

## TRUCK, LIGHTWEIGHT AND TRUCK, LIGHT – ALL TYPES LAND ROVER 110 4X4 AND 6X6

### FITTING OF TRAILER SAFETY CHAIN BRACKETS

## 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 EMEI General A 001.

### Introduction

1. This instruction details the fitting of trailer safety chain brackets to all Land Rover 110 vehicles, to allow the towing of trailers fitted with safety chains. The new lightweight and light trailer fleets will be fitted with safety chains.

2. **Associated Publications.** Reference may be necessary to the latest issue of the following documents:

- a. TRAMM, Volume 3, Section 2, Chapter 7;
- b. EMEI Workshop A 850 – Modifications, Trial Modifications and Local Modifications to Equipment;
- c. EMEI Workshop A 851 – Recording Modifications to Equipment – Use of Modification Record Plates and Documentary Requirements;
- d. EMEI Workshop D 700 – Painting of Army Equipment;
- e. EMEI Workshop E Series – Occupational Health and Safety;
- f. EMEI Workshop E 406 – Material Safety Data Sheets (MSDS);
- g. Manual of Occupational Health and Safety (MOHS);
- h. Australian Design Rule (ADR) 62/01 Mechanical Connections between Vehicles of 11 Dec 96;
- i. Rover Australia Engineering Change No 2459; and
- j. EMEI General P section – Stores Procedure.

3. **Authority.** ECO LTB 001-02 is the authority to carry out this modification.

### General

4. **Modification Application.** This modification is to be applied to all Land Rover 110 4x4 and 6x6

variants. Some vehicles have been modified during production.

5. **Items Affected.** This modification alters the rear cross-member by fitting additional brackets.

### WARNING

**DUE TO ADR REQUIREMENTS, TRAILERS FITTED WITH SAFETY CHAINS ARE NOT TO BE TOWED BY ANY LAND ROVER PRIOR TO COMPLETION OF THIS MODIFICATION.**

6. **Priority – Group 2.** All applicable equipment is to be modified by 31 December 2002 or prior to the following actions:

- a. prior to towing a trailer fitted with safety chains, or
- b. prior to issue from depot or pool stock.

### 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.**

7. **Action Required.** Actions detailed in this instruction are to be performed by supporting workshops authorised to carry out Light, Medium or Heavy Grade repairs.

### NOTE

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

8. **Estimated Manhours.** For initial planning purposes only, it is estimated that this modification will take 1.0 manhour to perform.

9. **Stores Required.** The stores required are listed in Table 1. All stores are to be demanded through normal supply channels.

**WARNING**

ALL INDUSTRIAL SAFETY, WORK PRACTICES AND EQUIPMENT OPERATING AND MAINTENANCE INSTRUCTIONS PERTAINING TO THIS EMEI ARE TO BE ADHERED TO.

THE HANDLING, STORAGE AND USE OF CHEMICAL SUBSTANCES ARE TO BE IN ACCORDANCE WITH MOHS, MSDS AND EMEI WORKSHOP E SERIES REQUIREMENTS.

**DETAIL**

**Modification Procedure for Land Rover 4x4 Variants**

10. The procedure for fitting the trailer safety chain brackets to the Land Rover 4x4 is as follows:

- a. Lower the spare wheel.
- b. Remove the rear chassis wiring loom securing-clamps.

**WARNING**

ENSURE THE WIRING LOOM LOCATED IN THE REAR CHASSIS CROSS-MEMBER IS CLEAR PRIOR TO DRILLING HOLES.

- c. Mark and drill four 10.6 mm holes at positions detailed in Figure 1.

**NOTE**

Ensure the split pin fitted to the retaining pin assembly (Item 4, Table 2) is fitted to the trailer bracket (Item 1, Table 2) prior to fitment to the vehicle.

- d. Assemble kit (Item 1, Table 1) to rear chassis cross-member, as shown in Figure 1.
- e. Torque nuts (Item 3, Table 2) to 45 to 50 N.m.
- f. Reposition internal wiring loom and refit the rear chassis wiring loom securing-clamps.
- g. Refit spare wheel.

**Modification Procedure for Land Rover 6x6 Variants**

11. The procedure for fitting the trailer safety chain brackets to the Land Rover 6x6 is as follows:

- a. Lower the spare wheel.
- b. Remove rear chassis wiring loom securing-clamps.

**WARNING**

ENSURE THE WIRING LOOM LOCATED IN THE REAR CHASSIS CROSS-MEMBER IS CLEAR PRIOR TO DRILLING HOLES.

- c. Mark and drill four 10.6 mm holes at positions detailed in Figure 2.

**NOTE**

Ensure the split pin fitted to the retaining pin assembly (Item 4, Table 2) is fitted to the trailer bracket (Item 1, Table 2) prior to fitment to the vehicle.

- d. Assemble kit (Item 1, Table 1) to rear chassis cross-member, as shown in Figure 2.
- e. Torque nuts (Item 3, Table 2) to 45 to 50 N.m.
- f. Reposition internal wiring loom and refit rear chassis wiring loom securing-clamps.
- g. Refit spare wheel.

12. **Post Modification Testing.** To ensure correct connection of the trailer safety chains when coupled to the towing vehicle, carry out the following checks:

- a. Couple the trailer to the vehicle, cross the trailer safety chains under the trailer draw bar – connect and check fitment of safety chains to both safety chain brackets.
- b. Articulate the vehicle to the full turning circle capability – check that the trailer safety chains do not interfere with the trailer towing capability.
- c. With the trailer safety chains connected to the towing vehicle, disconnect the towing eye from the pintle hook and lower the trailer draw bar – check that the draw bar is supported by the trailer safety chain and the towing eye is not in contact with the ground.

13. **Recording Action.** On completion of the modification the following action is to be taken:

- a. Deface the number 30 on the 4x4 modification record plate and number 39 on the 6x6 modification record plate.
- b. Complete the modification details in the Record Book for Service Equipment (GM 120).

14. Vehicles that have been modified in production are to be tested, as detailed in Para 12, and have the modification recorded, as detailed in Para 13.

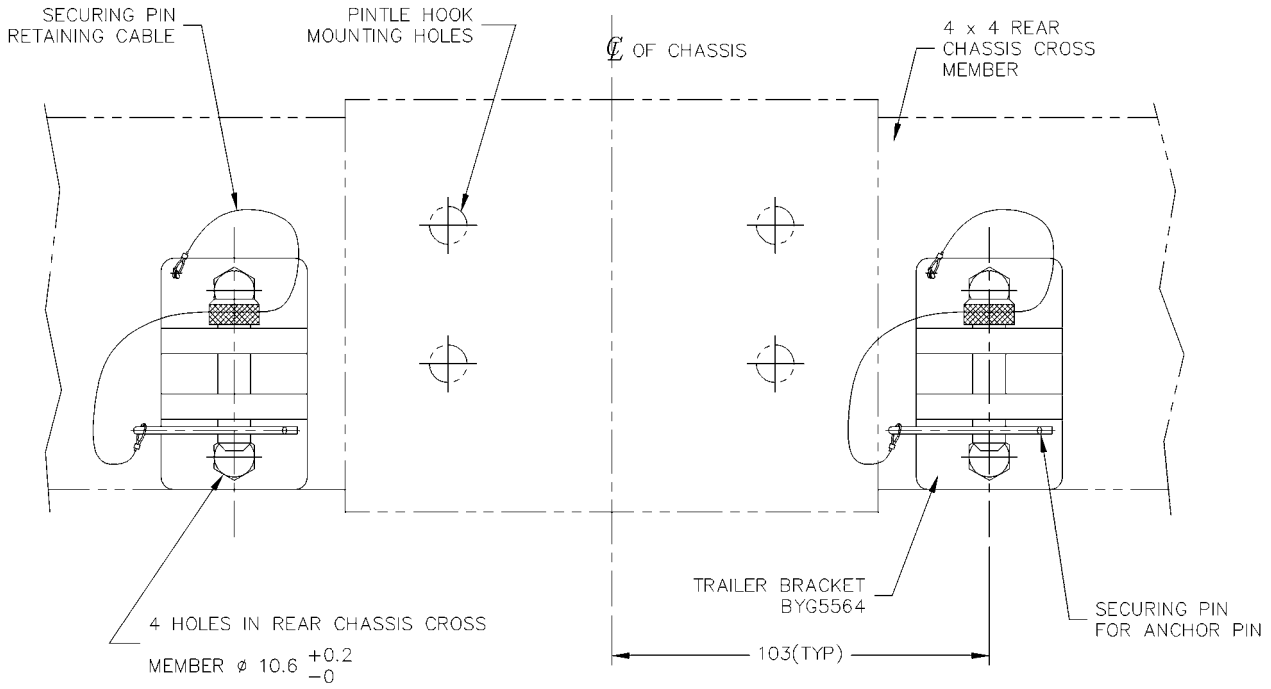
**Table 1 – Stores Required**

<b>Item</b>	<b>NSN</b>	<b>Mfr Part No</b>	<b>Designation or Description</b>	<b>Unit of Issue</b>	<b>Qty per Veh</b>
1	2540-66-145-6730	BYG5567	Trailer Safety Chain Assy Kit – 4x4 and 6x6 (contains items listed in Table 2)	Kit	1

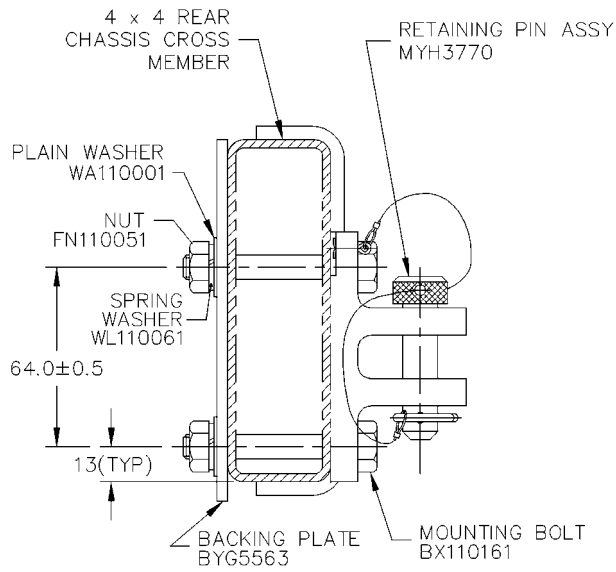
**Table 2 – Items Contained in Modification Kit BYG5567**

<b>Item</b>	<b>NSN</b>	<b>Mfr Part No</b>	<b>Designation or Description</b>	<b>Qty per Kit</b>
1	NIC	BYG5564	Bracket, Trailer Safety Chain	2
2	5306-66-145-7120	BX11071	Mounting Bolt – M10 x 85	4
3	5310-99-137-5113	NH110061	Nut – M10	4
4	5315-66-144-6338	MYH3770	Retaining Pin Assembly	2
5	5310-99-122-6476	WA110001L	Plain Washer – M10	4
6	5310-99-138-9228	WL110001	Spring Washer – M10	4
7	NIC	BYG5563	Plate – Backing	2

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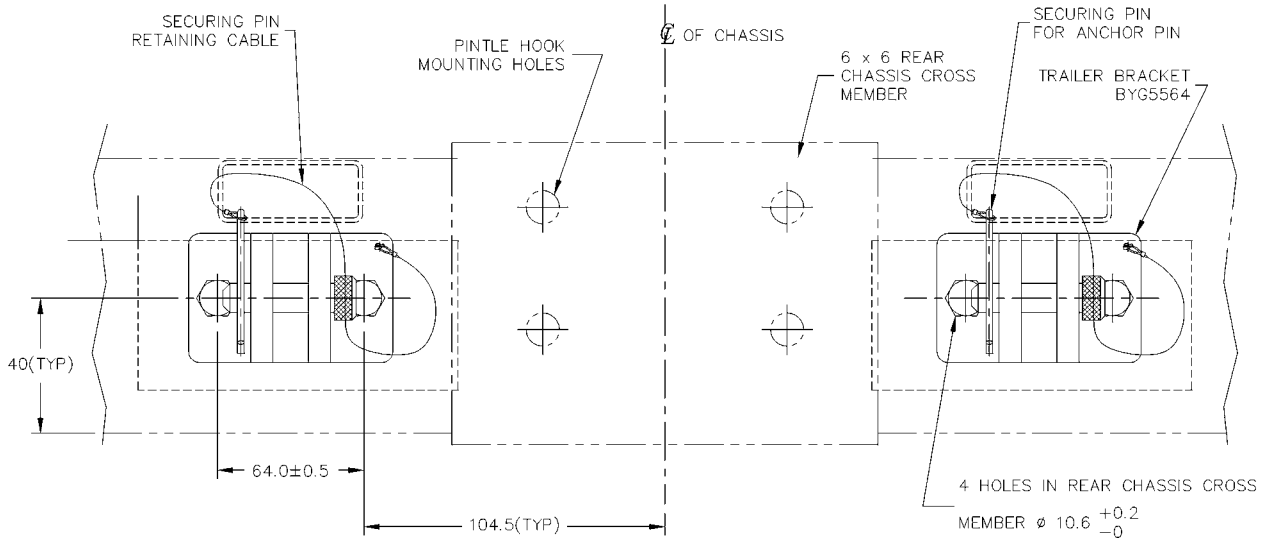
REAR VIEW OF LANDROVER 110 4 X 4 TOWBAR  
NOT SHOWING PINTLE



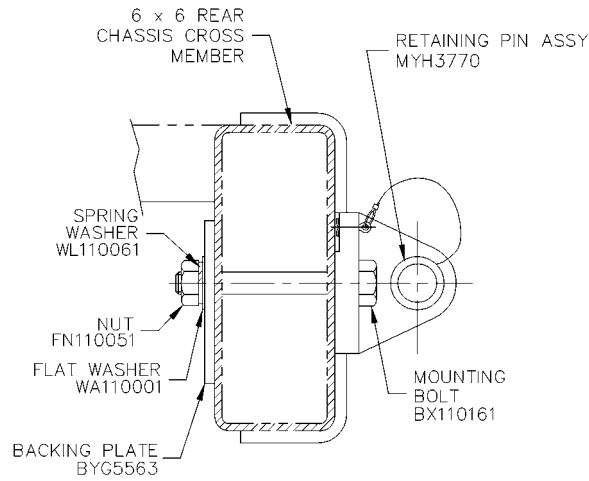
PART SECTION

Figure 1 – Land Rover 4x4 Rear Chassis Cross-Member

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REAR VIEW OF LANDROVER 110 6 X 6 TOWBAR  
NOT SHOWING PINTLE



PART SECTION

**Figure 2 – Land Rover 6x6 Rear Chassis Cross-Member**

**END**

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