



Ministry of Defence

Army Equipment Support Publication

Truck Utility Light (TUL) HS Truck Utility Medium (TUM) HS and (TUM) Ambulance HS

2320-D-128-411

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AMENDMENT RECORD

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PREFACE

Sponsor: DGES(A) ES52
 Project Number: ES52c/4356
 File Ref: D/DGES(A) 548/3/4
 Publication Authority: ATSA Chertsey

INTRODUCTION

- 1 The Publications Agency is responsible for the allocation of instruction numbers.
- 2 All Preparation for Installation instructions as issued are to be recorded in manuscript by the recipient on the Installation Instruction Index provided. Amendments to individual instructions are to be recorded on the instruction Amendment Record. All extant instructions and amendments can be found listed in the main AESP index.
- 3 Service users should forward any comments on this publication through the channels prescribed in AESP 0100-P-011-013. An AESP Form 10 is provided after the preliminary pages of this publication; it should be photocopied and used for forwarding comments on this AESP.
- 4 AESPs are issued under Defence Council authority and where AESPs specify action to be taken, the AESP will of itself be sufficient authority for such action and also for the demanding of the necessary stores.

INSTALLATION INSTRUCTION INDEX

- 5 The index is to be kept up to date by the User entering Installation instructions as and when they are published.

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TRUCK UTILITY LIGHT (TUL) HS
TRUCK UTILITY MEDIUM (TUM) HS
AND (TUM) AMBULANCE HS
INSTALLATION INSTRUCTION NO 1

Sponsor:
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Publications Agency
CTS TD
DLO Andover
Project No: CSV041

AMENDMENT RECORD

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SUBJECT

- 1 Fitting of sand channel mounting brackets.

INTRODUCTION**CAUTION**

VEHICLE RECORD BOOK. This instruction AESP 2320-D-128-411 must be retained with the vehicle record book.

- 2 This installation details the fitting of sand channel mounting brackets.

2.1 The vehicle can be converted back to its standard role when required by removing items fitted following this instruction and refitting original parts.

APPLICABILITY

- 3 This installation is to be fitted to WMIK vehicles only when approved by the Equipment Manager at DLO.

3.1 Unmodified stock, held at all levels of technical storage.

REASON FOR INSTALLATION

- 4 Code 2 - To improve operational performance.

RELATED AND ASSOCIATED PUBLICATIONS

- 5 Refer to AESP:

<u>Reference</u>	<u>Title</u>
2320-0-128-101	Purpose and Planning
2320-D-128-201	Operator Information
2320-D-128-711	Illustrated Parts Catalogue

ESTIMATED TIME REQUIRED

- 6 The estimated time required is listed in Table 1.

TABLE 1 ESTIMATED TIME REQUIRED PER EQUIPMENT

Serial (1)	Task (2)	Man-hours (3)	Tradesman employed (4)
1	Dismantling, preparation	1.5	REME tech + assistant
2	Assembly	1.5	REME tech + assistant
3	Testing	0.25	REME tech

IMPLEMENTATION PLAN

- 7

7.1 This modification is to be implemented by:

- Units authorised to install the Weapons Mounted Installation Kit.
- ARMY - Units authorised to carry out level 2 maintenance.

7.2 Associated modification instructions. Nil

ACTION REQUIRED BY

8 Units and establishments holding equipment.

8.1 Examine vehicle documents to see if modification is applicable.

8.2 Examine equipment or modification record plate to see if modification is embodied and where necessary Units with level 2 REME Support demand the stores required.

8.3 ARMY - On receipt of stores, request REME to modify equipment.

8.4 ARMY - Record the modification subject and AESP number in equipment documents.

8.5

9 Units authorised to carry out Unit, Field or Base repairs (levels 2, 3 or 4).

9.1 ARMY - When requested by users or during overhaul of equipments on charge without REME level 2 Support, obtain the items listed in Para 7 and carry out this modification.

9.2 Record completion details of modification against appropriate entry in equipment documents.

10 All recipients of the AESP. Add particulars to AESP 2320-D-128-411 Inst instr index.

STORES, TOOLS AND TEST EQUIPMENT

11 The item numbers in this Para are used as references throughout Para X.

11.1 **Stores to be demanded.**

11.1.1 The following items/installation kit(s) are to be demanded quoting this instruction as authority for demand.

Item No.	DMC	NSN/Part No.	Designation	Qty per eqpt
			Sand Channel Installation (WMIK) Comprising:	
1	G1	30053-015	Strap	(2)
2	G1	30053-014	Front bracket	(1)
3	G1		M8 x 20 lg hex hd screw ZP GRD 8.8 BS 3692	(2)
4	G1		M8 plain washer ZP BS 4320	(4)
5	G1		M8 nyloc nut ZP BS 4929	(4)
6	G1	30053-018	Sand Channel	A/R
7	G1	30053-013	Rear bracket	(1)
8	G1		M8 x 20 lg soc csk hd screw GRD 12.9 ZP BS 4168	(2)
9	G1		M6 plain washer ZP BS 4320	(12)
10	G1		M6 nyloc nut ZP BS 4929	(6)
11	G1		M6 x 20 lg hex hd screw ZP GRD 8.8 BS 3692	(6)
12	G1	30053-019	Edging strip	(4)

SEQUENCE OF OPERATIONS**Installation**

12 Carry out the installation as follows:

NOTE

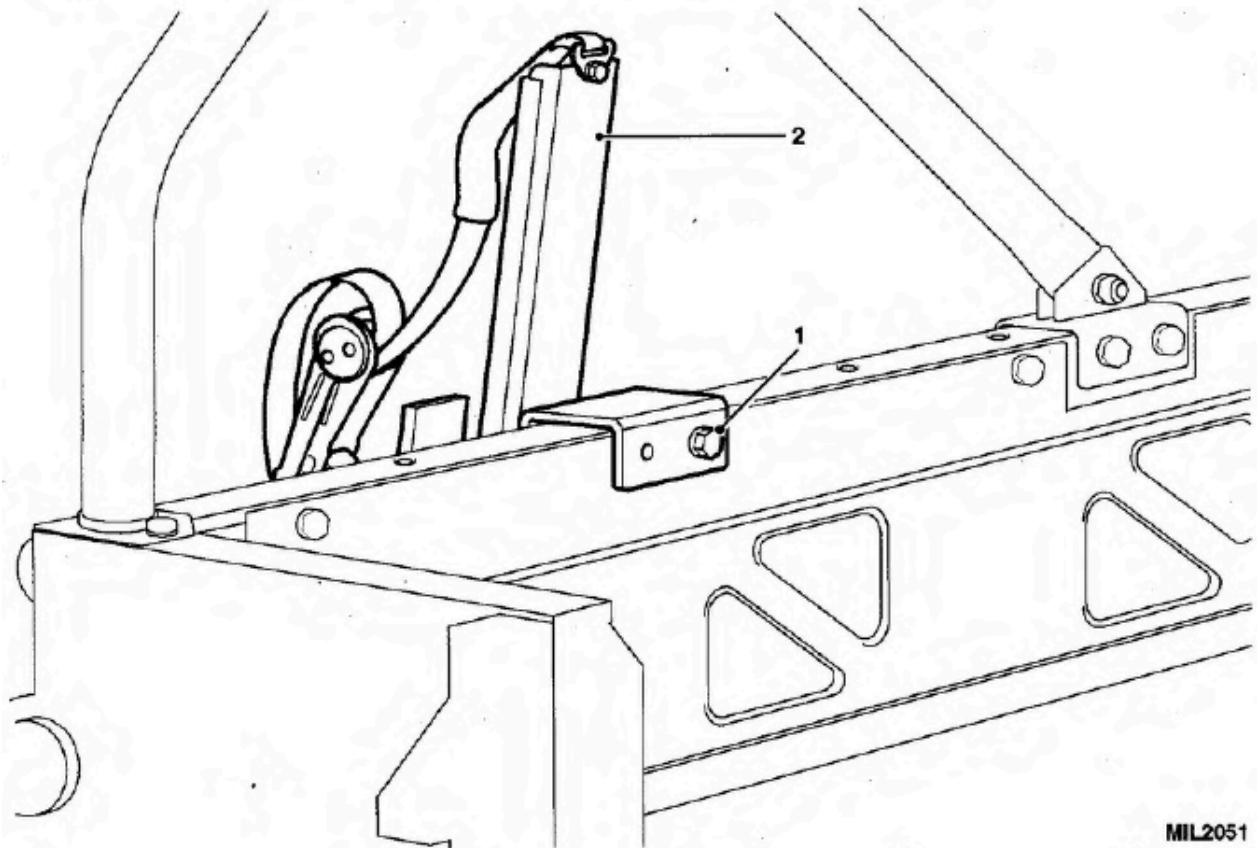
Brackets can be fitted to either side of the vehicle.

Refer to Fig 1

- 12.1 Park the vehicle on a flat level surface, apply the handbrake and remove the ignition keys.
- 12.2 Remove the second screw along from the rear of the vehicle securing the reinforcing plate to the top of the cargo rail.
- 12.3 Position the sand channel rear bracket (item 7) over the cargo rail and locate with the existing screw through hole nearest front of vehicle as shown.
- 12.4 Drill two 6.5mm dia holes through the body side using the rear channel bracket as a guide.
- 12.5 Secure the rear bracket (item 7) using two M6 screws (item 11), nuts (item 10) and washers (item 9) to the side of the vehicle.

12.6 If fitted, remove the Radio mast mounting bracket and use the existing holes to mount the front bracket (item 2).

12.7 Secure the bracket to the side of the vehicle using four M6 screws (item 11), nuts (item 10) and washers (item 9) through the existing reinforcement plates.



1 Rear Bracket

2 Existing Screw

Fig 1 Fitting the rear bracket

12.8 Attach the straps (item 1) to the front and rear brackets ensuring the shorter strap with the ratchet mechanism is fixed to the lower fixing using the M8 csk screws (item 8), M8 nuts (item 5) and M8 washers (item 4).

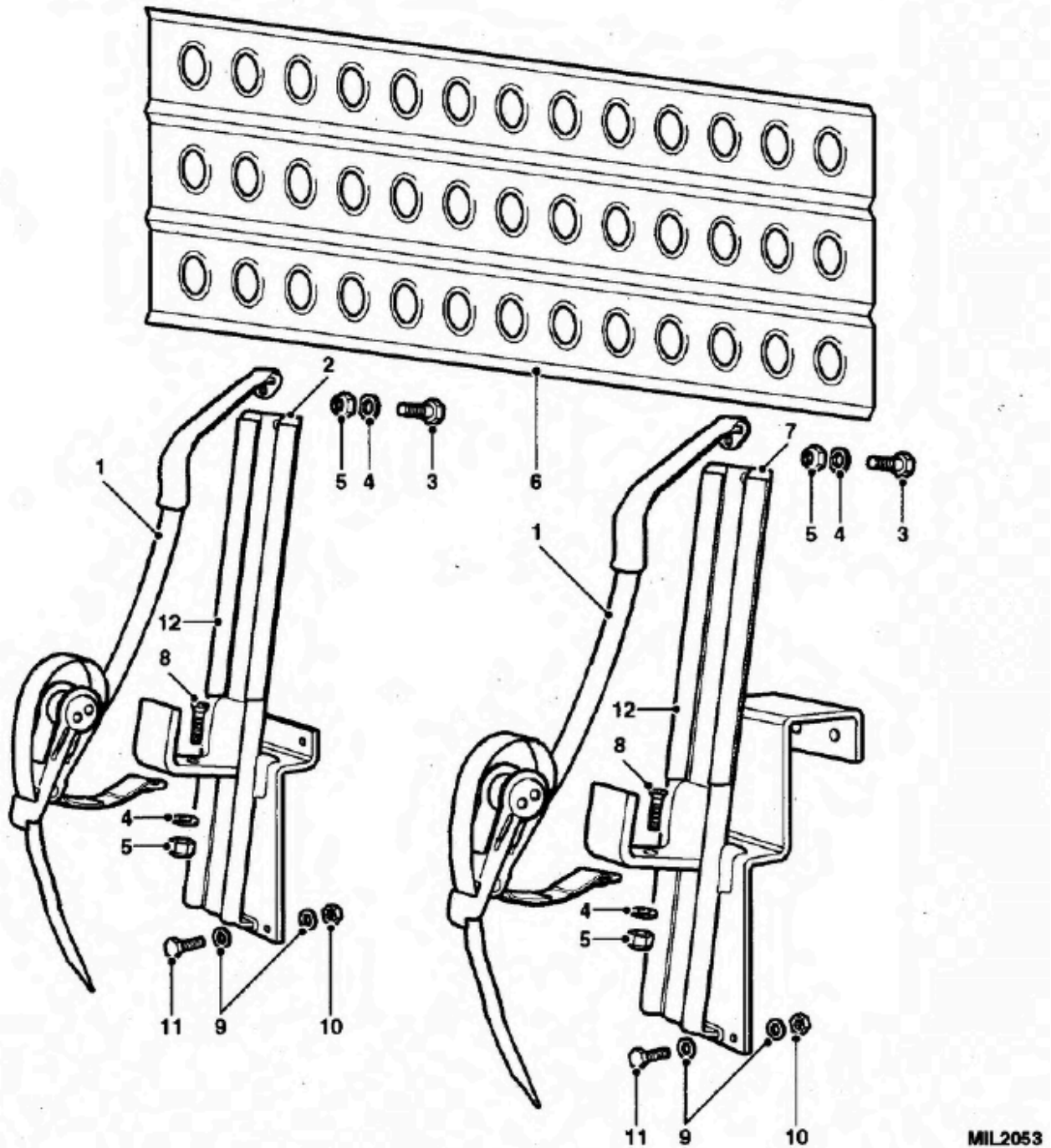
12.9 Attach the long part of the strap to the upper fixing using the M8 screws (item 3) M8 nuts (item 5) and M8 washers (item 4) and tighten.

12.10 Lift the sand channels one by one onto the brackets and secure by passing the upper strap through the corresponding holes in the top row of the sand channels and into the slot in the rear of the ratchet.

12.11 Operate the ratchets to take up the slack in the straps and secure the sand channels to the front and rear brackets.

Removal

13 To remove the sand channel brackets refer to this procedure in the reverse order.



- 1 Strap
- 2 Front Bracket
- 3 M8 Screw
- 4 M8 Washer
- 5 M8 Nyloc Nut
- 6 Sand Channel

- 7 Rear Bracket
- 8 M8 Csk Screw
- 9 M6 Washers
- 10 M6 Nut
- 11 M6 Screw
- 12 Edging Strip

Fig 2 Fitting the mounting brackets

TRUCK UTILITY LIGHT (TUL) HS
TRUCK UTILITY MEDIUM (TUM) HS
AND (TUM) AMBULANCE HS
INSTALLATION INSTRUCTION NO 2

Sponsor:
SUV IPT

Publications Agency
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Project No: CSV041

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SUBJECT

1 Fitting of a front axle guard.

INTRODUCTION**CAUTION**

VEHICLE RECORD BOOK. This instruction AESP 2320-D-128-411 must be retained with the vehicle record book.

2 This installation details the fitting of a front axle guard.

2.1 The vehicle can be converted back to its standard role when required by removing items fitted following this instruction and refitting original parts.

APPLICABILITY

3 This installation is to be fitted to WMIK vehicles only when approved by the Equipment Manager at DLO.

3.1 Unmodified stock, held at all levels of technical storage.

REASON FOR INSTALLATION

4 Code 2 - To improve operational performance.

RELATED AND ASSOCIATED PUBLICATIONS

5 Refer to AESP:

<u>Reference</u>	<u>Title</u>
2320-0-128-101	Purpose and Planning
2320-D-128-201	Operator Information
2320-D-128-711	Illustrated Parts Catalogue

ESTIMATED TIME REQUIRED

6 The estimated time required is listed in Table 1.

TABLE 1 ESTIMATED TIME REQUIRED PER EQUIPMENT

Serial (1)	Task (2)	Man-hours (3)	Tradesman employed (4)
1	Dismantling, preparation	1.5	REME tech + assistant
2	Assembly	1.5	REME tech + assistant
3	Testing	0.25	REME tech

IMPLEMENTATION PLAN

7

7.1 This modification is to be implemented by:

- Units authorised to install the Weapons Mounted Installation Kit.
- ARMY - Units authorised to carry out level 2 maintenance.

7.2 Associated modification instructions. Nil

ACTION REQUIRED BY

8 Units and establishments holding equipment.

8.1 Examine vehicle documents to see if modification is applicable.

8.2 Examine equipment or modification record plate to see if modification is embodied and where necessary Units with level 2 REME Support demand the stores required.

8.3 ARMY - On receipt of stores, request REME to modify equipment.

8.4 ARMY - Record the modification subject and AESP number in equipment documents.

9 Units authorised to carry out Unit, Field or Base repairs (levels 2, 3 or 4).

9.1 ARMY - When requested by users or during overhaul of equipments on charge without REME level 2 Support, obtain the items listed in Para X and carry out this modification.

9.2 Record completion details of modification against appropriate entry in equipment documents.

10 All recipients of the AESP. Add particulars to AESP 2320-D-128-411 Inst instr index.

STORES, TOOLS AND TEST EQUIPMENT

11 The item numbers in this Para are used as references throughout Para X.

11.1 **Stores to be demanded.**

11.1.1 The following items/installation kit(s) are to be demanded quoting this instruction as authority for demand.

Item No.	DMC	NSN/Part No.	Designation	Qty per eqpt
		30053 - 021	Front axle guard Comprising:	1
1	G1	30053-022	Hanger RH	(1)
2	G1	30053-023	Hanger LH	(1)
3	G1	30053 - 024	Guard main plate	(1)
4	G1		Socket button hd screw M12 x 25 lg ZP GRD 12.9 BS 4168	(8)
5	G1		Nyloc nut M12 ZP BS 4929	(8)

SEQUENCE OF OPERATIONS**Installation**

12 Carry out the installation as follows:

NOTE

Brackets can be fitted to either side of the vehicle.

Refer to Fig 1

12.1 Park the vehicle on a flat level surface, apply the handbrake and remove the ignition keys.

12.2 From underneath the vehicle remove the track rod protection bracket (1) mounted on the bottom of the differential pinion housing and return part to stores.

12.3 Remove the skid brackets (2) from the axle and return parts to stores.

12.4 Remove the anti-roll bar bolts (3) securing the roll bar to the ball joint assembly. Raise the roll bar (4) to allow access.

12.5 Remove the nuts on all the radius arm mounting bolts (5) and then individually remove and refit the bolts so that they face inwards towards the centre of the axle.

NOTE

Turn each bolt individually so as not to lose radius arm position and allow each bolt to protrude approximately 6-8 mm.

12.6 Install axle guard hanger (item 1) (9) on right side of axle assembly by hooking the rear of the hanger over the track rod and swing forward over and around the anti-roll bar bracket welded to the axle. Ensure front lugs face towards the centre of the axle.

12.7 Repeat for left hand side (item 2) and hook both brackets onto radius arm mounting bolts (6). Tap all bolts home.

12.8 Refit all radius arm mounting bolt nuts and tighten to 190Nm (140 lbf ft).

12.9 Pull down and re-attach anti-roll bar (7) to ball joint assembly and tighten bolts (8) to 68Nm (50 lbf ft).

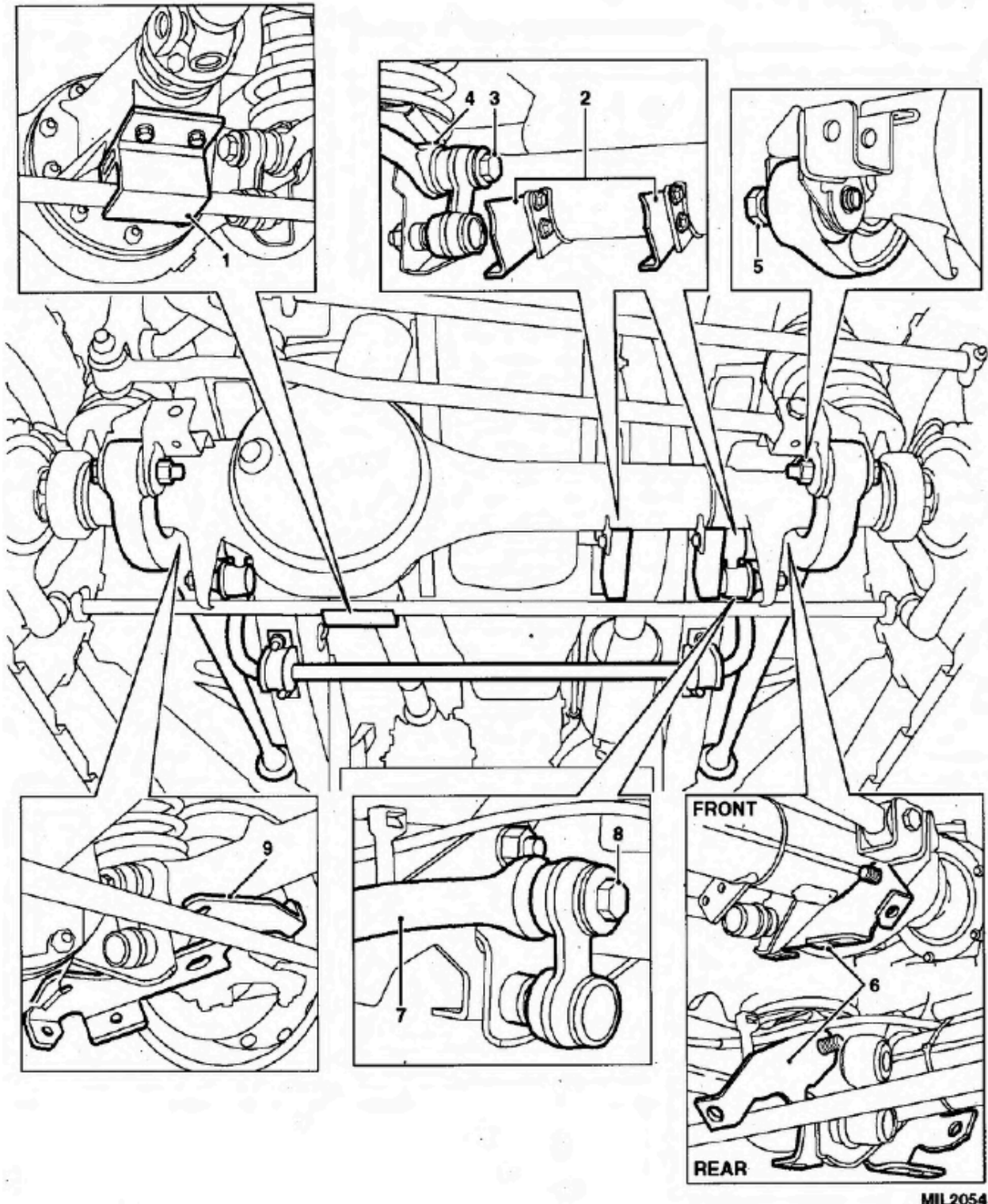


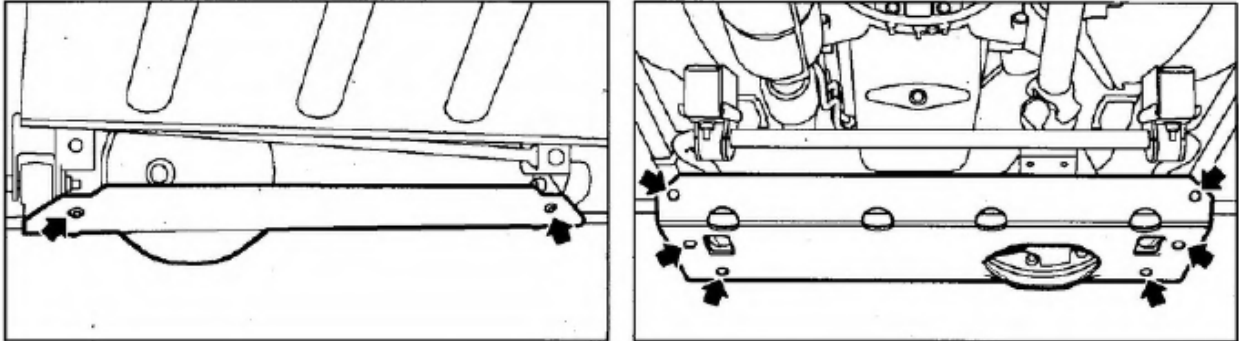
Fig 1 Fitting the front axle guard

12.10 Attach axle guard main plate (item 3) by first inserting left hand front socket button set screw (item 4) on leading edge of axle guard main plate and loosely tighten nyloc nut (item 5). Insert socket

button head screw into right hand corner of axle guard main plate trailing edge and loosely tighten nyloc nut.

12.11 Insert all remaining socket button set screws (8 in total) and tighten.

12.12 Lower ramp and remove vehicle.



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Fig 2 Fitting the front axle guard

Removal

13 To remove the front axle guard refer to this procedure in the reverse order.

TRUCK UTILITY LIGHT (TUL) HS
TRUCK UTILITY MEDIUM (TUM) HS
AND (TUM) AMBULANCE HS
INSTALLATION INSTRUCTION NO 3

Sponsor:
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CTS TD
DLO Andover
Project No: CSV041

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SUBJECT

1 Fitting of GPMG barrel clamps.

INTRODUCTION**CAUTION**

VEHICLE RECORD BOOK. This instruction AESP 2320-D-128-411 must be retained with the vehicle record book.

2 This installation details the fitting of GPMG barrel clamps.

2.1 The vehicle can be converted back to its standard role when required by removing items fitted following this instruction and refitting original parts.

APPLICABILITY

3 This installation is to be fitted to WMIK vehicles only when approved by the Equipment Manager at DLO.

3.1 Unmodified stock, held at all levels of technical storage.

REASON FOR INSTALLATION

4 Code 2 - To improve operational performance.

RELATED AND ASSOCIATED PUBLICATIONS

5 Refer to AESP:

<u>Reference</u>	<u>Title</u>
2320-0-128-101	Purpose and Planning
2320-D-128-201	Operator Information
2320-D-128-711	Illustrated Parts Catalogue

ESTIMATED TIME REQUIRED

6 The estimated time required is listed in Table 1.

TABLE 1 ESTIMATED TIME REQUIRED PER EQUIPMENT

Serial (1)	Task (2)	Man-hours (3)	Tradesman employed (4)
1	Dismantling, preparation	1.5	REME tech + assistant
2	Assembly	1.5	REME tech + assistant
3	Testing	0.25	REME tech

IMPLEMENTATION PLAN

7

7.1 This modification is to be implemented by:

- Units authorised to install the Weapons Mounted Installation Kit.
- ARMY - Units authorised to carry out level 2 maintenance.

7.2 Associated modification instructions. Nil

ACTION REQUIRED BY

8 Units and establishments holding equipment.

8.1 Examine vehicle documents to see if modification is applicable.

8.2 Examine equipment or modification record plate to see if modification is embodied and where necessary Units with level 2 REME Support demand the stores required.

8.3 ARMY - On receipt of stores, request REME to modify equipment.

8.4 ARMY - Record the modification subject and AESP number in equipment documents.

9 Units authorised to carry out Unit, Field or Base repairs (levels 2, 3 or 4).

9.1 ARMY - When requested by users or during overhaul of equipments on charge without REME level 2 Support, obtain the items listed in Para X and carry out this modification.

9.2 Record completion details of modification against appropriate entry in equipment documents.

10 All recipients of the AESP. Add particulars to AESP 2320-D-128-411 Inst instr index.

STORES, TOOLS AND TEST EQUIPMENT

11 The item numbers in this Para are used as references throughout Para X.

11.1 **Stores to be demanded.**

11.1.1 The following items/installation kit(s) are to be demanded quoting this instruction as authority for demand.

Item No.	DMC	NSN/Part No.	Designation	Qty per eqpt
			GPMG Barrel clamps Comprising:	1
1	G1	30053-003	RH Barrel clamp - small	(1)
2	G1	30053-002	LH Barrel clamp - large	(1)
3	G1		M8 nyloc nut ZP BS 4929	(4)
4	G1		M8 plain washer ZP BS 4320	(4)
5	G1		M8x20 lg soc csk hd screw ZP GRD 12.9 BS 4168	(2)
6	G1		M6 x 16 lg hex hd screw ZP BS 3692 GRD 8.8	(4)
7	G1		M6 spring washer ZP BS 4464	(4)
8	G1	30053-008	LH support bracket	(1)
9	G1	30053-007	RH support bracket	(1)
10	G1		M8 x 20 lg hex hd screw ZP BS 3692 GRD 8.8	(2)

SEQUENCE OF OPERATIONS**Installation**

12 Carry out the installation as follows:

NOTE

Brackets can be fitted to either side of the vehicle.

Refer to Fig 1

- 12.1 Park the vehicle on a flat level surface, apply the handbrake and remove the ignition keys.
- 12.2 Remove 0.5 HMG barrel clamps if fitted and return to stores.
- 12.3 Remove existing bolt from wire cutter LH pivot.
- 12.4 Offer LH support bracket (item 8) to pivot mounting and secure with existing bolt ensuring the rear of the support bracket is in contact with the underside of the hamper top assembly.
- 12.5 Ensure bracket is positioned in line and drill an 8.5mm dia hole through hamper top assembly using the LH support bracket as a guide.
- 12.6 Paint edge of hole using chassis black paint to prevent corrosion.
- 12.7 Secure rear of support bracket to hamper top frame assembly using two M8 csk screws (item 5), nyloc nuts (item 3) and washers (item 4) and tighten all fixings.

12.8 Fit barrel large clamp assembly (item 2) to support bracket and secure using two M6 screws (item 6) and washers (item 7) through underside of support bracket.

12.9 Check operation of barrel clamp.

12.10 Offer RH support bracket (item 9) to mounting plate on hamper top frame assembly and secure with two M8 screws (item 10), nyloc nuts (item 3) and washers (item 4) and tighten.

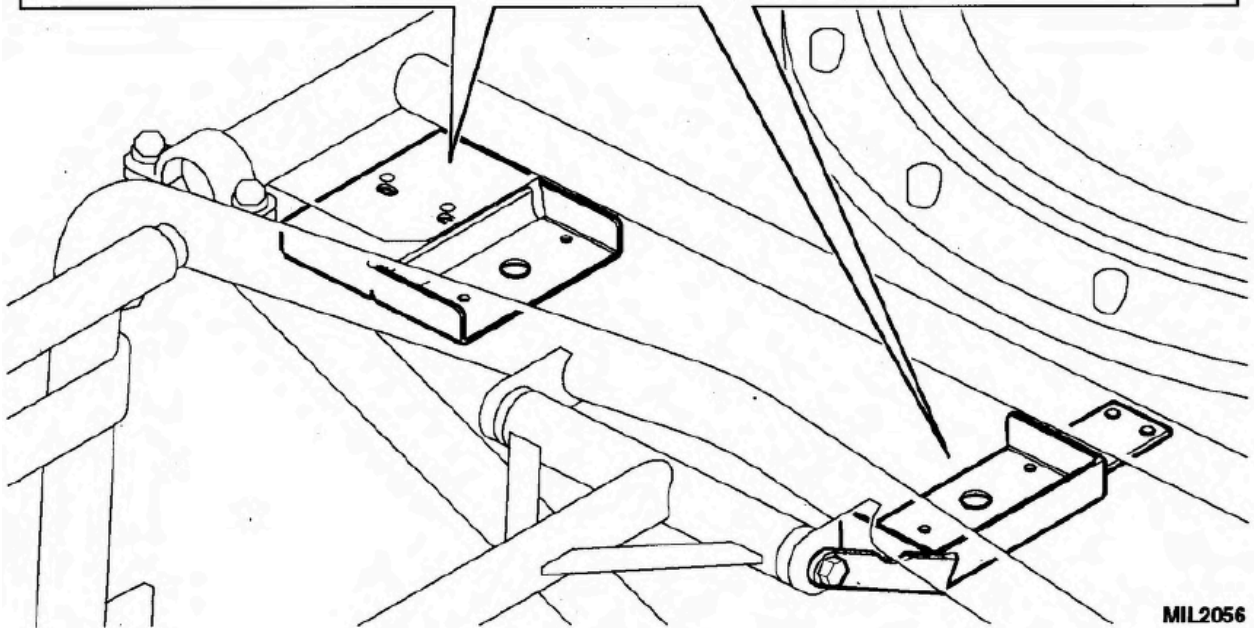
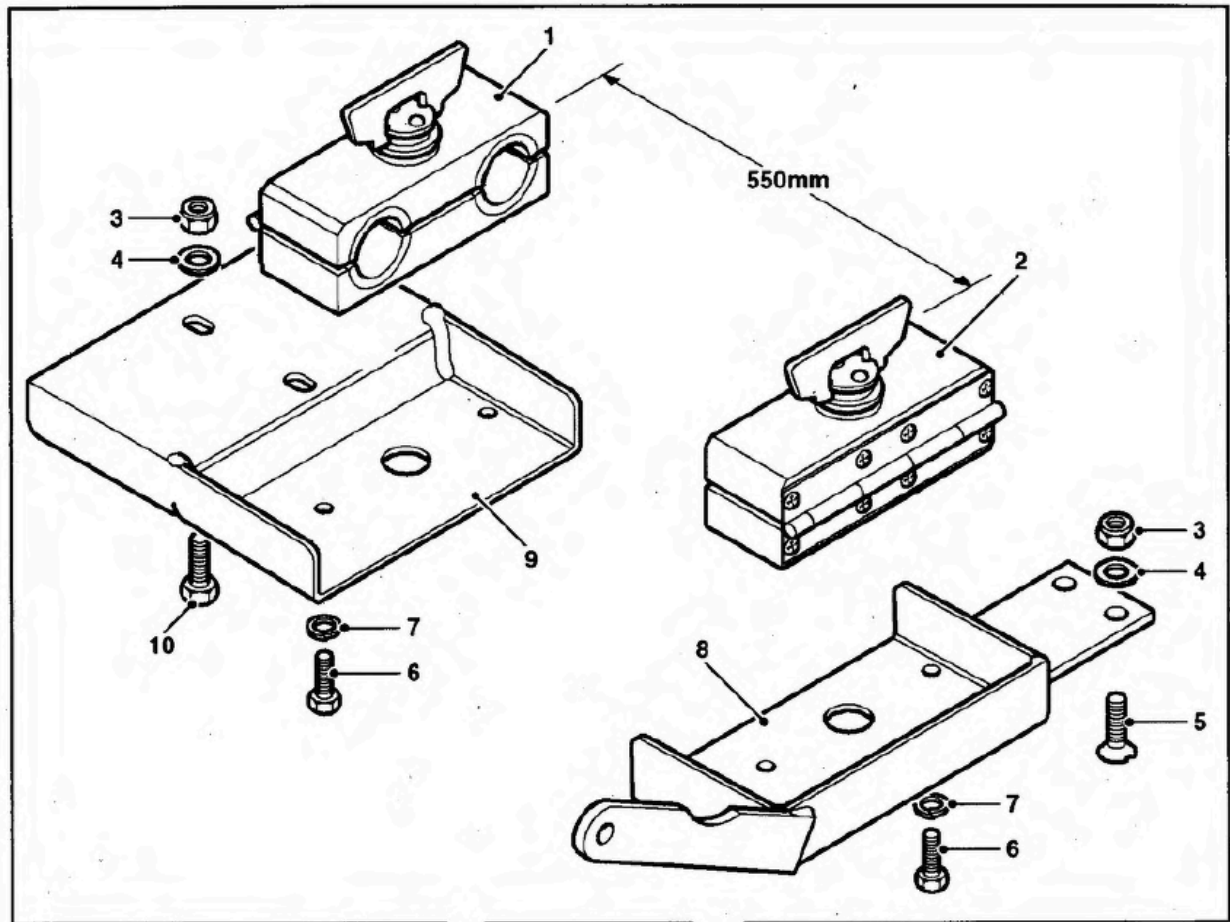
12.11 Fit small barrel clamp assembly (item 1) to bracket and secure using two M6 screws (item 6) and washers (item 7) through underside of support bracket. Position clamp so that the dimension between the inside faces of the clamps is 550mm.

12.12 Check operation of barrel clamp.

Removal

13 To remove the barrel clamps refer to this procedure in the reverse order.

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- | | | | |
|---|-----------------|----|--------------------|
| 1 | RH barrel clamp | 6 | M6 Screw |
| 2 | LH barrel clamp | 7 | M6 Washer |
| 3 | M8 Nyloc nut | 8 | LH support bracket |
| 4 | M8 Washer | 9 | RH support bracket |
| 5 | M8 Screw | 10 | M8 screw |

Fig 1 Fitting the GPMG barrel clamps

TRUCK UTILITY LIGHT (TUL) HS
TRUCK UTILITY MEDIUM (TUM) HS
AND (TUM) AMBULANCE HS
INSTALLATION INSTRUCTION NO 4

Sponsor:
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Publications Agency
CTS TD
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Project No: CSV041

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SUBJECT

- 1 Fitting of an additional Spare Wheel Carrier.

INTRODUCTION**CAUTION**

VEHICLE RECORD BOOK. This instruction AESP 2320-D-128-411 must be retained with the vehicle record book.

- 2 This installation details the fitting of GPMG barrel clamps.

2.1 The vehicle can be converted back to its standard role when required by removing items fitted following this instruction and refitting original parts.

APPLICABILITY

- 3 This installation is to be fitted to WMIK vehicles only when approved by the Equipment Manager at DLO.

3.1 Unmodified stock, held at all levels of technical storage.

REASON FOR INSTALLATION

- 4 Code 2 - To improve operational performance.

RELATED AND ASSOCIATED PUBLICATIONS

- 5 Refer to AESP:

<u>Reference</u>	<u>Title</u>
2320-0-128-101	Purpose and Planning
2320-D-128-201	Operator Information
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2	Assembly	1.5	REME tech + assistant
3	Testing	0.25	REME tech

IMPLEMENTATION PLAN

- 7

7.1 This modification is to be implemented by:

- Units authorised to install the Weapons Mounted Installation Kit.
- ARMY - Units authorised to carry out level 2 maintenance.

7.2 Associated modification instructions. Nil

ACTION REQUIRED BY

8 Units and establishments holding equipment.

8.1 Examine vehicle documents to see if modification is applicable.

8.2 Examine equipment or modification record plate to see if modification is embodied and where necessary Units with level 2 REME Support demand the stores required.

8.3 ARMY - On receipt of stores, request REME to modify equipment.

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9.1 ARMY - When requested by users or during overhaul of equipments on charge without REME level 2 Support, obtain the items listed in Para X and carry out this modification.

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STORES, TOOLS AND TEST EQUIPMENT

11 The item numbers in this Para are used as references throughout Para X.

11.1 **Stores to be demanded.**

11.1.1 The following items/installation kit(s) are to be demanded quoting this instruction as authority for demand.

Item No.	DMC	NSN/Part No.	Designation	Qty per eqpt
		30053-021	Spare Wheel Carrier Comprising:	1
1		ANR5820	Carrier	(1)
2		2540-99-665-3740 5300-144	Spacer	(4)
3			M8 x 50 Hex hd bolt ZP GRD 8.8 BS 3692	(4)
4			M8 nut Binx type ZP	(4)
5			M8 plain washer ZP BS 4320	(8)

SEQUENCE OF OPERATIONS**Installation**

12 Carry out the installation as follows:

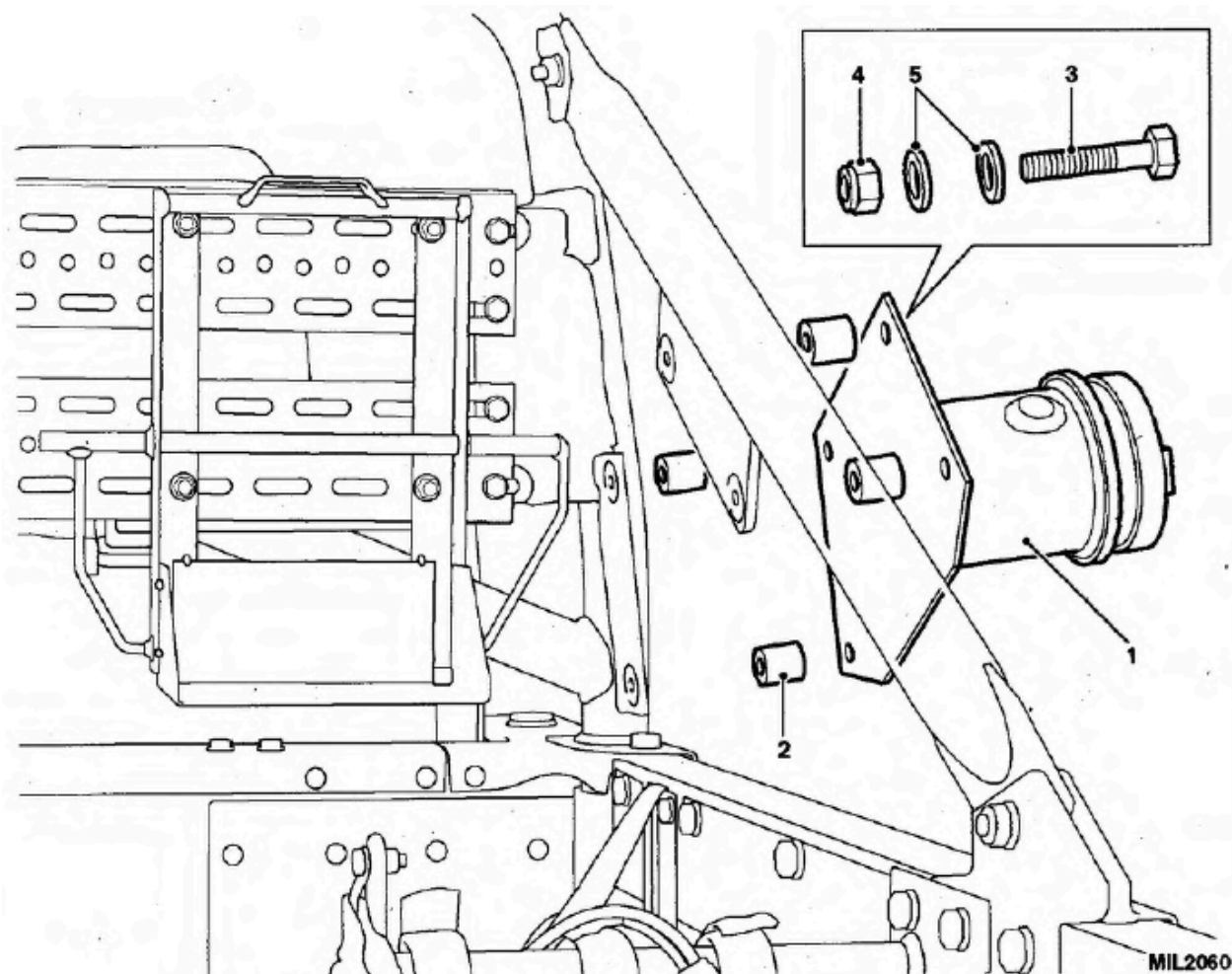
12.1 Park the vehicle on a level surface, apply the handbrake and remove the ignition keys.

12.2 Remove the Canopy (if fitted).

12.3 Locate the additional spare wheel carrier (item 1) on the roll cage mounting brackets and loosely secure with the fixings (items 3, 4 and 5). Ensure the spacers (item 2) are located in between the mounting brackets and the carrier.

12.4 Tighten the fixings.

12.5 Mount spare wheel onto carrier and secure. (Refer to Cat 201 Chap 4-1).



- | | | | |
|---|---------------------|---|--------|
| 1 | Spare Wheel Carrier | 4 | Nut |
| 2 | Spacer | 5 | Washer |
| 3 | Bolt | | |

Fig 1 Fitting the additional spare wheel carrier

Removal

13 To remove the front axle guard refer to this procedure in the reverse order.

FOR DEMONSTRATION PURPOSES ONLY

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TRUCK UTILITY LIGHT (TUL) HS
TRUCK UTILITY MEDIUM (TUM) HS
DEFENDER
AND RWMIK
INSTALLATION INSTRUCTION NO 5

Sponsor:
SUV IPT

Publications Agency
CTS TD
DLO Andover
Project No: CSV041

AMENDMENT RECORD

Amdt No.	Incorporated by (Signature)	Date	Amdt No.	Incorporated by (Signature)	Date
1			4		
2			5		
3			6		

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(continued)

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FOR DEMONSTRATION PURPOSES ONLY

SUBJECT

1 Installation of the 12/24 volt sockets on the Truck Utility Light (TUL), Truck Utility Medium (TUM), Defender and RWMIK.

INTRODUCTION

2 This instruction details the installation of 12/24 volt sockets to the Truck Utility Light (TUL), Truck Utility Medium (TUM), Defender and RWMIK.

2.1 The introduction of additional electrical equipment to the vehicle has raised the need for external power supplies. This kit provides one 12v (DIN type) and one 24v (cigar lighter type) power socket located on the centre instrument panel. The 12v socket being powered through a suppressed DC/DC converter is switched to prevent battery drain. This should be switched 'off' when not in use. The kit is supplied with 2 universal plugs (with adaptors) allowing use of both sockets. Both supplies are fitted with in line fuse protection.

2.2 Limitations on use of equipment. Nil

APPLICABILITY

3 Truck Utility Light (TUL), Truck Utility Medium (TUM), Defender and WMIK as and when nominated by the appropriate authority.

3.1 Unmodified stock, held at all levels of technical storage.

REASON FOR INSTALLATION

4 To equip Truck Utility Light (TUL), Truck Utility Medium (TUM), Defender and WMIK with 12/24 volt sockets. The equipment to be installed is as follows:

4.1 Instrument panel with socket outlets and on/off switch for 12 volt supply.

4.2 DC/DC converter with harness and clamp.

RELATED AND ASSOCIATED PUBLICATIONS

5 Refer to AESP:

<u>Reference</u>	<u>Title</u>
2320-D-128-201	Operator Information
2320-D-128-302	Technical Descriptions
2320-D-128-522	Repair Instructions
2320-D-128-523	Repair Instructions
2320-D-128-601	Maintenance Schedules
2320-D-128-811	Modification instructions

ESTIMATED TIME REQUIRED

6 The estimated time required is listed in Table 1.

TABLE 1 ESTIMATED TIME REQUIRED PER EQUIPMENT

Serial (1)	Task (2)	Man-hours (3)	Tradesman employed (4)
1	Dismantling, preparation	1.5	REME tech + assistant
2	Assembly	1.5	REME tech + assistant
3	Testing	0.25	REME tech

IMPLEMENTATION PLAN

7

7.1 This modification is to be implemented by:

- Units authorised to install the 12/24V sockets.
- ARMY - Units authorised to carry out level 3 maintenance.

7.2 Associated modification instructions. Nil

ACTION REQUIRED BY

8 Units and establishments holding equipment.

8.1 Examine vehicle documents to see if modification is applicable.

8.2 Examine equipment or modification record plate to see if modification is embodied and where necessary Units with level 2 REME Support demand the stores required.

8.3 ARMY - On receipt of stores, request REME to modify equipment.

8.4 ARMY - Record the modification subject and AESP number in equipment documents.

9 Units authorised to carry out Unit, Field or Base repairs (levels 2, 3 or 4).

9.1 ARMY - When requested by users or during overhaul of equipments on charge without REME level 2 Support, obtain the items listed in Para X and carry out this modification.

9.2 Record completion details of modification against appropriate entry in equipment documents.

10 All recipients of the AESP. Add particulars to AESP 2320-D-128-411 Inst instr index.

STORES, TOOLS AND TEST EQUIPMENT

Stores

11 Normally, individual items are not issued separately but may be demanded to make good kit deficiencies. Such demands are to quote full part numbers and designations as shown in this installation instruction Para X.X. A brief explanation of circumstances necessitating the demand is to be attached.

WARNING

HEALTH AND SAFETY. MATERIALS USED IN THE CONVERSION ARE REQUIRED TO MEET OBLIGATIONS INTRODUCED UNDER THE CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH REGULATIONS 1994 (COSHH). SAFETY INFORMATION RELATING TO MATERIALS USED IS CONTAINED IN JSP (F) 395-CATALOGUE OF HAZARDOUS STORES.

11.1 Stores to be demanded.

11.1.1 The following items/installation kit(s) are to be demanded quoting this instruction as authority for demand.

Item No.	DMC	NSN/Part No.	Designation	Qty per eqpt
	7XD	5999-99-213-1219	12/24V socket outlets kit: Comprising:	1
1			Instrument panel with socket outlets and on/off switch for (1) 12 volt supply.	(1)
2	7XD	5935-99-995-5732	Panel DC socket outlets	(1)
3	7XD	6130-99-753-0108	DC/DC converter with wiring harness attached	(1)
4	7XD	5340-99-989-1249	Clamp DC/DC converter	(1)
5	7XD	5935-99-593-3110	Socket 24v (cigar lighter style)	(1)
6	7XD	5935-99-335-7363	Socket 12v (DIN style)	(1)
7	7XD	5920-99-993-5105	Fuse holder (in-line blade type)	(2)
8	7XD	5920-99-759-5251	Fuse 7.5 amp	(1)
9	7XD	5920-99-759-5252	Fuse 10 amp Rocker switch	(1)
10	7XD	5935-99-134-8277	Universal plug 16 amp	(2)

SEQUENCE OF OPERATIONS

NOTES

- (1) The main numbers of Para X are used as references throughout this instruction.
- (2) The installation kit fits both LH and RH drive vehicles.

DETAILED INSTRUCTIONS

WARNING

HEALTH AND SAFETY. MATERIALS USED IN THE CONVERSION ARE REQUIRED TO MEET OBLIGATIONS INTRODUCED UNDER THE CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH REGULATIONS 1994 (COSHH). SAFETY INFORMATION RELATING TO MATERIALS USED IS CONTAINED IN JSP (F) 395-CATALOGUE OF HAZARDOUS STORES.

CAUTION

If difficulties are encountered, the Unit (MTO) should be consulted.

PREPARATION

12 Carry out the following preliminary tasks.

WARNINGS

(1) **FLAMMABLE SUBSTANCES. NO SMOKING OR NAKED FLAMES. LEAD ACID BATTERIES PRODUCE POTENTIALLY EXPLOSIVE GASES.**

(2) **HEALTH AND SAFETY. BATTERIES CONTAIN CORROSIVE ACID ELECTROLYTE. WEAR PROTECTIVE GLOVES AND GOGGLES WHEN HANDLING BATTERIES.**

(3) **HEALTH AND SAFETY. ENSURE APPROPRIATE CLOTHING AND GOGGLES ARE WORN WHEN DRILLING.**

Vehicle and radio batteries.

13 Disconnect the vehicle batteries (refer to Cat 522, Chap 13-1) and on Fitted For Radio (FFR) vehicles the radio batteries (refer to Chap 13-2).

INSTALLATION

14 Remove centre light switch panel to provide access.

15 Disconnect the wires from the inspection lamp sockets on the light switch panel. These wires will be connected to the new wiring harness later (see para XX).

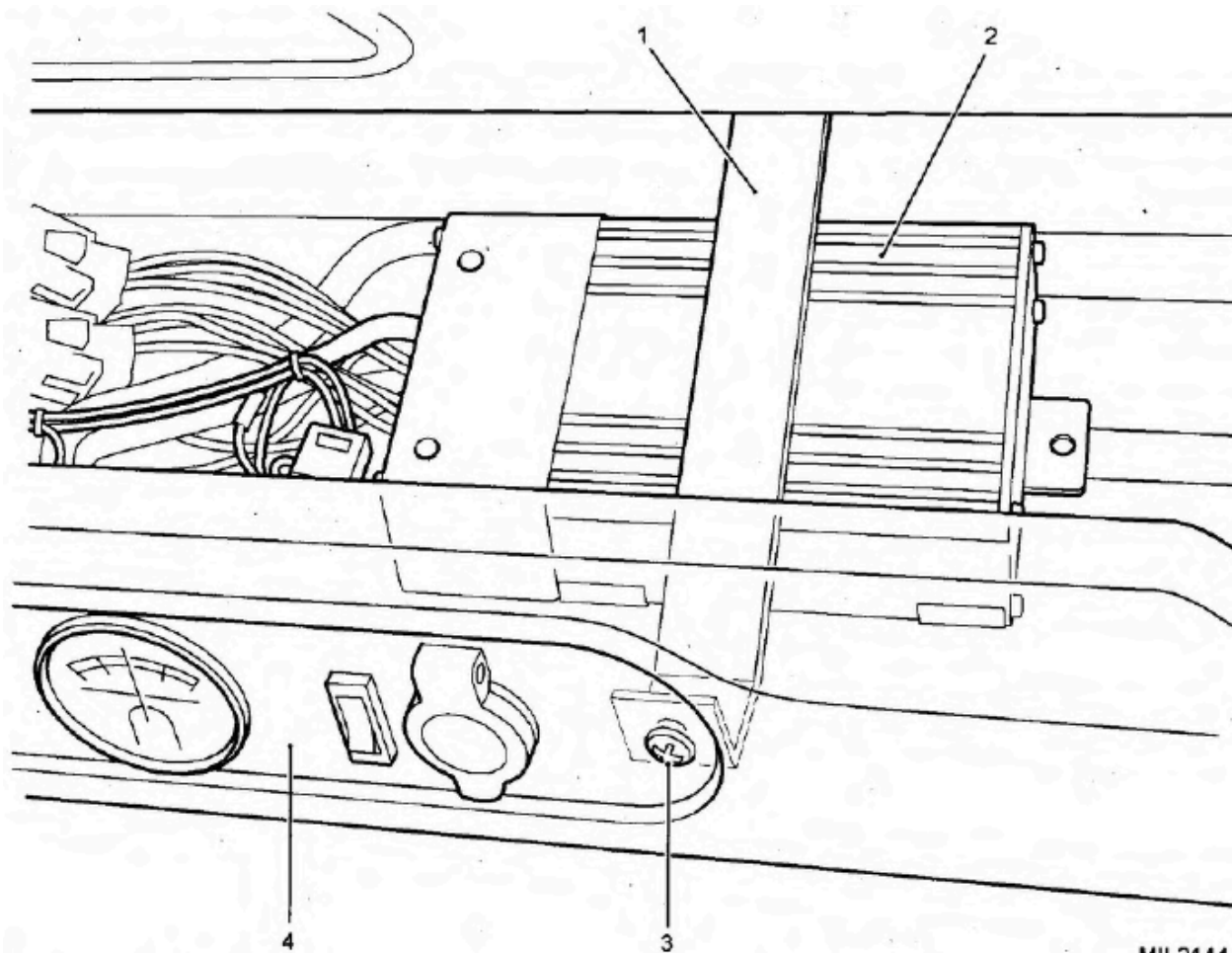
16 Remove right hand side panel.

17 Remove centre instrument panel and ammeter (refer to 522, Chap 13-2).

18 Refit ammeter to new front panel with 12V socket and switch to right hand side.

19 Fit new panel in position (2) and loosely locate left hand side fixing screw and nut.

20 Position DC/DC converter (3) as shown so that cable end of unit is flush with the right hand edge of the cable entry hole at the rear of the dash panel and rubber pads are on underside.



- | | | | |
|---|----------------|---|-------------------------|
| 1 | Clamp | 3 | Screw |
| 2 | DC/DC Inverter | 4 | Panel DC socket outlets |

Fig 1 DC/DC converter installation

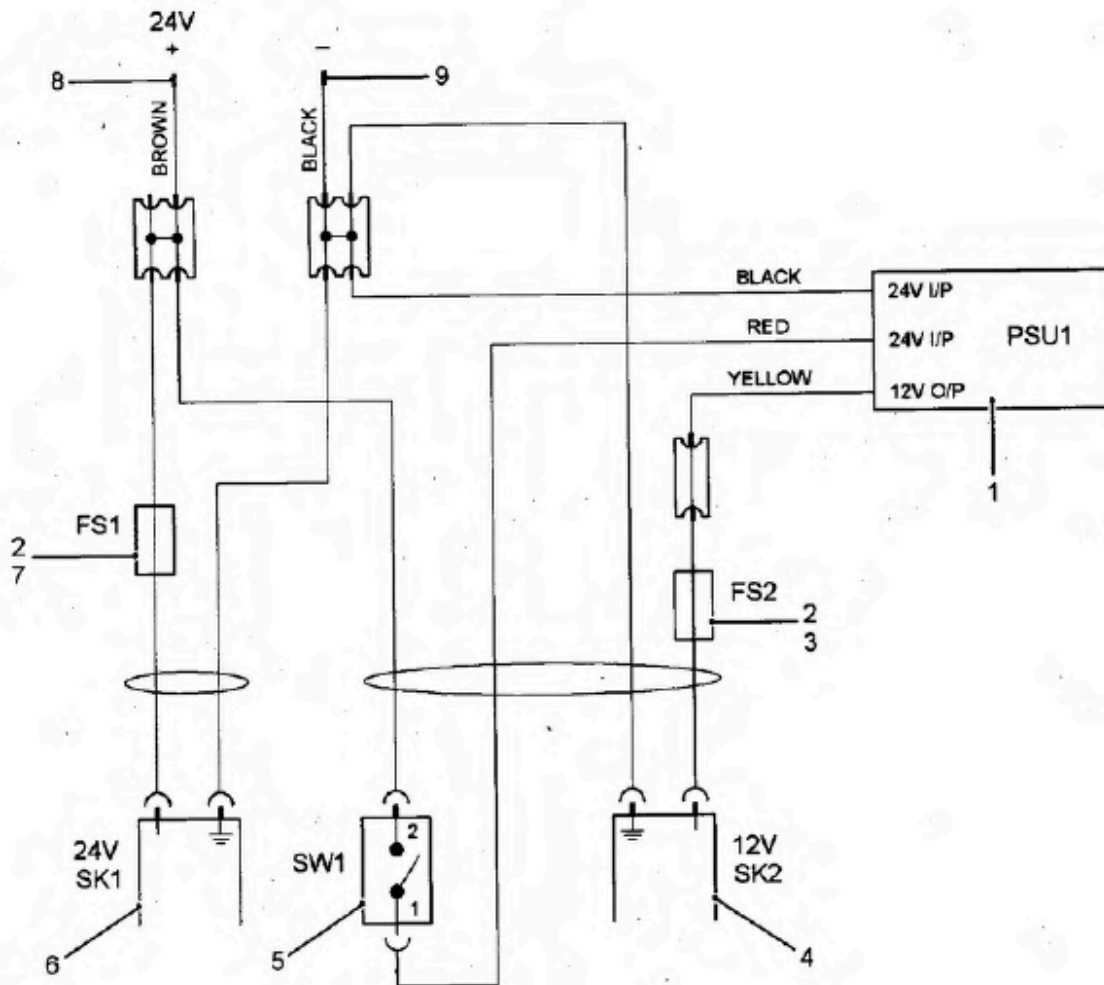
21 Fit clamp (4 by locating the un-drilled end under bend in rear panel of dash and inline with right hand instrument panel fixing screw (Fig 1 (3)), with the clamp pressed against the DC/DC converter fit the right hand side instrument panel screw ensuring it passes through the clamp, before tightening fixing screws ensure clamp is pressed firmly against DC/DC converter to secure it in place.

22 Connect harness to the wires removed from the inspection lamp sockets adhering to the colour code for correct connection ie. brown to brown and black to black. Ensure the wiring is neatly installed with inline fuses easily visible.

23 Refit side panel and light switch panel ensuring no wires are trapped.

24 Reconnect battery supply and check for output at each socket.

25 Two universal plugs are provided for user connection, these have a red removable adaptor that prevents connection to the wrong socket and has to be removed for connection to the 12V socket. These should be wired with the centre pin to positive.



MIL2145

- | | | | |
|---|---------------------|---|------------------------|
| 1 | DC/DC Inverter | 6 | 24V socket |
| 2 | Fuse holder | 7 | Fuse 7.5 Amp |
| 3 | Fuse 10 Amp | 8 | Connector - Brown wire |
| 4 | 12V socket | 9 | Connector - Black wire |
| 5 | Switch - 12V socket | | |

Fig 2 DC/DC converter installation

TESTING AFTER EMBODIMENT

26 All circuitry to be tested to Def-Stan 61-5 part 3 for security of system.

EFFECT ON WEIGHT

27 Negligible.

PUBLICATION AMENDMENTS**NOTE**

Necessary amendment will be issued separately.