## Pump house weekly test and maintenance record



Insured Name:		
Location:		

Please make routine enquiries of, and return completed test records to:

**Aviva Protection Solutions Team** 

sprinklerreview@aviva.com

PLEASE ENSURE COMPLETED TEST CARDS
ARE RETURNED TO THE EMAIL ADDRESS ABOVE
AS SOON AS PRACTICABLE AFTER
31ST DECEMBER/YEAR END

For Risk Management advice & resources please visit: **Aviva Risk Management Solutions.** 

The record card is provided by Aviva to enable you to record the results of weekly tests and procedures which should be carried out and may be a condition of your insurance.

## Procedures for shut down of the water supply or any installation

Your premises are vulnerable whenever your sprinkler system is inoperative; thus it is essential that the following precautions be taken. Any shut down of the water supply to the sprinkler system or any action that results in the protection being rendered inoperative, must be notified to Aviva via our <u>impairment management process</u>.

- 1. Alterations and repairs to the water supply or the installation should be carried out only during normal working hours, so far as is practicable, and all efforts must be made to ensure that the sprinklers remain inoperative for as short a time as possible.
- 2. As much of the sprinkler system as possible must remain operative during the progress of the work, particularly where the work cannot be completed in one day.
- 3. Before the water supply is turned off, a thorough examination of every part of the premises must be made to ascertain that there is no indication of fire.
- 4. When sprinkler protection is shut down during working hours, Managers and Supervisors must be notified, so that special vigilance can be maintained. Where practicable: Fire doors must be closed, smoking prohibited and hazardous operations controlled suspended or avoided.
- 5. When sprinkler protection is shut down you should follow Aviva's impairment management process.
- 6. After completion of the work, test the installation and water supplies to ensure they function correctly and that all-blank flanges or spades have been removed.

Whenever practicable, maintenance works should be planned in advance, and only undertaken after consultation with Aviva.

Always follow installer and manufacturer's instructions

Only trained personnel should undertake tests or maintainence

## PUMP HOUSE WEEKLY INSPECTION AND TESTS TO BE MADE

The Test Record Sheet of this card must be completed with the details and readings obtained during the weekly test procedure. The following notes are provided to assist in the completion of the tests in a full and correct manner. In all circumstances manufacturer's guidance must be followed.

## Untrained or unsupervised personnel should not undertake these tests.

ITEM	TEST OR CHECK	GUIDANCE NOTE
Pump House	Check ambient temperature before starting tests. Check pump room heating especially during winter or cold spells. Check that any automatic sump pumps operate correctly. Check all panels are showing correct indications. Check all stop valves are secured in the correct position.	Pump houses must be maintained at +10°C where a diesel driver is installed or +4°C where only electrically driven pumps are installed.  During testing the temperature rise within the pump room must be limited to 'no' more than 10°C above ambient. Check operation of any automatic ventilation when pumps are operating.
Pre-test Checks	Before starting any pumps ensure that: Suction and/or priming tank water is available Pump controllers signal normal/healthy indicators Electrical isolators correctly set "ON" and phase indicator Lamps are illuminated Before starting any diesel pump ensure that: All batteries are sound and have correct electrolyte level Check battery specific gravity Engine oil (lube) is at maximum on dipstick Fuel tank is full with reserve supply available Where radiator cooling or heat exchangers are fitted coolant levels are correct All water and oil pressure hoses are intact Drive belts adjusted and in good condition Exhaust systems complete and secure	Where cooling is provided to a diesel engine directly from the pump via a pressure relief valve or solenoid valve, it is essential that this supply be maintained. Failure of this supply, will if the pump is run, result in engine failure.  In addition to the fuel maintained in the engine fuel tank additional supplies sufficient to sustain a further six hours running must be readily available on site. Pressure hoses to/from coolers must be maintained, as failure will result in engine damage.  Diesel engine exhausts need to be kept in good order as leaking exhaust fumes constitute a Health and Safety hazard to personnel. At all times manufacturer's recommendations must be followed.  Ni-Cad batteries are not necessarily maintenance free.
Priming Tank	For each tank ensure: The ball valve on the infill operates correctly The low level float switch starts the pump The outlet valve is secured open Where a return line from the pump(s) is fitted that this operates when the pump(s) operate/run.	Priming tanks are normally filled from a connection via a ball valve from the Public supply.  In order to present loss of priming due to a defective foot valve or other leak, priming tanks are usually fitted with either a low level ball valve or float (Mobrey) switch.  Both devices will start the pump if priming is lost.
Jockey Pump(s) (Pressure Maintenance Pumps)	Test the automatic operation to ensure that it operates: At the correct setting "on" and "off" Without causing water hammer or contactor "chatter" Before any of the main fire pumps start pressure.	Correct pressure settings are important, to prevent the spurious operation of the main fire pumps due to minor pressure losses in the system.  If the "on/off" settings are set too close this can result in either water hammer or contactor chatter. Either, if not addressed, can lead to pump failure, which may result in the inappropriate operation of the main fire pumps and potential damage.
Electrically Driven Fire Pump	If more than one pump of this type is installed the following procedures must be followed for each pump: Test the pump for automatic starting Ensure that the pump operates at the correct starting pressure and record that pressure Check that the circulation relief line is discharging to waste (Should be 'No' flow when pump idle) The pump should be run for 10 minutes Record closed valve pressure If any problems occur shut down and call qualified engineer to attend.	The main fire pump(s) must be started automatically before the pressure in the system has fallen below 80% of the closed valve or "churning pressure" of the pump.  Minimum flow circulation lines discharging to waste are essential to prevent pump cavitation and overheating of both pump and driver. Failure to maintain this relief can lead to major damage of both pump and driver resulting in costly repairs and loss of protection whilst repairs are carried out. Leakage from these lines when the pump is at rest, is not necessary and adjustment will be required.
Diesel Driven Fire Pump(s)	If more than one pump of this type is installed the following procedures must be followed for each pump: Test each pump for automatic starting Ensure that the pump operates at the correct starting pressure and record that pressure Check that the circulation relief line is discharging to waste (Should be 'No' flow when pumps idle) Reset engine and restart on manual test run for a minimum of half an hour weekly Monitor throughout test to ensure pressure, speed and temperatures remain normal Monitor oil cooler hoses, gaskets for leaks Record hours run on completion of tests Check battery chargers operating after testing Check radiator levels before test	Check that there is a positive coolant flow where this is provided via a pressure relief/solenoid/differential valve. SHUT DOWN IMMEDIATELY IF THIS SUPPLY FAILS.  DO NOT leave the diesel unattended during testing. At any sign of a problem e.g. overheating etc. shut down, inhibit starting and call engineers.  Air-cooled diesels still require relief flow lines - refer to above. Batteries and their associated charging equipment need checking -refer to manufacturers instructions Immediately upon completion of testing, fuel tanks should be replenished, oil levels checked, and a full visual inspection made to ensure that the equipment is in order and reset for automatic use should a fire occur.
Water Storage Tank(s)	Ensure that the water level is correct by inspection of the actual levels, and check ball valve is operational so as to provide infill.  Check for any damage to the tank or roof Check immersion heater and trace heating and lagging Ensure test return line is drained to prevent frost damage	Water level gauges cannot be relied upon. Tank roofs must be kept in good order to prevent ingress of light and foreign objects.  Secure ball valve housing to prevent ingress of debris or accidents by unauthorised personnel.
River/Canals other Non- Portable Sources	Where the water source is from a river, canal reservoir etc. Check jack well, screens and foot valves are clear of all obstructions / weeds.	Such sources of supply need regular maintenance and inspection. Regular cleaning of jack wells is advisable and specialist contractors may be required for sludge removal.

\$ In	JANUARY	FEBRUARY	MA	MARCH	APRIL	MAY	JUNE
Storage Tank(s) - Full and In Order  Ball Valve Operating Correctly & Housing Lid Secured  All Pipe Lagging (incl. Drain Valves) Present & In Good Condition							
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Storage Talik(s) - Fower to Illillersion neater							
Pump House Clean, Tidy & Clear Of Any Storage, Waste, Etc.							
All Pump House Heaters Switched On							
Heater Thermostats On & Set Correctly							
Trace Heating Power Supplies Power "On"							
All Pump Suction Valves Fully Open & Secured							
All Pump Delivery Valves Fully Open & Secured							
Priming Tanks Full & In Order (Where Installed)							
Jockey Pump Start Pressure (Nearest 0.1 Bar)							
Jockey Pump Stop Pressure (Nearest 0.1 Bar)							
Ventilation Fans / Auto Louvres Operational							
All Remote Alarms Received at Panel							
All Fire Pumps, Equipment & Alarms Reset To Fully Automatic							
Tested By:							
Record Any Faults Identified, Actions Taken, Observations, Etc.							

PUMP HOUSE AND WATER STORAGE TANK(S)

Year:						
	טטנץ	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Date						
Storage Tank(s) - Full and In Order						
Ball Valve Operating Correctly & Housing Lid Secured						
All Pipe Lagging (incl. Drain Valves) Present & In Good Condition						
Storage Tank(s) - Power to Immersion Heater						
Pump House Clean, Tidy & Clear Of Any Storage, Waste, Etc.						
All Pump House Heaters Switched On						
Heater Thermostats On & Set Correctly						
Trace Heating Power Supplies Power "On"						
All Pump Suction Valves Fully Open & Secured						
All Pump Delivery Valves Fully Open & Secured						
Priming Tanks Full & In Order (Where Installed)						
Jockey Pump Start Pressure (Nearest 0.1 Bar)						
Jockey Pump Stop Pressure (Nearest 0.1 Bar)						
Ventilation Fans / Auto Louvres Operational						
All Remote Alarms Received at Panel						
All Fire Pumps, Equipment & Alarms Reset To Fully Automatic						
Tested By:						
Record Any Faults Identified, Actions Taken, Observations, Etc.						

PUMP HOUSE AND WATER STORAGE TANK(S)

Year:						
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
Date						
Pump Start Pressure (To Nearest 0.1 Bar)						
Cooling / Pressure Relief Water Flowing to Drain						
Pump Closed Head / Churn Presure (To Nearest 0.1 Bar)						
Control Panels - Lights Healthy						
Tested By:						
Record Any Faults Identified, Actions Taken, Observations, Etc.						

No:

ELECTRIC FIRE PUMP

Year:																					
	ű	JULY	≥	AUGUST	ä	ဟ	SEPTEMBER	MBE	א		OCTOBER	BER		Z	NOVEMBER	BER		믔	DECEMBER	BER	
Date																					
Pump Start Pressure (To Nearest 0.1 Bar)																					
Cooling / Pressure Relief Water Flowing to Drain																					
Pump Closed Head / Churn Presure (To Nearest 0.1 Bar)																					
Control Panels - Lights Healthy																					
Tested By:																					
Record Any Faults Identified, Actions Taken, Observations, Etc.																					

No:

**ELECTRIC FIRE PUMP** 

Year:						
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
Date						
Radiator / Coolant Level Checked & Correct						
Oil Level Checked & Correct						
Control Panel AC Supply On & All Lights Healthy						
Pump Start Pressure (Nearest 0.1 Bar)						
Cooling / Pressure Relief Water Flowing to Drain						
Pump Churn Pressure (Nearest 0.1 Bar)						
Manual Test Start Completed						
Hour Run To Date After Testing						
Fuel Level Topped Up / Minimum 3/4 Full						
Control Panels - Lights Healthy						
Tested By:						
Record Any Faults Identified, Actions Taken, Observations, Etc.						

No:

DIESEL FIRE PUMP

Year:						
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
Date						
Radiator / Coolant Level Checked & Correct						
Oil Level Checked & Correct						
Control Panel AC Supply On & All Lights Healthy						
Pump Start Pressure (Nearest 0.1 Bar)						
Cooling / Pressure Relief Water Flowing to Drain						
Pump Churn Pressure (Nearest 0.1 Bar)						
Manual Test Start Completed						
Hour Run To Date After Testing						
Fuel Level Topped Up / Minimum 3/4 Full						
Control Panels - Lights Healthy						
Tested By:						
Record Any Faults Identified, Actions Taken, Observations, Etc.						

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DIESEL FIRE PUMP