



ORDINARY AND EXTRAORDINARY MAINTENANCE

The water pressure which supplies the extinguishing system, composed of flow switch, solenoid valve and nozzles, is suggested to be at least 3 bar, so as to keep uniform the water jet that flows from the nozzle. 1 bar pressure is anyway enough to form the water jet. A higher pressure, 5-6 bar, is useful for a more effective extinguishing and a greater water speed that improves the extinguishing action when the nozzle to detector distance is in the range of minimum value as specified in the table graph on page MASP 13 of the application manual.

ORDINARY MAINTENANCE

The most critical element of the spark detection and extinguishing system is the water solenoid valve.

In fact, since it is composed of a pin pilot valve and a closing rubber elastic diaphragm on which a very small hole is drilled to perform the water opening and closing, it is easily jammed by dirt or foreign materials, or even calcareous layer, or worst, water frost that completely blocks the solenoid valve and deforms it in a permanent way.

We suggest to install a strainer before the solenoid valve in order to separate dirt. This strainer is a standard component well known to plumbers.

Periodically it must be opened and cleaned.

Inspection frequency is depending on the amount of dirt found. Also the solenoid valve must be periodically opened and cleaned, paying attention to the small hole of the diaphragm which, if jammed, prevents the solenoid valve from closing and creates a continuous water leak. The suggested inspection period is at least 6 months.

The non-closing solenoid valve leak problem is very common. In order to avoid bad consequences and damaging, we suggest, as a base prudence, to turn off the water tap at the end of every working cycle, morning and evening, night and before every stop period, holidays, and so on.

Water frost during winter must be avoided because it deforms and destroys the valve, causing a continuous water leak as soon as the ice will be melted.

We can suggest two ways to avoid the valve frost:

1. Insulating and heating the flow switch-valve system. For this purpose are well known heating cables used in mountain locations on roofs, gutters, car passing ways, pipes and water ducts.
2. Insulating and use of antifreeze liquid into the water supply booster.

Also the use of hot water is effective, provided the water is kept circulating around the flow switch-valve-nozzle system and water piping.

It is advisable to periodically check and eventually clean the optical window of the mounting frame. The frequency of this operation can be established based on the materials carried in the duct and to one's own experience.

All the spark detection and extinguishing system must be periodically verified in order to find faulty operations at least once a day.

For this purpose the TEST push button is available on the Control Panel.

I. Type "A" and "B" simple systems

By briefly depressing the TEST push button on the Control Panel all system is caused to operate:

- The Spark Detectors turn on for 3 seconds. The Extinguishing DET LEDs on the Control Panel turn on for 3 seconds.
- The Alarm Sounder sounds for 3 seconds.
- The Solenoid Valve opens for 3 seconds and the Nozzle sprays water for 3 seconds.
- If the Flow Switch is provided, the WATER FLOW LED on the Control Panel turns on for 3 seconds.
When alarm stops DET and WATER FLOW LEDs blink. Press the RESET pushbutton to reset the alarm memory and bring the LED signals back to the stand-by state (LEDs turn off).

II. Type "E1" and "E" complete systems

By briefly depressing the TEST push button on the Control Panel all system is caused to operate:

- The Spark Detectors, both for extinguishing and for monitoring, turn on for 3 seconds. Their LEDs on the Control Panel turn on for 3 seconds.
- The Alarm Sounder sounds for 3 seconds.
- Water is opened for 3 seconds by the Solenoid Valve, the Nozzle sprays water for 3 seconds and the WATER FLOW LED on the Control Panel turns on for 3 seconds.
- The STOP LED turns on in a permanent way and signals that the STOP output is energized to close the duct valve if present, and to stop the dust collection system fan.
- When alarm stops DET and WATER FLOW LEDs blink, STOP LED is on permanently.
- To turn off all the LEDs, to open the duct valve and to turn on the dust collection system fan, the RESET push button must be briefly depressed.

The periodical TEST operation doesn't disturb the dust collection system if it is performed during the day on more favorable moments, as for instance at the beginning of the morning and afternoon shifts just after the main fan switch is turned on. In this case the fan stop doesn't disturb the dust collection system and it can be turned on again without any problem.

EXTRAORDINARY MAINTENANCE

Since the ordinary maintenance is performed frequently, we can consider that the extraordinary maintenance is the operation of uninstalling all the sensitive parts such as Spark Detectors, Solenoid Valve and Flow Switch and sending them to Control Logic Srl - Milan for a full check.

The advised frequency is 5 years, unless particular conditions of heavy work or ordinary maintenance results suggest to anticipate it.