



DEPARTMENT OF THE NAVY
HEADQUARTERS, UNITED STATES MARINE CORPS
WASHINGTON, DC 20380-0001

URGENT

MI 6115-25/28
29 August 2003

U.S. MARINE CORPS MODIFICATION INSTRUCTION

IN LINE FUSE ADDITION TO TACTICAL QUIET GENERATOR,
MODELS MEP-805A, 806A, 815A AND 816A

- 1. Purpose.** To provide instructions for modification of Tactical Quiet Generators (TQG), in order to prevent damage to generator assemblies. A fuse configuration will be added into the excitation circuit to prevent this damage.
- 2. Time Compliance Period.** Action required by this Modification Instruction (MI) shall be completed within 6 months from date of this MI and/or prior to shipment of this equipment.
- 3. Information.** The Marine Corps has experienced problems with defective voltage regulators and operator error damaging regulators during field flash. A failed voltage regulator will not sense a reference point. When this sense reference point does not occur within the voltage regulator, it causes the stator core exciter to increase current and exceed normal capacity, and will cause a malfunction. This malfunction causes the stator and rotor core windings to overheat and expand the windings in the generator assembly. Expanded windings collide with the stator destroying the generator assembly. Additionally, the main generator also shows a small load without a load on the generator when the voltage regulator has failed. Once this modification is installed, and the voltage regulator fails to sense a reference point, the increased current will blow the 3 Amp fuse and protect the generator assembly. If fuse blows, voltage regulator should be evaluated and replaced prior to replacing fuse.

4. Technical Manuals Affected

TM 09244A/09245A-24P/3	Generator Set, Skid Mounted
TM 09244A/09245A-10/1	OPM Generator Set, Skid Mounted, Tactical Quiet 16190210700
TM 09244A/09245A-24P/	Diesel Engine, Model, 6068TF151
TM 09249A/09246A-24P/3	Generator Set, Tactical Quiet
TM 09249A/09246A-10/1	OPM Generator Set, Skid Mounted, Tactical Quiet
TM 09249A/09246A-24	Diesel Engine
TM 09249A/2815-24P/4	Diesel Engine Model 4045TF151

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5. Major Items Affected

<u>Description</u>	<u>NSN</u>	<u>TAMCN</u>	<u>I.D. No.</u>
GENERATOR SET, Tactical Quiet Skid Mounted 30 KW, 60 Hz MEP-805A	6115-01-274-7389	B09537B	09249A
GENERATOR SET, Tactical Quiet Skid Mounted 60 KW, 60 Hz MEP-806A	6115-01-274-7390	B10217B	09244A
GENERATOR SET, Tactical Quiet Skid Mounted 30 KW, 400 Hz MEP-815A	6115-01-274-7394	B09717B	09246A
GENERATOR SET, Tactical Quiet Skid Mounted 60 KW, 400 Hz MEP-816A	6115-01-274-7395	B10167B	09245A

7. Materiel Required

<u>Description</u>	<u>NSN</u>	<u>PN</u>	<u>Qty.</u>
HOLDER, Buss Fuse (600V, 30A)	5920-00-816-6892	BM6031SQ	1
FUSE, 3A, 600V Fast Acting	5920-00-225-9983	KTK-3	1
SPADE, Terminal (88-20274-1, 22-18)	5940-01-425-2020	AA-8704-06	1
TERMINAL, Disconnect (88-20275-1, 22-18)		RA2573M OS1J5	2
WIRE, (88-20540-2, 20 Gage)		Alpha Wire #1342 70331	10
SCREW, (10-32, 3/4-inch)		SBH-1032-048-SH 92219	1
WASHER, Lock (10)		WLS-10-024-SZ 92219	1
WIRE TIES	5975-00-727-5153	T181-9M5VT	5
LABEL, Warning (furnished with kit)			1

8. Tools Required

<u>Description</u>	<u>NSN</u>	<u>PN</u>
Tool Kit, General Mechanics	5180-00-606-3566	C64902T

9. Supply Action. Modification Kit will be stocked at MCLB Albany, GA under project code PGE. Units requiring this Modification Kit will request kit by contacting Inventory Manager, Code 577-2, DSN 567-6530/1.

10. Skills and Time Required. MOS 1142, Electrical Equipment Repair Specialist, one hour.

11. Procedures

NOTE

Before proceeding with modification, verify proper operation of generator in accordance with appropriate operating instructions of TM. If no deficiencies are noted, proceed with modification. If generator fails to operate due to fault lights, refer to appropriate TM and correct fault before proceeding with this modification.

WARNING

DISCONNECT BATTERY POWER BEFORE BEGINNING THIS MODIFICATION TO PREVENT ELECTRICAL SHOCK OR MECHANICAL INJURY.

WARNING

USE ONLY 3 AMP FUSE. IF FUSE BLOWS CHECK FOR FAULTY VOLTAGE REGULATOR. USING A LARGER FUSE WILL RESULT IN DAMAGE TO GENERATOR ASSEMBLY.

- a. Locate Generator in a safe and controlled area to apply modification. Ensure appropriate technical manuals, tools, and materials required are on hand.
- b. Ensure generator is off.
- c. Disconnect power from unit.
- d. Disconnect battery.
- e. Remove control box cover so top is open and accessible.
- f. Remove top left mounting screw for voltage regulator A1. See figure 1.

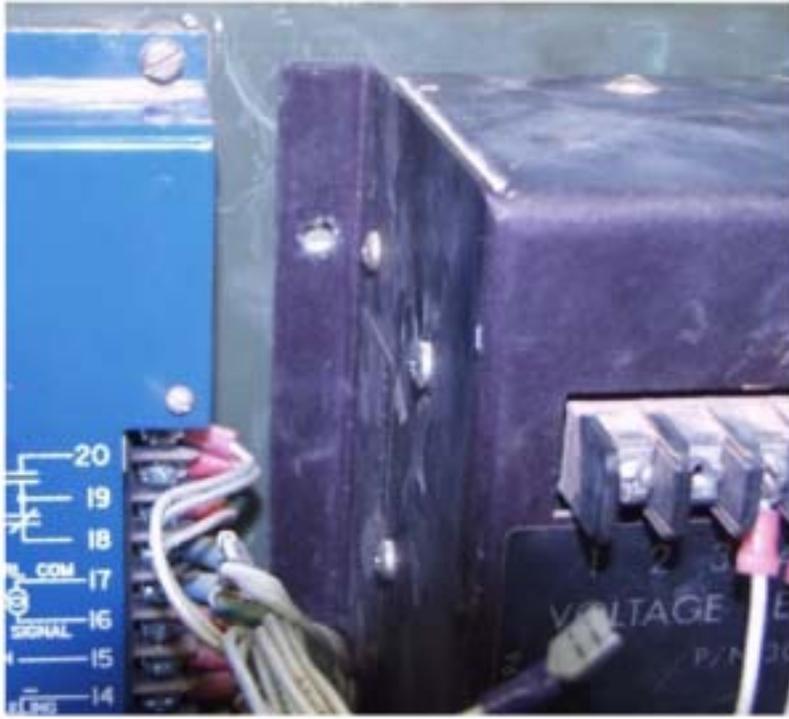


Figure 1. Location of Fuse Folder.

g. Install fuse holder vertically using new screw and lock washer, into existing hole. Orient fuse holder so yellow label can be seen from side. See Figure 2.



Figure 2. Fuse Holder Orientations.

- h. Disconnect wire number 141A20 from terminal 1 of voltage regulator A1. See figure 1.
- i. Remove terminal end and replace with female quick disconnect terminal provided.
- j. Remove enough wire ties from harness to allow wire number 141A20 to be reconnected to lower male quick disconnect terminal of fuse holder.
- k. Install wire number 141A20 on lower male quick disconnect terminal of fuse holder. See figure 3.



Figure 3. Lower Wire Connection.

1. Install female quick disconnect end of wire provided on male quick disconnect terminal located at top of fuse holder. Connect spade terminal end of wire provided to terminal 1 of voltage regulator (A1). See figure 4.



Figure 4. Top Wire Connections.

- m. Using wire ties, attach new wire to existing wiring harness. See figure 5.
- n. Apply Warning Label above terminal block on voltage regulator. See figures 5 and 6.



Figure 5. Completed Modification.



Figure 6. Modification Warning Label.

- o. Reinstall control box cover.
- p. Reconnect batteries
- q. Perform operational test on generator set.

12. Recording the Instruction. Ensure that appropriate records are updated in accordance with TM 4700-15/1.

BY DIRECTION OF THE COMMANDANT OF THE MARINE CORPS

OFFICIAL



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