

OPERATOR MAINTENANCE

10 kW 60 AND 400 Hz TRAILER-MOUNTED POWER UNITS AND POWER PLANTS

OPERATOR PMCS, INCLUDING LUBRICATION INSTRUCTIONS

INITIAL SETUP:

Tools and Special Tools

Tool Kit, General Mechanic's Automotive or Standard Automotive Tool Set (WP 0101, Table 2, Item 9)

Materials/Parts

Oil
Coolant

References

LO 9-6115-642-12
TM 9-6115-642-10
TM 9-2330-202-14&P
TM 9-2330-392-14&P
TM 9-2330-213-14&P

Equipment Condition

Operational
Equipment Turned OFF

NOTE

If the equipment must be in continuous operation, check and service only those items that can be checked and serviced without disturbing operation. Make the complete checks and services when the equipment can be shut down. When a procedure is required for both WEEKLY and BEFORE intervals, it is not necessary to do the procedure twice if the equipment is operated during the WEEKLY period.

Table 1. Operator Preventive Maintenance Checks and Services.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:
<p>WARNING</p> <p>Before performing any maintenance that requires climbing on or under trailer, make sure that trailer handbrakes are set, trailer front leg is lowered, and rear leveling-support jack is lowered. Failure to observe this warning could result in severe personal injury or death from trailer suddenly rolling or tipping.</p>				
1	Before	<p><u>TRAILER</u> HANDBRAKES</p>	<p>a. Check for proper operation of handbrake lever (1). Handbrake lever should move freely throughout its entire travel.</p>	<p>Handbrake lever (1 or 2) is locked in the applied position.</p>

Table 1. Operator Preventive Maintenance Checks and Services. - Continued

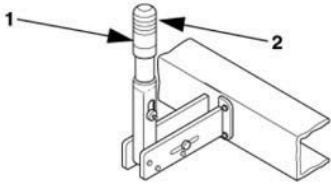
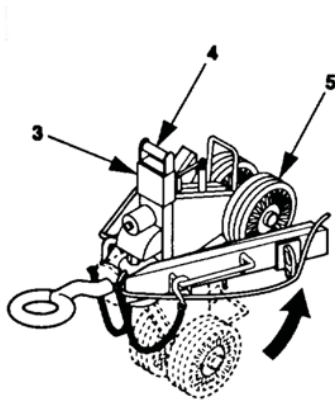
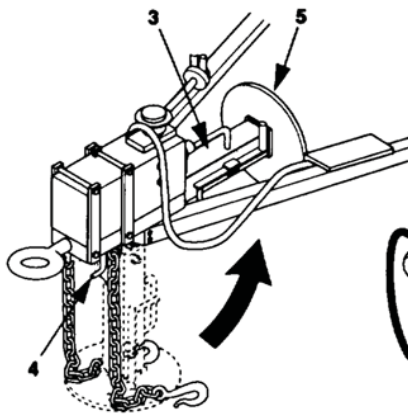
ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:
			<p>b. Check for proper adjustment of handbrake lever (1). Handbrake lever is properly adjusted when additional force is required to move handbrake lever beyond two-thirds distance of travel toward the applied position. If improperly adjusted, refer to Step d.</p> <p>c. With trailer hooked to towing vehicle, set the handbrake lever (1). Move the trailer slightly to see if the handbrakes hold the wheels. If not, proceed to Step d.</p> <p>c. With trailer hooked to towing vehicle, set the handbrake lever (1). Move the trailer slightly to see if the handbrakes hold the wheels. If not, proceed to Step d.</p>	
 <p>(TYPICAL)</p>				
<p>WARNING</p>				
<p>If trailer is not coupled to towing vehicle, ensure that wheels are securely chocked. Failure to do so may cause trailer to roll, resulting in injury to personnel or damage to equipment.</p>				
<p>NOTE</p>				
<p>Both handbrake levers (1) are adjusted the same way. This procedure covers one handbrake lever.</p>				
			<p>d. Handbrake Lever Adjustment</p> <p>(1) Release handbrake lever (1).</p> <p>(2) Turn adjustment knob (2) clockwise to tighten or counterclockwise to loosen. If unable to adjust, or adjustment has been used up, refer to field level maintenance.</p> <p>(3) Check adjustment (Refer to Step b). Repeat Steps (1) and (2) as required. Repeat Step c.</p>	

Table 1. Operator Preventive Maintenance Checks and Services. - Continued

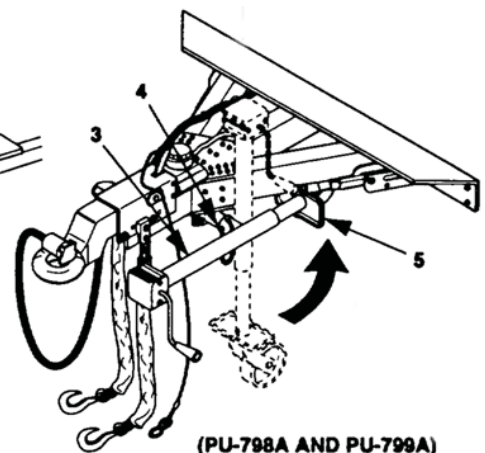
ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:
2	Before	LANDING LEG ASSEMBLY	a. With trailer connected to towing vehicle, check landing leg assembly (3) for ease of operation. b. Check landing leg assembly (3) for proper mounting, alignment, and general condition. c. Ensure landing leg assembly (3) can be locked in stored and support positions. d. Ensure locking lever (4) moves freely. e. Ensure landing leg foot or wheels (5) can be adjusted up and down.	Landing leg assembly will not secure in stored position or will not support trailer.



(AN/MJQ-37 AND AN/MJQ-38)

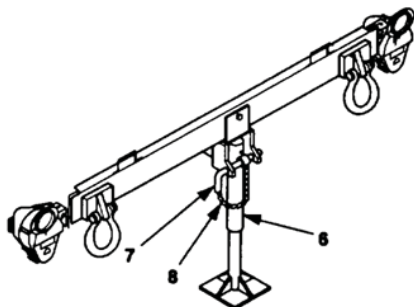


(PU-798 AND PU-799)

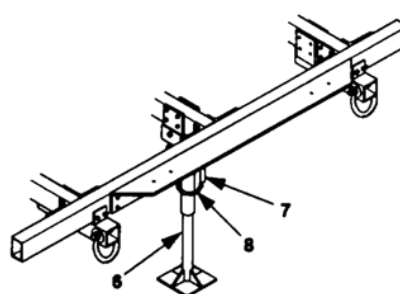


(PU-798A AND PU-799A)

3	Before	REAR LEVELING-SUPPORT JACK	a. Check rear leveling-support jack (6) for ease of operation. b. Check rear leveling-support jack (6) for secure mounting. c. Ensure rear leveling-support jack can be locked in stored and support positions. d. Ensure locking pin (7) is attached to leg with chain (8). e. Ensure leveling-support jack foot can be adjusted up and down.	Rear support leg will not secure in stored position or will not support trailer.
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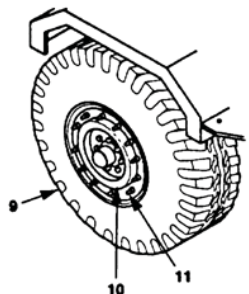
AN/MJQ-37 AND AN/MJQ-38
PU-798 AND PU-799



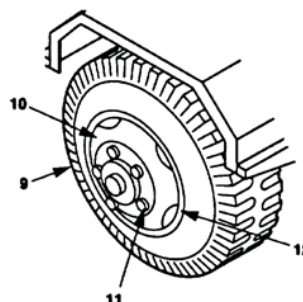
P-798A AND PU-799A

Table 1. Operator Preventive Maintenance Checks and Services. - Continued

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:														
4	Before	ACCESSORIES	<p>Check that following accessories are not missing or damaged:</p> <ul style="list-style-type: none"> • Auxiliary fuel hose(s) (stored in storage box inside right access door under control box on generator). • Fire extinguisher(s), check seal (stored in fire extinguisher bracket on fender). • Check accessory box for damage or missing parts. <p style="text-align: center;">NOTE</p> <p>Remaining accessories are stored in accessory box.</p> <ul style="list-style-type: none"> • Container adapter • Ground rod • Hammer, 8 lb • Load terminal wrench • Slide hammer • Ground cable 	Fire extinguisher is missing, seal is broken.														
5	Before	TIRES	<p>a. Check tires (9) for cuts, bruises, bulges, or unusual tread wear. Remove any foreign objects from between treads.</p> <p>b. Check tire pressure when tires are cool, as follows:</p> <table border="0" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;"><u>Power Plant</u></td> <td style="text-align: center;"><u>Power Unit</u></td> </tr> <tr> <td style="text-align: center;">AN/MJQ-37</td> <td style="text-align: center;">AN/MJQ-37</td> </tr> <tr> <td style="text-align: center;">AN/MJQ-38</td> <td style="text-align: center;">PU-799</td> </tr> <tr> <td></td> <td style="text-align: center;">PU-798A</td> </tr> <tr> <td></td> <td style="text-align: center;">PU-799A</td> </tr> <tr> <td style="text-align: center;">Highway</td> <td style="text-align: center;">35 psi</td> </tr> <tr> <td></td> <td style="text-align: center;">(241.3 kPa)</td> </tr> </table>	<u>Power Plant</u>	<u>Power Unit</u>	AN/MJQ-37	AN/MJQ-37	AN/MJQ-38	PU-799		PU-798A		PU-799A	Highway	35 psi		(241.3 kPa)	<p>One tire is missing or unserviceable.</p> <p>Tire will not hold air pressure.</p>
<u>Power Plant</u>	<u>Power Unit</u>																	
AN/MJQ-37	AN/MJQ-37																	
AN/MJQ-38	PU-799																	
	PU-798A																	
	PU-799A																	
Highway	35 psi																	
	(241.3 kPa)																	



(PU-798 AND PU-799)
(PU-798A AND PU799A)



(AN/MJO-37 AND AVMJQ-38)

Table 1. Operator Preventive Maintenance Checks and Services. - Continued

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:
6	Before	WHEELS	a. Check wheels (10) for damage. b. Check if stud nuts (11) are loose or missing.	Wheel is damaged. One stud nut is loose or missing.
<p>WARNING</p> <p>Do not attempt to seat a lockring when tire is inflated. Improperly seated lockring could fly off. Serious injury or death will result.</p>				
7	Before	DRAWBAR RING	Check drawbar ring (13) for secure mounting and obvious damage.	Ring is loose or bent.
8	Before	INTERVEHICULAR CABLE	a. Check intervehicular cable (14) for cuts and breaks. b. Open protective cover (15) Inspect for broken, missing, and burnt pins (16).	Cable is severed or missing.
9	Before	SAFETY CHAINS	Check safety chains (17) for secure mounting and obvious damage.	Chain is missing or unsecured.
10	Before	AIR HOSE AND COUPLER (AN/MJQ-37 AND AN/MJQ-38 ONLY)	a. With trailer hooked to towing vehicle, check air hose (18) for leaks, cuts, and abrasions.	Air leaks are found or hose is cut deep enough for cords to show.

Table 1. Operator Preventive Maintenance Checks and Services. - Continued

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:
			b. Check coupler body (19) for damage Check if seal (20) is missing or damaged.	Coupler body is cracked or broken. Seal is missing.
11	Before	FENDERS AND PLAT-FORMS	Check for damaged, loose, or missing hardware.	Damage is to extent where it poses a safety hazard or prevents trailer from being towed.
12	Before	LIGHTS AND REFLECTORS An assistant is required while checking the brake lights.	a. Check for obvious damage or looseness of lights, lenses, and reflectors. NOTE b. Connect the intervehicular cable (21) to the towing vehicle. c. Operate the vehicle light switch through all settings and check the lights (22). d. Check for damage and presence of reflectors (23).	Lights are not service-able.
13	Before	SWITCH BOX ASSEMBLY (AN/MJQ-37 AND AN/MJQ-38 ONLY)	a. Check for loose or missing mounting hardware. b. Check for damaged indicator lights.	Two or more mounting bolts are missing. Indicator lights are damaged.

Table 1. Operator Preventive Maintenance Checks and Services. - Continued

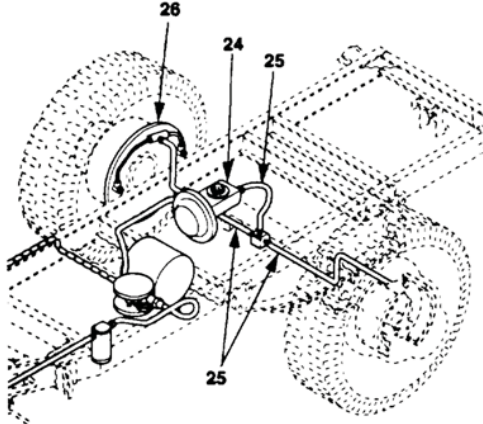
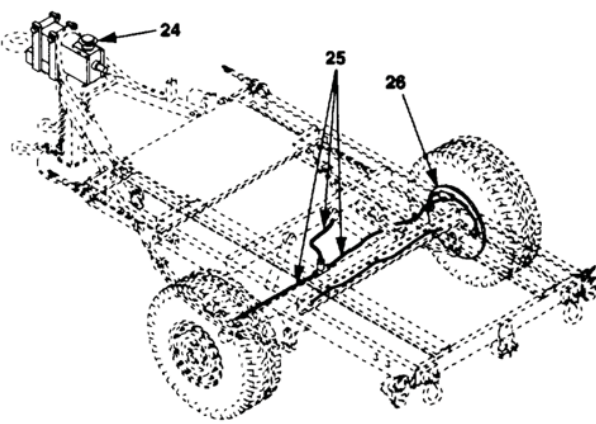
ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:
			c. Check hinges and clamping catches. d. Check for loose or damaged switches. e. Check output terminals and connectors for damaged or missing hardware.	Switches loose or damaged. Output terminals or connectors will not properly secure load cables. Cable is missing or broken.
14	Before	HYDRAULIC BRAKES	Check for leakage of brake fluid from master cylinder (24), hydraulic brake lines and fittings (25), and backing plates (26).	Brake system any leak.
<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>(AN/MJQ-37 AND AN/MJQ-38)</p> </div> <div style="text-align: center;">  <p>(PU-798 AND PU-799) (PU-798A AND PU-799A)</p> </div> </div>				
<p>GENERATOR SET ASSEMBLY</p> <p>NOTE</p> <p>If the equipment must be kept in continuous operation, check and service only those items that can be checked and serviced without disrupting operations. Complete all checks and services when equipment is shut down.</p>				
15	Before	HOUSING	a. Check doors (27), panels (28), hinges (29), and latches (30) for damaged, loose, or corroded items. b. Inspect air intake and exhaust grills (31) for debris.	Cannot secure door.
16	Before	IDENTIFICATION PLATES	<p style="text-align: center;">NOTE</p> Check all data plates. Check to ensure identification plates (32) are secure and legible.	

Table 1. Operator Preventive Maintenance Checks and Services. - Continued

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:
17	Before	SKID BASE	Inspect skid base (33) for cracks and corrosion.	Skid base is cracked or shows signs of structural damage.
18	Before	ACOUSTICAL MATERIAL	Ensure acoustical materials, located in the grill areas and under the engine, are secure, not damaged, or missing.	
<p>WARNING</p> <p>With any access door open, the noise level of this generator set when operating could cause hearing damage. Hearing protection must be worn when working near the generator set while running. Failure to comply with this warning could result in personal injury or loss of hearing.</p> <p>WARNING</p> <p>The fuels used in this generator set are highly flammable. DO NOT smoke or use open flame when performing maintenance. Flames and explosion can occur, resulting in severe personal injury or death.</p>				
19	Before	ENGINE ASSEMBLY	Check for loose or damaged hardware.	

Table 1. Operator Preventive Maintenance Checks and Services. - Continued

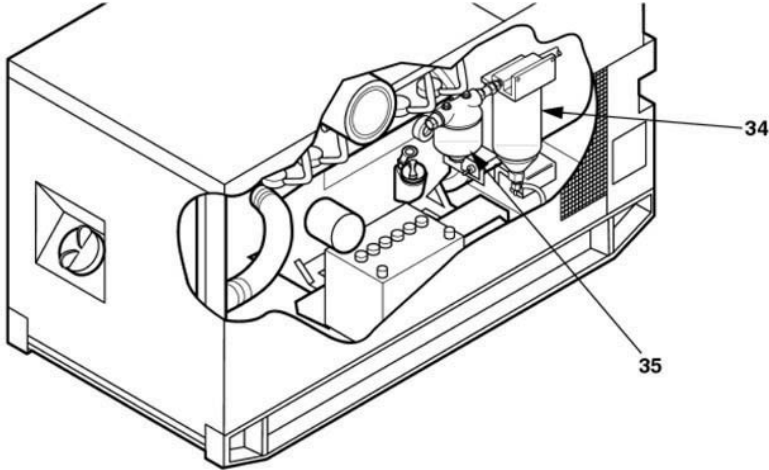
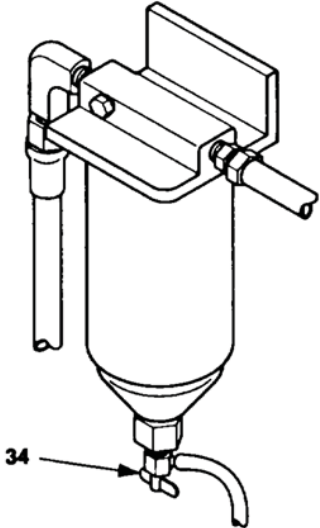
ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:
				
20	Before	FUEL SYSTEM	Inspect for leaks, damaged, loose, or missing hardware.	Any fuel leaks, damaged, loose, or missing parts.
21	Before	FUEL FILTER/WATER SEPARATOR	a. Inspect fuel filter/water separator (34) and fuel filter (35) for leaks, proper mounting, cracks, damage, or missing parts. b. Drain water from fuel filter/water separator (34).	Any fuel leaks.
				
22	Before	LUBRICATION SYSTEM	a. Inspect lubrication system for leaks, damaged, loose, or missing parts. b. Check oil level (36). Add oil as necessary. c. Check engine oil for contamination.	Class III leaks, damaged, loose, or missing parts. Engine oil shows signs of contamination.

Table 1. Operator Preventive Maintenance Checks and Services. - Continued

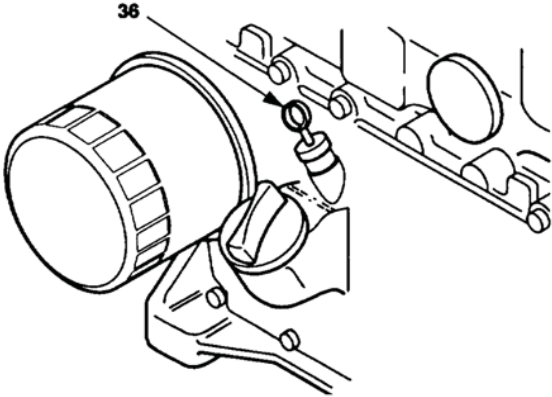
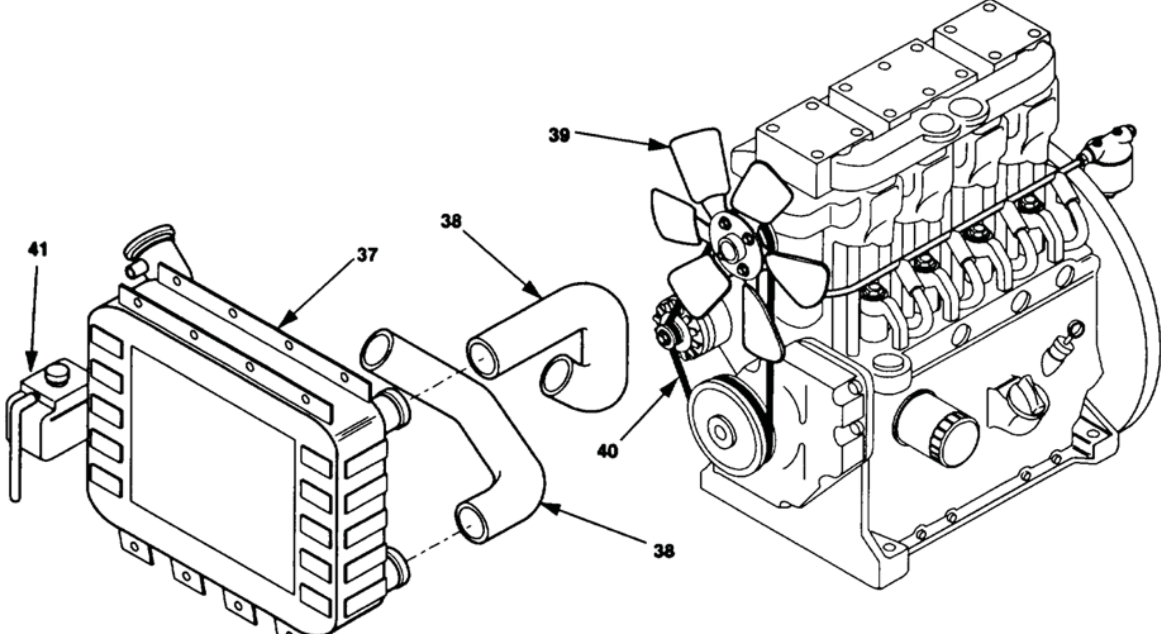
ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:
				
<p>WARNING</p> <p>Be very careful to avoid contact with high-pressure steam and liquid. Cooling system operates at high temperatures. Personal injury or death from burns or scalding can result from contact.</p>				
23	Before	RADIATOR	Check radiator (37) for leaks, damaged, or missing parts.	Class III leaks. Radiator cap missing.
24	Before	HOSES	Check hoses (38) for leaks and cracks.	Class III leaks.
25	Before	COOLING FAN	Check fan (39) for damage or looseness.	Damaged or loose.
26	Before	FAN BELT	Inspect belt (40) for cracks, fraying, or looseness.	Broken belt.
				
27	Before	OVERFLOW BOTTLE	Check overflow bottle (41) for leaks or missing parts.	Class III leaks. Check coolant level.

Table 1. Operator Preventive Maintenance Checks and Services. - Continued

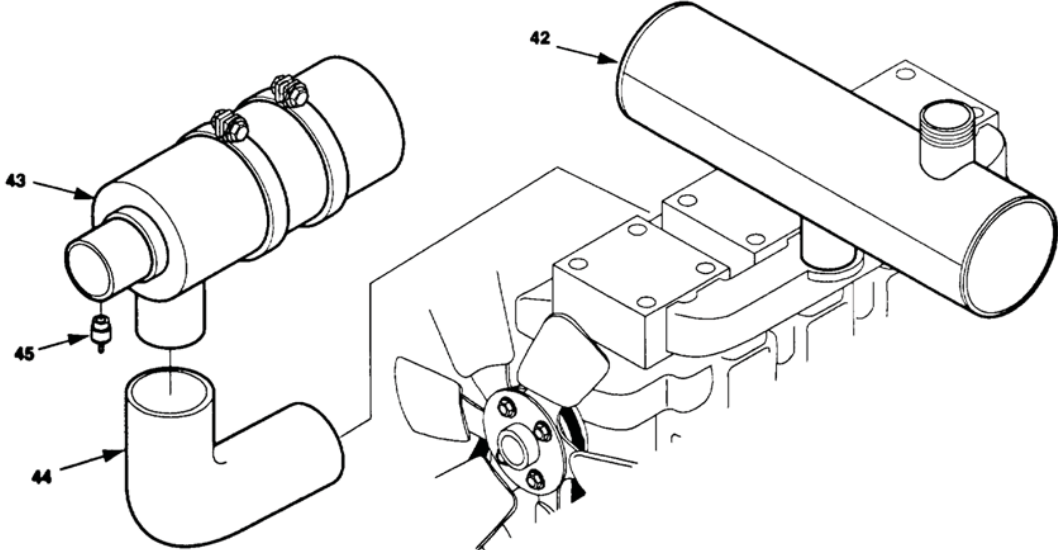
ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:
<p>WARNING</p> <p>Exhaust discharge contains deadly gases. DO NOT operate generator set in enclosed areas unless exhaust discharge is properly vented outside. Failure to observe this warning could result in severe personal injury or death due to carbon monoxide poisoning.</p>				
28	Before	EXHAUST SYSTEM	Check muffler (42) for leaks and exhaust system for corrosion, damaged, or missing parts.	Muffler or exhaust system damaged or leaking.
29	Before	AIR CLEANER ASSEMBLY	<p>a. Inspect air cleaner assembly (43) and piping (44) for loose or damaged connections.</p> <p>b. Inspect restriction indicator (45) for clogged element. If indicator shows red, notify next higher level of maintenance.</p>	<p>Loose or missing parts.</p> <p>Clogged element is indicated or piping and connections are loose.</p>
				
<p>WARNING</p> <p>Avoid contact with battery. Battery acid can cause burns to unprotected skin.</p> <p>WARNING</p> <p>Batteries give off a flammable gas. DO NOT smoke or use open flame when performing maintenance on batteries. Flames and explosion could result in severe personal injury or death.</p>				
30	Before	BATTERY CABLES	Inspect cables and connectors for corrosion, damage, loose, or missing parts.	Cables are loose, damaged, or missing.
<p>WARNING</p> <p>DO NOT touch live voltage connections. High voltage is produced when this generator set is operating. Failure to observe this warning could result in severe personal injury or death by electrocution.</p>				

Table 1. Operator Preventive Maintenance Checks and Services. - Continued

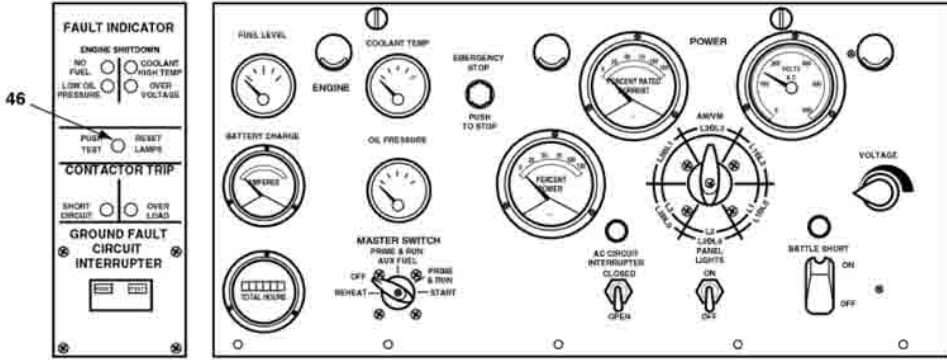
ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:
31	Before	OUTPUT BOX ASSEMBLY	a. Check for loose or damaged wiring or cables. b. Check output terminals for damage or missing hardware.	Loose or damaged wiring or cables. Damaged or missing hardware.
32	Before	CONTROLS AND INDICATORS	a. Check all indicators and controls for damage or missing parts. b. Press PUSH TEST RESET LAMPS button (46) on fault indicator. All lights must light.	Indicators or controls damaged or missing.
 <p>(TYPICAL)</p>				
33	Before	CONTROL BOX HARNESS	Check inside control box for loose or damaged wiring.	Loose or damaged wiring.
34	Before	GROUND ROD CABLE AND CONNECTIONS	a. Inspect for damage, corrosion, and loose connections. b. Inspect ground rod and cable for loose connections, breaks, damage and corrosion.	Cable is missing or damaged.
<p>WARNING</p> <p>High voltage is produced when this generator set is in operation. Improper operation could result in severe personal injury or death.</p>				
35	During	<u>TRAILER</u> OPERATION	a. Be alert for any unusual noises while towing the trailer. Stop and investigate any unusual noises. b. Ensure that the trailer is tracking/following correctly behind towing vehicle with no side pull.	Brakes locked-up
36	During	SWITCH BOX ASSEMBLY	Check indicator lights. Ensure indicator lights are operating properly.	

Table 1. Operator Preventive Maintenance Checks and Services. - Continued

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:
37	During	<u>GENERATOR SET ASSEMBLY</u> HOUSING	a. Check doors, panels, hinges, and clamping catches for damaged, loose, or door. corroded items. b. Inspect air intake and exhaust grills for debris.	Cannot secure door. Grills plugged or flow cut off.
38	During	ENGINE ASSEMBLY FUEL SYSTEM	Check for loose, damaged, or missing parts.	Any fuel leaks, and damaged or loose parts.
39	During	FUEL SYSTEM	Inspect for leaks, and damaged, loose, or missing parts.	Any fuel leaks, and damaged or loose parts.
40	During	LUBRICATION SYSTEM	Inspect for leaks, and damaged, loose, or missing parts.	Class III leaks, and damaged, or loose parts.
41	During	COOLING FAN	Listen for unusual noise in fan area.	
42	During	CONTROLS AND INDICATORS	Observe the following indicators and ensure they are operating properly. COOLANT TEMP. 170-200 °F (77-93 °C) OIL PRESSURE 25-60 psi (172- 414 kPa) FREQUENCY 60 Hz (AN/MJQ-37, PU-798, and PU-798A) 400 Hz (AN/MJQ-38, PU-799, and PU-799A) VOLTAGE 120-240 VAC	Frequency or AC volt-meter inoperative.
<p>WARNING</p> <p>Top housing panels and exhaust system can get very hot. When performing DURING PMCS, wear gloves and additional protective clothing as required. Failure to comply with this warning can cause severe burns and injury to personnel.</p>				
43	During	GROUND ROD CABLE AND CONNECTIONS	Inspect ground rod and cable for loose connections, breaks, damage and corrosion.	Cable is missing or damaged.
<p>WARNING</p> <p>High voltage is produced when the generator set is in operation. DO NOT touch live voltage connections. Never attempt to connect or disconnect load cables while the generator set is running. Failure to comply with this warning can cause injury or death to personnel.</p>				

Table 1. Operator Preventive Maintenance Checks and Services. - Continued

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:
44	After	HOUSING	a. Check doors, panels, hinges, and clamping catches for damaged, loose, or door. corroded items. b. Inspect air intake and exhaust grills for debris.	Cannot secure doors.
45	After	IDENTIFICATION PLATES	Check to ensure identification plates are secure.	
46	After	SKID BASE	Inspect skid base for cracks and corrosion.	Skid base is cracked or shows signs of structural damage.
WARNING				
DO NOT touch live voltage connections. High voltage is produced when this generator set is operating. Failure to observe this warning could result in severe personal injury or death by electrocution.				
47	After	ENGINE ASSEMBLY	Check for loose, damaged, or missing hardware.	
48	After	FUEL SYSTEM	Inspect fuel system for leaks, and damaged, loose, or missing hardware.	
49	After	FUEL FILTER/WATER SEPARATOR	a. Inspect fuel filter/water separator and fuel filter for leaks, proper mounting, cracks, damage, or missing parts. b. Drain water from fuel filter/water separator.	Any fuel leaks.
50	After	LUBRICATION SYSTEM	a. Inspect lubrication system for leaks, damaged, loose, or missing parts. b. Check oil level. c. Check engine oil for contamination.	Class III leaks, damaged, loose, or missing parts. Oil level is below add level. Engine oil shows signs of contamination.
WARNING				
Be very careful to avoid contact with high-pressure steam and liquid. Cooling system operates at high temperatures. Personal injury or death from burns or scalding can result from contact.				
51	After	RADIATOR	Check radiator for leaks, damaged, or missing parts.	Class III leaks. Radiator cap missing.
52	After	HOSES	Check hoses for leaks and cracks.	Class III leaks.
53	After	FAN BELT	Inspect belt for cracks, fraying, or looseness.	Broken belt.

Table 1. Operator Preventive Maintenance Checks and Services. - Continued

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:
54	After	OVERFLOW BOTTLE	Check overflow bottle for leaks or missing parts.	Class III leaks. Check coolant level. Coolant level is below cold line.
55	After	CONTROL BOX ASSEMBLY CONTROLS AND INDICATORS	Check all controls and indicators for damaged or missing parts.	Controls or indicators damaged or missing.
56	After	TRAILER SWITCH BOX ASSEMBLY (AN/MJQ-37 AND AN/MJQ-38 ONLY)	<ul style="list-style-type: none"> a. Check for loose or missing mounting hardware. b. Check for damaged indicator lights. c. Check hinges and clamping catches. d. Check for loose or damaged switches. e. Check output terminals and connectors for damaged or missing hardware. 	<p>Two or more mounting bolts are missing.</p> <p>Indicator lights are damaged.</p> <p>Switches loose or damaged.</p> <p>Output terminals or connectors will not properly secure load cables.</p>

MANDATORY REPLACEMENT PARTS LIST

There are no replacement parts required for these PMCS procedures.

OPERATOR LUBRICATION INSTRUCTIONS

Lubrication instructions for the generator set and engine are contained in LO 9-6115-642-12. Lubrication instructions for the trailers are contained in TM 9-2330-202-14&P for Power Units PU-798 and PU-799, TM 9-2330-392-14&P for PU-798A and PU-799A, and TM 9-2330-213-14&P for Power Plants AN/MJQ-37 and AN/MJQ-38.

END OF WORK PACKAGE