

**TRUCK, SURVEILLANCE, LIGHTWEIGHT, MC2, WINCH - LAND ROVER 110 4X4  
REGIONAL FORCE SURVEILLANCE VEHICLE (RFSV)**

**RELOCATION OF THE FUSE BOX**

**MODIFICATION INSTRUCTION**

This instruction is authorised for use by command of the Chief of the General Staff. 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 A001.

**Introduction**

1. This instruction details the rerouting of the main wiring loom and the relocation of the fuse box to the dash area to reduce water ingress during fording at water depth exceeding 900 mm. The modification is to be carried out by Rover Australia dealers and is funded by Project Perentie for parts and labour.

**General**

2. *Associated Publications.* The latest issue of the following references should be read in conjunction with this instruction:

- a. EMEI Workshop A 850 - Modifications, Trial Modifications and Local Modifications to Equipment;
- b. EMEI Workshop A 851 - Modifications to Equipment - Use of Modification Record Plates and Documentary Requirements;
- c. HQ Logistic Command Equipment Maintenance Program (EMP) 36/93 - Land Rover RFSV Fuse box Relocation; and
- d. Rover Australia Newsletter Military 04/1993.

3. *Authority.* Rover Australia Engineering Change 2264.

4. *Modification Application.* All Land Rover 110 4x4 RFSV.

5. *Items Affected.* The items affected are the wiring loom, fuse box, scuttle and dashboard area.

6. *Priority - Group 2.* All applicable equipment is to be modified by 30 Jun 94. Vehicles in remote localities should be booked into the supporting Rover Australia dealer for the modification at the earliest convenient time. Vehicles in depot or pool stock are to be modified prior to issue.

7. *Action Required.* The modification is to be completed by 30 Jul 94. The modification is to be carried out by Rover Australia dealers as detailed in Rover Australia Service Newsletter 04/1993 and HQ Log Comd EMP 36/93. The parts kits and labour are funded by Project Perentie. The modification is not to be carried out by RAEME tradesmen without the approval of the Fleet Manager B Vehicles, HQ Log Comd, Telephone (03)2827206. Any unit unable to comply with the completion date is to contact the Fleet Manager at HQ Log Comd.

8. *Estimated Manhours to Perform.* For initial planning purposes only, it is estimated that this modification will take 6.30 manhours to perform.

9. *Items to be Removed.* The items that are removed as part of the modification are to be disposed of as detailed in GENERAL P series.

10. *Stores Required.* The stores required are listed in Table 1. The kit detailed in Table 1 is to be ordered from Moorebank Log Gp on the basis of one kit per vehicle as detailed in HQ Log Comd EMP 36/93. The parts in Table 2 are shown for identification purposes and are not to be ordered as part of the modification.

**Table 1 - Stores to be Ordered Complete the Modification - All Land Rover 110 4x4 RFSV**

Item	NSN	Mfr Part No	Description	Unit of Issue	Qty per Equip
1	5920-66-128-6946	HYG6512	Kit, Fuse Box Relocation	ea	1

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**Table 2 - Stores Contained in Modification Kit (to assist parts identification and not to be ordered to complete the modification)**

Item	Mfr Part No	Description	Unit of Issue	Qty per Kit
1	BM106031	Bolt, 6 mm dia by 15 mm lg	ea	2
2	NY106041	Nut, Nyloc, 6 mm dia	ea	2
3	AB606051	Screw, Self Tapping, 6 mm by 15 mm lg	ea	2
4	AB612051	Screw, Self Tapping, 3.5 mm by 15 mm lg	ea	2
5	AB610051	Screw, Self Tapping, 4 mm by 15 mm lg	ea	4
6	RU608123	Rivet, 3.2 mm dia by 7 mm	ea	12
7	HYG6508	Power Link Cable - Auxilliary/Inspection Light Socket	ea	1
8	HYG6521	Extension Wire - Instrument Dimmer	ea	1
9	HYG6520	Extension Wire - Switch Fuse Instrument Dimmer	ea	1
10	HYG6505	Mounting Bracket	ea	1
11	HYG6504	Cover Fuse box	ea	1
12	HYG6506	Lower Cover Panel	ea	1
13	HYG6507	Fuse Label	ea	1
14	HYG6515	Deflector Plate	ea	2

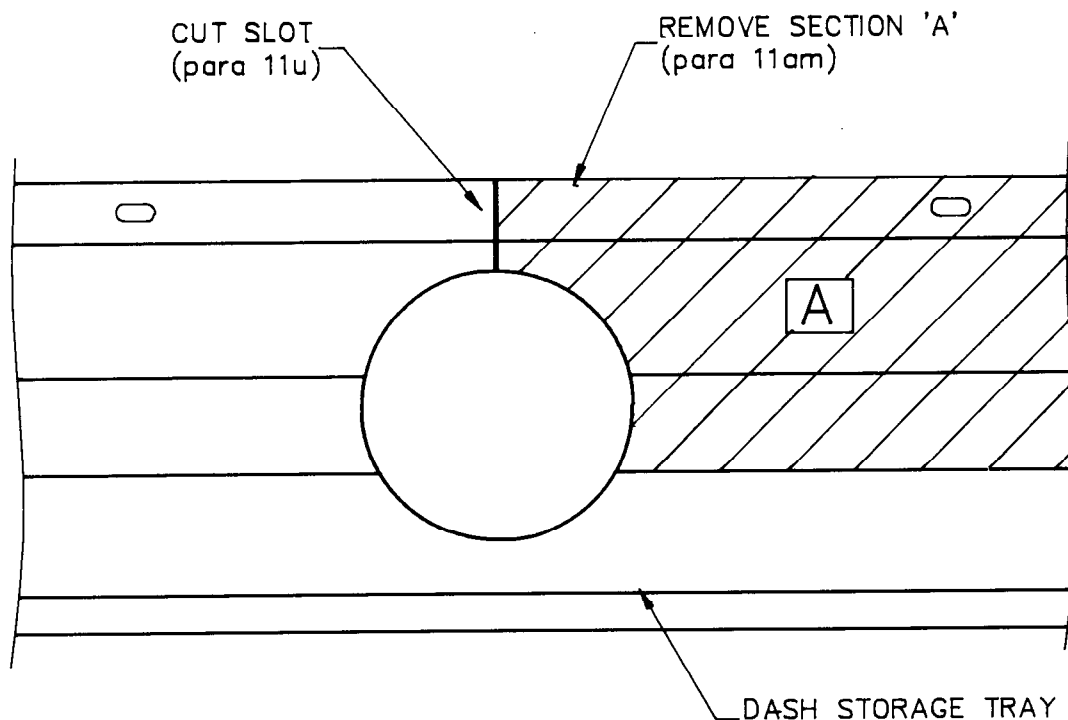
### Fuse Box Relocation Procedure

11. Proceed as follows:

- a. Disconnect the battery.
- b. Remove the three self tapping screws securing the top padded dash to lower dash assembly.
- c. Remove the demister vent aperture plates (2).
- d. Remove the grab handle/end plate assembly from the LH end of dash assembly.
- e. Remove the plastic trim finisher (U Section) from the top of the lower dash assembly.
- f. Remove the wiper motor cover (lower LH panel).
- g. Remove the centre panel cover complete with tripmeter.
- h. Disconnect the wiring to the tripmeter and auxiliary 12 V outlet.
- i. Remove the self tapping screws (4) securing instruments to binnacle.
- j. Disconnect the speedometer cable and warning lamp connectors.
- k. Remove the RH dash end panel (with heater controls attached).
- l. Slacken the bolts (3) securing the rear of the dash binnacle housing.
- m. Remove the top roll pad.
- n. Remove the self tapping screws (5) and clips securing the plastic fresh air grill panel.
- o. Remove the grill panel.
- p. Remove the LH and RH demister duct assembly.

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- q. Remove the central control panel knobs (lights and transfer case control).
- r. Remove the central control panel cover plate.
- s. Remove the central controls assembly.
- t. Locate the wiring loom clearance hole in the plastic dash storage tray.
- u. Cut a slot in the storage tray, as shown in Figure 1.
- v. Pull the RH end of the tray back and slide the tray to the left past the wiring.
- w. Remove the bolts (2) securing the lower dash panel to the bulkhead.
- x. Remove the fuse box cover.
- y. Remove the LH and RH footwell air ducts.
- z. Remove the self tapping screws (7) securing the lower dash panel to the bulkhead.
- aa. Remove the screws (2) securing the fuse carrier plate.
- ab. Remove the screws securing the steering wheel cowling.
- ac. Remove the lower cowling panel.
- ad. Pull the dash panel assembly away from the bulkhead.
- ae. Position the deflector plates (Item 14, Table 2) to cover the fresh air vent apertures inboard and adjacent to the regulator controls. Drill eight 3.2 mm holes in the vent panel using the plates as templates.
- af. Apply a small quantity of sealant to the perimeter of the plates and secure on panel with eight 3.2 mm rivets (Item 6, Table 2).
- ag. Remove the bonnet assembly.
- ah. Remove the engine air cleaner assembly.
- ai. Locate the plastic wiring cover plate on the bulkhead, drill out the rivets (4) and discard the plate.
- aj. From the inside of the vehicle, pull the main wiring harness through the bulkhead grommet as far as the first branch of harness will allow.



**Figure 1 - Plastic Storage Tray Rework**

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- ak. Pass the fuse carrier plate and associated wiring up behind the dash panel assembly. Turn the carrier plate through 180 degrees and temporarily secure in raised position.
- al. Refit the central controls to the centre of the dash panel (lights and transfer case control).
- am. Rework the RH section of the plastic storage tray as shown in Figure 1.
- an. Remove the tripmeter from the bracket on the centre panel cover. Remove the bracket from the centre panel cover and discard the fixing screws.
- ao. Remove the rivnuts from the cover.
- ap. Rework the cover as shown in Figure 2.
- aq. Extend the purple power feed wire to the auxiliary inspection light socket with link wire (Item 7, Table 2).
- ar. Extend the wire to the instrument dimmer switch with the white link wires (Items 8 and 9, Table 2).
- as. Refit the lower dash panel assembly to the bulkhead.
- at. Slide the reworked plastic storage tray into position with care to prevent wiring damage and ensure that all wires pass through cut out.
- au. Position the centre control cover ensuring that the tripmeter electrical connector has first been fed to R.H.S. along the storage tray and into the area behind the dash binnacle housing.
- av. Check that the inspection lamp sockets are connected and supplementary fuses located outside the cover.
- aw. Secure the panel cover in position (delete fixing 'A' as shown in Figure 2).
- ax. Refit the LH and RH windscreen demister ducts and trunking.

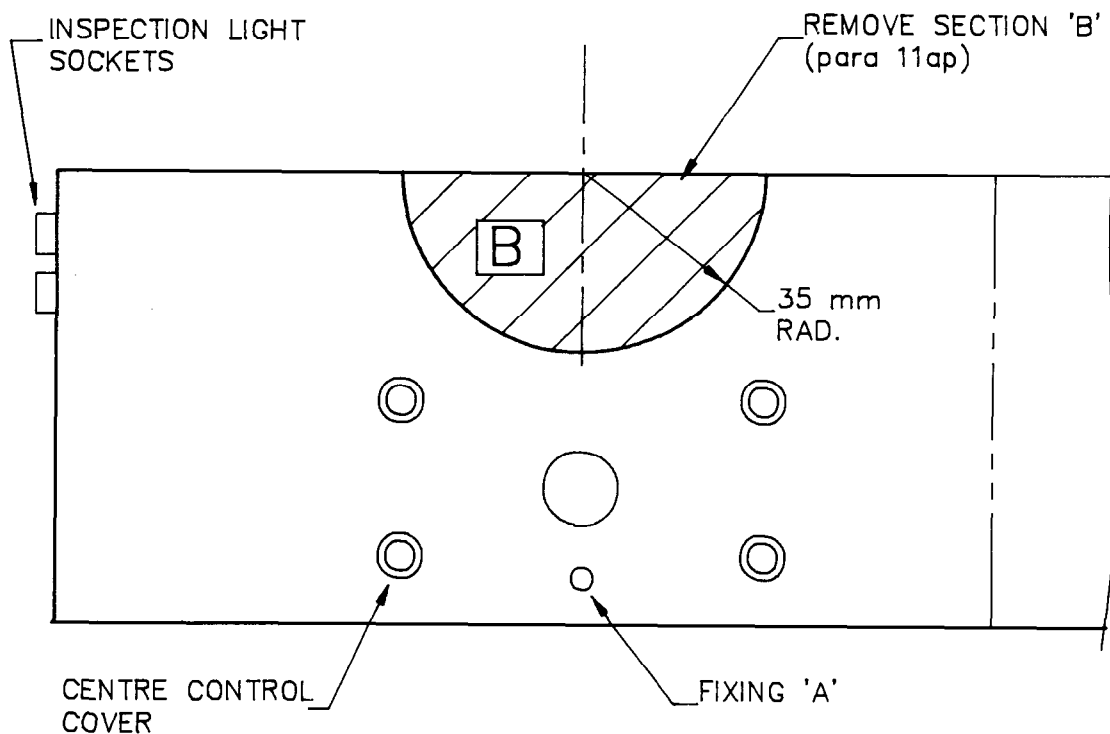
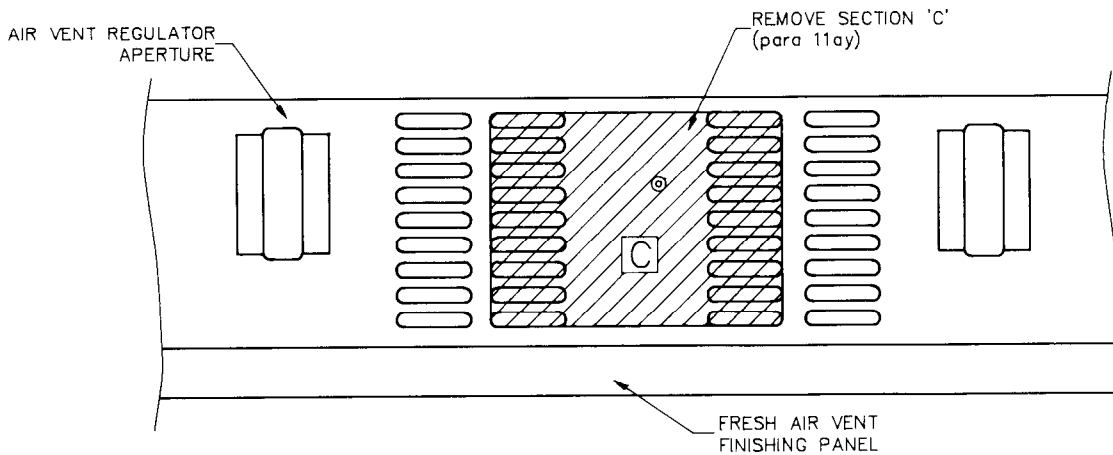


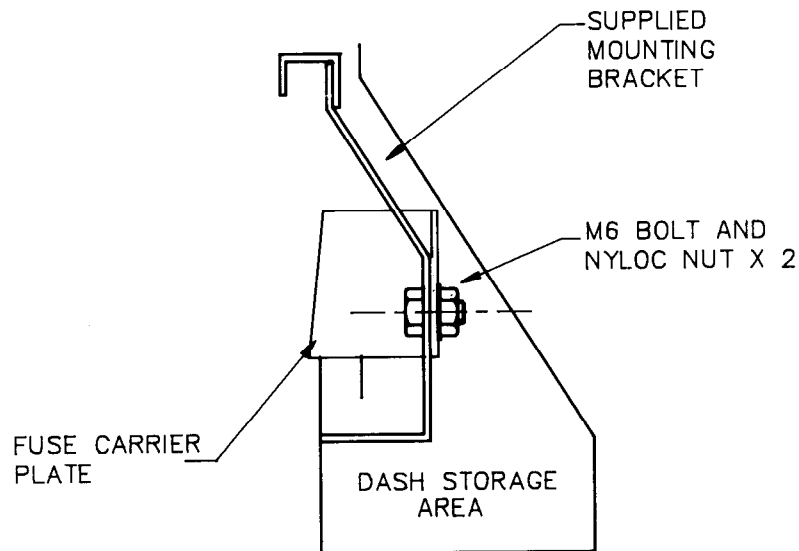
Figure 2 - Centre Panel Cover Rework

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- ay. Rework the fresh air vent finishing panel, as shown in Figure 3, and refit the vent finishing panel to the vehicle.
- az. Remove the temporary fixing of the fuse carrier plate.
- ba. Position the mounting bracket (Item 10, Table 2) into the dash aperture as shown in Figure 4.
- bb. Attach the bracket to the fuse carrier plate utilising the original mounting holes and new nuts and bolts (Items 1 and 2, Table 2) as shown in Figure 4.
- bc. Locate the top edge of the supplied bracket against the fresh air panel and align it with the centreline of the dash panel (centre of ashtray).
- bd. Drill two holes (4 mm ) in the vent panel using the bracket as a drilling template.
- be. Attach the bracket to the vent panel with two large self tapping screws (Item 3, Table 2).
- bf. Locate the supplementary fuses on the carrier plate utilising the original mounting holes and new nuts and bolts (Items 1 and 2, Table 2) as shown in Figure 4.



**Figure 3 - Rework of Fresh Air Vent Panel**



**Figure 4 - Dash Mounting Bracket for Fuse Panel**

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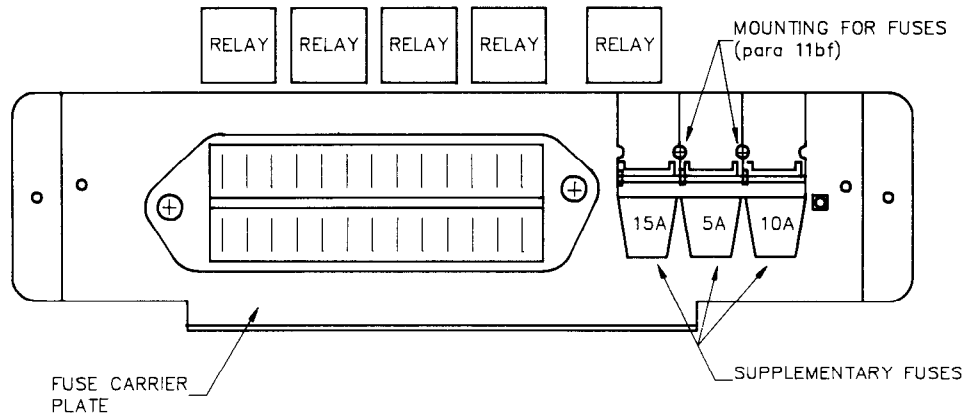


Figure 5 - Location of Supplementary Fuse or Mounting Plate

- bg. Secure the fuse holders with self tapping screws supplied (Item 4, Table 2).
- bh. Locate the tripmeter bracket on the top surface of the pad as shown in Figure 6.
- bi. Drill 16 mm clearance hole and four mounting holes (3.5 mm) using the bracket as a template, as shown in Figure 6.
- bj. Feed the tripmeter wiring through the hole in the bracket and locate the grommet in position.
- bk. Feed the wiring through the clearance hole in the dash pad and secure the bracket to the pad with self tapping screws supplied (Item 5, Table 2).
- bl. Feed the tripmeter wiring and connector to RHS along the dash behind the fresh air vent panel and pass it through the aperture in the panel for the RH demister duct assembly and into the area behind the dash binnacle housing.
- bm. Attach the connector to the main harness connector positioned previously in Para 11 au.
- bn. Refit the roll pad to the top dash assembly.
- bo. Refit the LH and RH demister duct finishers to the top of the dash pad.
- bp. Refit the LH and RH footwell air ducts.
- bq. Refit the heater controls.
- br. Refit the cover panel for the wiper motor assembly.
- bs. Tighten the dash binnacle housing bolts (refit instruments and steering cowling).
- bt. Locate the plastic U Section finisher for the lower dash panel and rework as shown in Figure 7.
- bu. Re-attach the finisher to the dash assembly.
- bv. Refit the LH dash end panel and grabhandle.
- bw. To the inside surface of the replacement fuse box cover (Item 11, Table 2) attach supplied label (Item 13, Table 2) and spare fuses as shown in Figure 8 to the double sided adhesive pad.
- bx. Position the fuse removal tweezers on the RH top edge of the fuse carrier plate for storage.
- by. Secure the cover in position utilising the original hand screws.
- bz. Remove the winch instruction plate from the original fuse box cover by drilling out the rivets.

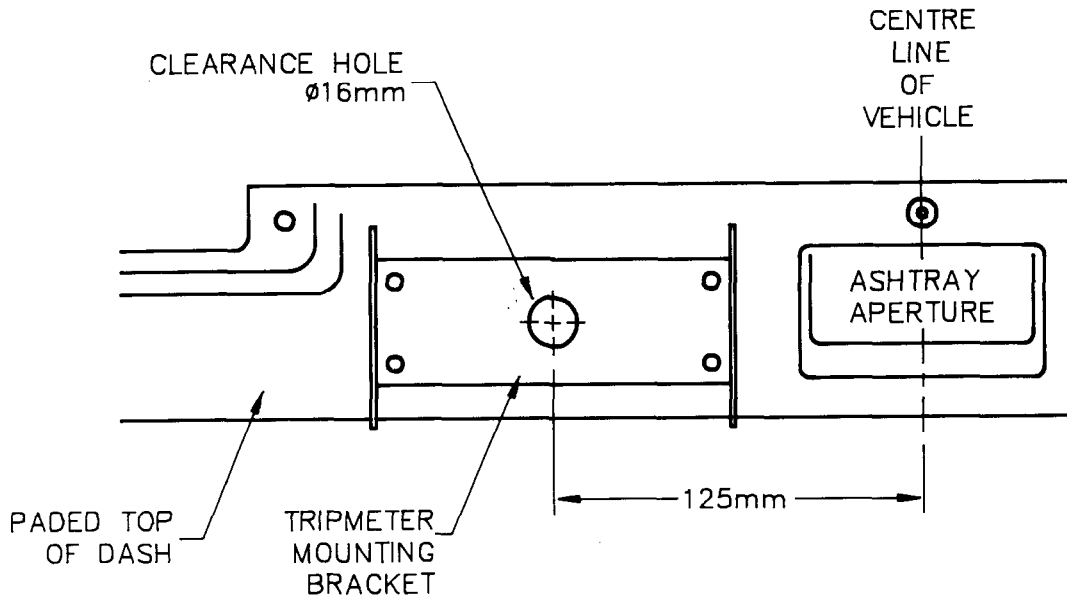


Figure 6 - Location of Tripmeter Bracket

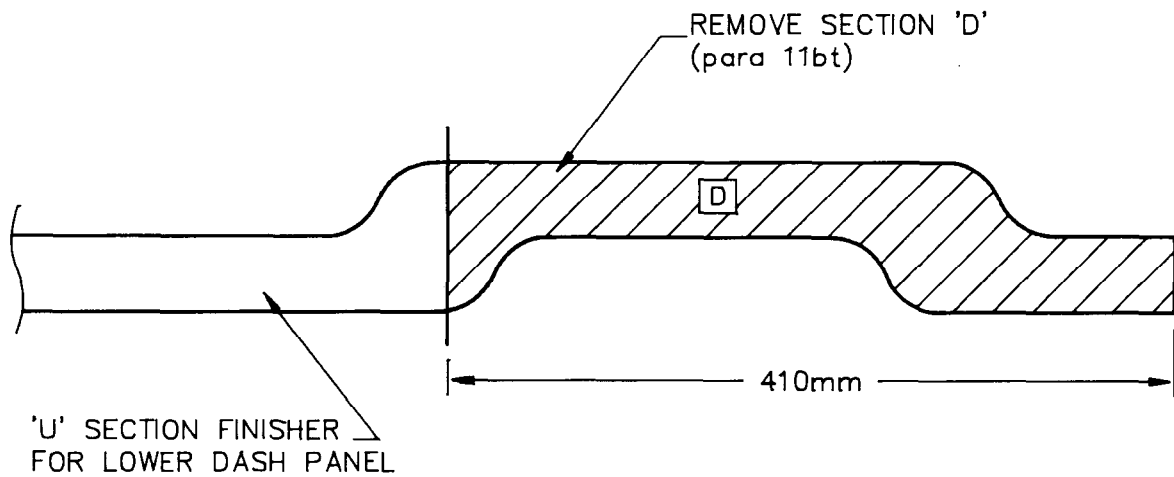


Figure 7 - Plastic U Section Finisher for Lower Dash Panel

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- ca. Position the instruction plate on the new lower cover panel (Item 12, Table 2) as shown in Figure 9.
- cb. Drill four holes (3.2 mm) using the plate as a template.
- cc. Attach the instruction plate to the lower cover panel with rivets (Item 6, Table 2).
- cd. Attach the cover panel to the bulkhead in the location of the original fuse box using the original fuse carrier plate fixing screws.
- ce. Refit the engine air cleaner assembly.
- cf. Refit the bonnet assembly.
- cg. Reconnect the battery terminals.

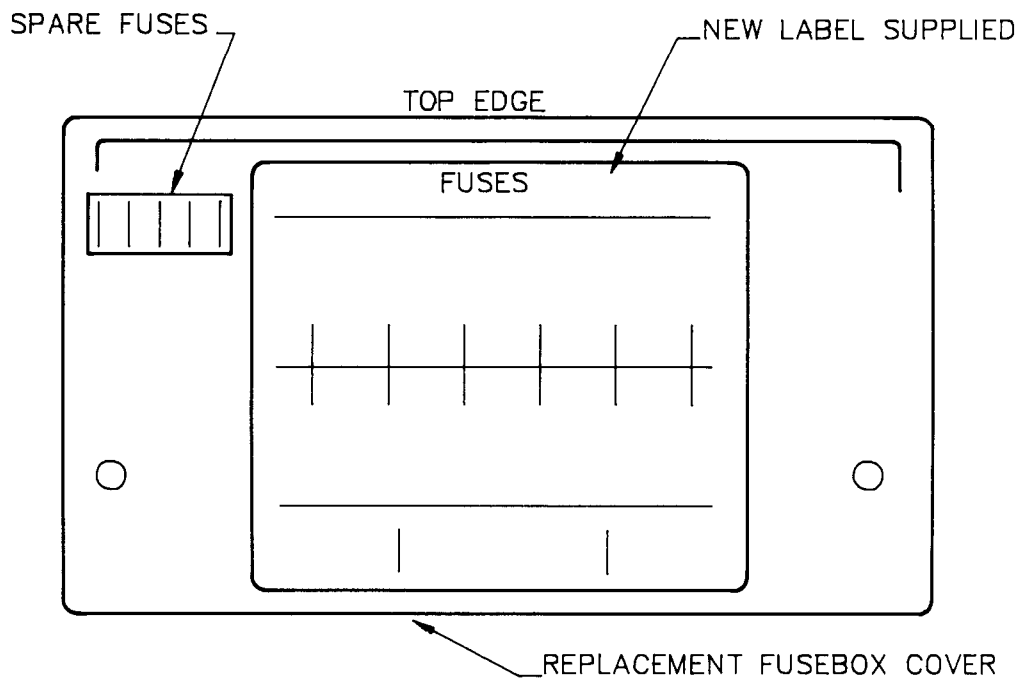


Figure 8 - Fuse Panel Label

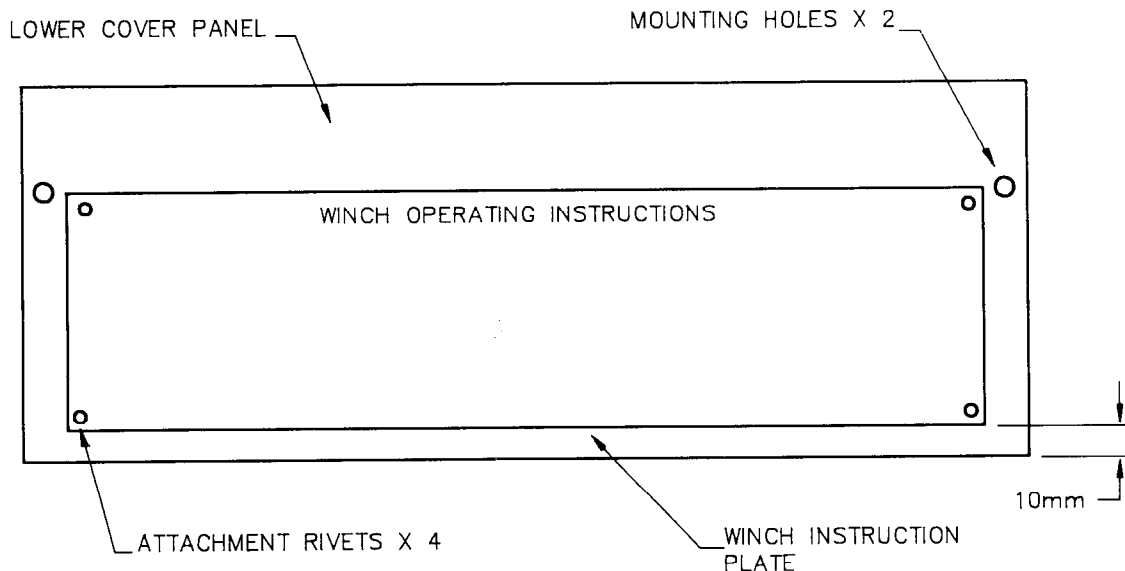


Figure 9 - Lower Cover Panel Plate

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- 12. *Post Modification Testing.*** Check the operation of all electrical circuits.
- 13. *Recording Action.*** On completion of the modification:
- a. deface the number 28 on the modification plate located on the drivers seat base;
  - b. enter the details of the modification in Part 3 of the GM 120, Record Book for Service Equipment;
  - c. sign the proforma at Rover Dealer (shown in Newsletter 04/1993) acknowledging the completion of the modification by the dealer; and
  - d. report the completion date of the modification and ARN of vehicle to the Regional Fleet Managers as detailed in HQ Log Comd EMP 36/93.

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**END**

List VEH G 16.6 - Code 1 (MEA 930117)