

Fire Sprinklers - Pre-action Systems

Last Issue Date: 02/11/2021		Type Of Service				
Activity		A	B	C	D	E
1	Check the sprinkler control valve assembly area.		Y	Y	Y	Y
2	Check signage for damage, legibility, and appropriate location of each of the following: a) Sprinkler block plan. b) Sprinkler stop valve inside plate. c) Booster connection signage. d) System pressure gauge schedule. e) Sprinkler and hydrant valve list. f) Interface diagram.		Y	Y	Y	Y
3	Check the spare sprinklers quantity and type are appropriate.		Y	Y	Y	Y
4	Check and ensure there is a spanner for every sprinkler type.		Y	Y	Y	Y
5	Check that the booster connection is unobstructed for its use. Verify the connection type is as per fire brigade requirements.		Y	Y	Y	Y
6	Check the main stop valves and alarm valves are secured in the open position. Check main stop valves are labelled.		Y	Y	Y	Y
7	Check that each isolating valve to each automatic pump start device is locked in the open position.		Y	Y	Y	Y
8	Check pressure switches are provided with a cover, securely mounted, correctly labelled and free of any condition that affect its function.		Y	Y	Y	Y
9	Check the alarm signaling equipment (ASE) is securely mounted, correctly labelled and free of any condition that affect its function.		Y	Y	Y	Y
10	Check the sprinkler system alarm interface with other systems is not isolated, inhibited, or disabled.		Y	Y	Y	Y
11	Check all water supply stop valves (including backflow preventer but excluding underground key-operated valves) are fully operational, secured in the open position and correctly labelled.		Y	Y	Y	Y
12	Before conducting an alarm function test, record the system pressure for each pressure gauge and verify the pressure readings are within the range required.		Y	Y	Y	Y
13	Verify the correct operation of each alarm signal. For monitored systems ensure it has activated the alarm signaling equipment.		Y	Y	Y	Y
14	Check each strobe indicator is fully operational (where fitted).		Y	Y	Y	Y
15	After conducting every alarm function test, record the system pressure for each pressure gauge and verify the pressure readings are within the ranges required.		Y	Y	Y	Y
16	Test each automatic pump starting device, record the pump cut-in pressures and verify they are within the ranges required. See Special Comments for the TDS references and applicable legislation and Standards.		Y	Y	Y	Y
17	Test each manual pump starting device. See Special Comments for the TDS references and applicable legislation and Standards.		Y	Y	Y	Y

Disclaimer -This TDS is intended to provide guidance only to support Preventative Maintenance servicing activities. All TDS users are encouraged to read and understand the full [Conditions of Use](#) provided on the final page of this document and on the DPTI website.

For more information please contact the applicable Facilities Management Service Provider.



Government of South Australia
Department of Planning,
Transport and Infrastructure

Download Date: 04/11/2021

Fire Sprinklers - Pre-action Systems

Last Issue Date: 02/11/2021		Type Of Service				
Activity		A	B	C	D	E
18	Conduct a routine service to the fire water storage tanks. See Special Comments for the TDS references and applicable legislation and Standards.		Y	Y	Y	Y
19	For foam systems, check for the correct level of foam concentrate, verify level indicator reads correctly. See Special Comments for the TDS references and applicable legislation and Standards.		Y	Y	Y	Y
20	Air compressor: a) Check the oil level. b) Visually assess the condition of the oil. c) Check that the regulator is locked and set in the correct position.		Y	Y	Y	Y
21	For air compressor (where fitted), record the cut in and out pressures and verify they are set as specified.		Y	Y	Y	Y
22	Where fitted, inspect and test the electrical detection components. See Special Comments for the TDS references and applicable legislation and Standards.		Y	Y	Y	Y
23	For nitrogen supply (where fitted): a) Check the cylinders are pressurized. Record each cylinder pressure. b) Check the regulator is locked and set in the correct position.		Y	Y	Y	Y
24	Test the solenoid valve for correct operation.		Y	Y	Y	Y
25	For low air pressure alarms, verify: a) Operation at predetermined levels. b) The operation pressure and record. c) Low pressure alarm(s) visual indicator and sounders are operational.		Y	Y	Y	Y
26	Simulate operation of each deluge valve to test the local and fire brigade alarms.			Y	Y	Y
27	Operate each flow switch and verify alarm signal at the fire panel.			Y	Y	Y
28	Operate all underground key-operated and subsidiary stop valves (except the ones owned by the water authority) and ensure they are fully open, secured in the open position and correctly labelled. Co-ordinate with the water authority to test the valves.			Y	Y	Y
29	Test each valve monitoring device. Verify the signal at the fire panel.			Y	Y	Y
30	Before conducting a main drain test, record the pressure from each pressure gauge and verify the pressure gauge readings are within the ranges indicated on the pressure gauge schedule.			Y	Y	Y
31	For towns main water supply, undertake the main drain valve water supply test.			Y	Y	Y
32	For water supply sources such as ponds, lakes, rivers, and the like: a) Check the inlet strainer or screen. b) Clean or replace if necessary.			Y	Y	Y
33	Via the pre-action valve test the local and fire brigade alarms.			Y	Y	Y
34	Restore system air pressure and verify the alarm has been reseating. Record the time to operate the alarm(s), verify that alarm(s) do not exceed 20 seconds.			Y	Y	Y

Disclaimer -This TDS is intended to provide guidance only to support Preventative Maintenance servicing activities. All TDS users are encouraged to read and understand the full [Conditions of Use](#) provided on the final page of this document and on the DPTI website.

For more information please contact the applicable Facilities Management Service Provider.



Government of South Australia
Department of Planning,
Transport and Infrastructure

Download Date: 04/11/2021

Fire Sprinklers - Pre-action Systems

Activity		Type Of Service				
		A	B	C	D	E
Last Issue Date: 02/11/2021						
35	Restore FIP/ASE and any related electrical control unit to operational status.			Y	Y	Y
36	For each pressure gauge: a) Record pressure. b) Verify pressure readings are within the ranges required.			Y	Y	Y
37	Secure all valves and alarm cocks in the open or close position as labelled.			Y	Y	Y
38	Verify operation of all pressure reducing valves under flow conditions. Record low and high pressure and check the low pressure reading is within the range required.				Y	Y
39	Test the pressure relief valve, record the operating pressure and check it is as per valve nameplate.				Y	Y
40	Conduct water supply test, record flow and pressure for: a) Static supply (no-flow). b) Hydraulically most unfavorable duty flow. c) Hydraulically most unfavorable duty pressure. d) Maximum water supply flow (minimum pressure). Provide a test report.				Y	Y
41	Test the alarm valve by opening each remote test valve, record the time to operate alarm gong and verify time does not exceed the relevant Australian Standard requirement.				Y	Y
42	Test the interface control via the pressure switch or flow switch. Verify the interface operates as required. Water motor alarm gong: Clean the strainer and lubricate the external gong mechanism.				Y	Y
43	Water motor direct brigade alarm: Clean the strainer.				Y	Y
44	Check the alarm signaling equipment batteries. Record: a) Date last replaced. b) Test load current and final test voltage.				Y	Y
45	For the tank quick fill water supply, conduct a water supply test through a flow measuring device. Record the flow and pressure.				Y	Y
46	Kitchen hoods and ducts: Inspect and clean all sprinklers.				Y	Y
47	Foam system: Test the foam concentrate as per NFPA 11.				Y	Y
48	Foam system: Check and clean the foam concentrate strainer.				Y	Y
49	Check the exposed water distribution system for corrosion, damage and adequate fixings.				Y	Y
50	Check the condition of the sprinklers will not affect complying function.				Y	Y
51	Check for missing or damaged escutcheons, cover plates or guards.				Y	Y
52	Check for any obstructions to the sprinklers and for sufficient clearance below the				Y	Y

Disclaimer -This TDS is intended to provide guidance only to support Preventative Maintenance servicing activities. All TDS users are encouraged to read and understand the full [Conditions of Use](#) provided on the final page of this document and on the DPTI website.

For more information please contact the applicable Facilities Management Service Provider.



Government of South Australia
Department of Planning,
Transport and Infrastructure

Download Date: 04/11/2021

Fire Sprinklers - Pre-action Systems

Last Issue Date: 02/11/2021		Type Of Service				
Activity		A	B	C	D	E
	sprinklers.					
53	Check for: a) Unprotected areas. b) Sprinkler spacing and location to wall, bulkhead, and partitions. c) Alteration, extensions that may affect the system performance. And whether sprinkler guards need to be installed.				Y	Y
54	Check all sprinklers within a compartment are of similar characteristics (coverage, operating temperature and RTI).				Y	Y
55	Check for changes in ambient temperature which may require a different sprinkler operating temperature setting.				Y	Y
56	Check the need for new external sprinklers due to the construction of any new buildings around the building being serviced.				Y	Y
57	Verify the hazard classification remains the same as per the sprinkler system design.				Y	Y
58	Verify the storage height and the commodity classification remain the same as per the sprinkler system design.				Y	Y
59	Check the block plans, emergency instructions and pressure schedules are compliant.				Y	Y
60	Check that the updated sprinkler system drawings are available on site.				Y	Y
61	For the air receiver condensate, drain condensate from condensate trap and air compressor receiver.				Y	Y
62	Check the sprinkler pipework and detection installation are secure.				Y	Y
63	Check the pre-action systems cover the extent of the protected area.				Y	Y
64	Overhaul the alarm valve including fitting of new alarm valve seating or port seating.					Y
65	Overhaul the main drain valve and test valve as necessary depending on the type.					Y
66	Overhaul the alarm cock plug.					Y
67	Overhaul the jacking pump as per the manufacturer's recommendations (where fitted).					Y
68	Overhaul the retard chambers (where fitted).					Y
69	Stop valves: Overhaul or replace as necessary.					Y
70	Overhaul the water supply non return valves.					Y
71	Water motor alarm gong: Clean and service.					Y
72	Water motor direct brigade alarm (where fitted): Clean and service.					Y
73	Check all gauges include calibration.					Y
74	Overhaul all special valves (pressure-reducing, pressure-relief, tail-end).					Y
75	Service the air compressor assembly as per manufacturer's recommendations.					Y

Disclaimer - This TDS is intended to provide guidance only to support Preventative Maintenance servicing activities. All TDS users are encouraged to read and understand the full [Conditions of Use](#) provided on the final page of this document and on the DPTI website.

For more information please contact the applicable Facilities Management Service Provider.



Government of South Australia
Department of Planning,
Transport and Infrastructure

Download Date: 04/11/2021

Fire Sprinklers - Pre-action Systems

Last Issue Date: 02/11/2021		Type Of Service				
		A	B	C	D	E
Activity						
76	Foam systems: via the foam maker or similar, check: a) The proportioning ratio. b) Drainage rate. Refill the foam concentrate tank.					Y
77	Overhaul the pre-action valves.					Y
78	Accelerator / exhaust: Check & clean the operating mechanism, fit new seals and a faceplate.					Y
79	Fit new pre-action valve seats. Check and clean the operating mechanism. Fit a new cover plate gasket/s.					Y
80	Record the results in the customer service report / log book.		Y	Y	Y	Y

Special Comments and Technical Data

- B SERVICE MONTHLY
- C SERVICE SIX MONTHLY
- D SERVICE ANNUAL
- E SERVICE FIVE YEARLY

THE ACTIVITIES LISTED ABOVE ARE OF A GENERIC NATURE AND MAY NEED TO BE VARIED TO SUIT THE MANUFACTURER'S RECOMMENDATIONS, APPLICABLE REGULATORY REQUIREMENTS AND SITE CONDITIONS. WHERE ANY DISCREPANCY EXISTS BETWEEN THE MANUFACTURER'S RECOMMENDATION, (INCLUDING THE SERVICE FREQUENCY), AND THIS TDS OR ANY REFERRED TDS, THE MOST STRINGENT REQUIREMENT / FREQUENCY SHOULD TAKE PRECEDENCE.

REFERENCED AND ASSOCIATED TDS ARE:
F39 FOR: INTERFACE TESTING OF FIRE PROTECTION SYSTEMS.

THIS TDS MUST BE READ IN CONJUNCTION WITH:
Ministerial Building Standard MBS 002 - Maintaining the Performance of Essential Safety Provisions.
AS 1851 - Routine Service of Fire Protection Systems and Equipment.
AS 1670.1 - Fire Detection, Warning, Control and Intercom Systems.
AS 1670.4 - Fire Detection, Warning, Control and Intercom Systems-System design, installation and commissioning. Part 4: Sound systems and intercom system for emergency purposes.
AS 1668 - The use of ventilation and air conditioning in buildings.
AS 2118.1 - Automatic Fire Sprinkler Systems.

Disclaimer - This TDS is intended to provide guidance only to support Preventative Maintenance servicing activities. All TDS users are encouraged to read and understand the full [Conditions of Use](#) provided on the final page of this document and on the DPTI website.

For more information please contact the applicable Facilities Management Service Provider.



Government of South Australia
Department of Planning,
Transport and Infrastructure

Download Date: 04/11/2021

Conditions of Use

A TDS should be used as a generic guide for Facilities Management Service Providers (FMSP) to deliver Facilities Maintenance Services, specifically Preventative Maintenance in accordance with the DPTI [Agency Work Procedure Manual](#).

Users of a TDS should familiarise themselves with the following **Conditions of Use**:

1. You use the information and data contained in any TDS published by DPTI at your sole risk. DPTI-AGFMA does not have the expertise to provide complete or accurate technical data schedules and provides these technical data sheets merely as a starting point and/or guide.
2. If you rely on the information in a TDS you are responsible for ensuring, by independent verification, its accuracy, currency and completeness. DPTI cannot guarantee that the information contained in a TDS meets the standards or requirements of legislative requirements.
3. A TDS is not an exhaustive list of tasks or obligations that may be required and is generally generic in nature. DPTI does not oblige the user of a TDS to rely on it to the exclusion of other sources of information. For example, manufacturer's requirements may need to be followed for additional and / or alternative tasks and for additional and / or alternative servicing frequencies. You should always check the primary source of information such as the Australian Standards, manufacturer's specifications, legislation and other standards before undertaking any work to which a schedule may apply.
4. You must apply appropriate risk management principles and carry out all tasks in accordance with obligations under the [Work Health and Safety Act 2012](#).
5. You must not use a TDS unless you meet the specific competency requirements for preventative maintenance servicing works and are capable of applying the TDS to your trade or area of expertise. A TDS is only to be used by people who are specifically instructed by DPTI to use them and only for work undertaken in South Australia.
6. DPTI, its agents, instrumentalities, officers and employees make no representations, express or implied, as to the accuracy of the information, the data contained in a TDS or the suitability of a TDS for a particular purpose.
7. DPTI does not provide legal advice. DPTI accepts no liability, howsoever arising, for any loss resulting from the use of a TDS and any information or data or reliance placed on them.
8. DPTI may change information and data in a TDS without notice.
9. DPTI may revise this disclaimer at any time by updating these Conditions of Use.