notes (See Summary Page)

Location	Device	Address	Circuit Number	Sprinkler Waterflow Delay	Smoke Detector Sensitivity	Correctly Installed	Missing	Requires Service or Repairs	Active Operation Confirmed	Annunciation Confirmed	Ground Fault Confirmed	Supervision Confirmed	Decibel Level	Notes (See Summary Page)
BOILER ROOM	н		2			×			×					
COMP/TELEPHONE ROOM	Н		2			×			×					
CAFFETERIA EAST	н		2			×			×					
TUNNEL CENTER WEST WALL	н		2			×			×					
TRAFFIC SERVICES BLDG	-							L						
STORAGE AND HANDLING EAST	I		7			×		×	×					D8
METER DEPT	I		7			×	_	×	×					D6
SIGH STORES SOUTH WALL	I		7			×		×	×					D6
LOOPS AND ELECTRICAL CAGES W	Ι		7			×		×	×					D8
TECH SHOP	I		7			×		×	×					D6
GARAGE	I		7			×		×	×					D6
RADIO SHOP OFFICES	I		7			×		×	×					D6
RADIO SHOP OFFICES	EOL		7.			×								
PAINT SHOP	I		5			×			×					
BUILDING A HORNS/STROBES													Г	
HI BAY SOUTH WEST CORNER	Ξ		4			×			×				П	
HI BAY SOUTH WEST CENTER	Ι		4			×	_		×					
HI BAY SOUTH EAST CENTER	I		4			×			×					
HI BAY SOUTH EAST CORNER	I		4			×			×					
CHASIS DYNO ROOM	<		≤			×			×		Ŀ			
HI BAY NORTH WEST CORNER	I		4			×			×					
HI BAY NORTH WEST CORNER	EOL		4			×								
HI BAY NORTH WEST CENTER	Ξ		4			×			×					
HI BAY NORTH EAST CENTER	I		4			×			×					
HI BAY NORTH EAST CORNER	I		4			×			×					
PAINT SHOP MECH ROOM	Ξ		4			×			×					
PAINT BOOTH 1	I		5			×			×					
PAINT BOOTH 2	I		տ			×			×					
PAINT BOOTH 3	I		6			×			×					

Location	De	Device	Address	Circuit Number	Sprinkler Waterflow Delay	Smoke Detector Sensitivity	Correctly Installed	Missing	Requires Service or Repairs	Active Operation Confirmed	Annunciation Confirmed	Ground Fault Confirmed	Supervision Confirmed	Decibel Level	Notes (See Summary Page)
PAINT BOOTH 4	Ι			6			×			×					
OUTSIDE PAINT BOOTH 6	EOL			6			×								,
PAINT SHOP	H			3			×			×					
PAINT SHOP	EOL			5			×								
PAINT SHOP	EOL			3			×								
CARPENTER SHOP SOUTH	I			3			×			×					
CARPENTER SHOP EAST	I			ω			×			×					
LOCKER ROOM	I			7			×		×	×					D6
HALL TO TRAFFIC SERVICES	I			7			×		×	×					D8
LO BAY NORTH WEST	I			4			×			×					
LO BAY NORTH CENTER	Ξ			4			×			×					
LO BAY NORTH EAST	I			4			×			×					
DIESEL FUEL SHOP	٧			۷1			×			×					
ELECTRICAL TESTING SHOP WEST	н			4			×			×					
ELECTRICAL TESTING SHOP EXIT	н			1			×			×					
NEAR ADMIN EXIT	I			_			×			×					
TIRE STORES NORTH	I			ω			×			×					
PARTS STORE EAST	I			3			×			×					
PARTS STORE WEST	н			3			×			×					
BUILDING B HORN/STROBES															
2ND FLR STAIRWELL	Ŧ			2			×			×					
SERVICE BAY NORTH EAST	н			2			×			×					
SERVICE BAY SOUTH EAST	ı			2			×			×					
SOUTH WEST MECH ROOM	н			2			×			×					
SOUTH WEST ELECTRICAL ROOM	EOL			2			×								
SOUTH WEST ELECTRICAL ROOM	I			2			×			×					
HALL OUTSIDE GAS UTILITY ROOM	I			2			×			×					
SERVICE BAY SOUTH	I			2			×			×					
B SECTION NORTH	Ξ			2			×			×					

B SECTION SCHTER	Location	Dev	Device	Address	Circuit Number	Sprinkler Waterflow Delay	Smoke Detector Sensitivity	Correctly Installed	Missing	Requires Service or Repairs	Active Operation Confirmed	Annunciation Confirmed	Ground Fault Confirmed	Supervision Confirmed	Decibel Level	Notes (See Summary Page)
ORTIH H H 2 2 X X ORTIH H H EOL 3 X X X X X X X X X X X X X X X X X X	B SECTION CENTER	Ξ			2			×			×					
ORTH H 3 X ORTH EOL 3 X MIRNRTH H 2 X NENTER H 3 X COUTH CNT H 3 X NOTH H 3 X NOTH CNT H 1 X NOTH CNT H 1 X STH CNT H 1 X SOUTH H 1 X NORTH H X X N X	B SECTION SOUTH	Ξ			2			×			×					
ORTH EOL 3 X MORTH H 2 X NOTH NETH H 2 X SENTER H 3 X SOUTH H 3 X OUTH ONT H 1 X NORTH H 1 X STHCNT H 1 X SOUTH H X X SOUTH H X X SOUTH H X X SOUTH H X X SOUTH X X SOUTH X X	TRACKS 1-12 EAST WALL NORTH	Ξ.			3			×			×				_	
NOTH H H 2 2 X X X X X X X X X X X X X X X	TRACKS 1-12 EAST WALL NORTH	EOL			3			×								
NTR NRTH H 3 3 X X 2 NEWTER H 2 2 X X 2 NOUTH CNT H 3 3 X X X 2 NOUTH CNT H H 3 3 X X X 2 NOUTH H H 1 1 X X 1 NORTH H H X X 1 NORTH H X X X 1 NORTH H X X X 1 NORTH H X X X X X X X X X X X X X X X X X X	TRACKS 1-12 WEST WALL NORTH	н			2			×			×					
NONTH	TRACKS 1-12 EAST WALL CNTR NRTH	Ξ			ω			×			×					
OUTH CNT H 3 X OUTH H 2 X OUTH H 1 X NORTH H 1 X STH CNT H 1 X NORTH H 1 X SOUTH H 1 X SOUTH H 1 X SOUTH H X X SOUTH X X X X X X X X <td>TRACKS 1-12 WEST WALL CENTER</td> <td>Ξ</td> <td></td> <td></td> <td>2</td> <td></td> <td></td> <td>×</td> <td></td> <td></td> <td>×</td> <td></td> <td></td> <td></td> <td></td> <td></td>	TRACKS 1-12 WEST WALL CENTER	Ξ			2			×			×					
NONTH	TRACKS 1-12 EAST WALL SOUTH CNT	Ξ			3			×			×					
OUTH NORTH NORTH H H 1 X STH CNT H H 1 X SOUTH H H 1 X X X X X X X X X X X X	TRACKS 1-12 WEST WALL SOUTH	Ξ			2			×			×					
NORTH H	TRACKS 1-12 EAST WALL SOUTH	Ι			3			×			×					
NTH CNT H X X STH CNT H H H 1 1 X X Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y	TRACKS 13-24 WEST WALL NORTH	I			1			×			×	_				
STH CNT H H 1 X X NORTH H H H 1 X X NORTH H H H 1 X X X X X X X X X X X X X X X	TRACKS 13-24 WEST WALL NTH CNT	Ξ						×	_		×					
SOUTH H H H 1 1 X X Y X Y X Y X Y X Y X Y X Y X Y X	TRACKS 13-24 WEST WALL STH CNT	Ξ			1			×			×					
VORTH H 1 1 X X TITH CNTR H 1 1 X X STH CNTR H 1 1 X X X X X X X X X X X X X X X X X	TRACKS 13-24 WEST WALL SOUTH	I			1			×			×					
VITH CNTR H 1 X STH CNTR H 1 X SOUTH H 1 X NORTH H 1 X STH CNT H 1 X SOUTH H 1 X SOUTH H 1 X CORNER H 1 X EOL 1 X H 1 X H 1 X CORNER H 1 X	TRACKS 13-24 EAST WALL NORTH	I			1			×			×					
STH CNTR H 1 X X SOUTH H H 1 X X X X X X X X X X X X X X X X	TRACKS 13-24 EAST WALL NTH CNTR	Ι			_			×			×					
NORTH H H 1 X X NORTH CNR H 1 X X X X X X X X X X X X X X X X X X	TRACKS 13-24 EAST WALL STH CNTR	Ξ						×			×				_	
NORTH H 1 X X NTH CNR H 1 1 X X STH CNT H 1 1 X X SOUTH H 1 1 X X X X X X X X X X X X X X X X	TRACKS 13-24 EAST WALL SOUTH	I			1			×			×				_	
NTH CNR H 1 X STH CNT H H 1 1 X STH CNT H H 1 1 X X SOUTH H H 1 1 X X X X X X X X X X X X X X X	TRACKS 25-36 WEST WALL NORTH	Ξ			<u>-</u>			×	L		×				L	
STH CNT H 1 X SOUTH H H 1 1 X SOUTH H H 1 1 X X X X X X X X X X X X X X X	TRACKS 25-36 WEST WALL NTH CNR	I			-			×			×					
CORNER H H 1 X X X X X X X X X X X X X X X X X	TRACKS 25-36 WEST WALL STH CNT	Ξ						×			×					
CORNER H EOL H 1 1 1 X X X X X	TRACKS 25-36 WEST WALL SOUTH	Ξ			_			×			×				L	
CORNER H	TRACKS 25-36 NORTH EAST CORNER	Ξ			<u> </u>			×			×					
CORNER H H H A A A A A A A A A A A A A A A A	TRACKS 25-26 NORTH EAST	Ξ			_			×			×				_	
AST CORNER H	TRACKS 25-36 NORTH EAST	ĘĎ.	_		<u>-</u>			L	_						_	
I I	TRACKS 25-36 CENTER	Ξ			_			×	L.		×				<u> </u>	
x	TRACKS 25-36 SOUTH EAST	Ξ			_			×			×					
	TRACKS 25-36 SOUTH EAST CORNER	±			-			×	$oxed{\bot}$		×				╄	



Emergency Lighting Annual Inspection Report

GChubb EDWARDS

BUILDING NAME: Winnipeg Transit - Fort Rouge Facility	INSPECTION DATE: November 13, 2014
BUILDING ADDRESS: 421 Osborne Street	INSPECTED BY: Andrew Fenstad

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Model #	Loading (Amps)	Battery Size	# of Bulbs	Remote Lamp Locations	Exit Sign Locations	AC Power (Y/N)	Load Test (Mins)	Charger Functional (Y/N)	Pass	Fail	Notes
					=						
LITHONIA M618 120CS CSA	3.2	6V7.2AH	2			Y	30	Y	PASS		
RG36	2.7	6V7.2AH	2			Υ	30	Y	PASS		
RG36		6V7.2AH	2			Y	30	Y		FAIL	D1
RG36		6V7.2AH	2		***************************************	Y	30	Y		FAIL	D1
LITHONIA M618 120CS CSA	2.7	6V7.2AH	2			Y	30	Y	PASS	_	
LITHONIA M618 120CS CSA	2.7	6V7.2AH	2			Υ.	30	Y	PASS		
RG36 W/EXIT SIGN	3.2	6V7.2AH	2		CAFÉ EXIT	Y	30	Y		FAIL	D1
EMERGILITE 6JML36R8	2.9	6V7.2AH	2			Y	30	Y	PASS		
LUMACELL RG36A	2.36	6V4.4AH	2			Y	30	Y	PASS		
LUMACELL RG36A	2.36	6V4.4AH	2			Y	30	Y	PASS		
LITHONIA M618 120CS CSA	3.2	6V7.2AH	2			Y	30	Y	PASS		
LUMACELL RG38A	2.1	6V7AH	2			Y	30	Y	PASS		
								·			N1
											N1
											N1
LUMACELL RG36A	2.36	6V4.4AH	2			Y	30	Y	PASS		
LUMACELL RG36A	2.36	6V4.4AH	2			Y	30	Y	PASS	_	
M618	3	6V7AH	2			Y	30	Υ	PASS		
M618	3	6V7AH	2			Y	30	Y		FAIL	D1
M618	3	6V7AH	2			Υ	30	Y	PASS		
M618	3	6V7AH	2			Y	30	Υ	PASS		
	LITHONIA M618 120CS CSA RG36 RG36 RG36 RG36 LITHONIA M618 120CS CSA LITHONIA M618 120CS CSA RG36 W/EXIT SIGN EMERGILITE 6JML36R8 LUMACELL RG36A LITHONIA M618 120CS CSA LITHONIA M618 120CS CSA LUMACELL RG36A LUMACELL RG36A LUMACELL RG36A	LITHONIA M618 120CS CSA RG36 RG36 RG36 LITHONIA M618 120CS CSA LITHONIA M618 120CS CSA LITHONIA M618 120CS CSA RG36 W/EXIT SIGN EMERGILITE 6JML36R8 LUMACELL RG36A LITHONIA M618 120CS CSA LUMACELL RG36A 3.2 LUMACELL RG36A 2.36 LUMACELL RG36A 2.36 LUMACELL RG36A 3.2 LUMACELL RG36A 3.3 M618 3 M618 3	LITHONIA M618 120CS CSA RG36 2.7 6V7.2AH RG36 6V7.2AH RG36 6V7.2AH LITHONIA M618 120CS CSA LITHONIA M618 120CS CSA LITHONIA M618 120CS CSA COMPANIA LITHONIA M618 120CS CSA RG36 W/EXIT SIGN 3.2 6V7.2AH EMERGILTE BJML36R8 LUMACELL RG36A LITHONIA M618 120CS CSA LUMACELL RG36A LITHONIA M618 120CS CSA LUMACELL RG36A L	LITHONIA M618 120CS CSA RG36 RG36	LITHONIA M618 120CS CSA RG36 2.7 6V7.2AH 2 RG36 6V7.2AH 2 RG36 6V7.2AH 2 LITHONIA M618 120CS CSA LITHONIA M618 120CS CSA LITHONIA M618 120CS CSA RG36 W/EXIT SIGN 6V7.2AH 2 EMERGILITE 6,M1,36RB 2.9 6V7.2AH 2 LUMACELL RG36A 2.36 6V4.4AH 2 LUMACELL RG36A 2.1 6V7.2AH 2 LUMACELL RG36A 2.36 6V4.4AH 2 LUMACELL RG36A 2.36 6V4.4AH 2 LUMACELL RG36A 2.36 6V4.4AH 2 LUMACELL RG36A 2.36 6V4.4AH 2	LITHONIA M618 120CS CSA RG36 2.7 6V7.2AH 2 RG36 6V7.2AH 2 RG36 6V7.2AH 2 LITHONIA M618 120CS CSA LITHONIA M618 120CS CSA LITHONIA M618 120CS CSA RG36 6V7.2AH 2 LITHONIA M618 120CS CSA RG36 6V7.2AH 2 CAFÉ EXIT CAFÉ EXIT CAFÉ EXIT LUMACELL RG36A 2.36 6V4.4AH 2 LUMACELL RG36A 2.36 6V4.4AH 2 LUMACELL RG36A 2.1 6V7.2AH 2 LUMACELL RG36A 2.1 6V7.2AH 2 LUMACELL RG36A 2.1 6V7.2AH 2 LUMACELL RG36A 2.36 6V4.4AH 2 LUMACELL RG36A 3.2 6V7.2AH 2 LUMACELL RG36A 3.3 6V7.2AH 2 LUMACELL RG36A 3.4 6V7.2AH 2 LUMACELL RG36A 3.6 6V4.4AH 2 LUMACELL RG36A 3.7 6V7.2AH 2 LUMACELL RG36A 3.8 6V7.2AH 2 LUMACELL RG36A 3.8 6V7.2AH 2 LUMACELL RG36A 3.8 6V7.2AH 2	LITHONIA M618 120CS CSA 2.7 6V7.2AH 2 RG36	LITHONIA M618 13.2 6V7.2AH 2 17. 30 18. RG36 2.7 6V7.2AH 2 18. RG36 8VEXIT 8VIRON M618 120CS CSA 12.7 6V7.2AH 2 18. RG36 WEXIT 9. RG36 8V7.2AH 2 18. RG36 8V7.2AH 2 18. RG36 WEXIT 9. RG36 8V7.2AH 2 18. R	LITHONIA M616 120CS CSA 12.7 6V7.2AH 2 RG36 2.7 6V7.2AH 2 RG36 FV7.2AH 2 RG36 FV7	LITHONIA M618 120CS CSA	LITHONIA M618 120CS CSA 3.2 8V7.2AH 2



Emergency Lighting Annual Inspection Report

Chubb Edwards

BUILDING NAME: Winnipeg Transit - Fort Rouge Facility

BUILDING ADDRESS: 421 Osborne Street

INSPECTION DATE: November 13, 2014

INSPECTED BY: Andrew Fenstad

Unit Location	Model#	Loading (Amps)	Battery Size	# of Bulbs	Remote Lamp Locations	Exit Sign Locations	AC Power (Y/N)	Load Test (Mins)	Charger Functional (Y/N)	Pass	Fail	Notes
#110 - TRACK 36 NORTH	M618	3	6V7AH	2			Y	30	Y	PASS		
#111 - TRACK 36 NORTH	M618	3	6V7AH	2			Y	30	Y	PASS		
#112 - TRACK 36 NORTH	M618	3	6V7AH	2			Y	30	Y	Pass		
#113 - TRACK 36 NORTH CORNER	M618	3	6V7AH	2			Y	30	Y		Fail	D1
#105 - TRACK 25 NORTH CORNER	M618	3	6V7AH	2			Y	30	Y		Fai)	D1
#104 - TRACK 25 NORTH	M618	3	6V7AH	2			Y	30	Y	-	Feil	
#103 - TRACK 25 NORTH	M618	3	6V7AH	2			Y	30	Y	Pass		
#102 - TRACK 25 NORTH CENTRE												NOT TESTED
#101 - TRACK 25 SOUTH CENTRE	M618	3	6V7AH	2			Y	30	Y		Fail	
#100 - TRACK 25 SOUTH	M618	3	6V7AH	2			Y	30	Y	Pass		
#99 - TRACK 25 SOUTH	M618	3	6V7AH	2			Y	30	Y		Fail	D1
#98 - TRACK 25 SOUTH CORNER												NOT TESTED
#97 - TRACK 24 NORTH CORNER	M618	3	6V7AH	2			Υ	30	Y	Pass		
#96 - TRACK 24 NORTH	M618	3	6V7AH	2			Y	30	Y	Pass		
#95 - TRACK 24 NORTH CENTER	M618	3	6V7AH	2			Y	30	Y	Pass		-
#94 - TRACK 24 CENTER	M618	3	6V7AH	2			Y	30	Y	Pass		
#93 - TRACK 24 SOUTH CENTER	M618	3	6V7AH	2			Υ	30	Y	Pass		
#92 - TRACK 24 SOUTH	M618	3	6V7AH	2			Y	30	Υ	Pass		
#91 - TRACK 24 SOUTH CORNER	M618	3	6V7AH	2			Υ	30	Υ	Pass		
#90 - TRACK 13 NORTH CORNER	M618	3	6V7AH	2			Υ	30	Y		Fail	D1
#89 - TRACK 13 NORTH	M618	3	6V7AH	2	a.v.a.t		Y	30	Y	Pass		
#88 - TRACK 13 NORTH CENTER	M618	3	6V7AH	2			Υ	30	Y	Pass		
#87 - TRACK 13 SOUTH CENTER	M618	3	6V7AH	2			Y	30	Y	Pass		



Emergency Lighting Annual Inspection Report

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Heist continu		ling ps)	y e	of Bulbs			swer ()	rest (s)	ger onal			
Unit Location	Model #	Loading (Amps)	Battery Size	# of B	Remote Lamp Locations	Exit Sign Locations	AC Power (Y/N)	Load Test (Mins)	Charger Functional (Y/N)	Pass	Fail	Notes
#63 - B SECTION SOUTH CORNER	M618	3	6V7AH	2			Y	30	Y		FAIL	D1
#62 - SERVICE BAY NORTH	M618	3	6V7AH	2			Y	30	Y	PASS		
#61 - SERVICE BAY NORTH CENTER	M618	3	6V7AH	2			Y	30	Y		FAIL	D1
#80 - SERVICE BAY CENTER	M618	3	6V7AH	2			Y	30	Y	PASS		
#59 - SERVICE BAY SOUTH CENTER	M618	3	6V7AH	2			Y	30	Y	PASS	 	
#58 - SERVICE BAY SOUTH	M618	3	6V7AH	2			Y	30	Y	PASS		
#57 - TREASURY												NOT TESTED
#56 - MECHANICAL ROOM												NOT TESTED
#S5 - GAS UTILITY ROOM	M618	3	6V7AH	2			Y	30	Y		FAIL	D1
#54 - ELECTRICAL ROOM												NOT TESTED
#53 - TUNNEL												NOT TESTED
#127 - STAIRWELL NEAR ELECTRICAL ROOM												NOT TESTED
BUILDING A							1					
TRAFFIC SERVICES												
#20 - SIGN STORES												NOT TESTED
#21 - SIGN FAB												NOT TESTED
#22 - STORAGE AND HANDLING EAST												NOT TESTED
#23 - STORAGE AND HANDLING WEST												NOT TESTED
24 - METER REPAIR												NOT TESTED
#25 - CLASSROOM							1					NOT TESTED
1017 - HALL TO TRAFFIC SERVICES	RG36	3	6V7.2AH	2			Y	30	Y		FAIL	D1
#116 - MENS WASHROOM BY TRAFFIC SERVICES	RG36	2.9	6V7.2AH	2			Y	30	Y	PASS		
#118 - HALL TO RADIO SHOP	RG36 W/EXIT SIGN	3.4	6V7.2AH	2		WITH UNIT	Y	30	Y		FAIL	D1





Automatic Sprinkler Systems

1 of 9

Water-Based Fire Protection Systems, 2008 Edition	
Date: Nov 17 2015 Inspector: Bart Dlugosz Inspector SP/W	/FD#: 223/792
Property Name: Winnipeg Transit Fort Rouge	
Tenant Name: Building "B"	
Address: 421 Osborne Street	
City: Winnipeg Province: MB Postal	Code:
Contact: Alex Vecherya Phone :	
General	
Building "B" Track 25-36 North	
System Designation Track 25-36 North	
Location of sprinkler valve North East Valve Room	
Type of sprinkler system X Wet Dry Deluge	Preaction
Is the building occupied?	X Yes No N/A
Is the system in service?	X Yes No N/A
The valve header room(s) appears to be adequately heated?	X Yes No N/A
The valve header room(s) have a low-temperature alarm?	Yes No X N/A
Is it known that the system(s) is hydraulically calculated?	Yes X No N/A
If yes, is hydraulic information sign provided at valve(s)?	Yes No X N/A
Is there a minimum of 18"clearance between storage/obstructions and the sprinkler deflector?	x Yes No N/A
Do all exterior openings appear to be protected from freezing?	X Yes No N/A
If a hand hose is part of the sprinkler system does it appear to be in good condition?	X Yes No N/A
Confirm that the building has not undergone any alterations/additions since the last	x _{Yes} No N/A
inspection? Explain No Answers / Comments: System appears to be pipe schedule system.	
Explain No Answers / Comments: System appears to be pipe schedule system.	
Water Supply	
Do reservoirs, tanks, or pressure tanks appear to be in good condition?	Yes No X N/A
(Water storage tanks, private fire service mains, etc. are not covered under this inspection.)	
Pumps (Fire Pump(s) are not covered under this inspection.)	,
Is fire pump Diesel Electric Gasoline	X None
When was pump last inspected?	
Does pump appear to be in good condition?	Yes No X N/A
Explain No Answers / Comments:	



Automatic Sprinkler Systems 2 of 9 **Annual Inspection & Tests** Date: Nov 17 2015 Building "B" Track 25-36 North Location: Fire Department Connections (Section 13.7) This section is Not Applicable: FDC Location: S.E corner of building "B" Are identification signs provided and in place? Yes X No N/A The connections are visible and accessible? X Yes No N/A Couplings or swivels are not damaged and rotate smoothly? X Yes No N/A Plugs or caps are in place and undamaged? Yes No X N/A Gaskets are in place and in good condition? X Yes No N/A The check valve is not leaking? Yes No Х N/A The automatic drain valve is in place and appears to be working and in good condition? Yes No N/A The connection clapper(s) is in place and appears to be operating properly? X Yes No N/A Explain No Answers / Comments: Located on the street. There is a valve pit near FDC and was not inspected during this inspection. Fire department connection feeds building "B" eastside. General Condition, Inspected From Floor Level (Section 5.2) This section is Not Applicable: Sprinkler heads appear to be in good condition? (Not corroded, loaded, painted, damaged) X Yes No N/A Piping appears to be in good condition? (Not damaged, leaking, corroded, bent) X Yes No N/A Hangers or Braces appear to be in good condition? (Not damaged, loose, rusted, missing) X Yes No N/A Devices, valves and gauges appear to be in good condition? X Yes No N/A Is stock of spare sprinklers available along with appropriate sprinkler wrench(s)? Yes No N/A Explain No Answers / Comments: Sprinkler Testing (Section 5.3) This section is Not Applicable: All sprinklers installed have been manufactured after 1920? X Yes No N/A Standard response sprinklers are less than fity (50) years old? X Yes No N/A Fast response sprinklers are less than twenty (20) years old? Yes No X N/A Extra high (325 °F or higher) sprinklers have been tested at five (5) year intervals? Yes No X N/A Dry sprinklers are less than ten (10) years old? Yes No X N/A (Sprinklers that do not meet the above criteria are required to be replaced or representative samples from one or more sample areas shall be tested. Test procedures shall be repeated at various intervals as stated in NFPA 25) Explain No Answers / Comments:



Automatic Sprinkler Systems

3 of 9

		Ar	nnuai ir	ispection & i	esis						
Date:	Nov 17 201	<u>5</u> Lo	ocation:	Building "B" T	rack 25-36 No	orth					
Gauges	(Section 5.3.2)		This	s section is No	t Applicable	:				
			(5) years or tes	ted every five (5) years by co	mparison with	a calibrated	gauge.				
				ne full scale shall be recalibra							
	are less than fiv				2.0	Yes X	No N/A				
Gauges	have been com	pared agains	st a calibrated g	auge and are within three (3)) percent?	Yes	No X N/A				
Gauges	have been repl	aced during t	his annual insp	ection?		Yes X	NoN/A				
Explain	No Answers / C	omments:	Gauges date	ed 2009 (x2) Should be repl	laced.						
Main Dr	ain Test (Secti	ion 13.2.5)		This	s section is No						
(All read	lings should be	from the sup	ply pressure lov			This Yea	r Last				
Record	the static water	supply press	ure with no flow	<i>i</i> .	Static PSI Before						
Open th	e main drain an	d allow water	flow to stabiliz	e. Record the pressure.	Residual PSI	65					
Close th	e main drain sl	owly. Record	I the pressure a	L. Garage Hare eters	Static PSI After	70					
What da	ate was the last	main drain te	est done?	2014 Size of	the Main Drain?	2"					
Explain	No Answers / C	comments:	Drain does	not handle test.							
Wet Sys	stem (Section	13.4)		This	s section is No	ot Applicable	e: 🔲				
The gau	iges indicate no	rmal water pi	ressure is being	g maintained?)	Yes	No N/A				
Does al	arm valve appe	ar to be free	of physical dam	age?)	Yes	No N/A				
All trim	valves are in the	e appropriate	open or closed	position?)	Yes	No N/A				
The ala	rm drains are no	ot leaking?)	Yes	No N/A				
Wet sys	tem is equipped	d with a tail-e	nd anti-freeze s	system(s)?		Yes X	No N/A				
Anti-free	eze solution rea	ding is at wha	at freezing poin	t?							
Anti-free	eze solution free	ezing point ap	pears to be sat	tisfactory?		Yes	No X N/A				
Explain	No Answers / C	Comments:									
Wet Sy	stem Test Tabl	le for Wet Al	arm Valve	This	s section is N	ot Applicable	e:				
Size	Make	Model	Serial #	Locatio	n of Inspector	rs Test					
6''	Reliable	E	7851	N	North OHD 26						
(Ensure	alarm company	y is notified to	o avoid false ala	arms.)							
Test ala	ırm valve water	flow alarm sv	witch by opening	g inspector's test valve.	120 psi	34 sec	70 psi				
Wet Sy	stem Low-Wat	er-Pressure	Switch			_					
Is the w	et system equip	ped with a lo	w-water-pressu	re switch?		Yes X	No N/A				
				ire slowly. Confirm operation			ord water				
pressur	e at which low p	ressure swite	ch activated. C	lose drain test and pump sys			1				
and res	and restore to service. Record pressure. PSI										
Explain	No Answers / C	Comments:	System Doe	es not have a Low Pressure	e switch. One	should be in	stalled.				



Autom	atic Sprinkler	System	าร				4 of 9
		A	nnual Ir	nspection &	Tests		
Date:	Nov 17 2015	L	ocation:	Building "I	B" Track 25-36	North	
Alarm va every five Has the If Yes, w If No, wa	e (5) years unless	ociated s tests ind been co nspection ection do	trainers, filters, a icate a greater fi mpleted within the completed? one during this a	and restriction orfices sha requency is necessary. he last four (4) years? Unknown		internally Yes Yes	No
	tem Vane Type F				This section is	Not Applicab	ole: X
	er-now alarm by o Switch Zone Designa			nd record time that alarm n of Inspectors Test	Static PSI	Alarm Time	Residual PSI
	e North Main Inco			eader / Various	Static PSI	32s	Residual PSI
Does va All trim v The inte	e System (Section live appear to be free valves are in the appropriate chamber card with the last the	ee of phy opropriate is not lea	e open or closed aking?		This section is the valve?	Yes Yes Yes Yes	No
Size	Make	Model	Serial #	Loc	ation of Inspec	tore Teet	
Size	IVIANE	WIOUEI	Geriai #	Loc	anon or maper	7.013 1631	
Explain	No Answers / Com	nments:	y 1944				



Automatic Sprinkler Systems 5 of 9 **Annual Inspection & Tests** Date: Nov 17 2015 Location: Building "B" Track 25-36 North Dry System Low-Air-Pressure Switch Is the dry system equipped with a low-air-pressure switch? Yes No X N/A If Yes, close the water supply valve isolate quick opening device if one is present and carefully open drain test valve to reduce air pressure slowly. (Do not reduce air pressure sufficiently to trip the dry pipe valve.) Confirm operation of low pressure switch, record air pressure at which low pressure switch activated. Close drain test valve, allow air pressure to rise to normal, then slowly open quick opening device and water supply valve. Record pressure. **PSI** Explain No Answers / Comments: Dry Pipe System Trip Test Table This section is Not Applicable: Every three (3) years and whenever the system is altered, the dry pipe valve shall be trip tested with the control valve fully open and the quick-opening device, if provided in service. During the years when full flow testing is not required, the dry pipe valve shall be trip tested with the control valve partially open. Has the dry pipe valve been tripped with the control valve fully open in the last two (2) years. If yes, what year was the fully open trip test conducted? No N/A Yes If No, is the fully open trip test being conducted during this annual inspection? No Yes N/A Normal air pressure as per the Manufacturers recommendation PSI Water Air Time to Trip Point Time Water To Trip test the dry pipe valve. Record the time from opening PSI PSI Air PSI Trip Inspectors Test the inspectors test valve until the dry pipe valve trips. Did the valve and alarm operate properly? Yes No N/A Dry pipe valve interior appears clean and satisfactory? Yes No N/A Quick-opening device operated properly? Yes No N/A Is a sign provided at the dry pipe valve indicating the number of auxiliary drains and location of each auxiliary drain? No N/A Were all identified auxiliary drains drained during this inspection? Yes No N/A Air supply appears to be adequate? N/A Yes No Automatic air pressure maintenance device appears to operate properly? N/A Yes No Was the dry pipe valve filled with priming water after it was trip tested and reset? Yes No N/A Explain No Answers / Comments: Dry Pipe System Inspection (Section 13.4.4.1.6) This section is Not Applicable: Dry pipe valve strainers, filters, and restriction orfices shall be inspected internally every five (5) years unless tests indicate a greater frequency is necessary. Has the internal inspection been completed within the last four (4) years? No N/A If Yes, what year was the inspection completed? If No, was the internal inspection done during this annual inspection? N/A No Explain No Answers / Comments:



Automa	tic Spri	nkler System	IS				14.50			6 of	9		
	Annual Inspection & Tests												
Date: _	Nov 17	2015 L	ocation:	- Е	Buil	ding "B" Trac	k 25-36 N	North	-7G		_		
Preaction	/ Deluge	System				This se	ection is I	Not Appli	cable:	X	- 12		
Does valve	e appear	o be free of phy	sical damage?					Yes	No	\Box	N/A		
All trim val	ves are ir	the appropriate	open or closed pos	sition?				Yes	No	\Box	N/A		
The valve	seat is no	t leaking?						Yes	No		N/A		
The electr	ical comp	onents are in se	rvice?				i elle el	Yes	No		N/A		
Size	Make	Model	Serial #	1		Strike Throug	jh What D	oes Not	Apply				
				Deluge		Preaction	Closed	Nozzles	Ope	en Noz	zles		
Supervise	d Preact	ion Low-Air-Pre	essure Alarm										
Is the prea	ction sys	em equipped wi	th a low-air-pressur	e alarm?				Yes	No	\Box	N/A		
If Yes, clos	se the wa	ter supply valve	and carefully open	drain test v	alv	e to reduce air	pressure	slowly.					
the state of the s			larm, record air pre				activation	. Close o	Irain				
test valve,	allow air	pressure to rise	to normal, then ope	n water su	opl	y valve.			1 7 11		PSI		
Preaction	/ Deluge	System Trip T	est Table (13.4.3.2	.2.2)		This se	ection is l	Not Appl	icable:	Х			
			e trip tested annuall										
			rge cannot occur un								- 1		
			cheduled shutdown rotecting freezers s				and the second s		ed 3				
		nto the piping in		nan be mp	les	teu iii a maiiii	er that doe	25 1101			PSI		
			E 1001 FC			Duint d		n of wale		4:			
Water PSI	Air PSI	Trip Point Air PSI	Number of detector to trip Preaction		¹	Briet a	escriptio	n or valv	e opera	tion	_		
7 177	100		to any monomo										
Did the va	lve and al	arm operate pro	perly?			7		Yes	No	П	N/A		
Were all n	nanual ac	tuation devices of	operated?				1	Yes	No	\Box	N/A		
For deluge	e systems	did the water di	scharge pattern app	ear to be s	ati	sfactory?		Yes	No		N/A		
Air supply	appears t	o be adequate?					Ī	Yes	No		N/A		
Automatic	air press	ure maintenance	device appears to	operate pr	оре	erly?	Ī	Yes	No		N/A		
Was the p	reaction v	alve filled with p	riming water after it	was trip te	ste	d and reset?	Ī	Yes	No		N/A		
Explain No	Answers	comments:	<u> </u>	<u> </u>		art is a line				71			
Preaction	/ Deluge	System Mainte	enance (Section 13	3.4.3.1.7.1)		This se	ection is	Not Appl	icable:	Х			
Interior cle	aning and	d parts replacem	ent or repair shall b	e permitte									
without re completed			the valve cannot be	reset exte	rna	lly the cleaning	g, replace	ment or r	epair sh	all be			
			, thus the inspection	n is done d	urir	ng this inspecti	ion?	Yes	No		N/A		
			us has the inspection					y 100 m yr					
			e inspection comple					Yes	No		N/A		
			ne during this annu	_	n?	1.11	·	Yes	No		N/A		
		s / Comments:		20			<u>.</u>	1					



Protection, Prevention, Perf	ormance.													
Automatic Sprinkler S	systems											7 c	of 9	
	An	nua	I Inspection	n 8	<u> </u>	Гes	ts							
Date: Nov 17 2015	Loc	ation: _	- Buil	lding	ı "B'	' Tracl	25-3	6 No	orth					_
Control Valves						11.5		11-11	7,15					
Are all control valves identif	ed?							Y	'es	Х	No		N/A	į.
Are all control valves locked	, sealed o	r equippe	ed with a supervisory sv	vitch'	?			X	'es		No		N/A	ı
Are all control valves in the	normal ope	en or clo	sed postion?					X	'es		No		N/A	i
Are all control valves free from	om externa	al leaks?						X Y	'es		No		N/A	i
During this inspection was e	ach contro	ol valve c	perated through its full	rang	e?			X	'es		No		N/A	
If applicable post indicator v								Y	'es		No	X	N/A	ĺ.
If applicable post indicator &	OS&Y va	lves were	e backed 1/4 turn from	fully	oper	n positi	on?	X Y	'es		No		N/A	ı
Control Valve Table														
Control Valve Function	# of Valves	Size	Type of Valve		Or	oen		Sec	urec	i		Sic	gns	
System control valve	1	6"	G.O.B	Х	Y		1 X	_		N	х	Y	,	N
Main Incoming North	1	8"	G.O.B	Х	Υ	1	1 X	Y		N		Υ	Х	N
Hydrant Iso	1	6"	G.O.B	Х	Υ	1	1 X	Y		N		Υ	х	N
					Υ	1	1	Y		N		Υ		N
					Υ	1	1	Y		N		Υ		N
					Υ	1	1	Υ		N		Υ		N
				15.50	Υ	1	1	Υ		N		Υ		N
					Υ	1	1	Y		N		Υ		N
					Υ	1	1	Y		N		Υ		N
					Υ	1	1	Υ		N		Υ		N
Backflow Prevention Asse	mblies (S	ection 1	3.6)	Т	his	sectio	n is N	lot A	ilgg	cabl	e:	Х		
All backflow preventers insta	alled in fire	protection	on system piping shall b									е	1	
following:	ho oondua	tod at the	a avetam damand inclu	. al: a a	b						la carla			
 A forward flow test shall inside hose stations are local 	ated downs	stream o	e system demand, inclu f the backflow prevente	iaing r.	nos	e strea	m ae	mano	a, wr	iere	nyara	ants	or	
(2) A backflow performance					ction	, shall	be co	nduc	cted a	at the	e cor	nple	tion	
of the forward flow test.										-			1029	
For backflow preventers size the test outlet is of a size to				ptab	le to	condu	ct wit	hout	mea	surin	ig flo	W, W	here	9
Where connections do not p				ed at	the	maxim	um fl	ow ra	ate po	ossik	ole.			
Connections do exist to peri							Γ		es.		No		N/A	
A forward flow test was cond				se s	trea	m?	F		es		No		N/A	
The forward flow test results			10 IT				F		es		No		N/A	
If no connections are availal						possi	ole?		es		No		N/A	
Was there a way of measuri									'es		No		N/A	
What flow rate was measure	177							_			I .		The section of	

No

Was the backflow preventer tested with a separate report to check for no backflow?



Automatic Sprinkler Systems

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Date:	Nov 17 2015 Location: Building "B" Track 25-36 North	
Obstr	ruction Investigation (Section 14.2.1)	
An ins	spection of piping and branch line conditions shall be conducted every five (5) years by opening a flushing	ng
conne	ection at the end of one main and by removing a sprinkler toward the end of one branch line for the purp	ose of
	ecting for the presence of foreign organic and inorganic material.	
	visual obstruction investigation of piping been conducted within the last four (4) years? Yes X Ns, what year was the investigation completed? Unknown	N/A
If No, v	was the visual obstruction investigation conducted during this annual inspection?	lo X N/A
		lo X N/A
		lo X N/A
Explair	in No Answers / Comments: Unknown when last Obstruction invesitgation was done and should	Ŀ
be do	one.	
	the property of the second of	
	iencies (As per NFPA 25 - 2008)	
The sy	system has the following deficiencies that should be reviewed with the authority having jurisdiction to determine	ermine
if corre	rections should be made. D1. Obstruction investigation of piping should be done every 5 years	•
D2	Internal Inspection of alarm valve and components should be done every 5 years.	
D3	Gauges are older then 5 years and should be replaced.	
D4	All system control valves should be identified and "keep open" signs should be installed.	
D5	Fire department connection should have a identification sign.	
D6		
D7 -		
D8		
D9		
D10		
D11 -	. The second of	
D12	19972 19 19 19 19 19 19 19 19 19 19 19 19 19	7.7
D13	The 12 february and the 12 and the 15 and the 15 and the 15 and the 15 and 16 a	
D14		
D15		
D16	and the second of the second o	
D17		
D18		
D19		
D20		
D21		
D22 -		
D23 -	The state of the s	
-	(Use back of page if further room is needed)	
	(Ose back of page if fulfiler footil is fleeded)	



Automatic Sprinkler Systems

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		Ailliaai III3	pection & rests
Date: _	Nov 17 2015	Location:	Building "B" Track 25-36 North
We recom and are p	rovided for information	based on this annual inspo on only. Corrections of the	ection and test. These recommendations are not deficiencies ese recommendations are dependent on the owner or authority
l			
		should be installed to proper to the proper in the proper in the proper in the properties the pr	
R4.	illis silould be clea	ned out to better nandle	drain test.
R5.			
R6.			
R7.			
R8.			
R9			ge if further room is needed)
access, co			e building (monitoring company, special codes, keys
Unable to	confirm a lot of th	e Deficiencies previousl	y written up due to low lighting.
whether of failure, and and condit confirmation change of	operational test insp r not the system med d any subsequent dation of equipment at on that system install occupancy.	ets current code or standa amage or loss consequent actual time of testing. Ow	e a review or analysis of the system design to determine and s. BDR Services Ltd. is not responsible for any equipment stial or direct. BDR Services Ltd. is merely verifying operation are responsible for system installation, maintenance and et any time there are alterations, additions, renovations and
Inspector:			Inspection Date: Nov 17 2015
Licence SI	P/WFD #: 223/79	2	Owner Representative:
Signature:	Band		Signature:



Automatic Sprinkler Systems

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As	• No. 10 (1997)		e Inspection, Testi etection Systems,			ance of		
Date: Nov 17 2	2015 Inspe	ector: Ba	rt Dlugosz	Inspec	tor SP/W	/FD#:	223/7	92
Property Name: Winn	ipeg Transit				100			
Tenant Name: Buildin	g "B"							
Address: 421 Os	borne Street							
City: Wi	nnipeg	Province:	MB		Postal	Code:		
1.50	echerya			Phone	: <u> </u>			
General							ulei -	
Building	Building	g "B" Service Ba	у	4 9				
System Designation	Service	Bay						
Location of sprinkler valv	e South V	Vest corner of bu	uilding in Maintena	ance Bay	/	-11		-
Type of sprinkler system	7	C Wet	Dry		Deluge		Preacti	on
Is the building occupied?						X Yes	No	N/A
Is the system in service?						X Yes	No	N/A
The valve header room(s	s) appears to l	oe adequately hea	ated?			X Yes	No	N/A
The valve header room(s	s) have a low-	temperature alarn	n?			Yes	No	X N/A
Is it known that the syste	m(s) is hydrau	ulically calculated	?			Yes	X No	N/A
If yes, is hydraulic inform	ation sign pro	vided at valve(s)?	>		1	Yes	No	X N/A
Is there a minimum of 18 deflector?	3"clearance be	etween storage/ob	structions and the	sprinkler	M	x Yes	No	N/A
Do all exterior openings	appear to be p	protected from fre	ezing?			X Yes	No	N/A
If a hand hose is part of Confirm that the building inspection?	•	•				x Yes	No No	N/A N/A
Explain No Answers / Co	omments:	System appears	s to be pipe sched	ule syste	em.			
						1 51	E	
Water Supply								
Do reservoirs, tanks, or	oressure tank	s appear to be in	good condition?		vi [Yes	No	X N/A
(Water storage tanks, pr				r this insr	L nection)			
				tine mop	,000,071.,7			
Pumps (Fire Pump(s) ar Is fire pump	e not covered	Diesel	Electric		Gasoline	. [None	
When was pump last ins	nected?				10000			
Does pump appear to be	•	lition?	-			Yes	No	X N/A
Explain No Answers / Co					,			
LAPIGIT TO A HOHOTO FOR								



Automotic Sprinkler Systems		0.50
Automatic Sprinkler Systems		2 of 9
Annual Inspection & Tests		
Date: Nov 17 2015 Location: Building "B" Service	Bay	
Fire Department Connections (Section 13.7) This section is	s Not Appli	cable:
FDC Location: Across the street of 520 Brandon street	91"	
Are identification signs provided and in place?	Yes	X No N/A
The connections are visible and accessible?	X Yes	No N/A
Couplings or swivels are not damaged and rotate smoothly?	X Yes	No N/A
Plugs or caps are in place and undamaged?	Yes	X No N/A
Gaskets are in place and in good condition?	X Yes	No N/A
The check valve is not leaking?	Yes	No X N/A
The automatic drain valve is in place and appears to be working and in good condition?	Yes	No X N/A
The connection clapper(s) is in place and appears to be operating properly?	X Yes	No N/A
Explain No Answers / Comments: Located on the street. There is a valve pit near F	DC and wa	as not
inspected during this inspection. Fire department connection feeds building "A" an	d westside	of building
"B". FDC is missing ONE 2.5" cap.		
General Condition, Inspected From Floor Level (Section 5.2) Sprinkler heads appear to be in good condition? (Not corroded, loaded, painted, damaged) Piping appears to be in good condition? (Not damaged, leaking, corroded, bent) Hangers or Braces appear to be in good condition? (Not damaged, loose, rusted, missing) Devices, valves and gauges appear to be in good condition? Is stock of spare sprinklers available along with appropriate sprinkler wrench(s)? Explain No Answers / Comments:	X Yes	No N/A No N/A No N/A No N/A No N/A No N/A
Sprinkler Testing (Section 5.3) This section is	s Not Appli	cable:
All sprinklers installed have been manufactured after 1920?	X Yes	No N/A
Standard response sprinklers are less than fity (50) years old?	X Yes	No N/A
Fast response sprinklers are less than twenty (20) years old?	Yes	No X N/A
Extra high (325 °F or higher) sprinklers have been tested at five (5) year intervals?	Yes	No X N/A
Dry sprinklers are less than ten (10) years old?	Yes	No X N/A
(Sprinklers that do not meet the above criteria are required to be replaced or representativ	e samples i	
more sample areas shall be tested. Test procedures shall be repeated at various intervals	1.5	
Explain No Answers / Comments:		apparation occurred to \$10.00 to
· La 19-11 12 13 14 15 15 15 15 15 15 15 15 15 15 15 15 15		



Auton	natic Sprinkl	er System	S				3 of 9				
	•	1. 7 2		nspection & 1	Tests						
Date:	Nov 17 201		ocation:	-	B" Service Bay						
Gauges	(Section 5.3.2	?)		Th	is section is Not A	pplicable:	5 105				
1000		972	(5) years or tes	sted every five (5) years by		a construit of the second	uge.				
				he full scale shall be recalib			ŭ				
_	are less than fi					es X N	o N/A				
				gauge and are within three (3) percent? Y	es N	o X N/A				
Gauges	have been rep	laced during t	his annual insp	ection?	Y	es X N	o N/A				
Explain No Answers / Comments: Gauges dated 2009 (x2) Should be replaced.											
Main D	rain Test (Sect	ion 13.2.5)		Th	is section is Not A						
(All read	lings should be	from the sup	ply pressure lo	wer gauge)		This Year	Last				
Record	the static water	supply press	ure with no flov	٧.	Static PSI Before	70					
				e. Record the pressure.	Residual PSI	69					
				fter gauge has stabilized.	Static PSI After	70					
What da	ate was the last	main drain te	est done?	2014 Size o	of the Main Drain?	2"					
Explain No Answers / Comments: Drain does not handle test.											
The gau Does ala All trim The ala Wet sys Anti-free	Wet System (Section 13.4) The gauges indicate normal water pressure is being maintained? Does alarm valve appear to be free of physical damage? All trim valves are in the appropriate open or closed position? The alarm drains are not leaking? Wet system is equipped with a tail-end anti-freeze system(s)? Anti-freeze solution reading is at what freezing point? Anti-freeze solution freezing point appears to be satisfactory? This section is Not Applicable: X Yes No N/A X Yes No N/A X Yes No N/A										
Explain	No Answers / C	Comments:									
Wet Sys	stem Test Tab				is section is Not A						
Size	Make	Model	Serial #	Locati	on of Inspectors T	est					
8''	Grinnell	Α	N/A	N.E c	orner of service ba						
(Ensure	alarm compan	y is notified to	avoid false ala	arms.)			lesidual PSI				
Test ala	rm valve water	flow alarm sv	vitch by opening	g inspector's test valve.	120 psi 3	36 sec	70 psi				
Is the we	•	pped with a lo valve to reduc	w-water-pressu e water pressu	re switch? re slowly. Confirm operatio lose drain test and pump sy	n of low pressure s						
•	ore to service.				Record pressur		PSI				
	No Answers / C	Comments:	System Doe	es not have a Low Pressur							



Automatic Sprinkler Systems 4 of 9 **Annual Inspection & Tests** Date: Nov 17 2015 Location: **Building "B" Service Bay** Wet System Inspection (Section 13.4.1.2) This section is Not Applicable: Alarm valves and their associated strainers, filters, and restriction orfices shall be inspected internally every five (5) years unless tests indicate a greater frequency is necessary. Has the internal inspection been completed within the last four (4) years? If Yes, what year was the inspection completed? If No, was the internal inspection done during this annual inspection? Explain No Answers / Comments: Unknown when last wet system inspection was and should be done. Wet System Vane Type Flow Alarms This section is Not Applicable: X Test water-flow alarm by opening inspector's test and record time that alarm registers. Flow Switch Zone Designation Location of Inspectors Test Static PSI Alarm Time Residual PSI Dry Pipe System (Section 13.4.4) X This section is Not Applicable: Does valve appear to be free of physical damage? Yes No N/A All trim valves are in the appropriate open or closed position? Yes No N/A The intermediate chamber is not leaking? Yes No N/A A tag or card with the last trip date and who conducted the test is attached to the valve? Yes No N/A Size Make Model Serial # Location of Inspectors Test Explain No Answers / Comments:



Protection, Prevention, Performance, Automatic Sprinkler Systems 5 of 9 **Annual Inspection & Tests** Date: Nov 17 2015 Location: Building "B" Service Bay Dry System Low-Air-Pressure Switch No X N/A Is the dry system equipped with a low-air-pressure switch? Yes If Yes, close the water supply valve isolate quick opening device if one is present and carefully open drain test valve to reduce air pressure slowly. (Do not reduce air pressure sufficiently to trip the dry pipe valve.) Confirm operation of low pressure switch, record air pressure at which low pressure switch activated. Close drain test valve, allow air pressure to rise to normal, then slowly open quick opening device and water supply valve. Record pressure. PSI. Explain No Answers / Comments: Dry Pipe System Trip Test Table This section is Not Applicable: Every three (3) years and whenever the system is altered, the dry pipe valve shall be trip tested with the control valve fully open and the guick-opening device, if provided in service. During the years when full flow testing is not required, the dry pipe valve shall be trip tested with the control valve partially open. Has the dry pipe valve been tripped with the control valve fully open in the last two (2) years. If yes, what year was the fully open trip test conducted? N/A Yes No If No, is the fully open trip test being conducted during this annual inspection? Yes No N/A Normal air pressure as per the Manufacturers recommendation PSI **Time Water To** Water Air Time to Trip Point Trip test the dry pipe valve. Record the time from opening PSI PSI Trip Air PSI Inspectors Test the inspectors test valve until the dry pipe valve trips. Yes No N/A Did the valve and alarm operate properly? Dry pipe valve interior appears clean and satisfactory? Yes No N/A Quick-opening device operated properly? Yes N/A No Is a sign provided at the dry pipe valve indicating the number of auxiliary drains and location of each auxiliary drain? No N/A Were all identified auxiliary drains drained during this inspection? N/A Yes No Air supply appears to be adequate? Yes No N/A Automatic air pressure maintenance device appears to operate properly? Yes No N/A Was the dry pipe valve filled with priming water after it was trip tested and reset? Yes N/A No Explain No Answers / Comments: Dry Pipe System Inspection (Section 13.4.4.1.6) This section is Not Applicable: Dry pipe valve strainers, filters, and restriction orfices shall be inspected internally every five (5) years unless tests indicate a greater frequency is necessary. Has the internal inspection been completed within the last four (4) years? No N/A If Yes, what year was the inspection completed? If No, was the internal inspection done during this annual inspection? N/A Explain No Answers / Comments:



Protection	ii. Freven	tion. I	remormance	·					
Automa	tic Spri	nkle	er System	S		***************************************	6 of 9		
			A	nnual Ins	spection	n & Te	sts		
Date: _	Nov 17	2015	<u> </u>	ocation:	. 9	Building "B" S	Service Bay		
Preaction	/ Deluge	Sys	tem			This se	ection is Not Applicable: X		
Does valv	e appear	to be	free of phys	sical damage?			Yes No N/A		
All trim va	lves are i	n the	appropriate	open or closed po	sition?		Yes No N/A		
The valve	seat is n	ot lea	king?				Yes No N/A		
The electr	ical comp	oner	nts are in ser	vice?			Yes No N/A		
Size	Make		Model	Serial #		Strike Throug	gh What Does Not Apply		
					Deluge	Preaction	Closed Nozzles Open Nozzles		
s the preaction system equipped with a low-air-pressure alarm? Yes No N/A Yes, close the water supply valve and carefully open drain test valve to reduce air pressure slowly. Confirm operation of low pressure alarm, record air pressure of low pressure alarm activation. Close drain est valve, allow air pressure to rise to normal, then open water supply valve. Preaction / Deluge System Trip Test Table (13.4.3.2.2.2) This section is Not Applicable: The preaction / deluge valve shall be trip tested annually as per the manufacturer's instructions. Where he nature is such that water discharge cannot occur unless protected equipment is shutdown, a full flow est shall be conducted at the next scheduled shutdown. In all cases the test frequency shall not exceed 3									
years. Pro	eaction o	r delu into t		rotecting freezers s the freezer. - Number of detect	shall be trip te	The state of the s			
Were all r For delug Air supply Automatic	PSI PSI Air PSI to trip Preaction system Did the valve and alarm operate properly? Were all manual actuation devices operated? For deluge systems did the water discharge pattern appear to be satisfactory? Air supply appears to be adequate? Automatic air pressure maintenance device appears to operate properly? Was the preaction valve filled with priming water after it was trip tested and reset? Yes No N/A N/A N/A								
Preaction Interior cle without re completed The valve The valve (4) years? If No, was	n / Deluge eaning ar moval of d annually requires can be r If Yes,	e Sys ad par the fa /. interr eset e what ;	tem Mainte ts replacem aceplate. If the nal resetting externally the year was the		be permitted en ereset extern on is done dur on been done eted?	every five (5) ye ally the cleaning ing this inspect within the last			





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Are all control valves locked, sealed or equipped with a supervisory switch? Are all control valves in the normal open or closed postion? Are all control valves free from external leaks? Yes X No	N/A N/A N/A N/A N/A N/A	N/ N/ N/ N/	No No	_	_	_	/ice	Serv	"B" (ing '	Build	E	ation: _	Loc	Date: Nov 17 2015
Are all control valves identified? Are all control valves locked, sealed or equipped with a supervisory switch? Are all control valves in the normal open or closed postion? Are all control valves free from external leaks? Yes X No No No No No No No No No	N/A N/A N/A N/A N/A	N/ N/ N/ N/	No No	_	_	\neg									
Are all control valves locked, sealed or equipped with a supervisory switch? Are all control valves in the normal open or closed postion? Are all control valves free from external leaks? Yes No No No No No No No No No N	N/A N/A N/A N/A N/A	N/ N/ N/ N/	No No	_	_	\neg_{Y}									Control Valves
Are all control valves in the normal open or closed postion? Are all control valves free from external leaks? X Yes No	N/A N/A N/A N/A	N/ N/ N/	No	X										d?	Are all control valves identified
Are all control valves free from external leaks?	N/A N/A N/A	N/N/			es	Y				?	vitch?	ed with a supervisory sw	equippe	sealed o	Are all control valves locked,
The state of the s	N/A N/A	N/	No		es	KY						sed postion?	en or clos	ormal ope	Are all control valves in the no
During this inspection was each control valve operated through its full range? X Yes No 1	N/A	-			es	KY	7						al leaks?	n externa	Are all control valves free from
		1000	No L		es	K Y				e?	range	perated through its full	l valve o	ch contro	During this inspection was ea
If applicable post indicator valves were opened until spring tension was felt? Yes No X	N/A	X N	No Z		es	Y				?	s felt	until spring tension was	opened	ves were	If applicable post indicator val
If applicable post indicator & OS&Y valves were backed 1/4 turn from fully open position? X Yes No 1															
Control Valve Table															Control Valve Table
# of Control Valve Function Valves Size Type of Valve Open Secured Sign	gns	Signs	,	ľ	ured	Sec			en	Ор		Type of Valve	Size	1911 0950	Control Valve Function
System control valve 1 8" OS+Y X Y N X Y N X Y	l N	Y	X	N		Υ	X	N		Υ	Х	OS+Y	8"	1	System control valve
Glycol System ISO 2 2" Ball Valve X Y N Y X N Y	X N	YX		Ν	X	Υ		N		Υ	Х	Ball Valve	2"	2	Glycol System ISO
Y N Y N Y	N	Υ		N		Υ		N		Υ					
Y N Y	N	Υ		N		Υ		N		Υ					
Y N Y N Y	N	Υ		N		Υ		N		Υ					
Y N Y N Y	١	Υ		N		Υ		N		Υ					
Y N Y	N	Υ		N		Υ		N		Υ					
Y N Y N Y	١	Υ		Ν		Υ		N		Υ					
Y N Y N Y	١	Υ		N		Υ		N		Υ					
Y N Y N Y	l l	Υ		N		Υ		N		Υ					
Backflow Prevention Assemblies (Section 13.6) All backflow preventers installed in fire protection system piping shall be tested annually in accordance with the following: (1) A forward flow test shall be conducted at the system demand, including hose stream demand, where hydrants of inside hose stations are located downstream of the backflow preventer. (2) A backflow performance test, as required by the authority having jurisdiction, shall be conducted at the complete of the forward flow test. For backflow preventers sized 2" and under a forward flow test is acceptable to conduct without measuring flow, where the test outlet is of a size to flow the system demand. Where connections do not permit a full flow test, test shall be completed at the maximum flow rate possible. Connections do exist to permit a full forward flow test? A forward flow test was conducted at the system demand, including hose stream? The forward flow test results met the system demand, including hose stream? If no connections are available was a flow test conducted at maximum flow rate possible? Was there a way of measuring the maximum flow rate? Yes X No X Was there a way of measuring the maximum flow rate?															
What flow rate was measured during the maximum flow rate? Was the backflow preventer tested with a separate report to check for no backflow? X No II	N/A	N	No [X		?	flow?	ackf	no b				



Automatic Sprinkler Systems

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Date:		Nov 17 2015	Location:	Building "B" Service Bay
An inconnections of the second in the second	spection ection of the control of th	at the end of one mai for the presence of for obstruction investigati it year was the investig the visual obstruction i obstruction investigati	ch line conditions in and by removing reign organic and on of piping been gation completed? Investigation condition results appear ther flushing investigation investigation.	conducted within the last four (4) years? Yes X No N/A
The s if corr D2	system rection Inter	ns should be made. I rnal Inspection of ala	iciencies that sho O1. Obstructio Irm valve and co	uld be reviewed with the authority having jurisdiction to determine n investigation of piping should be done every 5 years. mponents should be done every 5 years.
D3 D4		ges are older then 5		
D5				tified and "keep open" signs should be installed. a identification sign.
D6				ne 2.5" cap and should be replaced.
D7	Washington Co.			isory tamper switch to monitor valve in open position.
D8				
D9	:	10		Annual Charles and
D10				
D11		- 1 T	16 18 18	The state of the s
D12				ALTHOUGH ONE DE LACTA AND AND AND AND AND AND AND AND AND AN
D13				and the first of t
D14			and the second second	
D15				1880 alaka 1981 alaka 1
D16			1 1	
D17				
D18				
D19				
D20				
D21	_			
D22			V	
D23				
			(Use back o	f page if further room is needed)



Automatic Sprinkler Systems

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	Ailliuai ilispection & rests									
Date:		Location:	Building "B" Service Bay							
We re	are provided for information	pased on this annual in only. Corrections o	inspection and test. These recommendations are not deficiencies of these recommendations are dependent on the owner or authority							
I	-									
R2. R3.	Low pressure switch s									
R3. R4.	Drains should be clear	led out to better nar	ndle drain test.							
R5.										
R6.										
R7.										
R8.										
R9.										
Recor	ral Notes rd any pertinent informations, confined space, etc.) em monitored by Protele	on here with respect to	f page if further room is needed) o the building (monitoring company, special codes, keys							
This is whether failure and confirm	er or not the system meet , and any subsequent dar ondition of equipment at a	ts current code or sta mage or loss consequations otual time of testing.	clude a review or analysis of the system design to determine ndards. BDR Services Ltd. is not responsible for any equipment uential or direct. BDR Services Ltd. is merely verifying operation Owner is responsible for system installation, maintenance and e met any time there are alterations, additions, renovations and							
nspec	ctor: Bart Dlugosz		Inspection Date: Nov 17 2015							
_icenc	e SP/WFD #: 223/792	?	Owner Representative:							
Signat	ure: Bandi		Signature:							





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Annual Inspection & Tests

As per NFPA 25, Standard for the Inspection, Testing, and Maintenance of

	[50]	Water-Based F	ire Protection System	ns, 2008 Edition						
Date:	Nov 17 2015	Inspector:	Bart Dlugosz	Inspector SP/W	/FD#: 223/792					
Property Name:	Winnipeg	Transit Fort Roug	je							
Tenant Name:	Building "B	3"								
Address:	421 Osborn	ne Street								
City:	Winnip	eg Provin	ce: MB	Postal	Code:					
Contact:	Alex Veche	rya		Phone:						
General										
Building		Building "B" Trac	k 13-24 South							
System Designa	ation	Track 13-24 south	1							
Location of sprir	nkler valve	South East Valve	Room							
Type of sprinkle	er system	X Wet	Dry	Deluge	Preaction					
Is the building o	ccupied?				X Yes No N/A					
Is the system in	service?				X Yes No N/A					
The valve head	er room(s) ap	pears to be adequa	tely heated?		X Yes No N/A					
The valve head	er room(s) ha	ve a low-temperatu	re alarm?		Yes No X N/A					
Is it known that the system(s) is hydraulically calculated?										
If yes, is hydraulic information sign provided at valve(s)?										
Is there a minim deflector?	num of 18"cle	arance between sto	rage/obstructions and t	he sprinkler	x Yes No No N/A					
Do all exterior o	penings appe	ear to be protected f	rom freezing?		X Yes No N/A					
			es it appear to be in goo	od condition?	X Yes No N/A					
			alterations/additions si		X Yes No N/A					
Explain No Ans	wers / Comm	ents: System a	ppears to be pipe scl	nedule system.						
Water Supply	anks or pros	euro tanke annear te	o be in good condition?		Yes No X N/A					
800			etc. are not covered ur	25						
				ider tille illepeditori.)						
Is fire pump	ump(s) are no	ot covered under this Diesel	Electric	Gasoline	e X None					
When was pum	np last inspect	ted?		9						
Does pump app	pear to be in g	good condition?			Yes No X N/A					
Explain No Ans	wers / Comm	ents:								



Automatic Sprinkler Systems 2 of 9 **Annual Inspection & Tests** Date: Nov 17 2015 Location: Building "B" Track 13-24 South Fire Department Connections (Section 13.7) This section is Not Applicable: S.E corner of building "B" FDC Location: Are identification signs provided and in place? X No Yes N/A The connections are visible and accessible? X Yes No N/A Couplings or swivels are not damaged and rotate smoothly? Yes No N/A Plugs or caps are in place and undamaged? X Yes No N/A Gaskets are in place and in good condition? X Yes No N/A The check valve is not leaking? Yes No X N/A The automatic drain valve is in place and appears to be working and in good condition? Yes No X N/A The connection clapper(s) is in place and appears to be operating properly? X Yes No N/A Explain No Answers / Comments: Located on the street. There is a valve pit near FDC and was not inspected during this inspection. Fire department connection feeds building "B" eastside. General Condition, Inspected From Floor Level (Section 5.2) This section is Not Applicable: Sprinkler heads appear to be in good condition? (Not corroded, loaded, painted, damaged) X Yes No N/A Piping appears to be in good condition? (Not damaged, leaking, corroded, bent) X Yes No N/A Hangers or Braces appear to be in good condition? (Not damaged, loose, rusted, missing) X Yes No N/A Devices, valves and gauges appear to be in good condition? X Yes No N/A Is stock of spare sprinklers available along with appropriate sprinkler wrench(s)? Yes N/A Explain No Answers / Comments: Sprinkler Testing (Section 5.3) This section is Not Applicable: All sprinklers installed have been manufactured after 1920? X Yes No N/A Standard response sprinklers are less than fity (50) years old? X Yes No N/A Fast response sprinklers are less than twenty (20) years old? Yes No X N/A Extra high (325 °F or higher) sprinklers have been tested at five (5) year intervals? X N/A Yes No Dry sprinklers are less than ten (10) years old? No X N/A (Sprinklers that do not meet the above criteria are required to be replaced or representative samples from one or more sample areas shall be tested. Test procedures shall be repeated at various intervals as stated in NFPA 25) Explain No Answers / Comments:



Protect	Protection Prevention. Performance.										
Autom	atic Sprink	er System	ıs				3 of 9				
		Α	nnual lı	nspection &	Tests						
Date:	Nov 17 201	<u>5</u> L	ocation:	Building "B"	Track 13-24 Sout	h					
Gauges	(Section 5.3.2	2)		Ti	nis section is Not	Applicable:					
				sted every five (5) years by	and the same and the same and	calibrated ga	uge.				
Gauges	are less than fi	ve (5) years	old?	he full scale shall be recalib gauge and are within three	. 🔲	Yes X No					
Gauges	Gauges have been replaced during this annual inspection? Yes X No N/A										
Explain	No Answers / C	comments:	Gauges dat	ed 2009 (x2) Should be re	placed.						
Main Dr	Main Drain Test (Section 13.2.5) This section is Not Applicable:										
			ply pressure lo		<u></u>	This Year	Last				
			sure with no flow		Static PSI Before	70					
	e main drain ar e main drain al	Residual PSI Static PSI After	69 70								
	te main drain si			after gauge has stabilized. 2014 Size o	of the Main Drain?						
	plain No Answers / Comments: Drain does not handle test. Should be cleaned.										
	stem (Section				nis section is Not	Annlicable:					
			ressure is being			Yes N					
	-		of physical dam			Yes No	\vdash				
	100.00		open or closed		х	Yes N	o N/A				
The alar	m drains are no	ot leaking?			X	Yes N	o N/A				
Wet sys	tem is equipped	d with a tail-e	nd anti-freeze s	system(s)?		Yes X N	o N/A				
Anti-free	ze solution rea	ding is at wh	at freezing poin	t?							
Anti-free	ze solution free	ezing point ap	opears to be sat	tisfactory?		Yes N	o X N/A				
Explain I	No Answers / C	comments:									
	V 000 000000 000										
	tem Test Tabl				nis section is Not						
Size 8"	Make Grinnell	Model A	Serial # N/A		on of Inspectors South wall Track						
			o avoid false ala				esidual PSI				
				g inspector's test valve.		1m14s	70 psi				
Wet Svs	tem Low-Wate	er-Pressure	Switch								
•			w-water-pressu	re switch?	- []	Yes X N	o N/A				
				re slowly. Confirm operation			d water				
		ressure swite	ch activated. C	lose drain test and pump sy	24						
	ore to service.	8			Record pressu		PSI				
Explain I	No Answers / C	omments:	System Doe	es not have a Low Pressu	re switch. One sh	ould be inst	alled.				



Automatic Sprinkler Sy	ystems				4 of 9
	Annual I	nspection &	Tests		
Date: Nov 17 2015	Location:	Building "E	3" Track 13-24	South	F-11-2504
Wet System Inspection (Secondary Alarm valves and their associated every five (5) years unless tea Has the internal inspection be If Yes, what year was the inspection of No, was the internal inspection of No, was the internal inspection of No, was the internal inspection.	iated strainers, filters, sts indicate a greater feen completed within to pection completed? tion done during this a	and restriction orfices sha frequency is necessary. the last four (4) years? Unknown		internally Yes Yes	K No
Wet System Vane Type Flor			his section is	Not Applicat	ole: X
Test water-flow alarm by ope Flow Switch Zone Designation		nd record time that alarm	Static PSI	Alarm Time	Residual PSI
		is SUGS how 8 was a feet of the form			
		The second			
			10 10 1		
150.75.95	halman are		vis enside	Hay a 1 d	fue'r
Dry Pipe System (Section 1 Does valve appear to be free All trim valves are in the appro The intermediate chamber is A tag or card with the last trip	of physical damage? opriate open or closed not leaking?	I position?	This section is the valve?	Not Applical Yes Yes Yes Yes Yes	ble: X N/A N/A N/A N/A N/A N/A N/A
	odel Serial#	•	ation of Inspec		
Explain No Answers / Comme	ents:		1431 2		



Trocetion, Frevention, Ferromanic.			
Automatic Sprinkler Systems	NTC		5 of 9
Annual Insp	ection & Tests		
Date: Nov 17 2015 Location:	Building "B" Track 13-24	South	
Dry System Low-Air-Pressure Switch			
Is the dry system equipped with a low-air-pressure switch?		Yes	No X N/A
If Yes, close the water supply valve isolate quick opening of drain test valve to reduce air pressure slowly. (Do not reduce.) Confirm operation of low pressure switch, record a activated. Close drain test valve, allow air pressure to rise device and water supply valve. Explain No Answers / Comments:	uce air pressure sufficiently to trip air pressure at which low pressure	the dry pipe switch	PSI
Dry Pipe System Trip Test Table Every three (3) years and whenever the system is altered, fully open and the quick-opening device, if provided in service the dry pipe valve shall be trip tested with the control valve Has the dry pipe valve been tripped with the control valve (2) years. If yes, what year was the fully open trip test conditions in the fully open trip test being conducted during this	vice. During the years when full flo partially open. fully open in the last two ducted?	ted with the ow testing is	control valve not required,
If No, is the fully open trip test being conducted during this	annual inspection?	Yes [No N/A
Normal air pressure as per the Manufacturers recommend	ation		PSI
Trip test the dry pipe valve. Record the time from opening the inspectors test valve until the dry pipe valve trips.	Water Air Time to PSI PSI Trip	Trip Point Air PSI	Time Water To Inspectors Test
Did the valve and alarm operate properly?		Yes	No N/A
Dry pipe valve interior appears clean and satisfactory?		Yes	No N/A
Quick-opening device operated properly? Is a sign provided at the dry pipe valve indicating the numble location of each auxiliary drain?	per of auxiliary drains and	Yes	No N/A No N/A
Were all identified auxiliary drains drained during this inspe	ection?	Yes	No N/A
Air supply appears to be adequate?	9	Yes	No N/A
Automatic air pressure maintenance device appears to ope	erate properly?	Yes	No N/A
Was the dry pipe valve filled with priming water after it was	trip tested and reset?	Yes	No N/A
Explain No Answers / Comments:	·		
Dry Pipe System Inspection (Section 13.4.4.1.6)	This section is	Not Applic	able: X
Dry pipe valve strainers, filters, and restriction orfices shall indicate a greater frequency is necessary.			
Has the internal inspection been completed within the last	four (4) years?	Yes	No N/A
If Yes, what year was the inspection completed? If No, was the internal inspection done during this annual in	nspection?	Yes	No N/A
Explain No Answers / Comments:			



Automa	itic Spr	inkler System	ıs				6 of 9				
		Α	nnual Ins	pection	on & Te	sts					
Date: _	Nov 17	2015 L	ocation:	Bu	ilding "B" Trac	k 13-24 South	<u> </u>				
Preaction	ı / Delug	e System			This se	ection is Not Applic	able: X				
Does valv	e appear	to be free of phy	sical damage?			Yes	No N/A				
All trim va	lves are i	n the appropriate	open or closed pos	sition?		Yes	No N/A				
The valve	seat is n	ot leaking?				Yes	No N/A				
The elect	rical comp	oonents are in se	rvice?			Yes	No N/A				
Size	Make	Model	Serial #		Strike Throug	h What Does Not A	pply				
				Deluge	Preaction	Closed Nozzles	Open Nozzles				
Supervis	Supervised Preaction Low-Air-Pressure Alarm										
Is the pre	action sys	stem equipped wi	th a low-air-pressur	e alarm?		Yes	No N/A				
			and carefully open o				1.				
						activation. Close dra					
test valve	, allow air	pressure to rise	to normal, then ope	n water supp	oly valve.		PSI				
			est Table (13.4.3.2			ection is Not Applic	able: X				
						instructions. Where					
						shutdown, a full flow ency shall not exceed					
			rotecting freezers sl				, 3				
		into the piping in		102104	- num př. – – n	militariania	PSI				
Water	Air	Trip Point	Number of detector	rs required	Brief d	escription of valve	operation				
PSI	PSI	Air PSI	to trip Preaction	and a second was the force of		•					
		I									
Did the va	alve and a	larm operate pro	perly?			Yes	No N/A				
Were all r	nanual ad	ctuation devices o	pperated?			Yes	No N/A				
For delug	e systems	s did the water dis	scharge pattern app	ear to be sa	tisfactory?	Yes	No N/A				
Air supply	appears	to be adequate?				Yes	No N/A				
Automatic	air press	sure maintenance	device appears to	operate prop	erly?	Yes	No N/A				
Was the p	reaction	valve filled with p	riming water after it	was trip test	ed and reset?	Yes	No N/A				
Explain N	o Answer	s / Comments:	0		21 r.llh - 1	Hamin Har La	3 3 1 T 1				
Preaction	ı / Deluge	System Mainte	nance (Section 13	.4.3.1.7.1)	This se	ection is Not Applic	able: X				
			•	•		ars for valves that ca					
without re completed			the valve cannot be	reset extern	ally the cleaning	g, replacement or rep	air shall be				
			, thus the inspection	n is done dur	ing this inspecti	on? Yes	No N/A				
			us has the inspectio			<u> </u>					
			e inspection comple		A.	Yes	No N/A				
000 D E			ne during this annua		?	Yes	No N/A				
Explain N	o Answer	rs / Comments:				<u> </u>					





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anual Increation & Tacto

Annual inspection & rests													
Date: Nov 17 2015	Loca	ation: _	Buil	ding	"B"	Track 1	3-24	So	uth				_
Control Valves									MITTER STATE				
Are all control valves identifie	d?							Y	es X	No		N/A	
Are all control valves locked,	sealed or	equippe	ed with a supervisory sv	vitch?	•		7	K Y	es	No		N/A	
Are all control valves in the no	ormal ope	n or clos	sed postion?					K Y	es	No		N/A	
Are all control valves free fror	n externa	l leaks?					2	K Y	es	No		N/A	
During this inspection was ea	ch contro	l valve o	perated through its full	rang	e?		2	K Y	es	No		N/A	
If applicable post indicator val	ves were	opened	until spring tension wa	s felt	?		L	Y	es	No	X	N/A	
If applicable post indicator & OS&Y valves were backed 1/4 turn from fully open position? X Yes No N/A													
Control Valve Table													
Control Valve Function	# of Valves	Size	Type of Valve		Op	en		Sec	ured		Si	gns	
System control valve	1	8"	OS+Y	Х	Υ	N	х	Υ	N	Х			N
Main Incoming	1	8"	G.O.B	Х	Υ	N	Х	Υ	N	X	Y		Ν
South Valve room Iso	1	8"	G.O.B	Х	Υ	N	Х	Υ	N	-	Υ	Х	Ν
					Υ	N		Υ	N		Υ		Ν
					Υ	N		Υ	N		Y		Ν
			25 1		Υ	N		Υ	N		Υ		N
					Υ	N		Υ	N		Y		Ν
					Υ	N		Y	N	100	Y		Ν
					Υ	N		_		_	Υ		Ν
					Υ	N		Υ	N		Y		N
Was the backflow preventer t				no b	ackf	low?				No		N/A	



Automatic Sprinkler Systems

8 of 9

Date:		Location:	Building "B" Track 13-24 South
An instance on the connection of the connection	ection at the end of one meeting for the presence of frisual obstruction investigate, what year was the investigated was the visual obstruction investigated on this years results a full in No Answers / Commer	anch line conditions ain and by removing the conditions of the condition of piping been atigation completed in investigation con ation results appear anther flushing investing investing investing the condition investing invest	n conducted within the last four (4) years? Yes X No N/A
DC GC	16. The state of t	- TO 1997	
1.7			13 1100
The s	ections should be made.	eficiencies that she	ould be reviewed with the authority having jurisdiction to determine on investigation of piping should be done every 5 years. Description of piping should be done every 5 years.
D3	Gauges are older then		
D4			ntified and "keep open" signs should be installed.
D5	Fire department conne	ction should have	e a identification sign.
D6			
D7			
D8			
D9	28	<u> </u>	
D10			
D11	12 11 - 5 7 Hz W H		
D12 D13		V - 12 - 3 3 3 5 1 - 1 -	
D13			
D15			
D16			Lattle State Production Committee Co
D17		1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
D18		-	
D19			
D20			The second of the term of the second of the
D21			
D22		ī i	961 27 11 11 11 12 1 1391
D23			
		(Use back	of page if further room is needed)



	W
BDR	SERVICES LTD
Protection	n. Prevention. Performance

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				, million on the	opodion &	1000
Date:	N	ov 17 2	015	Location:	Building "B"	Track 13-24 South
We re		nd the f		on only. Corrections of		recommendations are not deficiencies are dependent on the owner or authority
					prevent false alarms.	
	Drains	should	be clea	ned out to better han	dle drain test.	
R4.						
R5.						
R6.						
R7. R8.						
R9.						
				(Use back of	page if further room is ne	eded)
Recor acces	s, confi	ertinent ned spa	ce, etc.)	ion here with respect to	o the building (monitoring o	company, special codes, keys
				,		
This is whether failure and confirm change	er or no e, and ar ondition mation t e of occ	rational t the sys ly subse of equip nat syst upancy	stem me equent da oment at em insta	ets current code or star amage or loss consequ actual time of testing.	ndards. BDR Services Ltd lential or direct. BDR Services Owner is responsible for see the met any time there are a	of the system design to determine d. is not responsible for any equipment vices Ltd. is merely verifying operation system installation, maintenance and alterations, additions, renovations and
Inspec	_	Bart Dlu			Inspection Date:	Nov 17 2015
Licenc	e SP/M	FD #:	223/79	2	Owner Representa	ative:
Signat	ture:	32	-01		Signature:	





1 of 9

Annual Inspection & Tests

As per NFPA 25, Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems, 2008 Edition

_	F07-883	Water-Based Fi	re Protection Systems,	, 2008 Edition					
Date: I	Nov 17 2015	Inspector:	Bart Dlugosz	_ Inspector SP/W	FD#:	223/792			
Property Name:		Transit Fort Rouge			1				
Tenant Name:	Building "B	3"							
Address:	421 Osborn	ne Street							
City:	Winnip	eg Provinc	ce: MB	Postal (Code: _				
Contact:	Alex Veche	rya		Phone :					
General									
Building		Building "B" Tracl							
System Designation Track 25-36 South									
Location of sprir	nkler valve	South East Valve	Room			_			
Type of sprinkle	r system	X Wet	Dry	Deluge	_ [Preaction			
Is the building o	ccupied?				X Yes	No N/A			
Is the system in	service?				X Yes	No N/A			
The valve head	er room(s) ap	pears to be adequate	ely heated?		X Yes	No N/A			
The valve head	er room(s) ha	ve a low-temperature	e alarm?	Ţ	Yes	No X N/A			
Is it known that	the system(s)) is hydraulically calc	ulated?	Ĺ	Yes	X No N/A			
		n sign provided at va		<u> </u>	Yes	No X N/A			
Is there a minim deflector?	num of 18"clea	arance between stor	age/obstructions and the	e sprinkler -	x Yes	No N/A			
Do all exterior o	penings appe	ear to be protected from	om freezing?	Ļ	X Yes	No N/A			
			s it appear to be in good alterations/additions sinc		x Yes x Yes	No N/A			
Explain No Ans	wers / Comm	ents: System ar	ppears to be pipe sche	dule system.					
				•					
Water Supply				г					
			be in good condition?		Yes	No X N/A			
	350.5		etc. are not covered unde	er this inspection.)					
Pumps (Fire Pulls fire pump	ump(s) are no	ot covered under this Diesel	inspection.) Electric	Gasoline	. 7	None			
When was pum	p last inspect				<u>, </u>				
Does pump app	51			ſ	Yes	No X N/A			
Explain No Ans	100								
	The second of th								
1									



Automatic Sprinkler Systems

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Date: Nov 17 2015 Location: Building "	B" Track 25-36 S	outh	ų s -		_
Fire Department Connections (Section 13.7)	This section is N	ot Appli	cable:		
FDC Location: S.E corner of building "B"		_= "			
Are identification signs provided and in place?		Yes	X No		N/A
The connections are visible and accessible?		X Yes	No		N/A
Couplings or swivels are not damaged and rotate smoothly?	[X Yes	No		N/A
Plugs or caps are in place and undamaged?	70.1 d	X Yes	No		N/A
Gaskets are in place and in good condition?		X Yes	No		N/A
The check valve is not leaking?		Yes	No	Х	N/A
The automatic drain valve is in place and appears to be working and in goo	od condition?	Yes	No	Х	N/A
The connection clapper(s) is in place and appears to be operating properly	?	X Yes	No		N/A
Explain No Answers / Comments: Located on the street. There is a v	alve pit near FD0	and wa	s not	100	
inspected during this inspection. Fire department connection feeds b	uilding "B" easts	ide.			
General Condition, Inspected From Floor Level (Section 5.2)	This section is N	ot Appli	cable:		
Sprinkler heads appear to be in good condition? (Not corroded, loaded, paint	ed, damaged)	X Yes	No		N/A
Piping appears to be in good condition? (Not damaged, leaking, corroded, ber	_	X Yes	No		N/A
Hangers or Braces appear to be in good condition? (Not damaged, loose, rus	_	X Yes	No	-	N/A
Devices, valves and gauges appear to be in good condition?	-	X Yes	No	-	N/A
Is stock of spare sprinklers available along with appropriate sprinkler wren	ch(s)?	X Yes	No		N/A
Explain No Answers / Comments:	AL 5 M				7
The part of the second		21 17 1			
	District Production	500			
Sprinkler Testing (Section 5.3)	This section is N	lot Appli	cable:		
All sprinklers installed have been manufactured after 1920?		X Yes	No	- 3.	N/A
Standard response sprinklers are less than fity (50) years old?		X Yes	No		N/A
Fast response sprinklers are less than twenty (20) years old?	ya Tu gas Na	Yes	No	Х	N/A
Extra high (325 °F or higher) sprinklers have been tested at five (5) year in	tervals?	Yes	No	Х	N/A
Dry sprinklers are less than ten (10) years old?		Yes	No	Х	N/A
(Sprinklers that do not meet the above criteria are required to be replaced	or representative s	samples	from one	or	
more sample areas shall be tested. Test procedures shall be repeated at	various intervals a	s stated	in NFPA :	25)	
Explain No Answers / Comments:					



Automatic Sprinkler Systems 3 of 9 **Annual Inspection & Tests** Date: Nov 17 2015 Location: Building "B" Track 25-36 South Gauges (Section 5.3.2) This section is Not Applicable: Gauges shall be replaced every five (5) years or tested every five (5) years by comparison with a calibrated gauge. Gauges not accurate to within three (3) percent of the full scale shall be recalibrated or replaced. Gauges are less than five (5) years old? N/A Yes X No Gauges have been compared against a calibrated gauge and are within three (3) percent? No Yes N/A Gauges have been replaced during this annual inspection? X No Yes N/A Explain No Answers / Comments: Gauges dated 2009 (x2) Should be replaced. Main Drain Test (Section 13.2.5) This section is Not Applicable: This Year (All readings should be from the supply pressure lower gauge) Last Static PSI Before 70 Record the static water supply pressure with no flow. 65 Open the main drain and allow water flow to stabilize. Record the pressure. Residual PSI Close the main drain slowly. Record the pressure after gauge has stabilized. Static PSI After 70 What date was the last main drain test done? 2014 Size of the Main Drain? 2" Explain No Answers / Comments: Drain does not handle test. Wet System (Section 13.4) This section is Not Applicable: The gauges indicate normal water pressure is being maintained? X Yes No N/A Does alarm valve appear to be free of physical damage? Yes No N/A All trim valves are in the appropriate open or closed position? X Yes No N/A The alarm drains are not leaking? No N/A Yes Wet system is equipped with a tail-end anti-freeze system(s)? No N/A Anti-freeze solution reading is at what freezing point? No X N/A Anti-freeze solution freezing point appears to be satisfactory? Yes Explain No Answers / Comments: There is no tail end anti freeze on system. Wet System Test Table for Wet Alarm Valve This section is Not Applicable: Size Make Model Serial # Location of Inspectors Test Grinnell N/A North OHD 25 (Ensure alarm company is notified to avoid false alarms.) Static PSI | Alarm Time Residual PSI 70 psi 125 psi Test alarm valve water flow alarm switch by opening inspector's test valve. 34 sec Wet System Low-Water-Pressure Switch Yes X No Is the wet system equipped with a low-water-pressure switch? If Yes, open drain test valve to reduce water pressure slowly. Confirm operation of low pressure switch, record water pressure at which low pressure switch activated. Close drain test and pump system up to normal pressure PSI and restore to service. Record pressure. Explain No Answers / Comments: System Does not have a Low Pressure switch. One should be installed.



Automatic Sprinkler Systems 4 of 9 **Annual Inspection & Tests** Nov 17 2015 Building "B" Track 25-36 South Date: Location: Wet System Inspection (Section 13.4.1.2) This section is Not Applicable: Alarm valves and their associated strainers, filters, and restriction orfices shall be inspected internally every five (5) years unless tests indicate a greater frequency is necessary. Has the internal inspection been completed within the last four (4) years? X No N/A If Yes, what year was the inspection completed? If No, was the internal inspection done during this annual inspection? N/A Explain No Answers / Comments: Unknown when last wet system inspection was and should be done. Х Wet System Vane Type Flow Alarms This section is Not Applicable: Test water-flow alarm by opening inspector's test and record time that alarm registers. Flow Switch Zone Designation Location of Inspectors Test Static PSI Alarm Time Residual PSI Dry Pipe System (Section 13.4.4) This section is Not Applicable: Does valve appear to be free of physical damage? Yes No N/A All trim valves are in the appropriate open or closed position? Yes No N/A The intermediate chamber is not leaking? No N/A Yes A tag or card with the last trip date and who conducted the test is attached to the valve? No N/A Yes Size Make Model Serial # **Location of Inspectors Test** Explain No Answers / Comments:



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Autom	atic Sprinkler Sys	stems					5 (of 9
		Annual Inspe	ctior	า &	Tests			
Date:	Nov 17 2015	Location:	Build	ing "E	3" Track 25-3	6 South		
Dry Sys	tem Low-Air-Pressur	e Switch						
Is the dr	y system equipped wit	h a low-air-pressure switch?				Yes	No 2	K N/A
drain tes valve.) activated device a	t valve to reduce air po Confirm operation of lo		e air press pressure normal, t	sure su at which hen slo	<i>ifficiently to tr</i> th low pressu	ip the dry pip re switch	e	PSI
Every this fully oper the dry p	n and the quick-openir ipe valve shall be trip dry pipe valve been tri	able never the system is altered, the ng device, if provided in service tested with the control valve pa pped with the control valve fully s the fully open trip test conduc	e. During artially ope y open in	valve the yean.	shall be trip to ars when full		control va	
	- a	being conducted during this an		ection?	>	Yes	No	N/A
			•		.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Ш. ••		=
Nomai a	an pressure as per the	Manufacturers recommendation		A *	T: 4-	T: D: /		PSI
2115		ecord the time from opening	Water PSI	Air PSI	Time to Trip	Trip Point Air PSI	Inspect	ater To ors Test
tne inspe	ectors test valve until ti	he dry pipe valve trips.			* 1 *1			
Did the v	alve and alarm operat	e properly?				Yes	No	N/A
Dry pipe	valve interior appears	clean and satisfactory?				Yes	No	N/A
ls a sign	pening device operated provided at the dry pip of each auxiliary drain	be valve indicating the number	of auxilia	ry draii	ns and	Yes	No No	N/A N/A
Were all	identified auxiliary dra	ins drained during this inspecti	on?			Yes	No	N/A
Air suppl	y appears to be adequ	uate?				Yes	No	N/A
Automati	c air pressure mainter	nance device appears to opera	te proper	ly?		Yes	No	N/A
Was the	dry pipe valve filled wi	th priming water after it was tri	p tested a	and res	et?	Yes	No	N/A
Explain N	lo Answers / Commer	nts:						
Dry pipe	System Inspection (valve strainers, filters, a greater frequency is	and restriction orfices shall be	inspecte			is Not Applid ve (5) years u		K.
	·	en completed within the last fou	ır (4) year	s?		Yes	No _	N/A
	hat year was the inspe							7
	s the internal inspection Io Answers / Commer	on done during this annual insp	ection?			Yes	No L	N/A
Lxpiaiii i	NO Allowers / Collimer							



Automa	Automatic Sprinkler Systems 6 of 9									
	Annual Inspection & Tests									
Date: _	Nov 17	2015 L	ocation:	Bui	lding "B" Track	25-36 South	MC 21 19			
Preaction / Deluge System This section is Not Applicable: X										
Does valve	Does valve appear to be free of physical damage? Yes No N/A									
All trim va	All trim valves are in the appropriate open or closed position? Yes No N/A									
The valve seat is not leaking?										
The electrical components are in service? Yes No N/A										
Size	Make	Model	Serial #			n What Does Not A				
				Deluge	Preaction	Closed Nozzles	Open Nozzles			
Supervise	Supervised Preaction Low-Air-Pressure Alarm									
Is the prea	action sys	tem equipped wi	th a low-air-pressure	e alarm?		Yes	NoN/A			
			and carefully open o				- 1			
the same of the same of the more			larm, record air pres	- care - care-caller - var - care-care-care-		activation. Close dra				
lest valve,	test valve, allow air pressure to rise to normal, then open water supply valve.									
	Preaction / Deluge System Trip Test Table (13.4.3.2.2.2) This section is Not Applicable:									
			e trip tested annually rge cannot occur un				,			
			scheduled shutdown							
			rotecting freezers sl		and the second s					
introduce	moisture	into the piping in	the freezer.				PSI			
Water	Air	Trip Point	Number of detector	ors required	Brief de	scription of valve	operation			
PSI	PSI	Air PSI	to trip Preactio	n system						
Did the va	lve and a	larm operate pro	perly?			Yes	No N/A			
Were all n	nanual ad	ctuation devices	operated?			Yes	No N/A			
For deluge	e systems	s did the water di	scharge pattern app	ear to be sa	tisfactory?	Yes	No N/A			
Air supply	appears	to be adequate?				Yes	No N/A			
	•		e device appears to			Yes	No N/A			
Was the p	reaction	valve filled with p	oriming water after it	was trip test	ed and reset?	Yes	No N/A			
Explain N	Explain No Answers / Comments:									
Preaction	/ Deluge	e System Mainte	enance (Section 13	3.4.3.1.7.1)	This se	ction is Not Applic	able: X			
	_	•	nent or repair shall b							
	without removal of the faceplate. If the valve cannot be reset externally the cleaning, replacement or repair shall be									
completed		54	, thus the inspection	n is done dur	ing this inspection	on? Yes	No N/A			
	- 0.5	-	us has the inspection		0.72					
			e inspection comple		within the last i	Yes	No N/A			
			one during this annu		?	Yes	No N/A			
		s / Comments:	Jang tine diffici			55 [



Protect	ion. Prevention. Perfo	rmance.														
Autom	atic Sprinkler Sy	/stems								99.73				7 (of 9	
		An	nua	l Inspection	า 8	? 7	Ге	st	S							
Date:	Nov 17 2015	Loc	ation: _	Buil	ding	"B"	Tra	ck 2	25-36	So	uth					_
Are all c Are all c	ontrol valves identifie	sealed or ormal ope	en or clos	ed with a supervisory sw sed postion?	ritch	?		· ·	2	X Y	es	х	No No No		N/A N/A N/A N/A	
Are all control valves free from external leaks? During this inspection was each control valve operated through its full range? If applicable post indicator valves were opened until spring tension was felt? If applicable post indicator & OS&Y valves were backed 1/4 turn from fully open position? X Yes No N/A N/A N/A Control Valve Table																
Contr	ol Valve Function	# of Valves	Size	Type of Valve		On	en			Sec	ured	1		Sic	ns	
	control valve	1	6"	G.O.B	х	Υ		N	х	Υ		N	х	Y		N
Main In	coming	1	8''	G.O.B	Х	Υ		N	Х	Υ		N	Х	Υ		N
South V	alve room Iso	1	8"	G.O.B	Х	Υ		N	X	Υ		N		Υ	Х	N
						Υ		N		Υ		N		Υ		N
						Υ		N		Υ		N		Υ		Ν
						Υ		Ν		Υ		N		Y		Ν
						Υ		N		Υ		N		Υ		N
						Υ		N		Y		N		Υ		Ν
						Υ		N		Υ		N		Υ		Ν
						Υ		N		Υ		N		Υ		Ν
All back following (1) A for inside ho (2) A back of the fo For back the test Where of Connect A forwar	ward flow test shall be been stations are located ckflow performance to rward flow test. cflow preventers sized butlet is of a size to flow connections do not performed flow test was condu-	led in fire e conducted downs est, as re d 2" and u ow the sy rmit a full it a full fo	ted at the stream of quired by under a for stem dea I flow tes rward flo he system	on system piping shall be system demand, incluing the backflow preventer by the authority having justification orward flow test is acceptant.	ding r. risdi ptab ed at	hos ction le to the	e str , sha con max	ually eam all be	in andern der	nduc nout i	dand d, wh ted a	ce winere at the	th th hydra e cor	ants mple	tion	
Was the	nections are available re a way of measurin w rate was measured	g the ma	ximum fl		flow	rate	pos	sible	э?	_	es es		No No		N/A N/A	
				rate report to check for	no h	ackf	low?	,		\neg			No		Ν/Δ	





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Date:	Nov 17 2015	Location:	Building "B" Track 25-36 South
An inscended insperience Has with the second of the second	ection at the end of one cting for the presence or isual obstruction investion, what year was the investivisual obstruction investion investion on this years results a in No Answers / Comme	ranch line conditions main and by removing foreign organic and gation of piping been estigation completed fon investigation condigation results appear further flushing investigation investigation investigation investigation investigation investigation investigation investigation further flushing investigation	conducted within the last four (4) years? Yes X No N/A
	0.8		ANY SERVER TO THE SERVER SERVE
_			A BALL
The s	ections should be made	deficiencies that sho b. D1. Obstruction	ould be reviewed with the authority having jurisdiction to determine on investigation of piping should be done every 5 years.
D3	Gauges are older the		
D4			tified and "keep open" signs should be installed.
D5	Fire department conn		
D6	-1-1 17	7 11 11	
D7			
D8			sé san tendit contra a est
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D10			
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		(Use back of	of page if further room is needed)



Automatic Sprinkler Systems

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Ailliuai ilisp	dection & rests							
Date: Nov 17 2015 Location:	Building "B" Track 25-36 South							
Recommendations Ve recommend the following based on this annual inspection and test. These recommendations are not deficiencies and are provided for information only. Corrections of these recommendations are dependent on the owner or authority paving jurisdiction. R1.								
R2. Low pressure switch should be installed to prev								
R3. <u>Drains should be cleaned out to better handle d</u> R4.	rain test.							
R5.								
R6.								
R7.								
R8.								
R9.								
(Use back of page if further room is needed) General Notes Record any pertinent information here with respect to the building (monitoring company, special codes, keys access, confined space, etc.) System monitored by Protelec 204-949-1415.								
Important Note: This is an operational test inspection. It does not include a review or analysis of the system design to determine whether or not the system meets current code or standards. BDR Services Ltd. is not responsible for any equipment failure, and any subsequent damage or loss consequential or direct. BDR Services Ltd. is merely verifying operation and condition of equipment at actual time of testing. Owner is responsible for system installation, maintenance and confirmation that system installation requirements are met any time there are alterations, additions, renovations and change of occupancy.								
Inspector: Bart Dlugosz	Inspection Date: Nov 17 2015							
Licence SP/WFD #: 223/792	Owner Representative:							
Signature: Band	Signature:							

Chubb Edwards 82 Terracon Place Winnipeg, MB R2J 4G7 Tel (204) 633-5248



Fax (204) 632-5341

January 6, 2016

Planning, Property and Development Municipal Accommodations Division Basement, 510 Main Street Winnipeg, Manitoba R3B 1M9 Attn: Ken Pietracci

Subject: November 2015 - Annual Test and Maintenance Inspection Agreement Location: Winnipeg Transit, 421 Osborne Street, Winnipeg, MB

Per the terms of the Preventative Maintenance Agreement with Chubb Edwards, we have completed the test and inspection of the building systems listed below following the requirements of the current Provincial Fire Code.

[X] Sprinkler System

[√] Backflow Preventer

We enclose our completed test and inspection report for your review. A certificate of inspection is attached for the backflow preventer.

We welcome the opportunity to assist you, should you require additional information and/or service regarding this inspection.

Regards,

Dianna Grosshans Fire Billing & Enquiries

Enc.



Inspection Certificate

This is to certify the system referred to below was inspected in accordance with the Provincial Fire Code and the requirements of the authority having jurisdiction and was found to be in proper working order when the inspection was completed.

THIS CERTIFIES that the

Backflow Preventer

equipment

installed at 421 Osborne Street, Winnipeg, MB

was checked and inspected, and is serviced by a trained technician

Issued: November 17, 2015

Next Inspection: November, 2016

Operations Manager

UTC Fire & Security Canada

Managing Director Chubb Edwards

C4396



BACKFLOW DEVICE TEST REPORT

Water and Waste Department • Service des eaux et des déchets

Site Information	Contact Company Address (Street, City, Prov. Postal Code) Phone / Fax # Email Alex Winnipeg Winnipeg N Building	1B				Owner Information	Contac Compa Addres (Street, Cit Postal Coo Phone	nys sy, Prov,			
ation	Serial # Manufacturer		Existing 01836			Rep	laced	Ne	W	l	Permit #:
Device Information	Model # Type of Assembly (RP, De Size (inches)		Ames 4000B RP 1.25							Water Meter #: Meter Reading:	
De	Location of Assembly Carpentry shop Type of Equip. Protected Fire Protection						Pas	s ☑ Fail 🗌			
	RP Device Initial Test Date (mm-dd-yy): 11-17-15 Line Press. 110 psi	1st Check (Press. Drop <u>9.2</u> Closed Leaked	2 psi ☑	(Clos	hec ed ed	v	Relief Valv Opened 2.8	at		ffer (A-B=C) 4 psi
Test Information	Test After Repair Date (mm-dd-yy): Line Press psi	Press. Drop Closed Leaked		l		ed	_ ı	Opened —			psi
nforn					1	_					
est I	DCVA Device Initial Test	1st Check	2nd	Check	-	-		Device ial Test	Air Ir Opene		Check Valve
_	Date (mm-dd-yy): Line Press psi	Closed ☐ Leaked ☐			sed 🔲		Date (r	nm-dd-yy):		psi open	Closed □ Leaked □
	Test After Repair Date (mm-dd-yy):	Closed ☐ Leaked ☐		osed 🗌			Test A	fter Repair nm-dd-yy):	Open	ed at psi	Closed 🗆
	Line Press psi				<u> </u>			ss psi		NUMBER OF STREET	
Licensed Tester	Tester Name Bart D Test Kit Serial # 05050 Company BDR	352 86-8227				Comments /	Maintenance / Repairs				

I certify all information on this report is true and accurate, acknowledging that <u>incomplete reports</u> will not be accepted. This information meets the requirements under By-Law 504/73.

☑ I accept	Date: 11/18/2015	Email this form
✓ I accept	Date: 11/18/2015	Email this for



BACKFLOW DEVICE TEST REPORT

Water and Waste Department • Service des eaux et des déchets

_	Contact Alex				Γ		Cont	act				
Site Information	Company Winnipeg Bus depot					Owner Information	Com					
rma	Address 421 Osborne					Ē	Addr					
ıfoı	(Street, City, Prov, Postal Code) Winnipeg MB Building A						Postal	City, Pr Code)	rov,			
e Ir	Phone / Fax #	A				Phone / Fax #						
Sit	Email					Ň	Emai		1X #			
						0	Lilla					
_			Existing	g	Replaced New				Permit #:			
tio	Serial #		10264								<u> </u>	
Device Information	Manufacturer		Ames								W	ater Meter #:
ıçı	Model#		4000B								 	
e L	Type of Assembly (RP, D	CVA, PVB)	RP								Me	eter Reading:
, vic	Size (inches)		2								-	
õ	Location of Assembly Type of Equip. Protecte		Paint shop								Pass ✓ Fail ☐	
	Type of Equip. Profeste	u ji	Fire Protection								Fas	s 🗸 Fail 🗌
	RP Device		eck (A)	2n	nd C	hec	k		Relief Valv	e (B)	Buffer (A-B=C)	
	Initial Test	Press. Dro	p <u>9.4</u> psi									
	Date (mm-dd-yy):	Closed 🔽		С		losed 🔽		Opened		<u>6.8</u> psi		
	11-17-15	Lea	ked 🗌 Le		_eal	eaked		2.6	psi		Δ.	
	Line Press. 110 psi											
	Test After Repair	Press. Dro	Press. Drop psi									
	Date (mm-dd-yy):	Closed				Closed			Opened at psi		psi	
loi		Lea	Leaked \square		.eaked □							
nat	Line Press psi											
Test Information												
st I	DCVA Device	1st Ched	ck 2nd	Check	PV		/B Device		Air Inlet		Check Valve	
Te	Initial Test					Initia		itial T	est	Opened at		
	Date (mm-dd-yy):	Closed	☐ Clo	sed 🗌			Date	(mm-	dd-yy):	81	psi	Closed
		Leaked	☐ Leal	Leaked					Did no		open	Leaked
	Line Press psi						Line Pr	ess	psi]	
	Test After Repair				1	Г	Test	After	Repair			
	Date (mm-dd-yy):	Closed	According to the contract of t	sed 🗌					dd-yy):	Opene	ed at	Closed □
		Leaked	Lea	ked 🔲		-					psi	0.0000
	Line Press psi						Line Pr	ess	psi			
	Licence # 889				7		I					
_		lugosz			11	s/	- se					
Licensed Tester		10 Tel		-		Comments	Maintenance Repairs					
cen	Test rat certai #					mu	eps					
Į,		00.0007				Sor	ai R					
	Phone # 204-586-8227					_	≥					

I certify all information on this report is true and accurate, acknowledging that <u>incomplete reports</u> will not be accepted. This information meets the requirements under By-Law 504/73.

V	I accept	Date: 11/18/2015	Email this form



BACKFLOW DEVICE TEST REPORT

Water and Waste Department • Service des eaux et des déchets

Site Information	Contact Alex Company Winnipeg Bus depot Address (Street, City, Prov. Postal Code) Phone / Fax # Email					Owner Information	Postal Co	any SS City, Prov, ode)	<u> </u>			
Device Information	Serial # Manufacturer Model #		Existing A02235 Ames 4000B		Replaced 1		Ne	lew		Permit #:		
Device In	Type of Assembly (RP, DCVA, PVB) Size (inches) Location of Assembly Type of Equip. Protected		RP 2 Glycol Fire Protection							Meter Reading: Pass ☑ Fail ☐		
ation	Initial Test Press. Dre Date (mm-dd-yy): CI		p <u>10.8</u> psi sed ☑		nd Check Closed ☑ _eaked ☐		(Opened at 3.5 psi		Buffer (A-B=C)		
	Date (mm-dd-yy): Cl		op psi osed □ aked □		Closed			Opened at psi			psi	
Test Information	50// 5	4 . 0		<u> </u>	1	_						
Test	DCVA Device Initial Test	1st Check	heck 2nd					B Device itial Test		Air Inlet Opened at		Check Valve
	Date (mm-dd-yy): Closed Line Press psi					Date (mn		mm-dd-	m-dd-yy): Did no		psi open	Closed □ Leaked □
	Test After Repair Date (mm-dd-yy): Line Press psi	Closed ☐ Leaked ☐				Test Af		After Repair mm-dd-yy):		Opened at		Closed 🗆
Licensed Tester	Licence # 889 Tester Name Bart D Test Kit Serial # 05050 Company BDR Phone # 204-58					Comments /	Repairs					

I certify all information on this report is true and accurate, acknowledging that <u>incomplete reports</u> will not be accepted. This information meets the requirements under By-Law 504/73.

V	I accept	Date: 11/18/2015	Email this form





1 of 9

As per NFPA 25, Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems, 2008 Edition									
Date: Nov	/ 17 2015	Inspector	,	Bart Dlugosz	Inst	pector SP/M	/FD #:	223/7	792
		Transit For					-		
10 E 1.	uilding B	Transit i or	riougo						
	1 Osborne	Street							
City:	Winnipe		Province:	MB	3	Postal	Code:		
	ex Vechery		. 101			one:			
General								41	
Building	Ī	Building "B	" South Tr	ack 1-12					
System Designation		South Trac	v 50 martin						
Location of sprinkles	-	South West	corner of	building in Mair	ntenance I	Вау			
Type of sprinkler sys		XV		Dry		Deluge		Preacti	ion
Is the building occup	pied?					4	X Yes	No	N/A
Is the system in ser	vice?						X Yes	No	N/A
The valve header ro	oom(s) app	ears to be a	dequately h	neated?		12	X Yes	No	N/A
The valve header ro	oom(s) have	e a low-tem	perature ala	arm?			Yes	No	X N/A
Is it known that the	system(s) i	s hydraulica	lly calculate	ed?			Yes	X No	N/A
If yes, is hydraulic ir	nformation	sign provide	d at valve(s	s)?			Yes	No	X N/A
Is there a minimum deflector?	of 18"clear	rance betwe	en storage/	obstructions and	I the sprink	ler	x	No	N/A
Do all exterior open	ings appea	r to be prote	ected from t	freezing?			X Yes	No	N/A
If a hand hose is pa Confirm that the bui inspection?							X Yes X Yes	No No	N/A N/A
Explain No Answers	s / Comme	nts: Sys	stem appea	ars to be pipe so	chedule sy	/stem.			
Water Supply									
Do reservoirs, tanks	s, or pressu	ure tanks ap	pear to be	in good condition	1?		Yes	No	X N/A
(Water storage tank						inspection.)			
Pumps (Fire Pump	0.00					38			
Is fire pump	(b) are not		iesel	Electric	: Г	Gasoline	e [3	K None	
When was pump la	st inspecte				_			_	
Does pump appear	650	Section 2	1?				Yes	No	X N/A
Explain No Answers									



Automatic Sprinkler Systems 2 of 9 **Annual Inspection & Tests** Date: Nov 17 2015 Location: Building "B" South Track 1-12 Fire Department Connections (Section 13.7) This section is Not Applicable: FDC Location: Across the street of 520 Brandon street Are identification signs provided and in place? X No Yes N/A The connections are visible and accessible? X Yes No N/A Couplings or swivels are not damaged and rotate smoothly? No Yes N/A Plugs or caps are in place and undamaged? Yes X No N/A Gaskets are in place and in good condition? X Yes No N/A The check valve is not leaking? Yes No X N/A The automatic drain valve is in place and appears to be working and in good condition? Yes No X N/A The connection clapper(s) is in place and appears to be operating properly? X Yes No N/A Explain No Answers / Comments: Located on the street. There is a valve pit near FDC and was not inspected during this inspection. Fire department connection feeds building "A" and westside of building "B". FDC is missing ONE 2.5" cap. General Condition, Inspected From Floor Level (Section 5.2) This section is Not Applicable: Sprinkler heads appear to be in good condition? (Not corroded, loaded, painted, damaged) X Yes No N/A Piping appears to be in good condition? (Not damaged, leaking, corroded, bent) X Yes No N/A Hangers or Braces appear to be in good condition? (Not damaged, loose, rusted, missing) X Yes No N/A Devices, valves and gauges appear to be in good condition? X Yes No N/A Is stock of spare sprinklers available along with appropriate sprinkler wrench(s)? Yes N/A Explain No Answers / Comments: Sprinkler Testing (Section 5.3) This section is Not Applicable: All sprinklers installed have been manufactured after 1920? X Yes No N/A Standard response sprinklers are less than fity (50) years old? Yes No N/A Fast response sprinklers are less than twenty (20) years old? Yes No Х N/A Extra high (325 °F or higher) sprinklers have been tested at five (5) year intervals? Yes No X N/A Dry sprinklers are less than ten (10) years old? No X N/A (Sprinklers that do not meet the above criteria are required to be replaced or representative samples from one or more sample areas shall be tested. Test procedures shall be repeated at various intervals as stated in NFPA 25) Explain No Answers / Comments:



Protect	Protection. Prevention. Performance.									
Auton	Automatic Sprinkler Systems 3 of 9									
		A	nnual l	nspection &	Tests					
Date:	Nov 17 201	<u>5</u> L	ocation:	Building "B	" South Track 1-1	2				
Gauges Gauges Gauges Gauges Gauges	Gauges (Section 5.3.2) Gauges shall be replaced every five (5) years or tested every five (5) years by comparison with a calibrated gauge. Gauges not accurate to within three (3) percent of the full scale shall be recalibrated or replaced. Gauges are less than five (5) years old? Gauges have been compared against a calibrated gauge and are within three (3) percent? Gauges have been replaced during this annual inspection? Gauges dated 2009 (x2) Should be replaced.									
Main Di	rain Test (Sect	ion 13.2.5)		T	his section is Not	Applicable:				
			ply pressure lo			This Year	Last			
		15.0	sure with no flow	0 0 /	Static PSI Before	70				
				ze. Record the pressure.	Residual PSI	69				
				after gauge has stabilized.	Static PSI After	70				
	ate was the last		10.1 A 2.1 C 2		of the Main Drain?	2"				
Explain	No Answers / C	Comments:	Drain does	not handle test.			101-01-01-01-01			
Wet System (Section 13.4) The gauges indicate normal water pressure is being maintained? Does alarm valve appear to be free of physical damage? All trim valves are in the appropriate open or closed position? The alarm drains are not leaking? Wet system is equipped with a tail-end anti-freeze system(s)? Anti-freeze solution reading is at what freezing point? Anti-freeze solution freezing point appears to be satisfactory? Explain No Answers / Comments:										
Wet Sys	stem Test Tabl	e for Wet Al	arm Valve	· TI	nis section is Not	Applicable:				
Size	Make	Model	Serial #	Locat	ion of Inspectors	Test				
8"	Grinnell	Α	N/A	Ins	side south door 1	2				
(Ensure	alarm company	y is notified to	o avoid false ala	arms.)	Static PSI A		esidual PSI			
Test ala	rm valve water	flow alarm sv	vitch by openin	g inspector's test valve.	125 psi	1m20s	70 psi			
Is the we If Yes, o pressure and rest	Vet System Low-Water-Pressure Switch The wet system equipped with a low-water-pressure switch? Yes, open drain test valve to reduce water pressure slowly. Confirm operation of low pressure switch, record water ressure at which low pressure switch activated. Close drain test and pump system up to normal pressure and restore to service. Record pressure. PSI System Does not have a Low Pressure switch. One should be installed.									



Protection. Prevention. Performance. **Automatic Sprinkler Systems** 4 of 9 **Annual Inspection & Tests** Date: Building "B" South Track 1-12 Nov 17 2015 Location: Wet System Inspection (Section 13.4.1.2) This section is Not Applicable: Alarm valves and their associated strainers, filters, and restriction orfices shall be inspected internally every five (5) years unless tests indicate a greater frequency is necessary. Has the internal inspection been completed within the last four (4) years? X No If Yes, what year was the inspection completed? If No, was the internal inspection done during this annual inspection? Explain No Answers / Comments: Unknown when last wet system inspection was and should be done. Wet System Vane Type Flow Alarms This section is Not Applicable: Х Test water-flow alarm by opening inspector's test and record time that alarm registers. Flow Switch Zone Designation Location of Inspectors Test Static PSI Alarm Time Residual PSI Dry Pipe System (Section 13.4.4) This section is Not Applicable: X Does valve appear to be free of physical damage? Yes No N/A All trim valves are in the appropriate open or closed position? Yes No N/A The intermediate chamber is not leaking? Yes N/A No A tag or card with the last trip date and who conducted the test is attached to the valve? N/A Yes No Size Serial # Make Model Location of Inspectors Test Explain No Answers / Comments:



rioletti	on Frevention Feriori	iance								
Autom	atic Sprinkler Sys	stems					17-17		5 (of 9
		Annual Ins	pe	ctior	า &	Tests				
Date:	Nov 17 2015	Location:		Build	ding "E	3" South Tra	ack 1-12			
Dry Sys	tem Low-Air-Pressure	e Switch								
Is the dr	y system equipped with	h a low-air-pressure switc	:h?				Yes		No 2	X N/A
drain tes valve.) activated device a	If Yes, close the water supply valve isolate quick opening device if one is present and carefully open drain test valve to reduce air pressure slowly. (Do not reduce air pressure sufficiently to trip the dry pipe valve.) Confirm operation of low pressure switch, record air pressure at which low pressure switch activated. Close drain test valve, allow air pressure to rise to normal, then slowly open quick opening device and water supply valve. Explain No Answers / Comments:									
Every thr fully oper the dry p Has the ((2) years	Ory Pipe System Trip Test Table Every three (3) years and whenever the system is altered, the dry pipe valve shall be trip tested with the control valve ully open and the quick-opening device, if provided in service. During the years when full flow testing is not required, he dry pipe valve shall be trip tested with the control valve partially open. Has the dry pipe valve been tripped with the control valve fully open in the last two 2) years. If yes, what year was the fully open trip test conducted? Yes No N/A NO, is the fully open trip test being conducted during this annual inspection?									
Normal a	air pressure as per the	Manufacturers recomme	ndatio	on						PSI
	the dry pipe valve. Re ectors test valve until th	ecord the time from opening dry pipe valve trips.	ng	Water PSI	Air PSI	Time to Trip	Trip Poir Air PSI		Time W	
Did the v	alve and alarm operate	e properly?					Yes		No	N/A
Dry pipe	valve interior appears	clean and satisfactory?					Yes		No	N/A
Is a sign location o	of each auxiliary drain?	e valve indicating the nur			ry drair	ns and	Yes		No No	N/A N/A
	y appears to be adequa	ins drained during this ins	spection	on?			Yes	\vdash	-No	N/A
		late <i>?</i> lance device appears to c	oneral	to properl	w2		Yes	\vdash	$-\frac{N_0}{N_0}$	$-\frac{N/A}{N/A}$
		th priming water after it w	50	0 5 0		at?	Yes Yes		No No	N/A N/A
	No Answers / Comment		as 111 ₁) lesieu u	nu res					
Dry Pine	System Inspection (S	Section 12 4 4 4 6)				'hi 4i	!= N -4 A		- I	
Dry pipe indicate a	valve strainers, filters, a greater frequency is r	and restriction orfices sha necessary.			d interr	his section nally every fiv				_
	nternal inspection beer hat year was the inspec	n completed within the last ction completed?	st four	r (4) years	s?		Yes	L	No	N/A
	s the internal inspection To Answers / Comment	n done during this annual	l inspe	ection?	*		Yes	1	No	N/A



Explain No Answers / Comments:

11 Yard Street Winnipeg MB R2W 5J6 | P: 204.586.8227 | F: 204.582.3657 | www.bdrservices.ca

Protection. Prevention. Performance. Automatic Sprinkler Systems 6 of 9 **Annual Inspection & Tests** Date: Nov 17 2015 Location: Building "B" South Track 1-12 Preaction / Deluge System This section is Not Applicable: X Does valve appear to be free of physical damage? Yes No N/A All trim valves are in the appropriate open or closed position? Yes No N/A The valve seat is not leaking? Yes No N/A The electrical components are in service? No N/A Size Make Model Serial # Strike Through What Does Not Apply Closed Nozzles Deluge Preaction Open Nozzles Supervised Preaction Low-Air-Pressure Alarm Is the preaction system equipped with a low-air-pressure alarm? Yes No N/A If Yes, close the water supply valve and carefully open drain test valve to reduce air pressure slowly. Confirm operation of low pressure alarm, record air pressure of low pressure alarm activation. Close drain test valve, allow air pressure to rise to normal, then open water supply valve. **PSI** Preaction / Deluge System Trip Test Table (13.4.3.2.2.2) This section is Not Applicable: The preaction / deluge valve shall be trip tested annually as per the manufacturer's instructions. Where the nature is such that water discharge cannot occur unless protected equipment is shutdown, a full flow test shall be conducted at the next scheduled shutdown. In all cases the test frequency shall not exceed 3 years. Preaction or deluge valves protecting freezers shall be trip tested in a manner that does not introduce moisture into the piping in the freezer. PSI Water Air Trip Point Number of detectors required Brief description of valve operation **PSI** PSI to trip Preaction system Air PSI Did the valve and alarm operate properly? Yes No N/A Were all manual actuation devices operated? Yes No N/A For deluge systems did the water discharge pattern appear to be satisfactory? Yes No N/A Air supply appears to be adequate? Yes No N/A Automatic air pressure maintenance device appears to operate properly? Yes N/A No Was the preaction valve filled with priming water after it was trip tested and reset? Yes No N/A Explain No Answers / Comments: Preaction / Deluge System Maintenance (Section 13.4.3.1.7.1) This section is Not Applicable: Interior cleaning and parts replacement or repair shall be permitted every five (5) years for valves that can be reset without removal of the faceplate. If the valve cannot be reset externally the cleaning, replacement or repair shall be completed annually. The valve requires internal resetting, thus the inspection is done during this inspection? N/A The valve can be reset externally thus has the inspection been done within the last four (4) years? If Yes, what year was the inspection completed? Yes No N/A If No, was the internal inspection done during this annual inspection? N/A



Automatic Sprinkler S	ystems						-						7 (of 9	
	An	nua	l Inspectio	n 8	<u> </u>	Гes	st	S							
Date: Nov 17 2015		ation: _	-			" Sou			:k 1-	-12					
Control Valves								_				1 [_	1	
Are all control valves identified										es		No		N/A	
Are all control valves locked,				witch'	?			-	Y			No		N/A	
Are all control valves in the r	•								Y			No	_	N/A	
Are all control valves free fro					•					es		No		N/A	
During this inspection was ea								2	Y			No	_	N/A	
If applicable post indicator va		7).	. •					_	_	es	_	No	Х	-	
If applicable post indicator &	OS&Y va	ives were	e backed 1/4 turn from	fully	oper	n posi	tion	!?[]	(Y	es		No		N/A	
Control Valve Table	1 44 - 5														
Control Valve Function	# of Valves	Size	Type of Valve		Or	en			Sec	ured	i		Sic	gns	
System control valve	1	6"	OS+Y	х	Υ		N	Х	Υ		N	Х	Υ		N
					Υ		Ν		Υ		N		Υ		N
					Υ		N		Υ		N		Υ		N
					Υ		N		Υ		N		Υ		N
					Υ		N		Υ		N		Υ		N
					Υ		N		Υ		N		Υ		N
					Υ		Ν		Υ		N		Υ		N
					Υ		Ν	TH,	Υ		N		Υ		N
					Υ		Ν		Υ		N		Υ		N
					Υ		Ν		Υ		N		Υ		N
Backflow Prevention Assertall backflow preventers instated following: (1) A forward flow test shall be	lled in fire	protection	on system piping shall e system demand, incl	be te: uding	sted		ally	in a	ccor	dano	ce wi	ith th			
inside hose stations are loca (2) A backflow performance of the forward flow test. For backflow preventers size the test outlet is of a size to forward where connections do not performed the size of the test outlet is of a size to forward the size to forward the size of	test, as re d 2" and i low the sy	quired by under a f vstem de	y the authority having journal flow test is accommand.	urisdi eptab	le to	cond	uct	with	out	mea	surir	ng flo)
Connections do exist to perm									_	es		No		N/A	
A forward flow test was cond				ose s	trea	m?		-	_	es		No		N/A	
The forward flow test results						1111		\vdash	_	es		No		N/A	
If no connections are availab		-				noss	sible	2		es		No		N/A	
Was there a way of measuring				1 11044	rate	, poss	אוטוכ	<u> </u>	_	es		No		N/A	
What flow rate was measure	15 22 242							_	┙'	00		1,40		13/7	
Was the backflow preventer	100		_	r no b	ackf	low?	_		\neg			No		N/A	



Automatic Sprinkler Systems

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Date	: Nov	17 2015	Location:	Building "B" South Track 1-12
			ection 14.2.1)	and the contract of the second
An ir	spection of	piping and bra	anch line condition	s shall be conducted every five (5) years by opening a flushing
conn	ection at the	end of one m	nain and by removi	ing a sprinkler toward the end of one branch line for the purpose of
				d inorganic material.
				en conducted within the last four (4) years? Yes X No N/A
	525		stigation completed	
				nducted during this annual inspection? Yes No X N/A
				ars that piping is not obstructed? Yes No X N/A
Base	ed on this ye	ars results a It	urther flushing inve	estigation or procedure is recommended? Yes No X N/A
Expla	ain No Answ	vers / Commer	nts: Unknown w	when last Obstruction invesitgation was done and should
be d	one.			
		type:	1-9	Marit 9/0 F. L. L. S. L. L. L. C. L.
		1 -1 -5	P Beer 1	
Defic	ciencies (A	s per NFPA 2	5 - 2008)	
The	system has	the following d	deficiencies that sh	nould be reviewed with the authority having jurisdiction to determine
				on investigation of piping should be done every 5 years.
D2				components should be done every 5 years.
D3	The second secon		5 years and shou	
D4				ntified and "keep open" signs should be installed.
D5				e a identification sign.
D6				one 2.5" cap and should be replaced.
D7				
D8	8			
D9		11-2-1		
D10				
D11	****			P. Company of Texts of the Company o
D12				white the property of the second second
D13			1 201	
D14				
D15			1-17	
D16				
D17				
D18				
D19				
D20		The second second		The first term was particular to the contract of the contract
D21				
D22		V I		to net a grant of
D23				Paradiana para
			(Use back	of page if further room is needed)



Automatic Sprinkler Systems

9 of 9

		2 1111101011 11	iopootiioii ei rooto
Date:	Nov 17 2015	Location:	Building "B" South Track 1-12
We re		ormation only. Corrections of	inspection and test. These recommendations are not deficiencies of these recommendations are dependent on the owner or authority
R2.		vitch should be installed t	
R3.	Drains should be	e cleaned out to better ha	ndle drain test.
R4.			
R5. R6.			
R7.			
R8.			
R9.			
		(Use back o	of page if further room is needed)
Recor acces	s, confined space,		to the building (monitoring company, special codes, keys
	,		
This is wheth failure and confirm chang	er or not the syste a, and any subsequendition of equipmention that system be of occupancy. The control of the system be of occupancy. The control of the system be of occupancy. The control of the system be of occupancy.	m meets current code or state nent damage or loss consequent at actual time of testing. ninstallation requirements a	clude a review or analysis of the system design to determine andards. BDR Services Ltd. is not responsible for any equipment quential or direct. BDR Services Ltd. is merely verifying operation. Owner is responsible for system installation, maintenance and re met any time there are alterations, additions, renovations and Inspection Date: Nov 17 2015 Owner Representative:
		0	Owner Nepresentative.
Signat	ture:	<u>U</u>	Signature:





1 of 9

Annual Inspection & Tests

As per NFPA 25, Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems, 2008 Edition

	Water-Based Fire Protection Systems, 2008 Edition											
Date:	Nov 17 2015	Inspector:	Bart Dlugosz	Inspector SP/V	VFD #:	223/792						
Property Name:	Winnipeg	Transit Fort Roug	е	E E								
Tenant Name:	Building "A											
Address:	421 Osborn	e Street										
City:	Winnipe	eg Provinc	ce: MB		l Code:							
Contact:	Alex Veche	rya		Phone: _								
General												
Building		Building "A" High	Bay Center									
System Designa	ation	Center High Bay										
Location of sprin	nkler valve	Infront of Bus Bay	y 25			_						
Type of sprinkle	r system	X Wet	Dry	Deluge		Preaction						
Is the building o	ccupied?				X Yes	No N/A						
Is the system in	5.0				X Yes	No N/A						
		pears to be adequat	tely heated?		X Yes	No N/A						
The valve heade	er room(s) ha	ve a low-temperatur	re alarm?		Yes	No X N/A						
Is it known that t	the system(s)) is hydraulically calc	culated?		Yes	X No N/A						
		n sign provided at va			Yes	No X N/A						
Is there a minim deflector?	num of 18"clea	arance between sto	rage/obstructions and th	ne sprinkler	x Yes	No N/A						
Do all exterior o	penings appe	ear to be protected fr	rom freezing?		X Yes	No N/A						
			es it appear to be in good alterations/additions sin		Yes X Yes	No X N/A No N/A						
Explain No Ansv	wers / Comm	ents: System a	ppears to be pipe Sch	edule system.								
W-1 2 :												
Water Supply Do reservoirs, to	anks, or press	sure tanks appear to	be in good condition?		Yes	No X N/A						
			etc. are not covered und	der this inspection.)								
Pumps (Fire Pu		ot covered under this		Gasolir	_	X None						
Is fire pump	n loot inco			Gasoiii	L.							
When was pum Does pump app					Yes	No X N/A						
Explain No Ansv	-				LJ 163							
Explain No Ans	weis / Comm											



Automatic Sprinkler Systems 2 of 9 **Annual Inspection & Tests** Nov 17 2015 Date: Location: **Building "A" High Bay Center** Fire Department Connections (Section 13.7) This section is Not Applicable: FDC Location: Across the street of 520 Brandon street Are identification signs provided and in place? Yes X No N/A The connections are visible and accessible? Х No N/A Yes Couplings or swivels are not damaged and rotate smoothly? Yes No N/A Plugs or caps are in place and undamaged? Yes X No N/A Gaskets are in place and in good condition? X Yes No N/A The check valve is not leaking? Yes No N/A The automatic drain valve is in place and appears to be working and in good condition? Yes No X N/A The connection clapper(s) is in place and appears to be operating properly? X Yes N/A No Explain No Answers / Comments: Located on the street. There is a valve pit near FDC and was not inspected during this inspection. Fire department connection feeds building "A" and westside of building "B". FDC is missing ONE 2.5" cap. General Condition, Inspected From Floor Level (Section 5.2) This section is Not Applicable: Sprinkler heads appear to be in good condition? (Not corroded, loaded, painted, damaged) Yes N/A X No Piping appears to be in good condition? (Not damaged, leaking, corroded, bent) X Yes No N/A No N/A Hangers or Braces appear to be in good condition? (Not damaged, loose, rusted, missing) X Yes X Yes No N/A Devices, valves and gauges appear to be in good condition? X Yes No N/A Is stock of spare sprinklers available along with appropriate sprinkler wrench(s)? Explain No Answers / Comments: This section is Not Applicable: Sprinkler Testing (Section 5.3) N/A All sprinklers installed have been manufactured after 1920? X Yes No Yes No N/A Standard response sprinklers are less than fity (50) years old? X X N/A Yes No Fast response sprinklers are less than twenty (20) years old? X N/A Yes No Extra high (325 °F or higher) sprinklers have been tested at five (5) year intervals? No X N/A Dry sprinklers are less than ten (10) years old? (Sprinklers that do not meet the above criteria are required to be replaced or representative samples from one or more sample areas shall be tested. Test procedures shall be repeated at various intervals as stated in NFPA 25) Explain No Answers / Comments:





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Date:	Nov 17 201	<u>5</u> Lo	ocation:	Building "A"	High Bay Cent	er	
Gauges	(Section 5.3.2	2)		This	s section is No	t Applicable	e:
		•	(5) years or tes	sted every five (5) years by co	omparison with	a calibrated	gauge.
				he full scale shall be recalibra			
-	are less than fi		2 2 2				No N/A
				gauge and are within three (3	3) percent?	Yes	No X N/A
Gauges	have been repl	aced during t	his annual insp	ection?		Yes X	No N/A
Explain	No Answers / C	comments:	Gauges dat	ed 2009 (x2) Should be rep	laced.	_	20 C
Main D	rain Test (Sect	ion 13.2.5)		This	s section is No	ot Applicable	e: 🗌
(All read	dings should be	from the sup	ply pressure lo	wer gauge)		This Yea	ar Last
Record	the static water	supply press	ure with no flov	v	Static PSI Before	75	
Open th	e main drain an	nd allow water	r flow to stabiliz	e. Record the pressure.	Residual PSI	65	
Close th	ne main drain sl	owly. Record	I the pressure a	after gauge has stabilized.	Static PSI After	75	
What da	ate was the last	main drain te	est done?	2014 Size of	the Main Drain?	2"	
Explain	No Answers / C	Comments:					
Wet Sy	stem (Section	13.4)		Thi	s section is No	ot Applicable	e:
The gau	uges indicate no	rmal water p	ressure is being	g maintained?	х	Yes	No N/A
	arm valve appe				х	Yes	No N/A
All trim	valves are in the	e appropriate	open or closed	position?	х	Yes	No N/A
The ala	rm drains are no	ot leaking?			х	Yes	No N/A
Wet sys	stem is equipped	d with a tail-e	nd anti-freeze s	system(s)?		Yes X	No N/A
Anti-free	eze solution rea	ding is at wha	at freezing poin	t?			
Anti-free	eze solution free	ezing point ap	pears to be sa	tisfactory?		Yes	No X N/A
Explain	No Answers / C	Comments:	No tail end	Anti-freeze system.			
Wet Sy	stem Test Tabl	e for Wet Al	arm Valve	Thi	s section is No	ot Applicable	e: 🗌
Size	Make	Model	Serial #	Locatio	on of Inspector	s Test	
6''	Grinnell	Α	F4858	Bus	Bay 8 on Colu	mn.	
(Ensure	alarm company	y is notified to	avoid false ala	arms.)	Static PSI	Alarm Time	Residual PSI
Test ala	ırm valve water	flow alarm sv	vitch by opening	g inspector's test valve.	125 psi	39 sec	70 psi
Wet Sy	stem Low-Wat	er-Pressure	Switch				
Is the w	et system equip	ped with a lo	w-water-pressu	re switch?		Yes X	No N/A
If Yes, o	pen drain test v	alve to reduc	e water pressu	re slowly. Confirm operation	of low pressur	e switch, rec	ord water
pressur	e at which low p	ressure swite	ch activated. C	lose drain test and pump sys	stem up to norm	nal pressure	
and rest	tore to service.				Record pres	ssure.	PSI
Explain	No Answers / C	comments:			— не		



Automatic Sprinkler Systems 4 of 9 **Annual Inspection & Tests** Location: Date: Nov 17 2015 **Building "A" High Bay Center** Wet System Inspection (Section 13.4.1.2) This section is Not Applicable: Alarm valves and their associated strainers, filters, and restriction orfices shall be inspected internally every five (5) years unless tests indicate a greater frequency is necessary. Has the internal inspection been completed within the last four (4) years? X No If Yes, what year was the inspection completed? If No, was the internal inspection done during this annual inspection? Explain No Answers / Comments: Unknown when last wet system inspection was and should be done. X Wet System Vane Type Flow Alarms This section is Not Applicable: Test water-flow alarm by opening inspector's test and record time that alarm registers. Flow Switch Zone Designation Location of Inspectors Test Static PSI Alarm Time Residual PSI Dry Pipe System (Section 13.4.4) This section is Not Applicable: X Does valve appear to be free of physical damage? Yes No N/A All trim valves are in the appropriate open or closed position? Yes No N/A The intermediate chamber is not leaking? N/A Yes No A tag or card with the last trip date and who conducted the test is attached to the valve? Yes No N/A Size Make Model Serial # **Location of Inspectors Test** Explain No Answers / Comments:



Automatic Sprinkler Systems

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Date:	Nov 17 2015	Location:	■ Section 1	Build	ding "A	\" High Bay	Center		
Dry Syst	em Low-Air-Pressu	re Switch					Tim's	i spilit G	
Is the dry	system equipped wi	th a low-air-pressur	e switch?				Yes	No X	N/A
drain test valve.) (activated device ar	ose the water supply valve to reduce air p Confirm operation of l . Close drain test val d water supply valve lo Answers / Comme	oressure slowly. (Dow pressure switch live, allow air pressure.	o not reduce n, record air p	<i>air press</i> pressure a normal, tl	ure su at whic nen slo	<i>fficiently to tri</i> h low pressu	ip the dry pipe re switch] PSI
							11 11 11 1		_
Every thre fully oper the dry pi Has the c (2) years.	System Trip Test T ee (3) years and when and the quick-opening pe valve shall be trip lry pipe valve been tring If yes, what year was	never the system is ng device, if provid tested with the con ipped with the cont s the fully open trip	ed in service itrol valve par rol valve fully test conduct	During rtially ope open in the desired?	valve s the yea en. the last	shall be trip to ars when full t two	flow testing is	control valvenot require	re d,
	ne fully open trip test				ection?		Yes _	No]N/A
Normal a	ir pressure as per the	e Manufacturers red	commendation	on					PSI
	he dry pipe valve. R ctors test valve until t			Water PSI	Air PSI	Time to Trip	Trip Point Air PSI	Time Wa Inspector	
Did the va	alve and alarm opera	te properly?					Yes	No	N/A
	valve interior appears		ctory?				Yes	No No	N/A
ls a sign	ening device operate provided at the dry pi f each auxiliary drain	pe valve indicating	the number of	of auxiliar	y drain	is and	Yes	No No	N/A N/A
Were all i	dentified auxiliary dra	ains drained during	this inspection	on?			Yes	No	N/A
Air supply	appears to be adeq	uate?					Yes	No	N/A
Automation	air pressure mainte	nance device appe	ars to operat	e properl	y?		Yes	No	N/A
	dry pipe valve filled w o Answers / Comme	5) TTA	fter it was trip	tested a	nd res	et?	Yes	No	N/A
Dry pipe vindicate a Has the ir If Yes, wh If No, was	System Inspection valve strainers, filters greater frequency is aternal inspection been at year was the inspection the internal inspection of Answers / Comments	, and restriction orf necessary. en completed withir ection completed? on done during this	the last four	r (4) years	d interr	his section i	s Not Applicate (5) years un	able: X less tests No No]]n/a]n/a



Autom	Automatic Sprinkler Systems 6 of 9											
		A	nnual Ins	pection	on & Te	sts						
Date:	Nov 17	2015 L	ocation:	п. В	uilding "A" Hiç	jh Bay Center						
Preaction	on / Deluge	System			This s	ection is Not Applic	able: X					
Does va	lve appear	to be free of phy	sical damage?			Yes	No N/A					
All trim ۱	alves are i	n the appropriate	e open or closed pos	sition?		Yes	No N/A					
The valv	e seat is n	ot leaking?				Yes	No N/A					
The elec	ctrical comp	onents are in se	rvice?			Yes	No N/A					
Size	Make	Model	Serial #		Strike Throug	gh What Does Not A	pply					
				Deluge	Preaction	Closed Nozzles	Open Nozzles					
		tion Low-Air-Pr										
Is the pr	eaction sys	tem equipped w	th a low-air-pressure	e alarm?		Yes	No N/A					
If Yes, c	Yes, close the water supply valve and carefully open drain test valve to reduce air pressure slowly.											
Confirm	Confirm operation of low pressure alarm, record air pressure of low pressure alarm activation. Close drain											
test valv	est valve, allow air pressure to rise to normal, then open water supply valve.											
Preaction	n / Deluge	System Trip T	est Table (13.4.3.2	.2.2)	This se	ection is Not Applica	able: X					
The prea	action / delu	ige valve shall b	e trip tested annually	y as per the	manufacturer's	instructions. Where						
						shutdown, a full flow						
vears F	reaction or	deluge valves n	rotecting freezers st	. In all case	s the test freque	ency shall not exceed	3					
		into the piping in		ian be trip te	oted in a mann	er that does not	PSI					
Water	Air	Trip Point	Number of detector	rs required	Brief d	escription of valve						
PSI	PSI	Air PSI	to trip Preaction		Brief d	cscription of valve	operation					
125	1 Loven											
Did the v	alve and a	larm operate pro	nerly?			Yes	No □N/A					
		tuation devices	8 8			Yes	No N/A					
			scharge pattern app	ear to be sa	tisfactory?	Yes	No N/A					
		to be adequate?		041 10 50 04	dotatory.	Yes	No N/A					
			e device appears to	onerate nror	nerly?	Yes	No N/A					
			riming water after it			Yes	No N/A					
		s / Comments:	ig water after it	nao mp tos	iou unu reset!							
			manas (Section 42	42474\	This	estion in Net Annile	ahla. V					
	A 10000		enance (Section 13			ection is Not Applicaters for valves that ca						
						g, replacement or rep						
	ed annually				h h 2 2 1							
The valv	The valve requires internal resetting, thus the inspection is done during this inspection? Yes No N/A											
	The valve can be reset externally thus has the inspection been done within the last four											
(4) years	4) years? If Yes, what year was the inspection completed? Yes No N/A											
lf No, wa	s the interr	nal inspection do	ne during this annua	al inspection	?	Yes	No N/A					
Explain I	No Answers	s / Comments:				H 19						





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	An	nua	inspection	I C	X I	est	5							
Date: Nov 17 2015	Loca	ation: _	Bu	ilding	g "A	" High E	Зау (Cent	er	19				
Control Valves						(1)					173-70	37.19		
Are all control valves identifie	d?						2	X Y	es		No		N/A	
Are all control valves locked,	sealed or	equippe	ed with a supervisory sv	vitch?	?		2	X Y	es		No		N/A	
Are all control valves in the ne	ormal ope	en or clos	sed postion?				2	X Y	es		No	1-1	N/A	
Are all control valves free from	m externa	I leaks?					2	X Y	es		No		N/A	
During this inspection was ea	ch contro	l valve o	perated through its full	range	e?		2	X Y	es		No		N/A	
If applicable post indicator va		1986	. S				L	_	es		No	Х	N/A	
If applicable post indicator &	OS&Y va	ves were	e backed 1/4 turn from	fully	oper	position	n? ;	ΧY	es		No		N/A	
Control Valve Table														
Control Valve Function	# of Valves	Size	Type of Valve		Op	en		Sec	ured			Sig	gns	
System control valve	1	6"	OS+Y	Х	Υ	N	X	Υ		Ν	X	Υ		N
					Υ	N		Υ		N		Υ		Ν
					Υ	N		Υ		Ν		Υ		Ν
					Υ	N		Y		Ν		Υ		Ν
	Y N Y N													
					Υ	N		Υ		Ν		Υ	today.	N
					Υ	N		Υ	797	Ν		Υ		Ν
					Υ	N		Υ	mg.	Ν		Υ		N
					Υ	N		Υ		Ν		Υ		Ν
					Υ	N		Υ		Ν		Υ		N
Backflow Prevention Assemblies (Section 13.6) All backflow preventers installed in fire protection system piping shall be tested annually in accordance with the following: (1) A forward flow test shall be conducted at the system demand, including hose stream demand, where hydrants or inside hose stations are located downstream of the backflow preventer. (2) A backflow performance test, as required by the authority having jurisdiction, shall be conducted at the completion of the forward flow test. For backflow preventers sized 2" and under a forward flow test is acceptable to conduct without measuring flow, where the test outlet is of a size to flow the system demand. Where connections do not permit a full flow test, test shall be completed at the maximum flow rate possible.														
Connections do exist to perm A forward flow test was conducted forward flow test results of the forward flow test results of the forward flow test results of the forward flow test are available. Was there a way of measured was the backflow preventer to the forward flow flow preventer to the forward flow flow flow flow preventer to the forward flow flow flow flow flow flow flow flow	ucted at the second and the second at the second at the maximum at the second at the s	ne syster ystem de low test o ximum fl ne maxin	m demand, including hose a emand, including hose a conducted at maximum ow rate? num flow rate?	strea flow	m? rate	possible	e?	Y Y Y	es es es es		No No No No No		N/A N/A N/A N/A N/A	



Automatic Sprinkler Systems

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Date:	A STATE OF THE STA	Location:	Building "A" High Bay Center
An instance of the connection	ection at the end of one of cting for the presence of risual obstruction investing what year was the investing was the visual obstruction investing the contraction investion investing the contraction investion invest	ranch line conditions main and by removi foreign organic and gation of piping bee estigation completed on investigation cor gation results appea further flushing inve	n conducted within the last four (4) years? Yes X No N/A
be do		onice. Onichown w	men last obstruction investigation was done and should
	7.06		
	1		
The s		deficiencies that sh	ould be reviewed with the authority having jurisdiction to determine on investigation of piping should be done every 5 years.
D2	Internal Inspection of	alarm valve and c	omponents should be done every 5 years.
D3	Gauges are older the		
D4	Fire department conn	ection is missing	one 2.5" cap and should be replaced.
D5	Fire department conn	ection should hav	e a identification sign.
D6	1 11	7 19 1	
D7			
D8	1 2 7 1 1 1 1 1 1 1 1 1		and the submediate of the subm
D9			
D10			
D11	u ydjenuu	4.51.11.18	ting that is forth masters to a lifetime to the
D12			
D13			STATES TO THE ALTER SELL OF SACTING THE LAWS TO AND
D14			
D15			
D16	Ti>=		ulut <u>i i maga artika a sati i teritua. I i i i i i i i i i i i i i i i i i i </u>
D17			
D18			
D19			
D20			The season of th
D21			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
D22			Specification of the second se
D23			CONTROL MAN TO SECURE AND SECURIOR SECU
		(Use back	of page if further room is needed)



Automatic Sprinkler Systems

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		Ailliadi III3	pection a rests
Date: _	Nov 17 2015	Location:	Building "A" High Bay Center
We recom and are p	rovided for information	on only. Corrections of th	pection and test. These recommendations are not deficiencies lese recommendations are dependent on the owner or authority remounted onto column.
		should be installed to pr	
	ins should be clear	ned out to better handle	e drain test.
R4			
R5			
R6.			
R7 R8.			
R9.			
T.O		(Use back of pa	ge if further room is needed)
access, co			ne building (monitoring company, special codes, keys
			,
whether or failure, and and condit confirmation	operational test insp r not the system mee d any subsequent da ion of equipment at a	ets current code or standa mage or loss consequen actual time of testing. Ov	e a review or analysis of the system design to determine ards. BDR Services Ltd. is not responsible for any equipment tial or direct. BDR Services Ltd. is merely verifying operation where is responsible for system installation, maintenance and net any time there are alterations, additions, renovations and
Inspector:	Bart Dlugosz		Inspection Date: Nov 17 2015
Licence SI	P/WFD #: 223/79	2	Owner Representative:
Signature:	Band		Signature:





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1	As per l			or the Inspec e Protection		ng, and Mainte 008 Edition	nance of			
Date: I	Nov 17 2015	Inspe	ctor:	Bart Dlugo	osz	Inspector SP/	WFD #:	223/	792	
Property Name:	ALL STATE OF THE S		ort Rouge			satisfied Period Section (Section Section Sect				
Tenant Name:	Building "A	\"						12		-
Address:	421 Osborr	ne Street								-
City:	Winnip	eg	Province	e:	МВ	Posta	l Code: _			
Contact:	Alex Veche	rya				Phone :				
General										
Building		Building	"A" C.T.S	- Communica	ation & Traf	fic Services				
System Designa	ation	Commu	nication / T	raffic Service	es					
Location of sprir	ıkler valve	Main En	trance Rad	io Shop		1.0		li		
Type of sprinkle	r system	х	Wet	Dry		Deluge	Pr	eaction		
Is the building o	ccupied?						X Yes	No		N/A
Is the system in	service?						X Yes	No		N/A
The valve heade	er room(s) app	pears to b	e adequatel	y heated?			X Yes	No		N/A
The valve heade	er room(s) ha	ve a low-te	emperature	alarm?			Yes	No	X	N/A
Is it known that t	he system(s)	is hydrau	lically calcul	ated?			Yes	X No		N/A
If yes, is hydraul							Yes	No	X	N/A
Is there a minim deflector?	um of 18"clea	arance be	tween stora	ge/obstruction	ns and the s	prinkler	x Yes	No		N/A
Do all exterior o	penings appe	ar to be p	rotected fro	m freezing?			X Yes	No		N/A
If a hand hose is Confirm that the inspection?							X Yes	No No		N/A N/A
Explain No Ansv	wers / Comm	ents:	System ap	pears to be p	ipe schedu	le system.				_
Water Supply										
Do reservoirs, ta	anks, or press	sure tanks	appear to b	e in good cor	ndition?		Yes	No	X	N/A
(Water storage	tanks, private	fire servi	ce mains, et	tc. are not cov	ered under	this inspection.)			
Pumps (Fire Pu	ımp(s) are no	t covered	under this i	nspection.)		-	_			
Is fire pump			Diesel	Ele	ectric		e x	None		
When was pum	p last inspect	ed?								,
Does pump app	ear to be in g	ood condi	tion?				Yes	No	XΝ	I/A
Explain No Ans	wers / Comm	ents:								



Automatic Sprinkler Systems

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Annual Inspection & Tests

As per NFPA 25, Standard for the Inspection, Testing, and Maintenance of

		Water	-Based Fire	Protection	Systems, 2	2008 Edition			
Date:	Nov 17 2015	Inspe	ctor:	Bart Dlugo	osz	Inspector SP/	NFD#:	223/7	92
Property Name:	Winnipeg	Transit F	ort Rouge			MI WE TO THE	- 1		
Tenant Name:	Building "A	11					4		
Address:	421 Osborn	e Street				14	edil L		
City:	Winnipe	eg	_ Province:		MB	Posta	I Code: _		
Contact:	Alex Veche	rya				Phone :	- all us	N. n.	
General					i lui				
Building		Building	"A" C.T.S -	Communic	ation & Tra	ffic Services	N/A		
System Designa	tion	Commur	nication / Tra	ffic Service	es	st fu dossano			
Location of sprin	kler valve	Main Ent	trance Radio	Shop			Da.		
Type of sprinkle	r system	Х	Wet	Dry		Deluge	Pr	eaction	
Is the building or	ccupied?						X Yes	No	N/A
Is the system in	service?						X Yes	No	N/A
The valve heade	er room(s) app	ears to be	e adequately	heated?			X Yes	No	N/A
The valve heade	er room(s) hav	e a low-te	emperature a	larm?			Yes	No	X N/A
Is it known that t	he system(s)	is hydrau	lically calcula	ted?			Yes	X No	N/A
If yes, is hydraul							Yes	No	X N/A
Is there a minim deflector?	um of 18"clea	arance be	tween storage	e/obstructio	ns and the s	sprinkler	x Yes	No	N/A
Do all exterior or	nenings anne	ar to be n	rotected from	freezing?			X Yes	No	N/A
If a hand hose is	the second second				e in good co	andition?	X Yes	H _{No}	N/A
Confirm that the				10.100	•			HIND	
inspection?	.5						X	No	N/A
Explain No Ansv	vers / Comme	ents:	System appe	ears to be p	ipe schedı	ıle system.	741		
Water Cumply									
Water Supply Do reservoirs, ta	nks. or press	ure tanks	appear to be	in good cor	ndition?		Yes	ПиоГ	X N/A
(Water storage t	V-81		50.50	-		this inspection.,			
Pumps (Fire Pu	ımp(s) are no	covered	under this ins	spection.)					
Is fire pump		el.	Diesel	Ele	ectric	Gasoline	· X	None	
When was pum	p last inspecte	ed?	 ,						
Does pump app	ear to be in go	ood condi	tion?				Yes	No X	N/A
Explain No Ansv	wers / Comme	ents:					-11 -		
-									



Automatic Sprinkler Systems

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Date: Nov 17 2015 Location: Building "A" C.T.S - Communicati	on & Traffic	Services
Fire Department Connections (Section 13.7) This section	is Not Appli	cable:
FDC Location: Across the street of 520 Brandon street		.911
Are identification signs provided and in place?	Yes	X No N/A
The connections are visible and accessible?	X Yes	No N/A
Couplings or swivels are not damaged and rotate smoothly?	X Yes	No N/A
Plugs or caps are in place and undamaged?	Yes	X No N/A
Gaskets are in place and in good condition?	X Yes	No N/A
The check valve is not leaking?	Yes	No X N/A
The automatic drain valve is in place and appears to be working and in good condition?	Yes	No X N/A
The connection clapper(s) is in place and appears to be operating properly?	X Yes	No N/A
Explain No Answers / Comments: Located on the street. There is a valve pit nea	r FDC and wa	as not
inspected during this inspection. Fire department connection feeds building "A" a	and westside	of building
"B". FDC is missing ONE 2.5" cap.		
General Condition, Inspected From Floor Level (Section 5.2) This section	is Not Appli	cable:
Sprinkler heads appear to be in good condition? (Not corroded, loaded, painted, damaged)	Yes	X No N/A
Piping appears to be in good condition? (Not damaged, leaking, corroded, bent)	X Yes	No N/A
Hangers or Braces appear to be in good condition? (Not damaged, loose, rusted, missing)	X Yes	No N/A
Devices, valves and gauges appear to be in good condition?	X Yes	No N/A
Is stock of spare sprinklers available along with appropriate sprinkler wrench(s)?	X Yes	No N/A
Explain No Answers / Comments: Refer to page 8 deficiencies.		
): I	=
Sprinkler Testing (Section 5.3) This section	ı is Not Appli	cable:
All sprinklers installed have been manufactured after 1920?	X Yes	No N/A
Standard response sprinklers are less than fity (50) years old?	X Yes	No N/A
Fast response sprinklers are less than twenty (20) years old?	Yes	No X N/A
Extra high (325 °F or higher) sprinklers have been tested at five (5) year intervals?	Yes	No X N/A
Dry sprinklers are less than ten (10) years old?	Yes	No X N/A
(Sprinklers that do not meet the above criteria are required to be replaced or representa	tive samples	from one or
more sample areas shall be tested. Test procedures shall be repeated at various interv	als as stated i	in NFPA 25)
Explain No Answers / Comments:		
		100



Automatic Sprinkler Systems 3 of 9 **Annual Inspection & Tests** Date: Nov 17 2015 Location: Building "A" C.T.S - Communication & Traffic Services Gauges (Section 5.3.2) This section is Not Applicable: Gauges shall be replaced every five (5) years or tested every five (5) years by comparison with a calibrated gauge. Gauges not accurate to within three (3) percent of the full scale shall be recalibrated or replaced. Gauges are less than five (5) years old? N/A Yes X No Gauges have been compared against a calibrated gauge and are within three (3) percent? Yes No N/A Gauges have been replaced during this annual inspection? Yes N/A Explain No Answers / Comments: Gauges dated 2009 (x2) Should be replaced. Main Drain Test (Section 13.2.5) This section is Not Applicable: This Year (All readings should be from the supply pressure lower gauge) Last Record the static water supply pressure with no flow. Static PSI Before 75 Residual PSI Open the main drain and allow water flow to stabilize. Record the pressure. 73 75 Close the main drain slowly. Record the pressure after gauge has stabilized. Static PSI After What date was the last main drain test done? 2" 2014 Size of the Main Drain? Explain No Answers / Comments: Drain does not handle test. Wet System (Section 13.4) This section is Not Applicable: The gauges indicate normal water pressure is being maintained? X Yes No N/A Does alarm valve appear to be free of physical damage? Yes No N/A All trim valves are in the appropriate open or closed position? Yes No N/A The alarm drains are not leaking? Yes No N/A Wet system is equipped with a tail-end anti-freeze system(s)? N/A Anti-freeze solution reading is at what freezing point? Anti-freeze solution freezing point appears to be satisfactory? X Yes No N/A Explain No Answers / Comments: Wet System Test Table for Wet Alarm Valve This section is Not Applicable: Size Make Model Serial # Location of Inspectors Test Grinnell F1837 Sign storage area (Ensure alarm company is notified to avoid false alarms.) **Alarm Time** Static PSI Residual PSI Test alarm valve water flow alarm switch by opening inspector's test valve. 120 psi 32 sec 70 psi Wet System Low-Water-Pressure Switch Is the wet system equipped with a low-water-pressure switch? Yes X No If Yes, open drain test valve to reduce water pressure slowly. Confirm operation of low pressure switch, record water pressure at which low pressure switch activated. Close drain test and pump system up to normal pressure PSI and restore to service. Record pressure. Explain No Answers / Comments: System Does not have a Low Pressure switch. One should be installed.



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		<i>P</i>	Annual Ir	ispection (& lests						
Date:	Nov 17 201	5	Location:	Building "A" C.T.S -	Communication	& Traffic Ser	vices				
Alarm va	Wet System Inspection (Section 13.4.1.2) Alarm valves and their associated strainers, filters, and restriction orfices shall be inspected internally every five (5) years unless tests indicate a greater frequency is necessary.										
156	Has the internal inspection been completed within the last four (4) years? Yes X No N/A										
If Yes, w	If Yes, what year was the inspection completed? Unknown										
If No, wa	s the internal ir	nspection d	one during this ar	nnual inspection?		Yes)	No N/A				
Explain N	No Answers / C	omments:	Unknown w	hen last wet system	inspection was a	nd should be	done.				
	tem Vane Typ er-flow alarm b			nd record time that ala	This section is rm registers.	Not Applicab	ole: X				
	Switch Zone Des			of Inspectors Test	Static PSI	Alarm Time	Residual PSI				
Dry Pipe	System (Sec	tion 13.4.4)		This section is						
			nysical damage?			Yes	No N/A				
			te open or closed	position?		Yes	No N/A				
	mediate cham		2.700			Yes	No N/A				
A tag or	card with the la	st trip date	and who conduc	ted the test is attached	d to the valve?	Yes _	NoN/A				
Size	Make	Model	Serial #	L	ocation of Inspec	tors Test					
Explain N	No Answers / C	comments:					· · · · · · · · · · · · · · · · · · ·				
5											



Automatic Sprinkler Systems

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Amidal inspection & rests										
Date: Nov 17 2015 Location: Building	g "A" C.T.S - Communicatio	n & Traffic Se	rvices							
Dry System Low-Air-Pressure Switch	ar action of the second second									
Is the dry system equipped with a low-air-pressure switch?		Yes	No X N/A							
If Yes, close the water supply valve isolate quick opening deducation test valve to reduce air pressure slowly. (Do not reduce valve.) Confirm operation of low pressure switch, record air activated. Close drain test valve, allow air pressure to rise to device and water supply valve. Explain No Answers / Comments:	e air pressure sufficiently to tr pressure at which low pressu	ip the dry pipe re switch	PSI							
Dry Pipe System Trip Test Table Every three (3) years and whenever the system is altered, the dry pipe valve shall be trip tested with the control valve fully open and the quick-opening device, if provided in service. During the years when full flow testing is not required, the dry pipe valve shall be trip tested with the control valve partially open. Has the dry pipe valve been tripped with the control valve fully open in the last two (2) years. If yes, what year was the fully open trip test conducted? This section is Not Applicable: X Per No N/A										
If No, is the fully open trip test being conducted during this a	nnual inspection?	Yes	NoN/A							
Normal air pressure as per the Manufacturers recommendat	ion		PSI							
Trip test the dry pipe valve. Record the time from opening the inspectors test valve until the dry pipe valve trips.	Water Air Time to PSI PSI Trip	Trip Point Air PSI	Time Water To Inspectors Test							
Did the valve and alarm operate properly?		Yes	No N/A							
Dry pipe valve interior appears clean and satisfactory?		Yes	No N/A							
Quick-opening device operated properly? Is a sign provided at the dry pipe valve indicating the number location of each auxiliary drain?	r of auxiliary drains and	Yes	No N/A N/A							
Were all identified auxiliary drains drained during this inspec	tion?	Yes	No N/A							
Air supply appears to be adequate?		Yes	No N/A							
Automatic air pressure maintenance device appears to opera	ate properly?	Yes	No N/A							
Was the dry pipe valve filled with priming water after it was to	rip tested and reset?	Yes	No N/A							
Explain No Answers / Comments:	Y861 551	Y TITE								
Dry Pipe System Inspection (Section 13.4.4.1.6) Dry pipe valve strainers, filters, and restriction orfices shall b indicate a greater frequency is necessary. Has the internal inspection been completed within the last fo If Yes, what year was the inspection completed? If No, was the internal inspection done during this annual ins Explain No Answers / Comments:	e inspected internally every fivur (4) years?	is Not Applicate (5) years under Yes								



Automa	itic Spri	inkler System	ıs				6 of 9				
Annual Inspection & Tests											
Date: _	Nov 17	2015 L	ocation: Bui	ilding "A" C.	T.S - Commur	ication & Traffic Se	rvices				
Preaction / Deluge System This section is Not Applicable:											
Does valv	e appear	to be free of phy	sical damage?			Yes	No N/A				
All trim va	lves are i	n the appropriate	open or closed pos	sition?		Yes	No N/A				
The valve	seat is no	ot leaking?				Yes	No N/A				
The electr		oonents are in se	rvice?			Yes	No N/A				
Size	Make	Model	Serial #			h What Does Not A					
				Deluge	Preaction	Closed Nozzles	Open Nozzles				
Is the prea	action sys	ater supply valve	th a low-air-pressure and carefully open o	drain test valv			No N/A				
			larm, record air pres to normal, then oper			activation. Close dra	PSI				
Preaction / Deluge System Trip Test Table (13.4.3.2.2.2) This section is Not Applicable: X The preaction / deluge valve shall be trip tested annually as per the manufacturer's instructions. Where the nature is such that water discharge cannot occur unless protected equipment is shutdown, a full flow test shall be conducted at the next scheduled shutdown. In all cases the test frequency shall not exceed 3 years. Preaction or deluge valves protecting freezers shall be trip tested in a manner that does not introduce moisture into the piping in the freezer.											
Water	Air	Trip Point	Number of detecto	ors required	Brief de	escription of valve	operation				
PSI	PSI	Air PSI	to trip Preaction	n system							
Did the va	lve and a	larm operate pro	perly?			Yes	No N/A				
Were all n	nanual ac	ctuation devices o	perated?			Yes	No N/A				
For deluge	e systems	did the water dis	scharge pattern app	ear to be sat	isfactory?	Yes	No N/A				
Air supply	appears	to be adequate?				Yes	No N/A				
Automatic	air press	ure maintenance	device appears to	operate prop	erly?	Yes	No N/A				
Was the p	reaction	valve filled with p	riming water after it	was trip teste	ed and reset?	Yes	No N/A				
Explain No	o Answer	s / Comments:	8								
Interior cle	Preaction / Deluge System Maintenance (Section 13.4.3.1.7.1) Interior cleaning and parts replacement or repair shall be permitted every five (5) years for valves that can be reset without removal of the faceplate. If the valve cannot be reset externally the cleaning, replacement or repair shall be										
•	•		, thus the inspection	n is done duri	ng this inspecti	on? Yes	No N/A				
The valve	can be re	eset externally the	us has the inspectio	n been done	within the last f	our					
		Service and the service and th	inspection complet			Yes	No N/A				
lf No, was	the interr	nal inspection do	ne during this annua	al inspection?)	Yes	No N/A				
Explain No	o Answers	s / Comments:									



Automatic Sprinkler Systems

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Date: Nov 17 2015 Location: Building "A" C.T.S - Communication & Traffic Services													
Control Valves													
Are all control valves identified? Are all control valves legled as equipped with a supervisory switch?													
Are all control valves locked, sealed or equipped with a supervisory switch? X Yes No N/A													
Are all control valves in the normal open or closed postion? X Yes No N/A													
Are all control valves free from external leaks? No N/A N/A N/A N/A													
During this inspection was each control valve operated through its full range? X Yes No N/A If applicable post indicator valves were opened until spring tension was felt?													
If applicable post indicator valves were opened until spring tension was felt? Yes No X N/A If applicable post indicator & OS&Y valves were backed 1/4 turn from fully open position? Yes No X N/A													
If applicable post indicator & OS&Y valves were backed 1/4 turn from fully open position? X Yes No N/A													
Control Valve Table	# of		. Mes	-						_			
Control Valve Function	Valves	Size	Type of Valve	sit	Ope	n		Seci	ured	1487	Sic	gns	
System control valve	1	6"	OS+Y	Х	Υ	N	Х	Υ	N	х	Υ		N
Low bay west traffic	1	6"	G.O.B	Х	Υ	N	Х	Υ	N		Υ	х	N
Mary All Control			TT C	\$ X A	Υ	N	1 13	Υ	N		Υ		N
111			7 1	e mil	Υ	N		Υ	N		Υ		N
79	14 17 14				Υ	N		Υ	N		Υ		Ν
		dr.			Υ	N		Υ	N		Υ		N
					Υ	N		Υ	N		Υ		Ν
			The second of th		Υ	N		Υ	N	-	Υ		Ν
			.0.1110	u.B.	Y	N		Υ	N		Υ		N
					Υ	N		Υ	N		Υ		N
Backflow Prevention Assemblies (Section 13.6) All backflow preventers installed in fire protection system piping shall be tested annually in accordance with the following: (1) A forward flow test shall be conducted at the system demand, including hose stream demand, where hydrants or inside hose stations are located downstream of the backflow preventer. (2) A backflow performance test, as required by the authority having jurisdiction, shall be conducted at the completion of the forward flow test. For backflow preventers sized 2" and under a forward flow test is acceptable to conduct without measuring flow, where the test outlet is of a size to flow the system demand. Where connections do not permit a full flow test, test shall be completed at the maximum flow rate possible. Connections do exist to permit a full forward flow test? A forward flow test was conducted at the system demand, including hose stream? Yes No N/A N/A N/A N/A N/A													
If no connections are availab Was there a way of measurii				n flow	rate p	ossible	?	\neg	es	No		N/A	
What flow rate was measure	-								es	No		N/A	
Was the backflow preventer				r no b	ackflov	w?				No		N/A	



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Date:	Nov 17 2015 Location: Building "A" C.T.S - Communication & Traffic Services
Obst	uction Investigation (Section 14.2.1)
An in:	pection of piping and branch line conditions shall be conducted every five (5) years by opening a flushing
conne	ction at the end of one main and by removing a sprinkler toward the end of one branch line for the purpose of
	ting for the presence of foreign organic and inorganic material.
	sual obstruction investigation of piping been conducted within the last four (4) years? Yes X No N/A
	what year was the investigation completed? Unknown
	was the visual obstruction investigation conducted during this annual inspection? Yes No X N/A
	isual obstruction investigation results appears that piping is not obstructed? Yes No X N/A
Base	on this years results a further flushing investigation or procedure is recommended? Yes No X N/A
59	n No Answers / Comments: Unknown when last Obstruction invesitgation was done and should
be do	ne.
Defic	encies (As per NFPA 25 - 2008)
	stem has the following deficiencies that should be reviewed with the authority having jurisdiction to determine
if corr	ections should be made. D1. Obstruction investigation of piping should be done every 5 years.
D2	Internal Inspection of alarm valve and components should be done every 5 years.
D3	Gauges are older then 5 years and should be replaced.
D4	All system control valves should be identified and "keep open" signs should be installed.
D5	Fire department connection should have a identification sign.
D6	Fire department connection is missing one 2.5" cap and should be replaced.
D7	There are approx. EIGHT loaded heads in Radio shop and should be cleaned.
D8	
D9	
D10	
D11	
D12	
D13	
D14	
D15	
D16	
D17	
D18	
D19	
D20	
D21 .	P 1/2
D22	
D23	
	(Use back of page if further room is needed)



Automatic Sprinkler Systems

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Date:	Nov 17 2	2015	Location:	Building "A" C.T.S - Communication & Traffic Services
We re	emmendations ecommend the tare provided for g jurisdiction.	following bas information o	only. Corrections	I inspection and test. These recommendations are not deficiencies of these recommendations are dependent on the owner or authority
R2.				to prevent false alarms.
R3.			d out to better ha	
R4.		7	11-91	
R5.			Vie	
R6.			·	
R7.				
R8.				2
R9.				of page if further room is needed)
Gene	eral Notes		(USE DACK)	of page if further room is needed)
acces	ss, confined spa	ace, etc.)		to the building (monitoring company, special codes, keys
Syste	em monitored b	by Protelec 2	204-949-1415.	
<u> </u>			# 4 ¹¹	A STATE OF THE STA
	71			
This is whether failure and confirm	er or not the system, and any subsection of equipments	ystem meets o sequent dama ipment at actu stem installatio	current code or sta age or loss consectual time of testing.	nclude a review or analysis of the system design to determine tandards. BDR Services Ltd. is not responsible for any equipment quential or direct. BDR Services Ltd. is merely verifying operation. Owner is responsible for system installation, maintenance and are met any time there are alterations, additions, renovations and
Inspec	ctor: Bart Dlu	ugosz		Inspection Date: Nov 17 2015
Licenc	ce SP/WFD #:	223/792		Owner Representative:
Signat	ure: Ba	nan		Signature:





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Water-Based Fire Protection Systems, 2008 Edition										
Date: Nov 17 2015 Inspector: Bart Dlugosz Inspector SP/WFD #: 223/792										
Property Name: Winnipeg Transit Fort Rouge										
Tenant Name: Building "A"										
Address: 421 Osborne Street										
City: Winnipeg Province: MB Postal Code:										
Contact: Alex Vecherya Phone :										
General										
Building "A" High Bay East										
System Designation East High Bay										
Location of sprinkler valve In front of Bus Bay 19 Valve room										
Type of sprinkler system X Wet Dry Deluge Preaction										
Is the building occupied?										
Is the system in service?										
The valve header room(s) appears to be adequately heated?										
The valve header room(s) have a low-temperature alarm?										
Is it known that the system(s) is hydraulically calculated?										
If yes, is hydraulic information sign provided at valve(s)?										
Is there a minimum of 18"clearance between storage/obstructions and the sprinkler deflector?										
Do all exterior openings appear to be protected from freezing?										
If a hand hose is part of the sprinkler system does it appear to be in good condition? Confirm that the building has not undergone any alterations/additions since the last inspection? Yes No X No X No										
Explain No Answers / Comments: System appears to be pipe Schedule system.										
Water Supply										
Do reservoirs, tanks, or pressure tanks appear to be in good condition? Yes No X No										
(Water storage tanks, private fire service mains, etc. are not covered under this inspection.)										
Pumps (Fire Pump(s) are not covered under this inspection.) Is fire pump Diesel Electric Gasoline X None										
When was pump last inspected?										
Does pump appear to be in good condition?										
Explain No Answers / Comments:										



Automatic Sprinkler Systems

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Date: Nov 17 2015 Location: Build	ling "A" High Bay East
Fire Department Connections (Section 13.7)	This section is Not Applicable:
FDC Location: Across the street of 520 Brandon street	130
Are identification signs provided and in place?	Yes X No N/A
The connections are visible and accessible?	X Yes No N/A
Couplings or swivels are not damaged and rotate smoothly?	X Yes No N/A
Plugs or caps are in place and undamaged?	Yes X No N/A
Gaskets are in place and in good condition?	X Yes No N/A
The check valve is not leaking?	Yes No X N/A
The automatic drain valve is in place and appears to be working and in	good condition? Yes No X N/A
The connection clapper(s) is in place and appears to be operating prope	erly? X Yes No N/A
Explain No Answers / Comments: Located on the street. There is	a valve pit near FDC and was not
inspected during this inspection. Fire department connection feed	s building "A" and westside of building
"B". FDC is missing ONE 2.5" cap.	
	<u></u>
General Condition, Inspected From Floor Level (Section 5.2)	This section is Not Applicable:
Sprinkler heads appear to be in good condition? (Not corroded, loaded, po	ainted, damaged) X Yes No N/A
Piping appears to be in good condition? (Not damaged, leaking, corroded,	bent) X Yes No N/A
Hangers or Braces appear to be in good condition? (Not damaged, loose,	, rusted, missing) X Yes No N/A
Devices, valves and gauges appear to be in good condition?	X Yes No N/A
Is stock of spare sprinklers available along with appropriate sprinkler wr	rench(s)? X Yes No N/A
Explain No Answers / Comments:	PROFESSION AND AND AND AND AND AND AND AND AND AN
Sprinkler Testing (Section 5.3)	This section is Not Applicable:
All sprinklers installed have been manufactured after 1920?	X Yes No N/A
Standard response sprinklers are less than fity (50) years old?	X Yes No N/A
Fast response sprinklers are less than twenty (20) years old?	Yes No X N/A
Extra high (325 °F or higher) sprinklers have been tested at five (5) yea	
Dry sprinklers are less than ten (10) years old?	Yes No X N/A
(Sprinklers that do not meet the above criteria are required to be replac	
more sample areas shall be tested. Test procedures shall be repeated	at various intervals as stated in NFPA 25)
Explain No Answers / Comments:	



Autom	atic Sprinkl	er Systems	S				3 of 9					
ř.	economination 251 ∰ 1255 155511.	=		nspection & T	Toete							
		AI	IIIuai II	ispection & i	6313							
Date:	Nov 17 201	<u>5</u> Lo	cation:	Building "A	" High Bay East							
Gauges	Gauges (Section 5.3.2) This section is Not Applicable:											
Gauges shall be replaced every five (5) years or tested every five (5) years by comparison with a calibrated gauge.												
Gauges not accurate to within three (3) percent of the full scale shall be recalibrated or replaced.												
Gauges	are less than fi	ve (5) years o	ld?		Y	es X No		Α				
Gauges have been compared against a calibrated gauge and are within three (3) percent?												
Gauges	have been repl	aced during t	his annual insp	ection?	LY	es X No	0N	/A				
Explain No Answers / Comments: Gauges dated 2009 (x2) Should be replaced.												
Main Dr	ain Test (Secti	ion 13.2.5)		Thi	is section is Not A							
The same second	lings should be		•			This Year	Last					
	the static water				Static PSI Before							
				e. Record the pressure.	Residual PSI							
1000000 F 1 1 1 20			- 10 A TOTAL CONTRACTOR OF THE PARTY OF THE	ofter gauge has stabilized.	Static PSI After	011		_				
A A A	te was the last				f the Main Drain?	2"						
Explain	No Answers / C	comments:	Drain does	not handle test. Should be	cleaned out.			_				
Wet Sys	stem (Section	13.4)		Thi	is section is Not A							
The gau	ges indicate no	rmal water pr	essure is being	g maintained?	X	es No	o N	/A				
	arm valve appe					es N		/A				
	alves are in the		open or closed	position?		es N		/A				
PODDOZIA DRODOCEO	m drains are no					es N		/A				
	tem is equipped				Y	es X N	о <u> </u>	/A				
	ze solution rea											
	ze solution free	- A A			Y	es N	o X N	IA				
Explain	No Answers / C	comments:	No tail end	Anti-freeze system.				_				
	stem Test Tabl				is section is Not A on of Inspectors T							
Size 6"	Make Grinnell	Model	Serial # 4681		Run shop / Test s			-				
_	alarm compan	v is notified to					esidual	PSI				
100				g inspector's test valve.		52 sec	70 psi					
				J								
	stem Low-Wate et system equip			re switch?		es X N	оПи	/A				
				re slowly. Confirm operation								
- 20 1	500			lose drain test and pump sy								
	ore to service.	. Coodio oviito	301114104. 0	a.a toot and panip by	Record pressur		F	PSI				
	No Answers / C	comments:	No low pres	sure switch, One should I	2-1 TE 192 18							
					,							



Automatic Sprinkler Systems

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Building B Main flow In sprinkler room 19 sec Dry Pipe System (Section 13.4.4) This section is Not Applicable: X				iiiidai II	Speciality	G 10010					
Alarm valves and their associated strainers, filters, and restriction orfices shall be inspected internally every five (5) years unless tests indicate a greater frequency is necessary. Has the internal inspection been completed within the last four (4) years? If No, was the inspection done during this annual inspection? Explain No Answers / Comments: Unknown when last wet system inspection was and should be done. Wet System Vane Type Flow Alarms This section is Not Applicable: Test water-flow alarm by opening inspector's test and record time that alarm registers. Flow Switch Zone Designation Location of Inspectors Test Static PSI Alarm Time Residual PS Building B Main flow In sprinkler room 19 sec Dry Pipe System (Section 13.4.4) Dry Pipe System (Section 13.4.4) Dry Pipe System (Section 13.4.4) This section is Not Applicable: X Yes No No No No No Alarm Time Residual PS Location of Inspectors Test Location of Inspectors Test No No No No No At ag or card with the last trip date and who conducted the test is attached to the valve? Yes No No No No No Size Make Model Serial # Location of Inspectors Test	Date: _	Nov 17 2015	1975	_ocation:	Buildi	ng "A" High Bay I	East				
If Yes, what year was the inspection completed? If No, was the internal inspection done during this annual inspection? Explain No Answers / Comments: Unknown when last wet system inspection was and should be done. Wet System Vane Type Flow Alarms This section is Not Applicable: Test water-flow alarm by opening inspector's test and record time that alarm registers. Flow Switch Zone Designation Location of Inspectors Test Static PSI Alarm Time Residual PS Building B Main flow In sprinkler room 19 sec In sprinkler room This section is Not Applicable: X Alarm Time Residual PS Building B Wain flow In sprinkler room This section is Not Applicable: X Alarm Time Residual PS Building B Wain flow In sprinkler room This section is Not Applicable: X Alarm Time Residual PS Building B Wain flow In sprinkler room I	Alarm valvevery five	Alarm valves and their associated strainers, filters, and restriction orfices shall be inspected internally every five (5) years unless tests indicate a greater frequency is necessary.									
If No, was the internal inspection done during this annual inspection? Explain No Answers / Comments: Unknown when last wet system inspection was and should be done. Wet System Vane Type Flow Alarms This section is Not Applicable: Test water-flow alarm by opening inspector's test and record time that alarm registers. Flow Switch Zone Designation Location of Inspectors Test Static PSI Alarm Time Residual PS Building B Main flow In sprinkler room 19 sec Dry Pipe System (Section 13.4.4) This section is Not Applicable: X Does valve appear to be free of physical damage? All trim valves are in the appropriate open or closed position? The intermediate chamber is not leaking? A tag or card with the last trip date and who conducted the test is attached to the valve? Yes No No No No Size Make Model Serial # Location of Inspectors Test		A THE RESIDENCE OF THE PARTY OF			Control of the contro		Yes/	INO LIN/A			
Explain No Answers / Comments: Unknown when last wet system inspection was and should be done. Wet System Vane Type Flow Alarms Test water-flow alarm by opening inspector's test and record time that alarm registers. Flow Switch Zone Designation Location of Inspectors Test Static PSI Alarm Time Residual PS Building B Main flow In sprinkler room 19 sec In sprinkler room This section is Not Applicable: This section is Not Applicable: This section is Not Applicable: X Does valve appear to be free of physical damage? All trim valves are in the appropriate open or closed position? The intermediate chamber is not leaking? A tag or card with the last trip date and who conducted the test is attached to the valve? Yes No N/ Yes N							Пуль	6 N N. / A			
Wet System Vane Type Flow Alarms Test water-flow alarm by opening inspector's test and record time that alarm registers. Flow Switch Zone Designation Location of Inspectors Test Static PSI Alarm Time Residual PS Building B Main flow In sprinkler room 19 sec In sprinkler room In special room In sprinkler room In sprinkler room In sprinkler room In sprinkler room In special room In special room In special room In sprinkler room In special room In sprinkler room In special room I			•			St. 24 fe 1					
Test water-flow alarm by opening inspector's test and record time that alarm registers. Flow Switch Zone Designation Location of Inspectors Test Static PSI Alarm Time Residual PSI Building B Main flow In sprinkler room 19 sec In sprinkler room In spr	Explain N	o Answers / Col	mments:	Unknown W	nen läst wet system	inspection was a	na snoula be	e done.			
Building B Main flow In sprinkler room 19 sec Dry Pipe System (Section 13.4.4) This section is Not Applicable: X					d record time that ala		Not Applicat	ole:			
Dry Pipe System (Section 13.4.4) Does valve appear to be free of physical damage? All trim valves are in the appropriate open or closed position? The intermediate chamber is not leaking? A tag or card with the last trip date and who conducted the test is attached to the valve? Size Make Model Serial # Location of Inspectors Test	Flow Sv	vitch Zone Desig	nation	Location	of Inspectors Test	Static PSI	Alarm Time	Residual PSI			
Does valve appear to be free of physical damage? All trim valves are in the appropriate open or closed position? The intermediate chamber is not leaking? A tag or card with the last trip date and who conducted the test is attached to the valve? Size Make Model Serial# Location of Inspectors Test	Building	B Main flow		ln s	prinkler room	school and the	19 sec				
Does valve appear to be free of physical damage? All trim valves are in the appropriate open or closed position? The intermediate chamber is not leaking? A tag or card with the last trip date and who conducted the test is attached to the valve? Size Make Model Serial# Location of Inspectors Test					00 p (ed. 10 d 100 p 10 d	Paris and a second					
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Does valve appear to be free of physical damage? All trim valves are in the appropriate open or closed position? The intermediate chamber is not leaking? A tag or card with the last trip date and who conducted the test is attached to the valve? Size Make Model Serial # Location of Inspectors Test	. 12		- N				and the same				
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Does valve appear to be free of physical damage? All trim valves are in the appropriate open or closed position? The intermediate chamber is not leaking? A tag or card with the last trip date and who conducted the test is attached to the valve? Size Make Model Serial # Location of Inspectors Test			- 2				1				
Does valve appear to be free of physical damage? All trim valves are in the appropriate open or closed position? The intermediate chamber is not leaking? A tag or card with the last trip date and who conducted the test is attached to the valve? Size Make Model Serial # Location of Inspectors Test						98-18-0-*-1-1	Lett 1				
Does valve appear to be free of physical damage? All trim valves are in the appropriate open or closed position? The intermediate chamber is not leaking? A tag or card with the last trip date and who conducted the test is attached to the valve? Size Make Model Serial # Location of Inspectors Test					Control to	4 1					
Does valve appear to be free of physical damage? All trim valves are in the appropriate open or closed position? The intermediate chamber is not leaking? A tag or card with the last trip date and who conducted the test is attached to the valve? Size Make Model Serial # Location of Inspectors Test							Tr. EUV.				
Does valve appear to be free of physical damage? All trim valves are in the appropriate open or closed position? The intermediate chamber is not leaking? A tag or card with the last trip date and who conducted the test is attached to the valve? Size Make Model Serial # Location of Inspectors Test											
Does valve appear to be free of physical damage? All trim valves are in the appropriate open or closed position? The intermediate chamber is not leaking? A tag or card with the last trip date and who conducted the test is attached to the valve? Size Make Model Serial # Location of Inspectors Test		_ 'L' 1-0%1		11 . 12 .		avis, a recei	Jelly Just				
Does valve appear to be free of physical damage? All trim valves are in the appropriate open or closed position? The intermediate chamber is not leaking? A tag or card with the last trip date and who conducted the test is attached to the valve? Size Make Model Serial # Location of Inspectors Test	Dry Pipe	System (Section	on 13.4.4)	and the second		This section is	Not Applica	ble: X			
The intermediate chamber is not leaking? A tag or card with the last trip date and who conducted the test is attached to the valve? Size Make Model Serial# Location of Inspectors Test	Does valv	e appear to be	free of ph	ysical damage?							
A tag or card with the last trip date and who conducted the test is attached to the valve? Yes					position?		Yes	No N/A			
Size Make Model Serial # Location of Inspectors Test	The interr	nediate chambe	er is not le	aking?			Yes	No N/A			
	A tag or c	ard with the last	t trip date	and who conduct	ted the test is attached	d to the valve?	Yes	No N/A			
Explain No Answers / Comments:	Size	Make	Model	Serial #	L	ocation of Inspec	tors Test				
Explain No Answers / Comments:											
The state of the s	Explain N	o Answers / Co	mments:	y_ 11"							
				Harry Lie	ration of the who	AG0 - 14"	£1. 1	4 1			
							MINISTERNA PROPERTY AND ADDRESS OF THE PARTY A				



Automatic Sprinkler Systems					5 of	9					
Annual Inspection & Tests											
Date: Nov 17 2015 Location:	Bui	lding '	'A'' High Bay	East							
Dry System Low-Air-Pressure Switch											
Is the dry system equipped with a low-air-pressure switch?				Yes	No X	N/A					
If Yes, close the water supply valve isolate quick opening devidrain test valve to reduce air pressure slowly. (Do not reduce valve.) Confirm operation of low pressure switch, record air pactivated. Close drain test valve, allow air pressure to rise to device and water supply valve. Explain No Answers / Comments:	<i>air press</i> ressure a normal, th	ure sur at which nen slo	<i>fficiently to tri_l</i> h low pressur	o the dry pipe e switch		PSI					
Dry Pipe System Trip Test Table Every three (3) years and whenever the system is altered, the fully open and the quick-opening device, if provided in service the dry pipe valve shall be trip tested with the control valve pa Has the dry pipe valve been tripped with the control valve fully (2) years. If yes, what year was the fully open trip test conduct If No, is the fully open trip test being conducted during this and Normal air pressure as per the Manufacturers recommendation.	During rtially ope open in ted?	valve s the yea n. he last	ars when full t	sted with the	control valv	re					
	Water	Air	Time to	Trip Point	Time Wa						
Trip test the dry pipe valve. Record the time from opening the inspectors test valve until the dry pipe valve trips.	PSI	PSI	Trip	Air PSI	Inspector	Description of the second					
Did the valve and alarm operate properly?				Yes	No	N/A					
Dry pipe valve interior appears clean and satisfactory?				Yes	No	N/A					
Quick-opening device operated properly? Is a sign provided at the dry pipe valve indicating the number location of each auxiliary drain? Were all identified auxiliary drains drained during this inspection		y drain	is and	Yes	No No No	N/A N/A N/A					
Air supply appears to be adequate?				Yes	No	N/A					
Automatic air pressure maintenance device appears to operat	e properl	y?		Yes	No	N/A					
Was the dry pipe valve filled with priming water after it was trip	tested a	nd res	et?	Yes	No	N/A					
Explain No Answers / Comments:											
Dry Pipe System Inspection (Section 13.4.4.1.6) Dry pipe valve strainers, filters, and restriction orfices shall be indicate a greater frequency is necessary. Has the internal inspection been completed within the last fou If Yes, what year was the inspection completed? If No, was the internal inspection done during this annual inspection.	r (4) year	d interr	his section i	Carried to the control of the contro]]n/a]n/a					
Explain No Answers / Comments:											



Automatic Sprinkler Systems 6 of 9 **Annual Inspection & Tests** Date: Building "A" High Bay East Nov 17 2015 Location: Preaction / Deluge System X This section is Not Applicable: N/A Does valve appear to be free of physical damage? Yes No All trim valves are in the appropriate open or closed position? No N/A Yes The valve seat is not leaking? N/A Yes No The electrical components are in service? No N/A Yes Size Make Model Serial # Strike Through What Does Not Apply Preaction Closed Nozzles Open Nozzles Deluge Supervised Preaction Low-Air-Pressure Alarm Is the preaction system equipped with a low-air-pressure alarm? Yes N/A If Yes, close the water supply valve and carefully open drain test valve to reduce air pressure slowly. Confirm operation of low pressure alarm, record air pressure of low pressure alarm activation. Close drain test valve, allow air pressure to rise to normal, then open water supply valve. **PSI** Preaction / Deluge System Trip Test Table (13.4.3.2.2.2) This section is Not Applicable: The preaction / deluge valve shall be trip tested annually as per the manufacturer's instructions. Where the nature is such that water discharge cannot occur unless protected equipment is shutdown, a full flow test shall be conducted at the next scheduled shutdown. In all cases the test frequency shall not exceed 3 years. Preaction or deluge valves protecting freezers shall be trip tested in a manner that does not introduce moisture into the piping in the freezer. PSI Water Air **Trip Point** Number of detectors required Brief description of valve operation PSI **PSI** Air PSI to trip Preaction system No N/A Did the valve and alarm operate properly? Yes Were all manual actuation devices operated? Yes No N/A For deluge systems did the water discharge pattern appear to be satisfactory? Yes No N/A Air supply appears to be adequate? Yes No N/A N/A Automatic air pressure maintenance device appears to operate properly? Yes No N/A Was the preaction valve filled with priming water after it was trip tested and reset? Yes No Explain No Answers / Comments: Preaction / Deluge System Maintenance (Section 13.4.3.1.7.1) This section is Not Applicable: Interior cleaning and parts replacement or repair shall be permitted every five (5) years for valves that can be reset without removal of the faceplate. If the valve cannot be reset externally the cleaning, replacement or repair shall be completed annually. The valve requires internal resetting, thus the inspection is done during this inspection? N/A The valve can be reset externally thus has the inspection been done within the last four (4) years? If Yes, what year was the inspection completed? N/A Yes N/A If No, was the internal inspection done during this annual inspection? Yes Explain No Answers / Comments:



Protection, Prevention, P	erformance.													
Automatic Sprinkle	r Systems											7 c	of 9	
	An	nua	I Inspection	on 8	3. 7	Гes	ts							
Date: Nov 17 2015	Loc	ation: _		Buildi	ng "	A" Hig	h Ba	y Eas	st					_
Control Valves							_	17.			116			
Are all control valves ider	ntified?						L	Y	'es	Х	No		N/A	
Are all control valves lock	ked, sealed or	r equippe	ed with a supervisory	switch'	?			XY	'es		No		N/A	
Are all control valves in the	ne normal ope	en or clos	sed postion?					XY	'es		No		N/A	
Are all control valves free	from externa	al leaks?						XY	'es		No		N/A	
During this inspection wa	s each contro	ol valve o	perated through its fu	ıll rang	e?			X	'es		No		N/A	
If applicable post indicate	or valves were	e opened	l until spring tension v	vas felt	?			Y	'es		No	X	N/A	
If applicable post indicate	or & OS&Y va	lves were	e backed 1/4 turn fror	n fully	oper	n positio	on?	X	'es		No		N/A	
Control Valve Table														
Control Valva Eunatio	# of	Cina	Type of Valve		٥	en		Soc	urec	1		Sir	gns	
Control Valve Function System control valve	on Valves	Size 6"	OS+Y	х		N N	ı x		urec	N		Y	X	N
System control valve	- `	<u> </u>	0011		Y			Y		N		Y		N
					Y		_	Y		N		Y		N
					Y	1		Y		N		Y		N
				_	Y	1		Y	\vdash	N		Y		N
					Y	1		Y		N		Υ		N
					Υ	1		Y		N		Υ		N
					Υ	1	1	Y		N		Υ	-	N
					Υ	1	1	Y		N		Υ		N
					Υ	1	1	Y		N		Υ		N
DLil Dti A			12.6)		This.	acatio	n io	Not /	nnli	aabl		х	1	
Backflow Prevention As All backflow preventers in	the same of the sa					sectio							1	
following:	istanca iii iiic	protecti	on system piping one	50 10	otou	umuu		4000	raam			•		
(1) A forward flow test sh					hos	e strea	m de	eman	d, wł	nere	hydra	ants	or	
inside hose stations are			•		ation	, aball	h	andu	ot od	ot th		mple	otion	
(2) A backflow performar of the forward flow test.	ice test, as re	equirea b	y the authority having	jurisai	CLIOI	i, snaii	be c	onau	cieu	at till	3 001	пріє	ווטוו	
For backflow preventers	sized 2" and	under a f	forward flow test is ac	ceptab	ole to	condu	ct wi	thout	mea	surir	ng flo	w, v	vhere	Э
the test outlet is of a size	to flow the sy	ystem de	emand.							152				
Where connections do n	ot permit a fu	II flow tes	st, test shall be compl	leted a	t the	maxim	um f	low ra	ate p	ossik	ole.		_	
Connections do exist to p	permit a full fo	rward flo	ow test?						es/		No		N/A	¢.
A forward flow test was o	conducted at t	he syste	m demand, including	hose s	strea	m?	- [\	es/		No		N/A	ĺ.
The forward flow test res	ults met the s	system d	emand, including hos	e strea	am?		- [\	es/		No		N/A	
If no connections are ava	ailable was a	flow test	conducted at maximu	um flov	v rate	e possi	ole?	1	es/		No		N/A	,
Was there a way of mea	suring the ma	ximum f	low rate?)	es/		No		N/A	
What flow rate was meas	sured during t	he maxii	mum flow rate?										,	
Was the backflow prever	nter tested wit	th a sepa	arate report to check f	for no b	oack	flow?		\	es		No		N/A	



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			and the state of t
Date:	Nov 17 2015	Location:	Building "A" High Bay East
An in:	ruction Investigation (Supection of piping and bushed on at the end of one	ranch line conditions s	shall be conducted every five (5) years by opening a flushing a sprinkler toward the end of one branch line for the purpose of
inspe	cting for the presence of	f foreign organic and i	norganic material.
Has v	visual obstruction investi	gation of piping been	conducted within the last four (4) years? Yes X No N/A
	s, what year was the inve		Unknown
			ucted during this annual inspection? Yes No X N/A
			s that piping is not obstructed? Yes No X N/A
Base	d on this years results a	further flushing invest	igation or procedure is recommended? Yes No X N/A
		nents: Unknown who	en last Obstruction invesitgation was done and should
be do	one.		
Defic	iencies (As per NFPA	25 - 2008)	
The s	ystem has the following	deficiencies that shou	lld be reviewed with the authority having jurisdiction to determine
if corr	ections should be made	. D1. Obstruction	investigation of piping should be done every 5 years.
D2			nponents should be done every 5 years.
D3	Gauges are older then	n 5 years and should	be replaced.
D4	Fire department conn	ection is missing on	e 2.5" cap and should be replaced.
D5	Fire department conn		
D6			ified and "keep open" signs should be installed.
D7	*		
D8			
D9			
D10			
D11	al fund la	One in the second	LC_T Feat by in Self J , is full limited as a limit of the self-self-self-self-self-self-self-self-
D12			and group of the first of the second of the
D13			The first of the transfer of t
D14			
D15			
D16			
D17			
D18		_	
D19			SATE OF THE SECTION O
D20			ALL VIV. SHE RESEARCH COLUMN TO A STREET OF STREET
D21			COLOR TO LE MITTE 200 MOTE COLO
D22			"EATT World in the state of the
D23			September 4 might investigation for the second
	Tell Tell	(Use back of	page if further room is needed)
		, 200 2001 01	F-9



Automatic Sprinkler Systems

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	Annual Inspection & Tests								
Date:	Nov 17 2015	Location:	Building "A" High Bay East						
We re	ommendations ecommend the following are provided for informati g jurisdiction. R1.	on only. Corrections of t	spection and test. These recommendations are not deficiencies these recommendations are dependent on the owner or authority						
R2. R3. R4. R5. R6.	Drains should be clea	should be installed to pend out to better hand	le drain test.						
R7. R8. R9.									
Recor	(Use back of page if further room is needed) General Notes Record any pertinent information here with respect to the building (monitoring company, special codes, keys access, confined space, etc.) System monitored by Protelec 204-949-1415.								
		¥.							
Impor	rtant Note:								
This is wheth failure and co	s an operational test insper or not the system me e, and any subsequent dependent dependent at condition of equipment at	ets current code or stand amage or loss conseque actual time of testing. C	de a review or analysis of the system design to determine dards. BDR Services Ltd. is not responsible for any equipment ential or direct. BDR Services Ltd. is merely verifying operation owner is responsible for system installation, maintenance and met any time there are alterations, additions, renovations and						
Inspec	ctor: Bart Dlugosz ce SP/WFD #: 223/79		Inspection Date: Nov 17 2015						
Signat	~ ~		Owner Representative: Signature:						



Automatic Sprinkler Systems

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	As per N		for the Inspection, To re Protection System		enance of			
Date: N	Nov 17 2015	Inspector:	Bart Dlugosz	Inspector SP	/WFD#:	223/792		
Property Name:		Transit Fort Roug						
Tenant Name:	Building "A					8		
Address:	421 Osborn						.	
City:	Winnipe	865 539	ce: MB	Post	al Code:			
Contact:	Alex Veche			Phone:				
General							\Box	
Building		Building "A" Store	es Center				_	
System Designa	tion	Center Stores / Lo	w Bay Center				_	
Location of sprin	ıkler valve	East Stores valve	header				_	
Type of sprinkler	r system	X Wet	Dry	Delug	e	Preaction		
Is the building or	ccupied?				X Yes	No N	I/A	
Is the system in	service?				X Yes	NoN	I/A	
The valve heade	er room(s) ap	pears to be adequat	ely heated?		X Yes	No N	I/A	
The valve heade	er room(s) ha	ve a low-temperatur	e alarm?		Yes	No X N	I/A	
Is it known that t	the system(s)	is hydraulically calc	ulated?		Yes	X No N	I/A	
	If yes, is hydraulic information sign provided at valve(s)?							
Is there a minim deflector?	Is there a minimum of 18"clearance between storage/obstructions and the sprinkler deflector?							
Do all exterior openings appear to be protected from freezing?							I/A	
If a hand hose is part of the sprinkler system does it appear to be in good condition? Confirm that the building has not undergone any alterations/additions since the last inspection? X Yes No N/A								
Explain No Answers / Comments: System appears to be pipe schedule system.								
	-							
Water Supply								
THE R. P. LEWIS CO., LANSING MICH.			be in good condition?		Yes	No X	1/A	
(Water storage tanks, private fire service mains, etc. are not covered under this inspection.)								
Pumps (Fire Pu	ımp(s) are no	t covered under this						
Is fire pump Diesel Electric Gasoline X None								
When was pump last inspected?								
Does pump appear to be in good condition? Yes No X N/A								
Explain No Answers / Comments:								
							_	
							_	



Automatic Sprinkler Systems 2 of 9 **Annual Inspection & Tests** Date: Nov 17 2015 Location: **Building "A" Stores Center** Fire Department Connections (Section 13.7) This section is Not Applicable: FDC Location: Across the street of 520 Brandon street Are identification signs provided and in place? Yes X No N/A The connections are visible and accessible? No N/A X Yes Couplings or swivels are not damaged and rotate smoothly? No Yes N/A Plugs or caps are in place and undamaged? Yes Х No N/A Gaskets are in place and in good condition? Yes N/A No The check valve is not leaking? Yes No X N/A The automatic drain valve is in place and appears to be working and in good condition? Yes No X N/A The connection clapper(s) is in place and appears to be operating properly? X Yes N/A Explain No Answers / Comments: Located on the street. There is a valve pit near FDC and was not inspected during this inspection. Fire department connection feeds building "A" and westside of building 'B". FDC is missing ONE 2.5" cap. General Condition, Inspected From Floor Level (Section 5.2) This section is Not Applicable: Sprinkler heads appear to be in good condition? (Not corroded, loaded, painted, damaged) X Yes No N/A Piping appears to be in good condition? (Not damaged, leaking, corroded, bent) X No Yes N/A Hangers or Braces appear to be in good condition? (Not damaged, loose, rusted, missing) X Yes No N/A Devices, valves and gauges appear to be in good condition? Yes No N/A Is stock of spare sprinklers available along with appropriate sprinkler wrench(s)? Yes No N/A Explain No Answers / Comments: Sprinkler Testing (Section 5.3) This section is Not Applicable: All sprinklers installed have been manufactured after 1920? X Yes No N/A Standard response sprinklers are less than fity (50) years old? X Yes No N/A Fast response sprinklers are less than twenty (20) years old? Yes No N/A Extra high (325 °F or higher) sprinklers have been tested at five (5) year intervals? Yes No X N/A Dry sprinklers are less than ten (10) years old? X N/A (Sprinklers that do not meet the above criteria are required to be replaced or representative samples from one or more sample areas shall be tested. Test procedures shall be repeated at various intervals as stated in NFPA 25) Explain No Answers / Comments:



Auton	natic Sprink	ler System	ıs		, he se		3 of 9			
Annual Inspection & Tests										
Date:	Nov 17 201	<u>5</u> L	ocation:	Building "A	A" Stores Cente	er				
Gauges	Gauges (Section 5.3.2) This section is Not Applicable:									
	Gauges shall be replaced every five (5) years or tested every five (5) years by comparison with a calibrated gauge.									
							,aago.			
	Gauges not accurate to within three (3) percent of the full scale shall be recalibrated or replaced. Gauges are less than five (5) years old? Yes X No N/A									
-	Gauges have been compared against a calibrated gauge and are within three (3) percent?									
			this annual insp		(c) porocin:	Yes X				
	No Answers / C	1000	10.7	ted 2009 (x2) Should be re	nlaced.					
Схріаін	NO Allsweis / C	Johnnenis.	Gauges dat	led 2009 (X2) Silouid be le	ріасец.					
	27 AND NO MADE NO	na para Ale Satu				a mass alle				
CONTRACTOR OF THE PARTY OF THE	rain Test (Sect				nis section is No					
		•	pply pressure lo			This Yea	r Last			
			sure with no flow		Static PSI Before					
				ze. Record the pressure.	Residual PSI	69				
- con-			22 N 42	after gauge has stabilized.	Static PSI After	70				
	ate was the last				of the Main Drain?					
Explain	No Answers / C	Comments:	Drain does	not handle test. Check va	lve on drain cu	p does not h	old.			
Wet Sys	stem (Section	13.4)		Th	nis section is No	t Applicable	: 🔲			
The gau	iges indicate no	rmal water p	ressure is bein	g maintained?	х	Yes I	No N/A			
Does ala	arm valve appe	ar to be free	of physical dan	nage?	х	Yes	No N/A			
			open or closed		х	Yes	No N/A			
	rm drains are n	the state of the s			х	Yes	No N/A			
Wet sys	tem is equippe	d with a tail-e	end anti-freeze s	system(s)?		Yes X	No N/A			
100	15 100001		at freezing poin							
Anti-freeze solution freezing point appears to be satisfactory?										
Explain No Answers / Comments: There is no tail end anti freeze on system.										
Wet Sys	stem Test Tabl	e for Wet Al	arm Valve	Th	nis section is No	ot Applicable	: 🔲			
Size	Make	Model	Serial #	Locati	on of Inspector	s Test				
6"	Grinnell	Α	82097							
(Ensure	alarm company	y is notified to	o avoid false ala	arms.)	Static PSI	Alarm Time	Residual PSI			
Test ala	rm valve water	flow alarm sv	witch by openin	g inspector's test valve.	120 psi	32 sec	70 psi			
Wet Sys	stem Low-Wat	er-Pressure	Switch							
Is the wet system equipped with a low-water-pressure switch?										
If Yes, open drain test valve to reduce water pressure slowly. Confirm operation of low pressure switch, record water										
pressure at which low pressure switch activated. Close drain test and pump system up to normal pressure										
i u	ore to service.			, , ,	Record pres		PSI			
Explain	No Answers / C	comments:	System Doe	es not have a Low Pressu	and the same of the same of		stalled.			



Automatic Sprinkler Systems 4 of 9 **Annual Inspection & Tests** Date: Nov 17 2015 Location: **Building "A" Stores Center** Wet System Inspection (Section 13.4.1.2) This section is Not Applicable: Alarm valves and their associated strainers, filters, and restriction orfices shall be inspected internally every five (5) years unless tests indicate a greater frequency is necessary. Has the internal inspection been completed within the last four (4) years? X No If Yes, what year was the inspection completed? If No, was the internal inspection done during this annual inspection? Explain No Answers / Comments: Unknown when last wet system inspection was and should be done. Wet System Vane Type Flow Alarms This section is Not Applicable: X Test water-flow alarm by opening inspector's test and record time that alarm registers. Flow Switch Zone Designation Location of Inspectors Test Static PSI Alarm Time Residual PSI Dry Pipe System (Section 13.4.4) X This section is Not Applicable: Does valve appear to be free of physical damage? Yes No N/A All trim valves are in the appropriate open or closed position? Yes No N/A The intermediate chamber is not leaking? Yes No N/A A tag or card with the last trip date and who conducted the test is attached to the valve? Yes No N/A Size Make Model Serial # Location of Inspectors Test Explain No Answers / Comments:



Automatic Sprinkler Systems

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Date:	Nov 17 2015	Location:	Bu	lding '	"A" Stores C	enter		
Dry Sys	tem Low-Air-Pressur	e Switch				п		
Is the dr	y system equipped wit	h a low-air-pressure switch?				Yes	No X	N/A
drain tes valve.) activated device a	t valve to reduce air p Confirm operation of lo		ce air press ir pressure to normal, t	ure su at whic hen slo	<i>fficiently to tri</i> h low pressu	ip the dry pipe re switch	9	PSI
					111			
Every the fully ope the dry p	n and the quick-openii ipe valve shall be trip dry pipe valve been tri	never the system is altered, the device, if provided in servitested with the control valve peed with the control valve for the fully open trip test conditions.	ice. During partially ope ully open in	valve s the yea en.	shall be trip te ars when full		control valv	/e
, , ,		being conducted during this		ection?)	Yes	No	N/A
		Manufacturers recommenda	1990					PSI
	the dry pipe valve. Rectors test valve until t	Trip Point Air PSI	Time Wa					
Did the .	alus and alarma anara	to mronorly?				Yes	No C	N/A
	valve and alarm operation					Yes	H _{No} H	N/A
	pening device operate	clean and satisfactory?				Yes	No -	N/A
Is a sign		be valve indicating the numb	er of auxilia	ry drair	ns and		No	N/A
	(5)	ins drained during this inspe	ction?			Yes	No	N/A
	ly appears to be adequ	0.55.1				Yes	No	N/A
Automat	ic air pressure mainte	nance device appears to ope	rate proper	ly?		Yes	No	N/A
Was the	dry pipe valve filled w	ith priming water after it was	trip tested a	and res	set?	Yes	No	N/A
Explain I	No Answers / Comme	nts:						
1356								
Dry pipe indicate Has the If Yes, w	a greater frequency is internal inspection bee that year was the inspe	and restriction orfices shall necessary. en completed within the last t	our (4) year	d inter		is Not Applid ve (5) years u Yes]]n/a]n/a
Explain I	No Answers / Comme	nts:						



Protection, Prevention, Performance, Automatic Sprinkler Systems 6 of 9 **Annual Inspection & Tests** Date: Nov 17 2015 Location: Building "A" Stores Center Preaction / Deluge System This section is Not Applicable: Does valve appear to be free of physical damage? N/A Yes No All trim valves are in the appropriate open or closed position? Yes No N/A The valve seat is not leaking? No N/A Yes The electrical components are in service? No N/A Yes Size Make Model Serial # Strike Through What Does Not Apply Preaction Closed Nozzles Open Nozzles Deluge Supervised Preaction Low-Air-Pressure Alarm Is the preaction system equipped with a low-air-pressure alarm? Yes N/A If Yes, close the water supply valve and carefully open drain test valve to reduce air pressure slowly. Confirm operation of low pressure alarm, record air pressure of low pressure alarm activation. Close drain test valve, allow air pressure to rise to normal, then open water supply valve. PSI Preaction / Deluge System Trip Test Table (13.4.3.2.2.2) This section is Not Applicable: The preaction / deluge valve shall be trip tested annually as per the manufacturer's instructions. Where the nature is such that water discharge cannot occur unless protected equipment is shutdown, a full flow test shall be conducted at the next scheduled shutdown. In all cases the test frequency shall not exceed 3 years. Preaction or deluge valves protecting freezers shall be trip tested in a manner that does not introduce moisture into the piping in the freezer. PSI Water Trip Point Air Number of detectors required Brief description of valve operation PSI PSI Air PSI to trip Preaction system Did the valve and alarm operate properly? Yes No N/A Were all manual actuation devices operated? No Yes N/A For deluge systems did the water discharge pattern appear to be satisfactory? Yes No N/A N/A Air supply appears to be adequate? Yes No Automatic air pressure maintenance device appears to operate properly? Yes No N/A Was the preaction valve filled with priming water after it was trip tested and reset? Yes No N/A Explain No Answers / Comments: Preaction / Deluge System Maintenance (Section 13.4.3.1.7.1) This section is Not Applicable: Interior cleaning and parts replacement or repair shall be permitted every five (5) years for valves that can be reset without removal of the faceplate. If the valve cannot be reset externally the cleaning, replacement or repair shall be completed annually. The valve requires internal resetting, thus the inspection is done during this inspection? N/A Yes The valve can be reset externally thus has the inspection been done within the last four (4) years? If Yes, what year was the inspection completed? N/A Yes No If No, was the internal inspection done during this annual inspection? Yes No N/A Explain No Answers / Comments:



Automatic Sprinkler Systems

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	AII	iiuai	ilispection	II C	× 1	C3	L)							
Date: Nov 17 2015	Loca	ation:	В	uildii	ng "/	A" Sto	res	s Ce	ente	r					
Control Valves							2.1								
Are all control valves identifie	d?)	(Y	es		No		N/A	
Are all control valves locked,	sealed or	equippe	d with a supervisory sv	witch?))	Y	es		No		N/A	
Are all control valves in the normal open or closed postion?															
Are all control valves free fror	Are all control valves free from external leaks?														
Ouring this inspection was each control valve operated through its full range?															
f applicable post indicator valves were opened until spring tension was felt? Yes No X N/A															
If applicable post indicator &	f applicable post indicator & OS&Y valves were backed 1/4 turn from fully open position? X Yes No N/A														
Control Valve Table															
Control Valve Function	# of Valves	Size	Type of Valve		Ор	en			Sec	ured	-		Sig	gns	
System control valve	1	6"	OS+Y	х	Υ		N	Х	Υ		Ν	X	Υ		Ν
					Υ	1	N		Υ		Ν		Y		Ν
					Υ		N		Υ		Ν		Y		N
					Υ		N		Υ		N		Y		N
					Υ	1	N		Υ		N		Υ		Ν
					Υ		N		Υ		N		Y		N
					Υ		N		Υ		N		Υ		N
					Υ		N		Υ		Ν		Υ		N
				_	Υ		N		Υ		N		Y		N
					Υ		N		Υ		N		Υ		N
Backflow Prevention Asser All backflow preventers instal following: (1) A forward flow test shall b inside hose stations are local (2) A backflow performance t of the forward flow test. For backflow preventers size the test outlet is of a size to f Where connections do not per Connections do exist to perm	lled in fire the conducted downs test, as re d 2" and the sylermit a ful	protection ted at the stream of the quired bounder a firstern de I flow tes	e system piping shall e system demand, incl f the backflow prevente y the authority having j forward flow test is acc emand. st, test shall be comple	be te uding er. urisdi eptab	sted hos ctior le to	e strean, shall	ally am I be uct	in a der cor with	nanductow ra	d, whated a	ce where at the suring	ith th hydr e co	mple	or	е
A forward flow test was cond				ose s	strea	m?				'es		No		N/A	
The forward flow test results						0.657			-	'es		No		N/A	
If no connections are availab		7.				e poss	ible	?		'es		No		N/A	
Was there a way of measuring						350			Y	'es		No		N/A	
What flow rate was measure								_							
Was the backflow preventer			_	r no b	oack	flow?						No		N/A	`



Automatic Sprinkler Systems

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Date:	Nov 17 2015	Location:	Building "A" Stores Center
Obst	ruction Investigation (S	Section 14.2.1)	
An in	spection of piping and br	anch line conditior	is shall be conducted every five (5) years by opening a flushing
conne	ection at the end of one r	nain and by remov	ring a sprinkler toward the end of one branch line for the purpose of
inspe	cting for the presence of	foreign organic ar	nd inorganic material.
Has v	visual obstruction investig	ation of piping be	en conducted within the last four (4) years? Yes X No N/A
	s, what year was the inve		
If No,	was the visual obstruction	on investigation co	nducted during this annual inspection? Yes No X N/A
This v	visual obstruction investig	gation results appe	ears that piping is not obstructed? Yes No X N/A
Base	d on this years results a	urther flushing inv	estigation or procedure is recommended? Yes No X N/A
Expla	in No Answers / Comme	nts: Unknown	when last Obstruction invesitgation was done and should
be do	one.		
Defic	iencies (As per NFPA	25 - 2008)	
The s	system has the following	deficiencies that s	nould be reviewed with the authority having jurisdiction to determine
if corr	ections should be made.	D1. Obstruct	ion investigation of piping should be done every 5 years.
D2	Internal Inspection of	alarm valve and	components should be done every 5 years.
D3	Gauges are older then	5 years and sho	uld be replaced.
D4	All system control val	ves should be ide	entified and "keep open" signs should be installed.
D5			ve a identification sign.
D6	Fire department conne	ection is missing	one 2.5" cap and should be replaced.
D7			•
D8			
D9	47		
D10			
D11		11	n a legit to the action of the second
D12			
D13			
D14			
D15			
D16			
D17			
D18			
D19			
D20			TRANSF REFERENCE
D21			A A STATE OF THE S
D22			
D23			
		(Use back	of page if further room is needed)





Automatic Sprinkler Systems

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Date:		15 Locati	on:	Building "A" Stores Center	
We re and a	re provided for in	nformation only. C	his annual inspectio orrections of these r	n and test. These recommendations ecommendations are dependent on t	are not deficiencies the owner or authority
I				722	
R2. R3.			installed to prever better handle drai		
R4.	Dialits Siloulu	be cleaned out to	better handle drai	i test.	
R5.					
R6.					
R7.					
R8.					
R9.					
Cana	ual Natas	(Use back of page if	further room is needed)	
Recor acces	s, confined space			ding (monitoring company, special c	odes, keys
Oysic	in monitored by	/ 1 Totelec 204-34	5-1415.		
		4			
	*				
This is whether failure and co	er or not the syst , and any subsec andition of equipr	tem meets current quent damage or lo ment at actual time	code or standards. oss consequential or of testing. Owner i	view or analysis of the system desig BDR Services Ltd. is not responsible direct. BDR Services Ltd. is merely s responsible for system installation, y time there are alterations, additions	e for any equipment verifying operation maintenance and
Inspec	tor: Bart Dlug	josz		nspection Date: Nov 17 2015	
Licenc	e SP/WFD #:	223/792		Owner Representative:	
Signat	ure: Ba	an		Signature:	



Automatic Sprinkler Systems

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As per l	NFPA 25, Standard for the Water-Based Fire Pro			ance of		
Date: Nov 17 2015	Inspector: Ba	rt Dlugosz	Inspector SP/W	/FD #:	223/792	
Property Name: Winnipeg	Transit Fort Rouge		- " T E			
Tenant Name: Building "A	\"					
Address: 421 Osborr	ne Street					_
City: Winnip	eg Province:	MB	Postal Postal	Code:		
Contact: Alex Veche	rya		Phone :			
General						
Building	Building "A" Stores Eas					
System Designation	East Stores / Tire shop		hine shop area			
Location of sprinkler valve	South West corner of St	tores				
Type of sprinkler system	X Wet	Dry	Deluge	_	Preaction	8
Is the building occupied?				X Yes	No	N/A
Is the system in service?			L	X Yes	No	N/A
The valve header room(s) ap	pears to be adequately hea	ated?	- 4	X Yes	No	N/A
The valve header room(s) ha	ve a low-temperature alarn	n?	1	Yes		N/A
Is it known that the system(s)) is hydraulically calculated	?	Ļ	Yes	X No	N/A
If yes, is hydraulic information			ilula a	Yes	No X	N/A
Is there a minimum of 18"cleadeflector?	arance between storage/ob	ostructions and the sp	orinkler	x Yes	_	N/A
Do all exterior openings appe	• • • • • • • • • • • • • • • • • • • •			X Yes		N/A
If a hand hose is part of the s Confirm that the building has inspection?				X Yes X Yes	No No	N/A N/A
Explain No Answers / Comm	ents: System appears	s to be pipe schedu	le system.			
Water Supply						
Do reservoirs, tanks, or press	sure tanks appear to be in	good condition?		Yes	No X	N/A
(Water storage tanks, private	e fire service mains, etc. are	e not covered under t	this inspection.)			
Pumps (Fire Pump(s) are no	ot cover <u>ed u</u> nder this inspe	ction.)			_	
Is fire pump	Diesel	Electric	Gasoline	×	None	
When was pump last inspect	ted?					
Does pump appear to be in g	good condition?		Į	Yes	No X	N/A
Explain No Answers / Comm	ents:					



Automatic Sprinkler Systems	2 of 9
Annual Inspection	n & Tests
Date: Nov 17 2015 Location:	Building "A" Stores East
Fire Department Connections (Section 13.7)	This section is Not Applicable:
FDC Location: Across the street of 520 Brandon street	41. w
Are identification signs provided and in place?	Yes X No N/A
The connections are visible and accessible?	X Yes No N/A
Couplings or swivels are not damaged and rotate smoothly?	X Yes No N/A
Plugs or caps are in place and undamaged?	Yes X No N/A
Gaskets are in place and in good condition?	X Yes No N/A
The check valve is not leaking?	Yes No X N/A
The automatic drain valve is in place and appears to be working an	d in good condition? Yes No X N/A
The connection clapper(s) is in place and appears to be operating p	properly? X Yes No N/A
Explain No Answers / Comments: Located on the street. The	e is a valve pit near FDC and was not
inspected during this inspection. Fire department connection	eeds building "A" and westside of building
"B". FDC is missing ONE 2.5" cap.	
General Condition, Inspected From Floor Level (Section 5.2)	This section is Not Applicable:
Sprinkler heads appear to be in good condition? (Not corroded, loads	
Piping appears to be in good condition? (Not damaged, leaking, corro	
Hangers or Braces appear to be in good condition? (Not damaged, I	pose, rusted, missing) X Yes No N/A
Devices, valves and gauges appear to be in good condition?	X Yes No N/A
Is stock of spare sprinklers available along with appropriate sprinkle	er wrench(s)? X Yes No N/A
Explain No Answers / Comments:	
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	CACCOLOGICAL CONTRACTOR CONTRACTO
Sprinkler Testing (Section 5.3)	This section is Not Applicable:
All sprinklers installed have been manufactured after 1920?	X Yes No N/A
Standard response sprinklers are less than fity (50) years old?	X Yes No N/A
Fast response sprinklers are less than twenty (20) years old?	Yes No X N/A
Extra high (325 °F or higher) sprinklers have been tested at five (5)	year intervals? Yes No X N/A
Dry sprinklers are less than ten (10) years old?	Yes No X N/A
(Sprinklers that do not meet the above criteria are required to be re	placed or representative samples from one or
more sample areas shall be tested. Test procedures shall be repeat	ated at various intervals as stated in NFPA 25)
Explain No Answers / Comments:	



Autom	utomatic Sprinkler Systems 3 of 9											
	·			nspection & Tests								
Date:	Nov 17 201	<u>5</u> L	ocation:	Building "A" Stores East								
Gauges	(Section 5.3.2	2)		This section is Not Applicable:								
-	17	3.	(5) years or tes	sted every five (5) years by comparison with a calibrated gauge.								
_	- 25		70 T T	he full scale shall be recalibrated or replaced.								
	are less than fi			Yes X No N/A								
				gauge and are within three (3) percent? Yes No X N/A								
			this annual insp									
	enter and a contract of											
LAPIGIT	Explain No Answers / Comments: Gauges dated 2009 (x2) Should be replaced.											
Main Dr	ain Test (Sect	ion 13.2.5)		This section is Not Applicable:								
(All read	lings should be	from the sup	ply pressure lo	wer gauge) This Year Last								
Record	the static water	supply press	sure with no flow	v. Static PSI Before 70								
Open th	e main drain ar	nd allow wate	r flow to stabiliz	e. Record the pressure. Residual PSI 69								
Close th	e main drain sl	owly. Record	d the pressure a	after gauge has stabilized. Static PSI After 70								
What da	ate was the last	main drain te	est done?	2014 Size of the Main Drain? 2"								
Explain	No Answers / C	Comments:	Drain did no	ot handle drain test. Drain shold be cleaned out.								
Wet Svs	stem (Section	13.4)		This section is Not Applicable:								
			ressure is being									
			of physical dam									
			open or closed	NATE								
	m drains are n	10.000	8	X Yes No N/A								
			end anti-freeze s	system(s)? Yes X No N/A								
			at freezing poin									
			opears to be sa									
Explain	No Answers / C	Comments:	System doe	es not have a tail anti-freeze zone.								
•												
	stem Test Tab			This section is Not Applicable:								
Size	Make	Model	Serial #	Location of Inspectors Test								
6"	Grinnell	Α	F5174	Machine shop outside steam bay								
•			o avoid false ala									
Test ala	rm valve water	flow alarm sv	witch by openin	g inspector's test valve. 120 psi 1m5s 70 psi								
Wet Sys	stem Low-Wat	er-Pressure	Switch									
			w-water-pressu	ure switch?								
If Yes, o	Yes, open drain test valve to reduce water pressure slowly. Confirm operation of low pressure switch, record water											
Description of the control of	pressure at which low pressure switch activated. Close drain test and pump system up to normal pressure											
	nd restore to service. Record pressure. PSI											
Explain	No Answers / C	Comments:	System Doe	es not have a Low Pressure switch. One should be installed.								
	System Does not have a Low Pressure switch. One should be installed.											



Automatic Sprinkler Systems

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			iiiidai ii	Spection	G 10313		
Date:	Nov 17 201	5L	ocation:	Bui	lding "A" Stores I	East	1
Alarm va every fiv Has the If Yes, w If No, wa	e (5) years unle internal inspect what year was th	associated sess tests indicated ion been contained inspection do	trainers, filters, icate a greater function mpleted within to completed?	and restriction orfices requency is necessar he last four (4) years Unknown nnual inspection?	ry. ? –	Yes Yes	X No
	stem Vane Typ ter-flow alarm b			nd record time that al	This section is	Not Applicat	ole: X
	Switch Zone Desi			n of Inspectors Test	Static PSI	Alarm Time	Residual PSI
				1 , , , 6	ractifert our		
				<u> White Calabian</u>	Million To		
			- 1 - 1	100		1 1 1 1	
		17 7 m - 1 M			11/13/19 20 10 2	11 1	-
			Lecal management			1,	
					-	-1	
						5 -	
	-					1000	
				I the company of the	-5 17 7.2		
		ind Life	Otemas and		malary minus	150 m. and	
Dry Pipe	e System (Sect	ion 13.4.4)			This section is	Not Applica	ble: X
Does va	lve appear to be	e free of phy	sical damage?		7.7	Yes	No N/A
All trim v	alves are in the	appropriate	open or closed	position?		Yes	No N/A
The inte	rmediate chamb	per is not lea	iking?			Yes	No N/A
A tag or	card with the la	st trip date a	and who conduc	ted the test is attache	ed to the valve?	Yes	No N/A
Size	Make	Model	Serial #		Location of Inspe	ctors Test	
					•		
Explain I	No Answers / C	omments.					
		ommonto.	· · · · · · · · · · · · · · · · · · ·	nelson, treate or			
		910 (0014					
450-00-00-00-00-00-00-00-00-00-00-00-00-0		THE PARTY OF THE PARTY.				Condition Condition area	



Autor	natic Sprinkler Sys	tems					5	of 9
		Annual Inspe	ctior	1 &	Tests			
Date:	Nov 17 2015	Location:	В	uilding	"A" Stores	East		
Dry Sy	stem Low-Air-Pressure	Switch					1 911	
Is the c	ry system equipped with	n a low-air-pressure switch?				Yes	No	X N/A
drain te valve.) activate device	est valve to reduce air pr Confirm operation of lo	alve isolate quick opening devinessure slowly. (Do not reduce low pressure switch, record air pre, allow air pressure to rise to late:	<i>air press</i> pressure normal, t	ure su at which hen slo	fficiently to tr h low pressu	<i>ip the dry pip</i> re switch	e	PSI
					-		г	_
Every to fully ope the dry Has the	en and the quick-openin pipe valve shall be trip t e dry pipe valve been trip	ible never the system is altered, the g device, if provided in service ested with the control valve pa oped with the control valve fully the fully open trip test conduct	e. During rtially ope open in	valve s the yea en.	ars when full	ested with the	e control v	
		peing conducted during this and		ection?)	Yes	No	N/A
		Manufacturers recommendation	•					PSI
Nomia	all pressure as per the	Manufacturers recommendation	Water	Air	Time to	Trip Point	Time	Water To
		cord the time from opening	PSI	PSI	Trip	Air PSI		ctors Test
tne insp	pectors test valve until th	le dry pipe valve trips.			igot!=	13 p fr		
Did the	valve and alarm operate	e properly?				Yes	No	N/A
Dry pip	e valve interior appears	clean and satisfactory?				Yes	No	N/A
Is a sig	ppening device operated n provided at the dry pip n of each auxiliary drain?	e valve indicating the number	of auxilia	ry drair	ns and	Yes	No No	N/A N/A
	25 55 55 55 25 25 25 25 25 25 25 25 25 2	ins drained during this inspection	on?			Yes	No	N/A
	ply appears to be adequ					Yes	No	N/A
		ance device appears to operate	te proper	y?		Yes	No	N/A
Was th	e dry pipe valve filled wi	th priming water after it was trip	p tested a	and res	et?	Yes	No	N/A
Explain	No Answers / Commen	ts:						
Dry pipe indicate	a greater frequency is	and restriction orfices shall be necessary.		d inter	This section nally every fiv	ve (5) years u	ınless tes	
	70	n completed within the last fou	ır (4) year	s?		Yes	No	N/A
	what year was the inspe	5.	ootic=0			□√ar	□N _F [
		on done during this annual insp	ection?			Yes	No [N/A
⊏xpiain	No Answers / Commen	15.						



Yes

No

N/A

Protection, Prevention, Performance, Automatic Sprinkler Systems 6 of 9 **Annual Inspection & Tests** Date: Nov 17 2015 Location: **Building "A" Stores East** Preaction / Deluge System This section is Not Applicable: X Does valve appear to be free of physical damage? Yes No N/A All trim valves are in the appropriate open or closed position? Yes No N/A The valve seat is not leaking? Yes No N/A The electrical components are in service? Yes No N/A Size Make Model Serial # Strike Through What Does Not Apply Deluge Preaction Closed Nozzles Open Nozzles Supervised Preaction Low-Air-Pressure Alarm Is the preaction system equipped with a low-air-pressure alarm? Yes No N/A If Yes, close the water supply valve and carefully open drain test valve to reduce air pressure slowly. Confirm operation of low pressure alarm, record air pressure of low pressure alarm activation. Close drain test valve, allow air pressure to rise to normal, then open water supply valve. **PSI** Preaction / Deluge System Trip Test Table (13.4.3.2.2.2) This section is Not Applicable: The preaction / deluge valve shall be trip tested annually as per the manufacturer's instructions. Where the nature is such that water discharge cannot occur unless protected equipment is shutdown, a full flow test shall be conducted at the next scheduled shutdown. In all cases the test frequency shall not exceed 3 years. Preaction or deluge valves protecting freezers shall be trip tested in a manner that does not introduce moisture into the piping in the freezer. PSI Water Air Trip Point Number of detectors required Brief description of valve operation **PSI** PSI to trip Preaction system Air PSI Did the valve and alarm operate properly? Yes N/A No Were all manual actuation devices operated? Yes No N/A For deluge systems did the water discharge pattern appear to be satisfactory? Yes No N/A Air supply appears to be adequate? Yes No N/A Automatic air pressure maintenance device appears to operate properly? Yes No N/A Was the preaction valve filled with priming water after it was trip tested and reset? Yes No N/A Explain No Answers / Comments: Preaction / Deluge System Maintenance (Section 13.4.3.1.7.1) This section is Not Applicable: Interior cleaning and parts replacement or repair shall be permitted every five (5) years for valves that can be reset without removal of the faceplate. If the valve cannot be reset externally the cleaning, replacement or repair shall be completed annually. The valve requires internal resetting, thus the inspection is done during this inspection? Yes N/A The valve can be reset externally thus has the inspection been done within the last four (4) years? If Yes, what year was the inspection completed? N/A Yes No

If No, was the internal inspection done during this annual inspection?

Explain No Answers / Comments:



Automotic Sprint								-			_	7	-5 0	
Automatic Sprink	_	_	nua	Linepoeti	on S	2 7	Fact	6				7	of 9	
	4	/ \	IIua	l Inspection		×	1621	5						
Date: Nov 17 20	15	Loca	ation: _		Build	ling	"A" Sto	res l	East					_
Control Valves Are all control valves i Are all control valves I Are all control valves i Are all control valves f During this inspection	ocked, sea n the norm ree from e	al ope xterna	en or clos	sed postion?			4		X Y Y X Y Y X Y Y	es es		lo lo lo lo	N/A N/A N/A N/A	
If applicable post indic			6	3 55						es _	_		N/A	
If applicable post indic	ator & OS	&Y val	ves were	e backed 1/4 turn fro	m fully	oper	n positio	n? []	X Y	es _	N	lo	N/A)
Control Valve Table	1 4	# of									_			
Control Valve Fun	100	alves	Size	Type of Valve		Op	en		Sec	ured		Si	gns	
System control valve	•	1	6"	OS+Y	Х	Υ	N	X	Υ	1	1 3	XY		Ν
						Υ	N		Υ	1	1	Y		Ν
						Υ	N		Υ		1	Y		Ν
					_	Υ	N		Υ		1	Y		N
Ε.					_	Y	N		Y		1	Y		N
					_	Y	N	-	Y		1	Y		N
						Y	N		Y		1	Y	\vdash	N
						Y	N		Y		1	Y		N
					-	Y	N	_	Y		1	Y		N
Backflow Prevention All backflow preventer following: (1) A forward flow test inside hose stations an (2) A backflow perform of the forward flow tes For backflow prevente the test outlet is of a s Where connections do	s installed shall be core located or nance test, t. rs sized 2" ize to flow	in fire onduct downs as re and u the sy	protection ted at the stream of quired by under a fe stem de	on system piping shad e system demand, in f the backflow prever y the authority having orward flow test is act mand.	all be te ecluding nter. g jurisdi	hos ction	e strear , shall b	y in a n der e cor t with	ccor nanc nduc nout i	dance d, wher ted at t measu	with e hy the c	the drants comple flow, v	or etion	Э
Connections do exist t	o permit a	full fo	rward flo	w test?					Y	es 🗌	N	lo	N/A	
A forward flow test wa							m?		_	es	_	lo	N/A	
The forward flow test r										es _	_	lo	N/A	
If no connections are a					um flow	rate	possib	e?		es _	_	lo	N/A	
Was there a way of m	140.00								Y	es	N	lo	N/A	
What flow rate was me Was the backflow pre					for no b	ackf	low?		Y	es	N	lo	N/A	2



Automatic Sprinkler Systems

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Date:	Nov 17 2015	Location:	Building "A" Stores East
An insconne inspe Has v If Yes If No, This v Based	ection at the end of one ma ecting for the presence of fo visual obstruction investigat s, what year was the investi was the visual obstruction visual obstruction investigat d on this years results a fur ain No Answers / Comments	nch line condition ain and by remove preign organic artion of piping being ation completed investigation contion results appearther flushing investigation in investigation investigat	een conducted within the last four (4) years? Yes X No N/A
20 22	The state of the s	gE :	O Settle O BOKE Settle OF The Company
			YEST TO THE PARTY OF THE PARTY
The s	rections should be made.	eficiencies that s D1. Obstruct	should be reviewed with the authority having jurisdiction to determine tion investigation of piping should be done every 5 years.
D2 D3			components should be done every 5 years.
D3	Gauges are older then 5		entified and "keep open" signs should be installed.
D5	Fire department connect	tion should ha	ve a identification sign
D6			one 2.5" cap and should be replaced.
D7			one 2.0 Cap and Should be replaced.
D8			
D9	i and analysis		
D10			
D11	a la grande de la company	_ = <u>f</u> a = _{10,1} 0	in a feel of page to the control of
D12			
D13	324 (63)	F 1 A.C	- 100 Maria - 100
D14			
D15			
D16		LUIDE E	The transfer of the second of
D17			
D18			
D19			
D20			
D21			
D22 .			CAST STORE IN THE STORE OF THE
D23 .		"In a book	
		(Use back	k of page if further room is needed)



Automatic Sprinkler Systems 9 of 9 **Annual Inspection & Tests** Date: Nov 17 2015 Location: **Building "A" Stores East** Recommendations We recommend the following based on this annual inspection and test. These recommendations are not deficiencies and are provided for information only. Corrections of these recommendations are dependent on the owner or authority having jurisdiction. R2. Low pressure switch should be installed to prevent false alarms. R3. Drains should be cleaned out to better handle drain test. R4. R5. R6. R7. R8. R9. (Use back of page if further room is needed) Record any pertinent information here with respect to the building (monitoring company, special codes, keys access, confined space, etc.) System monitored by Protelec 204-949-1415. Important Note: This is an operational test inspection. It does not include a review or analysis of the system design to determine whether or not the system meets current code or standards. BDR Services Ltd. is not responsible for any equipment failure, and any subsequent damage or loss consequential or direct. BDR Services Ltd. is merely verifying operation and condition of equipment at actual time of testing. Owner is responsible for system installation, maintenance and confirmation that system installation requirements are met any time there are alterations, additions, renovations and change of occupancy. Inspector: Bart Dlugosz Inspection Date: Nov 17 2015 223/792 Licence SP/WFD #: Owner Representative: Signature: Ban

Signature:



Automatic Sprinkler Systems

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	As per N	FPA 25, Standaı Water-Based	d for the Inspec			ance of		
Date:	Nov 17 2015	Inspector:	Bart Dlug	osz	Inspector SP/W	/FD #:	223/79	2
Property Name:	Winnipeg	Transit Fort Rou	ıge					
Tenant Name:	Building "A"	•						
Address:	421 Osborne	e Street						
City:	Winnipe	eg Prov	ince:	MB	Postal	Code:		
Contact:	Alex Vecher	ya			Phone :			
General								
Building		Building "A" Sto	res West				11	
System Designa	ation	West stores / ur	iform stores / C	Carpentry Sho	op / Paint shop			
Location of sprin	nkler valve	South West cor	ner of Stores		0.00			
Type of sprinkle	r system	X Wet		Ory	Deluge		Preaction	1
Is the building of	ccupied?				- 1	X Yes	No	N/A
Is the system in	service?					X Yes	No	N/A
The valve heade	er room(s) app	ears to be adequ	ately heated?		5 LamS = 115	X Yes	No _	N/A
The valve heade	er room(s) hav	e a low-temperat	ure alarm?		* 4 1	Yes	No X	N/A
Is it known that t	the system(s)	is hydraulically ca	lculated?		9	Yes	X No	N/A
		sign provided at				Yes	No X	N/A
Is there a minim deflector?	um of 18"clea	rance between st	orage/obstructio	ns and the spi	rinkler	x Yes	No	N/A
Do all exterior o	penings appea	ar to be protected	from freezing?			X Yes	No _	N/A
		orinkler system do not undergone an				x Yes	No No	N/A N/A
Explain No Ansv	wers / Comme	ents: System	appears to be p	oipe schedule	e system.			
Water Supply					r	<u> </u>		¬
areas toward and active carrier		ure tanks appear	_		l	Yes	No X	N/A
(Water storage t	tanks, private	fire service mains	s, etc. are not co	vered under th	is inspection.)			
Is fire pump		covered under the		Electric	Gasoline		None	
When was pump	• • • • • • • • • • • • • • • • • • • •				ı	Yes	No X	NI/A
Does pump app					ı	165		איייב
Explain No Ansv	wers / Comme							
	A Recognition of the Control of the	and the second second second	Company of the Palarage West (Company of		Artist and the second second	A STATE OF THE PARTY OF THE PAR	A CONTRACTOR	THE RESERVE TO SHARE SHARE



Yes

Yes

No X N/A

No X N/A

Automatic Sprinkler Systems 2 of 9 **Annual Inspection & Tests Building "A" Stores West** Date: Nov 17 2015 Location: Fire Department Connections (Section 13.7) This section is Not Applicable: FDC Location: Across the street of 520 Brandon street Are identification signs provided and in place? X No Yes N/A The connections are visible and accessible? X Yes No N/A Couplings or swivels are not damaged and rotate smoothly? X Yes No N/A Plugs or caps are in place and undamaged? Yes X No N/A Gaskets are in place and in good condition? Yes No N/A The check valve is not leaking? No Yes X N/A The automatic drain valve is in place and appears to be working and in good condition? Yes No X N/A The connection clapper(s) is in place and appears to be operating properly? X Yes N/A Explain No Answers / Comments: Located on the street. There is a valve pit near FDC and was not inspected during this inspection. Fire department connection feeds building "A" and westside of building "B". FDC is missing ONE 2.5" cap. General Condition, Inspected From Floor Level (Section 5.2) This section is Not Applicable: Sprinkler heads appear to be in good condition? (Not corroded, loaded, painted, damaged) X Yes No N/A Piping appears to be in good condition? (Not damaged, leaking, corroded, bent) X Yes No N/A Hangers or Braces appear to be in good condition? (Not damaged, loose, rusted, missing) X Yes No N/A Devices, valves and gauges appear to be in good condition? X Yes No N/A Is stock of spare sprinklers available along with appropriate sprinkler wrench(s)? Yes No N/A Explain No Answers / Comments: Sprinkler Testing (Section 5.3) This section is Not Applicable: All sprinklers installed have been manufactured after 1920? X Yes No N/A Standard response sprinklers are less than fity (50) years old? X Yes No N/A Fast response sprinklers are less than twenty (20) years old? Yes No X N/A

Extra high (325 °F or higher) sprinklers have been tested at five (5) year intervals?

(Sprinklers that do not meet the above criteria are required to be replaced or representative samples from one or more sample areas shall be tested. Test procedures shall be repeated at various intervals as stated in NFPA 25)

Dry sprinklers are less than ten (10) years old?

Explain No Answers / Comments:



Automatic Sprinkler Systems

Wet System Test Table for Wet Alarm Valve

Model

(Ensure alarm company is notified to avoid false alarms.)

Serial #

Make

Grinnell

Size

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This section is Not Applicable:

Alarm Time

Residual PSI

Location of Inspectors Test

Paint shop by Paint room 1

Static PSI

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Annual Inspection & Tests Date: Nov 17 2015 Location: **Building "A" Stores West** Gauges (Section 5.3.2) This section is Not Applicable: Gauges shall be replaced every five (5) years or tested every five (5) years by comparison with a calibrated gauge. Gauges not accurate to within three (3) percent of the full scale shall be recalibrated or replaced. Gauges are less than five (5) years old? Yes X No N/A Gauges have been compared against a calibrated gauge and are within three (3) percent? No Yes N/A Gauges have been replaced during this annual inspection? X No N/A Yes Explain No Answers / Comments: Gauges dated 2009 (x2) Should be replaced. Main Drain Test (Section 13.2.5) This section is Not Applicable: This Year (All readings should be from the supply pressure lower gauge) Last 75 Record the static water supply pressure with no flow. Static PSI Before Residual PSI 65 Open the main drain and allow water flow to stabilize. Record the pressure. Close the main drain slowly. Record the pressure after gauge has stabilized. Static PSI After 75 2" What date was the last main drain test done? 2014 Size of the Main Drain? Explain No Answers / Comments: Wet System (Section 13.4) This section is Not Applicable: The gauges indicate normal water pressure is being maintained? X No N/A Yes No Does alarm valve appear to be free of physical damage? X Yes N/A All trim valves are in the appropriate open or closed position? X Yes No N/A The alarm drains are not leaking? N/A No Yes Wet system is equipped with a tail-end anti-freeze system(s)? No N/A Anti-freeze solution reading is at what freezing point? Anti-freeze solution freezing point appears to be satisfactory? X Yes No N/A Explain No Answers / Comments: Refer to notes.

Explain No Answers / Comments: System Does not have a Low Pressure switch. One should be installed.



Automatic Sprinkler Systems

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			-		J J.			
Date:	Nov 17 201	5 L	ocation:	n thousa	Building "	A" Stores W	est	15 02
Alarm va every fiv Has the If Yes, w If No, wa	ve (5) years unle internal inspec what year was the	associated s ess tests ind tion been co he inspection nspection do	trainers, filters, icate a greater mpleted within completed?	and restriction of frequency is neother the last four (4) the last four (4) Unknow annual inspection when last wet s	orfices shall ressary. years? vn	be inspected	Yes Yes	K No
	stem Vane Typ ter-flow alarm b			and record time t	Thi hat alarm re	s section is	Not Applicat	ole: X
	Switch Zone Des			on of Inspectors T		Static PSI	Alarm Time	Residual PSI
				•				
			3 16 01 2		100		G G	
			in rise		dir.	1		
							Lym a sale	The state of the s
			16			a - 12 of 5 o		
							S Harris II. Sa	
						7		
Does va All trim v	e System (Sec	e free of phy e appropriate	open or close	d position?	Th	I is section is	Not Applical Yes Yes	No N/A No N/A
	rmediate cham		•				Yes	No N/A
	card with the la	ist trip date a	ind who conduc	cted the test is a	ttached to th	e valve?	Yes	NoN/A
Size	Make	Model	Serial #		Location	on of Inspec	tors Test	
	initivate graphical	i ansa gus	2011 00 31 62 5 31	race, in the market				
Explain I	No Answers / C	comments:	t ibbos em	es limitation	Affan Lui	Triade of	#1 TF	
							- According	



Automatic Sprinkler Systems 5 of 9 **Annual Inspection & Tests** Date: Nov 17 2015 Location: **Building "A" Stores West** Dry System Low-Air-Pressure Switch Is the dry system equipped with a low-air-pressure switch? No X N/A Yes If Yes, close the water supply valve isolate quick opening device if one is present and carefully open drain test valve to reduce air pressure slowly. (Do not reduce air pressure sufficiently to trip the dry pipe valve.) Confirm operation of low pressure switch, record air pressure at which low pressure switch activated. Close drain test valve, allow air pressure to rise to normal, then slowly open quick opening device and water supply valve. Record pressure. PSI Explain No Answers / Comments: Dry Pipe System Trip Test Table This section is Not Applicable: Every three (3) years and whenever the system is altered, the dry pipe valve shall be trip tested with the control valve fully open and the quick-opening device, if provided in service. During the years when full flow testing is not required, the dry pipe valve shall be trip tested with the control valve partially open. Has the dry pipe valve been tripped with the control valve fully open in the last two (2) years. If yes, what year was the fully open trip test conducted? N/A Yes No If No, is the fully open trip test being conducted during this annual inspection? Yes No N/A Normal air pressure as per the Manufacturers recommendation **PSI** Water Air Time to Trip Point **Time Water To** Trip test the dry pipe valve. Record the time from opening PSI PSI Trip Air PSI Inspectors Test the inspectors test valve until the dry pipe valve trips. Did the valve and alarm operate properly? Yes No N/A Dry pipe valve interior appears clean and satisfactory? N/A Yes No Quick-opening device operated properly? Yes No N/A Is a sign provided at the dry pipe valve indicating the number of auxiliary drains and location of each auxiliary drain? No N/A Were all identified auxiliary drains drained during this inspection? Yes No N/A Air supply appears to be adequate? Yes No N/A Automatic air pressure maintenance device appears to operate properly? Yes No N/A Was the dry pipe valve filled with priming water after it was trip tested and reset? Yes N/A Explain No Answers / Comments: Dry Pipe System Inspection (Section 13.4.4.1.6) This section is Not Applicable: Dry pipe valve strainers, filters, and restriction orfices shall be inspected internally every five (5) years unless tests indicate a greater frequency is necessary. Has the internal inspection been completed within the last four (4) years? N/A No If Yes, what year was the inspection completed? If No, was the internal inspection done during this annual inspection? No N/A Explain No Answers / Comments:



Explain No Answers / Comments:

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Automatic Sprinkler Systems 6 of 9 **Annual Inspection & Tests** Date: Nov 17 2015 Location: **Building "A" Stores West** Preaction / Deluge System This section is Not Applicable: X Does valve appear to be free of physical damage? N/A Yes No All trim valves are in the appropriate open or closed position? N/A Yes No The valve seat is not leaking? Yes N/A No The electrical components are in service? Yes No N/A Size Make Model Serial # Strike Through What Does Not Apply Deluge Closed Nozzles Preaction Open Nozzles Supervised Preaction Low-Air-Pressure Alarm Is the preaction system equipped with a low-air-pressure alarm? Yes N/A No If Yes, close the water supply valve and carefully open drain test valve to reduce air pressure slowly. Confirm operation of low pressure alarm, record air pressure of low pressure alarm activation. Close drain test valve, allow air pressure to rise to normal, then open water supply valve. PSI Preaction / Deluge System Trip Test Table (13.4.3.2.2.2) This section is Not Applicable: The preaction / deluge valve shall be trip tested annually as per the manufacturer's instructions. Where the nature is such that water discharge cannot occur unless protected equipment is shutdown, a full flow test shall be conducted at the next scheduled shutdown. In all cases the test frequency shall not exceed 3 years. Preaction or deluge valves protecting freezers shall be trip tested in a manner that does not introduce moisture into the piping in the freezer. PSI Water Air Trip Point Number of detectors required Brief description of valve operation PSI **PSI** Air PSI to trip Preaction system Did the valve and alarm operate properly? Yes No N/A Were all manual actuation devices operated? Yes No N/A For deluge systems did the water discharge pattern appear to be satisfactory? Yes No N/A Air supply appears to be adequate? Yes No N/A Automatic air pressure maintenance device appears to operate properly? Yes No N/A Was the preaction valve filled with priming water after it was trip tested and reset? Yes No N/A Explain No Answers / Comments: Preaction / Deluge System Maintenance (Section 13.4.3.1.7.1) This section is Not Applicable: Interior cleaning and parts replacement or repair shall be permitted every five (5) years for valves that can be reset without removal of the faceplate. If the valve cannot be reset externally the cleaning, replacement or repair shall be completed annually. The valve requires internal resetting, thus the inspection is done during this inspection? N/A No The valve can be reset externally thus has the inspection been done within the last four (4) years? If Yes, what year was the inspection completed? N/A Yes No If No, was the internal inspection done during this annual inspection? Yes N/A



Automatia Sprinklar S	votomo			- Parkers	- 16								_	-	
Automatic Sprinkler S			l loonootio	_ (o =	r_	_4						7 (of 9	ì
	An	nua	l Inspectio		×	ı e	St	S							
Date: Nov 17 2015	Loc	ation:	Е	Build	ling	"A"	Sto	es V	Vest						
Control Valves															
Are all control valves identifie	ed?								Y	es	Х	No		N/A	
Are all control valves locked,	sealed o	r equippe	ed with a supervisory sw	vitch'	?				Y	es	X	No		N/A	
Are all control valves in the n	ormal ope	en or clo	sed postion?						K Y	es		No		N/A	
Are all control valves free fro	m externa	al leaks?							X Y	es		No	100	N/A	
During this inspection was ea	ach contro	ol valve o	perated through its full	rang	e?			7	K Y	es		No		N/A	
If applicable post indicator valves were opened until spring tension was felt?										Х	N/A				
If applicable post indicator &	OS&Y va	lves were	e backed 1/4 turn from	fully	oper	n pos	sitior	1?	K Y	es		No		N/A	
Control Valve Table											la .				
Control Valve Function	# of Valves	Size	Type of Valve		Or	en			Sec	urec	1	-	Sic	gns	
System control valve	1	6"	OS+Y	Х	Y		N	х	Y		N	Х	Y	1	N
Paint shop Glycol	2	2"	G.O.B	Х	Υ		N		Υ	х	N		Υ	х	N
Carpenter shop Glycol	2	1.25"	G.O.B	х	Υ		N	х	Υ		N		Υ	Х	N
Paint shop Booths	4	3"	Gate	Х	Υ		N		Υ	Х	N		Υ	Х	N
Paint booth 4 Iso	1	2"	Gate	Х	Υ		N		Υ	Х	N		Υ	Х	N
Paint shop Glycol Iso	1	2"	Gate	Х	Υ		N		Υ	Х	N		Υ	Х	N
					Υ		N		Υ		N		Υ		N
					Υ		N		Υ		N		Υ		N
					Υ		N		Υ		N	T. I.	Υ		N
					Υ		N		Υ	51.1	N		Υ		N
Backflow Prevention Asser	mblies (S	ection 1	3.6)	7	his	sec	tion	is N	ot A	ilaa	cabl	e:		1	
All backflow preventers insta			Section 2.										ie	,	
following:															
 A forward flow test shall be inside hose stations are local 			9.5	_	hos	e str	eam	der	nand	d, wh	iere	hydr	ants	or	
(2) A backflow performance t					ctior	ı. sh	all b	oo e	nduc	ted :	at th	e cor	alam	etion	
of the forward flow test.		,	,		7 10 10	,			200 70 7			7 7 70			
For backflow preventers size				ptab	le to	con	duct	with	out	mea	surir	ng flo	W, V	vher	е
the test outlet is of a size to f Where connections do not pe				-d -t	tho	max	imu	m flo		to n	oooil	ala			
			N.	eu ai	. trie	Шах	arriu	III IIC	_		_	1 1	_	1	
Connections do exist to perm						1200		-		es	X	No		N/A	
A forward flow test was cond			AND THE RESERVE OF THE PARTY OF			m?		-		es		No	X	N/A	
The forward flow test results			1962 NO. 1967 NO. 196					_	_	es		No	Х	1	
If no connections are availab				flow	rate	pos	ssible	e? 	_	es		No	_	N/A	
Was there a way of measuring								L		es	X	No		N/A	
What flow rate was measure							,	г.	x V			l., '		1,	
Was the backflow preventer	tested wit	n a sena	rate report to check for	no h	ackt	TOW'	/		K IV	29		INO		IN//A	



Automatic Sprinkler Systems

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Date	Nov 17 2015	Location:	Building "A" Stores West
An in conn inspet Has y If Yes If No This Base	ection at the end of one meeting for the presence of the prese	anch line conditions nain and by removitoring or	n conducted within the last four (4) years? Yes X No N/A
The s	ections should be made.	eficiencies that sh D1. Obstructi	ould be reviewed with the authority having jurisdiction to determine on investigation of piping should be done every 5 years.
D2			omponents should be done every 5 years.
D3 D4	All system control valve		
D5	Fire department conne	es snould be ide	ntified and "keep open" signs should be installed.
D6			one 2.5" cap and should be replaced.
D7			
D8	All Collitois valves sile	ula be locked or	secured open by electronic device.
D9			
D10			August State of the Control of the C
D11			
D12			
D13		And The Treatment	
D14			
D15			and the state of t
D16			All as an a first as I as a first
D17			29 16 25 1 4 7 1 262 252 259 2 1 2
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D22	11011		
D23			
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Automatic Sprinkler Systems

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Ailidai ilispe	CHOIL & LESTS
Date: Nov 17 2015 Location:	Building "A" Stores West
Recommendations We recommend the following based on this annual inspectio and are provided for information only. Corrections of these relations jurisdiction. R1.	n and test. These recommendations are not deficiencies ecommendations are dependent on the owner or authority
R2. Low pressure switch should be installed to preven	A f-11
R3. Drains should be cleaned out to better handle drai	
R4.	ii test.
R5.	
R6.	
R7.	
R8.	
R9(Lise back of page if	further room is needed)
General Notes	
Record any pertinent information here with respect to the buil	lding (monitoring company, special codes, keys
access, confined space, etc.)	
System monitored by Protelec 204-949-1415.	
There are TWO Anti-freeze zones on this system. The Pa	int show long management 20 O if management should
and carpenter shop measured at -27 C if propelyne glyco	Int snop loop measures -28 C ir propelyne glycol,
and amplement and managed as an array of the best of the second and the second an	1.
I	
Important Note: This is an operational test inspection. It does not include a re whether or not the system meets current code or standards. If failure, and any subsequent damage or loss consequential or and condition of equipment at actual time of testing. Owner is confirmation that system installation requirements are met any change of occupancy.	BDR Services Ltd. is not responsible for any equipment direct. BDR Services Ltd. is merely verifying operation responsible for system installation, maintenance and
Inspector: Bart Dlugosz Ir	nspection Date: Nov 17 2015
Licence SP/WFD #: 223/792 C	Owner Representative:
Signature: Bandon S	Signature:



Automatic Sprinkler Systems

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As per NFF	The same of the sa	r the Inspection, Testi Protection Systems, 2		ance of	_
Date: Nov 17 2015	Inspector:	Bart Dlugosz	Inspector SP/W	VFD #:	223/792
	ansit Fort Rouge		72.2		
Tenant Name: Building "A"	-				
Address: 421 Osborne S	Street				
City: Winnipeg	Province:	MB	Postal	Code:	
Contact: Alex Vecherya	l .		Phone: _		
General				l unal	h 11 ()
Building Bu	uilding "A" High Ba	ay West/Low Bay Wes	t Traffic		3
System Designation W	est High Bay/West	Low Bay Traffic			
Location of sprinkler valve In	front of Bus Bay 3	2 Valve room			
Type of sprinkler system	X Wet	Dry	Deluge		Preaction
Is the building occupied?			1	X Yes	No N/A
Is the system in service?			-	X Yes	No N/A
The valve header room(s) appea	ars to be adequately	heated?		X Yes	No N/A
The valve header room(s) have	a low-temperature a	larm?	. I	Yes	No X N/A
Is it known that the system(s) is	hydraulically calcula	ited?		Yes	X No N/A
If yes, is hydraulic information si				Yes	No X N/A
Is there a minimum of 18"cleara deflector?	nce between storage	e/obstructions and the s	sprinkler	x Yes	No N/A
Do all exterior openings appear	to be protected from	r freezing?		X Yes	No N/A
If a hand hose is part of the sprin Confirm that the building has not				Yes	No X N/A
inspection?	t undergone any alte	stations/additions since	the last	X Yes	No N/A
Explain No Answers / Comment	s: System appe	ears to be pipe sched	ule system, not	hydraulical	ly calculated.
Water Supply					
Do reservoirs, tanks, or pressure	and the second s			Yes	No X N/A
(Water storage tanks, private fire	e service mains, etc	. are not covered under	this inspection.)		
Pumps (Fire Pump(s) are not co	over <u>ed u</u> nder this ins			_	_
Is fire pump	Diesel	Electric	Gasolin	e _X	None
When was pump last inspected?	The state of the s				
Does pump appear to be in good	d condition?			Yes	No X N/A
Explain No Answers / Comment	:s:				
	The second second second			- The Control of the Control	



Automatic Sprinkler Systems

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Date: Nov 17 2015 Location: Building "A" High Bay West/Lo	w Bay West Traffic
Fire Department Connections (Section 13.7) This section	is Not Applicable:
FDC Location: Across the street of 520 Brandon street	MARK I
Are identification signs provided and in place?	Yes X No N/A
The connections are visible and accessible?	X Yes No N/A
Couplings or swivels are not damaged and rotate smoothly?	X Yes No N/A
Plugs or caps are in place and undamaged?	Yes X No N/A
Gaskets are in place and in good condition?	X Yes No N/A
The check valve is not leaking?	Yes No X N/A
The automatic drain valve is in place and appears to be working and in good condition?	Yes No X N/A
The connection clapper(s) is in place and appears to be operating properly?	X Yes No N/A
Explain No Answers / Comments: Located on the street. There is a valve pit nea	r FDC and was not
inspected during this inspection. Fire department connection feeds building "A" a	and westside of building
"B". FDC is missing ONE 2.5" cap.	
General Condition, Inspected From Floor Level (Section 5.2) This section	is Not Applicable:
Sprinkler heads appear to be in good condition? (Not corroded, loaded, painted, damaged)	X Yes No N/A
Piping appears to be in good condition? (Not damaged, leaking, corroded, bent)	X Yes No N/A
Hangers or Braces appear to be in good condition? (Not damaged, loose, rusted, missing)	X Yes No N/A
Devices, valves and gauges appear to be in good condition?	X Yes No N/A
Is stock of spare sprinklers available along with appropriate sprinkler wrench(s)?	X Yes No N/A
Explain No Answers / Comments:	
Sprinkler Testing (Section 5.3) This section	n is Not Applicable:
All sprinklers installed have been manufactured after 1920?	X Yes No N/A
Standard response sprinklers are less than fity (50) years old?	X Yes No N/A
Fast response sprinklers are less than twenty (20) years old?	Yes No X N/A
Extra high (325 °F or higher) sprinklers have been tested at five (5) year intervals?	Yes No X N/A
Dry sprinklers are less than ten (10) years old?	Yes No X N/A
(Sprinklers that do not meet the above criteria are required to be replaced or representa	tive samples from one or
more sample areas shall be tested. Test procedures shall be repeated at various interv	als as stated in NFPA 25)
Explain No Answers / Comments:	
	M. I. Share a series of the se



Automatic Sprinkler Systems

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Date:	Nov 17 201	<u>5</u> Lo	ocation:	Building "A" High Bay	West/Low Bay	West Traffic	<u> </u>			
Gauges	(Section 5.3.2	!)		Th	is section is N	ot Applicable	9:			
Gauges Gauges Gauges Gauges Gauges	Gauges shall be replaced every five (5) years or tested every five (5) years by comparison with a calibrated gauge. Gauges not accurate to within three (3) percent of the full scale shall be recalibrated or replaced. Gauges are less than five (5) years old? Gauges have been compared against a calibrated gauge and are within three (3) percent? Yes No N/A N/A Gauges have been replaced during this annual inspection? Explain No Answers / Comments: Gauges dated 2009 (x2) Should be replaced.									
1	ain Test (Sect	-			is section is N					
	lings should be			(A) (A) (A)	[a a	This Yea	r Last			
	the static water	A A 150 B			Static PSI Before	е				
				e. Record the pressure.	Residual PSI	_	-			
	ie main drain sl ate was the last			after gauge has stabilized. 2014 Size o	Static PSI After of the Main Drain?	,				
Control of the Control							flowed			
Explain No Answers / Comments: Drain did not handle test. Drain backs up when other drains are flowed.										
Wet System (Section 13.4) The gauges indicate normal water pressure is being maintained? Does alarm valve appear to be free of physical damage? All trim valves are in the appropriate open or closed position? The alarm drains are not leaking? Wet system is equipped with a tail-end anti-freeze system(s)? Anti-freeze solution reading is at what freezing point? Anti-freeze solution freezing point appears to be satisfactory? Explain No Answers / Comments: No tail end anti-freeze system.										
Wet Sys	stem Test Tabl	e for Wet Al	arm Valve Serial #		is section is Nonector		e:			
6"	Grinnell	A	Seriai # F4841		compressor S					
	alarm compan				Static PSI	Alarm Time	Residual PSI			
				g inspector's test valve.	125 psi	22 sec	70 psi			
	stem Low-Wat			O	•		•			
Is the we	et system equip pen drain test v	pped with a lo valve to reduc	w-water-pressu ce water pressu	re switch? re slowly. Confirm operatio lose drain test and pump sy	-					
and rest	ore to service.				Record pre	ssure.	PSI			
Explain	No Answers / C	Comments:	System Doe	es not have a Low Pressur	re switch. One	should be in	stalled.			



Automatic Sprinkler Systems

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Date:	Nov 17 2015		Location:	Ruilding "A" H	igh Bay West/Low	Ray West Tra	ffic
_	tem Inspection			Dunuing A H	This section i		
Alarm va	lves and their a	ssociated :	strainers, filters,	and restriction orfice	es shall be inspected	d internally	ble: []
	3 K. F.			the last four (4) year		Yes Z	X No N/A
If Yes, w	hat year was th	e inspectio	n completed?	Unknown			
				annual inspection?			X No N/A
Explain N	No Answers / Co	omments:	Unknown v	vhen last wet syste	m inspection was	and should b	e done.
							. []
	tem Vane Type er-flow alarm by			nd record time that	This section is	Not Applical	ole: X
	Switch Zone Desi			on of Inspectors Test	Static PSI	Alarm Time	Residual PSI
				energia de Erros e		31,5797	
1.				und Zamet	- March 1		
				2.01			1 -
			4 1 N 1	dallar Ref. Albra	GLORIA CONTRA		
				71.56.11			
				No. com	10. 5.		
						1-	
				9.5	Truz ele		
					7 tu gal e		3 8
					Tari se		
					III K.T. III		
		- 1,1,1					
Dry Pine	System (Sect	ion 13 4 4)			This section is	e Not Applica	ble: X
		22 I	ysical damage?		This section is	Yes	No N/A
			e open or close			Yes	No N/A
	mediate chamb					Yes	No N/A
A tag or	card with the la	st trip date	and who conduc	cted the test is attac	hed to the valve?	Yes	No N/A
Size	Make	Model	Serial #		Location of Inspe	ctors Test	
Explain I	No Answers / C	omments:					
	112 0	b ^h ige	O graden	t In Seven	e goulger - 3	183	



Automatic Sprinkler Systems

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]	ildai ilispe	otion (
Date: Nov 17 2015 Loca	ation: Buildi	ng "A" High	Вау	West/Low	Bay West Tr	affic	_
Dry System Low-Air-Pressure Switcl	h					2-11	. 11
Is the dry system equipped with a low-a	air-pressure switch?				Yes	No X	N/A
If Yes, close the water supply valve iso drain test valve to reduce air pressure valve.) Confirm operation of low press activated. Close drain test valve, allow device and water supply valve. Explain No Answers / Comments:	slowly. <i>(Do not reduce</i> sure switch, record air p	air pressure pressure at v normal, ther	s <i>uff</i> which a slov	<i>ficiently to tri</i> low pressu	ip the dry pipe re switch	9	PSI
Explain No / nowers / comments.							
Dry Pipe System Trip Test Table Every three (3) years and whenever the fully open and the quick-opening device the dry pipe valve shall be trip tested w Has the dry pipe valve been tripped wit (2) years. If yes, what year was the fully	e, if provided in service ith the control valve pa h the control valve fully y open trip test conduct	During the rtially open. open in the ted?	lve sl e yea last	nall be trip te rs when full		control valves not required	e d, N/A
If No, is the fully open trip test being co	nducted during this and	nual inspecti	ion?		Yes	No	N/A
Normal air pressure as per the Manufa	cturers recommendation	on]		PSI
Trip test the dry pipe valve. Record the the inspectors test valve until the dry pi			Air PSI	Time to Trip	Trip Point Air PSI	Time Wat	
Did the valve and alarm operate proper	rlv?				Yes	No	N/A
Dry pipe valve interior appears clean a	15)				Yes	No	N/A
Quick-opening device operated properl Is a sign provided at the dry pipe valve location of each auxiliary drain?	y?	of auxiliary o	drains	s and	Yes	No No	N/A N/A
Were all identified auxiliary drains drair	ned during this inspection	on?			Yes	No	N/A
Air supply appears to be adequate?					Yes	No	N/A
Automatic air pressure maintenance de	evice appears to operat	te properly?			Yes	No	N/A
Was the dry pipe valve filled with primir	ng water after it was trip	tested and	rese	et?	Yes	No	N/A
Explain No Answers / Comments:							
Dry Pipe System Inspection (Section Dry pipe valve strainers, filters, and resindicate a greater frequency is necessar Has the internal inspection been complifyes, what year was the inspection colf No, was the internal inspection done Explain No Answers / Comments:	triction orfices shall be ary. eted within the last four mpleted?	r (4) years?			is Not Applic e (5) years ur Yes]]n/a]n/a



Explain No Answers / Comments:

11 Yard Street Winnipeg MB R2W 5J6 | P: 204.586.8227 | F: 204.582.3657 | www.bdrservices.ca

Automa	atic Spri	nkler System	s					6	of 9	
		Α	nnual Ins	pection	n & Te	sts				
Date:	Nov 17	2015 L	ocation:I	Building "A"	High Bay We	st/Low Bay	West T	raffic		
Preaction	n / Deluge	System			This s	ection is No	t Appli	cable:	х	
Does valv	ve appear	to be free of phys	sical damage?				Yes	No	N/A	
All trim va	alves are ir	the appropriate	open or closed pos	sition?		0.4	Yes	No	N/A	
The valve	e seat is no	t leaking?					Yes	No	N/A	
The elect	rical comp	onents are in se	rvice?			711.91	Yes	No	N/A	
Size	Make	Model	Serial #		Strike Through	h What Do	es Not	Apply		
				Deluge	Preaction	Closed N	lozzles	Open	Nozzles	
Supervis	ed Preact	ion Low-Air-Pre	essure Alarm				_			
Is the pre	action syst	em equipped wit	th a low-air-pressure	e alarm?			Yes	No	N/A	
Confirm of test valve Preaction The preaction the nature	FYes, close the water supply valve and carefully open drain test valve to reduce air pressure slowly. Confirm operation of low pressure alarm, record air pressure of low pressure alarm activation. Close drain test valve, allow air pressure to rise to normal, then open water supply valve. Preaction / Deluge System Trip Test Table (13.4.3.2.2.2) This section is Not Applicable: The preaction / deluge valve shall be trip tested annually as per the manufacturer's instructions. Where the nature is such that water discharge cannot occur unless protected equipment is shutdown, a full flow test shall be conducted at the next scheduled shutdown. In all cases the test frequency shall not exceed 3									
			cheduled shutdown otecting freezers sl			•		ed 3		
		nto the piping in		ian be trip te	stea in a maini	or triat docs	Hot		PSI	
Water	Air	Trip Point	Number of detector	rs required	Brief d	escription of	of valve	operatio	n	
PSI	PSI	Air PSI	to trip Preaction							
J-Mary		- 1								
Did the va	alve and al	arm operate pro	perly?				Yes	No	N/A	
Were all r	manual act	uation devices o	perated?			- 1	Yes	No	N/A	
For delug	e systems	did the water dis	scharge pattern app	ear to be sat	isfactory?		Yes	No	N/A	
Air supply	appears t	o be adequate?				I C P _I	Yes	No	N/A	
Automatio	air pressi	ure maintenance	device appears to	operate prop	erly?		Yes	No	N/A	
Was the p	oreaction v	alve filled with p	riming water after it	was trip test	ed and reset?	17	Yes	No _	N/A	
Explain N	o Answers	/ Comments:		Tappard 1		<u> </u>		- 11		
Interior cle without re	eaning and	l parts replacem ne faceplate. If t	nance (Section 13 ent or repair shall b he valve cannot be	e permitted e	every five (5) ye		s that c	an be res		
1.5			thus the inspection	is done duri	ng this inspecti	on?	Yes	No	N/A	
The valve	can be re	set externally thu	us has the inspectio	n been done	within the last	four	_			
			inspection complete		= 1 E 11	nie za lib	Yes	No	N/A	
If No, was	the intern	al inspection do	ne during this annua	al inspection?)		Yes	No	N/A	



No

Yes

N/A

Protection. Prevention. Per	formance													
Automatic Sprinkler	Systems			***************************************					7			7 0	of 9	
	An	nua	l Inspectio	n 8	% 7	Test	S							
Date: Nov 17 2015	Loc	ation: _	Building "A"	' High	Вау	/ West/	Low	Вау	Wes	st Tr	affic	ē —		_
Control Valves							2111					erte.		
Are all control valves identi	fied?							Y	'es	Х	No		N/A	
Are all control valves locke	d, sealed o	r equippe	ed with a supervisory s	witch1	?			XY	'es		No		N/A	
Are all control valves in the	normal ope	en or clos	sed postion?					X Y	'es		No		N/A	
Are all control valves free fi	om externa	al leaks?						X Y	'es		No		N/A	
During this inspection was	each contro	ol valve o	perated through its ful	l rang	e?			X Y	'es		No		N/A	
If applicable post indicator	valves were	e opened	until spring tension wa	as felt	?		T	Y	'es		No	X	N/A	
If applicable post indicator	& OS&Y va	lves were	e backed 1/4 turn from	fully	oper	positio	n?	X Y	'es		No		N/A	
Control Valve Table								_						
	# of		T		_			_				٥:		
	ontrol Valve Function Valves Size Type of Valve Open Tem control valve 1 6" OS+Y X Y N		V		ured		Sign X Y		jns	NI				
System control valve Building B Isolation	1	8"	Wafer G.O.B	X	Y	N	_	Y		N	X	Y	v	N
West Low Bay / CTS ISO	1	6"	Wafer G.O.B	X	Y	N	_	Y		N		_	X	N
(In store above East header		-	Water G.O.B	^	Y	N	-	Y	-	N		Y	X	N
(III Store above East header	<u>'</u>			-	Y	N	+	Y	-	N		Y	-	N
				+-	Y		+	Y	\vdash	N		Y		N
				40		N	-	Y		N		-		N
				+-	Y	N	-			N		Y		N
	_			-	Y	N	_	Y		N		Y		N
				-	Y	N	+	Y	-	N		Y		N
					Υ	N		Y		N		Υ	Щ	N
Backflow Prevention Ass						section						X		
All backflow preventers inst following:	alled in fire	protection	on system piping shall	be tes	sted	annuall	y in a	CCOI	rdan	ce w	ith th	е		
(1) A forward flow test shall	be conduc	ted at the	e system demand, incl	ludina	hos	e strear	n der	nano	d wh	nere	hydr	ante	or	
inside hose stations are loc					1100	o otrour	ii doi	i i di i k	u, ***	1010	riyara	arito	OI	
(2) A backflow performance	e test, as re	quired by	y the authority having j	urisdi	ction	, shall b	e co	nduc	ted	at the	e cor	nple	tion	
of the forward flow test.											-			
For backflow preventers size the test outlet is of a size to				eptab	le to	conduc	t with	out	mea	surir	ig flo	W, W	/here)
Where connections do not				ted at	the	maximu	ım flo	w ra	ate p	ossik	ole.			
Connections do exist to per							Г	_	es		No		N/A	
A forward flow test was con				0000	trear	m2	-		es		No		N/A	
The forward flow test result						10.	-	_	es es		No		N/A	
If no connections are availa		8	©			nneeih	Le2		es es		No		N/A	
Was there a way of measu				11044	iale	hossin	-	-	es		No		N/A	
What flow rate was measur	- T						_	┙'	63		140		IN/A	
Horr rate was inicasul	ou during t	IIIUAII	mann now rate:											

Was the backflow preventer tested with a separate report to check for no backflow?



Automatic Sprinkler Systems

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	The second of th
Date:	Nov 17 2015 Location: Building "A" High Bay West/Low Bay West Traffic
An inscended inspection Has voted that the second terms of the sec	ruction Investigation (Section 14.2.1) spection of piping and branch line conditions shall be conducted every five (5) years by opening a flushing ection at the end of one main and by removing a sprinkler toward the end of one branch line for the purpose of cting for the presence of foreign organic and inorganic material. visual obstruction investigation of piping been conducted within the last four (4) years? Yes No N/A was the visual obstruction investigation conducted during this annual inspection? Yes No X N/A
	visual obstruction investigation results appears that piping is not obstructed? Yes No X N/A on this years results a further flushing investigation or procedure is recommended? Yes No X N/A
The same of the same	ain No Answers / Comments: Unknown when last Obstruction invesitgation was done and should
be do	one.
The s	iencies (As per NFPA 25 - 2008) system has the following deficiencies that should be reviewed with the authority having jurisdiction to determine rections should be made. D1. Obstruction investigation of piping should be done every 5 years.
D2	Internal Inspection of alarm valve and components should be done every 5 years.
D3	Gauges are older then 5 years and should be replaced.
D4	Two sprinkler heads are covered with tape at high roof new bay addition.
D5	Fire department connection should have a identification sign.
D6	Fire department connection is missing one 2.5" cap and should be replaced.
D7	All system control valves should be identified and "keep open" signs should be installed.
D8	
D9	
D10	
D11	. 설로 15gg - 1 gg - 1 gg gr - 2 gg gr - 2 gg - 2
D12	grown and the state of the stat
D13	Company of the compan
D14	
D15	· · · · · · · · · · · · · · · · · · ·
D16	a de la transportación de
D17	
D18	
D19	
D20	
D21	The Englishment Englishment Englishment Englishment
D22	in the state of th
D23	Take Way to the part of the pa
	(Use back of page if further room is needed)



Automatic Sprinkler Systems

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Date:	Nov 17 2015	Location:	Building "A" High Bay West/Low Bay West Traffic
We re and a	re provided for informatio	on only. Correction	ual inspection and test. These recommendations are not deficiencies ns of these recommendations are dependent on the owner or authority by duct in new addition bay should also check for 18" of
- :	clearance for spary pat	ttern to develop	properly.
R2.			ed to prevent false alarms.
R3.	Drains should be clean	ed out to better	handle drain test.
R4.		8	
R5.			
R6.			
R7.			
R8.			
R9.			
		(Use bac	ck of page if further room is needed)
Recor acces	ral Notes rd any pertinent information ss, confined space, etc.) em monitored by Protele		ect to the building (monitoring company, special codes, keys
	•		
This is whether failure and confirm	er or not the system mee e, and any subsequent dar ondition of equipment at a mation that system installa te of occupancy.	ets current code or mage or loss cons actual time of testi	t include a review or analysis of the system design to determine standards. BDR Services Ltd. is not responsible for any equipment sequential or direct. BDR Services Ltd. is merely verifying operationing. Owner is responsible for system installation, maintenance and are met any time there are alterations, additions, renovations and
			Inspection Date: Nov 17 2015
Licenc	ce SP/WFD #: 223/792	2	Owner Representative:
Signat	ure: Bandi		Signature:





Automatic Sprinkler Systems

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	As per l		d for the Inspection, T Fire Protection Systen	And Add The Control of the Control o	nance of				
Date:	Nov 17 2015	Inspector:	Bart Dlugosz	Inspector SP/	WED #·	223/792			
Property Name:		Transit Fort Rou		Inspector of 7	VVI D #.	2201102			
Tenant Name:	Building B	Transit i ort itou	90						
Address:	421 Osborn	a Street							
City:	Winnip	Name of	nce: MB	Posts	al Code:				
Contact:	Alex Veche		ice. IVID	Phone :					
General									
Building		Building "B" Nor	th Track 1-12						
System Designa	ation	North Track 1-12							
Location of sprin			er of building in Maint	enance Bay					
Type of sprinkler	r system	X Wet	Dry	Deluge	Р	reaction			
Is the building od	ccupied?				X Yes	No N/A			
Is the system in	service?				X Yes	No N/A			
The valve header room(s) appears to be adequately heated?									
The valve heade	The valve header room(s) have a low-temperature alarm?								
Is it known that t	he system(s)	is hydraulically cal	culated?		Yes X	No N/A			
If yes, is hydraulic information sign provided at valve(s)?									
Is there a minimed deflector?	um of 18"clea	arance between sto	orage/obstructions and t	he sprinkler	x _{Yes}	No N/A			
Do all exterior openings appear to be protected from freezing?									
			es it appear to be in goo alterations/additions si		X Yes	No N/A			
Explain No Answ	vers / Comme	ents: System a	appears to be pipe sch	nedule system.		11.0			
•				.ouu.o oyoto	1 - 11				
					3,1				
Water Supply									
Do reservoirs, tanks, or pressure tanks appear to be in good condition?									
(Water storage tanks, private fire service mains, etc. are not covered under this inspection.)									
Pumps (Fire Pump(s) are not covered under this inspection.)									
Is fire pump Diesel Electric Gasoline X None									
When was pump	last inspecte	ed?							
Does pump appe	ear to be in go	ood condition?			Yes	No X N/A			
Explain No Answ	ers / Comme	ents:							



Automatic Sprinkler Systems

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Date: Nov 17 2015 Location: Building "B" North Tra	ck 1-12	
Fire Department Connections (Section 13.7) This section	is Not Applicable:	
FDC Location: Across the street of 520 Brandon street		
Are identification signs provided and in place?	Yes X No	N/A
The connections are visible and accessible?	X Yes No	N/A
Couplings or swivels are not damaged and rotate smoothly?	X Yes No	N/A
Plugs or caps are in place and undamaged?	Yes X No	N/A
Gaskets are in place and in good condition?	X Yes No	N/A
The check valve is not leaking?	Yes No	X N/A
The automatic drain valve is in place and appears to be working and in good condition?	Yes No	X N/A
The connection clapper(s) is in place and appears to be operating properly?	X Yes No	N/A
Explain No Answers / Comments: Located on the street. There is a valve pit near	FDC and was not	15.75/-
inspected during this inspection. Fire department connection feeds building "A" ar	nd westside of build	ing
"B". FDC is missing ONE 2.5" cap.		
1 W 1 W 1 W 1 W 1 W 1 W 1 W 1 W 1 W 1 W	3000	
General Condition, Inspected From Floor Level (Section 5.2) This section is	is Not Applicable:	33, 5 1 5
Sprinkler heads appear to be in good condition? (Not corroded, loaded, painted, damaged)	X Yes No	N/A
Piping appears to be in good condition? (Not damaged, leaking, corroded, bent)	X Yes No	N/A
Hangers or Braces appear to be in good condition? (Not damaged, loose, rusted, missing)	X Yes No	N/A
Devices, valves and gauges appear to be in good condition?	X Yes No	N/A
Is stock of spare sprinklers available along with appropriate sprinkler wrench(s)?	X Yes No	N/A
Explain No Answers / Comments:	- 7 75	
Sprinkler Testing (Section 5.3) This section	is Not Applicable:	
All sprinklers installed have been manufactured after 1920?	X Yes No	N/A
Standard response sprinklers are less than fity (50) years old?	X Yes No	N/A
Fast response sprinklers are less than twenty (20) years old?	Yes No	X N/A
Extra high (325 °F or higher) sprinklers have been tested at five (5) year intervals?	Yes No	X N/A
Dry sprinklers are less than ten (10) years old?	Yes No	X N/A
(Sprinklers that do not meet the above criteria are required to be replaced or representati	ive samples from one	or
more sample areas shall be tested. Test procedures shall be repeated at various interva	ls as stated in NFPA	25)
Explain No Answers / Comments:	Transport of the	



Automatic Sprinkler Systems Annual Ins

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Annual	Inspection	& Tests
Alliuai	mapecuon	or i coto

Date:	Nov 17 201	5 Lo	ocation:	Building "B"	North Track 1-	12	
Gauges	(Section 5.3.2)		Th	is section is No	t Applicable	9:
Gauges shall be replaced every five (5) years or tested every five (5) years by comparison with a calibrated gauge.							
100				he full scale shall be recalib			
	are less than fi					Yes X	No N/A
				gauge and are within three (3) percent?	Yes	No X N/A
_	have been repl			1 (7)		Yes X	No N/A
"	No Answers / C		1.5.1	ed 2009 (x2) Should be rep	placed.		
				()			
Main Dr	ain Test (Secti	ion 13.2.5)		Th	is section is No	ot Applicable	э:
(All read	lings should be	from the sup	ply pressure lo	wer gauge)		This Yea	ar Last
	the static water				Static PSI Before	70	
Open the	e main drain an	d allow water	flow to stabiliz	e. Record the pressure.	Residual PSI	69	
Close th	e main drain sl	owly. Record	the pressure a	after gauge has stabilized.	Static PSI After	70	
What da	ate was the last	main drain te	est done?	2014 Size o	f the Main Drain?	2''	
Explain	No Answers / C	comments:	Drain does	not handle test. Check va	lve on drain cu	p does not h	ıold.
Wet Sys	stem (Section	13.4)		Th	is section is No	ot Applicable	e: 🔲 📗
The gau	iges indicate no	rmal water pi	ressure is being	g maintained?	Х	Yes	No N/A
Does alarm valve appear to be free of physical damage?							
All trim v	valves are in the	e appropriate	open or closed	position?	X	Yes	No N/A
The alar	rm drains are no	ot leaking?			X	Yes	No N/A
Wet sys	tem is equipped	d with a tail-e	nd anti-freeze s	system(s)?		Yes X	No N/A
Anti-freeze solution reading is at what freezing point?							
Anti-free	eze solution free	ezing point ap	pears to be sa	tisfactory?		Yes	No X N/A
Explain No Answers / Comments:							
Wet Sys	stem Test Tabl				is section is No		e:
Size	Make	Model	Serial #		on of Inspector		(C) (C)
6"	Grinnell	Α	N/A		corner of Track		
	alarm company					Alarm Time	
Test ala	rm valve water	flow alarm sv	witch by openin	g inspector's test valve.	130 psi	44 sec	70 psi
Wet Sys	stem Low-Wat	er-Pressure	Switch				. —
Is the wet system equipped with a low-water-pressure switch?							
If Yes, o	pen drain test v	alve to reduc	ce water pressu	ire slowly. Confirm operation	on of low pressur	e switch, rec	ord water
pressure	e at which low p	ressure swite	ch activated. C	lose drain test and pump sy	stem up to norm	nal pressure	
CONTRACTOR STATEMENT	tore to service.				Record pres		PSI
Explain	No Answers / C	Comments:	System Doe	es not have a Low Pressu	re switch. One	should be in	istalled.



Automa	tic Sprinkle	er System		A CONTRACTOR OF THE PARTY OF TH			4 of 9
ratoma	шо оринки			spection &	Toete		4 01 3
		/~\i	iiidai iiis	•			
oate: _	Nov 17 201	5 Lo	cation:	Building '	B" North Track	(1-12	15-11-12
larm val	(5) years unle	associated stress tests indic	ainers, filters, and ate a greater frequ	restriction orfices sha uency is necessary.	This section is all be inspected	internally	
				ast four (4) years?		Yes)	No No
	at year was th	And the second second		Unknown		Dv. D	
			e during this annu				No N/
xpiain iv	o Answers / C	omments:	Unknown when	n last wet system ins	spection was a	na snoula be	aone.
	em Vane Typ r-flow alarm b			ecord time that alarm	This section is registers.	Not Applicat	ole: X
Flow St	witch Zone Des	ignation	Location of	Inspectors Test	Static PSI	Alarm Time	Residual PS
			9 h (8)		de La compa		200
			ii-5/5/alls	loca dispusa etc			No. of the last
					THE LIE	Section 1	
	5,501,101	Tanılı de la	southern a s	Constitution of	DE LO LINEA		
	1-1-						
				Contract to the second			
				1808 6	and the second		-
						F AMELICA I	4 -44
					180		
	1. 32	- 10					
					_		
			and the state of the				
ry Pipe	System (Sect	tion 13.4.4)	gest a lateral		This section is	Not Applica	ble: X
oes valv	e appear to be	e free of phys	ical damage?			Yes	No N/
All trim va	lves are in the	e appropriate	open or closed po	sition?		Yes	No N/
he interr	nediate cham	ber is not leal	king?			Yes	No N/
tag or c	ard with the la	ist trip date ai	nd who conducted	the test is attached to	the valve?	Yes	No N/
Size	Make	Model	Serial #	Loc	ation of Inspec	tors Test	7 - 1
Explain N	o Answers / C	comments:	1				<u> </u>
	STALL DITTE	11127	1 ag - 294 () () . (* .)	The Management of the Control	170) 1		





Automatic Sprinkler Systems

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Date:	Nov 17 2015	Location:		Build	ing "B	" North Trac	ck 1-12	7	
_	em Low-Air-Pressu	re Switch							
		th a low-air-pressure	switch?				Yes	No X	N/A
drain test valve.) (activated device ar	t valve to reduce air p Confirm operation of l		<i>not reduce</i> ecord air p	<i>air press</i> ressure a normal, th	<i>ure sut</i> at which aen slo	<i>ficiently to tri</i> n low pressu	p the dry pipe e switch	9	PSI
						- 6			
Every thr fully oper the dry p	n and the quick-openi ipe valve shall be trip	table enever the system is a fing device, if provided tested with the control ipped with the control	in service. ol valve par	. During trially ope	valve s the yea n.	hall be trip te ars when full		e control valves not require	ve ed,
(2) years	. If yes, what year wa	s the fully open trip te	st conduct	ed?			Yes	No L	N/A
If No, is t	he fully open trip test	being conducted duri	ing this anr	nual inspe	ection?		Yes	No L	N/A
Normal a	ir pressure as per the	e Manufacturers reco	mmendatio	on					PSI
		ecord the time from o		Water PSI	Air PSI	Time to Trip	Trip Point Air PSI	Time Wa	
Did the v	alve and alarm opera	ate properly?					Yes	No	¬ _{N/A}
		s clean and satisfacto	rv2				Yes	H _{No} H	N/A
Quick-op Is a sign	ening device operate	ed properly? ipe valve indicating th		of auxiliar	y drair	is and	Yes	No No	N/A N/A
Were all	identified auxiliary dr	ains drained during th	is inspection	on?			Yes	No	N/A
Air suppl	y appears to be adeq	uate?					Yes	No	N/A
Automati	c air pressure mainte	enance device appear	s to operat	te properl	y?		Yes	No	N/A
Was the	dry pipe valve filled v	vith priming water afte	er it was trip	tested a	nd res	et?	Yes	No	N/A
Explain N	No Answers / Comme	ents:							
Dry pipe indicate	valve strainers, filters a greater frequency is	5 TENDERSON PRO-PROPRIES.			d interr			inless tests	_
		en completed within t	ne last toul	(4) year	5?		Yes	No	_N/A
If No, wa	hat year was the insp s the internal inspect No Answers / Comme	ion done during this a	nnual insp	ection?			Yes	No	N/A
•		(



Annual Inspection & Tests Date: Nov 17 2015 Location: Building "B" North Track 1-12 Preaction / Deluge System	Protection	n, Preveni	tion Performanc	2.						
Date: Nov 17 2015 Location: Building "B" North Track 1-12 Preaction / Deluge System This section is Not Applicable: X Yes	Automa	tic Spri	nkler System	ıs			70 (New York 19 19 19 19	of 9		
Preaction / Deluge System This section is Not Applicable: X Yes		Annual Inspection & Tests								
All triw alves are in the appropriate open or closed position? The valve seat is not leaking? Make Model Serial # Strike Through What Does Not Apply Buprvised Preaction Low-Air-Pressure Alarm s the preaction system equipped with a low-air-pressure alarm? Yes No No N/A Yes No N/A Size Make Model Serial # Strike Through What Does Not Apply Deluge Preaction Closed Nozzles Open Nozzles Supervised Preaction Low-Air-Pressure Alarm s the preaction system equipped with a low-air-pressure alarm? Yes No N/A Yes No N/	Date: _	Nov 17	2015 L	ocation:	В	uilding "B" Nor	th Track 1-12			
All triw alves are in the appropriate open or closed position? The valve seat is not leaking? The electrical components are in service? Yes	Preaction	/ Deluge	System			This se	ction is Not Applicable:	X		
The valve seat is not leaking? The electrical components are in service? Size Make Model Serial # Strike Through What Does Not Apply Deluge Preaction Closed Nozzles Open Nozzles Supervised Preaction Low-Air-Pressure Alarm Is the preaction system equipped with a low-air-pressure alarm? If yes No N/A If yes, close the water supply valve and carefully open drain test valve to reduce air pressure slowly. Confirm operation of low pressure alarm, record air pressure of low pressure alarm activation. Close drain est valve, allow air pressure or sie to normal, then open water supply valve. Preaction / Deluge System Trip Test Table (13.4.3.2.2.2) This section is Not Applicable: X The preaction / deluge valve shall be trip tested annually as per the manufacturer's instructions. Where he nature is such that water discharge cannot occur unless protected equipment is shutdown, a full flow est shall be conducted at the next scheduled shutdown. In all cases the test frequency shall not exceed 3 erears. Preaction or deluge valves protecting freezers shall be trip tested in a manner that does not introduce moisture into the piping in the freezer. Water Air Trip Point Number of detectors required PSI Air PSI Air PSI to trip Preaction system Old the valve and alarm operate properly? Were all manual actuation devices operated? Yes No N/A Nor all manual actuation devices operated? Yes No N/A Was the preaction valve filled with priming water after it was trip tested and reset? Yes No N/A Was the preaction valve filled with priming water after it was trip tested and reset? Preaction / Deluge System Maintenance (Section 13.4.3.1.7.1) This section is Not Applicable: X Interior cleaning and parts replacement or repair shall be permitted every five (5) years for valves that can be reset without removal of the faceplate. If the valve cannot be reset externally the cleaning, replacement or repair shall be completed? Yes No N/A The valve can be reset externally thus has the inspection been done within the last four	Does valv	e appear	to be free of phy	sical damage?				N/A		
The electrical components are in service? Yes	All trim va	lves are i	n the appropriate	open or closed pos	sition?		Yes No	N/A		
Size Make Model Serial # Strike Through What Does Not Apply Deluge Preaction Closed Nozzles Open Nozzles Supervised Preaction Low-Air-Pressure Alarm s the preaction system equipped with a low-air-pressure alarm? Yes No N/A f Yes, close the water supply valve and carefully open drain test valve to reduce air pressure slowly. Confirm operation of low pressure alarm, record air pressure of low pressure alarm activation. Close drain est valve, allow air pressure to rise to normal, then open water supply valve. Preaction / Deluge System Trip Test Table (13.4.3.2.2.2) This section is Not Applicable: X The preaction / deluge valve shall be trip tested annually as per the manufacturer's instructions. Where he nature is such that water discharge cannot occur unless protected equipment is shutdown, a full flow est shall be conducted at the next scheduled shutdown. In all cases the test frequency shall not exceed 3 rears. Preaction or deluge valves protecting freezers shall be trip tested in a manner that does not introduce moisture into the piping in the freezer. Water PSI Air PSI Number of detectors required to trip Preaction system Did the valve and alarm operate properly? Were all manual actuation devices operated? For deluge systems did the water discharge pattern appear to be satisfactory? Yes No N/A Air supply appears to be adequate? Yes No N/A Air supply appears to be adequate? Yes No N/A Avas the preaction valve filled with priming water after it was trip tested and rese? Yes No N/A Was the preaction of the faceplate. If the valve cannot be reset externally the cleaning, replacement or repair shall be completed annually. The valve requires internal resetting, thus the inspection been done within the last four Yes No N/A If the valve can be reset externally thus has the inspection been done within the last four Yes No N/A If No, was the internal inspection done during this annual inspection?	The valve	he valve seat is not leaking?								
Deluge Preaction Closed Nozzles Open Nozzles Bupervised Preaction Low-Air-Pressure Alarm s the preaction system equipped with a low-air-pressure alarm? Yes, close the water supply valve and carefully open drain test valve to reduce air pressure slowly. Confirm operation of low pressure alarm, record air pressure of low pressure alarm activation. Close drain est valve, allow air pressure to rise to normal, then open water supply valve. Preaction / Deluge System Trip Test Table (13.4.3.2.2.2) This section is Not Applicable: X The preaction / deluge valve shall be trip tested annually as per the manufacturer's instructions. Where he nature is such that water discharge cannot occur unless protected equipment is shutdown, a full flow est shall be conducted at the next scheduled shutdown. In all cases the test frequency shall not exceed 3 rears. Preaction or deluge valves protecting freezers shall be trip tested in a manner that does not introduce moisture into the piping in the freezer. Water Air Trip Point he freezer. Water Air Trip Point to the piping in the freezer. PSI Water Air Trip Point to the piping in the freezer. PSI Water Air Strip Point to the piping in the freezer. PSI Water Air PSI Number of detectors required to trip Preaction system Did the valve and alarm operate property? Were all manual actuation devices operated? For deluge systems did the water discharge pattern appear to be satisfactory? Yes No N/A Air supply appears to be adequate? Yes No N/A Automatic air pressure maintenance device appears to operate property? Yes No N/A Was the preaction valve filled with priming water after it was trip tested and reset? Yes No N/A Was the preaction of Deluge System Maintenance (Section 13.4.3.1.7.1) This section is Not Applicable: X Interior cleaning and parts replacement or repair shall be permitted every five (5) years for valves that can be reset without removal of the faceplate. If the valve cannot be reset externally the cleaning, replacement or repair shall be completed annuall	The electr	ical comp	onents are in se	rvice?			Yes No	N/A		
Supervised Preaction Low-Air-Pressure Alarm s the preaction system equipped with a low-air-pressure alarm? If Yes, close the water supply valve and carefully open drain test valve to reduce air pressure slowly. Confirm operation of low pressure alarm, record air pressure of low pressure alarm activation. Close drain est valve, allow air pressure to rise to normal, then open water supply valve. PSI Preaction / Deluge System Trip Test Table (13.4.3.2.2.2) This section is Not Applicable: X The preaction / deluge valve shall be trip tested annually as per the manufacturer's instructions. Where he nature is such that water discharge cannot occur unless protected equipment is shutdown, a full flow est shall be conducted at the next scheduled shutdown. In all cases the test frequency shall not exceed 3 rears. Preaction or deluge valves protecting freezers shall be trip tested in a manner that does not nitroduce moisture into the piping in the freezer. PSI Water Air Trip Point Air PSI Number of detectors required to trip Preaction system Did the valve and alarm operate properly? Were all manual actuation devices operated? Tor deluge systems did the water discharge pattern appear to be satisfactory? Yes No N/A Air supply appears to be adequate? Automatic air pressure maintenance device appears to operate properly? Was the preaction valve filled with priming water after it was trip tested and reset? Yes No N/A Was the preaction / Deluge System Maintenance (Section 13.4.3.1.7.1) This section is Not Applicable: X Interior cleaning and parts replacement or repair shall be permitted every five (5) years for valves that can be reset without removal of the faceplate. If the valve cannot be reset externally the cleaning, replacement or repair shall be completed annually. The valve can be reset externally thus has the inspection is done during this inspection? Yes No N/A N/A The valve can be reset externally thus has the inspection been done within the last four (4) years? If Yes, what year was the inspec	Size	Make	Model	Serial #	G	Strike Throug	h What Does Not Apply	Angelia de la composição		
s the preaction system equipped with a low-air-pressure alarm? Yes No N/A f Yes, close the water supply valve and carefully open drain test valve to reduce air pressure slowly. Confirm operation of low pressure alarm, record air pressure of low pressure alarm activation. Close drain est valve, allow air pressure to rise to normal, then open water supply valve. PSI Preaction / Deluge System Trip Test Table (13.4.3.2.2.2) This section is Not Applicable: X The preaction / deluge valve shall be trip tested annually as per the manufacturer's instructions. Where he nature is such that water discharge cannot occur unless protected equipment is shutdown, a full flow est shall be conducted at the next scheduled shutdown. In all cases the test frequency shall not exceed 3 rears. Preaction or deluge valves protecting freezers shall be trip tested in a manner that does not introduce moisture into the piping in the freezer. PSI Water Air Trip Point Number of detectors required to trip Preaction system Did the valve and alarm operate properly? Nere all manual actuation devices operated? Oid the valve and alarm operate properly? Nere all manual actuation devices operated? Yes No N/A Air supply appears to be adequate? Automatic air pressure maintenance device appears to operate properly? Was the preaction valve filled with priming water after it was trip tested and reset? Yes No N/A Explain No Answers / Comments: Preaction / Deluge System Maintenance (Section 13.4.3.1.7.1) This section is Not Applicable: X Interior cleaning and parts replacement or repair shall be permitted every five (5) years for valves that can be reset without removal of the faceplate. If the valve cannot be reset externally the cleaning, replacement or repair shall be completed annually. The valve can be reset externally thus has the inspection is done during this inspection? Yes No N/A The valve can be reset externally thus has the inspection been done within the last four (4) years? If Yes, what year was the inspection complete					Deluge	Preaction	Closed Nozzles Ope	n Nozzles		
PSI PSI Air PSI to trip Preaction system Did the valve and alarm operate properly? Were all manual actuation devices operated? For deluge systems did the water discharge pattern appear to be satisfactory? Air supply appears to be adequate? Automatic air pressure maintenance device appears to operate properly? Was the preaction valve filled with priming water after it was trip tested and reset? Preaction / Deluge System Maintenance (Section 13.4.3.1.7.1) This section is Not Applicable: The valve requires internal resetting, thus the inspection been done within the last four (4) years? If Yes, what year was the inspection completed? If No, was the internal inspection done during this annual inspection? Yes No N/A N/A N/A N/A N/A N/A N/A N/A	If Yes, clo Confirm of test valve, Preaction The preaction the nature test shall by years. Preintroduce	FYes, close the water supply valve and carefully open drain test valve to reduce air pressure slowly. Confirm operation of low pressure alarm, record air pressure of low pressure alarm activation. Close drain est valve, allow air pressure to rise to normal, then open water supply valve. Preaction / Deluge System Trip Test Table (13.4.3.2.2.2) This section is Not Applicable: The preaction / deluge valve shall be trip tested annually as per the manufacturer's instructions. Where he nature is such that water discharge cannot occur unless protected equipment is shutdown, a full flow est shall be conducted at the next scheduled shutdown. In all cases the test frequency shall not exceed 3 rears. Preaction or deluge valves protecting freezers shall be trip tested in a manner that does not								
Did the valve and alarm operate properly? Were all manual actuation devices operated? For deluge systems did the water discharge pattern appear to be satisfactory? Automatic air pressure maintenance device appears to operate properly? Was the preaction valve filled with priming water after it was trip tested and reset? Preaction / Deluge System Maintenance (Section 13.4.3.1.7.1) This section is Not Applicable: The valve caning and parts replacement or repair shall be permitted every five (5) years for valves that can be reset without removal of the faceplate. If the valve cannot be reset externally the cleaning, replacement or repair shall be completed annually. The valve requires internal resetting, thus the inspection is done during this inspection? Yes No N/A N/A N/A N/A N/A N/A N/A N/A		110/10/00	A STATE OF THE PARTY OF THE PAR		Contract to the contract of th	Brief de	escription of valve operat	.1011		
Were all manual actuation devices operated? For deluge systems did the water discharge pattern appear to be satisfactory? Air supply appears to be adequate? Automatic air pressure maintenance device appears to operate properly? Was the preaction valve filled with priming water after it was trip tested and reset? Preaction / Deluge System Maintenance (Section 13.4.3.1.7.1) This section is Not Applicable: Preaction of the faceplate. If the valve cannot be reset externally the cleaning, replacement or repair shall be completed annually. The valve requires internal resetting, thus the inspection been done within the last four (4) years? If Yes, what year was the inspection completed? If No, was the internal inspection done during this annual inspection? Yes No N/A N/A N/A N/A N/A N/A N/A N/A						7	a profit layer	-1 -		
Preaction / Deluge System Maintenance (Section 13.4.3.1.7.1) Interior cleaning and parts replacement or repair shall be permitted every five (5) years for valves that can be reset without removal of the faceplate. If the valve cannot be reset externally the cleaning, replacement or repair shall be completed annually. The valve requires internal resetting, thus the inspection is done during this inspection? Yes No N/A The valve can be reset externally thus has the inspection been done within the last four (4) years? If Yes, what year was the inspection completed? Yes No N/A N/A N/A	Were all n For deluge Air supply Automatic Was the p	Did the valve and alarm operate properly? Were all manual actuation devices operated? For deluge systems did the water discharge pattern appear to be satisfactory? Air supply appears to be adequate? Automatic air pressure maintenance device appears to operate properly? Yes No N/A N/A Yes No N/A Yes No N/A								
without removal of the faceplate. If the valve cannot be reset externally the cleaning, replacement or repair shall be completed annually. The valve requires internal resetting, thus the inspection is done during this inspection? Yes No N/A The valve can be reset externally thus has the inspection been done within the last four (4) years? If Yes, what year was the inspection completed? Yes No N/A N/A N/A	Preaction	ı / Deluge	e System Mainte	•						
The valve can be reset externally thus has the inspection been done within the last four (4) years? If Yes, what year was the inspection completed? Yes No N/A N/A N/A	without re completed	moval of dannually	the faceplate. If	the valve cannot be	reset exteri	nally the cleaning	g, replacement or repair sha	all be		
(4) years? If Yes, what year was the inspection completed? If No, was the internal inspection done during this annual inspection? Yes No N/A N/A										
If No, was the internal inspection done during this annual inspection? Yes No N/A						e within the last i		N/A		
						1?		-		
			ters and	daring tino diffic	a. mopoodoi					





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Date: Nov 17 2015	Loc	ation: _	Bu	ilding	g "B"	North '	Trac	k 1-1	2				_
Control Valves						15 3 5			- y	1137=	J V J	_	
Are all control valves identifie	d?					5 8	2	K Y∈	es	No		N/A	
Are all control valves locked,	sealed or	equippe	ed with a supervisory s	witch1	?		2	K Y∈	es	No		N/A	
Are all control valves in the n	ormal ope	en or clos	sed postion?				2	K Y∈	es	No		N/A	
Are all control valves free fro	m externa	al leaks?					2	K Y∈	es	No		N/A	
During this inspection was ea	ach contro	ol valve o	perated through its full	rang	e?		2	K Ye	es	No		N/A	
If applicable post indicator va	f applicable post indicator valves were opened until spring tension was felt? Yes No X N/A												
If applicable post indicator &	OS&Y val	lves were	e backed 1/4 turn from	fully	open	position	? _ 2	K Ye	es	No		N/A	
Control Valve Table												22.0	
Control Valve Function	# of Valves	Size	Type of Valve		Оре	en		Secu	ıred		Si	gns	
System control valve	1	6"	OS+Y	х	Y	N	Х	Y	N	X	Y		N
					Υ	N		Υ	N		Y		N
					Υ	N		Y	N		Y		Ν
					Υ	N		Υ	N		Υ		Ν
					Υ	N		Υ	N		Y		Ν
					Y	N		Y	N		Y		Ν
					Y	N		Y	N		Y		N
					Υ	N	le.	Y	N		Y		N
					Y	N		Y	N		Y		N
					Υ	N		Y	N		Y		N
Backflow Prevention Asser All backflow preventers instated following: (1) A forward flow test shall be inside hose stations are local (2) A backflow performance to of the forward flow test. For backflow preventers size the test outlet is of a size to for Where connections do not per	lled in fire the conducted downs test, as re d 2" and the sy	protection ted at the stream or quired by under a footnote the stream decrease.	on system piping shall a system demand, include the backflow preventer the authority having jurished flow test is accumand.	be te uding er. urisdi eptab	hose ction,	stream shall be	in a den	nand nduct	, where ed at th	rith th hydr e cor	ants mple	or etion	•
Connections do exist to perm A forward flow test was cond The forward flow test results If no connections are availab Was there a way of measurir What flow rate was measure	ucted at the met the sole was a fing the material transfer in the second sec	he syste ystem de low test ximum fl	m demand, including hemand, including hose conducted at maximunow rate?	strea	m?		⇒?	Y 6 Y 6 Y 6 Y 6	es	No No No No No		N/A N/A N/A N/A N/A	
Was the backflow preventer	tested wit	h a sepa	rate report to check fo	r no b	ackflo	ow?	L			No		N/A	



Automatic Sprinkler Systems

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Date:	Nov 17 2015	5 obl	Location:	Building "B" North Track 1-12					
An insconners in special Has will be a second of the secon	An inspection of piping and branch line conditions shall be conducted every five (5) years by opening a flushing connection at the end of one main and by removing a sprinkler toward the end of one branch line for the purpose of inspecting for the presence of foreign organic and inorganic material. Has visual obstruction investigation of piping been conducted within the last four (4) years? Yes X No N/A Yes, what year was the investigation completed? Unknown No, was the visual obstruction investigation conducted during this annual inspection? Yes No X N/A This visual obstruction investigation results appears that piping is not obstructed? Yes No X N/A Sased on this years results a further flushing investigation or procedure is recommended? Unknown when last Obstruction investigation was done and should be done.								
The s	ections should be	owing defici made. D1	iencies that sh	nould be reviewed with the authority having jurisdiction to determine on investigation of piping should be done every 5 years.					
D2				components should be done every 5 years.					
D3 D4	Gauges are olde			ntified and "keep open" signs should be installed.					
D5				re a identification sign.					
D6				one 2.5" cap and should be replaced.					
D7		1 1 1 4		one are day and one and so replaced.					
D8									
D9	1								
D10									
D11	e carriera	1	15. 1 (5.	e i graducti i Menengasti i in ^{pert} angkaran arang yang					
D12									
D13	1 11 11 12 11 11	ne di	MO EU TERM	CLOSE AND TARREST RESERVED FOR THE STATE OF					
D14									
D15									
D16									
D17	7								
D18			-						
D19									
D20									
D21				or two first expressions in a manager carry of court of the section of the sectio					
D22	1. 17			Jedika m. n. nor no member 6 wante 7 and					
D23				with a more difference of the					
	1.48		(Use back	of page if further room is needed)					



Automatic Sprinkler Systems

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Date:		Location:	Building "B" North Track 1-12					
We re and a	mmendations ecommend the follow re provided for inform g jurisdiction. R1.	mation only. Corrections of	nspection and test. These recommendations are not deficiencies f these recommendations are dependent on the owner or authority					
I								
		tch should be installed to						
	Drains should be	cleaned out to better han	dle drain test.					
R4. R5.								
R6.								
R7.								
R8.								
R9.								
		(Use back of	page.if further room is needed)					
Recor acces	General Notes Record any pertinent information here with respect to the building (monitoring company, special codes, keys access, confined space, etc.) System monitored by Protelec 204-949-1415.							
<u> </u>								
								
-								
This is whether failure and confirm	mportant Note: This is an operational test inspection. It does not include a review or analysis of the system design to determine whether or not the system meets current code or standards. BDR Services Ltd. is not responsible for any equipment failure, and any subsequent damage or loss consequential or direct. BDR Services Ltd. is merely verifying operation and condition of equipment at actual time of testing. Owner is responsible for system installation, maintenance and confirmation that system installation requirements are met any time there are alterations, additions, renovations and change of occupancy.							
Inspec	ctor: Bart Dlugos	z	Inspection Date: Nov 17 2015					
Licenc	ce SP/WFD #: 22	23/792	Owner Representative:					
Signat	ture: Ban	a	Signature:					





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Annual Inspection & Tests

As per NFPA 25, Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems, 2008 Edition

	Water-Based Fire Protection Systems, 2008 Edition									
Date:	Nov 17 2015	Inspector:	Bart Dlugosz	Inspector SP/W	FD#: 223/792					
Property Name:	100 March 100 Ma	Transit Fort Roug		_						
Tenant Name:	Building "E	3"								
Address:	421 Osborr	ne Street								
City:	Winnip	eg Provinc	ce: MB	Postal Postal	Code:					
Contact:	Alex Veche	rya		Phone :						
General										
Building		Building "B" Track	k 13-24 North							
System Designa	ation	Track 13-24 North								
Location of sprin	nkler valve	East Center Sprin	kler room							
Type of sprinkle	r system	X Wet	Dry	Deluge	Preaction					
Is the building o	ccupied?				X Yes No N/A					
Is the system in	s the system in service?									
The valve heade	he valve header room(s) appears to be adequately heated?									
The valve heade	er room(s) ha	ve a low-temperatur	e alarm?	Į.	Yes No X N/A					
Is it known that t	the system(s)) is hydraulically calc	ulated?	Ļ	Yes X No N/A					
		n sign provided at va		L	Yes No X N/A					
Is there a minim deflector?	um of 18"clea	arance between stor	age/obstructions and the	e sprinkler	X Yes No N/A					
Do all exterior o	penings appe	ear to be protected fr	om freezing?	[X Yes No N/A					
If a hand hose is	s part of the s	sprinkler system does	s it appear to be in good	condition?	X Yes No N/A					
Confirm that the inspection?	building has	not undergone any a	alterations/additions sind	ce the last	X Yes No N/A					
Explain No Ansv	wers / Comm	ents: System ap	opears to be pipe sche	dule system.						
W-4 C !										
Water Supply Do reservoirs, ta	anks or press	sure tanks appear to	be in good condition?	Г	Yes No X N/A					
			etc. are not covered und	L ler this inspection.)						
		t covered under this								
Is fire pump		Diesel	Electric	Gasoline	X None					
When was pum	p last inspect	ed?								
Does pump app				ſ	Yes No X N/A					
Explain No Ansv										



Automatic Sprinkler Systems

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Annual Inspection & Tests Date: Nov 17 2015 Building "B" Track 13-24 North Location: Fire Department Connections (Section 13.7) This section is Not Applicable: FDC Location: S.E corner of building "B" Are identification signs provided and in place? Yes X No N/A The connections are visible and accessible? X Yes No N/A Couplings or swivels are not damaged and rotate smoothly? X Yes No N/A Plugs or caps are in place and undamaged? Yes No N/A Gaskets are in place and in good condition? X Yes No N/A The check valve is not leaking? Yes No Х N/A The automatic drain valve is in place and appears to be working and in good condition? Yes No X N/A The connection clapper(s) is in place and appears to be operating properly? X Yes No N/A Explain No Answers / Comments: Located on the street. There is a valve pit near FDC and was not inspected during this inspection. Fire department connection feeds building "B" eastside. General Condition, Inspected From Floor Level (Section 5.2) This section is Not Applicable: Sprinkler heads appear to be in good condition? (Not corroded, loaded, painted, damaged) X Yes No N/A Piping appears to be in good condition? (Not damaged, leaking, corroded, bent) X Yes No N/A Hangers or Braces appear to be in good condition? (Not damaged, loose, rusted, missing) X Yes No N/A Devices, valves and gauges appear to be in good condition? X Yes No N/A Is stock of spare sprinklers available along with appropriate sprinkler wrench(s)? Yes No N/A Explain No Answers / Comments:

Sprinkler Testing (Section 5.3) This section is Not Applicable: All sprinklers installed have been manufactured after 1920? X Yes No N/A Standard response sprinklers are less than fity (50) years old? X Yes No N/A Fast response sprinklers are less than twenty (20) years old? Yes No X N/A Extra high (325 °F or higher) sprinklers have been tested at five (5) year intervals? No X N/A Yes Dry sprinklers are less than ten (10) years old? Yes No X N/A (Sprinklers that do not meet the above criteria are required to be replaced or representative samples from one or more sample areas shall be tested. Test procedures shall be repeated at various intervals as stated in NFPA 25) Explain No Answers / Comments:



Autom	atic Sprinkl	er System	ıs				3 of 9		
		A	nnual lı	nspection &	Tests				
Date:	Nov 17 201	5 L	ocation:	Building "B"	Track 13-24 No.	rth			
Gauges Gauges Gauges Gauges Gauges	This section is Not Applicable: Gauges shall be replaced every five (5) years or tested every five (5) years by comparison with a calibrated gauge. Gauges not accurate to within three (3) percent of the full scale shall be recalibrated or replaced. Gauges are less than five (5) years old? Gauges have been compared against a calibrated gauge and are within three (3) percent? Gauges have been replaced during this annual inspection? Gauges dated 2009 (x2) Should be replaced.								
Explain	No Answers / C	omments:	Gauges dat	ed 2009 (x2) Snould be re	ергасеа.				
(All read Record to Open the Close th What da Explain I Wet Sys The gau Does ala All trim v	Main Drain Test (Section 13.2.5) (All readings should be from the supply pressure lower gauge) Record the static water supply pressure with no flow. Open the main drain and allow water flow to stabilize. Record the pressure. Close the main drain slowly. Record the pressure after gauge has stabilized. What date was the last main drain test done? Explain No Answers / Comments: Drain does not handle test. Check valve on drain cup does not hold. Wet System (Section 13.4) This section is Not Applicable: This section is Not Applicable: This section is Not Applicable: The gauges indicate normal water pressure is being maintained? Does alarm valve appear to be free of physical damage? All trim valves are in the appropriate open or closed position? The alarm drains are not leaking?								
Anti-free Anti-free	ze solution rea	ding is at wha ezing point ap	end anti-freeze s at freezing poin opears to be sa	t?			lo X N/A		
Wet Sys	stem Test Tabl Make	e for Wet Al Model	arm Valve		nis section is No		П		
				Locat		s rest			
(Ensure Test alar	6" Grinnell A N/A Bay 24 North Ensure alarm company is notified to avoid false alarms.) Test alarm valve water flow alarm switch by opening inspector's test valve. Wet System Low-Water-Pressure Switch Bay 24 North Static PSI Alarm Time Residual PSI 120 psi 1m17s 70 psi								
s the wet system equipped with a low-water-pressure switch? Yes X No N/A Yes, open drain test valve to reduce water pressure slowly. Confirm operation of low pressure switch, record water Pressure at which low pressure switch activated. Close drain test and pump system up to normal pressure Record pressure. PSI Explain No Answers / Comments: System Does not have a Low Pressure switch. One should be installed.									



Automatic Sprinkler Systems 4 of 9 **Annual Inspection & Tests** Date: Nov 17 2015 Building "B" Track 13-24 North Location: Wet System Inspection (Section 13.4.1.2) This section is Not Applicable: Alarm valves and their associated strainers, filters, and restriction orfices shall be inspected internally every five (5) years unless tests indicate a greater frequency is necessary. Has the internal inspection been completed within the last four (4) years? X No If Yes, what year was the inspection completed? If No, was the internal inspection done during this annual inspection? N/A Explain No Answers / Comments: Unknown when last wet system inspection was and should be done. Wet System Vane Type Flow Alarms Х This section is Not Applicable: Test water-flow alarm by opening inspector's test and record time that alarm registers. Location of Inspectors Test Flow Switch Zone Designation Static PSI Alarm Time Residual PSI North Main Incoming 32s Dry Pipe System (Section 13.4.4) X This section is Not Applicable: Yes No N/A Does valve appear to be free of physical damage? All trim valves are in the appropriate open or closed position? No N/A Yes The intermediate chamber is not leaking? No N/A Yes A tag or card with the last trip date and who conducted the test is attached to the valve? N/A No Size Make Model Serial # Location of Inspectors Test Explain No Answers / Comments:



		500 CO (100 CO)							
Auton	natic Sprinkler Sys	tems					5	of 9	
		Annual Inspe	ctior	1 &	Tests				
Date:	Nov 17 2015	Location:	Build	ing "E	3" Track 13-2	24 North			
	stem Low-Air-Pressure								
Is the dr	y system equipped with	a low-air-pressure switch?				Yes	No _	X N/A	
drain tes valve.) activate device a	st valve to reduce air pro Confirm operation of lo	alve isolate quick opening devinessure slowly. (Do not reduce we pressure switch, record air pre, allow air pressure to rise to test.	e <i>air press</i> pressure a normal, t	sure su at which hen slo	<i>ifficiently to tr</i> ch low pressu	rip the dry pip ire switch	ne	PSI	
- p:							- Г	==1	
Every the fully ope the dry pas the (2) years	This section is Not Applicable: Every three (3) years and whenever the system is altered, the dry pipe valve shall be trip tested with the control valve ully open and the quick-opening device, if provided in service. During the years when full flow testing is not required, ne dry pipe valve shall be trip tested with the control valve partially open. Has the dry pipe valve been tripped with the control valve fully open in the last two 2) years. If yes, what year was the fully open trip test conducted? Yes No N/A								
If No, is	f No, is the fully open trip test being conducted during this annual inspection? Yes No N/A								
Normal	air pressure as per the	Manufacturers recommendation	on					PSI	
100	the dry pipe valve. Recectors test valve until th	cord the time from opening se dry pipe valve trips.	Water PSI	Air PSI	Time to Trip	Trip Point Air PSI		Vater To tors Test	
Did the	valve and alarm operate	e properly?				Yes	No	N/A	
	valve interior appears	The second secon				Yes	No	N/A	
Quick-op Is a sign	pening device operated	properly? e valve indicating the number	of auxilia	ry drair	ns and	Yes	No No	N/A N/A	
Were all	identified auxiliary drain	ns drained during this inspection	on?			Yes	No	N/A	
Air supp	ly appears to be adequa	ate?				Yes	No	N/A	
		ance device appears to operat	0.00	•		Yes	No	N/A	
	e dry pipe valve filled wit No Answers / Comment	h priming water after it was trip ts:	p tested a	ind res	et?	Yes	No L	N/A	
Dry pipe indicate	a greater frequency is r	and restriction orfices shall be necessary.		d interi	This section nally every fiv	ve (5) years u	unless tests	_	
If Yes, w	hat year was the inspec	vi)		s?		Yes	No L	N/A	
	as the internal inspection No Answers / Comment	n done during this annual insp ts:	ection?			Yes	No L	N/A	



Automa	Automatic Sprinkler Systems 6 of 9										
	Annual Inspection & Tests										
Date: _	Nov 17	2015 L	ocation:	Bu	ilding "B" Tra	ck 13-24 North	4151.50				
Preactio	n / Deluge	System			This s	ection is Not Applica	able: X				
Does val	ve appear	to be free of phy	sical damage?			Yes	No N/A				
All trim va	alves are i	n the appropriate	open or closed pos	sition?		Yes	No N/A				
The valve	The valve seat is not leaking?										
The electrical components are in service? Yes No N/A											
Size	Make	Model	Serial #		Strike Throug	gh What Does Not A	pply				
				Deluge	Preaction	Closed Nozzles	Open Nozzles				
Supervised Preaction Low-Air-Pressure Alarm Is the preaction system equipped with a low-air-pressure alarm? If Yes, close the water supply valve and carefully open drain test valve to reduce air pressure slowly. Confirm operation of low pressure alarm, record air pressure of low pressure alarm activation. Close drain test valve, allow air pressure to rise to normal, then open water supply valve.											
the nature test shall years. Pr introduce	This section is Not Applicable: The preaction / deluge valve shall be trip tested annually as per the manufacturer's instructions. Where he nature is such that water discharge cannot occur unless protected equipment is shutdown, a full flow est shall be conducted at the next scheduled shutdown. In all cases the test frequency shall not exceed 3 years. Preaction or deluge valves protecting freezers shall be trip tested in a manner that does not introduce moisture into the piping in the freezer.										
Water PSI	Air PSI	Trip Point	Number of detector		Brief d	escription of valve	operation				
P31	P51	Air PSI	to trip Preactio	n system							
Were all i For delug Air supply Automatic	Did the valve and alarm operate properly? Were all manual actuation devices operated? For deluge systems did the water discharge pattern appear to be satisfactory? Air supply appears to be adequate? Automatic air pressure maintenance device appears to operate properly? Was the preaction valve filled with priming water after it was trip tested and reset? Yes No N/A N/A N/A Yes No N/A Yes No N/A N/A										
200			enance (Section 13	2/3/7/1	This a	action is Not Applie	able: V				
Interior cl without re complete The valve The valve	eaning an emoval of d annually e requires e can be re	d parts replacem the faceplate. If v. internal resetting eset externally the	ent or repair shall be the valve cannot be , thus the inspection us has the inspection	ne permitted e reset externa n is done duri on been done	every five (5) yeally the cleaning	four	n be reset air shall be				
W 20 2			e inspection comple)	Yes	No N/A				
		nai inspection do	ne during this annu	ai inspection?	- 11	Yes _	No N/A				



No

N/A

Protection, Prevention, Performance, 7 of 9 Automatic Sprinkler Systems **Annual Inspection & Tests** Building "B" Track 13-24 North Nov 17 2015 Location: Date: Control Valves N/A X No Yes Are all control valves identified? N/A No Are all control valves locked, sealed or equipped with a supervisory switch? Х Yes X Yes No N/A Are all control valves in the normal open or closed postion? N/A No Х Yes Are all control valves free from external leaks? No N/A X Yes During this inspection was each control valve operated through its full range? N/A Yes No X If applicable post indicator valves were opened until spring tension was felt? If applicable post indicator & OS&Y valves were backed 1/4 turn from fully open position? N/A Yes Control Valve Table # of Secured Signs **Control Valve Function** Valves Size Type of Valve Open X N 6" OS+Y Ν Υ N Y X System control valve X Y G.O.B X Ν Υ Х N 8" Y N X Y 1 Main Incoming North X G.O.B X Y X Υ N Y N Hydrant Iso Y N Y N Y N Y N Y N Y N N N Υ Y N Υ Y Υ N Y N N N Y N N Y Υ Y N N Υ N Y N Backflow Prevention Assemblies (Section 13.6) This section is Not Applicable: All backflow preventers installed in fire protection system piping shall be tested annually in accordance with the following: (1) A forward flow test shall be conducted at the system demand, including hose stream demand, where hydrants or inside hose stations are located downstream of the backflow preventer. (2) A backflow performance test, as required by the authority having jurisdiction, shall be conducted at the completion of the forward flow test. For backflow preventers sized 2" and under a forward flow test is acceptable to conduct without measuring flow, where the test outlet is of a size to flow the system demand. Where connections do not permit a full flow test, test shall be completed at the maximum flow rate possible. N/A Yes No Connections do exist to permit a full forward flow test? N/A Yes No A forward flow test was conducted at the system demand, including hose stream? Yes No N/A The forward flow test results met the system demand, including hose stream? N/A Yes No If no connections are available was a flow test conducted at maximum flow rate possible? N/A Yes Was there a way of measuring the maximum flow rate? What flow rate was measured during the maximum flow rate?

Was the backflow preventer tested with a separate report to check for no backflow?



Automatic Sprinkler Systems

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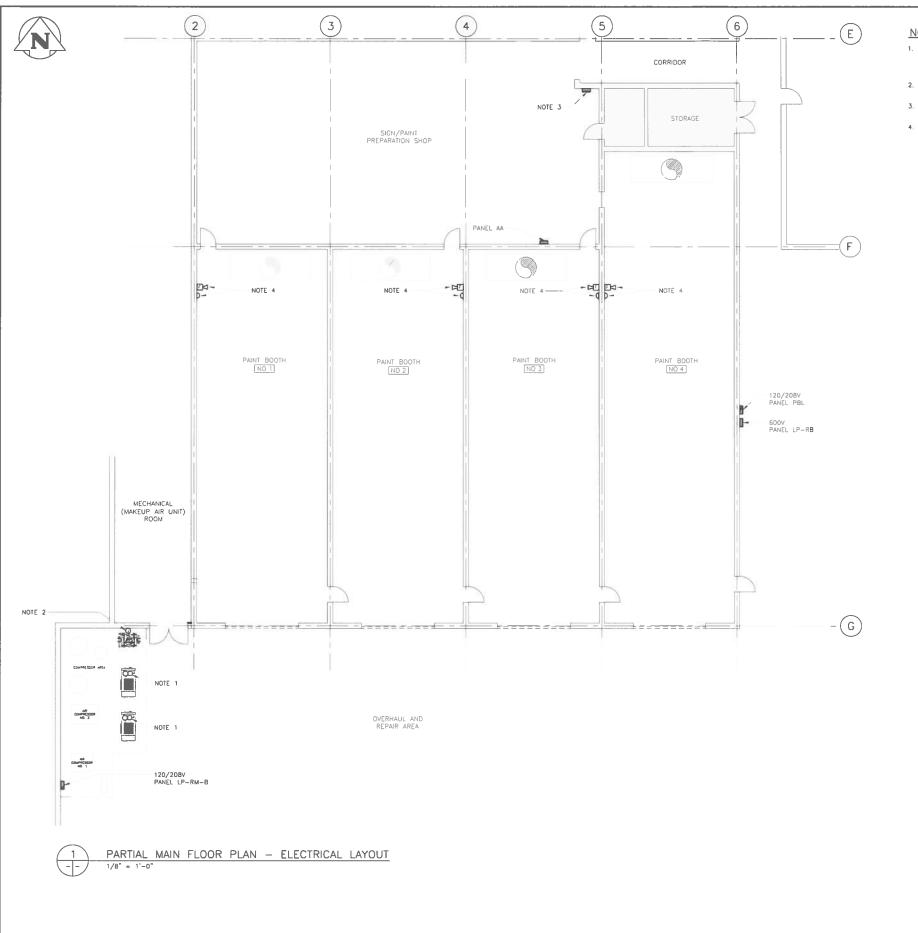
Date:	Nov 17 2015	Location:	Building "B" Track 13-24 North
An insconners of the conners of the	ection at the end of one recting for the presence of visual obstruction investigns, what year was the investigness are the visual obstruction investigned on this years results a sin No Answers / Comme	ranch line condition main and by remov foreign organic an igation of piping been estigation completed ion investigation corigation results appefurther flushing investigation investigation	en conducted within the last four (4) years? Yes X No N/A
be do	ne.	10.70	3 New York (1971 1981 1981 1981 1981 1981 1981 1981
		YIKIM	
The s	rections should be made	deficiencies that she. D1. Obstructi	nould be reviewed with the authority having jurisdiction to determine ion investigation of piping should be done every 5 years.
D2			components should be done every 5 years.
D3	Gauges are older ther		
D4			entified and "keep open" signs should be installed.
D5 D6	Fire department conn	ection should hav	ve a identification sign.
D6 D7			
D8			
D9			
D10			
D11	11,257 5,517		
D12			THE SECOND PROPERTY OF STREET STREET
D13		1.01000	
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D23			THE REAL OF THE PROPERTY OF TH
11		(Use back	of page if further room is needed)



Automatic Sprinkler Systems

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			-					
Date: _	Nov 17 2015	Location:		Building "B"	Track 13-24 North			
We recor	rovided for information	ased on this annual in n only. Corrections of	these	recommendations	recommendations are not deficiencies are dependent on the owner or authority			
R2. Lo	w pressure switch sl	hould be installed to	preve	ent false alarms.				
R3. Dra	ains should be clean	ed out to better hand	lle dra	ain test.				
R4								
R5								
R6.								
R7.								
R8								
R9								
Conoral	lotos	(Use back of p	page i	f further room is ne	eded)			
Record at access, c	General Notes Record any pertinent information here with respect to the building (monitoring company, special codes, keys access, confined space, etc.) System monitored by Protelec 204-949-1415.							
					The second secon			
This is an whether o failure, an and condiconfirmati	mportant Note: This is an operational test inspection. It does not include a review or analysis of the system design to determine whether or not the system meets current code or standards. BDR Services Ltd. is not responsible for any equipment ailure, and any subsequent damage or loss consequential or direct. BDR Services Ltd. is merely verifying operation and condition of equipment at actual time of testing. Owner is responsible for system installation, maintenance and confirmation that system installation requirements are met any time there are alterations, additions, renovations and hange of occupancy.							
Inspector:	Bart Dlugosz			Inspection Date:	Nov 17 2015			
Licence S	P/WFD#: 223/792			Owner Representa				
Signature	Banco			Signature:				



NOTES:

- JOHP COMPRESSOR PACKAGES AC-1 AND AC-2, 450V-3PH EACH COMPRESSOR FED FROM A 50A-3P CIRCUIT BREAKER IN PANEL LP-RB WITH J#8 TECK.
- DRYER/BREATHING AIR PACKAGE FED FROM A 15A-1P CIRCUIT BREAKER IN PANEL LP-RM-B.
- 3. BREATHING AIR SYSTEM REMOTE ALARM PANEL FED FROM A 15A-1P CIRCUIT BREAKER IN PANEL AA.
- 4. VISUAL AND AUDIBLE ALARMS TIED INTO BREATHING AIR CONTROL PANEL ALL WIRING WITHIN PAINT BOOTHS TO BE SUITABLE FOR CLASS 1 ZONE 1 INSTALLATION.

SYMBOL LEGEND

- ELECTRIC MOTOR, REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION.
- DISCONNECT SWITCH BY ELECTRICAL CONTRACTOR
- PANELBOARD.
- **①** JUNCTION BOX.
- FA ALARM HORN.
- ALARM STROBE LIGHT.

0.3	ISSUED AS BUILT	09.12.11	CPG
02	ISSUED FOR ADDENDUM #2	08-10-27	T.S.
01	ISSUED FOR ADDENDUM #1	08.10.22	T.S.
00	ISSUED FOR TENDER	08-10-09	L.K.
NO.	DESCRIPTION	DATE	ISSUED BY
RE	/ISIONS/ISSUE		

CITY OF WINNIPEG
TRANSIT DEPARTMENT

WARDROP | Engineering Inc.

AS-BUILT DATE 09.12.11 BY CPG

APEGIT

Wordrop Engineering Inc.

No. 195 Date: April 30, 2009

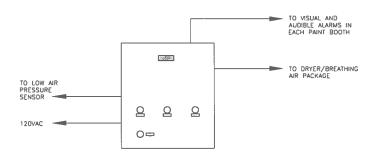
1/8"=1'-0" 5 0 5

CHECKED BY DD

PROJECT NAME WINNIPEG TRANSIT - OSBORNE STREET GARAGE PAINT BOOTH BREATHING AIR SYSTEM UPGRADE

PARTIAL MAIN FLOOR PLAN ELECTRICAL LAYOUT

T.S. L.K. L.K. AR SCALE: DATE: 08.04.08 AS NOTED DRAWING NO. 0829720102-DWG-E0001 03



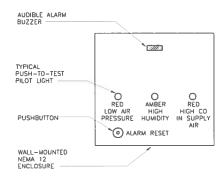


BREATHING AIR ALARM SYSTEM RISER DIAGRAM N.T.S

NOTES:

- PILOT LIGHTS ON THE ALARM PANEL INDICATE LOW AIR PRESSURE, HIGH HUMIDITY, AND HIGH CO IN SUPPLY AIR.
- 2. THE FOLLOWING CONDITIONS INITIATE AUDIBLE ALARM ON THE PANEL AND AUDIBLE/VISUAL ALARMS IN PAINT BOOTHS:

 HIGH HUMIDITY
 LOW AIR PRESSURE
 HIGH CO IN SUPPLY AIR
- 3. ALARM RESET BUTTON IS TO SILENCE AUDIBLE ALARM ONLY.



BREATHING AIR ALARM PANEL ELEVATION

OZ ISSUED AS BUILT
O1 ISSUED FOR ADDENDUM #1
OO ISSUED FOR TENDER
NO. DESCRIPTION
REVISIONS/ISSUE

CITY OF WINNIPEG TRANSIT DEPARTMENT

WARDROP | Engineering Inc.

AS-BUILT DATE 09.12.11 BY CPG CHECKED BY DD

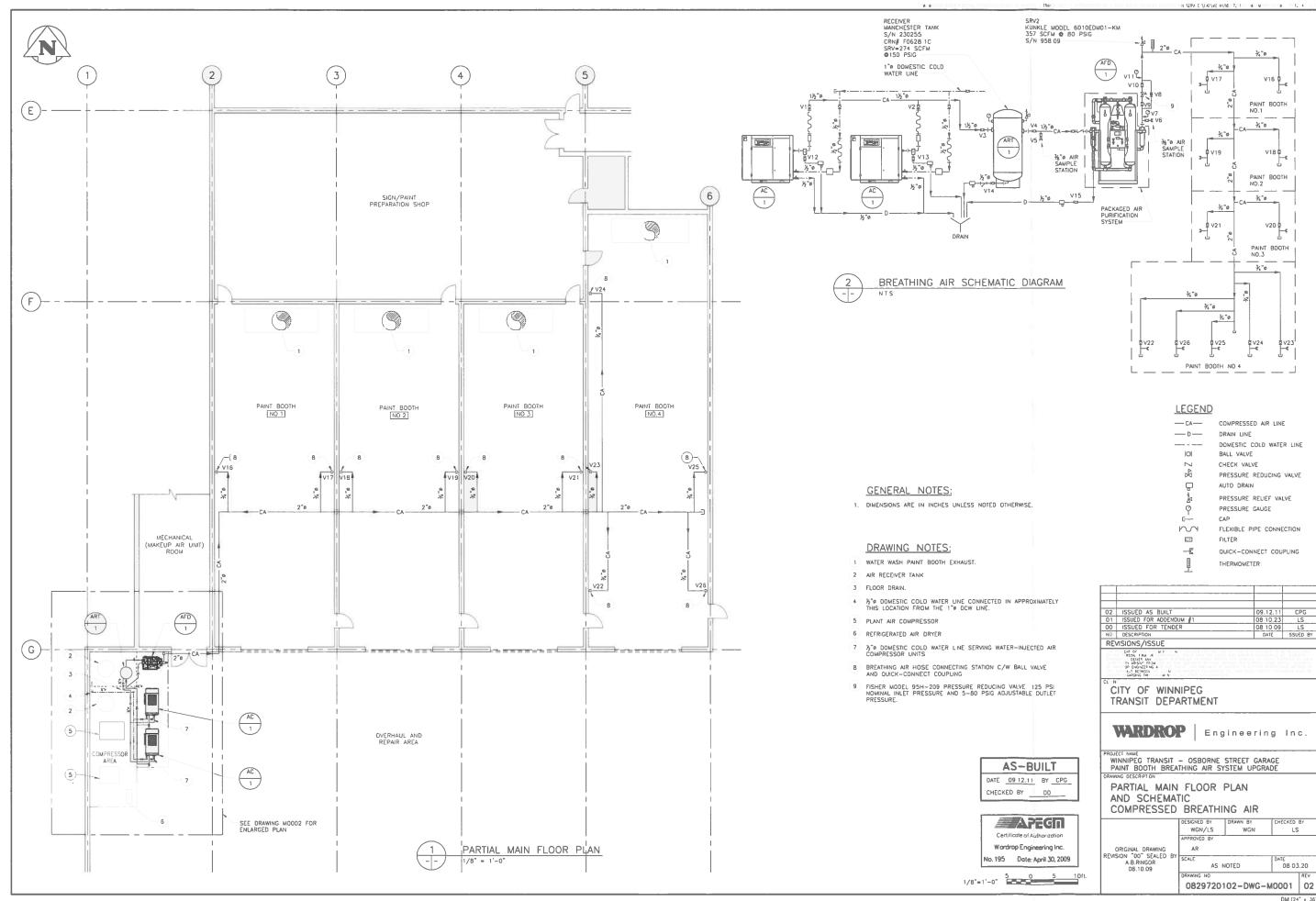
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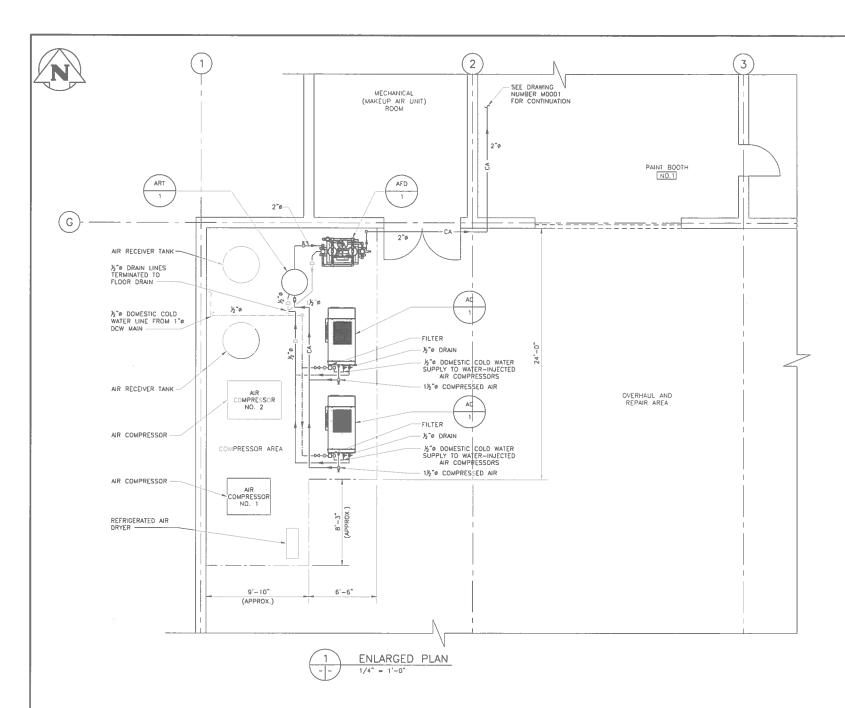
Certificate of Authorization Wardrop Engineering Inc. No. 195 Date: April 30, 2009

PROJECT NAME
WINNIPEG TRANSIT — OSBORNE STREET GARAGE
PAINT BOOTH BREATHING AIR SYSTEM UPGRADE

ELECTRICAL SPECIFICATION

HECKED BY: T.S. L.K. 08.04.08 AS NOTED 0829720102-DWG-E0002 02





BREATHING AIR FILTRATION/PURIFICATION UNIT SCHEDULE

TAG NO	SERVICE	LOCATION	FREE AIR	DELIVERY	WORKING	PRESSURE	MODEL	REMARKS
			L/s	(CFM)	kPa	(PSI)		
AFD-1	AC-1	OVERHAUL AND REPAIR AREA	70	(150)	690	(100)	APPL AP-150-BA	TWINTOWER AIR DRYER C/W 250 CFM APF0-250-X1 AFTERFILTER

AIR RECEIVER TANK SCHEDULE

TAG NO.	SERVICE	LOCATION	CAI	PACITY	WORKING PRESSURE		APPROXIMATE DIMENSION			N	REMARKS
			LITERS	(US GAL.)	kPo	(PSI)	DIAM!	(in)	HEIG mm	HT (in.)	
ART-1	AC-1	OVERHAUL AND REPAIR AREA	910	(240)	1380	(200)	760	(30)	2130	(84)	VERTICAL TANK TO CSA B51 AND ASME SECTION VIII

AIR COMPRESSOR SCHEDULE

TAG NO.	SERVICE	LOCATION		R DELIVERED DO PSIG	MAXIMUM WORKING PRESSURE		MOTOR		MODEL	TYPE	REMARKS
			L/s	(CFM)	kPo	(PSI)	kW	(HP)			
AC-1	PAINT SHOPS BREATHING AIR	OVERHAUL AND REPAIR AREA	60	(127)	1000	(145)	22 3	(30)	COMPAIR D22H RS	AIR COOLED ROTARY SCREW	OIL-LESS AIR COMPRESSOR PACKAGE WITH VARIABLE SPEED INVERTER MOTOR

GENERAL NOTES:

- 1. DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE.
- 2. SEE DRAWING M-0001 FOR SCHEMATIC DIAGRAM AND LEGEND.

)2	ISSUED AS BUILT	09.12.11	CPG
01	ISSUED FOR ADDENDUM #1	08.10.23	LS
00	ISSUED FOR TENDER	08-10-09	LS
₹0.	DESCRIPTION	DATE	ISSUED BY
חבו	ACIONIC /ICCLIE		

CITY OF WINNIPEG TRANSIT DEPARTMENT

WARDROP | Engineering Inc.

PROJECT NAME
WINNIPEG TRANSIT — OSBORNE STREET GARAGE
PAINT BOOTH BREATHING AIR SYSTEM UPGRADE
DRAWING DESCRIPTION

ENLARGED COMPRESSOR AREA PLAN EQUIPMENT LAYOUT AND SCHEDULES

	DESIGNED BY:	BRAWN BY.	CHECKED	BY:						
	WGN/LS	WGN/LS WGN								
	APPROVED BY:									
ORIGINAL DRAWING	AR	AR								
REVISION "00" SEALED BY	SCALE:	DATE:								
A.B.RINGOR 08.10.09	AS N	IOTED	08.03.20							
	DRAWING NO.			REV.						
	0829720102-DWG-M0002									

1/4"=1'-0" 2 0 2 4 6ft

AS-BUILT DATE 09.12.11 BY CPG

APEGIN Certificate of Authorization Wardrop Engineering Inc. No. 195 Date: April 30, 2009

CHECKED BY DD

30013.07.23

ENGINEERING MANUAL





Small UP - Total Air System

CCN: 23753759 Rev.: D ECO 81751

Ref.: 9902 Page: 606

Date: 30th April 2013 Cancels: 01st January 2011

Point of Manufacture - Campbellsville, USA

60 HERTZ ENGINEERING DATA

Model		UP6-15cTAS-125	UP6-15cTAS-150	UP6-15cTAS-210	
OFNEDAL COMPRESSOR DATA					
GENERAL COMPRESSOR DATA Capacity (Ref. Intake Condition.) FAD (1)	m³/min (cfm)	1 47 (52)	1 22 (47 2)	1.01 (35.9)	
Maximum & Rated Operating Pressure	m³/min (cfm) barg (psig)	1.47 (52) 8.6 (125)	1.33 (47.3) 10.3 (150)	14.5 (210)	
Rated package discharge Pressure (13)	barg (psig)	8.0 (116)	9.9 (143)	14.1 (205)	
Minimum Operating Pressure	barg (psig)	4.5 (65)	4.5 (65)	4.5 (65)	
Maximum Operating Temperature	°C (°F)	40 (105)	40 (105)	40 (105)	
Minimum Operating Temperature	°C (°F)	2 (36)	2 (36)	2 (36)	
SOUND LEVEL (2) Base mounted Enclosed	dB(A)	69	69	69	
Dase mounted Enclosed	ub(A)				
COOLING DATA					
Air-cooled (Ambient Temperature 40°C/1	04°F)				
Coolant Discharge temperature	°C(°F)	100 (212)	99 (210)	98 (208)	
A/E Injection Temperature	°C(°F)	82 (180)	81 (178)	80 (176)	
(3) Aftercooler - Inlet Aftercooler - Outlet	°C(°F) °C(°F)	90 (194) 51 (124)	89 (192) 51 (124)	89 (192) 51 (124)	
Heat Removal Oil Cooler	kW (1000 Btu/hr)	10.3 (35.1)	10.3 (35.1)	10.3 (35.1)	
Heat Removal Oil and Aftercooler	kW (1000 Btu/hr)	12.3 (42.0)	12.3 (42.0)	12.3 (42.0)	
Heat Removal Dryer Condenser (Max)	kW (1000 Btu/hr)	1.4 (4.8)	1.4 (4.8)	1.4 (4.8)	
Coolant Flow	lpm (UK gpm)	17.0 (3.7)	21.0 (4.6)	32.0 (7.0)	
Cooling Air	or ma 2 leasing / a frage)	00.0 (4000)	00.0 (4000)	00.0 (4000)	
Main Cooling Air Flov Dryer Cooling Airflov	` ,	30.0 (1060) Included	30.0 (1060) Included	30.0 (1060)	
,	v m³/min (ctm) °C (°F)	40 (72)	40 (72)	40 (72)	
Aftercooler CTD (3)	°C (°F)	11 (20)	11 (20)	11 (20)	
CONSTRUCTION FOUNDATION AND					
PIPING CONNECTIONS					
Air Discharge Base Mount	Inches BSPT (9)	0.75			
Air Discharge from ASME Receiver	Inches NPT	0.75			
Package Automatic Condensate Drain	Inches NPT	0.25			
Coolant Drain	Drain Plug	9/16"-SAE			
Power Inlet (Main)	Inch Inch	1" 1/2"			
Power Inlet (Dryer)	IIICII	1/2			
COOLANT LUBRICATION DATA					
Coolant Sump Capacity	litres (US gal)	3 (.8)			
Total coolant fill capacity	litres (US gal)	4.5 (1.2)			
DIMENCIONS		Data	001	400	
DIMENSIONS	mm	Basemount 1042/734/914	80 gal 1362/734/1541	120 gal 1897/734/1541	
length, width, height	mm Inches	41/28.9/36	53.6/28.9/60.7	74.7/28.9/60.7	
GA Drawing Numbers		22431811	22431829	22469191	
SHIPPING DATA - NET WEIGHTS		Basemount	len 08	120 gal	
Total Air System package	kg (lb.)	330 (725)	80 gal 455 (1000)	470 (1035)	

ENGINEERING MANUAL

SSRSmall UP - Total Air System



CCN: 23753759

Rev.: D ECO 81751

Ref.: 9902

Ref.: 9902 Page: 607

Date: 30th April 2013
Cancels: 01st January 2011

Point of Manufacture - Campbellsville, USA 60 HERTZ ENGINEERING DATA

Model			UP6-15cTAS-125	UP6-15	TAS-150	UP6-15cTAS-210	
Compressor Module Data							
Rotor Diameter (male)	mm		74.25	74	l.25	74.25	
Male Rotor Speed	rpm		6250	57	700	4675	
Tip Speed	m/sec		24.30	22	2.16	18.17	
Power Data							
Applied main motor power ⁽⁸⁾	HP		16.5	1	6.5	16.5	
Applied Power - Fan	HP		Included		uded	Included	
Applied Power - Dryer compressor	HP		0.6	(0.6	0.6	
Applied Power - Dryer Fan	HP		Included	Incl	uded	Included	
Applied Power - Full Package ⁽⁸⁾	HP		17.1	1	7.1	17.1	
ELECTRICAL DATA - ALL UNITS SSR UP6-15c		115-1-60	200v	230v	380v	460v	575v
*** NOTE BLUE SHADE DENOTES SINGLE PHASE ***							
Nominal Current - Main Drive Motor (8) ODP/TEFC	Amps		39.3/39	34.2/33.9	20.7/20.5	17.1/16.9	13.7/13.5
Maximum Applied Power - TAS Package (10) ODP/TEFC	Amps		43.2/42.9	37.6/37.3	22.8/22.6	18.8/18.6	15.1/14.9
Starting current Direct on Line	Amps		244.0	212.0	128.0	106.0	85.0
Starting current Star Delta Start	Amps		N/A	N/A	79.0	N/A	N/A
Main Motor Data							
Nominal Power - Main Driver	HP		15.0	15.0	15.0	15.0	15.0
rive Motor enclosure Protection			ODP / TEFC	ODP/TEFC	ODP/TEFC	ODP/TEFC	ODP/TEFC
rive Motor RPM			3500	3500	3500	3500	3500
rive Motor Frame			215TZ	215TZ	215TZ	215TZ	215TZ
rive Motor Locked Rotor DOL/(S/D) (5)	Amps		244.0	212.0	128(79)	106.0	85.0
rive Motor Efficiency (8)	, -		89.5/90.2	89.5/90.2	89.5/90.2	89.5/90.2	89.5/90.2
Orive Motor Power Factor (8)			0.9	0.9	0.9	0.9	0.9
			0.9	0.9	0.9		0.9
Test Certificate Number (4)						AT43068 BK75308	
Oryer Electrical Data	A	-					
Full Load Current	Amps	5					
Starting Current	Amps	30					
Electrical Installation Total Air System							
Recommended wire size - Main motor - (6)	Awg		4	6	8	10	10
Suggested Fuse Rating ⁽⁷⁾	Amps		75	65	35	30	25
Recommended wire size - Dryer - (6)	Awg	18					
Potringrated Driver Data		100 01					
Refrigerated Dryer Data Pressure Dew Point ISO Class (11)	°C (°F)	ISO Class 5		lower than 7°C (44°	F)		
1000010 DOW 1 OHIC 100 OHOO		5		050/40 7)	' /		

Refrigerant weight of R-134a

°C (°F) Grams / (Oz)

350/(12.7)

Filter Data	CCN
Primary filter detail - at 21°C (70°F)	85567162
Final filter detail - at 21°C (70°F)	85567170

Filtration
1 micron
01 micron

	Liquid
ISO Class	Filtration
3	0.6 mg/m ³ (0.5 ppm)
1	$0.01 \text{ mg/m}^3 (0.01 \text{ ppm})$

		barG	psig	barG	psig	barG	psig
Pressure Drop data by operating pressure	barG / (psig)	8.6	125	10.3	150	14.5	210
Dryer Pressure Drop	barG / (psig)	0.28	4	0.21	3	0.14	2
Primary filter wet pressure drop	barG / (psig)	0.14	2	0.10	1.5	0.07	1
Final filter wet pressure drop	barG / (psig)	0.21	3	0.14	2	0.10	1.5
Total Pressure Drop (10) For ISO Class 2.5.1 air	barG / (psig)	0.62	9	0.45	6.5	0.31	4.5

Notes :

- (1) FAD (Free Air Delivery) is full package performance including all losses. Tested in accordance with ISO 1217: 1996 Annex C.
- (2) Measured in free field conditions in accordance with PNEUROP/CAGI test codes PN8NTC2.3, with +/- 3 dB(A) tolerance.
 (3) 40% Relative Humidity Inlet Air (For alternate conditions refer to SSR toolbox or contact IR)
- (4) Motor test certificate
- (5) Inrush amps
- (6) This is a minimum requirement based on 90°C wire It may be necessary to use larger cables to comply with local regulations or if the voltage drop exceeds 5% of the nominal voltage.
- (7) Recommended Time delay Fuse. Refer to local code for proper fuse sizing
- (8) Measured at rated compressor duty
- (9) Installation kit will provide flexible connection to NPT or BSPT
- (10) Total Air System package including compressor, integral dryer with pre and final compressed air filters (11) Dew point measured In accordance with ISO 8573-1:2001. With inlet air to package of 25°C (77°F) and RH at 60%
- (13) Discharge pressure when operating at compressor rated pressure, with clean wetted filters



R45n

ENGINEERING DATA SHEET

150

CCN: 24192569 Rev.: ECN: 82093 Sheet: 1 of 1 Date: 20-Aug-2013

										Date.	20-Aug-2010		
Model Name		R45N-X100			-X110	R45N	-X115	R45N	N-X125	R45N	I-X135	R451	N-X145
GENERAL PERFORMANCE DATA													
Rated Discharge Pressure	barg (psig)	7 ((100)	7.5	(110)	8	(115)	8.5	5 (125)	9.5	(135)	10	(145)
Minimum Operation Pressure	barg (psig)	4.5 ((65)	4.5	(65)	4.5	(65)	4.5	5 (65)	4.5	(65)	4.5	(65)
Capacity FAD @ Max Speed (1)	m³/min (CFM)	7.42	(262)	7.39	(261)	7.28	(257)	7.02	(248)	6.74	(238)	6.46	(228
Capacity FAD @ Min Speed (1)	m³/min (CFM)	1.64	(58)	1.67	(59)	1.67	(59)	1.70	(60)	1.76	(62)	1.78	(63
Turndown Percentage	Percent	789	%	77	7 %	77	7%	7	6%	7-	4%	7	2%
Maximum Target Operating Pressure (2)	barg (psig)							(145)					
Maximum Operating Ambient Temperature	°C (°F)						46	(115)					
Minimum Operating Ambient Temperature	°C (°F)						2	(35)					
Maximum System Temperature Setting	°C (°F)						109	(228)					
Nominal Power - Main Motor	kW (HP)						45.00	(60)					
Main Drive Efficiency (3)	Percent						97.	.00%					
Main Motor Efficiency (3)	Percent							70%					
Package Input Power w/Fan - Air Cooled (4)	kW	55.	.1	56	6.6	56	6.6	5	6.7	5	6.0	5	5.2
Specific Power - Air Cooled (4)(5)	kW/m3/min (kW/100cfm)	7.43	(21.0)	7.66	(21.7)	7.78	(22.0)	8.07	(22.9)	8.31	(23.5)	8.55	(24.2
SOUND LEVEL (6)													
Standard Package - Air Cooled	dB(A)						(69					
COOLING DATA (@ Maximum Ambient Tempe		•	,										
Heat Removal Oil Cooler	kW (1000 Btu/hr)	41	(140)	43	(146)	43	(147)	43	(148)	43	(147)	42	(144
Heat Removal Oil and Aftercooler	kW (1000 Btu/hr)	54	(183)	55	(189)	55	(189)	56	(190)	55	(188)	55	(186
Additional Static Pressure (13)	Pa (in H2O)					Se	e docume	ent 2388	3374				
Fan Air Flow	m³/min (cfm)			Nom:	84	(2984)		Max	: 108	(3825)			
Fan Motor Nominal Power	kW							1.5					
Cooling Air Temperature Rise	°C (°F)	29	(52)	28	(51)	28	(51)	28	(50)	28	(50)	28	(51
Aftercooler CTD, 60 Hz (7)	°C (°F)	8	(15)	8	(15)	8	(15)	8	(15)	8	(15)	8	(15)
AIR END DATA								5400		4005			
Male Rotor Speed	rpm	540			77		87	5106		4925		4744	
Tip Speed Rotor	m/sec	36.			5.1		5.5	34.3		33.1 49.7		31.8 49.0	
Full Load Shaft Power	kW	48.	.9	50).3	50).3	50.4		4:	9.7	4	9.0
COOLANT LUBRICATION DATA Total Coolant Capacity - Air Cooled	litres (US gal)			26 (6.9									
<u> </u>	littes (US gai)			20 (0.9	'								
PIPING CONNECTIONS Air Discharge	Inches BSPT/NPT (9)						1	.50					
Package Automatic Condensate Drain	Inches BSPT/NPT (9)							.38					
Coolant Drain - Hose Size	Inches							.88					
Diameter of Power Inlet	mm / inch					Up	to 4.0" (re		plate)				
DIMENSIONS & WEIGHT			Ва	ase Mou	nted								
Length, Width, Height	mm (inches)					194	7(77)/111	4(44)/ 16	607(63)				
Net Weight - Air Cooled	kg (lb.)							(1711)					
GA Drawing Number - Air Cooled							2406	68652					
ELECTRICAL DATA				380\	/. 3Ф	460\	/. 3Ф		V. 3Φ	440	V. 3Ф		
Motor Protection							IP23 (ODP)					
Full Load Package Current - Air Cooled (10)	Amps			10	2.7	85	5.3	6	8.7	8	8.6		
Package Power Factor				0.	92	0.	91	0	.91	0.	.92		
Electrical Installation Recommended Supply Cable Size (11)	mm²/Cu (AWG or kcmil))			50/	1/0)	35/	1/0)	35	(1/0)	35	(1/0)		
Neconimenaeu Suppiy Gabie Size (11)	/Ou (/ATTO OF ROTHIN))			30(.,0)	33(., 5)	33	(1/0)	331	(1,0)		

150

150

150

Amps

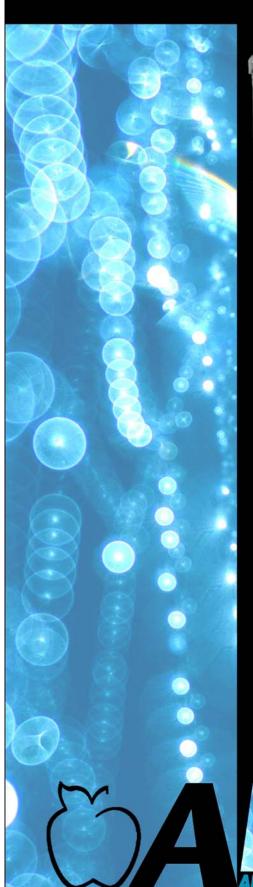
- FAD (Free Air Delivery) is full package performance including all losses. Tested per ISO 1217 : 2009 Annex C
 Maximum pressure at package discharge, value at which compressor will stop when unit operating at maximum target pressure
 At maximum speed and flow for the given package discharge pressure
- Measured at rated capacity and rated pressure

Maximum Recommended Fuse Rating (11)(12)

- Specific power guaranteed in accordance with ISO 1217 : 2009 Annex C
- (6) Measured in free field conditions per ISO 2151 using Hemispherical Method, with + 3 dB(A) tolerance.
- (7) 40% Relative Humidity Inlet Air and maximum speed (For alternate conditions contact IR)
 (9) BSPT or NPT, depending on regional standard
 (10) Maximum current includes 10% additional current due to fouled filters and elements

- (11) 90° C copper cables. Always apply local electrical codes for sizing cables and fusing.
 (12) Fast Acting Class-J, T or Semiconductor type fuse required. Apply local electrical codes for fuse sizing

TWINTOWER, HEATLESS, REGENERATIVE COMPRESSED AIR DRYERS





Model AP-630-FP-AN c/w "Purge Economizer Control\$" and mounted filters

APPL

- Minus 40°C & Lower Pressure Dew Points
- ASME Compliant & Provincially Registered
- 3 Year Switching Valve Warranty on Poppet-Style Valves (up to 2-1/2")
- Standard Models rated to 150 PSIG Higher Pressure Models Available
- Designed and Manufactured in Canada Under APPL's Registered ISO-9001-2008 Quality Assurance Program



3 - Year Switching Valve Warranty

Switching valves are a main wear and tear component on twintower regenerative air dryers. *APPL* dryers employ poppet-style pneumatically actuated switching valves for the tower inlet and purge exhaust functions on dryers up to model AP-850, and in exhaust and blow-down applications on larger models. The valves have brass bodies, stainless steel shafts and springs, and PTFE sealing discs. Pop-up position indicators mounted on top of the actuators provide a quick visual indication of whether the valve is currently in the open or closed position. Maintenance is very rare, but when required, the valve body can remain on the dryer piping, and the operator and main wear components may be removed from the body as a complete assembly for servicing. There are no rubber diaphragms to break down due to water and oil contamination which can occur in systems which are serviced on an infrequent basis. The standard APPL warranty for all other components is 12 months from date of start up or 15 months from date of shipment, whichever comes first. Warranty for these time-proven rugged switching valves is confidently extended to 3 year from date of shipment. See our warranty text.

Additional Quality Construction Features

С	200 PSIG Tower Design Pressure, ASME compliant and	С	Repressurization valve to allow full repressurization
	TSSA registered		prior to tower switching
С	Removable Stainless Steel wedge wire style desiccant	С	Up-flow drying and down-flow depressurization and
	retainers		purging ensures desiccant stability
С	Stainless Steel control solenoid valves	С	NEMA-12 Control panel enclosure
С	5 Micron Control air filter	С	Micro processor programmed for 10 minute time cycle
С	Liquid filled tower pressure gauges		and convertible to 4 minute cycle for lower dew points

Two Models to Choose From

APPL dryers are available in two versions for models AP-100 to AP-850. Each version offers advantages to users having specific operating requirements. The economical "Fixed Purge" version is designed for applications having constant pressure and flow conditions. These models have a fixed purge orifice which is tamper-proof and provides for a pre-determined purge volume during dryer operation. This version also eliminates the requirement for purge check valves, which will reduce maintenance requirements in future years. If the operating pressure or system demand changes significantly, the purge orifice may be replaced to accommodate the new conditions.

The "Adjustable Purge" models are designed for those applications which may see varying pressure or flow conditions, requiring the purge flow to be adjusted frequently. These dryers are provided with a purge flow adjusting valve, and a pressure/flow indicating gauge which allows the user to determine the purge flow level.

Both models are provided with a standard 10 minute time cycle to yield a 40/C or lower pressure dew point at maximum rated conditions. The configuration also allows the user to remove a jumper which will result in operation on a 4 minute time cycle, yielding lower dew point to approximately minus 60/C.

Optional Purge Economizer Control\$

The standard controls for heatless twintower regenerative air dryers feature a fixed 10 minute time cycle which provides for 5 minutes drying on each tower, during which time, the other tower is regenerated through the purging of the desiccant using dry, expanded air from the outlet of the on-line tower. This method of drying/regeneration is referred to as the "pressure swing adsorption" principle. Operation at 100 PSIG will require approximately 15% purge air flow (of the estimated maximum inlet volume to the dryer) through the regenerating tower at all times (with exception to the 45 second tower repressurization period), regardless of your system's actual demand for production air. In most applications, systems will see reduced air demand at times such as second and third shift operations, employee breaks, or for processes and work routines which consume air at irregular intervals. The result is usually over-purging which will yield dew points which are lower than those required to satisfy the application. This over-purging results in higher operating costs due to the additional energy costs required to compress the excess purge air, and also higher wear and tear on the air compressor resulting in higher maintenance costs. The optional APPL "Purge Economizer Controls" system eliminates this excess purge air by maintaining a close outlet dew point tolerance, and halting purge air flow when dew point levels are within an acceptance range. It does this at the end of each repressurization period just prior to normal tower switching. If the on-line tower is yielding a dew point at this time which is below a pre-determined set level, the dryer enters a "Purgeless" condition. The condition is maintained until the dew point yielded by the on-line tower deteriorates to the set level of a precision hygrometer. At that time, tower switching resumes, and the freshly regenerated standby tower is placed on line in the drying position. This system has been time-proven for well over a decade, and not only provides the user with a digital display of the actual outlet dew point, but also logs the hours during which the dryer has been in the "Purgeless" condition. The PLC-based controls additionally calculate the total number of cubic feet of purge air saved since the dryer was commissioned, which may be displayed on the control panel text display window. Based on knowing the cost to compress air, an actual dollar savings can be calculated through the use of "Purge Economizer Controls" versus standard fixed time cycle operation. The text display window provides a continuous display of all dryer operating functions. Unlike many competitive hygrometer-based control systems which do not provide a dew point display, APPL's highly informative system will pay for itself in short order while measuring and logging cost savings information for your routine evaluation. APPL highly recommends Purge Economizer Control\$ for maximum efficiency, especially on larger dryer models where a quick payback will be realized, after which savings can be deducted straight off the bottom line of your compressed air system's annual operating costs.

Capacity - SCFM @ Operating Pressure

From the table below, read across the top to the pressure at which the dryer will operate. From this pressure, follow the vertical column downward until the first SCFM figure exceeding your capacity requirement is found. From this figure, follow the horizontal row to the far left, where the APPL model number suitable for your requirements will be shown.

Model	el Operating Pressure - PSIG				Ove	Overall Dimensions (Inches)		Inlet & Outlet	Weight (LBS)			
	80	80	100	110	120	130	140	Height	Width	Depth	Size	
AP-100	83	91	100	109	117	126	135	71	32	28	1" NPT	250
AP-150	124	137	150	163	176	189	202	74	37	31	1.5" NPT	375
AP-200	165	183	200	217	235	252	270	80	36	31	1.5" NPT	450
AP-280	231	256	280	304	329	353	378	86	41	33	2" NPT	650
AP-380	314	347	380	413	446	479	513	85	45	42	2" NPT	900
AP-630	520	575	630	685	740	795	850	85	57	46	2" NPT	1300
AP-850	702	776	850	924	998	1072	1146	87	60	49	2.5" NPT	1800
AP-1200	991	1095	1200	1305	1409	1514	1618	99	69	60	3" FL.	3500
AP-1600	1321	1461	1600	1739	1879	2018	2158	101	88	62	3" FL.	4200
AP-2000	1651	1826	2000	2174	2349	2523	2697	120	82	62	4" FL.	5000
AP-2800	2312	2556	2800	3044	3288	3532	3776	118	104	48	4" FL.	6500
AP-3800	3137	3469	3800	4131	4463	4794	5125	120	141	62	6" FL.	9000
PURGE AIR CONSUMPTION	18.8%	16.7%	15%	13.8%	12.8%	11.9%	11.1%				SUBJECT TO (
	FIGURE SH	FIGURE SHOWN REPRESENTS THE PORTION OF THE DRYER INLET VOLUME CONSUMED						WITHOUT NOTICE. CONTACT APPL FOR DIMENSIONAL DRAWING.				

Note: Select Model and use suffix "-FP" for Fixed Purge models, and suffix "-AP" for Adjustable Purge models.

Optional Equipment and Features

OPTION	FUNCTION AND BENEFITS				
PURGE ECONOMIZER CONTROL\$	Reduce operating costs by reducing purge flow, wear and tear on air compressor and dryer switching valves. Provides user with actual operating performance of dryer and saving statistics.				
Oil Coalescing Prefilter with Auto Drain	Mandatory with all systems to removal oil aerosols and contaminants before air dryer.				
Particulate AfterFilter	Required to remove desiccant fines and other contaminants at dryer outlet.				
Mounting and Pre-Piping of Filters	Reduces installation requirements and ensures proper piping of filters.				
3-Valve Bypass	Allows bypass of dryer or filters. Optionally tandem filters with isolation valves allow maintenance during on-line service.				
"Tower Switching Failure" Alarm	Alerts the user to malfunctions of switching valves, exhaust restrictions (mufflers) or switching control failure.				
"High Humidity" Alarm	Alerts user to improper performance. This option is most economical if packaged with "Purge Economizer Control\$".				
"Low Inlet or Outlet" Pressure Alarm	Available to indicate low air supply due to excess system demand, or possible high pressure drop across dryer/filters.				
Copper-free Construction	Sour gas applications to prevent corrosion of yellow metals.				
Explosion-proof Controls	Suitable for hazardous locations. Contact APPL with specific conditions.				
High Pressure Models	For pressures to 1500 PSIG, special construction is offered.				
Colour Change Moisture Indicator	Provides visual indication of high humidity condition.				
Other customized features are available to suit specific applications upon request.					

E-mail: info@airpowerproducts.com



191 Shearson Crescent, Cambridge, Ontario N1T 1J5

Tel: 519-622-2034



DH Series

15 kW-110 kW Oil-Less Rotary Screw Compressors







CompAir DH—Guaranteed 100% air purity.

With over 90 years of experience, CompAir's oil free compressors have helped industries across the globe to meet and exceed quality and production objectives in food and beverage, pharmaceutical, electronic, healthcare and power generation applications.

The DH from CompAir sets the standards for air purity. These water-injected screw compressors are available in water-cooled and air-cooled versions and are certified ISO 8573-1 Class Zero (2010) and silicone free, making them the **ultimate choice** with simply no risk of oil contamination. Offering not only 100% pure oil-free air but also improved energy efficiency, these compressors are made to meet the precise needs of a diverse range of industries.





Why Oil-Less?

When you choose an oil-less DH series compressor from CompAir, you get a clean, reliable and efficient air supply that benefits both your business and your bottom line!

The ISO 8573-1 compressed air standard was revised in 2001 to address the requirements of these critical applications where air purity is vital. Along with a comprehensive methodology for measurement, a new stringent quality standard was born in ISO 8573-1 CLASS 0 — adding further weight to the five existing purity classes.

The ISO 8573-1 Class 0 and Silicone Free Certified DH Compressors Offer The Following Benefits:

- 100% silicone-free, guaranteed
- Specifically designed for use in pure-air critical applications such as the automotive industry
- Avoids contaminations and provides the highest air quality standards
- Independently tested and certified

Why Silicone-Free?

Silicone contamination in compressed air systems will cause problems across a wide range of industries, not least of all the automotive industry where a high quality finish is essential.

Blisters, cracking, craters and a loss of adhesion are all symptoms of silicone contamination and will result in costly product spoilage and re-working in addition to production downtime.

Class	Concentration total oil (aerosol, liquid, vapour) mg/m3
0	As specified by the equipment user or supplier and more stringent than class 1
1	≤ 0.01
2	≤ 0.1
3	≤1
4	≤ 5



CompAir DH—Guaranteed 100% air purity.

The DH series offers market-leading energy efficiency while using no oil anywhere in the compressor—thus helping to demonstrate your 'green' initiatives and increasing your market appeal.

CompAir DH Series: Your Resource for Cost Savings

The DH's unique water-injected, variable speed design achieves lower speeds combined with lower operating temperatures—resulting in high efficiency and reduced component wear.

- Water injected into the compression element provides lubrication, sealing and cooling.
- The superior cooling properties of water allow the compressor to operate at a low temperature providing near isothermal compression, low power consumption and class leading efficiency levels.
- A reverse osmosis membrane cartridge filters the injection water entering the compressor; as a result the water is always maintained at a high purity level.





Our oil-free solutions are proven in thousands of applications across the world, providing high quality, low cost air to manufacturers, processors and operators in a diverse range of industries including:

- Food and Beverage
- Pharmaceuticals

- Chemicals
- Automotive
- Electronics
- Engineering & Technology

Single-stage, water-injected, direct-driven compression element that's built to last.



CompAir's DH Series Compressors feature durable, twin gate rotors

Designed for Water Injection

- Bronze single 6 flute main rotor
- Carbon fiber composite 11-tooth gate rotors deliver 12 pulses of air per revolution compared with 6 pulses for a convention screw
- No metal to metal mating parts and low pulsation levels ensure low vibration and noise levels
- Sealed grease-lubricated main rotor bearings and water-lubricated gate rotor bearings extend rotor and bearing life
- Low temperature rise eliminates the need for a final air cooler, which reduces pressure losses

Balanced Bearing Loads

Compression Loads are Balanced Resulting in Low Bearing Loads and High Reliability

 Low bearing loads and low speeds mean sealed-for-life bearings can be used, requiring no oil lubrication

Axial loads act on both sides of the main rotor.



Radial loads act on both the top and underside of the main rotor.



Robust Design and Oil-Free Construction

- High efficiency IP55 TEFC motor ensures superior performance in the most rugged conditions
- Fully packaged and silenced enclosure reduces noise and simplifies installation
- Proven variable speed technology reduces energy costs and saves you money
- Comprehensive controller ensures safe and reliable operation
- Stainless steel separator vessel effectively separates air/water mixture from the compression element

 Design eliminates the need for a gearbox. No gearbox means no need for oil lubrication and zero chance of contamination High Efficiency Water Purification System Reverse Osmosis (RO) membrane filtration system provides high quality water and reduces water requirements and operation costs



- Ensures reliable and trouble free operation
- Connects to potable water supply with pressure between 32 & 87 psig
- Injection water is drained to low level point by opening water drain valve and refilled with purified water from the tank
- Water consumption is 4–10 gallons per day from potable water inlet supply

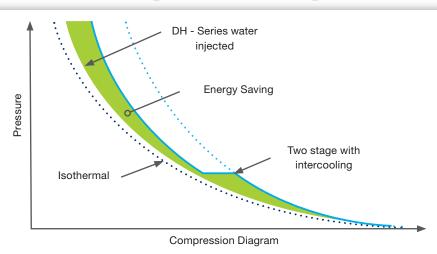
Maximum efficiency at any level of demand cuts energy costs and saves money.

- Excellent efficiency
- High reliability
- Low cost of ownership

Perfect Response to Your Individual Air Demand

Variable speed compressors from CompAir can efficiently and reliably handle the varying air demand. The right variable speed compressor in the right application delivers significant energy savings and a stable air supply at constant pressure.

Energy Savings . . .



Water injection means lower temperatures, and lower temperatures mean more efficient compression

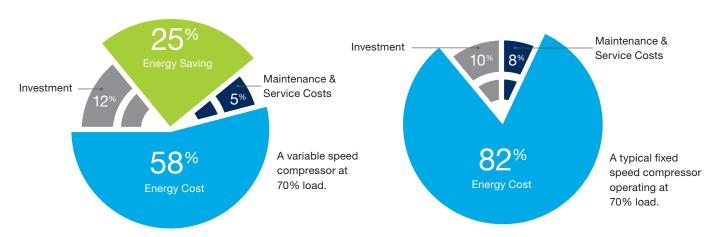
Variable speed technology offers maximum efficiency, cuts energy and Saves money.

Reduce the Cost of Ownership and Minimize Your Energy Consumption

The largest cost component of a compressor during its lifetime is the power required to operate it.



Variable Speed vs. Fixed Speed



Using a variable speed compressor can easily **save 25% energy** by using just the right amount of energy required to do the job and no more.



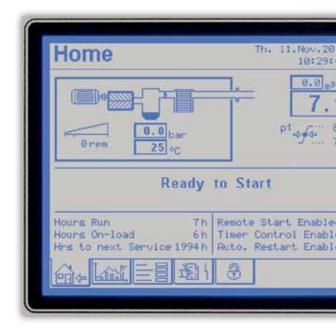
Comprehensive Compressor Controller

The multilingual Delcos XL touch screen control system ensures safe and reliable operation and protects your investment by continuously monitoring the operational parameters—essential for reducing your operating costs.

Features & Functions

- Compressor Status
- Line/Network Pressure
- Motor Speed
- On Load Hours/Total Hours Run
- Real Time Clock Allows Pre-Setting of Compressor Starting/Stopping
- Second Pressure Setting

- Integrated Cooling and Dryer Control
- Fault History Log for In-Depth Analysis
- Remote Control via Programmable Inputs
- Auto Restart After Power Failure
- Optional Base Load Sequencing





CompAir Compressors Control Themselves

Service

Regular maintenance and service of CompAir products is critical to the performance and longevity of the equipment. Only CompAir can provide:

- The assurance that the investment will provide a lifetime of productivity.
- Aftermarket parts and services that are engineered for use in CompAir products.
- Peace of mind by turning to one supplier and one source for all aftermarket needs.

CompAir's extensive network of authorized independent distributors is your source for all your aftermarket and service needs. Our distributors have the capability to handle all customer service, service and technical support needs.

Warranty

CompAir's unique engineering philosophy ensures long-lasting, reliable equipment. Our standard warranty ensures that you've got peace of mind when it comes to your system's operation. For added protection, CompAir's purchased extended warranty delivers one of the most comprehensive plans in the industry with 5-year programs available simply by registering the machine at startup and use of CompAir warranty kits.



If any DH unit doesn't perform as stated, we will buy the unit back within the first 12 months after purchase.





A better approach

CompAir DH Series vs. Traditiona	CompAir DH Series vs. Traditional Oil-Free Technology									
	CompAir DH	Traditional Oil-Free								
Oil	No ✓	Yes								
Speed	Up to 3500 rpm ✓	6000-25000 rpm								
Compression Temperature	140° F √	Up to 392° F								
Compression Elements	1 ✓	2								
Number of Gears	0 🗸	5–7								
Number of Bearings	7 ✓	More than 15								
Number of Seals	2 ✓	More than 15								

The DH Series—for Total Peace of Mind

- Established and proven single-stage compression element
- Significantly fewer moving parts means fewer wear items
- Simplified construction with no interstage or final air coolers
- Lower speeds and balanced bearing loads extend the compression element service life
- Dependable direct-drive system
- Cooler operating temperatures reduce component wear
- No oil or oil laden parts to dispose of, saving time and expense





CompAir DH - Technical Data

Variable Speed, Air And Water Cooled

	Cooling	Motor Rating		Pressure sig)		Delivered M)	Dimensions L x W x H	Noise Level (70% load)	Weight
Model	Method	(kW)	Min.	Max.	Min.*	Max.*	(Inches)	dB(A)**	(lbs)
D15H RS	Air	15	73	145	11.3	82.64	53 x 35 x 63	67	1515
Water	Water	13	73	143	11.5	02.04	33 x 33 x 03	66	1409
D22H RS	Air	00	73	145	24	101.04	53 x 35 x 63	67	1556
DZZH KO	RS 22 Water	73	145	24	121.84	33 X 33 X 03	66	1451	
D37H RS	Air	37	73	145	38.5	242.61	68 x 36 x 65	71	2194
טארו אס	Water	31	73	145	36.5	242.01		60	1973
D50H RS	Air	50	73	4.45	40.44	000.07	05 50 70		3461
טטטח אס	Water	50	73	145	43.44	266.27	85 x 56 x 78	75	3285
D75H RS	Air	75	73	145	65.69	400.47	85 x 56 x 78	77	4167
סט חמיט	Water	75	73	145	00.09	419.1	85 X 56 X 78	11	3990
D110H RS	Water	110	73	145	111.95	651.91	85 x 56 x 78	72	4850

^{*} Data measured and stated in accordance with ISO 1217 Edition 4, Annex C & E at the following conditions: Air Intake Pressure 1 bar a/14.5 psi; Air Intake Temperature 20° C/68° F; Humidity 0 % (dry)

Lean on a trusted source - CompAir.

^{**} Measured in free field conditions in accordance with ISO 2151, tolerance \pm 3 dB (A)

Innovative Products & Services

Trust CompAir to Supply Intelligent Compressed Air Solutions

Genuine Spare Parts

Enjoy complete peace of mind with CompAir. Genuine CompAir spare parts and lubricants ensure that compressed air plant reliability and efficiency is maintained at the highest standards. CompAir spare parts and lubricants are distinguished by the following characteristics:

- Long service life, even under harshest conditions
- Minimal losses contributing to energy savings
- High reliability improves plant "up time"
- Products manufactured within the strictest **Quality Assurance Systems**







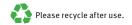


www.CompAir.com

www.CompAir.com/contact.asp 866-606-6131

CompAir USA 1301 North Euclid Avenue Princeton, IL 61356 United States of America

CompAir Canada 2390 South Service Road West Oakville, Ontario L6L 5M9



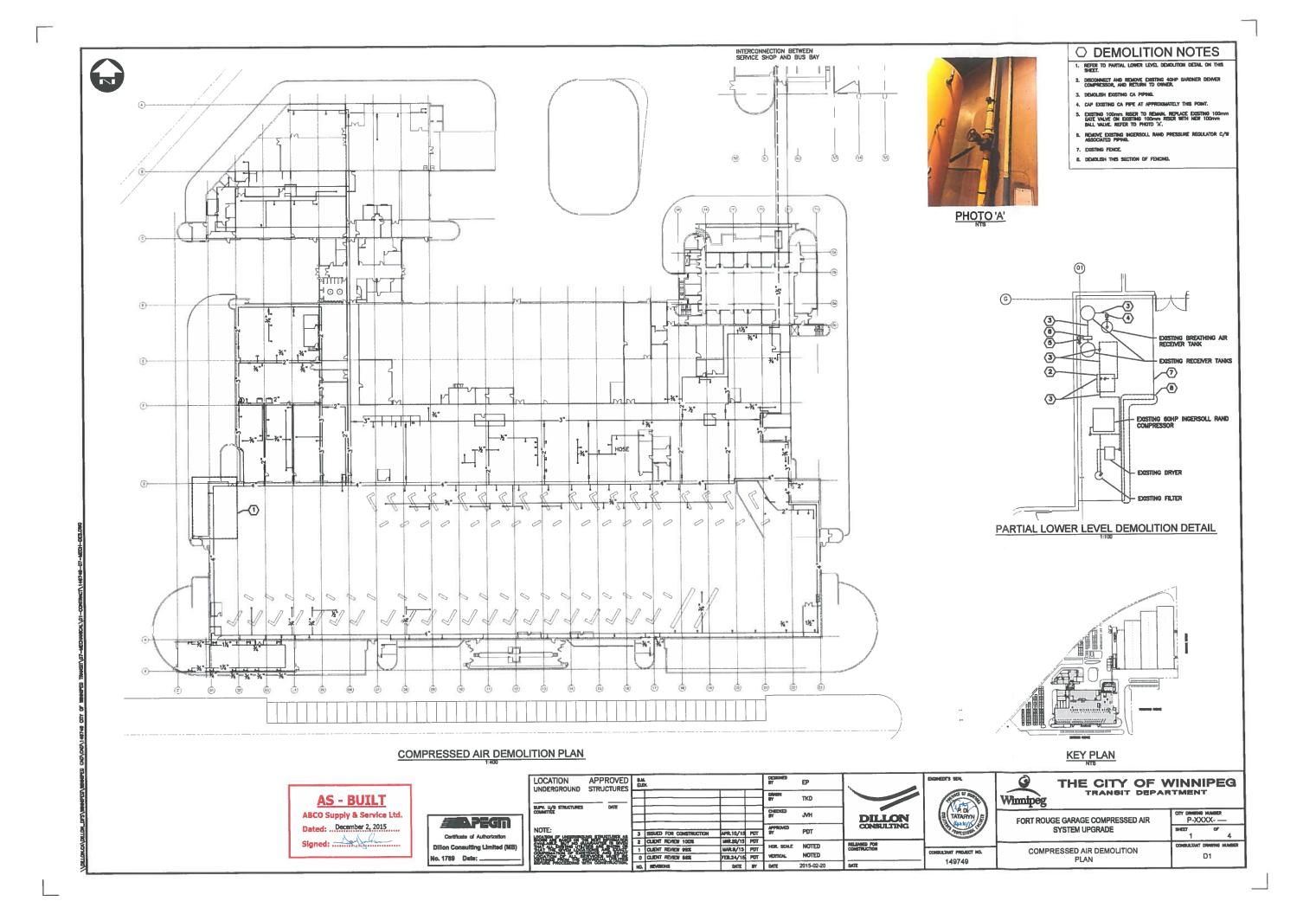


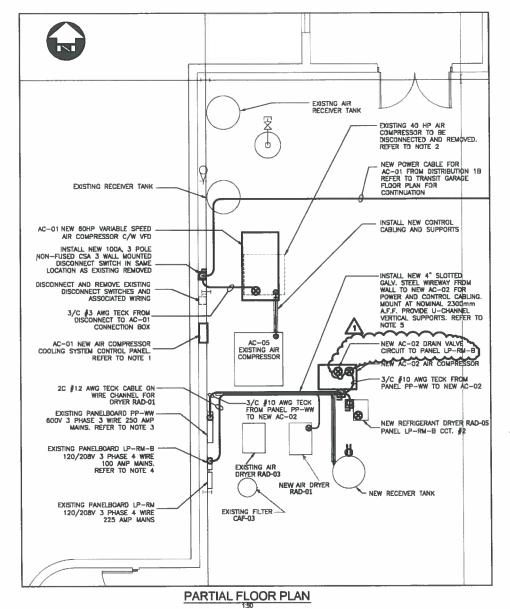


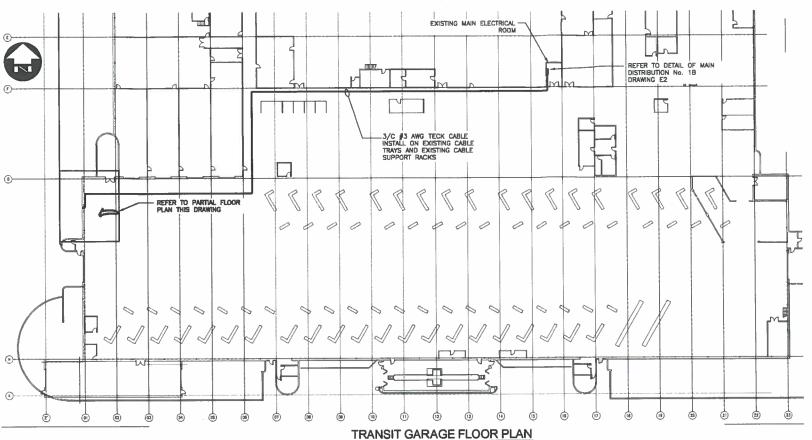








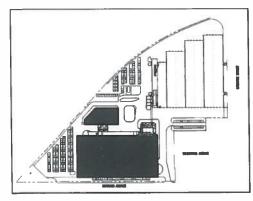




NOTES

- 1. PROVIDE 120V 19 POWER FROM NEW TANDEM (DUPLES) 15A CINCUIT EMBAGE IN PANEL LP—IN.
- 2. EMSTING 40 HP ART COMPRESSOR ELECTRICAL POWER TO BE CONCENSED AND REMOVED, ASSOCIATED DESCONDED SHEET AND EMPORED AND EMPORED PROPERTY OF THE PROPERTY OF DESCRIPTION AND THE PROPERTY OF T

- 5. COORDINATE CABLE SUPPORT STRUCTURES WITH MECHANICAL EQUIPMENT AND PIPPING TRADES.



KEY PLAN

AS - BUILT ABCO Supply & Service Ltd. Dated: December 2, 2015

Signed:

APEGN Cartificate of Authorization Dillon Consulting Limited (MB) No. 1789 Date: APR. 10/15

	LOCATION APPROVED UNDERGROUND STRUCTURES	8.H 61.E	v.			SESIONED BY	SCK	N.
	SUPV. U/O STRUCTURES DATE					Brancon By	SCK	
	COMMITTEE					SHEDIED BY	BLM	DILL
ĺ	NOTE:	-	ESUED FOR ADDENDUM No.1	APR.24/15		APPROVED BY	BLM	CONSUL
		-	ISSUED FOR CONSTRUCTION CLIENT REVIEW 100%	APR.10/15 MAR.20/15	SCK	HOR. SCALE	NOTED	HELEMED POR CONSTRUCTION
	SPACE REAL PROPERTY OF THE PERSON OF THE PER	A	CLIENT REVIEW 99%	WAR.9/15	SCK	VERTICAL.		
	BEFORE PROCEEDING WITH CONSTRUCTION.	160.	PRIVISIONS	DATE	EY	EATE	2015-02-20	DATE

Winnipeg

DRAWING ORIGINALLY

SIGNED BY B.L. MOORE DATED APR. 10, 2015

HOLINE PROJECT NO.

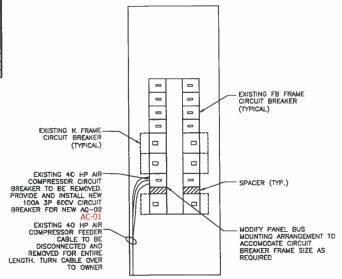
149749

THE CITY OF WINNIPEG

	FORT ROUGE GARAGE COMPRESSED AIR	CITY DRAWING HUMBER P-XXXX					
	SYSTEM UPGRADE	EMEET 1	or 2				
7		CONSULTRACT	DIVUING HUNGER				
	ELECTRICAL - FLOOR PLANS	1	E1				

	MOTOR - EQUIPMENT SCHEDULE																				
MOTOR / EQUIPMENT					STARTER					POWER POWER				DETAIL DWG.	REMARKS						
EQUIP. NO.	DESCRIPTION	EQUIP. LOAD	VOLT/IB	SIZE	TYPE	MAN.	MAG.	8/8	PL	HOA	OVERCURRENT DEVICE	LOCATION	PANEL	CCT		FEEDER	CAPACITOR SIZE	DISCONNECT TYPE	WIRE DIAGRAM		
AC-01 02	AIR COMPRESSOR	15 HP	600/3				\neg				30A-3P	G-02	PP-WW	8,10,12	3C	10 TECK		30A-3P CSA 3		PACKAGE UNIT	
AC-02 01	AIR COMPRESSOR	60 HP	600/3	-	-	-	- 1				100A-3P	G-02	1B	10	3C	3 TECK		100A-3P CSA 3		DIRECT CONNECTION TO UNIT C/W PACKAGE VFD	
0-1	DRYER	2.54 kW	600/3								15A-3P	G-02	PP-WW			12 TECK		INTERNAL		DIRECT CONNECTION TO UNIT	
0-2 5	DRYER	1/2 HP	120/1								15A-1P	G-20	LP-RM-B	CCT 2	2 12	AWG 21C		INTERNAL		DIRECT CONNECTION TO UNIT	

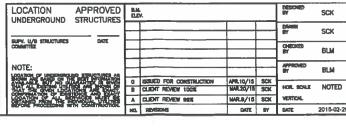
-DEVICE LOCATED IN STARTER -DEVICE LOCATED IN FIELD ADJACENT TO EQUIPMENT.



DISTRIBUTION 1B MODIFICATIONS
NT.8.









SCK SCK

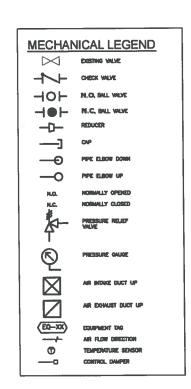
RELEASED FOR CONSTRUCTION

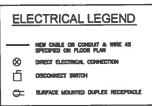
Winnipeg THE CITY OF V					
FORT ROUGE GARAGE COMPRESSED AIR	P-XXXX				
SYSTEM UPGRADE	2 0F				
	CONSULTANT DRAWING HUMBER				
ELECTRICAL - SCHEDULES AND DETAILS	E2				

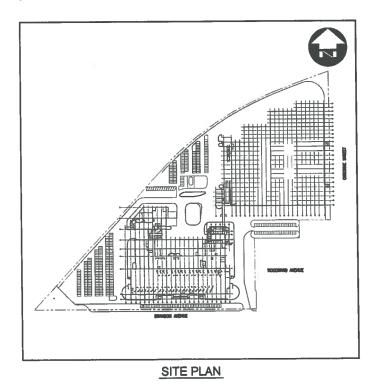


THE CITY OF WINNIPEG TRANSIT DEPARTMENT

FORT ROUGE GARAGE COMPRESSED AIR SYSTEM UPGRADE







DILLON PROJECT: 149749 DATE: APRIL 10, 2015

	DRAWING INDEX
D W	DESCRIPTION
G.	MECHANICAL
	WEOTANIOAL
D1	COMPRESSED AIR DEMOLITION PLAN
M1	COMPRESSED AIR LAYOUT PLAN, SERVICE SHOP
M2	COMPRESSED AIR LAYOUT PLAN, BUS BAY
М3	COMPRESSED AIR PIPING SCHEMATIC, DETAILS, EQUIPMENT SCHEDULE & SEQUENCE OF OPERATION
	ELECTRICAL
E1	FLOOR PLANS
E2	SCHEDULES AND DETAILS
\vdash	

AS - BUILT

ABCO Supply & Service Ltd.

Dated: December 2, 2015

Signed:



Ingersoll Rand

NL Module

Less Energy Use, Longer Life

Ingersoll Rand's NL Module coalescing filters provide true oil-free compressed air with minimal pressure drop of 0.5 psid for long-term cost savings. Superior air quality is achieved by effectively removing damaging oil and water aerosols before they flow through air system piping, process equipment and pneumatic valves and tools.

Conventional filters used to achieve similar air quality typically operate at a pressure drop 6 psid higher than the NL Module, and have a far shorter service life.

These maintenance-free filters feature a high-quality design that extends element life to 10 to 15 years and helps eliminate system downtime by reducing the effects of a catastrophic failure of the compressor's air/oil separator.

Once the pressure differential reaches 3 psid or greater, it is time to change the element. This requires depressurization of the vessel as well as lid and element removal.

(IR) Ingersoll Rand

Benefits

- High-efficiency particulate filtration to 0.5 ppm
 - > 3 microns at 100%
 - 0.1 to 3 microns at 99.98%
- · Effective oil removal
 - -2 ppm in = 0.01 ppm out
 - -10 ppm in = 0.05 ppm out
- Low pressure drop resulting in low energy costs

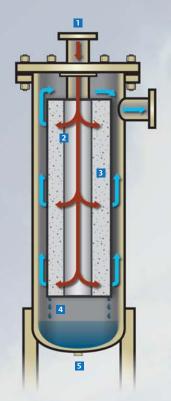
- Extended element life 10 -15 years
- Effective on all common mineral and synthetic lubricants
- Standard differential pressure gauge indicates element condition
- · Virtually maintenance-free



NL Modules

How Coalescing Filters Work

Air contaminated with mineral or synthetic oil and water aerosols enters the NL Module housing (1) and flows horizontally through a deep filter bed (2). Sub-micron particles collect on individual bed fibers and coalesce to form droplets (3). As the droplets move through the filter bed, they become larger and their resulting weight forces them to drop to the bottom of the housing (4). Low internal velocity prevents oil re-entrainment, while the large surface area keeps the pressure drop very low over the life of the element. The long residence time through the deep filter bed ensures the highest coalescing efficiency. Automatic or manual drains can be used to discharge lubricant and water that accumulate in the bottom of the housing (5). Compressed air and drain hookups are all that's required to integrate an NL Module into your compressed air system — no electricity is used.



Depth of Bed Filtration

Deep-bed filtration provides more surface area for the highest coalescing efficiency

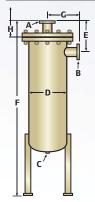


Typical cross-section of an NL Module



Typical cross-section of a standard filter

Technical Per	formance										
Name	Model Number	scfm Flow@100 psig	Connection Size (A) (B)	Drain Port (C)	Shippin Housing & Element	g Weight Ib Replacement Element	(D)	Di (E)	mensions in (F)	(G)	(H)
NLM125	F210NG	125	2" MPT	1" FPT	455	20	14	14.5	42.3	13	21
NLM250	F430NG	250	2" MPT	1" FPT	455	25	14	14.4	42.3	13	25
NLM500	F850NG	500	3" MPT	1" FPT	520	35	14	14.4	68.3	13	37
NLM800	F1360NG	800	3" MPT	1" FPT	530	60	14	14.5	68.3	13	51
NLM1100	F1870NG	1,100	3" MPT	1" FPT	660	70	16	15.5	72.3	14	57
NLM1500	F2550NG	1,500	4" FLG	1" FPT	775	100	18	15.6	72.4	15	57
NLM1900	F3220NG	1,900	4" FLG	1" FPT	1,225	120	24	16.9	75.8	18	59
NLM2400	F4070NG	2,400	4" FLG	1" FPT	1,245	140	24	16.9	75.8	18	59
NLM3000	F5100NG	3,000	4" FLG	1" FPT	1,385	160	24	16.9	88.8	18	69
NLM4500	F7600NG	4,500	6" FLG	1.5" FLG	1,770	250	24	18	153	18	118
NLM6000	F10200NG	6,000	8" FLG	2" FLG	2,460	350	30	18	155	21	118
NLM8000	F13600NG	8,000	8" FLG	2" FLG	2,850	375	30	19	181	21	142
NLM10000	F17000NG	10,000	10" FLG	2" FLG	4,500	475	30	21	211	25.75	173



NL Module Dimensions Please refer to the table abov

Please refer to the table above to find dimensions for each NI model

Annual Savings From 6 psig Reduction										
kW	Air Comp	ressor Ho	orse Power							
Cost	50	100	200							
\$0.06	\$274	\$548	\$1,096							
0.08	365	730	1,460							
0.10	457	913	1,826							

Savings calculations based on (2) 8-hour shifts/day, 5 days/week, 51 weeks/year = 4,080 hours



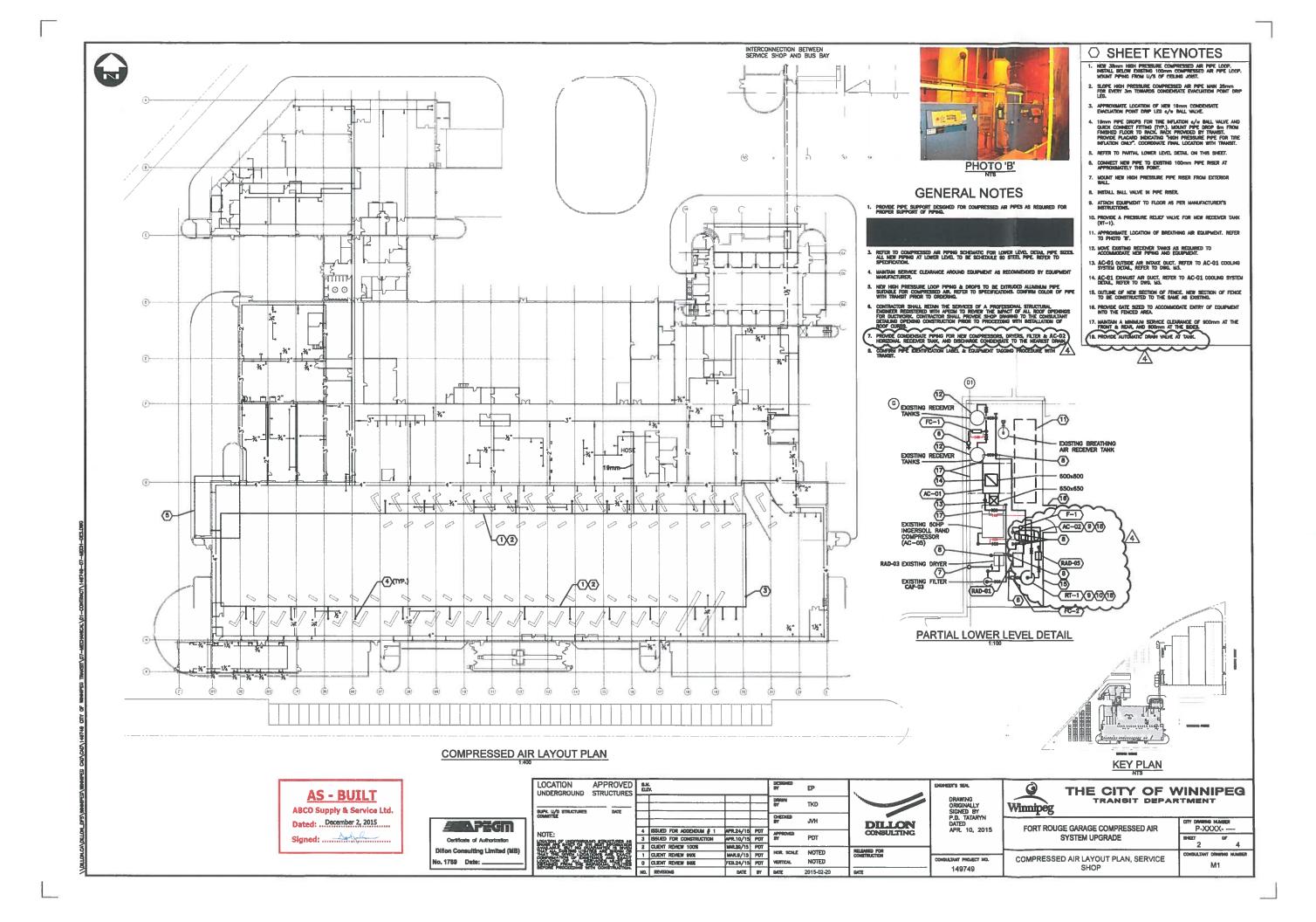


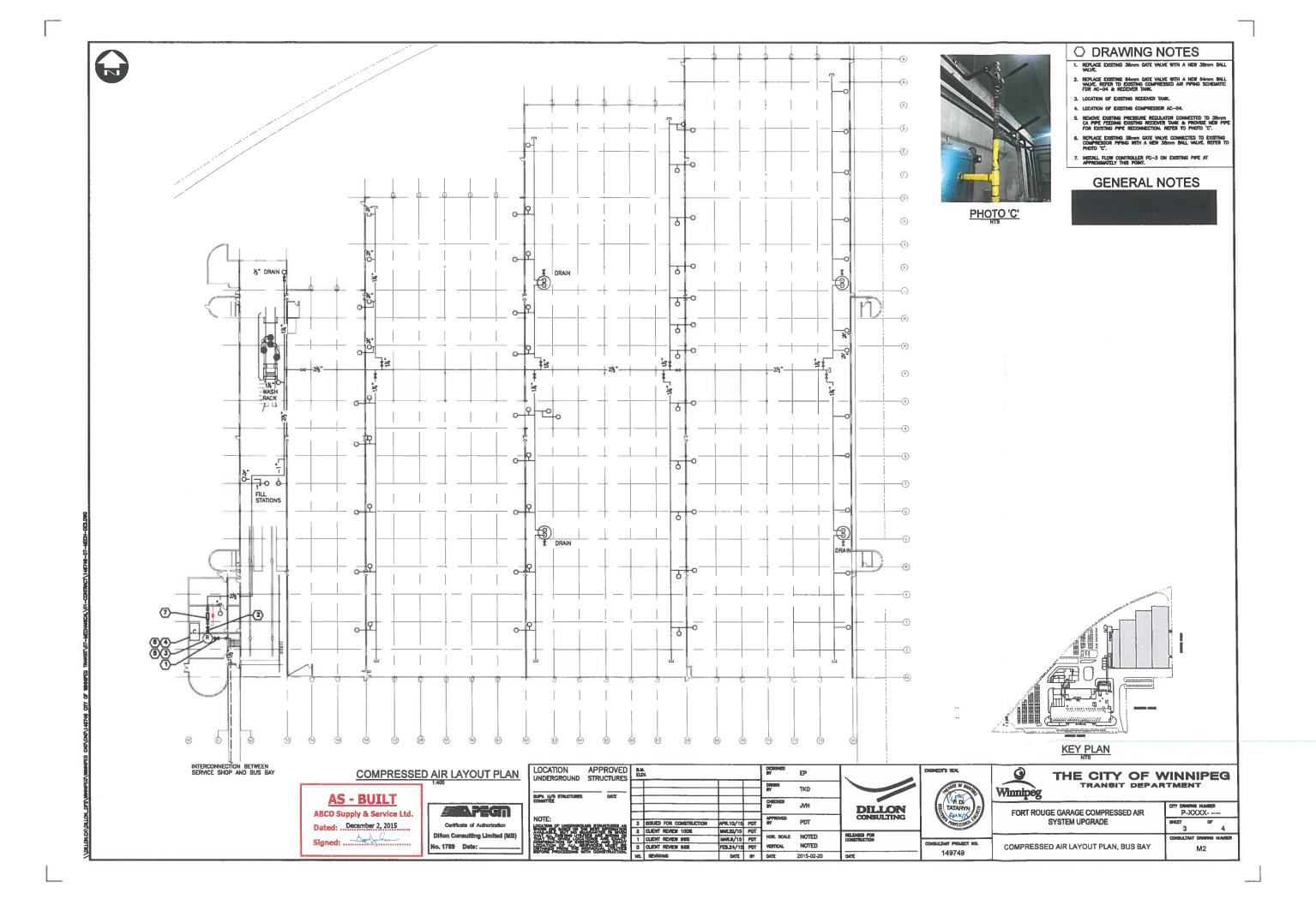
Industrial Technologies

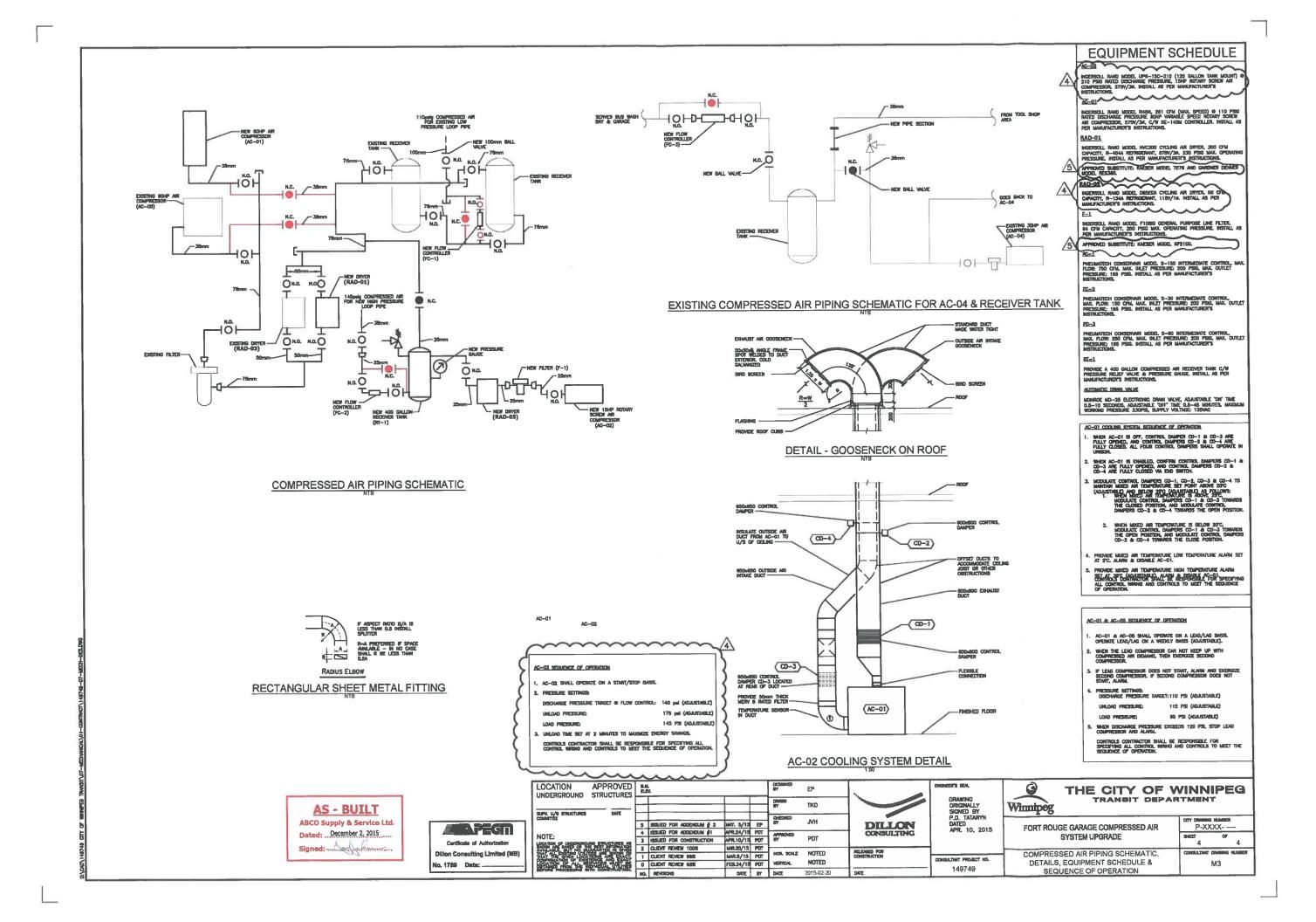
P.O. Box 1840 800-D Beaty Street Davidson, NC 28036 (704) 655-5000 (704) 655-4039 Fax Ingersoll Rand compressors are not designed, intended or approved for breathing air applications. Ingersoll Rand does not approve specialized equipment for breathing air applications and assumes no responsibility or liability for compressors used for breathing air service.

Nothing contained on these pages is intended to extend any warranty or representation, expressed or implied, regarding the product described herein. Any such warranties or other terms and conditions of sale of products shall be in accordance with Ingersoll Rand's standard terms and conditions of sale for such products, which are available upon request.

Product improvement is a continuing goal at Ingersoll Rand. Designs and specifications are subject to change without notice or obligation.







Nirvana





Nirvana Cycling Refrigerated Dryers

Ingersoll Rand's Nirvana Cycling Refrigerated Dryer provides reliability like no other dryer in its class: reliability that you can count on to protect your air system day in and day out; reliability built in by design.



The Nirvana is a genuine cycling dryer, incorporating innovative features that make it not only the most reliable, but the most energy efficient, dryer in its class.

The key element central to the Nirvana's reliability and energy efficiency is its distinct, patented heat exchanger design. Providing high heat transfer with low pressure drop because of uniquely short flow length, the Nirvana heat exchanger presents a flow area three to five times that of an equivalent copper tubing exchanger, and it is self-cleaning, which greatly reduces the potential for fouling.

Reliability Is Our Design

High Heat Transfer at Work

The superior performance of the Nirvana dryer can be attributed to the effective heat transfer capabilities of the exchanger design, utilized throughout the package for each stage of heat removal. The dryer design includes a pre-cooling system with stainless steel heat exchangers to properly condition the air for drying. A re-heater section of the dryer's air side also uses these high performance heat exchangers to prepare the dried compressed air for re-entry into the air system. This prevents pipe sweating and readies the compressed air for use in process applications.

Corrosion-resistant 304L stainless

steel is used in all the Nirvana dryer's

heat exchangers, providing durability

in environments unsuitable for copper

or other metals.

An innovative corrugated and folded stainless steel panel is stacked inside two stainless steel shells, then welded together to form a unitized heat exchanger. This design ensures reliability through the elimination of dissimilar metals or tube in tube chaffing, which is a common cause for heat exchanger leaks and failures.

100% stainless steel construction permits optimal heat transfer, resulting in a consistent pressure dew point.

Nirvana dryer's heat exchangers combine a high heat transfer coefficient with unmatched low pressure drop.

2 Nirvana Refrigerated Dryer Nirvana Refrigerated Dryer

Energy-Efficient Design

An advanced cycling dryer, the Nirvana provides significant savings because it does not waste energy costs through continuous operation of its refrigeration system, as do traditional non-cycling dryers. Each component of the Nirvana has been designed to provide not only durability, but maximum energy efficiency. This combination of system design and individual component design adds up to the most energy efficient cycling refrigerated dryer available.

Factors contributing to the Nirvana's energy efficiency:

- Design includes a refrigeration system combined with a thermal mass that efficiently stores cold energy.
- Refrigeration compressor cycles off during periods of reduced load, while dryer continues to remove moisture and contaminants from the compressed air.
- Unique centrifugal separator design provides effective moisture separation maintaining consistent dew point, regardless of partial load operation.

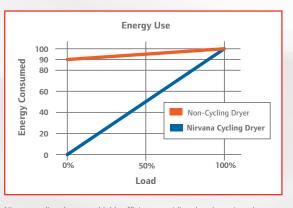
Electronic No Air Loss (ENL) Drain

Nirvana cycling dryers up to 2,400 SCFM are equipped with ENL condensate drains, which eliminate venting of compressed air to the atmosphere and are more reliable than traditional float- or solenoid-type drains.

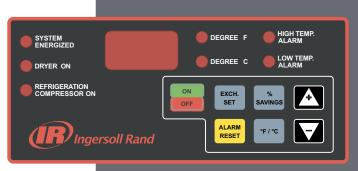


Best in Class Design

The Nirvana cycling dryer uses centrifugal separation to remove moisture from the chilled air. Separation occurs at the coldest point in the system by means of centrifugal acceleration, then expands into an area of low velocity containing a sump, and change of air flow direction. The result is highly-efficient moisture removal, providing exceptionally dry, clean air under all operating conditions.



Nirvana cycling dryers are highly efficient, providing dry, clean air under any operating conditions.



Microprocessor LED Controller up to NVC800 features a NEMA 1 package protection standard with an optional NEMA 4 rating.

Microprocessor Controller

The easy-to-use controller automatically manages dryer operation for optimum air treatment and for maximum energy efficiency.

- Simple and easily read interface with LED indication
- Digital display of chiller temperature available at a glance to ensure optimal dryer performance
- Percent of energy savings available at the touch of a button
- Automatic dryer restart in the event of a sudden loss of power
- Adjustable chiller temperature set point to further reduce energy expense
 - Microprocessor control constantly monitors dryer functions including thermal mass temperature and provide alarms to minimize dryer downtime



Large Capacity from 3,200 to 8,000 SCFM

Modular design for exceptional reliability and energy efficiency

Nirvana large capacity cycling refrigerated compressed air dryers consist of multiple, independent air treatment modules, each with its own controls and refrigeration system, sharing a central thermal mass cold storage medium. Compressed air is cooled as it passes through the large capacity Nirvana dryer, causing moisture and contaminants to condense so they can be removed from the air in multiple high-efficiency centrifugal separators.

The moisture and contaminants are then automatically discharged from the system through pneumatic no air loss condensate drains to eliminate wasting valuable compressed air.

Clean, dry compressed air is warmed as it exits the dryer to prevent pipe sweating and to condition it for application. The refrigeration system in each module automatically cycles as needed to maintain cold stored energy, while active circulation of the thermal mass cold storage media contributes to the dryer's overall efficiency.



Expandable Large Capacity Dryers feature a modular design and individual controllers that provide redundancy for models starting at 3,250 SCFM.

Redundant Design for Reliability

The multiple air treatment modules of each Nirvana large capacity dryer are integrated to make a single dryer with air treatment capacities from 3,250 to 8,000 SCFM. (Larger dryer sizes upon request.) Modules share a single inlet header and a single outlet header, each with dual connection capability for installation versatility. Each module includes 304L stainless steel heat exchangers and a high-efficiency centrifugal separator.

Because Nirvana large capacity dryers employ a shared, continuously-circulating thermal mass cold storage medium and integrated drying modules with individual electrical disconnects, the dryer can continue to operate and provide compressed air treatment even if a module must be isolated for maintenance or repair.

Dryer operation is coordinated through digital controls, fully adjustable to meet application requirements. The operation of individual modules can also be adjusted to make optimum use of the benefits associated with cycling refrigeration systems.





Controller for NVC1000 and larger

Microprocessor Controller

- Backlit LCD with integrated keypad allows viewing of dryer parameters regardless of environmental lighting
- **MODBUS** compatible via **RS232/485-remote** communication - ready connection port
- Remote alarm contact available and remote start/stop ready
- Advanced diagnostic memory with failure code storage
- Percentage of energy savings available at the touch of a button

How They Work

efficiently and effectively removes moisture for all applications even under partial load conditions. **Submerged Evaporator Thermal Mass Storage Tank** is fully insulated to maintain Stainless Steel Pre-cooler/Re-heater assures that a consistently cold propylene glycol-water mixture for continuous pressure dew point compressed air is properly conditioned for cooling control. The thermal tank temperature is while simultaneously reducing the energy costs of removing the initial heat load. Clean, dry air leaving monitored by the controller permitting the refrigerant compressor to cycle off during low the dryer is reheated to maintain low relative humidity in the process air, further protecting the heat loads resulting in energy savings. compressed air system. Air Chiller uses stainless steel corrugated heat exchangers to provide efficient heat transfer between the compressed air and the dryer's **Dry Air Exits** Moist Air Enters System cooling thermal mass, assuring a consistent and continuous 38°F/3°C pressure dew point. Filter Dryer Thermal Expansion Valve

Refrigeration System employs a reliable, time-proven hermetic reciprocating compressor.

Thermal Mass Cooling System circulates the thermal mass fluid to provide a continuous cold medium for heat transfer. Compressed Air Side System pre-cools the inlet air, chills the air to 38°F/3°C, removes moisture through the centrifugal separator and is re-heated for process use.

Centrifugal Air/Moisture Separator

8 Nirvana Refrigerated Dryer Nirvana Refrigerated Dryer

Global Reach Unsurpassed Local Customer Support

Ingersoll Rand provides its products and services directly or through distributors to customers in close to 200 countries. We focus on providing innovation to increase your productivity and profitability. Expect more with Ingersoll Rand. We are your total solutions provider.

Long-term Value



There is more to value than simply price.

The commitment of many thousands of dedicated compressed air specialists, either directly employed or members of a select market channel partnership, mean that friendly Ingersoll Rand support is close at hand. In addition to parts availability, qualified on-site service is available globally.



Preventative Maintenance and Warranty



Factory training and certified Ingersoll Rand technicians can protect your investment by providing high-quality preventative maintenance. In addition, we can offer a comprehensive seven-year parts and labor warranty.

Replacement Parts Made Easy

Ensure that you have all the right parts on hand with our simplified ordering. Ingersoll Rand's reputation for dryer parts availability is second to none.



The best overall value is getting the most out of your investment. Ingersoll Rand customer support teams will help you protect your investment.

Specifications

	Air Capacity		Operat	ing kW	Dime	ensions (in	/mm)		
Model	(SCFM 38°F/ 3°C m3/min)	Pressure Drop (psig/barg)	Air Cooled	Water Cooled	W	D	Н	Approx. Ship Wt. (lbs /kg)	Air In/Out (in)
NVC200	200/5.7	1.6/0.11	1.66	1.06	28/711	33/838	58/1473	620/282	1.5 NPT
NVC300	300/8.5	2.1/0.14	2.54	1.65	28/711	33/838	58/1473	735/334	2 NPT
NVC400	400/11.3	2.9/0.20	3.24	2.19	28/711	33/838	58/1473	745/339	2 NPT
NVC500	500/14.1	2.9/0.20	4.65	4.28	42/1067	40/1016	62/1575	1250/570	3 NPT
NVC600	600/17.0	3.0/0.21	4.82	3.14	42/1067	40/1016	62/1575	1275/580	3 NPT
NVC700	700/19.8	2.7/0.19	5.79	3.58	42/1067	40/1016	62/1575	1320/600	3 NPT
NVC800	800/22.7	2.9/0.20	6.50	4.16	42/1067	40/1016	62/1575	1415/643	3 NPT
NVC1000	1000/28.3	2.4/0.17	7.03	4.48	32/813	76/1930	69/1753	2315/1052	4 FLG
NVC1200	1200/34.0	3.1/0.21	8.72	5.48	32/813	76/1930	69/1753	2435/1107	4 FLG
NVC1600	1600/45.3	3.3/0.23	11.48	7.34	32/813	76/1930	69/1753	2785/1266	4 FLG
NVC2000	2000/56.7	3.5/0.24	13.18	9.09	34/864	91/2311	91/2311	4070/1850	6 FLG
NVC2400	2400/68.0	3.5/0.24	14.29	9.59	34/864	91/2311	91/2311	4150/1886	6 FLG
NVC3250	3250/92.1	3.0/0.21	18.03	14.77	75/1905	96/2438	100/2540	6330/2877	8 FLG
NVC4000	4000/113.3	3.0/0.21	21.77	15.26	75/1905	100/2540	96/2438	7060/3029	8 FLG
NVC4800	4800/136.0	3.0/0.21	28.72	19.32	75/1905	100/2540	96/2438	7200/3273	8 FLG
NVC6000	6000/170.0	3.0/0.21	32.65	22.89	110/2794	98/2489	101/2565	9870/4486	10 FLG
NVC8000	8000/226.6	3.0/0.21	43.54	30.52	143/3632	99/2515	102/2591	12575/5716	12 FLG

Performance data presented in accordance with CAGI standard ADF 100 under 100°F inlet temperature,

100°F ambient temperature and 100 psig conditions.

Maximum working pressure: NVC200 - 800, 230 psig; NVC1000 - 8000 SCFM, 220 psig.

Weights and dimension shown for NVC200-2400 air-cooled, NVC3250 and larger in water-cooled.

Average kilowatts per hour of dryer operation at full rated capacity.

Standard NVC200-800 SCFM models ETL-certified, 1000-2400 models UL 508 panels.

Available voltages 460-3-60, 575-3-60, 380-3-50. NVC200-400 available in 230-3-60 and 220-3-50. NVC200 available in 230-1-60.

Correction Factors

	Inlet Air Temperature	Correction Factor	Inlet Air Pressure	Correction Factor	Ambient Air Temperature	Correction Factor
Dryer Selection	80°F	1.64	75 psig	0.91	80°F	1.25
Example:	90°F	1.27	100 psig	1.00	90°F	1.12
500 SCFM	100°F	1.00 г	→125 psig	1.08 —	→ 100°F	1.00
110°F inlet 125 psig	→ 110°F	0.81	150 psig	1.16	110°F	0.86
100°F ambient	120°F	0.66	225 psig	1.22	120°F	0.77
Calculation:	Dryer Size = $500/(0.00)$	81 x 1.08 x 1.0	0) = 572 SCFM =	NVC600		

10 Nirvana Refrigerated Dryer Nirvana Refrigerated Dryer



Ingersoll Rand Industrial Technologies provides products, services and solutions that enhance our customers' energy efficiency, productivity and operations. Our diverse and innovative products range from complete compressed air systems, tools and pumps to material and fluid handling systems and environmentally friendly microturbines. We also enhance productivity through solutions created by Club Car®, the global leader in golf and utility vehicles for businesses and individuals.

www.ingersollrand.com

Industrial Technologies P.O. Box 1840 800-D Beaty Street Davidson, NC 28036 (704) 655-5000 (704) 655-4039 Fax









Ingersoll Rand compressors are not designed, intended or approved for breathing air applications. Ingersoll Rand does not approve specialized equipment for breathing air applications and assumes no responsibility or liability for compressors used for breathing air service.

Nothing contained on these pages is intended to extend any warranty or representation, expressed or implied, regarding the product described herein. Any such warranties or other terms and conditions of sale of products shall be in accordance with Ingersoll Rand's standard terms and conditions of sale for such products, which are available upon request.

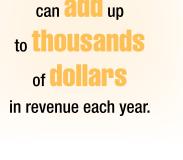
Product improvement is a continuing goal at Ingersoll Rand. Designs and specifications are subject to change without notice or obligation.



Automate Your Fluid Dispense:

- Beat the book time and move more vehicles through your shop
- Reduce human error and inventory shrinkage
- Automatically post fluid dispenses to the work order
- Eliminate out-of-stock problems and over-fill tank issues—Matrix automatically emails fluid levels to oil suppliers and oil recyclers
- ADP and Reynolds interfaces provide secure, reliable data transfer between Matrix and the management software
- Works with ADP's Elite 9200, WebSuite® 2006 or higher and Reynolds & Reynolds ERA 6.4 or higher

Saving just a few minutes each day





ideal for car dealerships, truck dealerships, off-road maintenance shops, including mining and construction, fleet facilities, fast lubes, service shops and in-plant applications

Matrix Total Fluid Management System-choosing the right system is easy!

Get a QUICK-QUOTE!

Just fill in and fax this form to your distributor for a free audit of your fluid management needs



Choose the level of reporting and data you need, from basic to comprehensive. If your requirements change, it's easy to upgrade later.

MATRIX SO	Quantity	
256634	Premier software CD	
256635	Professional software CD	
256636	Basic software CD	
256637	Premier with ADP Interface	
256638	Premier with Reynolds Interface	
	256634 256635 256636 256637	256635 Professional software CD 256636 Basic software CD 256637 Premier with ADP Interface



One PAC required for each air pump. For safety and increased security, the PAC is a must have to maximize your fluid management system. Designed to supply air to the pump only when Matrix authorizes the dispense.

PUMP AIR CONTROL (PAC)		Quantity
247436	93 scfm valve for pump mount	



Choose a transceiver and the connecting hardware for your shop layout to wirelessly send and receive information from your bulk tanks, pumps and meters.

	TRANSCEIV	ER AND CONNECTION HARDWARE	Quantity
	255231	Transceiver w/universal power adapter*	
	255731	USB/RS422 converter	
	15T999	15 ft USB cable	
	15T998	3 ft USB cable	
	119572	RS422 bulk wire (1000 ft rolls)	
		*Minimum one required	



Choose one TLM for each bulk fluid tank. Tank readings are automatic for used or new oil and anti-freeze products.

TANK LEVEL MONITOR (TLM)		Quantity
256285	Tank Level Monitor	



Decide how many meters per work bay, which fluids you want to dispense and which extension type to use. High flow options are available to move more fluids faster.

MATRIX ELECTRONIC DISPENSE METER. 5 GPM OR LESS

Quantity
Quality

200202	7/2 in tip (i) owned with rigid extension and extinded datemate their drip quiet electric on	
256482	1/2 in npt(f) swivel with flexible extension and standard automatic non-drip quick-close nozzle for oil	
256483	1/2 in npt(f) swivel with gear lube extension and standard quick-close nozzle	
256484	1/2 in npt(f) swivel with rigid extension and standard quick-close nozzle for anti-freeze	
256485	1/2 in npt(f) swivel with flexible extension and standard quick-close nozzle for anti-freeze	
MATRIX EL	ECTRONIC DISPENSE METER, 14 GPM OR LESS	Quantity
MATRIX EL 256486		Quantity
	ECTRONIC DISPENSE METER, 14 GPM OR LESS	Quantity
256486	ECTRONIC DISPENSE METER, 14 GPM OR LESS 1/2 in npt(f) swivel with rigid extension, high flow, quick-close nozzle for oil	Quantity

256282 1/2 in not(f) swivel with rigid extension and standard automatic non-drip quick-close nozzle for oil

Accessories



Protect the finish of the vehicle you're working on with an inlet swivel cover. Color code your meters to easily identify which fluid you're dispensing.

NLET SWIV	Quantity	
15T366	Black cover for 3/4" hose (standard)	
15T367	Red cover for 3/4" hose	
15T368	Blue cover for 3/4" hose	
15T369	Green cover for 3/4" hose	
15T370	Yellow cover for 3/4" hose	

FILTER KITS	AND MISCELLANEOUS ACCESSORIES	Quant
255885	Filter kit includes (10) filters/strainers (15M308), (10) spacers (15M309), and (10) 0-rings (155332)	
15B750	Drum cover mount bracket	
249440	Console bracket	

OIL BAR*		Quantity
256719	Oil bar cabinet for Matrix 3; holds up to three Matrix meters	
257539	Matrix meter for oil bar (no extension or inlet swivel)	
255370	Oil bar kit for one Matrix meter; includes pipe fittings and nozzle	

*For a 3-meter oil bar, order the following part numbers and quantities: 256719 (1), 257539 (3), 255370 (3)

CLEANLINE	CLEANLINE™ FILTER ASSEMBLIES Quantity		
248421	900 psi (62 bar) tank mount		
248418	900 psi (62 bar) wall mount		
248419	1800 psi (124 bar) tank mount		
248417	1800 psi (124 bar) wall mount		

CLEANLINE ASSEMBLY REPLACEMENT FILTERS Quantity 900 psi (62 bar) screw-on filter 1800 psi (124 bar) filter element

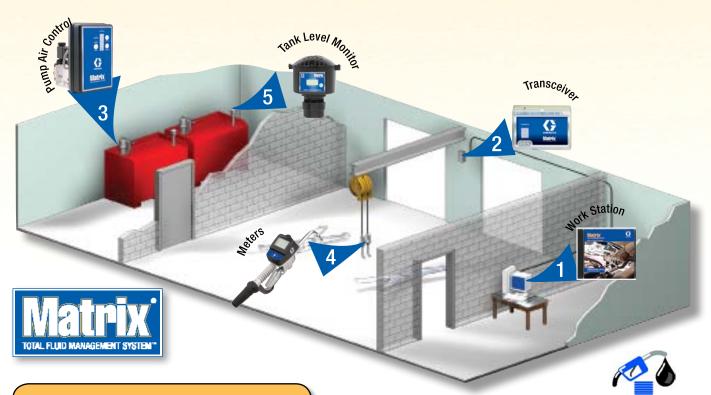
Potential material and labor savings in just one year!

TYPICAL AUTOMOTIVE DEALERSH	IP SHRINKAGE	LABOR SAVINGS WITH MATRIX SYSTEM		
Price of oil (per gallon)	\$8 X	Weekly Savings (inventory tracking)	5 hours	
Gallons used (per year)	15,000 =	Shop Rate per hour	\$95	
Total oil cost (per year)	\$120,000 X	Total labor cost (per week)	\$475	
Typical Inventory loss	10% =	Weeks (per year)	52	
Total Inventory savings per year	\$12,000	Total labor savings	\$24,700	
		,		

*Example shown in gallons

POSSIBLE ANNUAL SAVINGS WITH MATRIX = \$36,700.00

Fluid dispense and **inventory control** at your **ingertips** for petroleum, synthetic oil products and anti-freeze mixtures



5 Steps to Choose Your System

Select Application Software

Matrix offers three software platforms using the Matrix meter including Premier, Professional and Basic.

Include a Transceiver

Sends and receives information from the meters, Tank Level Monitors and Pump Air Control to the work station.

Security with the Pump Air Control Supplies air to the pump only when Matrix authorizes the dispense.

Performance of the Matrix Meter

The Matrix Meter dispenses fluid and communicates dispense information wirelessly to the PC.

The Time-Saving Tank Level Monitor Ultrasonic signal accurately measures fluid levels and communicates to used oil recyclers or bulk fluid suppliers.

Tracking dispenses right to the work order saves time and eliminates lost inventory

Matrix Application Features

Feature	Basic	Professional	Premier
Maximum Number of Transceivers	1	2	8
Maximum Number of Meters	30	100	300+
Maximum Number of Tank Monitors	0	12	50
Client PC Networking	0	6	300
Number of users	250	500	1000
Basic Reporting	х		
Comprehensive Reporting		х	х
Tank Level Email		х	х
Third Party Interface Capable		х	х
Track Dispense by Technician		х	х
Track Dispense by Vehicle Number			х
ADP® Certified Interface			х
Reynolds® Certified Interface			Х

Note: All products have no fluid limit and are oil bar capable

ABOUT GRACO

Founded in 1926, Graco is a world leader in fluid handling systems and components. Graco products move, measure, control, dispense and apply a wide range of fluids and viscous materials used in vehicle lubrication, commercial and industrial settings.

The company's success is based on its unwavering commitment to technical excellence, world-class manufacturing and unparalleled customer service. Working closely with qualified distributors, Graco offers systems, products and technology that set the quality standard in a wide range of fluid handling solutions. Graco provides equipment for spray finishing, protective coating, paint circulation, lubrication, and dispensing sealants and adhesives, along with power application equipment for the contractor industry. Graco's ongoing investment in fluid management and control will continue to provide innovative solutions to a diverse global market.

GRACO LOCATIONS

MAILING ADDRESS P.O. Box 1441 Minneapolis, MN 55440-1441 Tel: 612-623-6000 Fax: 612-623-6777

AMERICAS

MINNESOTA Worldwide Headquarters Graco Inc. 88-11th Avenue N.E. Minneapolis, MN 55413

EUROPE

BELGIUM European Headquarters Industrieterrein-Oude Bunders Slakweidestraat 31 3630 Maasmechelen. Belgium Tel: 32 89 770 700 Fax: 32 89 770 777

ASIA PACIFIC

AUSTRALIA Graco Australia Pty Ltd. Suite 17, 2 Enterprise Drive Bundoora, Victoria 3083 Australia Tel: 61 3 9468 8500 Fax: 61 3 9468 8559

Graco (Hong Kong) Ltd. Shanghai Representative Office Building 7, 1029 Zhongshan Road South Huangpu District, Shanghai 200011. P.R.China Tel: 86 21 649 50088 Fax: 86 21 649 50077

INDIA

Graco Hong Kong Ltd. India Liaison Office Room 443, Augusta Point Regus Business Centre 53 Golf Course Road Gurgaon, Haryana India 122001 Tel: 91 124 435 4208 Fax: 91 124 435 4001

JAPAN

Graco K.K. 1-27-12 Hayabuchi Yokohama City, Japan 2240025 Tel: 81 45 593 7300 Fax: 81 45 593 7301

KOREA

Graco Korea Inc. Shinhan Bank Building 4th Floor #1599 Gwanyang-Dong, Dongan-Ku, Anyang-si, Korea 431-060 Tel: 82 31 476 9400 Fax: 82 31 476 9801

DISTRIBUTION SERVICE

Contact us today!

Send an E-mail to info_APLube@graco.com for product information or visit us at www.graco.com

Matrix[®] Total Fluid **Management System****

Automated, wireless oil dispense tracking and bulk tank monitoring



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Fluid Management Systems

Features and Benefits

- Wireless transmission and reception of meter and tank level information make it simple to track your entire facility's activities
- Customize to fit your business—three product platforms (Basic, Professional, and Premier) to fit any size facility
- · Multi-level security to protect your assets
- Precise measurement and control of fluids ensures profits and eliminates out of stock issues for critical inventory
- ADP and Reynolds & Reynolds interfaces provide secure, reliable, data transfer between the Matrix database and the dealership management software



- · Auto dealerships
- · Heavy-duty fleet service
- · Off-road maintenance shops
- · Industrial in-plant lubrication

Typical Fluids Handled

- · Petroleum- and synthetic-based oils
- · Anti-freeze
- · Gear lube

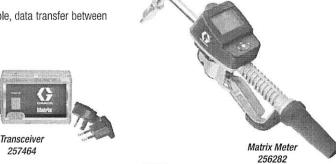
Matrix Application Features

Feature	Basic	Professional	Premier
Maximum Number of Transceivers	1	2	8
Maximum Number of Meters	30	100	300
Maximum Number of Tank Monitors	0	12	50
Client PC Networking	0	6	300
Number of users	250	500	1000
Track Dispense by Work Order	X	Х	X
Track Dispense by Technician			X
Track Dispense by Vehicle Number			X
Tank Level Email		Х	X
Third Party Interface Capable		Х	X
ADP® Certified Interface			Х
Reynolds® Certified Interface			X

No fluid limitations with any Matrix Platform



Premier software 256634









Pump Air Control 247436



Professional Matrix demo case with everything you need to show your customers how Matrix will save them time, gain them more billable hours, and maximize their fixed-operation's profitability.

Ordering Information

Matrix Demo Kit

24X077

Includes Matrix Demo Meter (24F318), Matrix Premier Software (256634), Matrix Transceiver (257464), Matrix Tank Level Monitor (256285), Matrix Pump Air Control (247436), USB Cable (15T998), Custom Protective Case



Fluid Management Systems

Software System Operating Requirements

Matrix software can be configured as a stand-alone PC or networked to multiple PC's. This software is not compatible with Apple® Computers, and is not available for the Apple® Operating system. The PC requirements for the Matrix Server and Matrix Client or shop PC's are noted below.

Server PC Hardware Requirements

- Windows® 2003 and Windows® 2008 (R2) server platforms
- Pentium® 4 or better processor
- · Processor speed of 3.0 GHz or better
- · RAM memory of 1 GB or better
- · CD-RW or DVD/RW drive
- · Serial port configuration for (1) RS422 and (1) USB connection

PC Clients

- Windows® XP, Vista®, Windows® 7 and Windows® 8 operating system
- Pentium® 4 or better processor with a processor speed of 2.0 GHz or better
- · RAM memory of 1 GB or better

Software Instruction Manuals

Basic	Professional	Premier	ADP	Procede	Reynolds & Reynolds
313104	313106	313108	313112	334786	313114

RF Communication (Meters, Transceivers, Tank Level Monitors, Pump Air Control)

Description	Performance		
RF Communication	2.4 GHz Direct Sequence Spread Spectrum		
RF Communication Range	Unobstructed: 300 to 500 ft (91 to 152 m); Obstructed: 250 to 300 ft (76 to 91 m)		
RF Temperature Range	-40° F to 185° F (-40° C to 85° C)		
Approvals	FCC, Industry Canada (IC), C-Tick, CE		

Ordering Information

System S	oftware
256634	Premier Software CD (includes 3rd party interface)
256635	Professional Software CD
256636	Basic Software CD
256637	Premier Software with ADP Interface
128160	Premier Software with Procede Excede Interface
256638	Premier Software with Reynolds & Reynolds Interface
Transceiv	er and Connection Hardware
257464	Transceiver with Universal Power Adapter
255731	USB/RS422 Converter
15T999	15 ft USB Cable
15T998	3 ft USB Cable
119572	RS422 Bulk Wire (1000 ft roll)

Transceiver and Connection Hardware Technical Specifications

Weight	1.0 lb (454 grams)
Power Supply	100 - 240 V, 50/60 Hz to 12 VDC plug-in transformer
Instruction Manual	





Fluid Management Systems

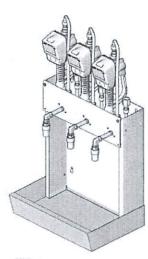
Matrix Meter and Accessories

Matrix Ele	ctronic Meter with Extension, 5 gpm or Less			
256282	1/2 in npt(f) swivel, rigid extension and standard automatic non-drip quic	ck-close nozzle for oil		
256482	1/2 in npt(f) swivel, flexible extension and standard automatic non-drip quick-close nozzle for oil			
256483	1/2 in npt(f) swivel, gear lube extension and standard quick-close nozzle			
256484	1/2 in npt(f) swivel, rigid extension and standard quick-close nozzle for anti-freeze			
256485	1/2 in npt(f) swivel, flexible extension and standard quick-close nozzle for anti-freeze			
Matrix Ele	ectronic Meter with Extension, 14 gpm or Less			
256486	1/2 in npt(f) swivel, rigid extension, high flow, quick-close nozzle for oi	ĺ		
256487	1/2 in npt(f) swivel, flexible extension, high flow, quick-close nozzle for oil			
256488 3/4 in npt(f) swivel, rigid extension, high flow, quick-close nozzle for oil				
257120	3/4 in npt(f) swivel, flexible extension, high flow, quick-close nozzle for oil			
Swivel Co	vers			
15T366	Black swivel cover (standard color with meter)			
15T367	Red swivel cover			
15T368	Blue swivel cover			
15T369	Green swivel cover			
15T370	Yellow swivel cover			
Accessori	es			
249440	Console bracket			
257539	Matrix meter for oil bar (swivel and extension removed)			
256719	Oil bar console–complete cabinet without piping and meters Instruction Manua			
255370	Oil bar kit (fittings, nozzles, and piping) 313013			
257556	Retro fit kit-mount Matrix meter in 222107 console			
Filter Kits	for Matrix Meters			
255885	Filter kit includes (10) filters/strainers (15M308), (10) spacers (15M309)	and (10) O-rings (155332)		



recinical opecinications	
Flow Range (1)	
Maximum Working Pressure	
Operating Fluid Pressure Range	
Weight (with battery and rigid nozzle extension) .	6.07 lbs (2.75 kg)
Units of Measurement	Programmable in pints, quarts, gallons, or liters
Inlet	
	3/4 in—16 straight thread O-ring Boss
	Preset Models-six months, manual models-one year
	Aluminum, sst, pbt/pc, nitrile rubber, cs
	Petroleum- and synthetic-based oils and
	anti-freeze mixtures (not compatible with fuel and windshield washer fluid)
Meter Pressure Loss (1)	± 0.5%
	± 0.5%
	±0.15 %
	ressure, temperature, viscosity, inlet fitting and nozzle type.
 At 2.5 gpm (9.5 lpm) @ 70° F (21° C) with 10 wt. oil Average shop use with alkaline batteries (included); 3 	and 1 gal (3.8 l) dispensed. May require re-calibration. Out-of-box accuracy ±1.25%. 0-35% longer life with lithium AA





Oil Bar Components ordered separately. For complete unit, order oil bar 256719, kit 255370 (one per meter) and Matrix meters (257539) as needed

Fluid Management Systems

Tank Level Monitor

Choose one TLM for each bulk fluid tank. Tank readings are automatic for used or new oil and anti-freeze products.

Tank Level Monitor				
256285	Tank Level Monitor			

Technical Specifications

Ultrasonic Tank Depth Measurement Range \dots 0 – 30 ft. (0-9 m) (Not recommended for use with pressurized tanks)
Fluid Level Measurement Accuracy*
Weight
Operating Temperature Range
RF Operating Temperature Range
Storage Temperature Range
Ambient temperature range**
Batteries
Vertical Tanks
Cylindrical Tanks
Approvals
Instruction Manual 312964
Note: Do NOT use the Matrix Tank Level Monitor with gasoline, diesel fuel, or other flammable liquids, and materials with an auto ignition temperature below 419° F (215° C)

^{*}The difference in air temperature between the inside and outside of the tank may affect the accuracy of fluid levels

**Display will not function below 32° F (0° C)

Pump Air Control

One PAC required for each air pump. For safety and increased security, the PAC is a must have to maximize your fluid management system. Designed to supply air to the pump only when Matrix authorizes the dispense.

Pump Air	Control (PAC)		
247436	93 scfm valve		

Technical Specifications

Operating Pressure Range	23-145 psi (1.7 - 10 bar)
Maximum Air Flow	247436 - 93 SCFM (2.6m3/min)
Power Supply	120-240 VAC line voltage, 24VDC solenoid
Output Power	10mW - 100mW
AMPS	
Frequency	50/60 Hz
Operating Temperature Range*	
Enclosure Type	
Weight	247436 - 3.4 lbs (1.5 kg)
Instruction Manual	
Note: Do NOT use the Matrix Tank Level Monitor with gasoline, diesel fuel, or other flam temperature below 419° F (215° C).	
temperature below 413 1 (213 0).	

^{*}The difference in air temperature between the inside and outside of the tank may affect the accuracy of fluid levels. Display will not function below 32° F (0° C).

Tank Accessories

CleanLine	Filter Assemblies		
248421	900 psi tank mount CleanLine filter assembly (includes thermal relief)		
248418	900 psi wall mount CleanLine filter assembly (includes thermal relief)		
248419	1800 psi tank mount CleanLine filter assembly		
248417	1800 psi wall mount CleanLine filter assembly		
Replacem	ent Filters		
15D702	900 psi CleanLine screw-on type filter		
119278	1800 psi CleanLine filter element		



Tank Level Monitor 256285



Pump Air Control 247436

SD Series Electronic Meters

Dispense Meters and Control Valves

Features and Benefits

- Fluid inlet options (½ in and ¾ in npt) meets standard and high-flow requirements
- · Large LCD display and simple operator controls
- · Locking trigger (LDP5/LDP15 models) and durable cast guard prevents accidental triggering
- · Flush-mount nozzle valve design prevents leaks and contamination

Typical Applications

- Automotive dealerships
- Heavy-duty dealerships Fast lube centers
- · Lube trucks

- Fleet service facilities
- Service shops
- In-plant
- Mining

Typical Fluids Handled

· Petroleum- and synthetic-based oils

· Anti-freeze

Technical Specifications

roommour opcomountion	
Flow Range (1)	0.1–14 gpm (0.4 - 53 lpm)
Maximum Working Pressure	
Weight	5 lbs (2.3 kg)
Inlet	
Outlet	3/4 in-16 straight thread 0-ring Boss
Maximum Totalizer	
Maximum Recorded Dispense	999.9 Units
Maximum Pre-Set Volume	
Storage Temperature Range	40–158° F (-40-70° C)
Operating Temperature Range	4–158° F (-20-70° C)
Battery	4 AA alkaline or 4 AA lithium
Battery Life (3) Preset Models - six months w/alkaline, manu	al models - one year w/alkaline 4 AA alkaline/lithium
Wetted Parts	
Meter Pressure Loss (1)	
Accuracy (2)	+/- 0.5%
Dimensions (without extension)	
Warranty	
Instruction Manual	

Ordering Information

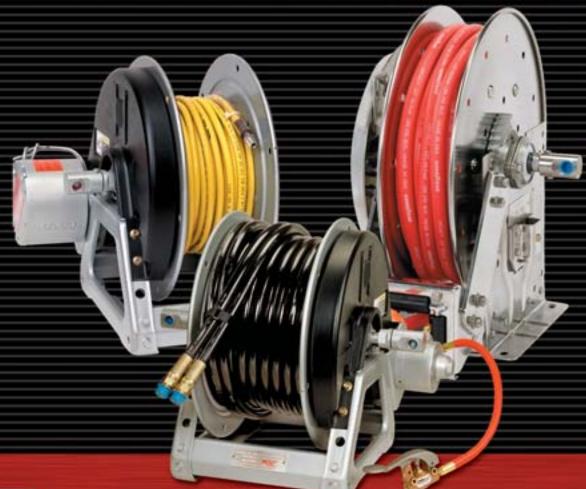
	5	_
SDM5 MA	NUAL DISPENSE ELECTRONIC METER, 5 GPM OR LESS	
255350	1/2 in npt(f) swivel, rigid extension with standard automatic non-drip quick-close nozzle for oil	
255348	1/2 in npt(f) swivel, flexible extension with standard automatic non-drip quick-close nozzle for oil	
255349	1/2 in npt(f) swivel, extension with standard quick-close nozzle for gear lube	
255802	1/2 in npt(f) swivel, rigid extension with standard quick-close nozzle for anti-freeze	
255803	1/2 in npt(f) swivel, flexible extension with standard quick-close nozzle for anti-freeze	_
SDM15 M	ANUAL DISPENSE ELECTRONIC METER, 14 GPM OR LESS	
256836	1/2 in npt(f) swivel, rigid extension with high flow, quick-close nozzle for oil and anti-freeze	
256837	1/2 in npt(f) swivel, flexible extension with high flow, quick-close nozzle for oil and anti-freeze	
255800	3/4 in npt(f) swivel, rigid extension with high flow, quick-close nozzle for oil and anti-freeze	
255801	3/4 in npt(f) swivel, flexible extension with high flow, quick-close nozzle for oil and anti-freeze	
SDP5 PRE	SET DISPENSE ELECTRONIC METER, 5 GPM OR LESS	
255200	1/2 in npt(f) swivel, rigid extension with standard automatic non-drip quick-close nozzle for oil	_
255351	1/2 in npt(f) swivel, flexible extension with standard automatic non-drip quick-close nozzle for oil	X
255352	1/2 in npt(f) swivel, extension with standard quick-close nozzle for gear lube	
255355	1/2 in npt(f) swivel, rigid extension with standard quick-close nozzle for anti-freeze	_
255356	1/2 in npt(f) swivel, flexible extension with standard quick-close nozzle for anti-freeze	
SDP15 PF	RESET DISPENSE ELECTRONIC METER, 14 GPM OR LESS	
256838	1/2 in npt(f) swivel, rigid extension with high flow, quick-close nozzle for oil and anti-freeze	
256839	1/2 in npt(f) swivel, flexible extension with high flow, quick-close nozzle for oil and anti-freeze	
255353	3/4 in npt(f) swivel, rigid extension with high flow, quick-close nozzle for oil and anti-freeze	
255354	3/4 in not(f) swivel, flexible extension with high flow, quick-close nozzle for oil and anti-freeze	



[&]quot;Tested in 10W oil at 70° F. Flow rates vary with fluid pressure, temperature, viscosity, inlet and nozzle type.
"At 2.5 gpm (9.5 lpm) @ 70° F (21° C) with 10 wt. oil and 1 gal (3.8 i) dispensed. May require re-calibration. Out-of-box accuracy ±1.25%.
"Average shop use with alkaline batteries (included); 30-35% longer life with lithium AA.



Industrial Hose Reels



The Hannay Way

Washdown • Chemical Transfer • Potable Water Food Processing • Pharmaceuticals & Cosmetics • Fueling Fire Protection • Dairy Operations • Bottling Plants

www.hannay.com

Hannay hose reels come in all sizes and capacities.

Hannay Reels is the leading manufacturer of high quality hose and cable reels for most every conceivable application. This catalog describes and gives specifications on our most popular hose reels. If you don't see what you're looking for, give us a call and we will help you meet your needs.

Reel Selector Chart	LD II C	
Reel Type	I.D. Hose Sizes	Page
Hose Assemblies	1/4"-1-1/2"	3
Hannay Reels Policies Our Guarantee, Service Policy, Paint Notice, Return Goods Policy		4
Spring Rewind Reels	. / /	_
Series N500 (high pressure)	1/4" & 3/8" 1/4"—3/4" Dual	5
Series N600/600 (dual hose)	1/4"-3/4" Dual	6-7
Series N700/700 Series N800/800	3/8" & 1/2" 3/4" & 1"	8-9 10-11
Series 900	1-1/4" & 1-1/2"	10-11
Compact Manual Rewind Reels	, , ,	
Series 1000	1/4"-3/8"	13
Power and Manual Rewind Reels		
Series 1500, 1800	1/4"—3/4" 1/4"—1/2" Dual	14-15
Series 2000 (dual hose), G2000	1/4"—1/2" Dual	16-17
Series 3000, 3500 (manual only)	3/4"-1-3/4"	18-19
Series 4000, G4100	3/4"-1"	20-21
Series 6000 Series 7000 (dual hose)	3/4"-1" 1/2"-1" 3/4"-1" Dual	22-23 24
Series 7500 (dudi flose)	3/4 -1 Duul 1"-1-1/2"	25
Series 8000	1"-1-1/2" 1-1/2"-2"	26-27
Series 9000	2"-3"	28-29
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Series 1100, AT1200	3/8"-1"	30-31
Storage Reels		
Series C1150, ATC1250	16/3-10/3	32-33
Series C1500, C3200	1/4"-1-1/2"	34-35

Lube Reel Chart		
Reel Type	I.D. Hose Sizes	Page
Spring Rewind Reels		
Series N500 (high pressure)	1/4" & 3/8"	5
Series N700	3/8" & 1/2"	8
Series N800	3/4" & 1"	10
Series 900	3/4" & 1" 1-1/4" & 1-1/2"	12
Power Rewind Reels		
Series 7500	1"-1-1/2"	25

Mounting Hole Sizes	
N Series Reels — 7/16" x 7/8" running front to back	
Pressed Frame Reels — 7/16" x 7/8" running left to right	
Series 1000 — 5/16" x 7/8"	
Series 1500, 1800, 4000, 2000 — 13/32" round holes	



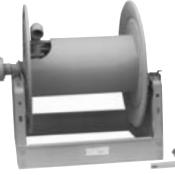
Spring Rewind Reels



Compact Manual Rewind Reels







Manual Rewind Reels

Storage Reels



Complete Reel Packages are also available. For further information refer to our form H-0001-Pkg.

Hose Assemblies

Hannay offers a wide selection of low, medium, and high pressure hose assemblies for a variety of applications such as general purpose air and water, petroleum products, hydraulics, oxygen/acetylene, breathing air, potable water, steam, and pressure washing. These assemblies are available with inside diameters ranging from 3/16" to 3", working pressures from 100 psi to 10,000 psi (7 bar to 689 bar), working temperatures from -65° F to +450° F (-54° C to +232° C), and in most cases at least a 4:1 burst pressure ratio. Hannay also offers 24" flexible connectors for most reels. Please contact our factory with your specific need.

Low Pressure Hose

Our low pressure hose assemblies with inside diameters of 1/4", 3/8", 1/2", and 3/4" have working pressures from 300 psi to 350 psi (21 bar to 24 bar), working temperatures from -40° F to +212° F (-40° C to +100° C) depending on fluid, have a synthetic rubber core and cover with a one textile braid reinforcement. They are designed for use with petroleum-based hydraulic fluids and lubricating oils, water, water/glycol, water/oil emulsion hydraulic fluids, and air. Our low pressure hose assemblies with inside diameters of 1", 1-1/4", and 1-1/2" have working pressures of 200 psi (14 bar), working temperatures from -40° F to +180° F (-40° C to +82° C). They have a blended nitrile core, a neoprene cover, and four spiral reinforcements for the 1" and an EPDM core and cover with a two textile braid reinforcement for the 1-1/4" and 1-1/2" (also available in 1"). The nitrile/neoprene hose is designed for transfer of air and water. The EPDM hose covers these applications, plus it is good for conveying water-based liquid fertilizers, pesticides and other products.

Medium Pressure Hose

Our medium pressure hose assemblies with inside diameters of 1/4", 3/8", and 1/2" have working pressures from 2000 psi to 2750 psi (138 bar to 190 bar), working temperatures from -40° F to +250° F (-40° C to +121° C), and have a synthetic rubber core and cover with one braid of high tensile steel wire for reinforcement. They are designed for use with petroleum-based hydraulic fluids and lubricating oils, water, water/glycol, water/oil emulsion hydraulic fluids, and air.

High Pressure Hose

Our high pressure hose assemblies with inside diameters of 1/4", 3/8", and 1/2" have working pressures from 3500 psi to 5000 psi (241 bar to 345 bar), working temperatures from -40° F to +257° F (-40° C to +125° C), depending on fluid, have a synthetic rubber core and cover with two braids of high tensile steel wire separated by a synthetic layer for reinforcement. They are designed for use with petroleum-based hydraulic fluids and lubricating oils, water, water/glycol, water/oil emulsion hydraulic fluids, and air.

Twin Oxygen/Acetylene Hose

Our oxygen/acetylene grade R hose assemblies with inside diameters of 1/4" and 3/8" have working pressures of 200 psi (14 bar), working temperatures of -40° F to +200° F (-40° C to +93° C), or have an EPDM core and cover with one textile braid reinforcement. This hose is designed for oxygen/acetylene only. Grade T oxygen/acetylene, propane, MAPP gas hose is also available. For oxygen/acetylene reels see Hannay Welding Catalog H-0408-W.

Twin Hydraulic Hose

Our twin hydraulic hose assemblies with inside diameters of 1/4", 3/8", and 1/2" have working pressures from 2000 psi to 5000 psi (138 bar to 345 bar), working temperatures from -40° F to +212° F (-40° C to +100° C), have a polymeric core, abrasion-resistant urethane cover, and braided fiber reinforcement. This hose is not only designed for hydraulic and pneumatic circuits, but has a wide chemical compatibility that covers applications such as agricultural sprays, urethane foam mixers, and fire resistant fluids.

Note: All spring rewind reels complete with hose are supplied with appropriate hose stop. (See Ordering & Accessory Guide.)



Our Guarantee and Service Policy

Equipment manufactured by Hannay Reels, Inc. is guaranteed for two years from date of shipment when installed according to our instructions, given proper care, and used for the purpose for which it is designed.

Equipment which proves to be defective upon our inspection will be replaced free of charge, including freight to the customer. Our responsibility ceases upon delivery to any common carrier and we do not, unless previously instructed, insure shipments beyond point of delivery to such carrier. No material will be accepted for return without a return goods authorization. No allowance will be made for labor charges incurred in making exchanges, replacements or repairs.

Components (including hose and cable) which are manufactured by other vendors will be subject to the warranty terms of their own manufacturers. Also excluded from the general guarantee are normal wear items (including seals, motor brushes, and paint finish).

We reserve the right to modify or alter materials, dimensions, design and construction when necessary to improve the performance of the reel and/or accessories, or to meet delivery requirements.

Failure to use a properly sized circuit breaker with any electric rewind motor will void warranty on motor.

Failure to use a flexible connector with any live hose reel will void warranty on swivel joint.

We expressly disclaim any liability for damage or injuries resulting from the use, operation, service, maintenance or failure of equipment.

Paint Notice

To meet the requirements and performance of vehicle and OEM apparatus paints we recommend our reels be painted with the same or equal paint as used on the specific apparatus the reel is being mounted on.

Hannay Reels will supply any model or custom reel or part with an automotive primer or rust preventative oil finish upon request, allowing application of final coating at your facility. Or at additional cost Hannay can prime / pre-paint all material before final assembly.

In today's regulatory environment this would be the most cost-effective way to meet your finishing standards.

Optional finishes are available for various environmental conditions and should be discussed with the factory.

Standard finish is oven cured enamel. <u>High performance finishes for demanding and corrosive environments are available at an additional cost.</u> Consult factory for specific requirements.

Return Goods Policy

All Hannay Reels are built to order. The parts and components are ordered or placed into production as soon as the order is written.

In order to keep the number of returned goods at a minimum, we ask that you use the Hannay Reels Order Worksheet and/or Accessories Order Form when specifying reels with us. These forms can be found in our Ordering and Accessory Guide, H-0415-OA. **Be sure to include any size and/or weight limitations for your installation.**

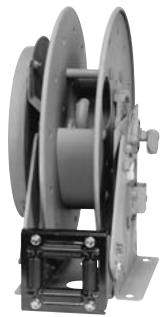
In the event that an item does need to be returned for credit, repair or replacement, prior approval <u>must</u> be obtained from Hannay Reels, Inc. Upon your request, we will fax a Return Goods Authorization form. A signed copy of this form <u>must</u> accompany the material when returned to us.

All material must be returned prepaid, unless otherwise noted on our Return Goods Authorization. No return will be accepted that has been damaged due to improper return packaging, tampered with or altered from its original condition. **Equipment specially built to customer specifications and requirements is not subject to cancellation or returnable for credit under any conditions.**

Our restocking and handling fee is a **MINIMUM** of 25% for standard catalog reels and parts.

No material will be accepted for credit when returned without permission. Orders for equipment incorporating variations from catalog listed items are special and are not subject to return.

No allowance will be made for labor or mileage charges incurred in making exchanges, replacements, or repairs.



For:

- Chassis Grease
- Hydraulics
- Air/Water

Standard Configuration Shown

N500 HIGH PRESSURE SPRING REWIND REELS

To handle single 1/4" or 3/8" I.D. hose.

- Compact frame and narrow base.
- Non sparking ratchet assembly.
- Declutching arbor to prevent damage from reverse winding.
- Standard inlet 90° swivel joint 1/4" female NPT threads. 3/8" female NPT threads are optional and **must be specified.**
- Standard outlet is 1/4" female NPT threads. 3/8" female NPT threads are optional and **must be specified.**
- Other threads can be furnished and **must be specified.**
- Standard pressure of 10,000 psi (689 bar), product temperatures from -40° F to +250° F (-40° C to +121° C). Optional 1/4" 3000 psi (207 bar), or 3/8" 3000 psi (207 bar) or 8000 psi (552 bar) are available upon request.
- 4-way roller assembly.
- Constant Tension is available consult factory.

Parts Drawing - ISO 92

Model Number	Hose	Capacity of feet m.	Reel		.Weight b. g.	Standard Roller Assy	Reel Dimensions*** inches mm.								
	I.D. (in) I.D. (mm) O.D. (in)	1/4" 6 5/8"	3/8" 10 3/4"	NET	Frt. SHIP		C	F	G	н					
	0.D. (mm)	16	19		Wt.		`	•	Ů						
N515-14-16-8C		25 8	25 8	48* 22	83 38	N203	8 203	17.62 448	16.25 413	9.12 232					
N515-16-17C		35 11	35 11	51* 23	86 39	N203	10.5 267	18.5 470	17 432	9.12 232					
N515-19-20J		50 15	50 15	63* 29	98 44	N203	10.5 267	20.75 527	20 508	10.62 270					
N515-23-24J		75 23	75 23	75* 34	110 50	N203	15.5 394	23.75 603	24 610	12.62 321					

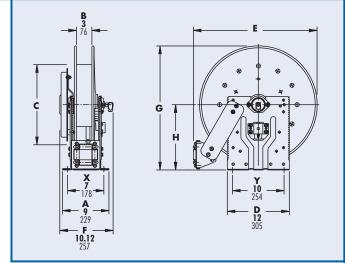
Notes:

- 1. Specifications subject to change.
- Reel models and capacities shown are for standard drag applications; for vertical lift applications consult factory.
- 3. Other sizes, from standard components, available on request.
- 4. Finish: refer to Page 4.
- 5. Be sure to check dimensions and weights prior to ordering.

NOTICE: <u>A Flexible Connector</u> must be used between the inlet pipe and the inlet swivel joint.

- * When shipped as a parcel package (via Fed-Ex or UPS Ground), Net wt. plus carton wt.
- *** x,y indicate mounting holes. See page 2





SPRING REWI **DUAL HOSE REELS**

To handle dual 1/4" through 1/2" I.D. hose.

- Narrow frame and compact mounting base.
- Non sparking ratchet assembly.
- Declutching arbor to prevent damage from reverse winding.
- Standard inlets 90° balanced pressure swivel joints 1/2" female NPT threads.
- Standard outlets 1/2" female NPT threads.
- Pressures to 3000 psi (207 bar)
- Temperatures from -60° F to +250° F (-51°C to +121°C).
- Consult factory for other pressures & temps.
- 4-way roller assembly.
- Constant Tension is available consult factory.
- Reels for use with oxygen/acetylene. See Series N400 Hannay Reels Welding Catalog H-0408-W.



Optional TR roller position shown

For:

- Hydraulics
- Air/Water
- Spray Painting

Parts Drawing — ISO 80

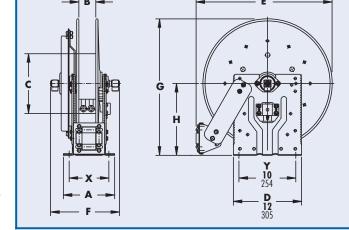
Model Number		Hose Cap	acity of Red leet m.	el	Appro	ox. Weight lb. kg.	Standard Roller Assy	Reel Dimensions*** inches mm.									
	I.D. (in) I.D. (mm) O.D. (in) O.D. (mm)	1/4" 6 5/8"	3/8" 10 3/4"	1/2" 13 7/8" 22	NET	SHIP		A	В	c	E	F	G	Н	х		
N615-19-20C	O.D. (IIIIII)	2/35 2/11	2/35 2/11	2/20 2/6	63 28.6	78* 35.4	N203	9 229	3 76	10.5 267	20.75 527	11. 75 298	20 508	10.62 270	7 178		
N617-19-20J		2/50 2/15	2/50 2/15	2/25 2/8	66 29.9	86* 39	N205	11 279	5 127	10.5 267	20.75 527	13.75 349	20 508	10.62 270	9 229		
N615-23-24B		2/65 2/20	2/60 2/18	2/30 2/9	87 39.5	104* 47.2	N203	9 229	3 76	10.5 267	23.75 603	11.75 298	24 610	12.62 321	7 178		
N617-25-26-15.5B		2/75 2/23	2/75 2/23	2/50 2/15	93 42.2	128 58.1	N205	11 279	5 127	15.5 394	25.25 641	13.75 349	26 660	13.62 346	9 229		
N617-25-26-15.5A		2/100 2/31	2/85 2/26	<u>-</u> -	120 54.4	155 70.3	N205	11 279	5 127	15.5 394	25.25 641	1 4.5 368	26 660	13.62 346	9 229		

Notes:

- 1. Specifications subject to change.
- 2. Reel models and capacities shown are for standard drag applications; for vertical lift applications consult factory.
- 3. Other sizes, from standard components, available on request.
- 4. Finish: refer to Page 4.
- 5. Be sure to check dimensions and weights prior to ordering.

NOTICE: A Flexible Connector must be used between the inlet pipe and the inlet swivel joint.

- * When shipped as a parcel package (via Fed-Ex or UPS Ground).
- *** x,y indicate mounting holes. See page 2









Available Roller Positions

For hydraulic tool circuit applications full flow swivels w/viton seals are recommended (add 2.25 to "F" dim in chart)



Standard Configuration Shown

For:

- Hydraulics
- Spray Painting
- Air/Water

SPRING REWIND **DUAL HOSE REELS**

To handle dual 1/4" through 3/4" I.D. hose.

- Rollformed channel frame for heavy duty applications.
- Non sparking ratchet assembly.
- Declutching arbor to prevent damage from reverse winding.
- Standard inlets 90° balanced pressure swivel joints 1/2" female NPT threads. (1" inlet available).
- Standard outlets 1/2" female NPT threads. (3/4" outlet available).
- Pressures to 3000 psi (207 bar)
- Temperatures from -60° F to +250° F (-51 $^{\circ}$ C to +121 $^{\circ}$ C).
- Consult factory for other pressures & temps.
- 4-way roller assembly.
- Constant Tension is available consult factory.
- Reels for use with oxygen/acetylene. See Series N400 Hannay Reels Welding Catalog H-0408-W.

Parts Drawing - ISO 8

Model Number	Hose Capacity of Reel <u>feet</u> m.						rox. Weight Standard Reel Dimensions*** Roller Inches In													
	I.D. (in) I.D. (mm)	1/4" 6	3/8" 10	1/2" 13	3/4" 19															
	O.D. (in) 0.D. (mm)	5/8" 16	3/4" 19	7/8" 22	1-9/32 " 33	NET	SHIP		A	В	C	D	E	F	G	Н	X	Y		
617-25-26-15.5B		2/75 2/23	2/75 2/23	2/50 2/15	<u>-</u> -	93 42.2	128 58.1	R205	10.25 260	5 127	15.5 394	25 635	26.12 663	15.0 381	25.88 657	13.5 343	5.5 140	22 559		
617-25-26-15.5A		2/100 2/31	2/85 2/26	<u>-</u> -	<u>-</u> -	120 54.4	155 70.3	R205	10.25 260	5 127	15.5 394	25 635	26.12 663	15.75 400	25.88 657	13.5 343	5.5 140	22 559		
† 618-30-31-15.5A		<u>-</u>	<u>-</u> -	2/100 2/31	2/50 2/15	1 30 59	1 65 74.8	R206	11.25 286	6 152	15.5 394	28.5 724	29.62 752	21.75 552	31.38 797	17 432	6.5 165	25.5 648		

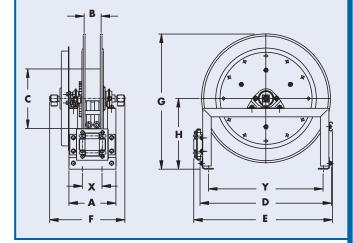
Notes:

- 1. Specifications subject to change.
- 2. Reel models and capacities shown are for standard drag applications; for vertical lift applications consult factory.
- 3. Other sizes, from standard components, available on request.
- 4. Finish: refer to Page 4.
- 5. Be sure to check dimensions and weights prior to ordering.

NOTICE: A Flexible Connector must be used between the inlet pipe and the inlet swivel joint.

*** x,y indicate mounting holes. See page 2 NPT threads, standard outlets are 1/2" female NPT threads.

† Must specify if 1" joints and 3/4" outlet risers are required.









Available Roller Positions

For hydraulic tool circuit applications full flow swivels w/viton seals are recommended (add 2.25 to "F" dim in chart)

SPRING REWIND REELS

To handle 1/4" through 1/2" I.D. hose.

- Standard N Series has a narrow frame and compact mounting
- Non sparking ratchet assembly.
- Declutching arbor to prevent damage from reverse winding.
- Standard inlet 90° balanced pressure swivel joint 1/2" female NPT threads.
- Standard outlet 1/2" female NPT threads.
- Standard Pressures to 3000 psi (207 bar) (available up to 10,000 psi
- Temperatures from -60° F to +250° F (-51° C to +121° C).
- Consult factory for other pressures & temps.
- 4-way roller assembly.
- Constant Tension is available consult factory.



Shown with **Optional TR Roller Position**

For:

- Lubrication
- Air/Water
- Assembly Operations
- Washdown
- Air Tools
- General Industrial **Applications**

Parts Drawing — ISO 79

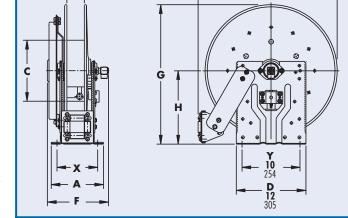
Model Number		<u> </u>	city of Reel eet m.		Approx. Weight Standard lb. kg. Roller Assy			Reel Dimensions*** inches mm.									
	I.D. (in) I.D. (mm) O.D. (in)	1/4" 6 5/8"	3/8" 10 3/4"	1/2" 13 7/8"	NET	Frt. SHIP		A	В	C	E	F	G	н	х		
	0.D. (mm)	16	19	22		Wt.				-			-				
N716-14-16-8C		- -	25 8	25 8	52* 24	70 39	N204	10 254	4 102	8 203	17.62 448	11.25 286	16.25 413	9.12 232	8 203		
N716-16-17C		<u>-</u> -	35 11	35 11	55* 25	71 32	N204	10 254	4 102	10.5 267	18.5 470	11.25 286	17 432	9.12 232	8 203		
N716-19-20J		<u>-</u>	50 15	50 15	64* 29	85 38	N204	10 254	4 102	10.5 267	20.75 527	11.25 286	20 508	10.62 270	8 203		
N716-23-24-15.5G		1 00 30	75 23	65 20	94* 43	129 59	N204	10 254	4 102	15.5 394	23.75 603	11.25 286	24 610	12.62 321	8 203		
N716-23-24-15.5J		<u>-</u> -	65 20	65 20	79* 36	96 44	N204	10 254	4 102	15.5 394	23.75 603	11.25 286	24 610	12.62 321	8 203		
N716-25-26-15.5B		<u>-</u> -	75 23	75 23	90 41	125 57	N204	10 254	4 102	15.5 394	25.25 641	11.25 286	26 660	13.62 346	8 203		
N718-25-26-15.5G		<u>-</u> -	100 30	100 30	96 44	131 59	N206	12 305	6 152	15.5 394	25.25 641	13.25 337	26 660	13.62 346	10 254		

Notes:

- 1. Specifications subject to change.
- 2. Reel models and capacities shown are for standard drag applications; for vertical lift applications consult factory.
- 3. Other sizes, from standard components, available on request.
- 4. Finish: refer to Page 4.
- 5. Be sure to check dimensions and weights prior to ordering.

NOTICE: A Flexible Connector must be used between the inlet pipe and the inlet swivel joint.

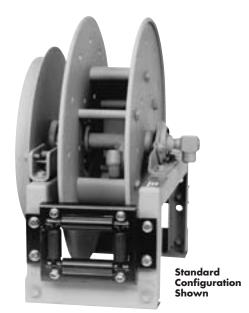
- * When shipped as a parcel package (via Fed-Ex or UPS Ground). Net wt. plus carton wt.
- *** x,y indicate mounting holes. See page 2











For:

- Lubrication
- Air/Water
- Assembly Operations
- Washdown
- Air Tools
- General Industrial Applications

700

SPRING REWIND REELS

To handle 1/4" through 1/2" I.D. hose.

- Rollformed channel frame for heavy-duty applications.
- Non sparking ratchet assembly.
- Declutching arbor to prevent damage from reverse winding.
- Standard inlet 90° balanced pressure swivel joint 1/2" female NPT threads.
- Standard outlet 1/2" female NPT threads.
- Standard Pressures to 3000 psi (207 bar) (available up to 10,000 psi 690 bar).
- Temperatures from -60° F to +250° F (-51° C to +121° C).
- Consult factory for other pressures & temps.
- 4-way roller assembly.
- Constant Tension is available consult factory.

Parts Drawing - ISO 66

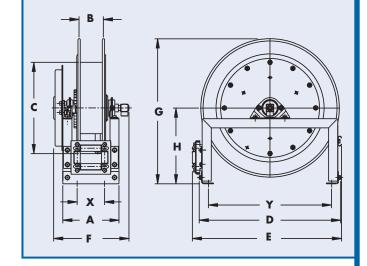
Model Number	Hose Capacity of Reel feet m.			Approx. II	Reel Dimensions*** inches mm.											
	I.D. (in) I.D. (mm) O.D. (in) O.D. (mm)	3/8" 10 3/4" 19	1/2" 13 7/8" 22	NET	Frt. SHIP Wt.		A	В	C	D	E	F	G	Н	X	Υ
716-25-26-15.5B		75 23	75 23	90 41	125 57	R204	9.25 235	4 102	15.5 394	25 635	26.12 663	12.75 324	25.88 657	13.5 343	4.5 114	22 559
718-25-26-15.5G		100 30	100 30	96 44	131 59	R206	11.25 286	6 152	15.5 394	25 635	26.12 663	14.75 375	25.88 657	13.5 343	6.5 165	22 559
718-30-31-20D		150 46	125 38	127 58	1 62 73	R206	11.25 286	6 152	20 508	28.5 724	29.62 752	15.5 394	31.38 797	17 432	6.5 165	25.5 648

Notes:

- Specifications subject to change.
- Reel models and capacities shown are for standard drag applications; for vertical lift applications consult factory.
- 3. Other sizes, from standard components, available on request.
- 4. **Finish:** refer to Page 4.
- 5. Be sure to check dimensions and weights prior to ordering.

NOTICE: <u>A Flexible Connector</u> must be used between the inlet pipe and the inlet swivel joint.

*** x,y indicate mounting holes. See page 2









(OPT) TR (C

Available Roller Positions

SPRING REWIND REELS

To handle 3/4" or 1" I.D. hose.

- Standard N series has a narrow frame and compact mounting base.
- Non sparking ratchet assembly.
- Declutching arbor to prevent damage from reverse winding.
- Standard inlet 90° balanced pressure swivel joint 1" female NPT threads.
- Standard outlet 1" female NPT threads.
- Pressures to 1000 psi (69 bar).
- Temperatures from -40° F to +250° F (-40° C to +121° C).
- Consult factory for other pressures & temps.
- 4-way roller assembly
- Constant Tension is available consult factory.



For:

- Fuel Dispensing (Consult Factory)
- Waste Oil Evacuation
- Air/Water

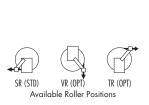
Parts Drawing - ISO 81

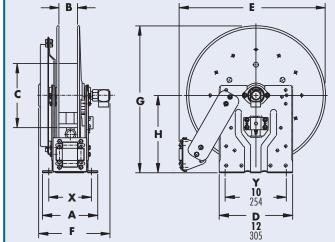
Model Number	ا	Hose Capacity feet m.	y	Approx.		Standard Roller Assy				Reel Dim ii				
	I.D. (in) I.D. (mm)	3/4" 19	1" 25											
	O.D. (in) 0.D. (mm)	1-9/32 " 33	1-9/16" 40	NET	SHIP		A	В	C	E	F	G	Н	X
N816-19-20J		25 8	15 5	75 34	91* 41	N204	10 254	4 102	10.5 267	20.75 527	13 330	20 508	10.62 270	8 203
N818-23-24J		50 15	25 8	87 39	100 45	N206	12 305	6 152	10.5 267	23.75 603	15 381	24 610	12.62 321	10 254
N816-25-26B		60 18	35 11	96 44	131 59	N204	10 254	4 102	10.5 267	25.25 641	13 330	26 660	13.62 346	8 203
N818-25-26B		70 21	50 15	102 46	137 62	N206	12 305	6 152	10.5 267	25.25 641	15 381	26 660	13.62 346	10 254

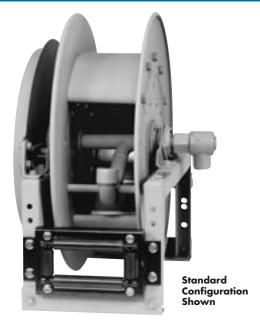
- 1. Specifications subject to change.
- 2. Reels models and capacities shown are for standard drag applications; for vertical lift applications consult factory.
- 3. Other sizes, from standard components, available on request.
- 4. Finish: refer to Page 4.
- 5. Be sure to check dimensions and weights prior to ordering.

NOTICE: A Flexible Connector must be used between the inlet pipe and the inlet swivel joint.

- * When shipped as a parcel package (via Fed-Ex or UPS Ground).
- *** x,y indicate mounting holes. See page 2







For:

- Fuel Dispensing (Consult Factory)
- Waste Oil Evacuation
- Air/Water

800

SPRING REWIND REELS

To handle 3/4" or 1" I.D. hose.

- Rollformed channel frame for heavy-duty applications.
- Non sparking ratchet assembly.
- Declutching arbor to prevent damage from reverse winding.
- Standard inlet 90° balanced pressure swivel joint 1" female NPT threads.
- Standard outlet 1" female NPT threads.
- Pressures to 1000 psi (69 bar).
- \bullet Temperatures from -40° F to +250° F (-40° C to +121° C).
- Consult factory for other pressures & temps.
- 4-way roller assembly.
- Constant Tension is available consult factory.

Parts Drawing - ISO 42

Model Number	l	Hose Capacity <u>feet</u> m.	y	Approx. II		Standard Roller Assy					_ <u>i</u>	ensions* n. m	**			
	I.D. (in)	3/4"	1"													
	1.D. (mm) O.D. (in) 0.D. (mm)	19 1-9/32 " 33	25 1-9/16" 40	NET	SHIP		A	В	С	D	E	F	G	Н	X	Υ
816-25-26B		60 18	35 11	96 44	131 59	R204	9.25 235	4 102	10.5 267	25 635	26.12 663	13.5 343	25.88 657	13.5 343	4.5 114	22 559
818-25-26B		70 21	50 15	102 46	137 62	R206	11.25 286	6 152	10.5 267	25 635	26.12 663	15.5 394	25.88 657	13.5 343	6.5 165	22 559
820-25-26-10.5A		85 26	75 23	131 59	166 75	R308	13.25 337	8 203	10.5 267	25 635	27 686	18.25 464	25.88 657	13.5 343	8.5 216	22 559
820-30-31-10.5A		- -	100 30	137 62	172 78	R308	13.25 337	8 203	10.5 267	28.5 724	30.5 775	18.25 464	31.38 797	17 432	8.5 216	25.5 648
820-30-31-15.5A		1 00 30	<u>-</u>	145 66	1 80 82	R308	13.25 337	8 203	15.5 394	28.5 724	30.5 775	18.25 464	31.38 797	17 432	8.5 216	25.5 648

Notes:

- 1. Specifications subject to change.
- Reels models and capacities shown are for standard drag applications; for vertical lift applications consult factory.
- 3. Other sizes, from standard components, available on request.
- 4. Finish: refer to Page 4.
- Be sure to check dimensions and weights prior to ordering.

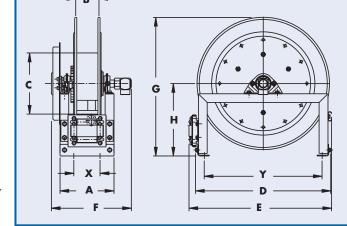
NOTICE: <u>A Flexible Connector</u> must be used between the inlet pipe and the inlet swivel joint.

- * When shipped as a parcel package (via Fed-Ex or UPS Ground).
- *** x,y indicate mounting holes. See page 2









SPRING REWIND REELS

To handle 1-1/4" or 1-1/2" I.D. hose.

- Rollformed channel frame construction.
- Non sparking ratchet assembly.
- Declutching arbor to prevent damage from reverse winding.
- Standard inlet 90° swivel joint 1-1/2" female NPT threads and 2" victaulic groove.
- Standard outlet 1-1/2" female NPT threads.
- Pressures to 600 psi (41 bar)
- Temperatures from -40° F to $+175^{\circ}$ F (-40° C to $+79^{\circ}$ C).
- Consult factory for other pressures & temps.
- 4-way roller assembly.
- Constant Tension is available consult factory.



For:

- Bulk Transfer
- Fuel Dispensing (Consult Factory)
- Suction/Discharge (Consult Factory)

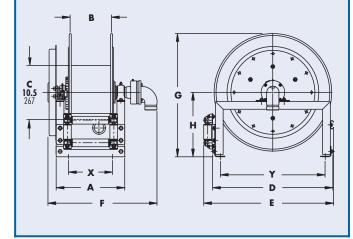
Parts Drawing - ISO 29

Model Number	Hose	Capacity of Meet Mr.	Reel	Wei Il k		Standard Roller Assy				Reel	Dimension inches mm.	IS ^{***}			
	I.D. (in) I.D. (mm)	1-1/4" 32	1-1/2" 38												
	O.D. (in) 0.D. (mm)	1-13/16" 46	2-1/16" 52	NET	SHIP		A	В	D	E	F	G	Н	X	Y
922-23-24B		40 12	25 8	104 47	1 39 63	R310	15.25 387	10 254	23.25 591	25.25 641	24 610	23.88 607	12.5 318	10.5 267	20.25 514
920-25-26A		50 15	40 12	127 58	162 73	R308	13.25 337	8 203	25 635	27 686	22.75 578	25.88 657	13.5 343	8.5 216	22 559
922-30-31A		75 23	50 15	156 71	191 87	R310	15.25 387	10 254	28.5 724	30.5 775	24.75 629	31.38 797	17 432	10.5 267	25.5 648

- 1. Specifications subject to change.
- 2. Reel models and capacities shown are for standard drag applications; for vertical lift applications consult factory.
- 3. Other sizes, from standard components, available on request.
- 4. **Finish:** refer to Page 4.
- 5. Be sure to check dimensions and weights prior to ordering.

NOTICE: A Flexible Connector must be used between the inlet pipe and the inlet swivel joint.

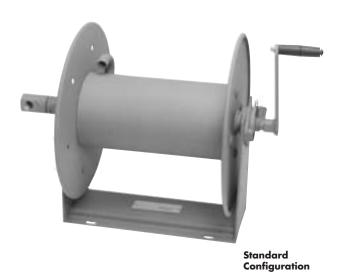
*** x,y indicate mounting holes. See page 2











Shown

1000

COMPACT MANUAL REWIND REELS

To handle single 1/4" or 3/8" I.D. hose.

- Lightweight
- Compact
- Direct crank rewind permanently attached.
- Adjustable cam lock brake standard.
- Optional pin lock available.
- Standard inlet 90° ball bearing swivel joint 1/2" female NPT threads.
- Standard outlet 3/8" female NPT threads.
- Pressures to 3000 psi (207 bar).
- Temperatures from $+20^{\circ}$ F to $+400^{\circ}$ F (-7° C to $+204^{\circ}$ C).
- Consult factory for other pressures & temps.

For:

- Pressure WashingWashdown
- Spray Operations Air

Parts Drawing — ISO 165

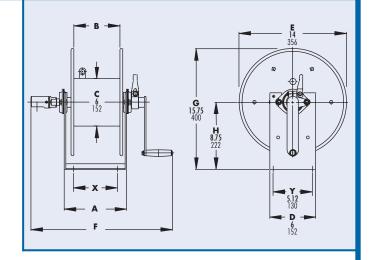
Model Number	Hos	e Capacity of R <u>feet</u> m.	leel	Approx Crank <u>I</u>	. Weight Rewind b cg.		<u>inc</u>	ensions*** hes m.	
	I.D. (in) I.D. (mm) O.D. (in)	1/4" 6 5/8"	3/8" 10 3/4"	NET	SHIP	A	В	F	X
	0.D. (mm)	16	19		31111	n		•	^
1014-14-16		100 31	75 23	23 10	30* 14	8.12 206	6 152	19 483	4 102
1016-14-16		150 46	100 31	24 11	30* 14	10.12 257	8 203	21 533	6 152
1020-14-16		250 76	1 75 53	25	30 *	14.12 359	12 305	25 635	10 254

Notes

- 1. Specifications subject to change.
- 2. Other sizes, from standard components, available on request.
- 3. **Finish:** refer to Page 4.
- 4. Be sure to check dimensions and weights prior to ordering.

NOTICE: <u>A Flexible Connector</u> must be used between the inlet pipe and the inlet swivel joint.

- * When shipped as a parcel package (via Fed-Ex or UPS Ground).
- *** x,y indicate mounting holes. See page 2

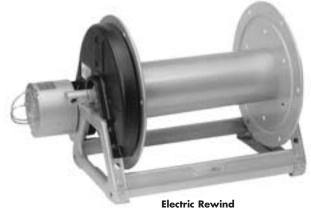


1500

MANUAL OR POWER REWIND REELS

To handle single 1/4" through 5/8" I.D. hose.

- Lightweight compact reels designed for long lengths of hose in manual and power rewind.
- Direct crank rewind is permanently attached.
- Chain and sprocket drive powered by electric, hydraulic, or compressed air motor.
- Direct crank rewind, cam-lock drag brake, spring actuated pin lock.
- Standard inlet 90° ball bearing swivel joint 1/2" female NPT threads.
- Standard outlet 1/2" female NPT threads.
- Optional Rollers: Specify roller position when ordering.
- Pressures to 3000 psi (207 bar)
- Temperatures from $+20^{\circ}$ F to $+400^{\circ}$ F (-7° C to $+204^{\circ}$ C).
- Consult factory for other pressures & temps.



Electric Rewind
Standard Configuration Shown

For:

- Lawn Care
- Pest Control
- Pressure Washing
- Agriculture
- Steam Cleaning



Optional External Mounting Brackets part no. 9906.0025. Add 2-1/2" to the X dimensions shown in the chart.

Parts Drawing — ISO 90 (power); ISO 179 (manual)

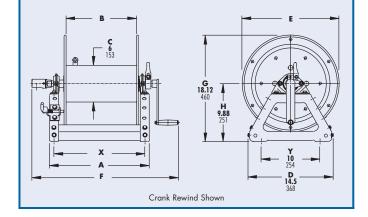
Model Number		Hose	Capacity of feet m.	Reel		Crank R	Weight Rewind ³ b. g.			Red	el Dimension inches mm.	s***		
For Power Rewind	I.D. (in) I.D. (mm)	1/4" 6	3/8" 10	1/2" 13	5/8" 16									
See Note 5	O.D. (in) 0.D. (mm)	5/8" 16	3/4" 19	7/8" 22	1" 25	NET	SHIP	A	В	E Crank	E Power	F CRANK	F POWER	X
1514-17-18		175 53	125 38	75 23	50 15	27 12	50* 23	11 279	6 152	16.5 419	19 483	19 483	16.5 419	9.5 241
1520-17-18		350 107	275 84	1 75 53	125 38	29 13	50* 23	17 432	12 305	16.5 419	1 9 483	25 635	22.5 572	15.5 394
1526-17-18		500 152	400 122	300 91	200 61	31 14	50* 23	23 584	18 457	16.5 419	1 9 483	31 787	28.5 724	21.5 546
1530-17-18		-	500 152	375 114	275 84	33 15	50* 23	27 686	22 559	16.5 419	19 483	35 889	32.5 826	25.5 648
1536-17-18		-	-	475	350	35	50 *	33 838	28 711	16.5 419	19 483	41 1041	38.5 978	31.5 800

Notes:

- 1. Specifications subject to change.
- 2. Upon request, reels can be supplied with drum lengths other than shown.
- Weights shown in chart are for crank rewind models. ADD these amounts for power rewind models:

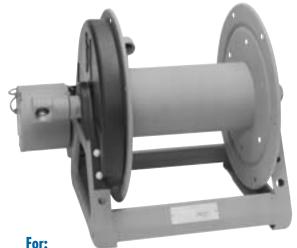
	Net (lbs.)	Ship (lbs.)	Net (kg.)	Ship (kg.)
Electric	18	18	8.2	8.2
Hydraulic	15	15	6.8	6.8
Air	15	15	6.8	6.8

- 4. Dimension "F" is the overall length of standard model reels.
- 5. When ordering power rewind models, prefix model number with: A = Air Rewind E = Electric Rewind HD = Hydraulic Rewind (Air rewind reels are supplied with control valve and hose; 12v and 24v DC rewind reels are supplied with switch and solenoid; 115v AC rewind reels are not supplied with switch but can be ordered separately; hydraulic rewind reels are not supplied with control valve.)
- 6. Manual rewind available in RT or LB configuations only.
- 7. Finish: refer to Page 4.
- 8. Be sure to check dimensions and weights prior to ordering.
- 9. Some roller options may prohibit the use of our molded chain guard.



NOTICE: A Flexible Connector must be used between the inlet pipe and the inlet swivel joint.

- * When shipped as a parcel package (via Fed-Ex or UPS Ground).
- *** x,y indicate mounting holes. See page 2



- Air Compressors
- Washdown

Electric Rewind Standard Configuration Shown



Optional External Mounting Brackets part no. 9906.0025. Add 2-1/2" to the X dimensions shown in the chart.

1800

MANUAL OR POWER REWIND REELS

To handle single 5/8" or 3/4" I.D. hose.

- Lightweight compact reels designed for long lengths of hose in manual and power rewind.
- Direct crank rewind is permanently attached.
- Chain and sprocket drive powered by electric, hydraulic, or compressed air motor.
- Direct crank rewind, cam-lock drag brake, spring actuated pin lock.
- Standard inlet 90° ball bearing swivel joint 1" female NPT threads.
- Standard outlet 3/4" female NPT threads.
- Optional Rollers: Specify roller position when ordering.
- Some roller options may prohibit the use of our molded chain guard.
- Pressures to 1000 psi (69 bar).
- Temperatures from -40° F to +250° F (-40° C to +121° C).
- Consult factory for other pressures & temps.

Parts Drawing — ISO 136

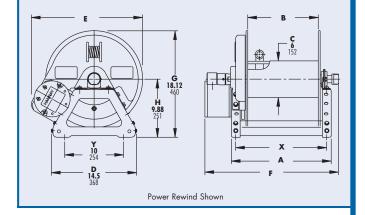
Model Number	Но	ose Capacity of feet m.	Reel	Approx Crank	c. Weight Rewind ³ lb. kg.			Re	el Dimension inches mm.	s***		
For Power Rewind	I.D. (in) I.D. (mm)	5/8" 16	3/4" 19									
See Note 5	O.D. (in) 0.D. (mm)	1" 25	1-9/32" 40	NET	SHIP	A	В	E Crank	E POWER	F CRANK	F POWER	X
1816-17-18		75 23	50 15	28 13	50* 23	13 330	8 203	16.5 419	19 483	23.38 594	18.5 470	11.5 292
1822-17-18		150 46	100 30	30 14	50* 23	19 483	14 356	16.5 419	19 483	29.38 746	24.5 622	17.5 445
1826-17-18		200 61	125 38	32 15	50* 23	23 584	18 457	16.5 419	19 483	33.38 848	28.5 724	21.5 546
1830-17-18		275 84	150 46	33 15	50* 23	27 686	22 559	16.5 419	19 483	37.38 950	32.5 826	25.5 648
1836-17-18		350 107	200 61	36 16	50* 23	33 838	28 711	16.5 419	19 483	43.38 1102	38.5 978	31.5 800

Notes:

- 1. Specifications subject to change.
- 2. Upon request, reels can be supplied with drum lengths other than shown.
- Weights shown in chart are for crank rewind models. ADD these amounts for power rewind models:

power rewin	Net (lbs.)	Ship (lbs.)	Net (kg.)	Ship (kg.)
Electric	18	18	8.2	8.2
Hydraulic	15	15	6.8	6.8
Air	15	15	6.8	6.8

- 4. Dimension "F" is the overall length of standard model reels.
- A = Air Rewind E = Electric Rewind HD = Hydraulic Rewind (Air rewind reels are supplied with control valve and hose; 12v and 24v DC rewind reels are supplied with switch and solenoid; 115v AC rewind reels are not supplied with switch and solenoid; 115v AC rewind reels are not supplied with switch but can be ordered separately; hydraulic rewind reels are not supplied with control valve.)
- 6. Manual rewind available in RT or LB configurations only.
- 7. Finish: refer to Page 4.
- 8. Be sure to check dimensions and weights prior to ordering.
- 9. Some roller options may prohibit the use of our molded chain guard.



NOTICE: A Flexible Connector must be used between the inlet pipe and the inlet swivel joint.

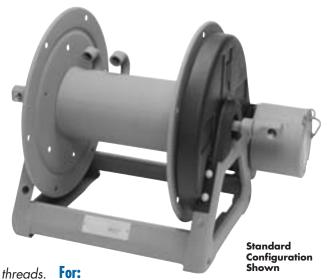
- * When shipped as a parcel package (via Fed-Ex or UPS Ground).
- *** x,y indicate mounting holes. See page 2

2000

MANUAL OR POWER REWIND REELS

To handle dual 1/4" through 1/2" I.D. hose.

- Two swivel joint inlets and two outlet risers to handle two equal lengths of hose.
- Chain-drive crank rewind or chain and sprocket rewind powered by an electric, or compressed air motor.
- MX Crank rewind reels pinion brake as standard.
- Power rewind reels are not supplied with a brake.
- Standard inlets 90° ball bearing swivel joints 1/2" female NPT threads.
- Standard outlets 1/2" female NPT threads.
- Pressures to 3000 psi (207 bar).
- Temperatures from +20° F to +400° F (-7° C to +204° C).
- Consult factory for other pressures & temps.
- Reels for use with oxygen/acetylene.
 See Series 2400 Hannay Reels Welding Catalog H0408-W.



- Hydraulics
- Air/Water

Spray Painting



Optional External Mounting Brackets part no. 9906.0025. Add 2-1/2" to the X dimensions shown in the chart.

Parts Drawing - ISO 112

Model Number		Hose Capac <u>fe</u>	city of Reel et 1.		Approx. Crank R <u>I</u> l	Weight Rewind ³ b. g.			Rec	el Dimension inches mm.	s***		
For Power Rewind	I.D. (in) I.D. (mm)	1 /411	2 /011	1 /011	NET	SHIP							
See Note 5	O.D. (in) O.D. (mm)	1/4"	3/8"	1/2"			A	В	E Crank	E Power	F CRANK	F POWER	X
2016-17-18		2/100 2/31	2/75 2/23	2/50 2/15	32 15	50* 23	1 3 330	8 203	18.5 470	19 483	21 533	20.75 527	11.5 292
2020-17-18		2/175 2/53	2/125 2/38	2/75 2/23	34 15	50* 23	17 432	12 305	18.5 470	19 483	25 635	24.75 629	15.5 394
2026-17-18		2/275 2/84	2/200 2/61	2/125 2/38	36 16	50* 23	23 584	18 457	18.5 470	19 483	31 787	30.75 781	21.5 546
2030-17-18		2/350 2/107	2/250 2/76	2/175 2/53	37 17	50* 23	27 686	22 559	18.5 470	19 483	35 889	34.75 883	25.5 648
2036-17-18		2/425 2/130	2/300 2/91	2/225 2.69	39 18	50 23	33 838	28 711	18.5 470	19 483	41 1041	40.75 1035	31.5 800

Notes

- 1. Specifications subject to change.
- 2. Upon request, reels can be supplied with drum lengths other than shown and with disc sizes in other diameters.
- Weights shown in chart are for crank rewind models. ADD these amounts for power rewind models:

	Net (lbs.)	Ship (lbs.)	Net (kg.)	Ship (kg.)
Electric	18	18	8.2	8.2
Air	15	15	6.8	6.8

- Dimension "F" is the overall length of standard model reels. MX chain drive crank models, reels require 2" clearance to remove crank handle.
- 5. When ordering, prefix model number with:

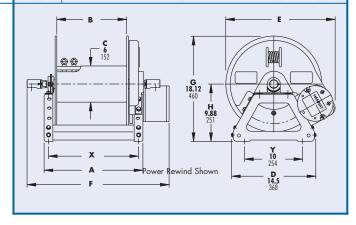
A = Air Rewind E = Electric Rewind

MX = Chain Drive Crank

(Air rewind reels are supplied with control valve and hose;
12v and 24v DC rewind reels are supplied with switch and solenoid;
115v AC rewind reels are not supplied with switch but can be ordered.

115v AC rewind reels are not supplied with switch but can be ordered separately.)

- 6. Finish: refer to Page 4.
- 7. Be sure to check dimensions and weights prior to ordering.
- 8. Some roller options may prohibit the use of our molded chain guard.



NOTICE: A Flexible Connector must be used between the inlet pipe and the inlet swivel joint.

- * When shipped as a parcel package (via Fed-Ex or UPS Ground).
- *** x,y indicate mounting holes. See page 2



- Hydraulics
- Spray **Painting**
- **Gear Driven Crank Rewind** Shown



Optional External Mounting Brackets part no. 9906.0025. Add 2-1/2" to the X dimensions shown in the chart.

REWIND

To handle dual 1/4" through 1/2" I.D. hose.

- Two swivel joint inlets and two outlet risers to handle two equal lengths of hose.
- Gear-drive crank rewind.
- Pinion brake as standard.
- Standard inlets 90° ball bearing swivel joints 1/2" female NPT threads.
- Standard outlets 1/2" female NPT threads.
- Pressures to 3000 psi (207 bar).
- Temperatures from $+20^{\circ}$ F to $+400^{\circ}$ F (-7° C to $+204^{\circ}$ C).
- Consult factory for other pressures & temps.
- For power rewind see Series 2000, pg. 16.
- Reels for use with oxygen/acetylene. (See Welding Catalog H-0408-W).

Parts Drawing — ISO 205

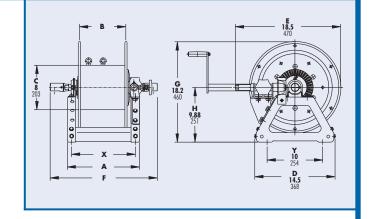
Model Number		Hose Capac	<u>et </u>		Approx. Crank ll k	. Weight Rewind b g.		Reel Dim incl mi		
	I.D. (in) I.D. (mm)	1/4" 6	3/8" 10	1/2" 13	MET	CIUD				v
	O.D. (in) O.D. (mm)	5/8" 16	3/4" 19	7/8" 22	NET	SHIP	Α	В	F	Х
G2016-17-18-8		2/75 2/23	2/50 2/15	2/35 2/11	40 15	50* 23	13 330	8 203	21 533	11.5 292
G2020-17-18-8		2/125 2/38	2/100 2/31	2/50 2/15	42 18	50* 23	17 432	12 305	25 635	15.5 394
G2026-17-18-8		2/200	2/150 2/46	2/100 2/31	44 19	50*	23 584	18 457	31 787	21.5 546

Notes:

- 1. Specifications subject to change.
- 2. Upon request, reels can be supplied with drum lengths other than shown.
- 3. Finish: refer to Page 4.
- 4. Be sure to check dimensions and weights prior to ordering.

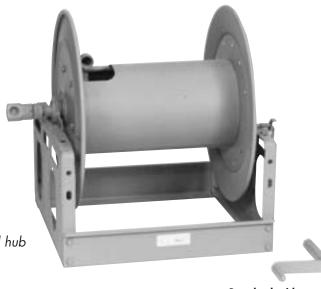
NOTICE: A Flexible Connector must be used between the inlet pipe and the inlet swivel joint.

- * When shipped as a parcel package (via Fed-Ex or UPS Ground).
- *** x,y indicate mounting holes. See page 2



To handle 3/4" or 1" I.D. hose.

- Economical manual rewind reels for long lengths of hose.
- Choose disc rewind or removable direct crank rewind.
- Supplied with spring-actuated pin lock.
- Standard inlet 90° ball bearing swivel joint 1" female NPT threads.
- Standard outlet 1" female NPT thread.
- Optional bronze or aluminum swivel joint and stainless steel hub assembly and riser, are available
- Optional Rollers may be purchased.
- Pressures to 1000 psi (69 bar)
- Temperatures from -60° F to +250° F (-51° C to +121° C).
- Consult factory for other pressures & temps.



Standard with **Crank Handle**

For:

- Fuel Dispensing (Consult Factory)
- Spray Operations
- Fire Protection

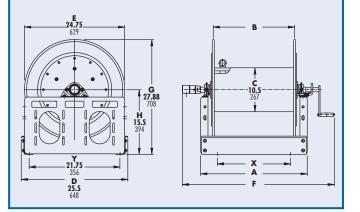
Parts Drawing — ISO 113

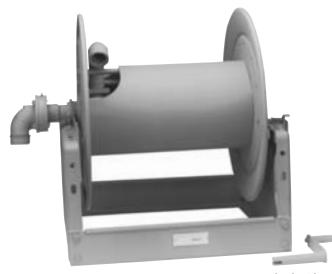
Model Number		<u>'f</u>	icity of Reel eet m.		Ċrank	. Weight Rewind lb.		Reel Dim <u>inch</u> mr		
		Round	Hose	Collapsible Hose						
	I.D. (in) I.D. (mm)	3/4" 19	1" 25	1" 25						
	O.D. (in) O.D. (mm)	1-9/32 " 33	1-9/16" 40	1/2"x1-3/4" 13 x 44	NET	SHIP	A	В	F	X
3016-25-26		100 30	50 15	200 61	85 39	120 54	13 330	7.5 191	23.75 603	7.75 197
3020-25-26		150 46	100 30	300 91	94 43	129 59	17 432	11.5 292	27.75 705	9 229
3024-25-26		250 76	150 46	400 122	103 47	138 63	21 533	15.5 394	31.75 806	13 330
3028-25-26		300 91	200 61	550 168	113 51	155 70	25.5 648	20 508	36.25 921	17.5 445

- 1. Specifications subject to change.
- 2. Upon request, reels can be supplied with drum lengths other than shown and with disc sizes in other diameters.
- 3. Power rewind NOT available on these models.
- 4. Dimension "F" is the overall length of standard model reels. Crank rewind models, 3–1/2" clearance required to remove crank.
- 5. Subtract 5" from 'F' dimension for disc rewind models.
- 6. Finish: Call factory for offshore/marine finish, available at extra cost. Refer to Page 4.
- 7. Be sure to check dimensions and weights prior to ordering.

NOTICE: A Flexible Connector must be used between the inlet pipe and the inlet swivel joint.

*** x,y indicate mounting holes. See page 2





Standard with Crank Handle

For:

- Fuel Dispensing (Consult Factory)
- Bulk Transfer
- Fire Protection

3500

MANUAL REWIND REELS

To handle 1" through 1-3/4" I.D. hose.

- Economical manual rewind reels for long lengths of hose.
- Choose disc rewind or removable direct crank rewind.
- Supplied with spring-actuated pin lock.
- Standard inlet 90° swivel joint 1-1/2" female NPT threads and 2" victaulic groove.
- Standard outlet flanged riser with 1-1/2" female NPT threads.
- Optional bronze or aluminum swivel joint and stainless steel hub assembly and riser, are available
- Optional Rollers may be purchased.
- Pressures to 600 psi (41 bar)
- \bullet Temperatures from -40° F to +175° F (-40° C to +79° C).
- Consult factory for other pressures & temps.

Parts Drawing - ISO 111

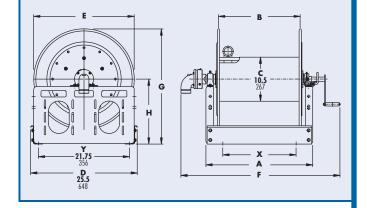
Model Number		Н	ose Capacit feet m.	y of Reel			x. Weight Rewind lb. kg.	t Reel Dimensions*** inches mm.						
	I.D. (in)	1"	1-1/2"	1-1/2"	psible Hose 1-3/4"									
	1.D. (mm) O.D. (in) 0.D. (mm)	25 1-9/16" 40	38 2-1/16 " 52	38 3/4"x3" 19 x 76	44 7/8"x3-1/4" 22 x 83	NET	SHIP	A	В	E	F	G	Н	Х
3516-25-26		50 15	<u>-</u> -	50 15	50 15	95 43	130 59	13 330	7.5 191	24.75 629	26 660	27.88 708	15.5 394	7.75 197
3520-25-26		1 00 30	50 15	1 00 30	75 23	104 47	139 63	17 432	11.5 292	24.75 629	30 762	27.88 708	15.5 394	9 229
3524-25-26		150 46	75 23	150 46	100 30	113 51	157 71	21 533	15.5 394	24.75 629	34 864	27.88 708	15.5 394	1 3 330
3528-25-26		200 61	100 30	200 61	150 46	123 56	173 78	25.5 648	20 508	24.75 629	38.5 978	27.88 708	15.5 394	17.5 445
3524-30-31		200 61	100 30	250 76	150 46	124 56	174 79	21 533	15.5 394	28.75 730	34 864	29.88 759	15.5 394	1 3 330
3528-30-31		250 76	150 46	300 91	250 76	134 61	184 83	25.5 648	20 508	28.75 730	38.5 978	29.88 759	15.5 394	17.5 445
3534-30-31		350 107	200 61	450 137	350 107	147 67	197 89	31.5 800	26 660	28.75 730	44.5 1130	29.88 759	15.5 394	23.5 597
3530-33-34		400 122	250 76	450 137	350 107	138 63	188 85	27.5 699	22 559	31.75 806	40.5 1029	32.38 822	16.5 419	19.5 495

Notes:

inlet swivel joint.

- 1. Specifications subject to change.
- 2. Upon request, reels can be supplied with drum lengths other than shown and with disc sizes in other diameters.
- 3. Power rewind NOT available on these models.
- Dimension "F" is the overall length of standard model reels.
 Crank rewind models, 3-1/2" clearance required to remove crank.
- 5. Subtract 5" from 'F' dimension for disc rewind models.
- Finish: Call factory for offshore/marine finish, available at extra cost. Refer to Page 4.
- 7. Be sure to check dimensions and weights prior to ordering.

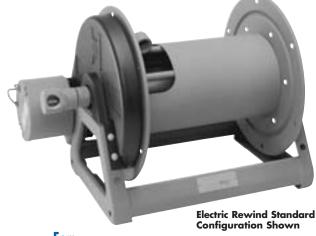
 NOTICE: A Flexible Connector must be used between the inlet pipe and the
- *** x,y indicate mounting holes. See page 2



NUAL OR POWER **REWIND REELS**

To handle single 3/4" or 1" I.D. hose.

- Lightweight compact reels designed for long lengths of hose in manual and power rewind.
- Direct crank rewind is removable.
- Chain and sprocket drive powered by electric, hydraulic, or compressed air motor.
- Direct crank rewind, cam-lock drag brake, spring actuated pin lock.
- Standard inlet 90° ball bearing swivel joint 1" female NPT threads.
- Standard outlet 1" female NPT threads.
- Optional Rollers: Specify roller position when ordering.
- Pressures to 1000 psi (69 bar).
- Temperatures from -60° F to +250° F (-51° C to +121° C).
- Consult factory for other pressures & temps.



- Fuel Dispensing (Consult Factory)
- Fire Protection
- Water Supply
- Chemical Transfer



Optional External Mounting Brackets part no. 9906.0025. Add 2-1/2" to the X dimensions shown in the chart.

Parts Drawing — ISO 68

Model Number	Ho	ose Capacity of financial means	Reel		. Weight Rewind ³ b g.	Reel Dimensions*** inches mm.						
For Power Rewind See Note 5	I.D. (in) I.D. (mm)	3/4" 19	1" 25									
See Indie 3	O.D. (in) O.D. (mm)	1-9/32" 33	1-9/16" 40	NET	SHIP	A	В	E Crank	E Power	F Crank	F Power	X
4018-17-18		50 15	35 11	36 16	50* 23	15 381	10 254	16.5 419	19 483	27 686	20.5 521	13.5 343
4024-17-18		100 30	50 15	46 21	56* 25	21 533	16 406	16.5 419	19 483	33 838	26.5 673	19.5 495
4030-17-18		150 46	75 23	57 26	62* 28	27 22 16.5 19 39 32.5 25.5 686 559 419 483 991 826 648						
4038-17-18		200 61	100 30	70 32	112 51	35 30 16.5 19 47 40.5 33.5 889 762 419 483 1194 1029 851						

Notes:

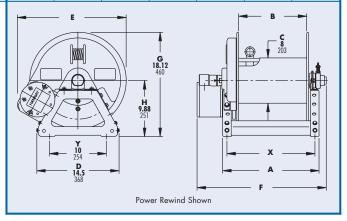
- 1. Specifications subject to change.
- 2. Upon request, reels can be supplied with drum lengths other than shown.
- 3. Weights shown in chart are for crank rewind models. ADD these amounts for power rewind models:

	Net (lbs.)	Ship (lbs.)	Net (kg.)	Ship (kg.)
Electric	18	18	8.2	8.2
Hydraulic	15	15	6.8	6.8
Air	15	15	6.8	6.8

- 4. Dimension "F" is the overall length of standard model reels. Crank rewind reels require 3-1/2" clearance to remove or install crank handle.
- 5. When ordering power rewind models, prefix model number with: E = Electric Rewind HD = Hydraulic Rewind A = Air Rewind(Air rewind reels are supplied with control valve and hose; 12v and 24v DC rewind reels are supplied with switch and solenoid; 115v AC rewind reels are not supplied with switch but can be ordered separately; hydraulic rewind reels are not supplied with control valve.)
- 6. Finish: refer to Page 4.
- 7. Be sure to check dimensions and weights prior to ordering. 8. Some roller options may prohibit the use of our molded chain guard.

NOTICE: A Flexible Connector must be used between the inlet pipe and the inlet swivel joint.

- * When shipped as a parcel package (via Fed-Ex or UPS Ground).
- *** x,y indicate mounting holes. See page 2, also for external mounting brackets.





with Gear Driven **Crank Rewind**

Electric Rewind Shown

For:

- Fuel Dispensing (Consult Factory)
- Fire Protection
- Water Supply
- Chemical Transfer

MANUAL OR POWER **REWIND REELS**

To handle single 3/4" or 1" I.D. hose.

- Lightweight compact reels designed for long lengths of hose in manual and power rewind.
- Gear driven crank rewind handle is removable.
- Chain and sprocket drive powered by electric, hydraulic, or compressed air motor.
- Gear driven crank rewind, adjustable pinion brake.
- Standard inlet 90° ball bearing swivel joint 1" female NPT threads.
- Standard outlet 1" female NPT threads.
- Optional Rollers: Specify roller position when ordering.
- Pressures to 1000 psi (69 bar).
- Temperatures from -60° F to +250° F (-51° C to +121° C).
- Consult factory for other pressures & temps.

Parts Drawing — ISO 206

Model Number	Н	ose Capacity of <u>feet</u> m.	Reel		. Weight Rewind ³ b ^{(g} .			Reel Dim ind mi			
For Power Rewind	I.D. (in) I.D. (mm)	3/4" 19	1" 25								
See Note 5	O.D. (in) 0.D. (mm)	1-9/32" 33	1-9/16" 40	NET	SHIP	A B E E F CRANK POWER				Х	
4118-17-18		50 15	35	62 28	97 44	15 381	10 254	18 457	20.5 521	21.5 546	7.5 190
4124-17-18		100 30	50 15	72 33	107 49	21 533	16 406	18 457	20.5 521	27.5 699	13.5 343
4130-17-18		150 46	75 23	83 38	118 54	27 686	22 559	18 457	20.5 521	33.5 851	19.5 495
4138-17-18		200 61	100 30	96 44	131 59	35 889	30 762	18 457	20.5 521	41.5 1054	27.5 698

Notes:

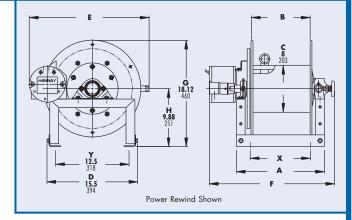
- 1. Specifications subject to change.
- 2. Upon request, reels can be supplied with drum lengths other than shown.
- 3. Weights shown in chart are for crank rewind models. ADD these amounts for power rewind models:

	Net (lbs.)	Ship (lbs.)	Net (kg.)	Ship (kg.)
Electric	18	18	8.2	8.2
Hydraulic	15	15	6.8	6.8
Air	15	15	6.8	6.8

- 4. Dimension "F" is the overall length of standard model reels.
- 5. When ordering power rewind models, prefix model number with: A = Air Rewind E = Electric Rewind HD = Hydraulic Rewind (Air rewind reels are supplied with control valve and hose; 12v and 24v DC rewind reels are supplied with switch and solenoid; 115v AC rewind reels are not supplied with switch but can be ordered separately; hydraulic rewind reels are not supplied with control valve.)
- 6. Finish: refer to Page 4.
- 7. Be sure to check dimensions and weights prior to ordering.

NOTICE: A Flexible Connector must be used between the inlet pipe and the inlet swivel joint.

*** x,y indicate mounting holes. See page 2



6000

MANUAL OR POWER REWIND REELS

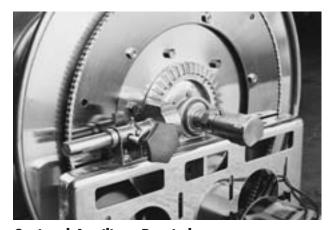
To handle single 1/2" through 1" I.D. hose.

- Heavy-duty reel for longer lengths of hose.
- Choose Gear-driven crank rewind or chain and sprocket drive powered by an electric, hydraulic or compressed air motor.
- Crank rewind reels supplied with pinion brake, power rewind reels with a comet brake.
- Standard inlet a 90° ball bearing swivel joint 1" female NPT threads.
- Standard outlet 1" female NPT threads.
- Standard inlet, outlet riser and hub assembly are steel.
 Optional bronze or aluminum swivel joint and stainless steel hub assembly and riser, are available.
- Optional Rollers may be purchased.
- Pressures to 1000 psi (69 bar).
- Temperatures from -60° F to +250° F (-51° C to +121° C).
- Consult factory for other pressures & temps.

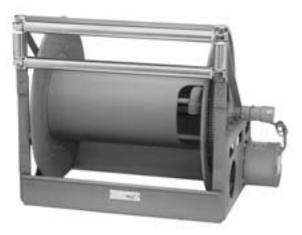


For:

- Fuel Dispensing (Consult Factory)
- Spray Operations
- Fire Protection
- Water Blasting*
- Sewer Cleaning*
- *Heavy-duty construction required. Consult factory.



Optional Auxiliary Rewind
Ring and pinion shaft rewind unit with
removable crank handle



Shown with optional Assembly C Roller
Top Wind



Parts Drawing - ISO 84

Model Number		fe	city of Reel n.		Crank R	. Weight Lewind ³ J g.	Reel Dimensions*** inches mm.									
For Power Rewind See Note 4	I.D. (in) I.D. (mm) O.D. (in) O.D. (mm)	1/2" 13 7/8" 22	3/4" 19 1-9/32" 33	1" 25 1-9/16" 40	NET	SHIP	A	В	D	E	F CRANK	F POWER	G	Н	х	Y
6024-19-21		235 72	125 38	60 18	85 39	127 58	21 533	15.5 394	20.5 521	18.75 476	25.38 645	28.5 724	21.5 546	12.12 308	13 330	16.75 425
6032-19-21		350 107	200 61	1 00 30	102 46	144 65	29.5 749	24 610	20.5 521	18.75 476	33.88 861	37 940	21.5 546	12.12 308	21.5 546	16.75 425
6024-23-24		450 137	185 56	100 30	92 42	134 61	21 533	15.5 394	20.5 521	22.75 578	25.38 645	28.5 724	23.5 597	12.12 308	13 330	16.75 425
6030-23-24		<u>-</u> -	250 76	150 46	105 48	147 67	27.5 699	22 559	20.5 521	22.75 578	31.88 810	35 889	23.5 597	12.12 308	19.5 495	16.75 425
6038-23-24		<u>-</u> -	350 107	200 61	120 54	162 73	35 889	29.5 749	20.5 521	22.75 578	39.38 1000	42.5 1080	23.5 597	12.12 308	27.5 699	16.75 425
6016-25-26		285 87	100 30	60 18	88 40	130 59	13 330	7.5 191	25.5 648	24.75 629	17.38 441	20.5 521	27.88 708	15.5 394	7.75 197	21.75 552
6022-25-26		500 152	200 61	100 30	100 45	142 64	19 483	13.5 343	25.5 648	24.75 629	23.38 594	26.5 673	27.88 708	15.5 394	11 279	21.75 552
6028-25-26		<u>-</u> -	300 91	200 61	113 51	155 70	25.5 648	20 508	25.5 648	24.75 629	29.88 759	33 838	27.88 708	15.5 394	17.5 445	21.75 552
6018-30-31		450 137	235 72	135 41	101 46	151 68	15 381	9.5 241	25.5 648	28.75 730	19.38 492	22.5 572	29.88 759	15.5 394	7 178	21.75 552
6024-30-31		<u>-</u> -	400 122	200 61	113 51	163 74	21 533	15.5 394	25.5 648	28.75 730	25.38 645	28.5 724	29.88 759	15.5 394	13 330	21.75 552
6028-30-31		<u>-</u> -	500 152	265 81	121 55	171 78	25.5 648	20 508	25.5 648	28.75 730	29.88 759	33 838	29.88 759	15.5 394	17.5 445	21.75 552
† 6030-30-31		<u>-</u> -	550 168	300 91	125 57	175 79	27.5 699	22 559	25.5 648	28.75 730	31.88 810	35 889	29.88 759	15.5 394	19.5 495	21.75 552
† 6028-33-34		- -	600 183	350 107	129 59	179 81	25 635	20 508	31.5 800	31.75 806	29.62 752	32.75 832	33.62 854	17.75 451	17.5 445	27.75 705

Notes:

Specifications subject to change.

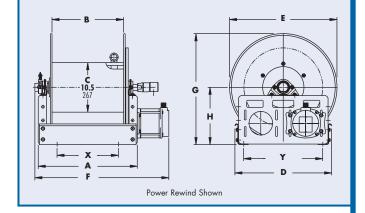
- 1. Upon request, reels can be supplied with drum lengths other than shown and with disc sizes in other diameters.
- Dimensions shown for reels up to and including 30-31 disc size reflect pressed frames. All others are rollformed channel frames.
- 3. Weights shown in chart are for crank rewind models. ADD these amounts for power rewind models:

	Net (lbs.)	Ship (lbs.)	Net (kg.)	Ship (kg.)
Electric 1/2 HP	40	40	18.1	18.1
Hydraulic	20	20	9.1	9.1
Air	20	20	9.1	9.1

- 4. When ordering power rewind models, prefix model number with: A = Air Rewind EP = Electric Rewind (1/2 hp) HD = Hydraulic Rewind (Air rewind reels are supplied with control valve and hose; 12v and 24v DC rewind reels are supplied with switch and solenoid; 115v AC rewind reels are not supplied with switch but can be ordered separately; hydraulic rewind reels are not supplied with control valve.)
- 5. Finish: refer to Page 4.
- 6. Be sure to check dimensions and weights prior to ordering.

NOTICE: <u>A Flexible Connector</u> must be used between the inlet pipe and the inlet swivel joint.

- *** x,y indicate mounting holes. See page 2
 - † Some applications require a clutch/reduction unit.



UAL OR POWER REWIND REELS

To handle dual 3/4" or 1" I.D. hose.

- Two swivel joint inlets and two outlet risers to handle two equal lengths of hose.
- Choose gear-driven crank rewind or chain & sprocket drive powered by an electric, hydraulic or compressed air motor. An auxiliary rewind is standard.
- Crank rewind and power rewind reels, pinion brake standard.
- Standard inlets 90° ball bearing swivel joints 1" female NPT threads.
- Standard outlets 1" female NPT threads.
- Standard inlet, outlet riser and hub assembly are steel. Optional bronze or aluminum swivel joint and stainless steel hub assembly and riser, are available.
- Pressures to 1000 psi (69 bar).
- Temperatures from -60° F to +250° F (-51° C to +121° C).
- Consult factory for other pressures & temps.



For:

- Hydraulics
- Dual Agents

Parts Drawing — ISO 72

Model Number	Hos	se Capacity of R feet m.	teel		. Weight Lewind ⁴ b ^{g.}				I	Reel Dim inch mr	_	k*			
For Power Rewind See Note 5	I.D. (in) I.D. (mm) O.D. (in) O.D. (mm)	3/4" 19 1-9/32" 33	1" 25 1-9/16" 40	NET	SHIP	A	В	D	E	F CRANK	F POWER	G	Н	X	Υ
7024-19-21	o.p. (mm)	2/60 2/18	2/25 2/8	100 45	142 64	21 533	15.5 394	20.5 521	21.88 556	29.75 756	32.12 816	21.5 546	12.12 308	13 330	16.75 425
7026-23-24		2/90 2/27	2/50 2/15	105 48	147 67	23 584	17.5 445	20.5 521	23 584	31.75 806	34.12 867	23.5 597	12.12 308	15 381	16.75 425
7016-25-26		2/40 2/12	2/30 2/9	95 43	145 66	13 330	7.5 191	25.5 648	24.75 629	21.75 552	24.12 613	27.88 708	15.5 394	7.75 197	21.75 552
7032-25-26		2/175 2/53	2/100 2/31	129 59	179 81	29.5 749	24 610	25.5 648	24.75 629	38.25 972	40.62 1032	27.88 708	15.5 394	21.5 546	21.75 552
† 7032-30-31		2/300 2/91	2/150 2/46	137 62	187 85	29.5 749	24 610	25.5 648	28.75 730	38.25 972	40.62 1032	29.88 759	15.5 394	21.5 546	21.75 552
† 7024-33-34		2/225 2/69	2/115 2/35	120 54	170 77	20.5 521	15.5 394	31.5 800	31.75 806	29.75 756	32.12 816	33.62 854	17.75 451	13 330	27.75 705
† 7032-33-34		2/350 2/107	2/200 2/61	137 62	187 85	29 737	24 610	31.5 800	31.75 806	38.25 972	40.62 1032	33.62 854	17.75 451	21.5 546	27.75 705

- 1. Specifications subject to change.
- 2. Upon request, reels can be supplied with drum lengths other than shown and with disc sizes in other diameters.
- 3. Dimensions shown up to and including 30-31 disc size reflect pressed frames. All others are rollformed channel frames.
- 4. Weights shown in chart are for crank rewind models. ADD these amounts for power rewind models:

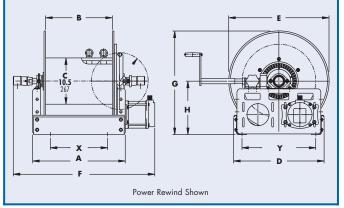
ioi powci	Net (lbs.)	Ship (lbs.)	Net (kg.)	Ship (kg.)
Electric	40	40	18.1	18.1
Hydraulic	20	20	9.1	9.1
Air	20	20	9 1	9.1

5. When ordering, prefix model number with:

A = Air Rewind EP = Electric Rewind MX = Chain Drive Crank HD = Hydraulic Rewind (Air rewind reels are supplied with control valve and hose; 12v and 24v DC rewind reels are supplied with switch and solenoid; 115v AC rewind reels are not supplied with switch but can be ordered separately; hydraulic rewind reels are not supplied with control valve.)

6. **Finish:** refer to Page 4.

7. Be sure to check dimensions and weights prior to ordering.



NOTICE: A Flexible Connector must be used between the inlet pipe and the

^{***} x,y indicate mounting holes. See page 2 † Some applications require a clutch/reduction unit.





- Fuel Dispensing (Consult Factory)
- Bulk Transfer
- Suction/Discharge (Consult Factory)

Optional Auxilary Rewind (Ring and pinion shaft rewind unit with removable crank handle)

MANUAL OR POWER REWIND REELS

To handle single 1" through 1-1/2" I.D. hose.

- Heavy-duty reel designed for longer lengths.
- Choose gear-driven crank rewind or chain and sprocket drive powered by an electric, hydraulic or compressed air motor.
- Crank rewind reels supplied with pinion brake and power rewind reels with a comet brake.
- Standard inlet 90° ball bearing swivel joint 1-1/2" female NPT threads and 2" victaulic groove.
- Standard outlet flanged riser 1-1/2" female NPT threads.
- Standard inlet, outlet riser and hub assembly are steel. Optional bronze or aluminum swivel joint and stainless steel hub assembly and riser, are available.
- Rollers may be purchased as accessory items.
- Operate at pressures to 600 psi (41 bar).
- Temperatures from -40° F to $+175^{\circ}$ F (-40° C to $+79^{\circ}$ C).
- Consult factory for other pressures & temps.

Parts Drawing — ISO 18

Model Number		<u>_f</u>	ecity of Reel eet m.			. Weight Rewind ⁴ lb ^{(g.}	, mm.									
For Power Rewind See Note 5	I.D. (in) I.D. (mm) O.D. (in) O.D. (mm)	1" 25 1-9/16" 40	1-1/4" 32 1-13/16" 46	1-1/2" 38 2-1/16" 52	NET	SHIP	A	В	D	E	F CRANK	F POWER	G	Н	X	Υ
7528-19-21		85 26	70 21	50 15	104 47	146 66	25.5 648	20 508	20.5 521	18.75 476	32 813	33 838	21.5 546	12.12 308	17.5 445	16.75 425
7538-23-24		200 61	190 58	100 30	130 59	172 78	35 889	29.5 749	20.5 521	22.75 578	41.5 1054	42.5 1080	23.5 597	12.12 308	27 686	16.75 425
7520-25-26		115 35	75 23	50 15	106 48	148 67	17 432	11.5 292	25.5 648	24.75 629	23.5 597	24.5 622	27.88 708	15.5 394	9 229	21.75 552
7528-25-26		200 61	135 41	100 30	123 56	165 75	25.5 648	20 508	25.5 648	24.75 629	32 813	33 838	27.88 708	15.5 394	17.5 445	21.75 552
7522-30-31		190 58	160 49	100 30	118 54	168 76	19 483	13.5 343	25.5 648	28.75 730	25.5 648	26.5 673	29.88 759	15.5 394	11 279	21.75 552
† 7528-30-31		285 87	260 79	160 49	131 59	181 82	25.5 648	20 508	25.5 648	28.75 730	32 813	33 838	29.88 759	15.5 394	17.5 445	21.75 552
† 7526-33-34		335 102	200 61	200 61	133 60	1 83 83	22.5 572	17.5 445	31.5 800	31.75 806	29.25 743	30.25 768	33.62 854	17.75 451	15 381	27.75 705

Notes:

- 1 Specifications subject to change.
 2. Upon request, reels can be supplied with drum lengths other than shown and with disc sizes in other diameters.
- 3. Dimensions shown for reels up to and including 30-31 disc size reflect pressed frames. All others are

rewind models. ADD these amounts for power rewind models:

3. Dimensions and rollformed channel frames.

4. Weights shown in chart are for crank rewind mod Net (lbs.)

Ship (lbs.)

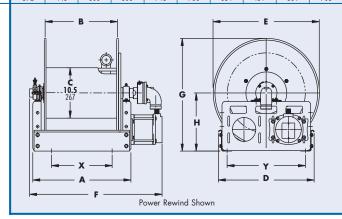
40 Net (kg.) 18.1 9.1 Ship (kg.) 18.1 20 20 Hydraulic 20 20

6. Finish: refer to Page 4.

7. Be sure to check dimensions and weights prior to ordering.

NOTICE: A Flexible Connector must be used between the inlet pipe and the inlet swivel joint.

* x,y indicate mounting holes. See page 2† Some applications require a clutch/reduction unit.



8000

MANUAL OR POWER REWIND REELS

To handle single 1-1/2" or 2" I.D. hose.

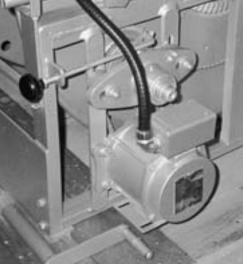
- Heavy-duty reel designed for longer lengths and larger diameters of hose through 2" I.D.
- Choose gear-driven crank rewind or chain and sprocket drive powered by an electric, hydraulic or compressed air motor.
- Crank rewind reels supplied with a pinion brake, power rewind reels with a comet brake.
- Standard inlet 90° ball bearing swivel joint 2" female NPT threads.
- Standard outlet flanged riser 2" female NPT threads
- Standard inlet, outlet riser and hub assembly are steel.
 Optional bronze or aluminum swivel joint and stainless steel hub assembly and riser, are available.
- Rollers may be purchased as accessory items.
- Pressures to 600 psi (41 bar).
- Temperatures from -40° F to $+175^{\circ}$ F (-40° C to $+79^{\circ}$ C).
- Consult factory for other pressures & temps.



Shown with Optional Auxilary Rewind

For:

- Bulk Transfer
- Chemical Transfer
- General Dispensing
- Suction/Discharge (consult factory)
- Fueling Applications
 Refer to:
 Aviation Catalog
 H-0418-AVIA
 Petroleum Catalog
 H-0417-FD



Chain Clutch-Reduction Units

For use on reels with 39" diameter or larger discs and/or when increased torque and slower rewind speeds are required. Factory-installed when specified or available as an accessory item.



Parts Drawing - ISO 35

Model Number	H	ose Capacity of F feet m.	teel	<u></u>	Approx. Weight Crank Rewind ³ <u>lb.</u> kg.					Reel Din incl		**			
For Power Rewind See Note 4	I.D. (in) 1.D. (mm) O.D. (in) O.D. (mm)	1-1/2" 38 2-1/16" 52	2" 51 2-9/16" 65	NET	SHIP	A	В	D	E	F CRANK	F POWER	G	Н	X	Y
8234-26-27		80 24	60 18	120 54	170 77	26.25 667	20 508	27 686	25.75 654	33.75 857	34.75 883	26.62 676	13.75 349	18.75 476	23.25 591
8238-26-27		100 30	75 23	145 66	195 88	30.25 768	24 610	27 686	25.75 654	37.75 959	38.75 984	26.62 676	13.75 349	22.75 578	23.25 591
8246-26-27		145 44	100 30	196 89	245 112	38.25 972	32 813	27 686	25.75 654	45.75 1162	46.75 1188	26.62 676	13.75 349	30.75 781	23.25 591
8226-33-34		85 26	60 18	80 36	150 68	17.75 451	11.5 292	31.5 800	31.75 806	25.25 641	26.25 667	33.38 848	17.75 445	10.25 260	27.75 705
8234-33-34		150 46	115 35	133 60	230 105	26.25 667	20 508	31.5 800	31.75 806	33.75 857	34.75 883	33.38 848	17.75 445	18.75 476	27.75 705
8238-39-40		340 104	225 69	218 99	420 191	30.25 768	24 610	40 1016	39 991	37.75 959	38.75 984	39.88 1013	20.38 518	22.75 578	37 940

Notes:

- 1. Specifications subject to change.
- Upon request, reels can be supplied with drum lengths other than shown and with disc sizes in other diameters.
- 3. Weights shown in chart are for crank rewind models. ADD these amounts for power rewind models:

	Net (lbs.)	Ship (lbs.)	Net (kg.)	Ship (kg.)
Electric	40	40	18.1	18.1
Hydraulic	20	20	9.1	9.1
Aír	20	20	9.1	9.1

4. When ordering power rewind models, prefix model number with:

A = Air Rewind EP = Electric Rewind (1/2 HP)

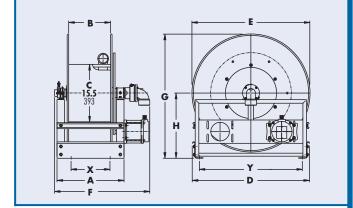
HD = Hydraulic Rewind

(Air rewind reels are supplied with control valve and hose; 12v and 24v DC rewind reels are supplied with switch and solenoid; 115v AC rewind reels are not supplied with switch but can be ordered separately; hydraulic rewind reels are not supplied with control valve.)

- 5. Finish: refer to Page 4.
- Be sure to check dimensions and weights prior to ordering.

NOTICE: A Flexible Connector must be used between the inlet pipe and the inlet swivel joint.

*** x,y indicate mounting holes. See page 2



2000

MANUAL OR POWER REWIND REELS

To handle 2" through 3" I.D. hose.

- Heavy-duty reel designed for longer lengths and larger diameters of hose through 3" I.D.
- Choose gear-driven crank rewind or chain and sprocket drive powered by an electric, hydraulic or compressed air motor.
- Crank rewind reels supplied with a pinion brake power rewind reels with a comet brake.
- Standard inlet 90° ball bearing swivel joint 3" female NPT threads.
- Standard outlet flanged riser 3" female NPT threads.
- Standard, outlet riser and hub assembly are aluminum with ductile inlet. Optional bronze or aluminum swivel joint and stainless steel hub assembly and riser, are available.
- Rollers may be purchased as accessory items.
- Pressures to 300 psi (21 bar).
- Temperatures from -20° F to +225° F (-29° C to +107° C).
- Consult factory for other pressures & temps.

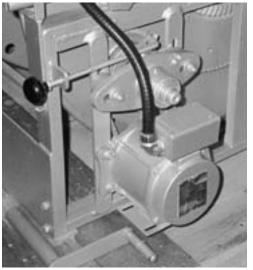


Shown with Optional Auxilary Rewind

For:

- Suction/Discharge (consult factory)
- High Volume Application
- Bulk Transfer
- Chemical Transfer

• Fueling Applications
Refer to:
Aviation Catalog
H-0418-AVIA
Petroleum Catalog
H-0417-FD



Chain Clutch-Reduction Units

For use on reels with 39" diameter or larger discs and/or when increased torque and slower rewind speeds are required. Factory-installed when specified or available as an accessory item.



Parts Drawing - ISO 57

Model Hose Capacity of Reel Number <u>feet</u> m.						Approx. Weight Crank Rewind ³										
For Power Rewind	I.D. (in) I.D. (mm)	2" 51	2-1/2" 64	3" 76												
See Note 4	O.D. (in) O.D. (mm)	2-9/16" 65	3-3/16" 81	3-3/4" 95	NET	SHIP	A	В	D	E	F Crank	F POWER	G	Н	X	Y
9332-33-34		70 21	30 9	25 8	147 67	217 98	23.75 603	17.5 445	31.75 807	31.75 807	33.75 857	33.25 845	33.88 861	18 457	16.25 413	27.75 705
9338-33-34		1 00 30	45 14	35	187 85	257 117	30.25 768	24 610	31.75 807	31.75 807	40.25 1022	39.75 1010	33.88 861	18 457	22.75 578	27.75 705
9346-33-34		140 43	60 18	50 15	237 108	372 169	38.25 972	32 813	31.75 807	31.75 807	48.25 1226	47.75 1213	33.88 861	18 457	30.75 781	27.75 705
9338-39-40		185 56	90 27	80 24	239 108	480 218	30.25 768	24 610	40 1016	39 991	40.25 1022	39.75 1010	40.38 1026	20.88 530	22.75 578	37 940
9334-45-46		200 61	130 40	115 35	361 164	525 239	26.25 667	20 508	46 1168	45 1143	36.25 921	35.75 908	46.38 1178	23.88 607	18.75 476	43 1092

Notes:

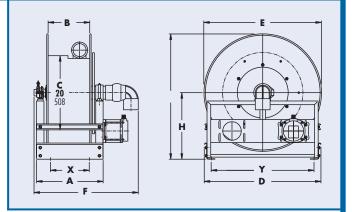
- 1. Specifications subject to change.
- 2. Upon request, reels can be supplied with drum lengths other than shown and with disc sizes in other diameters.
- 3. Weights shown in chart are for crank rewind models. ADD these amounts for power rewind models:

	Net (lbs.)	Ship (lbs.)	Net (kg.)	Ship (kg.)
Electric	40	40	18.1	18.1
Hydraulic	20	20	9.1	9.1
Air	20	20	9.1	9.1

- 4. When ordering power rewind models, prefix model number with: A = Air Rewind EP = Electric Rewind (1/2 HP) HD = Hydraulic Rewind
- (Air rewind reels are supplied with control valve and hose; 12v and 24v DC rewind reels are supplied with switch and solenoid; 115v AC rewind reels are not supplied with switch but can be ordered separately; hydraulic rewind reels are not supplied with control valve.)
 5. **Finish:** refer to Page 4.
- 6. Be sure to check dimensions and weights prior to ordering.

NOTICE: A Flexible Connector must be used between the inlet pipe and the inlet swivel joint.

*** x,y indicate mounting holes. See page 2



PORTABLE HOSE REELS ON WHEELS

To handle 3/8" through 5/8" I.D. hose.

- Continuous flow reels with swivel joint inlet, fluid hub, outlet riser.
- Comes with cam-lock brake.
- Direct crank rewind.
- One-piece foot, rubber tires, and removable steel handlebar.
- Permanently attached crank.
- Standard inlet 90° ball bearing swivel joint 1/2" female NPT
- Standard outlet is 1/2" female NPT threads.
- GH Prefix to model # (e.g. GH1100) includes garden hose thread on outlet, 5' lead-in hose, hose end clips.
- Pressures to 3000 psi (207 bar).
- Temperatures from $+20^{\circ}$ F to $+400^{\circ}$ F (-7° C to $+204^{\circ}$ C).



GH 1100 Configuration Shown

For:

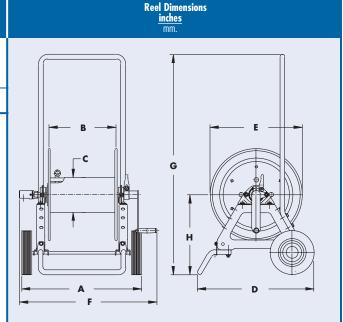
- Grounds **Maintenance**
- Restaurants/Hotels
- Home Use

Parts Drawing — ISO 48

Model Number		Hose Capa <u>fe</u>	Approx. Weight — lb. kg.			
	I.D. (in) I.D. (mm)	3/8" 10	1/2" 13	5/8" 16		
	O.D. (in) O.D. (mm)	3/4" 19	7/8" 22	1" 25	NET	SHIP
1100		275 84	175 53	125 38	47 21	50* 23

Notes:

- 1. Specifications subject to change.
- 2. Finish: refer to Page 4.
- 3. Be sure to check dimensions and weights prior to ordering.
 - * When shipped as a parcel package (via Fed-Ex or UPS Ground).





For:

- Grounds
 Maintenance
- Restaurants/Hotels
- Home Use

AT1200

PORTABLE HOSE REELS ON WHEELS

To handle 1/2" through 1" I.D. hose.

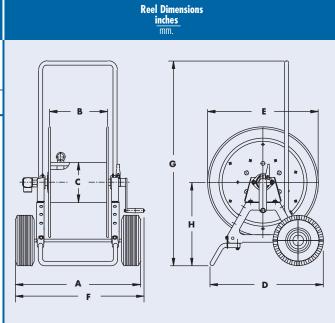
- Continuous flow reels with swivel joint inlet, fluid hub, outlet riser.
- Comes with pneumatic tires and cam-lock drag brake.
- Direct crank rewind.
- One-piece foot, and removable steel handlebar.
- Permanently attached crank.
- Model AT1200 –standard inlet 90° balance pressure swivel joint 1" female NPT threads.
- Standard outlet is 1" female NPT threads.
- GH Prefix to model # (e.g. GHAT1200) includes garden hose thread on outlet, 5' lead-in hose, hose end clips.
- Operates at pressures to 1000 psi.
- Temperatures from -40° F to +250° F (-40° C to +121° C).
- Consult factory for other pressures & temps.

Parts Drawing - ISO 87

Model Number		Hose	Approx. Weightkg.				
	I.D. (in) I.D. (mm)	1/2" 13	5/8" 16	3/4" 19	1" 25		
	O.D. (in) O.D. (mm)	7/8" 22	1" 25	1-9/32 " 33	1-9/16" 40	NET	SHIP
AT1200		350 107	250 76	150 46	100 30	86 39	91* 41

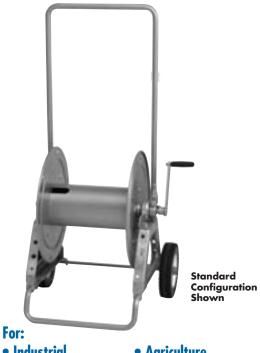
Notes:

- 1. Specifications subject to change.
- 2. Finish: refer to Page 4.
- 3. Be sure to check dimensions and weights prior to ordering.
 - *When shipped as a parcel package (via Fed-Ex or UPS Ground)



PORTABLE STORAGE REELS **ON WHEELS**

- Direct crank rewind
- One-piece foot, rubber tires, and removable steel handlebar
- For storing cable, hose or rope. A 1-1/8" x 2-3/8" (28 mm x 60 mm) opening in the drum to initiate winding.
- Comes with cam-lock brake.

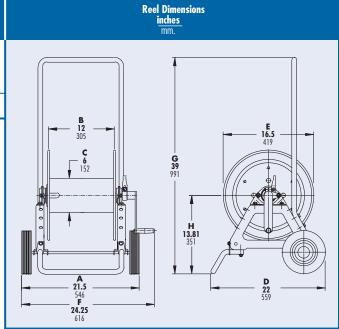


- Industrial **Maintenance**
- Construction
- Agriculture
- Grounds **Maintenance**

Parts Drawing - ISO 48

Model Number		Cable	Capacity o feet m.	f Reel		Approx. Weight lb. kg.			
		16/3	14/3	12/3	10/3				
	O.D. (in) 0.D. (mm)	.390 10	.530 14	.600 15	.690 18	NET	SHIP		
C1150		1100	500	400	300	44	50*		
		335	152	122	91	20	23		

- 1. Specifications subject to change.
- 2. When ordering specify model number, O.D., length and weight of cable, hose, etc.
- 3. **Finish:** refer to Page 4.
- 4. Be sure to check dimensions and weights prior to
 - *When shipped as a parcel package (via Fed-Ex or UPS Ground), some assembly required.





ATC1250

PORTABLE STORAGE REELS ON WHEELS

- Direct crank rewind.
- One-piece foot, pneumatic tires, and removable steel handlebar.
- A larger version of the C1150 model with pneumatic tires and a 4-1/2" x 9" (114 mm x 229 mm) drum opening.
- Supplied with a cam-lock drag brake.

Standard Configuration Shown

For:

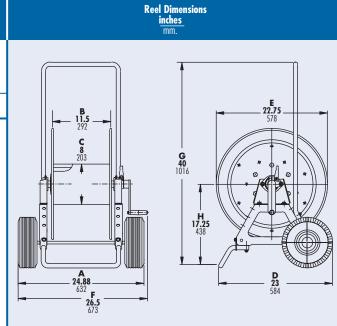
- Industrial Maintenance
- Construction
- Agriculture
- Grounds
 Maintenance

Parts Drawing - ISO 87

Model Number		Cable		Approx. Weight lb. kg.			
		Go					
		16/3	14/3	12/3	10/3		
	O.D. (in) 0.D. (mm)	.390 10	.530 14	.600 15	.690 18	NET	SHIP
ATC1250		1800 549	950 290	750 229	550 168	84 38	89* 40

Notes:

- 1. Specifications subject to change.
- When ordering specify model number, O.D., length and weight of cable, hose, etc.
- 3. **Finish:** refer to Page 4.
- 4. Be sure to check dimensions and weights prior to ordering.
 - * When shipped as a parcel package (via Fed-Ex or UPS Ground), some assembly required.



OR POWER REWIND STORAGE REELS

To handle single 1/4" through 1" O.D.

- Reels are designed for storage of long lengths of hose, cable, rope, wire or other materials.
- A 1-1/8" \times 2-3/8" (28 mm \times 60 mm) opening in the drum to initiate winding.
- Direct crank rewind, permanently attached. Removable crank option is available. Also available chain and sprocket rewind powered by electric, compressed air, or hydraulic motor.
- Supplied with cam lock brake on manual rewind models only.
- Optional divider discs can be placed at almost any point. Be sure to specify spacing of discs on your order.
- Rollers may be purchased as accessory items.



Standard Configuration Shown

For Storage Of:

- Hose
- Rope
- Cable
- Wire

Parts Drawing — ISO 179

Model Number	Hose Capacity of Reel <u>feet</u> m.						Approx. Weight Crank Rewind 4							
Rewind See Note 5	O.D. (in) O.D. (mm)	1/4" 6	1/2" 13	3/4" 19	1" 25	NET	SHIP	A	В	E Crank	E POWER	F CRANK	F POWER	X
C1514-17-18		1300 396	325 99	150 46	75 23	23 10	34* 15	11 279	6 152	16.5 419	19 483	16 406	15.75 400	9.5 241
C1520-17-18		<u>-</u> -	650 198	300 91	150 46	25 11	50* 23	17 432	12 305	16.5 419	19 483	22 559	21.75 552	15.5 394
C1526-17-18		<u>-</u> -	900 274	450 137	225 69	27 12	50* 23	23 584	18 457	16.5 419	19 483	28 711	27.75 705	21.5 546
C1530-17-18		-	1000 305	550	275 84	29	50 *	27	22	16.5	19 483	32 813	31.75	25.5

Notes:

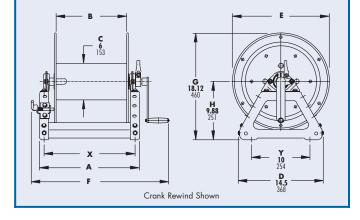
- 1. Specifications subject to change.
- 2. Upon request, reels can be supplied with drum lengths other than shown and with disc sizes in other dimensions.
- 3. Dimensions reflect pressed frames.
- 4. Weights shown in chart are for crank rewind models. ADD these amounts for power rewind models.

Net (kg.) Net (lbs.) Ship (lbs.) Ship (kg.) Electric 18 18 8.2 8.2 Hydraulic 15 15 6.8 6.8 15 15 6.8 6.8

5. When ordering power rewind models Prefix model number with:

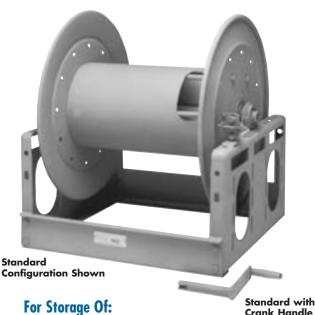
E = Electric Rewind HD = Hydraulic Rewind A = Air Rewind (Air rewind reels are supplied with control valve and hose; 12v and 24v DC rewind reels are supplied with switch and solenoid; 115v AC rewind reels are not supplied with switch but can be ordered separately; hydraulic rewind reels are not supplied with control valve.) 6. Finish: refer to Page 4.

- 7. Be sure to check dimensions and weights prior to ordering.
 - * When shipped as a parcel package (via Fed-Ex or UPS Ground).
- *** x,y indicate mounting holes. See page 2





Optional External Mounting Brackets part no. 9906.0025. Add 2-1/2" to the X dimensions shown in the chart.



MANUAL REWI STORAGE REELS

To handle single 1/2" through 1-1/2" O.D.

- A 4-1/2" x 9" (114mm x 229mm) opening in the drum to initiate winding.
- Designed for storage of long lengths of hose, cable, rope, wire or other materials.
- Choose disc rewind or removable direct crank rewind.
- Supplied with spring actuated pin lock.
- Optional divider discs can be placed at almost any point. Be sure to specify spacing of discs on your order.
- Rollers may be purchased as accessory items.

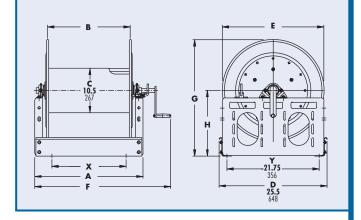
- Hose
- Rope
- Cable
- Wire

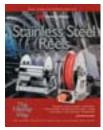
Parts Drawing — ISO 117

Model Number							I	pprox. Weight Reel Dimensions*** crank Rewind							
	O.D. (in) 0.D. (mm)	1/2" 13	3/4" 19	1" 25	1-1/4" 32	1-1/2" 38	NET	SHIP	A	В	E CRANK	F CRANK	G	Н	X
C3218-25-26		1 000 305	450 137	225 69	125 38	90 27	85 39	127 58	15 381	9.5 241	24.75 629	22 559	27.88 708	15.5 394	7 178
C3228-25-26		<u>-</u> -	1 000 305	500 152	325 99	200 61	109 49	151 68	25.5 648	20 508	24.75 629	32.5 826	27.88 708	15.5 394	17.5 445
C3234-25-26		<u>-</u> -	1 300 396	650 198	400 122	275 84	122 55	164 74	31.5 800	26 660	24.75 629	38.5 978	27.88 708	15.5 394	23.5 597

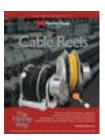
Notes:

- 1. Specifications subject to change.
- 2. Upon request, reels can be supplied with drum lengths other than shown and with disc sizes in other dimensions.
- 3. Dimensions reflect pressed frames.
- 4. Series C3200 requires $3 \cdot 1/2$ " clearance to remove crank handle.
- 5. Subtract 5" from 'F' dimension for disc rewind on C3200 Series.
- 6. **Finish:** refer to Page 4.
- 7. Be sure to check dimensions and weights prior to ordering.
- *** x,y indicate mounting holes. See page 2





Stainless Steel Reels



Cable Reels



Firefighting Reels



Welding Reels



Reference Guide



Pressure Wash Reels



Audio/Video Reels



Ordering & Accessory Guide



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