

# FIRE PUMP NO FLOW CHURN TEST

<b>C</b>	<b>FIRE PUMP</b>
W-Diesel M-Electric	<b>No-Flow</b>

Facility:

DATE: \_\_\_\_\_

INSPECTOR: \_\_\_\_\_

BUILDING LOCATION: \_\_\_\_\_

PUMP ID: \_\_\_\_\_

**Diesel Engine-driven fire pumps - Weekly**  
per NFPA 25-2011, 8.3.1

**Electric Motor-driven fire pumps - Monthly**  
per NFPA 25-2011, 8.3.2

<b>A. NO-FLOW (CHURN) FIRE PUMP TEST</b>	<u>NFPA 25-2011</u> 8.3.2	<u>EC.02.03.05</u> EP# 6	
	Yes	No	<u>NFPA 25-2011</u>
1. Start the pump automatically by reducing water pressure at control switch? (Auto timer may be substituted for the starting procedure)	<input type="checkbox"/>	<input type="checkbox"/>	8.3.2.2; 8.3.2.6
2. Run pump, without water flow, for (10 min elec)(30 min diesel)	<input type="checkbox"/>	<input type="checkbox"/>	8.3.2.3; 8.3.2.4
3. Qualified person in attendance at all times the pump is operating?	<input type="checkbox"/>	<input type="checkbox"/>	8.3.2.7
4. Complete the checklists below			

### OBSERVATIONS

<u>ALL PUMPS</u>	READINGS (§8.3.2.8)	(Describe problems below)	OK	Fail
a. Time Pump Starts operation		<b>l. Inspect pump packing glands for slight discharge &amp; adjust nuts if needed</b> (§8.3.2.8)		
b. Current System Pressure		<b>m. Inspect for unusual noise or vibration</b> (§8.3.2.8)		
c. Pump Starting Pressure		<b>n. Inspect boxes, bearings, pump casing for overheating</b> (§8.3.2.8)		
d. System Suction Pressure		<b>o. Verify downstream pressure in the discharge piping &lt;= rated pressure of components</b> (§13.5.7.2)		
e. System Discharge Pressure		<b>p. Verify water flows through Circulation Relief Valve when the fire pump is churning</b> (§13.5.7.1)		
f. Highest Pressure during test***		<b>q. Verify the calculated Churn pressure match churn pressure on pump nameplate</b>		
g. Lowest Pressure during test***				
h. Pump Discharge Pressure				
i. Pump Churn Pressure (Calc diff between suction & discharge psi)				
j. Time Pump Stops operation				
k. Total time pump ran (calc diff "j"- "a"):				

\*\*\* For pumps with electronic pressure sensors to control the fire pump operation

### ELECTRIC PUMPS

Not Applicable (no Elec driven pumps)

a. Time controller is on 1st step*	
b. Time for motor to reach full rpm	
c. Time pump runs after starting**	

\* For reduced voltage or reduced current starting controllers    \*\* For automatic stop controllers

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Facility:

DATE: \_\_\_\_\_

INSPECTOR: \_\_\_\_\_

**DIESEL PUMPS**

Not Applicable (no Diesel driven pumps)

OK    Fail

a. Time for engine to crank?	
b. Time for engine to reach running speed? (max 10 sec)	

c. Observe periodically while engine is running: engine oil pressure gauge, speed indicator, water, and oil temp indicators		
d. Check the heat exchanger for cooling waterflow?		
e. Check the heat exchanger for cooling waterflow?		
f. Record any abnormalities?		

**B. BREAKER OPERATION**

<i>NFPA 110-2010</i>	<i>EC.02.03.05</i>
8.4.6.1	EP# (No#)

Either before or after the Churn Test, exercise the pump circuit breaker by turning it "off" & then turning it "on"

OK  
 Problem

**DESCRIBE PROBLEMS & ACTIONS TAKEN**