

***ARMY TM 9-6115-643-10
AIR FORCE TO 35C2-3-445-21**

TECHNICAL MANUAL

OPERATOR'S MANUAL

FOR

**GENERATOR SET, SKID MOUNTED, TACTICAL QUIET,
15 kW, 50/60 Hz, MEP-804A**

(NSN: 6115-01-274-7388) (EIC: VG4)

15 kW, 50/60 Hz, MEP-804B

(NSN: 6115-01-530-1458) (EIC: N/A)

**GENERATOR SET, SKID MOUNTED, TACTICAL QUIET,
15 kW, 400 Hz, MEP-814A**

(NSN: 6115-01-274-7393) (EIC: VN4)

15 kW, 400 Hz, MEP-814B

(NSN: 6115-01-529-9494) (EIC: N/A)

***SUPERSEDURE NOTICE** - This manual supersedes TM 9-6115-643-10 dated 01 April 2008. Date of issue for the revised manual is: 15 February 2010.

DISTRIBUTION STATEMENT A - Approved for public release; distribution is unlimited.

**HEADQUARTERS, DEPARTMENTS OF THE ARMY
AND AIR FORCE
15 FEBRUARY 2010**

OPERATOR MAINTENANCE

**15 kW 50/60 AND 400 Hz SKID MOUNTED, TACTICAL QUIET GENERATOR SET
PMCS, INCLUDING LUBRICATION INSTRUCTIONS**

INITIAL SETUP:

Tools and Special Tools

Generator Mechanical Tool Kit

Materials/Parts

Expendable Durable/Items List

Personnel Required

One

References

LO 9-6115-643-10

Equipment Condition

Generator set grounded, off & operational

LUBRICATION ORDER

Refer to LO 9-6115-643-12 for lubrication information.

Table 1. Preventive Maintenance Checks and Services for Model MEP-804A, MEP-804B, MEP-814A and MEP-814B.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:
<u>GENERATOR SET EXTERIOR</u>				
WARNING				
<p>In extreme cold weather, skin can stick to metal. Avoid contacting metal items with bare skin in extreme cold weather. Failure to comply can cause injury or death to personnel.</p>				
NOTE				
<p>The generator set can be operated continuously at any load from no load up to and including rated load. However, at light loads (less than 25% of set rating), an oily residue (unburned fuel oil) may occasionally be noticed in the exhaust system outlet and around connection joints in the exhaust system. This residue is caused by the inability of the fuel injection system to consistently meter the small amount of fuel required to operate at these low load levels and is not a defect in the fuel system. The oily residue could affect engine performance and create a cosmetic problem on and around the generator set. Operation at rated load will burn off this oily residue. The length of time required at rated load depends on the amount of residue. The muffler may also need to be removed and cleaned if excessive build up occurs. This oily residue can be prevented by increasing the electrical load on the set.</p>				
NOTE				
<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>				
1	Before	HOUSING	Check door panels, hinges, and latches for damage, loose, or corroded items.	Cannot secure door.

Table 1. Preventive Maintenance Checks and Services for Model MEP-804A, MEP-804B, MEP-814A and MEP-814B. - Continued

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:
			Inspect air intake and exhaust grills for debris.	
2	Before	IDENTIFICATION PLATES	Check to ensure identification plates are secure.	
3	Before	SKID BASE	Inspect skid base for cracks and/or corrosion.	Skid base is cracked or shows signs of structural damage.
4	Before	ACOUSTICAL MATERIALS	Ensure that acoustical materials are free of damage and not missing.	
ENGINE ASSEMBLY				
WARNING				
Operating the generator set exposes personnel to a high noise level. Hearing protection must be worn when operating or working near the generator set when the generator set is running. Failure to comply can cause hearing damage to personnel.				
WARNING				
Fuels used in the generator set are combustible. Do not smoke or use open flames when performing maintenance. Failure to comply can result in flames and possible explosion and can cause injury or death to personnel and damage to the generator set.				
5	Before	ENGINE ASSEMBLY	Inspect for loose, damaged, or missing hardware.	Any loose, damaged, or missing hardware.
6	Before	FUEL SYSTEM	Inspect for leaks, damage, loose, or missing hardware.	Any fuel leaks, damage, loose or missing parts.
7	Before	FUEL FILTER/WATER SEPARATOR	Inspect for leaks, cracks, damage, proper mounting, loose or missing parts. Drain water from fuel filter/water separator.	Any fuel leaks. Water not drained.
8	Before	LUBRICATION SYSTEM		
NOTE				
Pull dipstick from oil dipstick tube and take reading. If recheck is desired: Wipe dipstick clean. Reinsert dipstick into oil dipstick tube (dipstick must remain in oil dipstick tube for 5 seconds minimum). Pull dipstick from oil dipstick tube and take reading.				
			Inspect for leaks, damage, loose or missing parts. Inspect oil level. Inspect for contamination.	Class III leaks, damage, loose or missing parts. Oil level is low. Oil shows signs of contamination.
COOLING SYSTEM				

Table 1. Preventive Maintenance Checks and Services for Model MEP-804A, MEP-804B, MEP-814A and MEP-814B. - Continued

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:
<p>WARNING</p> <p>Cooling system operates at high temperature and pressure. Contact with high pressure steam and/or liquids can result in burns and scalding. Shut down generator set, and allow system to cool before performing checks, services and maintenance. Failure to comply can cause injury or death to personnel.</p>				
9	Before	RADIATOR	Inspect for leaks, damage, loose or missing parts.	Class III leaks or missing radiator cap.
10	Before	HOSES	Inspect for leaks, cracks, or missing parts.	Class III leaks or missing clamps or hoses.
11	Before	COOLING FAN	Inspect for obstruction, damage, or looseness. Inspect for unusual noise in fan area.	Damaged or loose. Unusual noise from area.
11.1	Before	WATER PUMP	Inspect for leaks.	Class III leaks or unusual noise from area.
12	Before	FAN BELT	Inspect for cracks, fraying, or looseness.	Broken or missing belt.
13	Before	OVERFLOW BOTTLE	Inspect for proper mounting, leaks, or missing hardware.	Class III leaks or missing hardware.
<p><u>EXHAUST/INTAKE SYSTEM</u></p> <p>WARNING</p> <p>Exhaust discharge contains deadly gases including carbon monoxide. Do not operate generator set in an enclosed area unless exhaust discharge is properly vented outside. Failure to comply can cause injury or death to personnel.</p>				
14	Before	EXHAUST SYSTEM	Inspect for leaks, corrosion, and missing parts.	Leaks, damaged, or missing parts.
15	Before	AIR CLEANER ASSEMBLY	Inspect for loose, damaged, or missing parts. Inspect restriction indicator for clogged air cleaner element.	Loose or missing parts. Clogged air cleaner element.
15.1	Before	CRANKCASE VENTILATION FILTER (MEP-804B/MEP-814B)	Inspect for loose, damaged, or missing parts. Remove filter element and inspect for oil saturation or damaged filter element.	Loose or missing parts. Clogged or damaged.
<p><u>GROUNDING ROD ASSEMBLY</u></p>				

Table 1. Preventive Maintenance Checks and Services for Model MEP-804A, MEP-804B, MEP-814A and MEP-814B. - Continued

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:
WARNING				
High voltage is produced when the generator set is in operation. Never attempt to start the generator set unless it is properly grounded. Failure to comply can cause injury or death to personnel.				
WARNING				
Ensure nuts on ground terminals are properly secured creating a good ground. Failure to comply with this warning can cause injury or death to personnel.				
16	Before	GROUND ROD CABLE AND CONNECTIONS	Inspect for damage, corrosion, and loose connections.	Damaged, corroded, or loose connections.
WARNING				
Batteries give off a flammable gas. Do not smoke or use open flame when performing maintenance. Failure to comply can cause injury or death to personnel and equipment damage due to flames and explosion.				
WARNING				
Battery acid can cause burns to skin and cause eye injury. Wear safety goggles and chemical gloves and avoid acid splash while working on the batteries. Failure to comply may cause injury or death to personnel.				
WARNING				
Dangerous voltage exists on live circuits. Always observe precautions and never work alone. Failure to comply with this warning can cause injury or death to personnel.				
17	Before	BATTERIES	Inspect electrolyte level.	Electrolyte is below battery plates.
18	Before	BATTERY CABLES	Inspect for corrosion, damage, loose connections, or missing parts.	Damaged, loose, or missing parts.
19	Before	OUTPUT BOX ASSEMBLY	Inspect cables for damage or loose connections. Inspect output terminals for damage or missing hardware.	Damaged, loose, or missing parts. Damaged or missing hardware.
20	Before	<u>CONTROL BOX ASSEMBLY</u> CONTROLS AND INDICATORS	Inspect for damage or missing parts.	Damaged or missing parts.
WARNING				
High voltage is produced when this generator set is in operation. Make sure unit is completely shut down and free of any power source before attempting any repair or maintenance on the unit. Failure to comply can cause injury or death to personnel.				

Table 1. Preventive Maintenance Checks and Services for Model MEP-804A, MEP-804B, MEP-814A and MEP-814B. - Continued

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:
21	Before	CONTROL BOX HARNESS <u>GENERATOR SET</u> <u>EXTERIOR</u>	Inspect for damage and looseness.	Damaged or loose.
<p>WARNING</p> <p>Operating the generator set exposes personnel to a high noise level. Hearing protection must be worn when operating or working near the generator set when the generator set is running. Failure to comply can cause hearing damage to personnel.</p> <p>WARNING</p> <p>Fuels used in the generator set are combustible. Do not smoke or use open flames when performing maintenance. Failure to comply can result in flames and possible explosion and can cause injury or death to personnel and damage to the generator set.</p> <p>WARNING</p> <p>Top housing panels can get very hot. When performing DURING PMCS, wear gloves and additional protective clothing as required. Failure to comply can result in severe burns to personnel.</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>				
22	During	HOUSING	Check door panels, hinges, and latches for damage, loose, or corroded items.	Cannot secure door.
23	During	<u>ENGINE ASSEMBLY</u> ENGINE ASSEMBLY	Inspect for loose, damaged, or missing hardware.	Any loose, damaged, or missing hardware.
24	During	FUEL SYSTEM	Inspect for leaks, damage, loose, or missing hardware.	Any fuel leaks, damage, loose or missing parts.
25	During	LUBRICATION SYSTEM		

Table 1. Preventive Maintenance Checks and Services for Model MEP-804A, MEP-804B, MEP-814A and MEP-814B. - Continued

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:
<p>NOTE</p> <p>Pull dipstick from oil dipstick tube and take reading. If recheck is desired:</p> <ul style="list-style-type: none"> • Wipe dipstick clean. • Reinsert dipstick into oil dipstick tube (dipstick must remain in oil dipstick tube for 5 seconds minimum). • Pull dipstick from oil dipstick tube and take reading. 				
26	During	<p><u>COOLING SYSTEM</u> COOLING FAN</p>	<p>Inspect for leaks, damage, loose or missing parts. Inspect oil level. Inspect for contamination.</p> <p>Inspect for obstruction, damage, or looseness. Inspect for unusual noise in fan area.</p>	<p>Class III leaks, damage, loose or missing parts. Oil level is low. Oil shows signs of contamination.</p> <p>Damaged or loose. Unusual noise from area.</p>
27	During	OVERFLOW BOTTLE	Inspect for proper mounting, leaks, or missing hardware.	Class III leaks or missing hardware.
28	During	<p><u>GROUNDING ROD ASSEMBLY</u> GROUND ROD CABLE AND CONNECTIONS</p>	Inspect for damage, corrosion, and loose connections.	Damaged, corroded, or loose connections.
<p><u>CONTROL BOX ASSEMBLY</u></p>				
<p>WARNING</p> <p>High voltage is produced when the generator set is in operation. Never attempt to connect or disconnect load cables while the generator set is running. Failure to comply can cause injury or death to personnel.</p>				
29	During	CONTROLS AND INDICATORS	Inspect indicators are operating properly.	Indicators are not operating properly.
<p>NOTE</p> <p>If the equipment must be kept in service continuous operation, check only those items that can be checked and serviced without disrupting operations. Complete all checks and services when equipment is shut down.</p>				
<p><u>GENERATOR SET EXTERIOR</u></p>				

Table 1. Preventive Maintenance Checks and Services for Model MEP-804A, MEP-804B, MEP-814A and MEP-814B. - Continued

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:
<p>WARNING</p> <p>Exhaust system can get very hot. Shut down generator set, and allow system to cool before performing checks, services and maintenance. Failure to comply can cause severe burns and injury to personnel.</p> <p>WARNING</p> <p>Top housing panels can get very hot. Allow panels to cool down before performing maintenance. Failure to comply can result in severe burns to personnel.</p>				
30	After	HOUSING	Check door panels, hinges, and latches for damage, loose, or corroded items.	Cannot secure door.
31	After	IDENTIFICATION PLATES	Check to ensure identification plates are secure.	
32	After	SKID BASE	Inspect skid base for cracks and/or corrosion.	Skid base is cracked or shows signs of structural damage.
<p>WARNING</p> <p>Fuels used in the generator set are combustible. Do not smoke or use open flames when performing maintenance. Failure to comply can result in flames and possible explosion and can cause injury or death to personnel and damage to the generator set.</p> <p>WARNING</p> <p>All fuel is combustible and toxic to eyes, skin, and respiratory tract. Skin and eye protection are required when working in contact with diesel fuel. Avoid repeated or prolonged contact. Provide adequate ventilation. Operators are to wash skin exposed to fuel and change fuel soaked clothing promptly. Failure to comply can cause serious injury to personnel.</p>				
33	After	ENGINE ASSEMBLY	Inspect for loose, damaged, or missing hardware.	Loose, damaged, or missing hardware.
34	After	FUEL SYSTEM FUEL SYSTEM	Inspect for leaks, damage, loose, or missing hardware.	Any fuel leaks, damage, loose or missing parts.
35	After	FUEL FILTER/ WATER SEPARATOR	Inspect for leaks, cracks, damage, proper mounting, loose or missing parts.	Any fuel leaks.
36	After	LUBRICATION SYSTEM		

Table 1. Preventive Maintenance Checks and Services for Model MEP-804A, MEP-804B, MEP-814A and MEP-814B. - Continued

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF:					
<p style="text-align: center;">NOTE</p> <p>Pull dipstick from oil dipstick tube and take reading. If recheck is desired:</p> <ul style="list-style-type: none"> • Wipe dipstick clean. • Reinsert dipstick into oil dipstick tube (dipstick must remain in oil dipstick tube for 5 seconds minimum). • Pull dipstick from oil dipstick tube and take reading. <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;"></td> <td style="width: 15%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"> Inspect for leaks, damage, loose or missing parts. Drain water. Inspect oil level. Inspect for contamination. </td> <td style="width: 20%;"> Class III leaks, damage, loose or missing parts. Water not drained. Oil level is low. Oil shows signs of contamination. </td> </tr> </table> <p style="text-align: center;">COOLING SYSTEM</p>								Inspect for leaks, damage, loose or missing parts. Drain water. Inspect oil level. Inspect for contamination.	Class III leaks, damage, loose or missing parts. Water not drained. Oil level is low. Oil shows signs of contamination.
			Inspect for leaks, damage, loose or missing parts. Drain water. Inspect oil level. Inspect for contamination.	Class III leaks, damage, loose or missing parts. Water not drained. Oil level is low. Oil shows signs of contamination.					
<p style="text-align: center;">WARNING</p> <p>Cooling system operates at high temperature and pressure. Contact with high pressure steam and/or liquids can result in burns and scalding. Shut down generator set, and allow system to cool before performing checks, services and maintenance. Failure to comply can cause injury or death to personnel.</p>									
37	After	RADIATOR	Inspect for leaks, damage, loose or missing parts.	Class III leaks or missing radiator cap.					
38	After	HOSES	Inspect for leaks, cracks, or missing parts.	Class III leaks or missing clamps or hoses.					
39	After	FAN BELT	Inspect for cracks, fraying, or looseness.	Broken or missing belt.					
40	After	<u>CONTROL BOX ASSEMBLY</u> CONTROLS AND INDICATORS	Inspect for damaged or missing parts.	Damaged or missing parts.					

Mandatory Replacement Parts List

There are no replacement parts required for these PMCS procedures.

END OF WORK PACKAGE