W.D. PERKINS

FIRE PUMP SPECIALIST

Pump Performance Test by W.D. Perkins Fire Pump Specialists as Per NFPA 1911-2017 and ISO Standards Recommended on Rated and Non-Rated Fire Apparatus Service Performed with A Draft Commander 3000® Using Clean Clear Water

1911-2017 INSPECTION, MAINTENANCE, TESTING, AND RETIREMENT OF IN-SERVICE AUTOMOTIVE FIRE APPARATUS

PUMP PERFORMANCE TEST

Name of Fire Department: HARVARD MA		Date of Pump Test: 10-29-2024		
Unit ID: Engine 3		VIN: I1HTSEADR22H532902		
Manufacturer of Apparatus: KME		Year Apparatus Manufactured: 2002		
Manufacturer Model: INTERNATIONAL	Vehicle Mileage: 13002	Pump Hours: 0	Vehicle Engine: Diesel	
Pump Make: Hale	Pump Model #: QPAK100-23L		Pump Serial #: 82369	MFG Job/S.O # : 5043
Pump Rated Capacity: (GPM) at 1000		Type of Pump: Single		
Test Site Location: FIRE STATION	Suction Hose Size: 6 (in.)		Length: 17Ft (ft)	

Tests Performed from Draft

	At Start of Tests	At End of Tests
Atmospheric Pressure	30.57	30.40
Air Temperature	47	47
Water Temperature	65	85
Elevation of test site	430	430
Lift	**3 Feet**	**3 Feet**
Negative Pressure: 5	**Engine Pressure: 145**	**Net Pressure: 150**

NFPA Recommended Vacuum Attained is 22 Inches of Mercury up to 2000ft. (Altitude)

Vacuum/Wet Prime Tank Flow Test Results				
Actual Dry Vacuum Attained: 23Hg	Dry Vacuum reading in 5 minutes: 19Hg	Dry Vacuum Test Result: Pass	Tank Flow GPM: 596	Tank Flow Test Result: Pass Flowed 500 GPM
Time to wet prime pump: :15	Wet Prime Test Results: Pass	Engine Governed Speed Plate Reading: 0	Engine Governed Speed Cab Reading: 0	Engine Governed Speed Result: N/A (NO Plate Reading)
Pressure Control Device Type: Pressure Governor	MFG of Pressure Control Device: FRC	Rise pressure while pumping: Yes	Pressure Device in Working Order: Yes	

Pump Test Results

	Capacity Test	Overload Test	200 PSI Test	250 PSI Test
Test Duration in Minutes	**20**	**5**	**10**	**10**
Average Nozzle Pressure	**72**	**72**	**67**	**58**
Gallons Per Minute	**1008**	**1008**	**704**	**508**
Average Pump Pressure	**150**	**165**	**200**	**250**
RPM-Engine	**1587**	**1639**	**1702**	**1851**
RPM-Pump	**1587**	**1638**	**1702**	**1851**
Pass Fail	**Pass**	**No Plate Reading**	**Pass**	**Pass**

HARVARD Engine 3 Pump Test per NFPA 1911 Apparatus Guidelines of latest edition 2017

20-MINUTE CAPACITY TEST 150 PSI Plate RPM: 1627

Number of Discharge Lines: 2 Size of Discharge Lines: 3"	Hose Length: 100	Number of Nozzles: 1 Nozzle Size(s): 2"	Position of transfer valve: N/A

Time	Rpm Tach Cab	Rpm Tach Pump Panel	Engine Temp	Oil Pressure	Voltage /Amps	Auto Trans Temp.	Apparatus Gauge Vac	Test Gauge Vac	Apparatus Gauge Pressure	Test Gauge Pressure	Pitot/ Flow	Actual GPM Flowed
11:30	1585	1587	215	46	13.30	205	-0	-5	150	145	72	1008
11:35	1587	1587	213	47	13.30	205	-0	-5	150	145	72	1008
11:40	1589	1589	206	46	13.20	205	-0	-5	150	145	72	1008
11:45	1590	1588	204	46	13.20	208	-0	-5	150	145	72	1008
11:50	1585	1585	208	45	13.10	208	-0	-5	150	150	72	1008
Averages	1587	1587	209	46	13.22	206	-0	-5	150	146	72	1008

5-MINUTE OVERLOAD TEST 165 PSI Plate RPM: 0

Time	Rpm Tach Cab	Rpm Tach Pump Panel	Engine Temp	Oil Pressure	Voltage /Amps	Auto Trans Temp.	Apparatus Gauge Vac	Test Gauge Vac	Apparatus Gauge Pressure	Test Gauge Pressure	Pitot/ Flow	Actual GPM Flowed
11:50	1634	1633	212	45	13.10	208	-0	-5	160	160	72	1008
11:55	1644	1644	207	46	13.10	210	-0	-5	160	160	72	1008
Averages	1639	1638	210	46	13.10	209	-0	-5	160	160	72	1008

10-MINUTE 200 PSI 70% Test Plate RPM: 1723

Number of Discharge Lines: 2 Size of Discharge Lines: 3"	Hose Length: 100	Number of Nozzles: 1 Nozzle Size(s): 1.75"	Position of transfer valve: N/A

Time	Rpm Tach Cab	Rpm Tach Pump Panel	Engine Temp	Oil Pressure	Voltage /Amps	Auto Trans Temp.	Apparatus Gauge Vac	Test Gauge Vac	Apparatus Gauge Pressure	Test Gauge Pressure	Pitot/ Flow	Actual GPM Flowed
11:55	1711	1711	207	47	13.10	210	-0	-4	200	200	60	704
12:00	1696	1696	212	48	13.20	212	-0	-4	200	200	70	704
12:05	1700	1700	210	45	13.50	212	-0	-4	200	200	70	704
Averages	1702	1702	210	47	13.27	211	-0	-4	200	200	67	704

10-MINUTE 250 PSI 50% TEST Plate RPM: 1890

Number of Discharge Lines: 2 Size of Discharge Lines: 3"	Hose Length: 100	Number of Nozzles: 1 Nozzle Size(s): 1.5"	Position of transfer valve: N/A

Time	Rpm Tach Cab	Rpm Tach Pump Panel	Engine Temp	Oil Pressure	Voltage	Auto Trans Temp.	Apparatus Gauge Vac	Test Gauge Vac	Apparatus Gauge Pressure	Test Gauge Pressure	Pitot/ Flow	Actual GPM Flowed
12:06	1860	1860	207	46	13.00	214	-0	-2	250	250	58	508
12:11	1845	1845	214	45	13.10	214	-0	-2	250	250	58	508
12:16	1848	1848	210	46	13.10	216	-0	-2	250	250	58	508
Averages	1851	1851	210	46	13.07	215	-0	-2	250	250	58	508

If Test Stopped See Page 5 for Explanation

Service Company Name: W.D. Perkins Fire Pump Specialist	Fire Department Name: HARVARD	Service Technician Name: Gene Jastrem	Date: 10-29-2024

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FIRE PUMP SPECIALIST

Draft Commander 1911-3000 Fire Pump Test Performance Checklist Before and During ISO Pump Test

29 POINT PREVENTATIVE MAINTENANCE CHECKLIST

HARVARD Engine 3

1. Emergency Brake set during Pump Test	Yes	2. Fuel gauge of Apparatus before Pump Test	Full
		3. Fuel gauge of Apparatus after Pump Test	3/4

4. Primer	Electric Oilless	5. Primer Status	OK
4a. Oil Level		5a. Primer Recommended Repair	
6. Drain Fire Pump before checking Primer for Vacuum Test	Yes	8. All Emergency Lights turned on during Pump Test	Yes
7. Checked all Suction and Discharge Plugs and Cap. Gaskets in good shape.	OK	8a. Emergency Lighting Recommend Repair	
7a. Suction and Discharge Plugs and Caps Replaced			
7b. Suction and Discharge Plugs and Caps Recommend Repair		10. Check all Pump Panels Individual Discharge gauges. While performing Pump Test, did any of the Individual Gauges with Discharge Valves Closed & not using for the Pump Test Show pressure or vac on any of the Individual Gauges	No
9. All Discharge Checked for Leaks When Pump Testing Unit from Draft Commander	OK	10a. Discharge Gauges Showing Pressure/Vac Recommended Repairs	
9a. Discharge (s) Recommended Repair		12. Water leaking under apparatus when running Pump Test and/or when Dry Vacuum Test performed	No Leaks Noted
11. Tank Fill Line and Tank to Pump Line not leaking when performing Pump Test, and when Dry Vacuum Test performed	No Leaks	14. Inlet Screen(s) on all suction(s) in place and in good condition	Yes
13. Inspect while Pump Test is being performed - Check Pump Inspection Door for external plumbing leaks	Inspected NO leaks noted	14a. Inlet Screens Recommend Repair	
13a. Plumbing Leak Recommend Repair		16. Apparatus Tachometer in cab working	Yes
15. Check for oil leaks under engine while performing test	No Leaks	17. Apparatus Tachometer on Pump Panel working	Yes
15a. Oil Leak Recommend Repair		19. Apparatus Engine Temp on Pump Panel working	Yes
18. Apparatus Engine Temp working in Cab	Yes		

20. Amp Gauge Working in Cab	Yes	21. Amp Gauge Working on Pump Panel	Yes
22. Oil Pressure Gauge Working in Cab	Yes	23. Oil Pressure Gauge Working on Pump Panel	Yes
24. If Transfer Valve is Equipped Valve is Working	N/A	25. All Suction and Discharge Valves Open and Close Properly	Yes
26. Water Tank Gauge Working	No	25a. Suction and Discharge Valve Recommend Repair	
26a. Water Tank Gauge Recommend Repair	FLASHING VERY OLD CLASS 1 TRANSDUCER MIGHT BE OUT	27. Gear Box on Fire Pump While Performing Test Sounds Normal	Yes
28. Fire Apparatus Pump Cooling System (if equipped)	OK	29. Other Issues	

Test Stoppage Report

HARVARD Engine 3

Test Stoppage Signage

HARVARD Engine 3

Performance Test Notes

HARVARD Engine 3