

Unifire Force Robotic Nozzles & FlameRanger

Maintenance Instructions



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Unifire Force Fire Monitors & FlameRanger System Maintenance, Testing & Inspection Schedule

The following schedule sets forth Unifire AB's mandatory minimum requirements for the maintenance, testing, and inspection of Unifire's Force robotic nozzle systems and FlameRanger autonomous fire suppression systems.

Certain components supplied with Unifire equipment are manufactured by third parties. All such components must be maintained, tested, and inspected strictly in accordance with the instructions of their respective manufacturers. The proper functioning of Unifire equipment further depends on the correct and reliable operation of other third-party systems and infrastructure, including but not limited to: pumps, valves, piping, foam proportioning systems, and a continuous, stable electrical power supply.

Compliance with this schedule is a condition of proper use of Unifire's equipment. Failure to adhere to these requirements — and to the corresponding recommendations of third-party component manufacturers and all applicable local, national, and international standards — may result in impaired system performance, increased risk of malfunction, and serious danger to life, health, and property.

Relevant standards and regulations include, without limitation:

- MSC.1/Circ.1432 and MSC.1/Circ.1516, as amended; and
- For marine applications, the LASH FIRE D10.3 Report (from page 89 onward).

Unifire expressly disclaims any responsibility or liability for system failures, damage, injury, or loss of any kind resulting from non-compliance with these requirements.

UNIFIRE MINIMUM RECOMMENDED MAINTENANCE, TESTING & INSPECTION SCHEDULE		
Time Interval	Type of System	Action
Weekly	FlameRanger autonomous fire monitor system (water only)	• Verify that all fire detection and fire alarm control panel indicators are functional by operating the lamp/indicator test switch.
Monthly	Force remote control fire monitor system (water only)	• Briefly run the Force remote controlled fire monitor in all axes (directions) and adjust the spray pattern several times to "exercise" the gears to prevent gear locking. This should be done without the use of water. • Ensure the proper function of all system joysticks and controllers, including all functions thereof.
	FlameRanger autonomous fire monitor system (water only)	• As per above, and: • Test automatic starting arrangements on all system pump(s) so designed. • Follow maintenance and testing procedures of the detector manufacturer(s).

UNIFIRE MINIMUM RECOMMENDED MAINTENANCE, TESTING & INSPECTION SCHEDULE		
Time Interval	Type of System	Action
Quarterly	Force remote control fire monitor system (water only)	- Visually inspect the monitors' motors, motor cables and connectors to ensure they are in good condition. (See: https://youtu.be/3CIE1Zt-pZE?si=ZxJnojPk2r29g1Mu) - Inspect exterior and interior of X-TARGA PLC; ensure that the interior is dry and clean and all electrical contacts are properly connected and that the seal is in good condition.
	FlameRanger autonomous fire monitor system (water only)	- As per above, and: - Follow maintenance and testing procedures of the detector manufacturer(s) and visually inspect them for evidence of misalignment, tampering obstruction, etc.
Annual	Force remote control fire monitor system (water only)	- Verify proper operation of all fire monitors by flowing water and confirm full coverage of the entire deck area. Ensure all piping is thoroughly flushed with fresh water after service. - Visually inspect all accessible components for proper condition. - Flow test all pumps for proper pressure and capacity. - Verify all pump relief valves, if provided, are properly set. - Examine all system filters/strainers to verify that they are free of debris and contamination. - Clean surfaces of the monitor, nozzle tip and cable connections. - Test emergency power supply switchover, where applicable. - Check for any changes that may affect the system such as obstructions.
	FlameRanger autonomous fire monitor system (water only)	- As per above, and: - Follow maintenance and testing procedures of the detector manufacturer(s). - Perform a live test of the FlameRanger system to confirm proper function: CAUTION: ensure that such a test is conducted under strictly safe conditions without risk of test fire spreading and the ability to independently extinguish the test fire if necessary; also ensure that no persons are within the range of the monitor's water stream so as to avoid any risk of injury therefrom. Unifire recommends that such test only be performed during the presence of qualified and trained professional firefighters.
5-year	Force remote control fire monitor system (water only)	- Perform internal inspection of all control/section valves and all fire monitors. - Replace all system M12 motor cables and joystick M12 cable with new cables supplied by Unifire AB.
	FlameRanger autonomous fire monitor system (water only)	- As per above, and: - Follow maintenance and testing procedures of the detector manufacturer(s).
10-year	Force remote control fire monitor system (water only)	These systems should be inspected and tested by a competent person as per the manufacturer's instructions, and as a minimum should include a hydrostatic test and internal examination for gas and water pressure cylinders according to EN 1968:2002.
	FlameRanger autonomous fire monitor system (water only)	As per above.