

TRUCK, AMBULANCE, LIGHT, 4 LITTER, FFR, WINCH, MC2 - LAND ROVER 110 6X6

FITMENT OF AUXILIARY POWER OUTLETS AND MODIFICATION PLATE

MODIFICATION INSTRUCTION

This instruction is authorised for use by command of the Chief of Army. It provides direction, mandatory controls and procedures for the operation, maintenance and support of equipment. Personnel are to carry out any action required by this instruction in accordance with GENERAL A 001.

Introduction

1. This instruction details the modification of the Main Switch Panel of the Truck, Ambulance - Land Rover 110 6x6, by the fitting of two 24 volt auxiliary power outlets in the module. This instruction also details the modification of the 24 volt to 12 volt Reducer for the fitment of a 12 volt auxiliary power outlet.
2. The purpose of this modification is to allow fitment of the Oxygen Change Over Assembly to one of the 24 volt connectors and to provide a 12 volt auxiliary power connector for 12 volt medical equipment.
3. **Associated Publications.** Reference may be necessary to the latest issue of the following documents:
 - a. EMEI Workshop A 850 - Modifications, Trial Modifications and Local Modifications to Equipment;
 - b. EMEI Workshop A 851 - Recording Modifications to Equipment - Use of Modification Record Plates and Documentary Requirements; and
 - c. EMEI General P Section - Stores Procedure.
4. **Authority.** Engineering Change Order (ECO) No. LR6X6:0015 dated 24 Apr 98 is the authority to carry out this modification.

General

5. **Modification Application.** This modification is to be applied to all Trucks, Ambulance, Light, 4 Litter, FFR, Winch - Land Rover 110 6x6.
6. **Items Affected.** This modification alters the Main Switch Panel, the 24 volt to 12 volt Reducer and the Ambulance Module.
7. **Priority - Group 1.** All applicable equipment is to be modified.

NOTE

Where modification would delay priority issues of depot or pool stock, equipment may be issued unmodified providing the equipment record book is endorsed appropriately.

8. **Action Required.** Actions detailed in this instruction are to be performed by ECN 418 at repair agencies authorised to carry out medium or heavy repairs.

NOTE

On receipt of this instruction, enter all relevant information other than date completed in the modifications section of the Equipment Record Book for Service Equipment (GM 120).

9. **Estimated Workhours.** For initial planning purposes only, it is estimated that this modification will take 3.0 workhours to perform.
10. **Stores Required.** The stores required are listed in Table 1. All stores are to be demanded through normal supply channels.
11. **Special Equipment Required.** Special equipment required is as follows:
 - a. holesaw, 32 mm, and
 - b. holesaw, 19 mm.

Detail

12. **Modification of Main Switch Panel.** The procedure is as follows:
 - a. Remove power from module by disconnecting the auxiliary batteries on the passenger side of the vehicle.
 - b. Remove the seven external retaining screws from the main switch panel located nearest the medic's seat in the front of the module.
 - c. Remove the switch panel in a downward motion from the retaining bracket near the air conditioner.
 - d. Remove the relay box from the cavity.
 - e. Measure the position for the holes on the bottom face of the switch panel assembly, as shown in Fig 1.
 - f. Using the 32 mm holesaw cut the two connector holes through the bottom panel and the spacer.

- g. Using a 2.5 mm drill, pre-drill the connector securing holes, as shown in Fig 1.
- h. Using a 3.5 mm drill, enlarge the four connector mounting holes in each connector.
- i. Drill a 14 mm hole in the bottom of the relay box, approximately in a position corresponding to one of the connector holes, and fit the grommet.
- j. Remove the retaining screws from the fuse panel to access the spare fuse terminal.
- k. Solder two 600 mm long red wires to the spare fuse terminal.
- l. Secure fuse panel back into place on the switch panel.
- m. Connect two 400 mm long black wires to the earth strip in the relay box.
- n. Feed all four wires out through the grommet.
- o. Separate the wires and feed a red and black wire out each of the connector holes.
- p. Solder the wires to the connector pins and assemble the connectors, ensuring that the positive (red) wires are fitted to pin A. The common (black) wires are fitted to pin B. Pin C remains unconnected.
- q. Secure the connectors to the fibreglass using the self-tapping screws into predrilled mounting holes, ensuring that pin A is closest to the right-hand side of the vehicle.
- r. Fit the socket caps to the sockets.
- s. Replace the relay box and secure the Switch Panel back into place.
- t. Using 5-minute Araldite, position label "24v" as per Fig 2.

13. Side Module Bin - Fitting of 12 Volt Auxiliary Power Outlet. The procedure to fit the 12 Volt Auxiliary Power Outlets as follows:

- a. Open passenger side bin and remove waste basket.
- b. Remove the splash guard from inside the compartment.
- c. Undo the 6 screws holding the 24-12 volt reducer to the sidewall and place on the floor of the compartment.
- d. Measure the location of the mounting hole; ie 40 mm from the sidewall and 75 mm from the top (refer Fig 3).

- e. Using the 19 mm holesaw, drill through the first wall layer from the inside of the module.
- f. Moving to the outside of the vehicle, drill a 32 mm hole through the inside wall layer of the waste compartment directly in line with the first hole.
- g. Secure the 12 volt socket to the inner wall layer of the waste compartment using the nut provided.
- h. Connect the positive (red) wire to the centre terminal at the rear of the socket using a spade connector and insulate with heat shrink
- i. Splice the positive (red) wire to the positive (red) wire from the auxiliary power terminal using a scotch clip.
- j. Connect the negative (black) wire to the outside terminal at the rear of the socket using a spade connector and insulate with heatshrink.
- k. Splice the negative (black) wire to the negative (black) wire coming from the auxiliary power terminal using a scotch clip.
- l. Remount the 24-12 volt reducer to the sidewall. Replace the splash guard and the waste bin.
- m. Using 5-minute Araldite, position label "12v" above and central to the 12 volt outlet, as per Fig 4.
- n. Position and secure the pressure sensitive modification plate at the rear of the vehicle, 260 mm from the internal wall and 35 mm from the lower edge of the shelf, as shown in Fig 5.

14. Post Modification Testing. Reconnect the batteries to return power to the module.

15. Once power is restored, check there is positive 24 V available between pins A and B of each 24 volt socket and positive 12 volts available between the centre terminal and the outside connector of the 12 volt socket.

16. Recording Action. On completion of the modification, the following action is to be taken:

- a. deface the number 1 on the Module modification record plate; and
- b. complete the modification details in Part 3 of the Equipment Record Book for Service Equipment (GM 120).

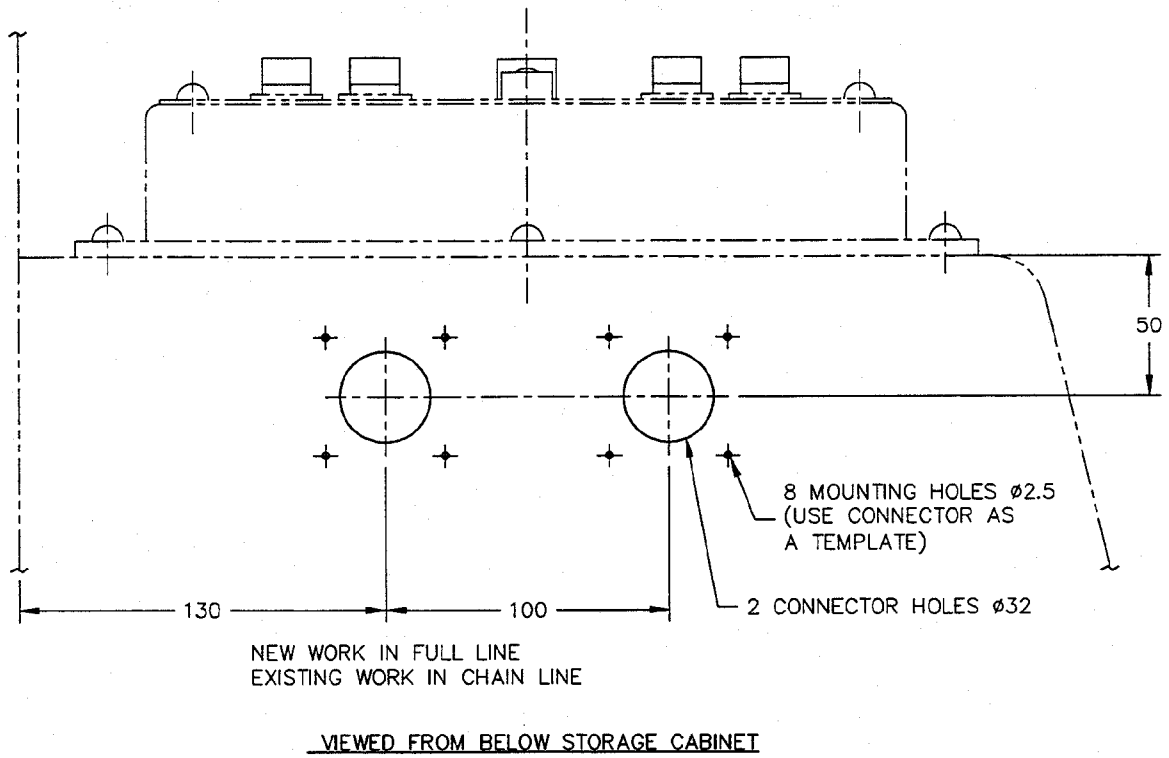


Figure 1 - Location of Mounting Holes

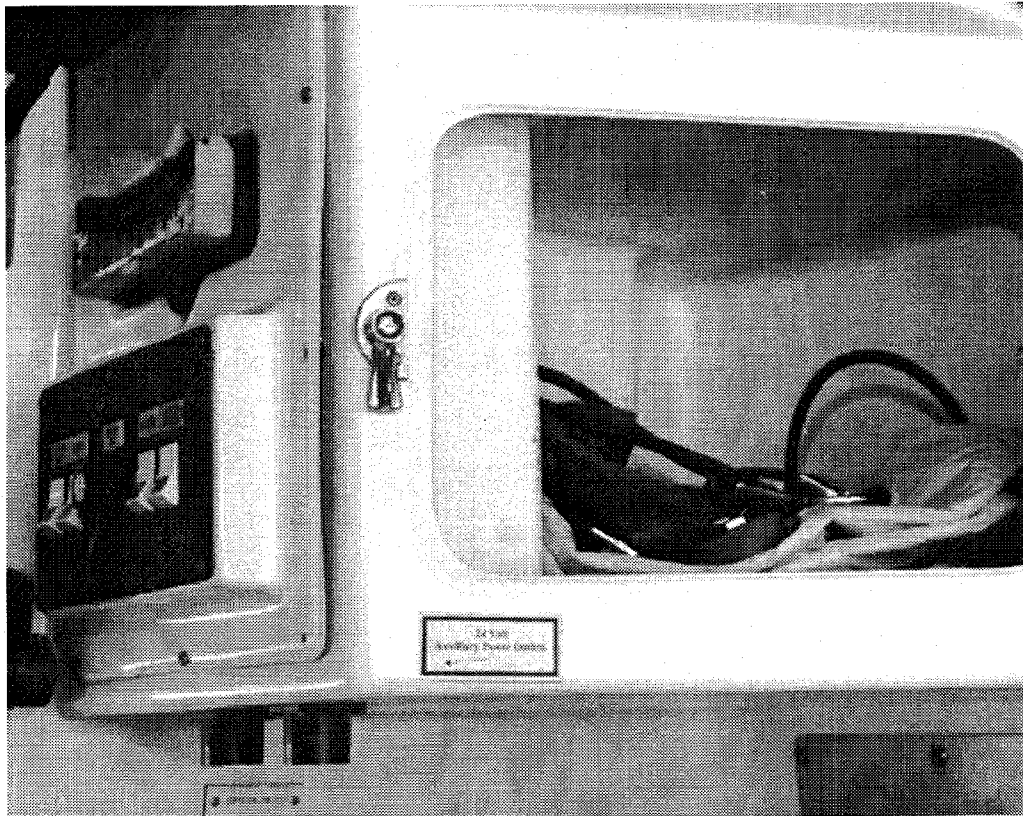


Figure 2 - Completed Main Switch Panel

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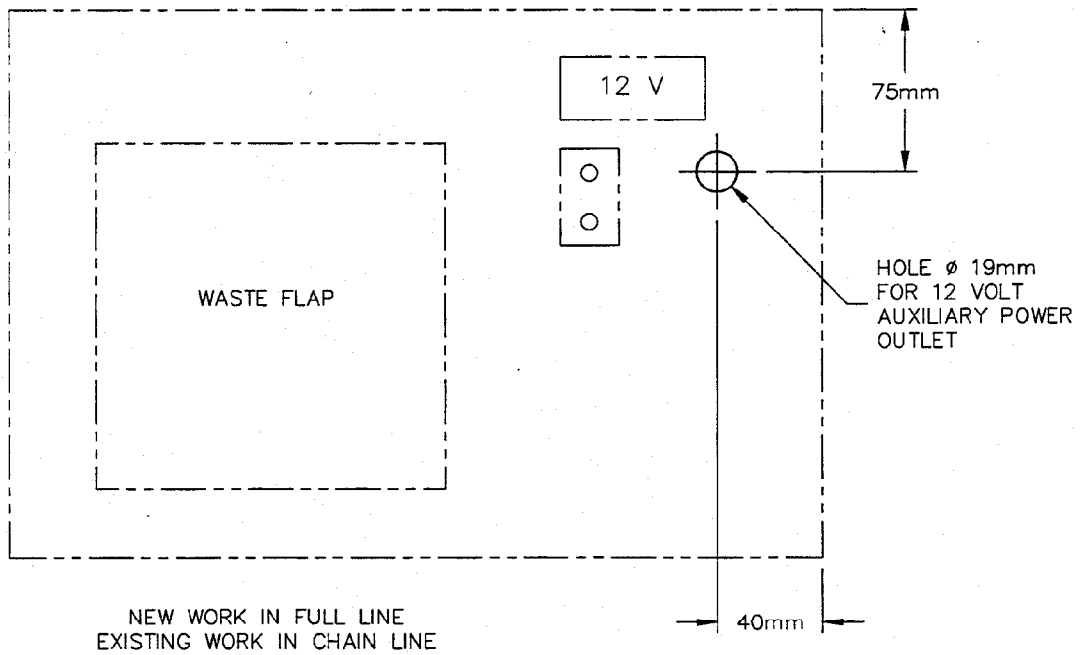


Figure 3 - Location of Mounting Holes

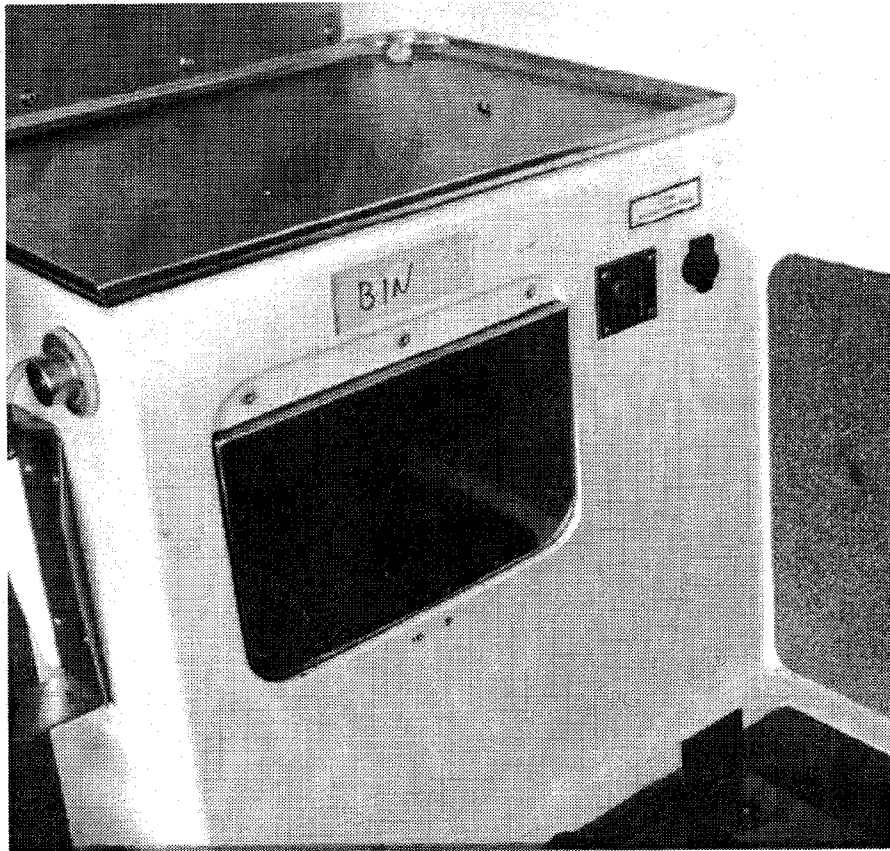


Figure 4 - Completed 12 Volt Auxiliary Power Outlet

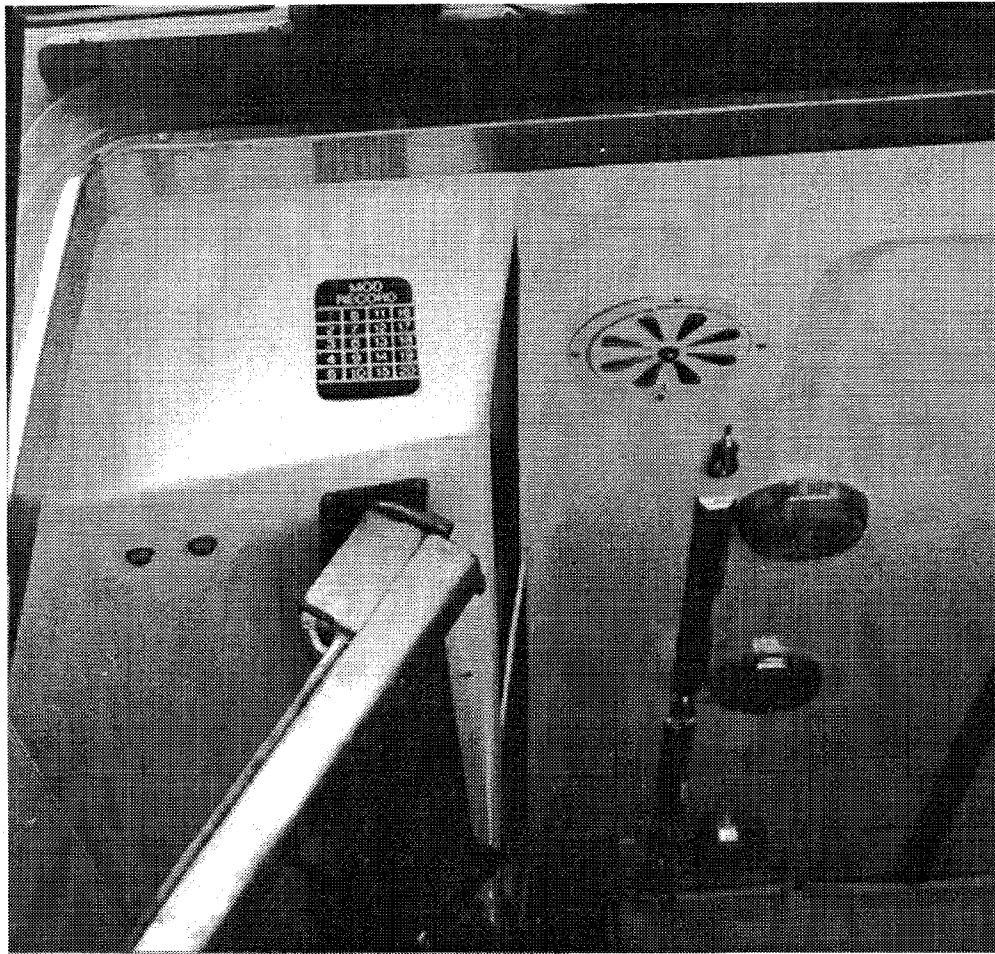


Figure 5 - Location of Modification Plate

Table 1 - Stores Required

Item	NSN	Mfr Part No	Designation or Description	Unit of Issue	Qty per Equip
1	5935-01-260-9660	MS3102R20-19S	Connector Receptacle, Electrical	ea	2
2	6145-66-018-3954		Wire, Electrical (Black)	roll	as reqd
3	6145-66-029-7156		Wire, Electrical (Red)	roll	as reqd
4	5325-99-106-5991	CWG 6	Grommet, 14 mm	ea	1
5		6G x ½ in	Screw, Self-tapping, Pan Head	ea	8
6	9905-66-016-3535		Modification Plate	ea	1
7		Hella 4918	Socket	ea	1
8		Hella 8235	Scotch Clip	pkt	1
9			Heat Shrink	mm	100
10		HYM184	Label "12v"	ea	1
11		HYM185	Label "24v"	ea	1

END

List VEH G 22.0 - Code 1 (Job No 9601230)

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