

Supplemental Instructions
for
Pramac ES5500X 5.5 KW
Generator Set



1 December 2003
NSWC Coastal Systems Station
Panama City, FL

This package includes the following supplemental items and instructions to be used with the previously shipped Pramac ES5500X 5.5 KW Generator Set, supplied as part of the USS Cole damage control lessons learned package:

- a. Pramac Industries Technical Service Bulletin 1001 (Power Panel Rewiring and Ground Removal)
- b. Wiring Check Template (used during power panel rewiring)
- c. Repair Parts Kit for Generator (submit to Supply Officer)
- d. Installation instructions for adding replacement fuel prime line (air vent)
- e. Generator Mobility Kit (Ancillary equipment)
- f. Allowance Parts List (APL) 16A030002
- g. Maintenance Index Page (MIP)/Maintenance Requirement Cards (MRCs)

The Pramac Industries service bulletin (TSB 1001) for the ES5500X generator series, dated 23 June 03, accomplishes two tasks: (1) corrects an incorrect wiring problem of the power panel to allow a full 40 amp service to the duplex receptacles, and (2) removes an incorrectly-wired ground, allowing the 10" damage control circular saw to function with this generator.

As an aid to rewiring the panel, two figures, included immediately following TSB 1001, may be used as a guide. The first figure is a template that may be inserted directly above the terminal board before and after the rewiring steps to determine if the wiring to the terminal board is correct. The second figure illustrates use of the template during rewiring.

When following TSB 1001, also note these discrepancies:

- Pramac does not need to be contacted for the replacement part (as indicated on the TSB); it is provided as part of this delivery.
- It is very easy to overlook the remark in the TSB that there are two procedures included in the instruction. **Be sure to read through both sets of instructions first.** Note that when step #13 of procedure 1 is complete, DO NOT PUT THE UNIT BACK TOGETHER, but proceed to step #2 of the second procedure. After step #5 of the second procedure, go back to step #14 of the first procedure, and finish.

During evaluation of the TSB, it was determined that it should require no more than 45 minutes to perform.

A repair parts kit is also provided. This kit should be submitted to the supply officer. Parts in this kit match the APL for the generator set.

In addition to the above TSB, the Coastal System Station has developed two modifications to improve operation and mobility of the generator, including a fuel system air purge, which allows the fuel system to be purged of air without removing fuel lines. The second modification is a generator mobility kit, which consists of wheels and handles. Information on both modifications is also found in this package.

Any questions concerning the above may be addressed to Mr. K. Powell, NSWC CSS Panama City, Code E50L, Commercial (850) 234-4198, DSN 436-4198, or E-Mail at powellke@ncsc.navy.mil.

Date: 23-Jun-03

PRODUCTS INVOLVED

ES5500X(ES5500MYHDI-AB00W) generators with serial numbers between 2002US21034 and 2003US25890.

ISSUE

Some generators may have been produced with the wiring between the alternator and the electrical panel connected improperly. There may also be a ground to neutral jumper wire in the control panel. This bulletin has been produced to define parts and procedures in correcting the wiring.

SYMPTOMS

On generators with this problem, one of the circuit breakers will trip upon cranking. This can go unnoticed because the generator may continue to perform, however, maximum capacity cannot be obtained. The circuit breakers also have weather boots, which can disguise the fact that the circuit breaker has tripped. There may also be problems with the GFCI tripping when using certain tools, specifically a Milwaukee brand 6460 circular saw. Note: This does not present a safety problem.

ACTIONS

For generators within the defined serial number range and model number experiencing the previously described problems a new wiring harness, part number PIT0005, will be provided under warranty. Contact the Service/Warranty Manager at (770) 479-2922 and reference this TSB number. Note that the existing wiring diagram in the generator manual is correct and may be used when connecting the new wire harness. An electrical diagram is also shown on page 2. Where the ground to neutral jumper exists on the panel, use the following procedures to remove it.

There are 2 sets of procedures below. If your generator exhibits both problems the corrective actions can easily be combined. Read both sets of procedures thoroughly.

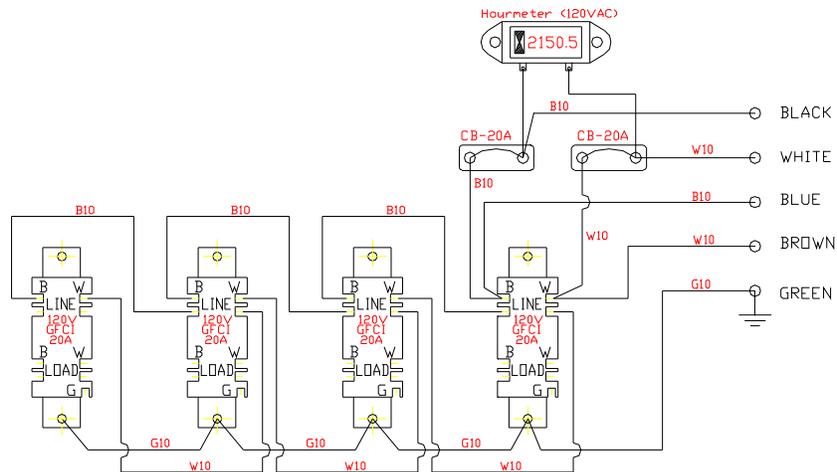
Upon receipt of the wiring harness from the Service/Warranty Department follow the steps below to correct the generator wiring.

Tools required: Phillips head screwdriver, small standard screwdriver, 10mm Socket or wrench.

Make certain that the generator is not running before beginning. **Read the instructions completely before beginning work.** Refer to page 2 for photos showing the harness correctly installed.

1. Remove the back cover from the alternator using a Phillips head screwdriver and removing the 4 screws in the corners.
2. Disconnect the green wire from the alternator body inside the panel with the same screwdriver.
3. Disconnect the existing harness from the alternator by pulling the white connector apart.
4. Remove the bolts around the perimeter of the control panel using the 10mm socket or wrench and rotate the panel down.
5. Using the standard screwdriver, disconnect the existing harness(5 wires – 1 green, 2 white, 2 black) from the bottom of the terminal block which is mounted on the control panel.
6. Remove the existing harness from the generator and discard. Route the new harness into roughly the same position as the old one.

7. Connect the white connector of the new harness to the white connector in the alternator noting that the wire colors of the new harness correspond to those on the alternator.
8. Connect the green wire with the ring terminal on the end to the same ground position in the alternator as the previous harness using the same screw.
9. In the control panel, connect the **Green** wire from the harness to the position on the connector block opposite the green wire.
10. Connect the **Brown** wire of the harness to the position on the connector block opposite the white wire which connects directly to one of the receptacles.
11. Connect the **Blue** wire of the harness to the position on the connector block opposite the black wire which connects directly to one of the receptacles.
12. Connect the **White** wire of the harness to the position on the connector block opposite the white wire which connects directly to one of the circuit breakers.
13. Connect the **Black** wire of the harness to the position on the connector block opposite the black wire which connects directly to one of the circuit breakers.
14. Reinstall the control panel and the alternator end cap.
15. Make certain that all circuit breakers are re-set by pushing the black buttons on the front of the control panel. Note that these buttons may be hidden by weather boots.



Elec. Diagram – Control Panel

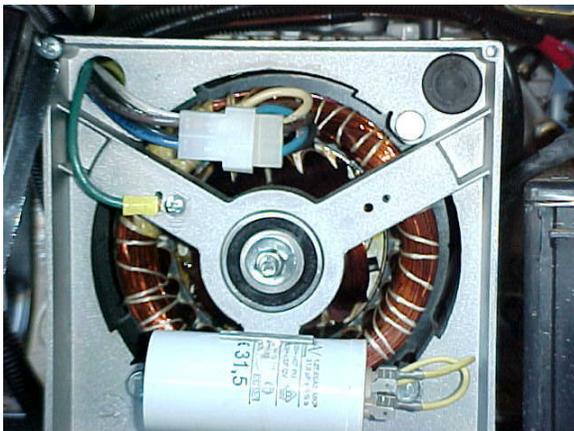


Figure 1. Alternator



Figure 2. Control Panel

Follow the steps below to remove the ground to neutral jumper wire.

Tools required: Phillips head screwdriver, 10mm Socket or wrench.

Make certain that the generator is not running before beginning. **Read the instructions completely before beginning work.**

1. Remove the bolts around the perimeter of the control panel using the 10mm socket or wrench and rotate the panel down.
2. Locate the ground to neutral jumper. It should be a **green** wire connected from a ground(green wires) point to a neutral(white wires) point. Reference Figure 3 below for the typical position, circled in red. Note that the jumper could possibly be on any of the receptacles but should be as shown below.
3. Loosen the **green** screw on the receptacle where one end of the jumper is connected and remove the jumper from that position. Re-tighten the screw.
4. Loosen the **silver** screw on the receptacle at the other end of the jumper wire. Remove the jumper from that position. Re-tighten the screw making sure that the white wire remains connected. Discard the jumper wire.
5. Reinstall the control panel.
6. Make certain that all GFCI receptacles are reset by pushing the reset buttons on the front of the receptacles.

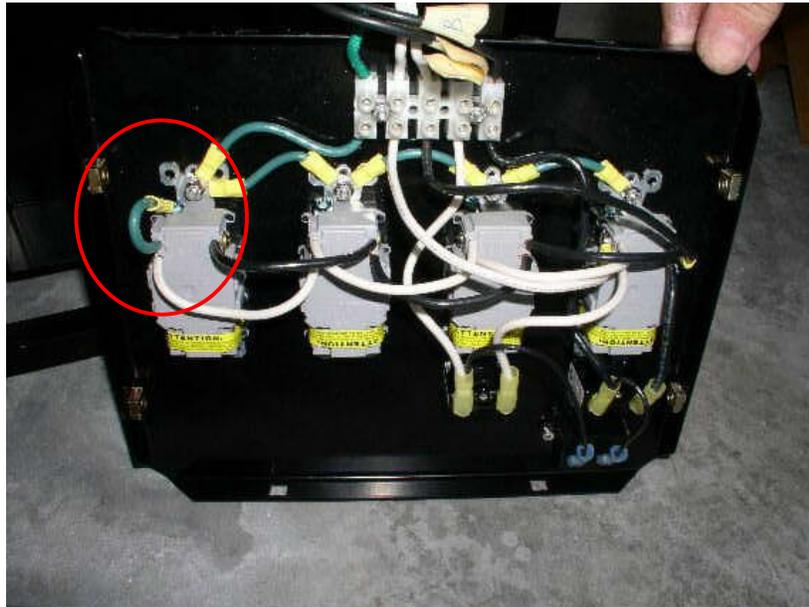
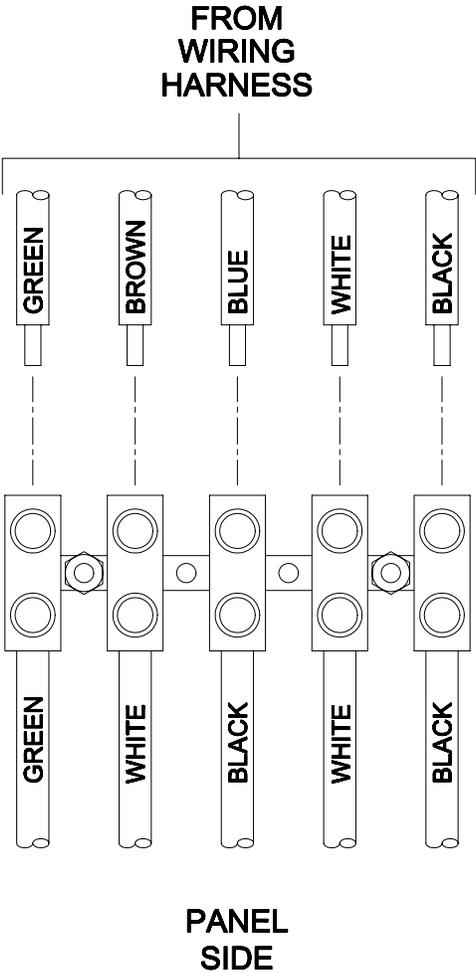
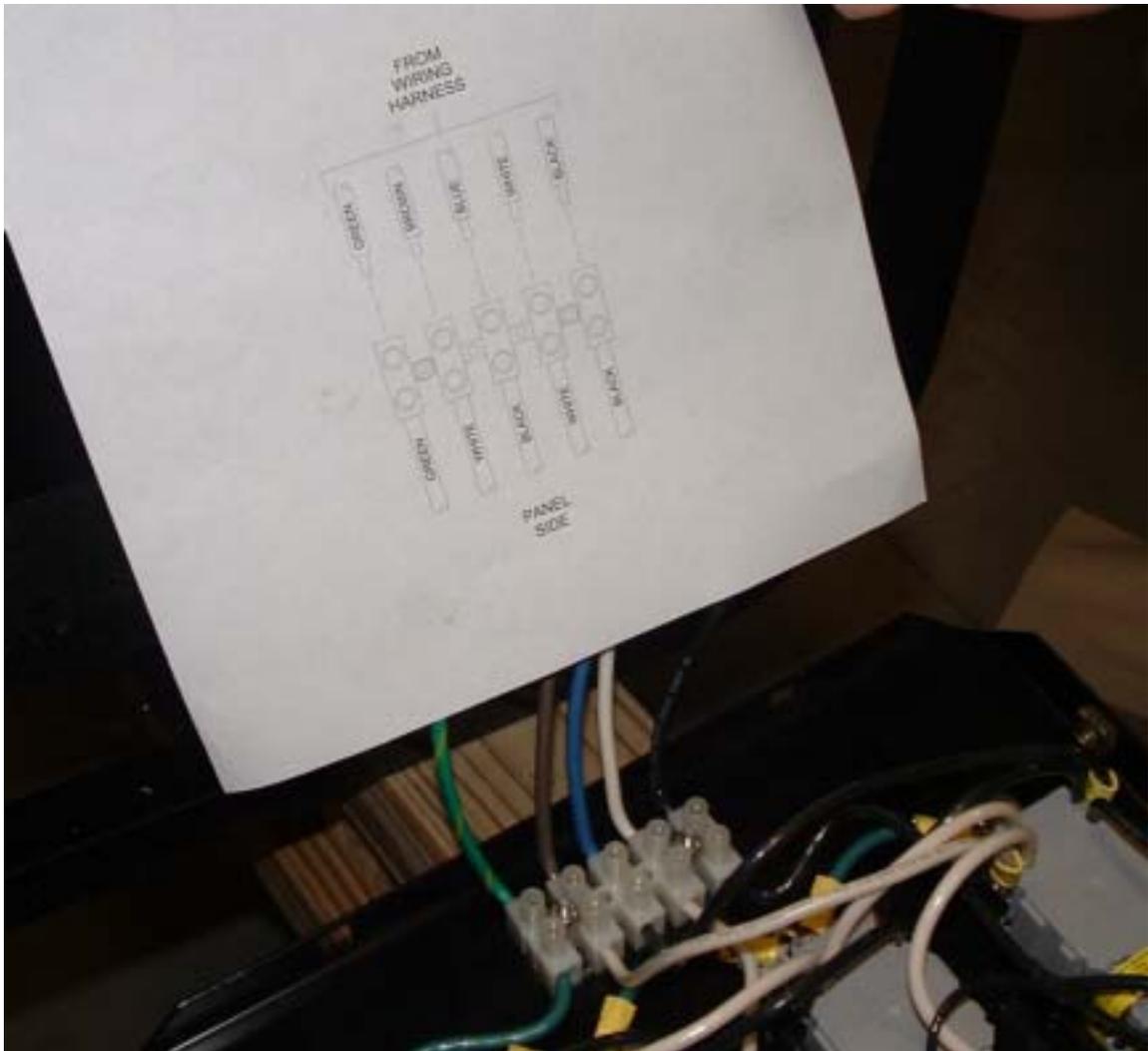


Figure 3. Control Panel

WIRING HARNESS TEMPLATE





USING THE WIRING HARNESS TEMPLATE

PRAMAC ES5500X 5.5 KW GENERATOR SET
REPAIR PARTS KIT LIST

ITEM	PART NO.	QTY
O-ring	24341-000224	1
Rope	114650-76630L	1
Knob	160910-76620	1
Strainer (oil filter)	114250-35110	1
Fuel Filter	W3-1/2	1
Air Filter	114650-12590	1

Installation Instructions for Adding Replacement Fuel Prime Line (Air Vent) for Pramac ES5500X 5.5 KW Generator Set

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Panama City, Florida

1. Close fuel valve on bottom of fuel tank.
2. Ensure Engine Speed Lever is in the STOP position.
3. Disconnect the rubber fuel supply line from the engine and cut to 6" length (Figure 1).



Figure 1

4. Disconnect metal supply line from injector pump (Figure 2).



Figure 2

5. Remove the three nuts holding the fuel injector pump to engine; remove pump from engine.
6. Remove hose barb fitting (that rubber supply line was connected to) from the fuel injector pump.

7. Install in its place the new brass tee with valve and hose barbs. Note the position shown in Figure 3.



Figure 3

8. Reinstall fuel injector pump, ensuring the fuel control pin (Figure 4) lines up in the middle of the guide on the engine (Figure 5).



Figure 4



Figure 5

9. Install the three nuts holding the fuel injector pump.
10. Reconnect the metal fuel supply line in its original position.
11. Connect the new vent line to the hose barb on the new valve (Figure 6); install clamp.



Figure 6

12. Reconnect the rubber fuel supply line to the other hose barb (Figure 7); install clamps.



Figure 7

13. Remove fuel return hose on top of the engine and cut to 9" length.
14. Install new vent hose with tee to the injector and attach vent hose to the tee (Figure 8); install clamps.



Figure 8

15. Remove top intake manifold bolt and install clamp provided with kit (Figure 9).



Figure 9

16. Remove fuel return hose from fuel tank. Replace hose barb on quick-disconnect with new hose barb and hose with clamps in kit (Figure 10).



Figure 10

17. Completed installation should look like Figure 11.



Figure 11

MOBILITY KIT, GENERATOR

1. Kit Contents (See Figure 1).
 - (1) Two wheel assemblies with fasteners (4 each hex head bolts with 4 each nylok nuts).
 - (2) Two handle assemblies (1 right, 1 left). Handles are marked on the inside of the clamping area with either an "R" for right side handle or "L" for left side handle.
 - (3) Two handle caps with fasteners (4 each socket head screws).



Figure 1. Kit Contents

2. Handle Installation (See Figure 2).

- (1) Tools required: 1 each, ¼" Allen Wrench (Hex Key)
- (2) Using the "L" handle assembly, one handle cap, and two socket head screws, install the left handle on the upright brace approximately 1" below the horizontal brace on the left side of the generator (see Figure 2).
- (3) Installation of the right side handle is identical to the left handle.

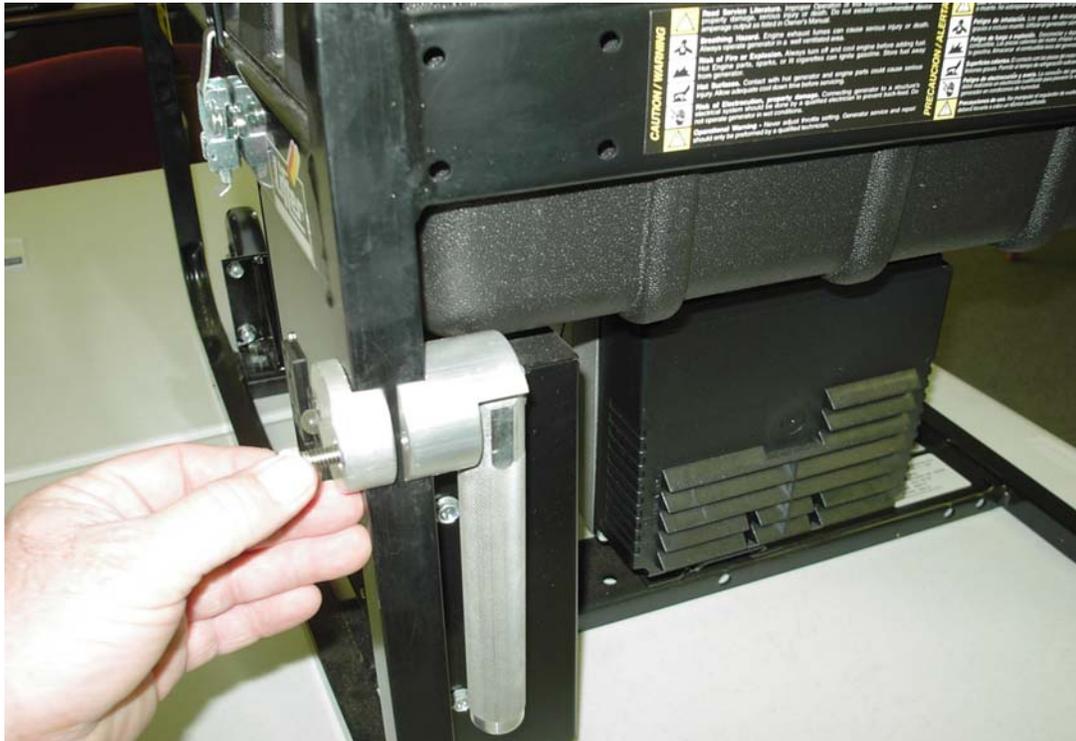


Figure 2. Handle Installation

3. Wheel Installation (See Figure 3).

- (1) Tools Required: 1 each, ½" socket with ratchet.
1 each, ½" combination wrench
- (2) Using one wheel assembly, two hex head bolts, and two nylok nuts, install one wheel on the right side of the generator, as shown in Figure 3. (Note bolt holes provided in generator frame for this purpose.)
- (3) Installation of the left wheel assembly is identical to the right wheel.

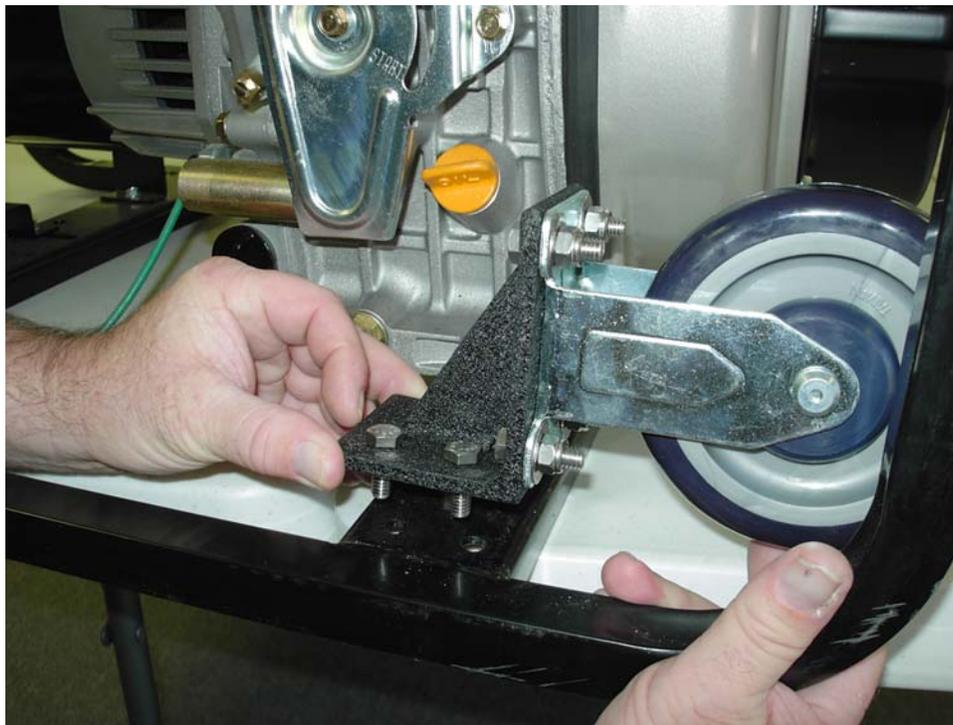


Figure 3. Wheel Installation

MIP CONTROL NUMBER: 6641/029-14 DATE: January 2004

SHIP SYSTEM, SYSTEM, SUBSYSTEM, OR EQUIPMENT
 Portable Generator Set, ES5500X
 6641

REFERENCE PUBLICATIONS
 1. NAVSEA ST460-AH-OMI-010

CONFIGURATION
 Pramac ES5500X 5.5KW Generator Set

SCHEDULING AIDS
 # Mandatory scheduling required.

OTHER	SYSCOM MRC CONTROL NO.	MAINTENANCE REQUIREMENT DESCRIPTION	PERIODICITY CODE	RATES	MAN HOURS	RELATED MAINTENANCE
	14 E1JA N	1. Renew Engine Fuel.	Q-1	PO3	0.5	None
	14 E1HZ N	1. Clean Engine Oil Filter and Renew Lubricating oil. NOTE: Accomplish annually or every 100 hours of operation, whichever occurs first.	A-1R	PO3	0.5	None
	14 E1JB Y	1. Replace Fuel Filter.	A-2	PO3	0.3	None
	14 E1JC Y	1. Replace Air Filter Element. NOTE: Accomplish every 500 hours of generator operation or when filter contamination causes engine power output reduction.	R-2	FN/SN	0.2	None

INACTIVE EQUIPMENT MAINTENANCE

	14 E1JD N	The following requirements will be scheduled when equipment is inactivated for periods of prolonged idleness Lay-Up Maintenance 1. Prepare Generator Set for Long Term Storage. Periodic Maintenance None	LU-1	FN/SN	1.0	Q-1#
	14 E1JE N	Start-Up Maintenance 1. Return Generator Set to Operation Status. Operational Test None	SU-1	FN/SN	1.0	None

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