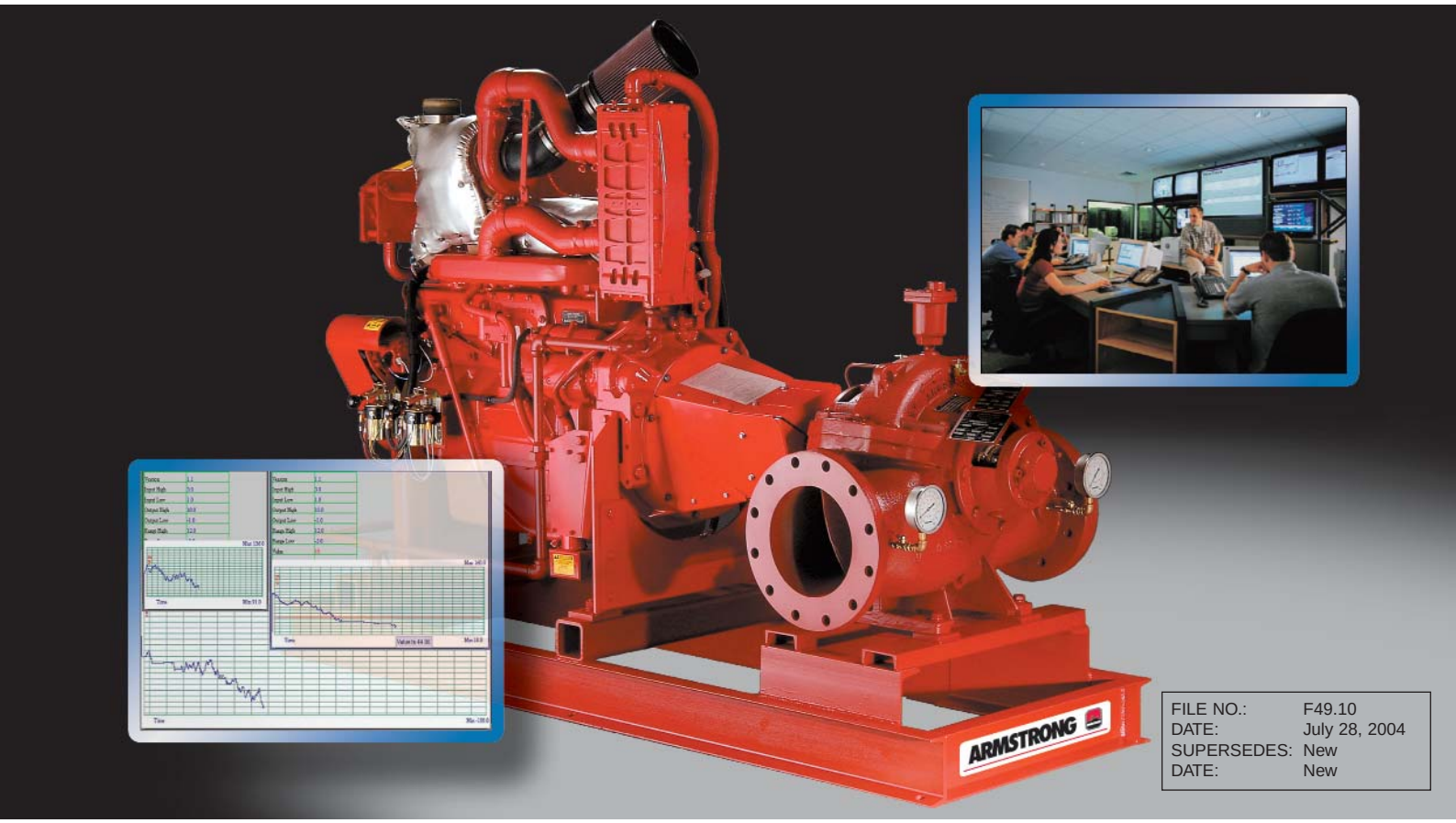
# ARMSTRONG

## Series 4900F

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*Fire Pump Monitoring System*

# Armstrong Fire Pump Monitoring System

Fire pumps are installed in buildings to ensure adequate water is available for automatic sprinkler and standpipe systems. Because fire pumps do not operate under normal conditions but must be immediately available in the event of an emergency, units are required to be exercised regularly and properly maintained. Armstrong's Fire Pump Monitoring Service helps to ensure that the fire pump system is operating properly and that water is available for fire service.

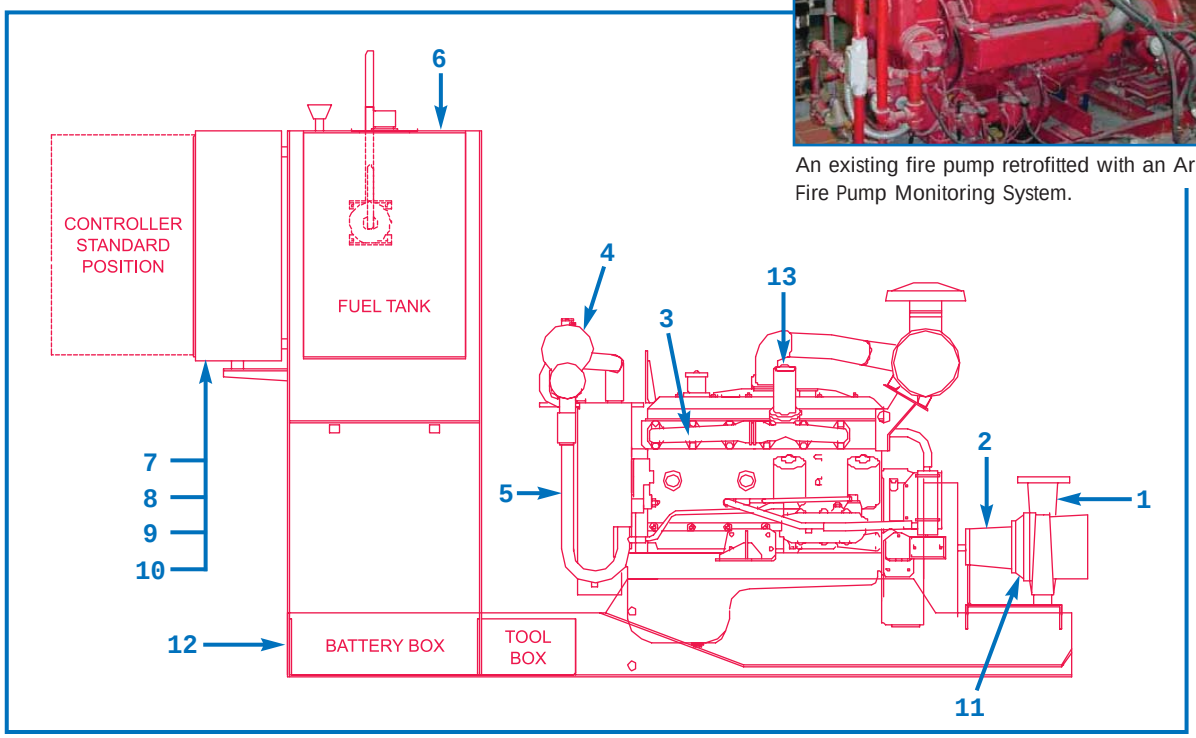
## Features

- Weekly reports available for on-site and off-site service personnel
- Available on all new Armstrong Fire Pumps
- Compatible with any manufacturer's existing approved fire pump
- Wide range of communications options to fit available building infrastructure
- Ability to dispatch qualified service personnel to perform maintenance prior to equipment failure
- Remote testing capability
- For use with both diesel and electric fire pump systems

# Critical Items Monitored in Diesel Systems

1. Pump Discharge Pressure
2. Pump Bearing Temperature
3. Engine Oil Pressure
4. High Cooling Water Temperature
5. Engine Raw Water Flow
6. Low Diesel Fuel Level
7. Engine Running
8. Engine Trouble
9. Jockey Pump Status
10. Controller in Manual or Off Setting
11. Mechanical Seal Leakage or Packing Seal Failure
12. Battery Condition
13. Engine Exhaust Gas Temperature

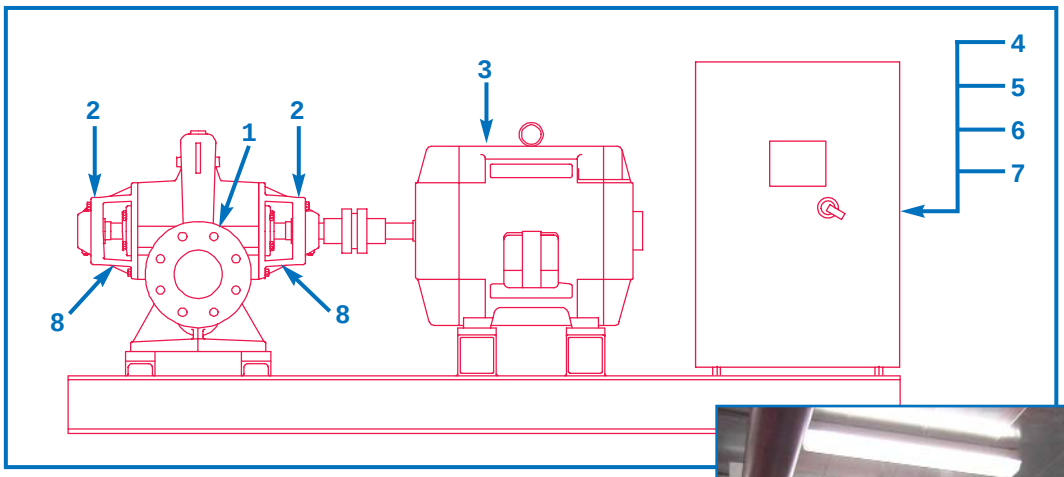
An existing fire pump retrofitted with an Armstrong Fire Pump Monitoring System.




Arrangement may vary depending on local code requirements. An LPC pump set is shown.

# Critical Items Monitored in Electric Systems

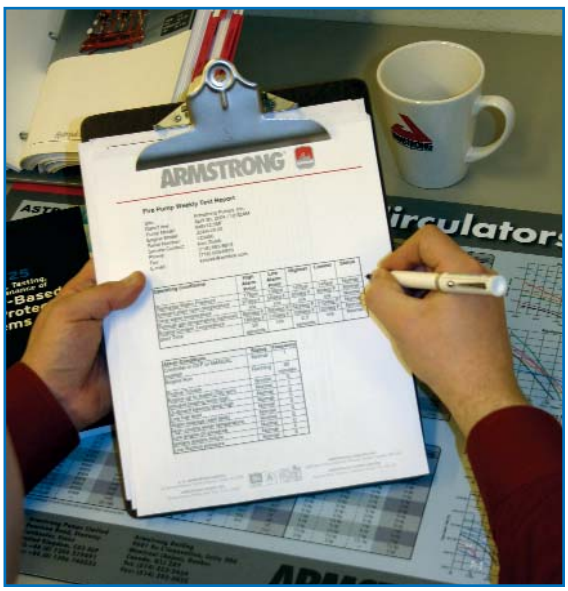
1 Pump Discharge Pressure
2 Pump Bearing Temperature
3 Motor Temperature
4 Pump Running
5 Jockey Pump Status
6 Power Available
7 Power Supply Phase Loss and Reversal
8 Mechanical Seal Leakage or Packing Seal Failure




Arrangement may vary depending on local code requirements.
An FM pump set is shown.

The Fire Pump Monitoring System generates reports of key indicators concerning the status of a fire pump installation and a weekly test. The report is provided electronically each week to recipients defined by the customer. These reports can be retained to provide a record of fire protection system maintenance for local authorities as well as for insurance purposes.


Armstrong Fire Pump Monitoring System can be installed on any new or existing fire pump package.




Monitoring Service reports weekly on fire pump system status.

# Typical Specification

Supply and install one Armstrong Fire Pump Monitoring System as indicated in the plans. The system shall monitor the condition of ____ diesel and/or ____ electric fire pump, and provide weekly status reports indicating the condition of the equipment. Critical abnormal operating conditions and weekly reports shall be sent to the building owner representative and the designated service provider as a minimum.

## Features

The system shall monitor the following conditions:

1. Discharge water pressure shall have adjustable high and low alarms. Discharge water pressure shall be logged on an hourly basis. Any abnormal pressure condition alarm shall be reported.
2. The outboard and inboard bearings shall be monitored for over-temperature. The temperature shall be logged during the weekly test. Any abnormally high temperature condition shall be indicated in the report and alarms reported.
3. Power available shall be monitored and alarms reported should the controller be in the non-Automatic operating mode.
4. For diesel engine fire pumps, operation shall be monitored with alarms reported should a high coolant temperature, low oil pressure, low fuel level or engine trouble condition be experienced. Engine trouble shall include abnormal conditions for batteries, chargers and abnormal exhaust gas temperature.
5. For electric fire pumps, the line voltage shall be monitored with alarms reported should an abnormal voltage or phase condition be sensed outside of the hourly logging. The motor protection phase loss sensor will be set to monitor the number of times a day this occurs.
6. Mechanical seal leakage or packing seal failure detectors shall enable an alarm for early seal failure detection.
7. Jockey pump starts shall be logged and indicated on the weekly report.

## Optional Features

The system shall be provided with the following optional monitoring capabilities:

1. Pump room temperature
2. Supply water temperature
3. Low supply water level (for tank systems)
4. Remote stopping capability (if allowed by the authority having jurisdiction)

## Connectivity

The remote monitoring equipment shall be capable of connection by installing contractor and communicating in one of three ways:

1. Direct connection to the telephone network using a dedicated analog line
2. Connection via LAN and Internet
3. Connection via wireless devices

## Sensors and Hardware

All monitoring devices and sensors shall operate on 24 V and 4-20 mA signals. The central control unit shall be configured by Armstrong to site conditions. The program shall be stored in EPROM to prevent loss of set points in the event of a power failure.

## Service Arrangements

The monitoring system shall be installed and operated for the purposes of assisting with maintenance and recording testing activity. The monitoring system shall not replace alarm devices required by local or national fire alarm codes.


Armstrong's FirePak systems available up to 1500 gpm are ideal applications for monitoring equipment. Single source responsibility ensures the equipment complies with applicable codes and is ready for commissioning.

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