



2023 ANNUAL FIRE PUMP TEST RECORD

TEST RATING
GOOD

UNDERWOOD FIRE EQUIPMENT, INC.

48216 FRANK STREET

WIXOM, MICHIGAN 48393

PHONE: (855) 4-UFE-PUMP WWW.FIREPUMPS.COM

SERVICE DATE: 9/29/23

TECHNICIAN: J WOLF

COMPANY NAME: BAKER COMMONS
ADDRESS: 106 PACKARD
CITY/STATE/ZIP: ANN ARBOR, MICHIGAN 48104
CONTACT NAME: ARBOR INSPECTION SERVICES
CONTACT PHONE: 734-761-8088

MANUFACTURER: A-C FIRE PUMP
MODEL NUMBER: 5x4 KSJF
SERIAL NUMBER: 811-90981-1-1
PUMP ID: BAKER COMMONS

PUMP TYPE: HSC - ELECTRIC
PUMP CAPACITY: 750
DESIGN PRESSURE: 62
PUMP SPEED: 1765
SUCTION FLG. SIZE: 5 **DISCHARGE FLG. SIZE:** 4

FIRE PUMP PERFORMANCE RECORD

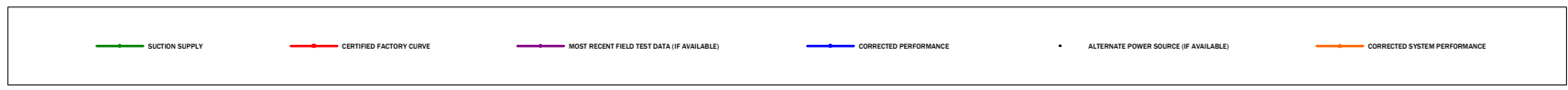
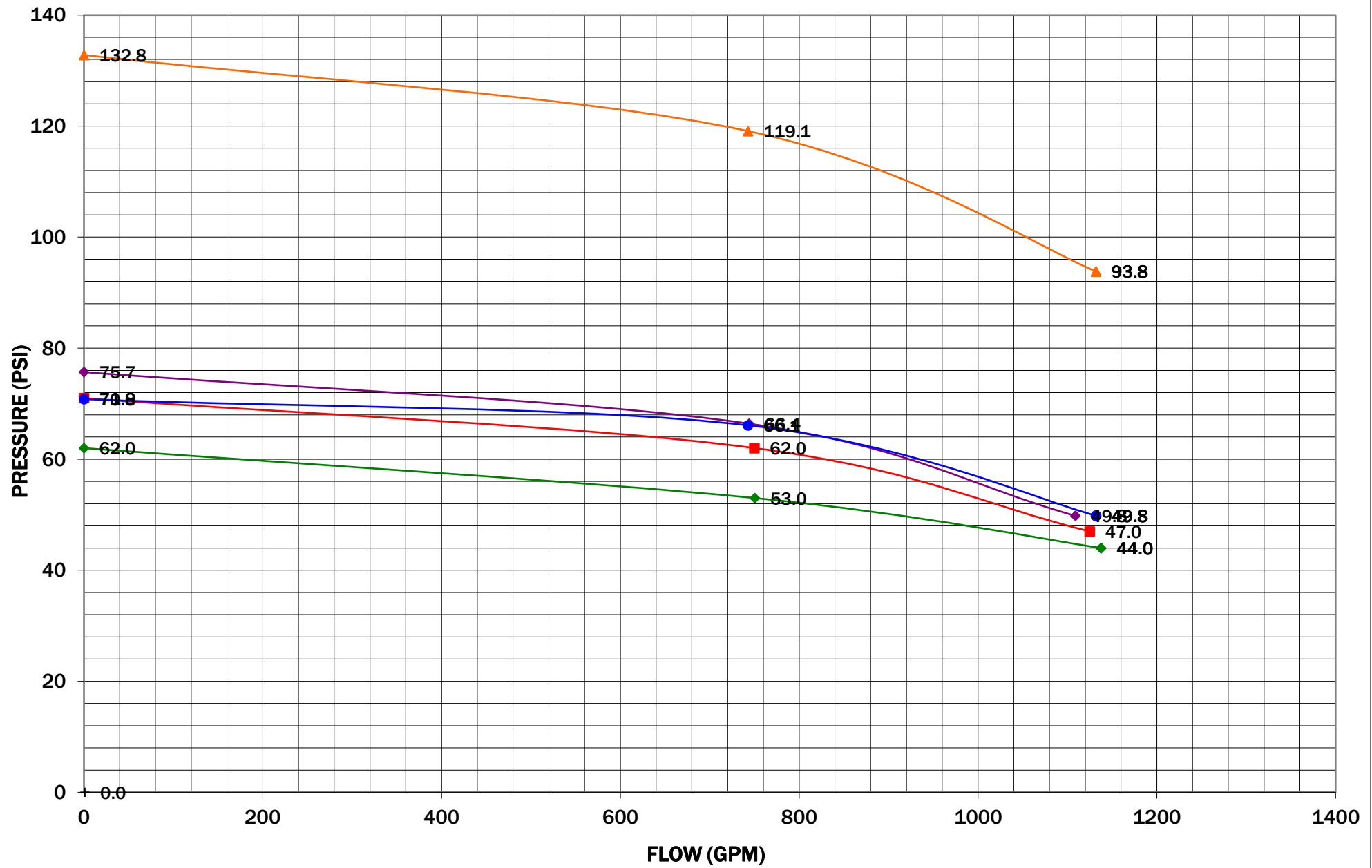
FLOW POINT	START / STOP TIME	DISCHARGE (PSI)	SUCTION (PSI)	PUMP SPEED (RPM)	PHASE A AMPS	PHASE B AMPS	PHASE C AMPS	MOTOR OVERLOAD (YES/NO)	PHASE A-B VOLTS	PHASE A-C VOLTS	PHASE B-C VOLTS	OVER / UNDER VOLTAGE (YES/NO)	FIRE PUMP CASING TEMP. (°F)	INBOARD STUFF BOX TEMP. (°F)	OUTBOARD STUFF BOX TEMP. (°F)	INBOARD BEARING TEMP. (°F)	OUTBOARD BEARING TEMP. (°F)	CASING RELIEF OPEN (YES/NO)	ACTUAL NET FLOW (GPM)	ACTUAL NET BOOST (PSI)	SPEED CORRECTED FLOW (GPM)	SPEED CORRECTED BOOST (PSI)	VELOCITY HEAD CORRECTED (PSI)
1		135	62	1792	58	56	58	NO	208	208	207	NO	72	75	78	74	75	YES	0	73.0	0	70.8	70.8
2		119	53	1783	87	88	92	NO	207	208	207	NO	66	84	82	77	79	NO	750	66.0	743	64.7	66.1
3		91	44	1774	107	105	109	NO	207	207	207	NO	65	82	83	79	81	NO	1138	47.0	1132	46.5	49.8
4																							
5																							
ALT. POWER																							

FLOW POINT	NOZZLE SIZE (INCHES)	HOSE REQ'D (FEET)	HOSE STREAM DIFFUSER (YES / NO)	DISCHARGE NOZZLE COEF.	PITOT #1 (PSI)	PITOT #2 (PSI)	PITOT #3 (PSI)	PITOT #4 (PSI)	PITOT #5 (PSI)	PITOT #6 (PSI)	PITOT #7 (PSI)	PITOT #8 (PSI)	PITOT #9 (PSI)	PITOT #10 (PSI)	PITOT #11 (PSI)	PITOT #12 (PSI)	FLOW METER (GPM)	TOTAL FLOW (GPM)	DEVIATION (%)	FIRE PUMP PERFORMANCE DATA			
1	2.5	N/A	N/A	0.9														0	-0.3	CERTIFIED FACTORY CURVE			
2	2.5	N/A	N/A	0.9	5	5												750	5.6	FLOW (GPM)	0	750	1125
3	2.5	N/A	N/A	0.9	12	11												1138	6.2	BOOST (PSI)	71	62	47
4																				MOST RECENT FIELD TEST DATA			
5																				FLOW (GPM)	0	744	1109
ALT. POWER																				BOOST (PSI)	75.7	66.4	49.8

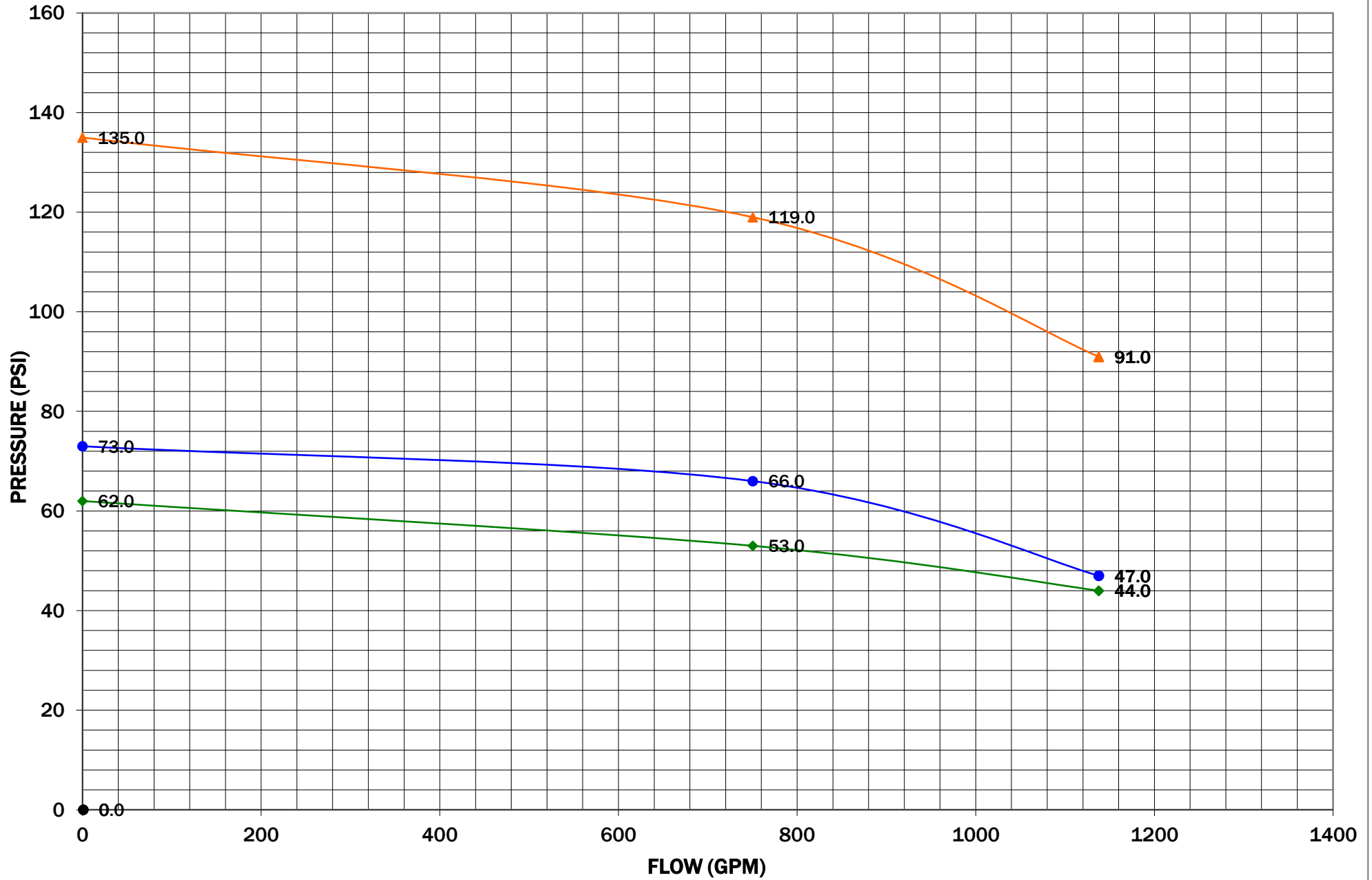
INTERPRETATION OF FIELD TEST RESULTS AND SERVICE RECOMMENDATIONS PER NFPA #25

AS COMPARED TO THE CERTIFIED FACTORY TEST CURVE, THE FIRE PUMP TESTED GOOD AT ALL POINTS FLOWED. THE REMOTE ALARMS AS REQUIRED BY NFPA 20 WERE CONNECTED INSIDE THE FIRE PUMP CONTROL PANEL AT THE TIME OF OUR TEST. WHILE ON SITE OUR TECHNICIAN NOTED THE JOCKEY PUMP POWER SUPPLY IS FED FROM THE FIRE PUMP CONTROL PANEL WHICH IS A VIOLATION OF NFPA 20 "A FIRE PUMP CONTROLLER SHALL NOT BE USED AS A JUNCTION BOX TO SUPPLY OTHER EQUIPMENT". NFPA ADVISES TO COMPLETE A NO FLOW TEST MONTHLY, WE RECOMMEND COMPLETING THIS TESTING IN AN ATTEMPT TO KEEP THE FIRE PUMP FROM BEING SEIZED.

FIRE PUMP PERFORMANCE CURVE - CORRECTED DATA



FIRE PUMP PERFORMANCE CURVE - UNADJUSTED DATA



VISUAL INSPECTION



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FIRE PUMP ROOM VISUAL INSPECTION

	YES	NO	N/A
1 EQUIPMENT IN OPERATING CONDITION AND FREE OF PHYSICAL DAMAGE?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 HEAT IS ADEQUATE, NOT LESS THAN 40°F (4°C)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 THE FIRE PUMP CONTROL PANEL DATA LOG DATE AND TIME IS ACCURATE?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 PUMP ROOM IS CLEAN AND FREE OF STORAGE, EQUIPMENT AND PENETRATIONS NOT ESSENTIAL TO THE OPERATION OF THE PUMP AND RELATED EQUIPMENT?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 PUMP ROOM HAS ADEQUATE LIGHTING?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 VENTILATING LOUVERS ARE FREE TO OPERATE?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7 NO EXCESSIVE WATER IS COLLECTING ON THE FLOOR?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

FIRE PUMP SYSTEM VISUAL INSPECTION

8 SUCTION RESERVOIR HAS THE REQUIRED WATER LEVEL?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9 WET PIT SUCTION SCREENS ARE UNOBSTRUCTED AND IN PLACE?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10 ALL PIPING IS FREE OF LEAKS?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11 FIRE PUMP SUCTION AND DISCHARGE AND BYPASS VALVES ARE FULLY OPEN?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12 WATERFLOW TEST VALVES ARE IN THE CLOSED POSITION?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13 ALL VALVES EQUIPPED WITH A SEAL, LOCK, OR TAMPER SWITCH?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14 SUCTION LINE PRESSURE GAUGE READING IS WITHIN ACCEPTABLE RANGE?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15 DISCHARGE LINE PRESSURE GAUGE READING IS WITHIN ACCEPTABLE RANGE?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16 SHAFT MOVEMENT OR END PLAY IS ACCEPTABLE?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

MECHANICAL TRANSMISSION

17 LUBRICATE ALL-METAL TYPE COUPLING OR UNIVERSAL JOINT DRIVE SHAFT?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
18 LUBRICATE RIGHT ANGLE GEAR DRIVE?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
19 COUPLING GUARD IS IN PLACE?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20 VERTICAL TURBINE ELECTRIC MOTOR OR RIGHT ANGLE GEAR DRIVE HAS ADEQUATE OIL LEVEL?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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ELECTRICAL SYSTEM VISUAL INSPECTION

	YES	NO	N/A
21 CONTROLLER PILOT LIGHT (POWER ON) LIGHT IS ILLUMINATED?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22 TRANSFER SWITCH NORMAL PILOT LIGHT, IF AVAILABLE, IS ILLUMINATED?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
23 ISOLATING SWITCH IS CLOSED - STANDBY (EMERGENCY) SOURCE?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
24 PHASE REVERSAL PILOT LIGHT IS OFF, OR NORMAL PHASE ROTATION PILOT LIGHT IS ON?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25 POWER TO PRESSURE MAINTENANCE (JOCKEY) PUMP IS ACCEPTABLE (NOT BEING SUPPLIED FROM THE FIRE PUMP CONTROLLER)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
26 FIRE PUMP CONTROL PANEL SUPERVISORY SIGNALS ARE BEING MONITORED (RUN, POWER LOSS, AND PHASE REVERSAL OR RUN, TROUBLE, AND HOA NOT IN AUTO)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27 PRINTED CIRCUIT BOARD(S) ARE FREE FROM CORROSION?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28 CABLES AND / OR WIRING INSULATION IS FREE FROM CRACKING?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29 PLUMBING (WET) PARTS INTERNALLY AND EXTERNALLY ON THE FIRE PUMP CONTROL PANEL ARE FREE FROM LEAKS?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

DIESEL ENGINE SYSTEM VISUAL INSPECTION

30 DIESEL FUEL TANK IS AT LEAST 2/3 FULL?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
31 DIESEL FUEL TANK LEVEL IS ELECTRONICALLY MONITORED?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
32 DIESEL FUEL TANK LEAK DETECTION SWITCH IS INSTALLED?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
33 FIRE PUMP CONTROL PANEL SELECTOR SWITCH IS IN THE AUTO POSITION?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
34 BATTERY VOLTAGE READINGS ARE WITHIN ACCEPTABLE RANGE?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
35 BATTERY CURRENT READINGS ARE WITHIN ACCEPTABLE RANGE?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
36 FIRE PUMP CONTROL PANEL BATTERY PILOT LIGHTS ARE ON AND / OR BATTERY FAILURE PILOT LIGHTS ARE OFF?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
37 ALL ALARM PILOT LIGHTS ARE OFF?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
38 DIESEL ENGINE HOUR METER IS PRESENT?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
39 FUEL TANK LEVEL INDICATOR IS WORKING CORRECTLY?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
40 FLEXIBLE FUEL CONNECTIONS AT THE ENGINE ARE FREE FROM CRACKS? LEAKS?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
41 EXHAUST SYSTEM CONDENSATE TRAP HAS BEEN DRAINED?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
42 BATTERY CONNECTIONS ARE CLEAN AND TIGHT?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
43 ELECTROLYTE LEVEL IN BATTERIES IN WITHIN ACCEPTABLE RANGE?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
44 ENGINE WATER JACKET HEATER (BLOCK HEATER) IS OPERATING?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>