

## FOAM START-UP PROCEDURE MAIN PUMP & JOCKEY PUMP

By: \_\_\_\_\_

Customer: \_\_\_\_\_ Date: \_\_\_\_\_

Job No.: \_\_\_\_\_ Pump Model No.: \_\_\_\_\_

Pump Description: \_\_\_\_\_ Serial No.: \_\_\_\_\_

Design Conditions: \_\_\_\_\_ GPM \_\_\_\_\_ PSI

Motor Horsepower: \_\_\_\_\_ Voltage: \_\_\_\_\_

RPM: \_\_\_\_\_ Test Site Location: \_\_\_\_\_

City/State: \_\_\_\_\_

Contractor: \_\_\_\_\_ Contact: \_\_\_\_\_

- 
- A. Inspect installation of all pumps. \_\_\_\_\_ Initial
  - B. Check to make sure all skids are properly anchored to the floor. \_\_\_\_\_ Initial
  - C. Check to make sure all piping is supported and not being supported by the pump. \_\_\_\_\_ Initial
  - D. Check the alignment of all pumps after the contractor has anchored the skid and realigned the pumps. \_\_\_\_\_ Initial
  - E. Check to make sure all pumps turn by hand. \_\_\_\_\_ Initial
  - F. Check supply voltage to control panel of each pump. \_\_\_\_\_ Initial
  - G. Bump each pump to check rotation of pump. \_\_\_\_\_ Initial
  - H. Check for correct relief valve setting and plumbing. \_\_\_\_\_ Initial
  - I. Complete foam pump and controller test sheets (see attached). \_\_\_\_\_ Initial
  - J. Check for any leaks or abnormalities before and during operation. \_\_\_\_\_ Initial
  - K. Witness contractor's sprinkler tests. \_\_\_\_\_ Initial

## FUNCTIONAL TEST PROCEDURE FOR ELECTRIC MAIN FOAM PUMP AND CONTROLLERS

Test Location: \_\_\_\_\_

City/State: \_\_\_\_\_

Pump Rep.: \_\_\_\_\_ Date of Test: \_\_\_\_\_ Job No.: \_\_\_\_\_

Model No.: \_\_\_\_\_ Serial No.: \_\_\_\_\_

Pump Controller Model No.: \_\_\_\_\_

Controller Serial No.: \_\_\_\_\_ Unit Ratings: \_\_\_\_\_

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- 1) Verify correct operation of controller and rotation of pump driver. \_\_\_\_ Initial
  - 2) Measure and record voltage and amperage at various loads (see attached sheet).
  - 3) Read and record reduced voltage sequencing timer setting (if applicable). \_\_\_\_ Seconds
  - 4) Read and record sequential start timer setting (if applicable). \_\_\_\_ Seconds
  - 5) Read and record minimum run timer setting. \_\_\_\_ Minutes
  - 6) Read and record minimum run timer shutdown mode.
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- 7) Perform 10 automatic starts. \_\_\_\_ Initial
 

1	2	3	4	5	6	7	8	9	10
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  - 8) Perform 10 manual starts. \_\_\_\_ Initial
  - 9) Verify controller operation by lowering system pressure until pump starts. \_\_\_\_ Initial
 

Read and record pressure switch start setting: \_\_\_\_\_.

Read and record pressure switch stop setting: \_\_\_\_\_.
  - 10) At the direction of the person conducting the test, determine the condition the controller should be left in at the end of the test.
 

Circle One:            ON            OFF

**FUNCTIONAL TEST PROCEDURES  
FOR JOCKEY FOAM PUMP AND CONTROLLERS**

Test Location: \_\_\_\_\_

City/State: \_\_\_\_\_

Pump Rep.: \_\_\_\_\_ Date of Test: \_\_\_\_\_ Job No.: \_\_\_\_\_

Model No.: \_\_\_\_\_ Serial No.: \_\_\_\_\_

Controller Serial No.: \_\_\_\_\_

Options: \_\_\_\_\_

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1) Verify correct operation of controller and rotation of pump driver. \_\_\_\_ Initial

2) With pump under load condition, measure and record:

Line Voltage L1-L2: \_\_\_\_\_ Volts AC.

Line Voltage L2-L3: \_\_\_\_\_ Volts AC.

Line Voltage L1-L3: \_\_\_\_\_ Volts AC.

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Line Amperage L1: \_\_\_\_\_ Amps AC.

Line Amperage L2: \_\_\_\_\_ Amps AC.

Line Amperage L3: \_\_\_\_\_ Amps AC.

3) Verify controller operation by lowering system pressure until  
pump starts. \_\_\_\_ Initial

Read and record pressure switch start setting: \_\_\_\_\_.

Read and record pressure switch stop setting: \_\_\_\_\_.

4) At the direction of the person conducting the test, determine the condition the  
controller should be left in at the end of the test.

Circle One:      HAND              OFF              AUTO

## FUNCTIONAL TEST PROCEDURE FOR AUTOMATIC TRANSFER SWITCHES

Test Location: \_\_\_\_\_

City/State: \_\_\_\_\_

Pump Rep.: \_\_\_\_\_ Date of Test: \_\_\_\_\_ Job No.: \_\_\_\_\_

Firetrol Model No.: \_\_\_\_\_

Unit Serial No.: \_\_\_\_\_ Unit Ratings: \_\_\_\_\_

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- 1) The flange mounted test switch should be used to simulate a loss of normal power. This will cause the generator to start and take the load of the fire pump. This test should be done while the pump is running at rated load.  
\_\_\_\_\_ Initial
  
- 2) At least half of the manual and automatic operations of the fire pump controller should be performed while on emergency power.  
\_\_\_\_\_ Initial
  
- 3) Verify correct sequence of operation on transfer back to normal power.  
\_\_\_\_\_ Initial



## PRE-START CHECKLIST FOR DIESEL FOAM PUMP ENGINES

Test Location: \_\_\_\_\_

City/State: \_\_\_\_\_

Pump Mfg.: \_\_\_\_\_ Date of Test: \_\_\_\_\_ Job No.: \_\_\_\_\_

Model No.: \_\_\_\_\_ Serial No.: \_\_\_\_\_

Engine Serial No.: \_\_\_\_\_

Options: \_\_\_\_\_

- .....
- 1) Check engine oil level. \_\_\_\_ Initial
  - 2) Check radiator level. \_\_\_\_ Initial
  - 3) Check for leaks in the following areas:
    - Oil drain plug. \_\_\_\_ Initial
    - Fuel line connections. \_\_\_\_ Initial
    - Coolant connections and drain plug. \_\_\_\_ Initial
  - 4) Visually check engine and controller for loose cables, wires, fittings, and any physical damage. \_\_\_\_ Initial
  - 5) Verify adequate fuel supply for test. \_\_\_\_ Initial
  - 6) Purge air from fuel system. \_\_\_\_ Initial
  - 7) Verify controller is off and cannot start. \_\_\_\_ Initial
    - Connect batteries and energize chargers. \_\_\_\_ Initial
  - 8) Push emergency run fuel operator in. \_\_\_\_ Initial
  - 9) Confirm with pump representative that pump is wet, aligned and system is ready to operate.

**Proceed to Functional Test Procedure for Diesel Fire Pump Controllers.**

## FUNCTIONAL TEST PROCEDURE FOR DIESEL FOAM PUMP AND CONTROLLERS

Test Location: \_\_\_\_\_

City/State: \_\_\_\_\_

Pump Rep.: \_\_\_\_\_ Date of Test: \_\_\_\_\_ Job No.: \_\_\_\_\_

Model No.: \_\_\_\_\_ Serial No.: \_\_\_\_\_

Controller Serial No.: \_\_\_\_\_

Options: \_\_\_\_\_

- .....
- 1) Verify controller operation by lowering system pressure until  
pump starts. \_\_\_\_\_ Initial  
Read and record pressure switch start setting: \_\_\_\_\_.  
Read and record pressure switch stop setting: \_\_\_\_\_.
  - 2) Read and record sequential start timer setting. \_\_\_\_\_ Seconds
  - 3) Read and circle minimum run timer shutdown mode.  
5 minutes                      30 minutes                      NONE (manual shutdown)
  - 4) Perform 10 automatic starts. \_\_\_\_\_ Initial  
Allow engine to run at full speed for 5 minutes/start.  
1      2      3      4      5      6      7      8      9      10
  - 5) Perform 10 manual starts. \_\_\_\_\_ Initial  
Allow engine to run at full speed for 5 minutes/start.  
Alternate battery banks to allow 5 starts/bank.  
1      2      3      4      5      6      7      8      9      10
  - 6) Verify alarm outputs for engine running, engine trouble, and  
main switch mis-set. \_\_\_\_\_ Initial
  - 7) Verify correct operation of any additional alarms. \_\_\_\_\_ Initial
  - 8) **Main engine alarm tests** - for each of the following three tests, the controller  
should be placed in automatic and the engine started using the “test” push  
button.

**FUNCTIONAL TEST PROCEDURE  
FOR DIESEL FOAM PUMP AND CONTROLLERS  
(Continued)**

Verify correct operation of the following alarm inputs using jumpers and/or engine manufacturer's test switches:

- \_\_\_\_\_ Low oil pressure
- \_\_\_\_\_ High water temperature
- \_\_\_\_\_ Overspeed
- \_\_\_\_\_ Low radiator level (FTA4000 ONLY)

The first three conditions should cause an engine shutdown if the controller is in a test mode.

Tests Passed. \_\_\_\_\_ Initial

- 9) **Crank cycle timer test** – to be performed only at the request of the authority having jurisdiction.

\*For the following test, disable the engine-mounted starter to allow repeated operation of the starting contractors without cranking the engine.

\*Place the controller in automatic and press the “test” push button.

\*The crank cycle timer should attempt to crank the engine for a period of 15 seconds followed by a 15-second rest period. The starting attempts should be on alternating battery banks and should repeat 3 times for each battery bank.

\*At the end of the test, the controller should lock out the starter, and light the “**failed-to-start**” indicator and sound the audible alarm.

\*Re-connect the starter.

\*Tests Passed. \_\_\_\_\_ Initial

- 10) Set weekly test timer per customer request.

Record test date and time: \_\_\_\_\_

- 11) At the direction of the person conducting the test, determine the condition the controller should be left in at the end of the test.

Circle One:            MANUAL            OFF            AUTOMATIC



**ENGINE PERFORMANCE RECORD  
FOR DIESEL DRIVEN FOAM PUMP**

Test Location: \_\_\_\_\_

Date of Test: \_\_\_\_\_ Job No.: \_\_\_\_\_

Notes: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Unit Rated at: \_\_\_\_\_ HP at \_\_\_\_\_ RPM.

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**PUMP CONDITION**

**RPM**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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Log oil pressure at start of test: \_\_\_\_\_ PSI

Log water temperature at start of test: \_\_\_\_\_ DEG

Log oil pressure at end of test: \_\_\_\_\_ PSI

Log water temperature at end of test: \_\_\_\_\_ DEG

Log hour meter reading at start of test: \_\_\_\_\_ HOURS

Log hour meter reading at end of test: \_\_\_\_\_ HOURS

Total hours run during test: \_\_\_\_\_ HOURS

