

# Report of Inspection, Testing & Maintenance of Fire Pump Assemblies

**REV. 3/03** 

INSPECTOR'S INITIAL

ALL QUESTIONS ARE TO BE ANSWERED AND ALL BLANKS TO BE FILLED (Weekly inspection tasks are NOT included in this report)

|         | (,)   |          |          |          |                | . ,  |          |       |       |
|---------|---|----------|----------|----------|----------------|--|----------|-------|-------|
| Inspect | ing Firm:   |          |          |          |                | Inspection Contract#   |          |       |       |
| Name o  | of Inspected Property:  |          |          |          |                |  |          |       |       |
| Inspect | or Name:  |          |          |          |                | Date:  |          |       |       |
| Inspect | ion Frequency:  Monthly   | Qu       | arterl   | У        |                | Annually Other   |          |       |       |
|         | *Items necessary only   | in tl    | he ab    | send     | e of manu      | facturer's recommendations   |          |       |       |
|         | Monthly Inspection, Testi   | <u> </u> | and      | I Ma     | aintenar       | nce for Fire Pump Assemblies   |          |       |       |
|         | ,,,,,,  |          | N/A      |          |                |  | Υ        | N/A   | N     |
| A.1.0   | System in service before conducting tasks   | Ė        | 1 4//    | -        | A.4.2          | *Battery case exterior cleaned and dried   | +-       | 14//  | - 1   |
| A.1.1   | Pertinent parties notified before conducting tasks                                  |          |          |          | A.4.3          | *Battery case changed as necessary   | _        |       |       |
| A.2.0   | Control valves in normal open or closed position                                    |          |          |          | A.4.4          | *Battery system tested for specific gravity or                                   | 1        |       |       |
| A.2.1   | Control valves properly locked or supervised  |          |          |          |                | state of charge  |          |       |       |
| A.2.2   | Control valves accessible   |          |          |          | A.4.5          | *Battery system charger and charge rate  |          |       |       |
| A.2.3   | Control valves provided with appropriate wrenches                                   |          |          |          | A 4.6          | operational, normal, and equalized   | +        |       |       |
| A.2.4   | Control valves free from external leaks   |          |          |          | A.4.6          | *Circuit breakers or fuses checked   | +        |       |       |
| A.2.5   | Control valve identification signs in place   |          |          |          | A.5.0          | *Isolating switch exercised  | +        |       |       |
|         | Control valve sign indicates area served  |          |          |          | A.5.1<br>A.6.0 | *Circuit breaker exercised Fire pump assembly maintenance performed              | +        |       |       |
| A.3.0   | Backflow prevention assembly valves are locked                                      |          |          | $\dashv$ | A.0.0          | in accordance with mfg. recommendations  |          |       |       |
|         | or electrically supervised in open position   |          |          |          | A.7.0          | Pertinent parties notified of completion of tasks                                |          |       |       |
| A.3.1   | Reduced pressure backflow prevention  |          |          |          | A.8.0          | ALARM PANEL CLEAR  |          |       |       |
|         | assembly not in continuous discharge  |          |          |          | A.9.0          | SYSTEM RETURNED TO SERVICE   |          |       |       |
| A.4.0   | *Battery case visually inspected  |          |          |          | A.10.0         | COMMENTS:  |          |       |       |
| A.4.1   | *Battery case corrosion removed   |          |          |          | 1              |  |          |       |       |
| Qua     | rterly Inspection for Fire Pump Ass   | em       | blie     | S        |                | Quarterly Testing and Maintenand   | e fo     | or    |       |
| B.1.0   | System in service on inspection   |          |          |          |                | Fire Pump Assemblies   |          |       |       |
| B.2.0   | FDC is visible  |          |          |          | C.1.0          | System in service before conducting tasks  |          |       |       |
| B.2.1   | FDC is accessible   |          |          |          | C.1.1          | Pertinent parties notified before conducting tasks                               | i        |       |       |
| B.2.2   | FDC swivels/couplings undamaged/rotate  |          |          |          | C.2.0          | Adequate drainage provided before flow testing                                   |          |       |       |
|         | smoothly  |          |          | _        | C.2.1          | One main drain test conducted downstream from backflow preventer                 |          |       |       |
|         | FDC goalstain place and in goal condition   |          |          | -        | C.2.2          | One main drain test conducted downstream   | +        |       |       |
|         | FDC gaskets in place and in good condition  |          |          | -        |                | from pressure reducing valve   |          |       |       |
|         | FDC check valve not looking   |          |          |          | C.2.2          | Supply water gauge reading before flow (station                                  | ;)       |       | psi   |
|         | FDC check valve not leaking FDC automatic drain valve in place and                  |          |          | -        | C.2.3          | Gauge reading during stable flow (residual)                                      |          |       | psi   |
| D.Z.1   | operating properly  |          |          |          | C.2.4          | Time for supply pressure to return to normal                                     |          |       | sec   |
| B.2.8   | FDC clapper is in place and operating properly                                      |          |          |          | C.3.0          | *Strainer, filter, or dirt leg (or combination                                   |          |       |       |
| B.2.9   | FDC interior inspected where caps missing   |          |          |          |                | thereof) cleaned   | igsquare |       |       |
| B.2.10  | FDC obstructions removed as necessary   |          |          |          | C.3.1          | *Crankcase breather cleaned (as necessary)                                       | $\perp$  |       |       |
| B.3.0   | Pressure control valve (PRV) not leaking  |          |          |          | C.3.2          | *Crankcase breather changed (as necessary)                                       | $\perp$  |       |       |
| B.3.1   | Pressure control valve maintaining downstream                                       |          |          |          | C.3.3          | *Water strainer cleaned  | $\vdash$ |       |       |
|         | pressure per design   |          | $\vdash$ | _        | C.4.0          | Fire pump assembly maintenance performed in accordance with mfg. recommendations |          |       |       |
|         | Pressure control valve in good condition  *Crankcase breather inspected and in good |          |          | $\dashv$ | C.5.0          | Pertinent parties notified of task conclusion                                    | $\vdash$ |       |       |
| B.4.0   | condition   |          |          |          | -              | ALARM PANEL CLEAR  | $\vdash$ |       |       |
| B.4.1   | *Engine exhaust system insulation in place  |          |          |          |                | SYSTEM RETURNED TO SERVICE   | $\vdash$ |       |       |
| B.4.2   | *Engine exhaust system fire hazard safeguards                                       |          |          |          | -              | COMMENTS:  |          |       | ш     |
|         | in place  | <u> </u> |          |          | 0.0.0          |  |          |       |       |
| B.4.3   | *Battery system terminals clean and tight   | <u> </u> |          | _        |                |  |          |       |       |
|         | *Electrical wiring subject to movement free from chafing                            |          |          |          |                |  |          |       |       |
| B.5.0   | Fire pump assembly maintenance performed in accordance with mfg. recommendations    |          |          |          |                |  |          |       |       |
| B.6.0   | ALARM PANEL CLEAR   |          |          |          | 1              |  |          |       |       |
| B.7.0   | COMMENTS:   |          |          |          | <u> </u>       |  |          |       |       |
|         | (All "NO" ansv  | vers     | to b     | e ext    | olained.)      | (AF  | SA F     | orm 1 | 110A) |

OWNER/DESIGNATED REP. INITIÁL

DATE

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| Inspecting Firm: |                                    |  |                 |       |     |    | Inspection Contract# |  |   |       |                 |  |  |
|------------------|------------------------------------|--|-----------------|-------|-----|----|----------------------|--|---|-------|-----------------|--|--|
| Name o           | of Inspected Prop                  | perty:   |                 |       |     |    |                      |  |   |       |                 |  |  |
| Inspect          | or Name:                           |  |                 |       |     |    |                      | Date:  |   |       |                 |  |  |
| Inspect          | ion Frequency:                     | ☐ Monthly  | Qu              | arter | ly  |    |                      | Annually Other   |   |       |                 |  |  |
|                  |                                    | *Items necessary only                                    | in t            | he al | sen | се | of manu              | facturer's recommendations   |   |       |                 |  |  |
|                  | Sem                                | ni-Annual Inspection, Te                                 | esting and Main |       |     |    | ainter               | nance for Fire Pump Assemblies   |   |       |                 |  |  |
|                  |                                    | •  |                 | N/A   |     |    |                      | •  | Υ   | N/A   | N               |  |  |
| D.1.0            | System in service                  | ce before conducting tasks                               |                 |       |     |    | D.4.1                | *Manual starting means of electrically driven  |   |       |                 |  |  |
| D.1.1            | Pertinent parties                  | notified before conducting tasks                         |                 |       |     |    | D 4 2                | pumps operated   | ₩   |       | $\vdash$        |  |  |
| D.2.0            |                                    | pervisory switches initiate                              |                 |       |     |    | D.4.2                | *Antifreeze protection level tested and adjusted as necessary                              |   |       |                 |  |  |
|                  |                                    | uring first two hand wheel efore valve stem moved        |                 |       |     |    | D.4.3                | *Electrical system safeties and alarms operated  |   |       |                 |  |  |
|                  | one-fifth from no                  |  |                 |       |     |    | D.4.4                | *Electrical system boxes, panels, and cabinets   |   |       |                 |  |  |
| D.2.1            | Signal restored normal position    | only when valve returned to                              |                 |       |     |    | D.5.0                | Cleaned  | -   |       | $\vdash$        |  |  |
| D.3.0            | <u> </u>                           | age provided before flow testing                         |                 |       |     |    | D.5.0                | Fire pump assembly maintenance performed in accordance with mfg. recommendations           |   |       |                 |  |  |
| D.3.1            | Main drain test                    |  |                 |       |     |    | D.6.0                | Pertinent parties notified of task conclusion  |   |       |                 |  |  |
| D.3.2            |                                    | auge reading before flow (static)                        |                 |       | psi |    | D.7.0                | ALARM PANEL CLEAR  |   |       |                 |  |  |
|                  |                                    | during stable flow (residual)                            |                 |       | psi |    | D.8.0                | SYSTEM RETURNED TO SERVICE   |   |       |                 |  |  |
| D.3.4            |                                    |  |                 |       |     |    | D.9.0                | COMMENTS:  |   |       |                 |  |  |
|                  |                                    | pressure to return to normal st section inspected and in |                 |       | sec |    |                      |  |   |       |                 |  |  |
|                  | good condition                     | or occurry moposited and m                               |                 |       |     |    |                      |  |   |       |                 |  |  |
| An               | nual Inspec                        | tion for Fire Pump Asse                                  | mb              | lies  | ;   |    | Ann                  | nual Maintenance for Fire Pump As  | sen   | nblie | es              |  |  |
| E.1.0            | System in service                  | ce on inspection   |                 |       |     |    | F.1.0                | System in service before conducting maintenance  | ļ.  |       |                 |  |  |
| E.2.0            |                                    | ismic bracing appear<br>I tightly attached               |                 |       |     |    | F.2.0                | Pertinent parties notified before conducting maintenance                                   |   |       |                 |  |  |
| E.3.0            | Piping appears                     | free of mechanical damage                                |                 |       |     |    | F.3.0                | Operating stems of OS&Y (including backflow  |   |       |                 |  |  |
| E.3.1            | Piping appears                     | free of leakage  |                 |       |     |    | F.3.1                | Valve completely closed and respond  | +   |       |                 |  |  |
| E.3.2            | Piping appears                     | free of corrosion  |                 |       |     |    | F.4.0                | Valve completely closed and reopened  Adequate drainage provided before flow testing       | +   |       |                 |  |  |
| E.3.3            | Piping appears                     | properly aligned   |                 |       |     |    | F.4.1                | Main drain test conducted  | +-  |       |                 |  |  |
| E.3.4            |                                    | free of external loading                                 |                 |       |     |    | F.4.2                | Supply water gauge reading before flow (station  | ·)  |       | psi             |  |  |
| E.4.0            |                                    | re such as not to expose g conditions (prior to          |                 |       |     |    | F.4.3                | Gauge reading during stable flow (residual)  | <u>')                                    </u> |       | psi             |  |  |
|                  | freezing weathe                    | r) "   |                 |       |     |    | F.4.4                | Time for supply pressure to return to normal   |   |       | sec             |  |  |
| E.4.1            | Adequate heat i<br>temperatures at | s provided maintaining                                   |                 |       |     |    | F.5.0                | Fire pump assembly maintenance performed in  |   |       | 300             |  |  |
|                  | (prior to freezing                 |  |                 |       |     |    |                      | accordance with mfg. recommendations   |   |       |                 |  |  |
| E.5.0            | *Pump shaft end                    | play within specified tolerances                         |                 |       |     |    | F.5.1                | *Pump bearing lubricated   | _   |       |                 |  |  |
| E.5.1            | *Pressure gauge<br>to be within 5% | e and sensor accuracy verified                           |                 |       |     |    | F.5.2                | *Gauges recalibrated or changed (when 5% o more out of calibration)                        |   |       |                 |  |  |
| E.5.2            | *Pump coupling tolerances          | alignment within specified                               |                 |       |     |    | F.5.3                | *Wet pit suction screens checked (cleaned as necessary) after every operation              |   |       |                 |  |  |
| E.5.3            | *Electrical conne                  | ections tightened as necessary                           |                 |       |     |    | F.5.4                | *Mechanical transmission coupling lubricated   |   |       |                 |  |  |
| E.5.4            | *Mechanical mo                     | oving parts lubrication verified ers and relays)         |                 |       |     |    | F.5.5                | *Mechanical transmission right-angle gear drive lubricated                                 |   |       |                 |  |  |
| E.5.5            | , ,                                | h setting calibration verified                           |                 |       |     |    | F.5.6                | *Electric drive motor bearings lubricated  |   |       |                 |  |  |
| E.5.6            |                                    | and overflow piping free                                 |                 |       |     |    | F.5.7                | *Fuel tank voided of water and foreign material  | _   |       |                 |  |  |
|                  | from obstruction                   |  |                 |       |     |    | F.5.8                | *Diesel engine lubrication system oil and filter changed (or 50 hrs whichever comes first) |   |       |                 |  |  |
| E.5.7<br>E.5.8   | *Fuel piping in g                  | good condition  ductwork and louvers in                  |                 |       |     |    | F.5.9                | *Diesel engine cooling system antifreeze changed   |   |       |                 |  |  |
|                  | good condition                     | ductwork and louvers in                                  |                 |       |     |    |                      | *Diesel engine cooling system heat   |   |       |                 |  |  |
| E.5.9            | *Exhaust system place and in good  | n hangers and supports in od condition                   |                 |       |     |    | F.5.11               | exchanger rodded out *Electrical system circuit breakers or fuses                          | $\vdash$                                      |       | H               |  |  |
| E.5.10           | *Electrical contr                  | ol and power wiring<br>ecked for tightness               |                 |       |     |    | F.6.0                | changed (every 2 years)  Pertinent parties notified after conclusion of                    | $\vdash$                                      |       |                 |  |  |
| E.6.0            | Fire pump asse                     | mbly maintenance performed vith mfg. recommendations     |                 |       |     |    | F.7.0                | maintenance  ALARM PANEL CLEAR   | _   |       |                 |  |  |
| E.7.0            | ALARM PANEL                        |  |                 |       |     |    | F.7.0<br>F.8.0       | SYSTEM RETURNED TO SERVICE   | +   |       | $\vdash \vdash$ |  |  |
|                  | COMMENTS:                          |  | '               |       |     |    | F.9.0                | COMMENTS:  | 1   |       | ш               |  |  |
|                  |                                    |  |                 |       |     | L  |                      | JUMPETTIO.   |   |       |                 |  |  |

| Inspection Inspection G.1.0 S G.1.1 P | on Frequency:  System in service  Pertinent parties     | Monthly *Items necessary only  | Quarte   | 1      |                | Da   | te:                               |                                       |     |       |     |
|---------------------------------------|---|--|----------|--------|----------------|--|-----------------------------------|---------------------------------------|-----|-------|-----|
| G.1.0 S                               | on Frequency:  System in service  Pertinent parties     | *Items necessary only  |          | 1      |                | Da   | te:                               |                                       |     |       |     |
| G.1.0 S<br>G.1.1 P                    | System in service Pertinent parties                     | *Items necessary only  |          | 1      |                |  |                                   |                                       |     |       |     |
| G.1.1 P                               | Pertinent parties                                       |  |          | eriy   |                | Annually   |                                   | Other                                 |     |       |     |
| G.1.1 P                               | Pertinent parties                                       |  | in the a | absend | e of manu      | facturer's recomn  | nendations                        |                                       |     |       |     |
| G.1.1 P                               | Pertinent parties                                       | Annual Ta  | etina    | for I  | Eira Dun       | np Assemblie   | <u> </u>                          |                                       |     |       |     |
| G.1.1 P                               | Pertinent parties                                       | Aimaire  | Y N/     |        | iie ruii       | np Assemblie   | 3                                 |                                       | Υ   | N/A   | N   |
| G.1.1 P                               | Pertinent parties                                       | ce before testing  | 1 11/7   |        | G.5.6          | Pump suction an  | d discharge pr                    | essures and                           |     | 14//1 |     |
|                                       |   | s notified before testing  |          |        |                | flow measuremen  | its at each hos                   | e stream used                         |     |       |     |
|                                       | Adequate draina   | age provided before flow testing   |          |        |                | to determine tota<br>streams used in t                                       |                                   |                                       |     |       |     |
|                                       | Main drain test   | * '  |          |        |                | every 3 years at   | minimum)                          |                                       |     |       |     |
| G.2.1 S                               | Supply water ga   | auge reading before flow (static)  |          | psi    | G.5.7          | Pump suction and flowmeter measure   |                                   |                                       |     |       |     |
| G.2.2 G                               | Gauge reading   | during stable flow (residual)  |          | psi    |                | pump output whe  | re flowmeter ι                    | used in testing                       |     |       |     |
| G.2.3 T                               | Time for supply   | pressure to return to normal   |          | sec    | 0.50           | (not to exceed 2   |                                   |                                       |     |       |     |
| G.3.0 C                               | Control valves (  | including backflow and PIVs)<br>h full range and returned to                               |          |        | G.5.8<br>G.5.9 | Flow meter adjust testing in accordate Test results using previous annual to | ance with mfg.  I flow meter co   | inst.<br>Insistent with               |     |       |     |
|                                       | •   | til spring or torsion felt in rod  |          |        |                | flow test using ho   |                                   |                                       |     |       |     |
|                                       | Main drain test   | s backed 1/4 turn from full open   |          |        |                | WHILE PUMP IS  | RUNNING                           |                                       |     |       |     |
|                                       |   | auge reading before flow (static)  |          | psi    | G.6.0          | At churn, circulat   | ion relief valve                  | checked for                           |     |       |     |
|                                       |   | during stable flow (residual)  |          | psi    | G 6 1          | operation and wa<br>At churn, pressur  |                                   | shocked for                           |     |       |     |
|                                       |   | pressure to return to normal   |          | sec    | G.0.1          | proper operation   | e relier valve (                  | Silecked for                          |     |       |     |
| G.4.0 B                               |   | ntion assembly forward flow  |          |        | G.6.2          | At churn, pressur proper operation   | e control valve                   | e checked for                         |     |       |     |
| G.4.1 S                               | System demand   | I flow was achieved through  |          |        | G.6.3          | At churn, test con   | tinued for minir                  | mum of hour                           |     |       |     |
| G.4.2 F                               | ate possible (or  | st conducted at maximum  |          |        |                | At each flow cond<br>and current in all<br>(see appropriate                  | lines recorded section on page    | i<br>je 5)                            |     |       |     |
|                                       | permit full flow to<br>Forward flow test                | est)<br>st conducted without measuring   |          | +      | G.6.5          | At each flow cond (see appropriate   |                                   |                                       |     |       |     |
| fl<br>s                               | flow (device =2<br system demand                        | 2" and outlet sized to flow )  |          |        | G.6.6          | At each flow cond of pump suction a  | dition, simultar<br>and discharge | neous readings                        |     |       |     |
| ir                                    | nspection cond  | ntion assembly internal<br>ucted (where shortages last<br>r and rationing enforced by AHJ) |          |        | G.6.7          | pump discharge to (see appropriate Pressure relief van                       | section on pag                    |                                       |     |       |     |
| G.4.5 F                               |   | st satisfied by annual fire  |          |        |                | each flow condition  | on                                |                                       |     |       |     |
| G.4.6 B                               | Backflow preven   | tion assembly performance test   |          |        | G.6.8          | each flow condition  | on                                |                                       |     |       |     |
|                                       | conducted as re<br>FLOW TEST:                           | equired by the AHJ   |          |        | G.6.9          | Pressure relief val<br>discharge pressu                                      | re did not exce                   | eed normal                            |     |       |     |
|                                       |   | revent water damage by   |          |        | G 6 10         | operating pressure Pressure control  |                                   |                                       |     |       |     |
| G.5.1 F                               | verifying adequa<br>Flow test condu<br>and peak fire pu | cted under minimum, rated,   |          |        | G.0.10         | (system not expo<br>than rating)   |                                   |                                       |     |       |     |
| G.5.2 F                               | Flow test condu   | cted by controlling quantity of d through test devices                                     |          |        | G.6.11         | Pressure relief va<br>proper pressure  | alve observed                     | closing at                            |     |       |     |
| G.5.3 F                               | ire pump opera  | ated at maximum allowable re available suction supplies                                    |          |        |                | Pressure control proper pressure (   | (suction or disc                  | charge)                               |     |       |     |
| p                                     | oump capacity)  | ving of 150 percent of rated   |          |        | G.6.13         | Pressure relief va<br>during flow condit<br>minimum rated p                  | ions (as neces                    | sary to achieve                       |     |       |     |
| fl                                    | low at 0 psi or h                                       | on supply provided required<br>nigher gauge pressure at pump<br>except installations where |          |        | G.6.14         | Pressure relief va<br>at pump test con                                       | alve reset to no                  | · · · · · · · · · · · · · · · · · · · |     |       |     |
| N                                     | NFPA 20 permit  | ted negative suction gauge   |          |        |                | SYSTEMS EQUIP  |                                   |                                       | FER | SWIT  | CH: |
|                                       | oressures)<br>Electric fire pum                         | p driver did not overload  |          | ++     | G.7.0          | Power failure cor  |                                   | ed while pump                         |     |       |     |
| b<br>a                                | peyond rating (ii                                       | ncluding service factor e delivering necessary   |          |        | G.7.1          | operating at peak<br>Transfer switch to<br>power source ver                  | ansfer of pow                     | er to alternate                       |     |       |     |

| Aillidai            | Julie 1 dans for 1 feet dillp Assembles o | ontinued on page 4 |       |
|---------------------|---|--------------------|-------|
|                     | (All "NO" answers to be explained.)       |                    | (AFSA |
| INSPECTOR'S INITIAL | OWNER/DESIGNATED REP. INITIAL             | DATE               |       |

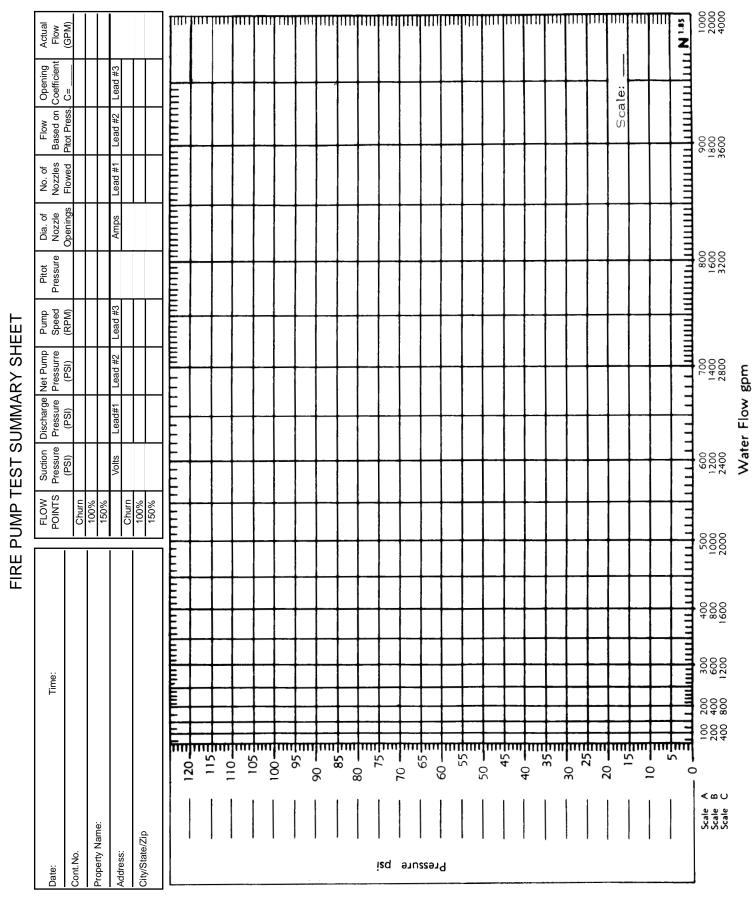
INSPECTOR'S INITIAL

| Inspector Name: Date:  | Inspecting Firm:  |                   |         |              | Insp                 | ection Contract#               |      |      |     |
|--|---|-------------------|---------|--------------|----------------------|--------------------------------|------|------|-----|
| Name      | Name of Inspected Property:   |                   |         |              |                      |                                |      |      |     |
| Annual Testing for Fire Pump Assemblies continued from page 3    V   N/A   N   Commendation   V   N/A   N   N   N   N   N   N   N   N   N  | Inspector Name:   |                   |         |              | Date                 | э:                             |      |      |     |
| Annual Testing for Fire Pump Assemblies continued from page 3    Y   N/A   N   | Inspection Frequency:   | Qua               | arterly |              | Annually             | Other                          |      |      |     |
| G.7.2 Pump maintenance of peak load performance verified G.7.3 Power failure condition removed G.7.4 Pump reconnected to normal power source after at time delay. G.8.0 Alarm condition simulated G.8.1 Local or remote alarm indicating devices (visual and auditole) observed for operation during inspecting, testing, and maintaining alcording controlled simulations or destructions G.8.2 Legally required safety precautions taken during inspecting, testing, and maintaining alcording controlled simulations or destructions G.8.3 After water-flow portions of annual testing or fire protection system activations, suction screens inspected and cleared of debris or obstructions G.8.4 Engine generator sets supplying emergency or standby power to fire pump assemblies tested in accordance with MFPA 110 G.8.5 Automatic transfer switches tested in accordance with MFPA 110 G.8.6 Pump come environmental heating equipment automatic operation verified equipment manual operation verified equipment automatic operation verified each part of the pump and diver chacked  G.8.9 Pump land and angular alignment or pump and diver chacked  G.8.9 Parallel and angular misalignment or pump and diver chacked  G.8.9 Pump land and angular misalignment oreverted at the pump and diver chacked expensive expens | *Items necessa  | ary only in th    | e abse  | ence of manı | ıfacturer's recomm   | endations                      |      |      |     |
| G.7.2 Pump maintenance of peak load performance verified condition removed controlled processory and the processory of the pump assembly considered acceptable because test performance with MEPs and pump performance desire.  G.7.3 Power failure condition removed control processory and power source after a time delay controlled processory of the pump assembly considered acceptable because test performance marches performance marches performance characteristics on nameplate of to responsible porty recommendations and condition to acceptance with NEPs and processory of the pump assembly considered acceptable because test performance marches performance with nere degradation in excessor of percent and acceptance test univo concomition to acceptance with representation of the pump assembly considered acceptable because test performance marches performance marches performance marches performance with members and person of the processory of the pump assembly considered acceptable because test performance marches performance characteristics on nameplate of to esponsible porty.  G.9.0 Coloriculation relief valve verified closes in accordance with mile, specified to responsible porty.  G.9.1 Colorical performance performed in accordance with mile, specified closes in accordance with mile, recommendations in accordance with mile, r | Annual Testing  | for Fire P        | ump     | Assembl      | ies continued        | from page 3                    |      |      |     |
| G.7.2 Pump maintenance of peak load performance verified condition removed controlled processory and the processory of the pump assembly considered acceptable because test performance with MEPs and pump performance desire.  G.7.3 Power failure condition removed control processory and power source after a time delay controlled processory of the pump assembly considered acceptable because test performance marches performance marches performance characteristics on nameplate of to responsible porty recommendations and condition to acceptance with NEPs and processory of the pump assembly considered acceptable because test performance marches performance with nere degradation in excessor of percent and acceptance test univo concomition to acceptance with representation of the pump assembly considered acceptable because test performance marches performance marches performance marches performance with members and person of the processory of the pump assembly considered acceptable because test performance marches performance characteristics on nameplate of to esponsible porty.  G.9.0 Coloriculation relief valve verified closes in accordance with mile, specified to responsible porty.  G.9.1 Colorical performance performed in accordance with mile, specified closes in accordance with mile, recommendations in accordance with mile, r |   | Υ                 | N/A N   | N            |                      |                                | Υ    | N/A  | N   |
| gressure gressure gressure gressure interested to normal power source after a time delay gressure interested in time delay (S.3.0 Alarm conditions simulated (S.3.1 Deal or remote alarm indicating devices (visual and audible) observed for operation of uring inspecting, testing, and maintaining electric controllers  G.3.2 Legally required safety precautions taken during inspecting, testing, and maintaining electric controllers  G.3.3 After water-flow portions of annual testing or fire protection system activations, suction on soreers impacted and oleared of debris  G.3.4 Engine generator sets supplying emergency or startify oponer to fire pump assemblies tested in accordance with NFPA 110  G.3.5 Automatic rapefer switches tested in accordance with miss protection verified of the strong and the state of the second of the state of the state of the state of the state of the sta |   |                   |         |              |                      |                                |      |      |     |
| after a time delay  G.8.0 Alarm conditions simulated  G.8.1 Local required safety precautions taken during inspecting, testing, and maintaining electric controllers  G.8.2 Legally required safety precautions taken during inspecting, testing, and maintaining electric controllers  G.8.3 After water-flow portions of annual testing or fire protection system activations, suction screens inspected and cleared of debris or obstructions  G.8.4 Engine generator sets supplying emergency or standby power to fire pump assemblies tested in accordance with NFPA 110  G.8.5 Automatic transfer switches tested in accordance with MFPA 110  G.8.6 Pump room environmental heating equipment automatic operation verified  G.8.7 Pump room environmental leuriniation equipment automatic operation verified  G.8.8 Parallel and angular alignment of pump and driver checked  G.8.10 Parallel and angular alignment orpump and driver checked electrol of the pump and grow of the peritor of the pump and grow of the pump |   |                   |         | G.11.3       | •                    | ested for excessive back       |      |      |     |
| G.8.1 Local or remote alarm indicating devices (visual and audile) observed for operation of during inspecting testing, and maintaining electric controllers  G.8.2 Legally required safety precautions taken during inspecting, testing, and maintaining electric controllers  G.8.3 After water-flux portions of annual testing or fire protection system activations, suction screens inspected and cleared of debris or obstructions  G.8.4 Engine generator sats supplying emergency or standby power to fire pump assemblies tested in accordance with NFPA 110  G.8.5 Automatic ransfer switches tested in accordance with NFPA 110  G.8.6 Pump room environmental heating equipment automatic operation verified  G.8.7 Pump room environmental illumination equipment manual operation verified experiment automatic operation verified experiment pump and driver checked  G.8.9 Parallel and angular misalignment corrected  TEST RESULTS AND EVALUATION:  G.9.0 Theoretical rated speed correction factors not applied to determine pump compliance per testing  G.9.1 Engine speed on tincreased beyond pump speed rating at rated condition to achieve rated pump performance  G.9.2 Fire pump assembly considered acceptable acceptance test curve initial unadjusted field acce |   | rce               |         | G.12.0       | •                    | notified of test conclusion    |      |      |     |
| (visual and audible) observed for operation 6.8.2 Legalty required safely precautions taken during inspecting, testing, and maintaining electric controllers or obstructions 6.8.3 After water-flow portions of annual testing or fire protection systems activations, suction screens inspected and cleared of debris or obstructions 6.8.4 Engine generator sets supplying emergency or standry power to fire pump assemblies tested in accordance with NFPA 110 6.8.5 Automatic transfer switches tested in accordance with with FPA 110 6.8.6 Pump room environmental testing equipment automatic operation verified 6.8.7 Pump room environmental illumination equipment manual operation verified 6.8.8 Pump room environmental werified 6.8.9 Parailel and angular alignment of pump and driver checked 6.8.10 Parailel and angular alignment of pump and driver checked 6.8.10 Parailel and angular misalignment corrected TEST RESULTS AND EVALUATION: 6.9.0 Theoretical rated speed correction factors not applied to determine pump compliance per testing 6.9.1 Engine speed not increased beyond pump speed rating at rated condition to achieve rated pump performance 6.9.2 Fire pump assembly considered acceptable because test matches initial unadjusted field acceptance test curve 6.9.3 Fire pump assembly considered acceptable because test performance matches below or 10 percent above rated voltage 6.9.4 Investigation initiated where degradation in responsible party 6.9.5 Voltage readings at motor within 5 percent below or 10 percent above rated voltage 6.9.6 Abnormalities observed during inspection responsible party 6.10.0 Circulation relief valve verified to close in accordance with milg. spec. 6.11.0 Fire pump assembly maintenance performed in accordance with milg. spec. 6.11.0 Fire pump assembly maintenance performed in accordance with milg. spec. 6.11.0 Fire pump assembly maintenance performed in accordance with milg. spec.   |   |                   |         | G.13.0       | ALARM PANEL C        | CLEAR                          |      |      |     |
| G.8.2 Legally required safety precautions taken during inspecting, testing, and maintaining electric controllers  G.8.3 After water-flow portions of annual testing or fire protection system activations, suction screens inspected and cleared of debris or obstructions  G.8.4 Engine generator sets supplying emergency or standby power to fire pump assembles tested in accordance with NFPA 110  G.8.5 Automatic transfer switches tested in accordance with NFPA 110  G.8.6 Pump room environmental heating equipment automatic operation verified equipment manual operation verified equipment automatic operation verified  G.8.7 Pump room environmental limination equipment automatic operation verified  G.8.8 Pump room environmental wertilation equipment automatic operation verified  G.8.9 Parallel and angular misalignment corrected  TEST RESULTS AND EVALUATION:  G.9.0 Theoretical rated speed correction factors not applied to determine pump compliance per testing  G.9.1 Engine speed not increased beyond pump speed rating at rated condition to achieve rated pump performance  G.9.2 Fire pump assembly considered acceptable because ust matches initial unadjusted field acceptance test curve  G.9.3 Fire pump assembly considered acceptable because ust performance matches performance extended to the pressure on the pressure of the pressure on the pressure of th |   |                   |         | G.14.0       | SYSTEM RETURI        | NED TO SERVICE                 |      | ш    |     |
| fire protection system activations, suction screens inspected and cleared of debris or obstructions  G.8.4 Engine generator sets supplying emergency or standby power to fire pump assemblies tested in accordance with NFPA 110  G.8.5 Automatic transfer switches tested in accordance with NFPA 110  G.8.6 Pump room environmental heating equipment automatic operation verified  G.8.7 Pump room environmental limination equipment manual operation verified  G.8.8 Pump room environmental limination equipment automatic operation verified  G.8.9 Parallel and angular alignment of pump and driver checked  G.8.10 Parallel and angular misalignment corrected  TEST RESULTS AND EVALUATION:  G.9.10 Parallel and angular misalignment corrected per testing  G.9.2 Fire pump assembly considered acceptable because test matches initial unadjusted field acceptance test curve or and performance matches performance characteristics on nameplate  G.9.4 Investigation initiated where degradation in excess of 5 percent of initial acceptance test personance matches below or 10 percent above rated voltage  G.9.5 Voltage readings at motor within 5 percent below or 10 percent above rated voltage  G.9.6 Abnormalities observed during inspection, testing, and maintenance promptly reported to responsible party  G.10.0 Circulation relief valve verified to close in accordance with mig. spece.  G.11.0 Fire pump assembly mign. tenance performed in accordance with mign. spece.   | G.8.2 Legally required safety precautions take during inspecting, testing, and maintaining  | n                 |         | G.15.0       | COMMENTS:            |                                |      |      |     |
| standby power to fire pump assemblies tested in accordance with NFPA 110  G.8.5 Automatic transfer switches tested in accordance with NFPA 110  G.8.6 Pump room environmental heating equipment automatic operation verified  G.8.7 Pump room environmental illumination equipment automatic operation verified  G.8.8 Pump room environmental illumination equipment automatic operation verified  G.8.9 Parallel and angular alignment of pump and driver checked  G.8.10 Parallel and angular misalignment corrected  TEST RESULTS AND EVALUATION:  G.9.0 Theoretical rated speed correction factors not applied to determine pump compliance per testing  G.9.1 Engine speed not increased beyond pump speed rating at rated condition to achieve rated pump performance  G.9.2 Fire pump assembly considered acceptable because test matches initial unadjusted field acceptance lest curve  G.9.3 Fire pump assembly considered acceptable because test performance matches performance characteristics on nameplate ressure or nameplate pressure  G.9.4 Investigation initiated where degradation in excess of 5 percent of initial acceptance test performance characteristics on nameplate pressure or nameplate pressure  G.9.4 Investigation initiated where degradation in excess of 5 percent of initial acceptance test performance characteristics on nameplate to responsible party  G.9.0 Circulation relief valve verified of close in accordance with mfg. spec.  G.11.0 Fire pump assembly maintenance performed in accordance with mfg. spec.  | G.8.3 After water-flow portions of annual testin fire protection system activations, suctio screens inspected and cleared of debris | n                 |         |              |                      |                                |      |      |     |
| G.8.5 Automatic transfer switches tested in accordance with NFPA 110 G.8.6 Pump room environmental heating equipment automatic operation verified G.8.7 Pump room environmental llumination equipment manual operation verified G.8.8 Pump room environmental llumination equipment automatic operation verified G.8.9 Parallel and angular alignment of pump and driver checked G.8.10 Parallel and angular misalignment corrected TEST RESULTS AND EVALUATION: G.9.0 Theoretical rated speed correction factors not applied to determine pump compliance per testing G.9.1 Engine speed not increased beyond pump speed rating at rated condition to achieve rated pump performance G.9.2 Fire pump assembly considered acceptable because test matches initial unadjusted field acceptance test curve G.9.3 Fire pump assembly considered acceptable because test matches initial unadjusted field acceptance test curve G.9.4 Investigation initiated where degradation in excess of 5 percent of initial acceptance test pressure on ameplate pressure test pressure on ameplate pressure test greates at motor within 5 percent below or 10 percent above rated voltage G.9.5 Voltage readings at motor within 5 percent below or 10 percent above rated voltage G.9.6 Abnormalities observed during inspection, testing, and maintenance performed in accordance with mfg. spec. G.11.0 Fire pump assembly maintenance performed in accordance with mfg. sece. G.11.0 Fire pump assembly maintenance performed in accordance with mfg. sece.  | standby power to fire pump assemblies   | ency or<br>tested |         |              |                      | -                              | embl | lies |     |
| accordance with NFPA 110  G.8.6 Pump room environmental heating equipment automatic operation verified (G.8.7 Pump room environmental illumination equipment manual operation verified (G.8.8 Pump room environmental illumination equipment automatic operation verified (G.8.8 Pump room environmental ventilation equipment automatic operation verified (G.8.8 Pump room environmental ventilation equipment automatic operation verified (G.8.8 Pump room environmental ventilation equipment automatic operation verified (G.8.8 Pump room environmental ventilation equipment automatic operation verified (G.8.8 Pump room environmental ventilation equipment automatic operation verified (G.8.8 Pump room environmental ventilation equipment automatic operation verified (G.8.8 Pump room environmental ventilation equipment automatic operation verified (G.8.8 Pump room environmental ventilation equipment automatic operation verified (G.8.8 Pump room environmental illumination (G.8.8 Pump room environmental in G.8.9 Check valve internal compone |   |                   |         | H.2.0        | Pertinent parties no | tified before conducting tasks |      |      |     |
| automatic operation verified  G.8.7 Pump room environmental illumination equipment manual operation verified  G.8.8 Pump room environmental ventilation equipment automatic operation verified  G.8.9 Parallel and angular alignment of pump and driver checked  G.8.10 Parallel and angular misalignment corrected  TEST RESULTS AND EVALUATION:  G.9.0 Theoretical rated speed correction factors not applied to determine pump compliance per testing  G.9.1 Engine speed not increased beyond pump speed rating at rated condition to achieve rated pump performance  G.9.2 Fire pump assembly considered acceptable because test matches initial unadjusted field acceptance test curve  G.9.3 Fire pump assembly considered acceptable because test performance matches performance characteristics on nameplate pressure  G.9.4 Investigation initiated where degradation in excess of 5 percent of initial acceptance test personsible party  G.9.6 Abnormalities observed during inspection, testing, and maintenance promptly reported to responsible party  G.10.0 Circulation relief valve verified to close in accordance with mfg. spec.  G.11.0 Fire pump assembly maintenance performed in accordance with mfg. recommendations  | accordance with NFPA 110  |                   |         | H.3.0        | Check valves inter   | rnally inspected               |      |      |     |
| G.8.8 Pump room environmental ventilation equipment automatic operation verified G.8.9 Parallel and angular alignment of pump and driver checked  G.8.10 Parallel and angular misalignment corrected  TEST RESULTS AND EVALUATION: G.9.0 Theoretical rated speed correction factors not applied to determine pump compliance per testing G.9.1 Engine speed not increased beyond pump speed rating at rated condition to achieve rated pump performance G.9.2 Fire pump assembly considered acceptable because test matches initial unadjusted field acceptance test curve G.9.3 Fire pump assembly considered acceptable because test performance matches performance characteristics on nameplate excess of 5 percent of initial acceptance test pressure or nameplate pressure G.9.5 Voltage readings at motor within 5 percent below or 10 percent above rated voltage G.9.6 Abnormalities observed during inspection, testing, and maintenance pormptly reported to responsible party G.11.0 Fire pump assembly maintenance performed in accordance with mfg. spec. G.11.0 Fire pump assembly maintenance performed in accordance with mfg. recommendations   | automatic operation verified  | oment             |         | H.3.1        |                      | nal components operate         |      |      |     |
| G.8.9 Pump room environmental ventilation equipment automatic operation verified G.8.9 Parallel and angular alignment of pump and driver checked G.8.10 Parallel and angular misalignment corrected TEST RESULTS AND EVALUATION: G.9.0 Theoretical rated speed correction factors not applied to determine pump compliance per testing G.9.1 Engine speed not increased beyond pump speed rating at rated condition to achieve rated pump performance G.9.2 Fire pump assembly considered acceptable because test matches initial unadjusted field acceptance test curve G.9.3 Fire pump assembly considered acceptable because test performance characteristics on nameplate performance characteristics on nameplate pressure or nameplate pressure G.9.4 Investigation initiated where degradation in excess of 5 percent of initial acceptance test performance rated voltage G.9.6 Abnormalities observed during inspection, testing, and maintenance performed in accordance with mfg. spec. G.10.0 Circulation relief valve verified to close in accordance with mfg. recommendations   |   |                   |         |              |                      |                                | ,    |      |     |
| G.8.9 Parallel and angular alignment of pump and driver checked  G.8.10 Parallel and angular misalignment corrected  TEST RESULTS AND EVALUATION:  G.9.0 Theoretical rated speed correction factors not applied to determine pump compliance per testing  G.9.1 Engine speed not increased beyond pump speed rating at rated condition to achieve rated pump performance  G.9.2 Fire pump assembly considered acceptable because test matches initial unadjusted field acceptance test curve  G.9.3 Fire pump assembly considered acceptable because test performance matches performance characteristics on nameplate Pressure on nameplate pressure  G.9.6 Abnormalities observed during inspection, testing, and maintenance performed in accordance with mfg. recommendations  H.3.5 Check valve internal inspection/maintenance date:  H.4.1 Pressure control valves full flow tested  H.4.2 Supply side static pressure  psi H.4.3 System side static pressure  psi H.4.4 Supply side residual pressure  H.4.5 System side residual pressure  H.4.6 Results compared to previous full flow test  H.4.7 Adjustments made as necessary  H.4.8 Results compared to previous full flow test  H.4.9 System side residual pressure  H.4.1 Pressure control valves full flow tested  H.4.2 Supply side residual pressure  H.4.4 Supply side residual pressure  H.4.6 Results compared to previous full flow test  H.4.7 Adjustments made as necessary  H.4.9 System side residual pressure  H.4.9 System side residual pressure  H.4.1 Pressure control valves full flow tested  H.4.2 Supply side residual pressure  H.4.3 System side residual pressure  H.4.4 Supply side residual pressure  H.4.5 System side residual pressure  H.4.6 Results compared to previous full flow test  H.4.7 Adjustments made as necessary  H.4.9 System side attaic pressure  H.4.9 System side residual pressure  H.4.9 Results or side residual pr |   |                   |         |              | condition            |                                |      |      |     |
| G.8.10 Parallel and angular misalignment corrected  TEST RESULTS AND EVALUATION:  G.9.0 Theoretical rated speed correction factors not applied to determine pump compliance per testing  G.9.1 Engine speed not increased beyond pump speed rating at rated condition to achieve rated pump performance rated pump performance test curve  G.9.2 Fire pump assembly considered acceptable because test matches initial unadjusted field acceptance test curve  G.9.3 Fire pump assembly considered acceptable because test performance matches performance characteristics on nameplate  G.9.4 Investigation initiated where degradation in excess of 5 percent of initial acceptance test pressure  G.9.5 Voltage readings at motor within 5 percent below or 10 percent above rated voltage  G.9.6 Abnormalities observed during inspection, testing, and maintenance performed in accordance with mfg. recommendations  H.4.0 Adequate drainage provided before flow testing  H.4.1 Pressure control valves full flow tested  H.4.2 Supply side static pressure  psi  H.4.3 System side residual pressure  psi  H.4.4 Supply side residual pressure  psi  H.4.5 System side residual pressure  H.4.6 Results compared to previous full flow test  H.4.7 Adjustments made as necessary  H.5.0 Obstruction investigation conducted (required at 5 year intervals regardless of obstruction evidence) (see AFSA Form 114A)  H.7.0 Pertinent parties notified after conclusion of tasks  H.8.0 ALARM PANEL CLEAR  H.9.0 SYSTEM RETURNED TO SERVICE  H.10.0 COMMENTS:  | G.8.9 Parallel and angular alignment of pump  | and               |         |              | cleaned/repaired/r   | eplaced as necessary           |      |      |     |
| TEST RESULTS AND EVALUATION:  G.9.0 Theoretical rated speed correction factors not applied to determine pump compliance per testing  G.9.1 Engine speed not increased beyond pump speed rating at rated condition to achieve rated pump performance  G.9.2 Fire pump assembly considered acceptable because test matches initial unadjusted field acceptance test curve  G.9.3 Fire pump assembly considered acceptable because test performance matches performance characteristics on nameplate  G.9.4 Investigation initiated where degradation in excess of 5 percent of initial acceptance test pressure  G.9.5 Voltage readings at motor within 5 percent below or 10 percent above rated voltage  G.9.6 Abnormalities observed during inspection, testing, and maintenance performed in accordance with mfg. spec.  G.11.0 Circulation relief valve verified to close in accordance with mfg. recommendations  H.4.1 Pressure control valves full flow tested  H.4.2 Supply side static pressure  psi H.4.3 System side residual pressure  H.4.4 Supply side residual pressure  H.4.5 System side residual pressure  H.4.6 Results compared to previous full flow test  H.4.7 Adjustments made as necessary  H.5.0 Fire pump assembly maintenance performed (required at 5 year intervals regardless of obstruction evidence) (see AFSA Form 114A)  H.7.0 Pertinent parties notified after conclusion of tasks  H.8.0 ALARM PANEL CLEAR  H.9.0 SYSTEM RETURNED TO SERVICE  H.10.0 COMMENTS:   | G.8.10 Parallel and angular misalignment corre  | cted              |         | H.3.5        |                      | nai inspection/maintenance     |      |      |     |
| not applied to determine pump compliance per testing  G.9.1 Engine speed not increased beyond pump speed rating at rated condition to achieve rated pump performance  G.9.2 Fire pump assembly considered acceptable because test matches initial unadjusted field acceptance test curve  G.9.3 Fire pump assembly considered acceptable because test performance matches performance characteristics on nameplate  G.9.4 Investigation initiated where degradation in excess of 5 percent of initial acceptance test pressure or nameplate pressure  G.9.5 Voltage readings at motor within 5 percent below or 10 percent above rated voltage  G.9.6 Abnormalities observed during inspection, testing, and maintenance promptly reported to responsible party  G.10.0 Circulation relief valve verified to close in accordance with mfg. recommendations  H.4.2 Supply side static pressure  H.4.3 System side residual pressure  H.4.4 Supply side static pressure  H.4.5 System side residual pressure  H.4.6 Results compared to previous full flow test  H.4.7 Adjustments made as necessary  H.5.0 Fire pump assembly maintenance performed in accordance with mfg. recommendations  H.6.0 Obstruction investigation conducted (required at 5 year intervals regardless of obstruction evidence) (see AFSA Form 114A)  H.7.0 Pertinent parties notified after conclusion of tasks  H.8.0 ALARM PANEL CLEAR  H.9.0 SYSTEM RETURNED TO SERVICE  H.10.0 COMMENTS:  |   | '                 |         | H.4.0        | Adequate drainage    | provided before flow testing   | ,    |      |     |
| G.9.1 Engine speed not increased beyond pump speed rating at rated condition to achieve rated pump performance G.9.2 Fire pump assembly considered acceptable because test matches initial unadjusted field acceptance test curve G.9.3 Fire pump assembly considered acceptable because test performance matches performance characteristics on nameplate G.9.4 Investigation initiated where degradation in excess of 5 percent of initial acceptance test pressure or nameplate pressure G.9.5 Voltage readings at motor within 5 percent below or 10 percent above rated voltage G.9.6 Abnormalities observed during inspection, testing, and maintenance promptly reported to responsible party G.10.0 Circulation relief valve verified to close in accordance with mfg. recommendations  H.4.2 Supply side static pressure H.4.3 System side static pressure H.4.4 Supply side residual pressure H.4.5 System side residual pressure H.4.6 Results compared to previous full flow test H.4.7 Adjustments made as necessary H.5.0 Fire pump assembly maintenance performed in accordance with mfg. recommendations  H.4.2 Supply side static pressure H.4.3 System side static pressure H.4.4 Supply side residual pressure  H.4.5 System side residual pressure H.4.6 Results compared to previous full flow test H.4.7 Adjustments made as necessary H.5.0 Fire pump assembly maintenance performed in accordance with mfg. recommendations  H.4.2 Supply side residual pressure H.4.3 System side static pressure H.4.4 Supply side residual pressure H.4.5 System side residual pressure H.4.6 Results compared to previous full flow test H.4.7 Adjustments made as necessary H.5.0 Fire pump assembly maintenance performed in accordance with mfg. recommendations  H.4.2 Supply side residual pressure H.4.3 System side static pressure H.4.4 Supply side residual pressure H.4.5 System side static pressure H.4.6 Results compared to previous full flow test H.4.7 Adjustments made as necessary H.5.0 Fire pump assembly maintenance performed in accordance with mfg. recommendations  H.6.0 Obstruction i |   |                   |         | H.4.1        | Pressure control v   | alves full flow tested         |      |      |     |
| G.9.1 Engine speed not increased beyond pump speed rating at rated condition to achieve rated pump performance G.9.2 Fire pump assembly considered acceptable because test matches initial unadjusted field acceptance test curve G.9.3 Fire pump assembly considered acceptable because test performance matches performance characteristics on nameplate G.9.4 Investigation initiated where degradation in excess of 5 percent of initial acceptance test pressure or nameplate pressure or nameplate pressure or nameplate pressure G.9.5 Voltage readings at motor within 5 percent below or 10 percent above rated voltage G.9.6 Abnormalities observed during inspection, testing, and maintenance promptly reported to responsible party G.10.0 Circulation relief valve verified to close in accordance with mfg. spec. G.11.0 Fire pump assembly maintenance performed in accordance with mfg. recommendations   |   | ice               |         | H.4.2        | Supply side static   | pressure                       |      |      | psi |
| rated pump performance  G.9.2 Fire pump assembly considered acceptable because test matches initial unadjusted field acceptance test curve  G.9.3 Fire pump assembly considered acceptable because test performance matches performance characteristics on nameplate  G.9.4 Investigation initiated where degradation in excess of 5 percent of initial acceptance test pressure or nameplate pressure  G.9.5 Voltage readings at motor within 5 percent below or 10 percent above rated voltage  G.9.6 Abnormalities observed during inspection, testing, and maintenance promptly reported to responsible party  G.10.0 Circulation relief valve verified to close in accordance with mfg. spec.  G.11.0 Fire pump assembly maintenance performed in accordance with mfg. recommendations  | G.9.1 Engine speed not increased beyond pur   |                   |         | H.4.3        | System side statio   | pressure                       |      |      | psi |
| G.9.2 Fire pump assembly considered acceptable because test matches initial unadjusted field acceptance test curve  G.9.3 Fire pump assembly considered acceptable because test performance matches performance characteristics on nameplate  G.9.4 Investigation initiated where degradation in excess of 5 percent of initial acceptance test pressure or nameplate pressure  G.9.5 Voltage readings at motor within 5 percent below or 10 percent above rated voltage  G.9.6 Abnormalities observed during inspection, testing, and maintenance promptly reported to responsible party  G.10.0 Circulation relief valve verified to close in accordance with mfg. recommendations  H.4.5 System side residual pressure  H.4.6 Results compared to previous full flow test  H.4.7 Adjustments made as necessary  H.5.0 Fire pump assembly maintenance performed in accordance with mfg. recommendations  H.6.0 Obstruction investigation conducted (required at 5 year intervals regardless of obstruction evidence) (see AFSA Form 114A)  H.7.0 Pertinent parties notified after conclusion of tasks  H.8.0 ALARM PANEL CLEAR  H.9.0 SYSTEM RETURNED TO SERVICE  H.10.0 COMMENTS:   |   | e                 |         | H.4.4        | Supply side residu   | ial pressure                   |      |      | psi |
| because test matches initial unadjusted field acceptance test curve  G.9.3 Fire pump assembly considered acceptable because test performance matches performance characteristics on nameplate  G.9.4 Investigation initiated where degradation in excess of 5 percent of initial acceptance test pressure or nameplate pressure  G.9.5 Voltage readings at motor within 5 percent below or 10 percent above rated voltage  G.9.6 Abnormalities observed during inspection, testing, and maintenance promptly reported to responsible party  G.10.0 Circulation relief valve verified to close in accordance with mfg. spec.  G.11.0 Fire pump assembly maintenance performed in accordance with mfg. recommendations  H.4.6 Results compared to previous full flow test  H.4.7 Adjustments made as necessary  H.5.0 Fire pump assembly maintenance performed in accordance with mfg. recommendations  H.6.0 Obstruction investigation conducted (required at 5 year intervals regardless of obstruction evidence) (see AFSA Form 114A)  H.7.0 Pertinent parties notified after conclusion of tasks  H.8.0 ALARM PANEL CLEAR  H.9.0 SYSTEM RETURNED TO SERVICE  H.10.0 COMMENTS:  |   | able              |         | H.4.5        | System side resid    | ual pressure                   |      |      | psi |
| G.9.3 Fire pump assembly considered acceptable because test performance matches performance characteristics on nameplate  G.9.4 Investigation initiated where degradation in excess of 5 percent of initial acceptance test pressure or nameplate pressure  G.9.5 Voltage readings at motor within 5 percent below or 10 percent above rated voltage  G.9.6 Abnormalities observed during inspection, testing, and maintenance promptly reported to responsible party  G.10.0 Circulation relief valve verified to close in accordance with mfg. spec.  G.11.0 Fire pump assembly maintenance performed in accordance with mfg. recommendations  | because test matches initial unadjusted   |                   |         | H.4.6        | Results compared     | to previous full flow test     |      |      |     |
| because test performance matches performance characteristics on nameplate  G.9.4 Investigation initiated where degradation in excess of 5 percent of initial acceptance test pressure or nameplate pressure  G.9.5 Voltage readings at motor within 5 percent below or 10 percent above rated voltage  G.9.6 Abnormalities observed during inspection, testing, and maintenance promptly reported to responsible party  G.10.0 Circulation relief valve verified to close in accordance with mfg. spec.  G.11.0 Fire pump assembly maintenance performed in accordance with mfg. recommendations   | ,   | able              |         | H.4.7        | Adjustments made     | e as necessary                 |      |      |     |
| G.9.4 Investigation initiated where degradation in excess of 5 percent of initial acceptance test pressure or nameplate pressure  G.9.5 Voltage readings at motor within 5 percent below or 10 percent above rated voltage  G.9.6 Abnormalities observed during inspection, testing, and maintenance promptly reported to responsible party  G.10.0 Circulation relief valve verified to close in accordance with mfg. spec.  G.11.0 Fire pump assembly maintenance performed in accordance with mfg. recommendations  | because test performance matches  |                   |         | H.5.0        |                      |                                |      |      |     |
| G.9.5 Voltage readings at motor within 5 percent below or 10 percent above rated voltage G.9.6 Abnormalities observed during inspection, testing, and maintenance promptly reported to responsible party G.10.0 Circulation relief valve verified to close in accordance with mfg. spec. G.11.0 Fire pump assembly maintenance performed in accordance with mfg. recommendations   | G.9.4 Investigation initiated where degradation excess of 5 percent of initial acceptance   | n in              |         | H.6.0        | (required at 5 year  | r intervals regardless of      | )    |      |     |
| below or 10 percent above rated voltage  G.9.6 Abnormalities observed during inspection, testing, and maintenance promptly reported to responsible party  G.10.0 Circulation relief valve verified to close in accordance with mfg. spec.  G.11.0 Fire pump assembly maintenance performed in accordance with mfg. recommendations   |   | ent               |         | H.7.0        |                      |                                | _    |      |     |
| testing, and maintenance promptly reported to responsible party  G.10.0 Circulation relief valve verified to close in accordance with mfg. spec.  G.11.0 Fire pump assembly maintenance performed in accordance with mfg. recommendations  | below or 10 percent above rated voltage   | •                 |         | H.8.0        | ALARM PANEL C        | CLEAR                          |      |      |     |
| G.10.0 Circulation relief valve verified to close in accordance with mfg. spec.  G.11.0 Fire pump assembly maintenance performed in accordance with mfg. recommendations   | testing, and maintenance promptly report  | n,<br>rted        |         |              |                      | NED TO SERVICE                 |      |      |     |
| G.11.0 Fire pump assembly maintenance performed in accordance with mfg. recommendations  | G.10.0 Circulation relief valve verified to close in  | n                 |         |              | -                    |                                |      |      |     |
|  | G.11.0 Fire pump assembly maintenance perform   |                   |         |              |                      |                                |      |      |     |
|  |   |                   |         |              |                      |                                |      |      |     |

| Inspecting F       | irm:              | •                                     | •                 |                |                | •                  | Inspe                                 | ction Contract       | #                 |              |
|--------------------|-------------------|---------------------------------------|-------------------|----------------|----------------|--------------------|---------------------------------------|----------------------|-------------------|--------------|
|                    | pected Prope      | erty:                                 |                   |                |                |                    | '                                     |                      |                   |              |
| Inspector Na       |                   | , , , , , , , , , , , , , , , , , , , |                   |                |                |                    | Date:                                 |                      |                   |              |
| Inspection F       |                   | ☐ Monthly                             |                   | Quart          | erly           | □l An              | nually                                |                      | Other             |              |
|                    | - 1 /             |                                       |                   |                |                |                    | , , , , , , , , , , , , , , , , , , , | <b>—</b>             |                   |              |
|                    |                   |                                       |                   | An             | nual Test      | Data               |                                       |                      |                   |              |
| ELECTRIC           | PUMP SYST         | ГЕМ:                                  |                   |                |                |                    |                                       |                      |                   |              |
| Time contro        | ller during the   | e starting tran                       | sition from R     | teduced Vol    | tage to Full V | oltage/            |                                       |                      |                   | sec.         |
|                    |                   | o reach full s                        | peed:             |                |                |                    |                                       |                      |                   | sec.         |
|                    | JMP SYSTE         |                                       |                   |                |                |                    |                                       |                      |                   |              |
| -                  | ed for engine     |                                       |                   |                |                |                    |                                       |                      |                   | sec          |
|                    |                   | unning speed:                         |                   |                |                |                    |                                       |                      |                   | sec          |
|                    | s while Engir     | ne operating:                         |                   |                |                |                    |                                       |                      |                   |              |
|                    | Pressure:         |                                       |                   |                |                |                    |                                       |                      |                   | psi          |
|                    | ed indicator:     |                                       |                   |                |                |                    |                                       |                      |                   | rpm          |
|                    | er temperatur     | e:                                    |                   |                |                |                    |                                       |                      |                   | °F           |
|                    | emperature:       |                                       |                   |                |                |                    |                                       |                      |                   | °F           |
| PUMP:              |                   |                                       |                   |                |                |                    |                                       |                      |                   |              |
| Make               |                   |                                       |                   |                |                |                    |                                       |                      |                   |              |
| Type<br>Rated Capa | ıcity             |                                       |                   |                |                |                    |                                       |                      |                   |              |
| Rated Press        |                   |                                       |                   |                |                |                    |                                       |                      |                   |              |
| Rated RPM          | Juic              |                                       |                   |                |                |                    |                                       |                      |                   |              |
|                    | annual flow t     | est:                                  |                   |                |                |                    |                                       |                      |                   |              |
| CONTROLI           | ER:               |                                       |                   |                |                |                    |                                       |                      |                   |              |
| Make/Mode          | l                 |                                       |                   |                |                |                    |                                       |                      |                   |              |
| Listed             |                   |                                       |                   |                |                |                    |                                       |                      |                   |              |
| COMMENT            | S:                |                                       |                   |                |                |                    |                                       |                      |                   |              |
|                    |                   |                                       |                   |                |                |                    |                                       |                      |                   |              |
|                    |                   |                                       |                   |                |                |                    |                                       |                      |                   |              |
|                    |                   |                                       |                   |                |                |                    |                                       |                      |                   |              |
|                    |                   |                                       |                   |                |                |                    |                                       |                      |                   |              |
|                    |                   |                                       |                   |                |                |                    |                                       |                      |                   |              |
|                    | NOTE              |                                       | \ d               |                |                |                    | DI - 44 - J                           | O D                  | 0 -10             |              |
|                    | NOIE              | : Pump H                              | ertorm            | ance C         | urve Sno       | ouia Be            | Piotted                               | On Page              | e 8 ot 8.         |              |
| Test Da            | ata:              |                                       |                   |                |                |                    |                                       |                      |                   |              |
|                    | T                 | T =                                   | T                 |                |                |                    |                                       |                      | T                 | T            |
| Flow               | Suction           | Discharge                             | Net Pump          | Pump           | Pitot          | Dia. of            | No. of                                | Flow                 | Opening           | Actual Flow  |
|                    | Pressure<br>(PSI) | Pressure<br>(PSI)                     | Pressure<br>(PSI) | Speed<br>(RPM) | Pressure       | Nozzle<br>Openings | Nozzles<br>Flowed                     | Based on Pitot Pres. | Coefficient<br>C= | (GPM)        |
| Churn              | (PSI)             | (P31)                                 | (PSI)             | (KPIVI)        |                | Openings           | riowed                                | Pilot Pies.          | =                 |              |
| 100%               |                   |                                       |                   |                |                |                    |                                       |                      |                   |              |
| 150%               |                   |                                       |                   |                |                |                    |                                       |                      |                   |              |
|                    | Volts             | Lead #1                               | Lead #2           | Lead #3        |                | Amps               | Lead #1                               | Lead #2              | Lead #3           |              |
| Churn              | _                 |                                       |                   |                |                | <br>               |                                       |                      |                   | 1            |
| 100%               |                   |                                       |                   |                |                |                    |                                       |                      |                   |              |
| 150%<br>Notes:     |                   |                                       | <u> </u>          |                |                | <u> </u>           | <u> </u>                              |                      |                   |              |
| Remarks or         | Test              |                                       |                   |                |                |                    |                                       |                      |                   |              |
| rtomanto or        | 1 1001            |                                       |                   |                |                |                    |                                       |                      |                   |              |
|                    |                   |                                       |                   |                |                |                    |                                       |                      |                   |              |
| Signature a        | nd Title of Pe    | rson Making                           | Test              |                |                | Co                 | mpany Nam                             | e & Address          |                   |              |
| 14 <i>0</i>        |                   |                                       |                   |                |                | _                  |                                       |                      |                   |              |
| Witness (O         | wner or Desig     | nated Rep.)                           |                   |                |                | Da                 | te of Examir                          | ation                |                   |              |
|                    |                   |                                       | (All "NO"         | answers to     | be explained   | d.)                |                                       |                      | (AF               | SA Form 110A |
| INSPECTOR          | 'S INITIAL _      |                                       |                   |                | ED REP. INIT   |                    | DATE                                  |                      |                   | Page 5 of 6  |

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(All "NO" answers to be explained.)
INSPECTOR'S INITIAL \_\_\_\_\_ DATE \_\_\_\_\_\_
OWNER/DESIGNATED REP. INITIAL \_\_\_\_\_ DATE \_\_\_\_\_

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