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**TRAILER, CARGO, 3/4 TONNE,
WIDE TRACK, 2 WHEELED,
FV 2381, MK 3**

REPRINTED INCORPORATING AMDTS Nos 1 to 3
REPAIR INSTRUCTIONS

This publication contains information covering the requirements
of Cat 5.2 at levels 2 and 3

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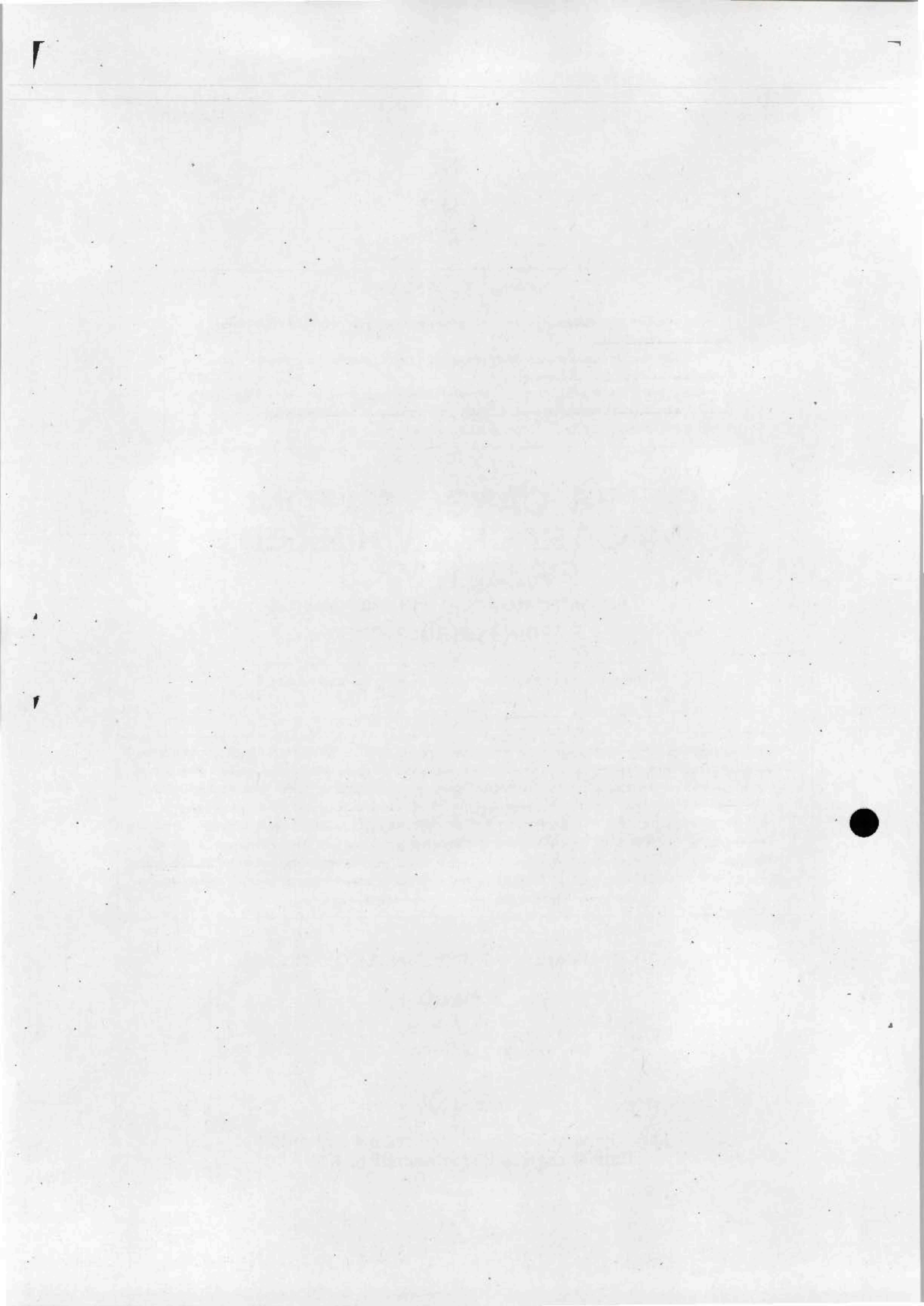
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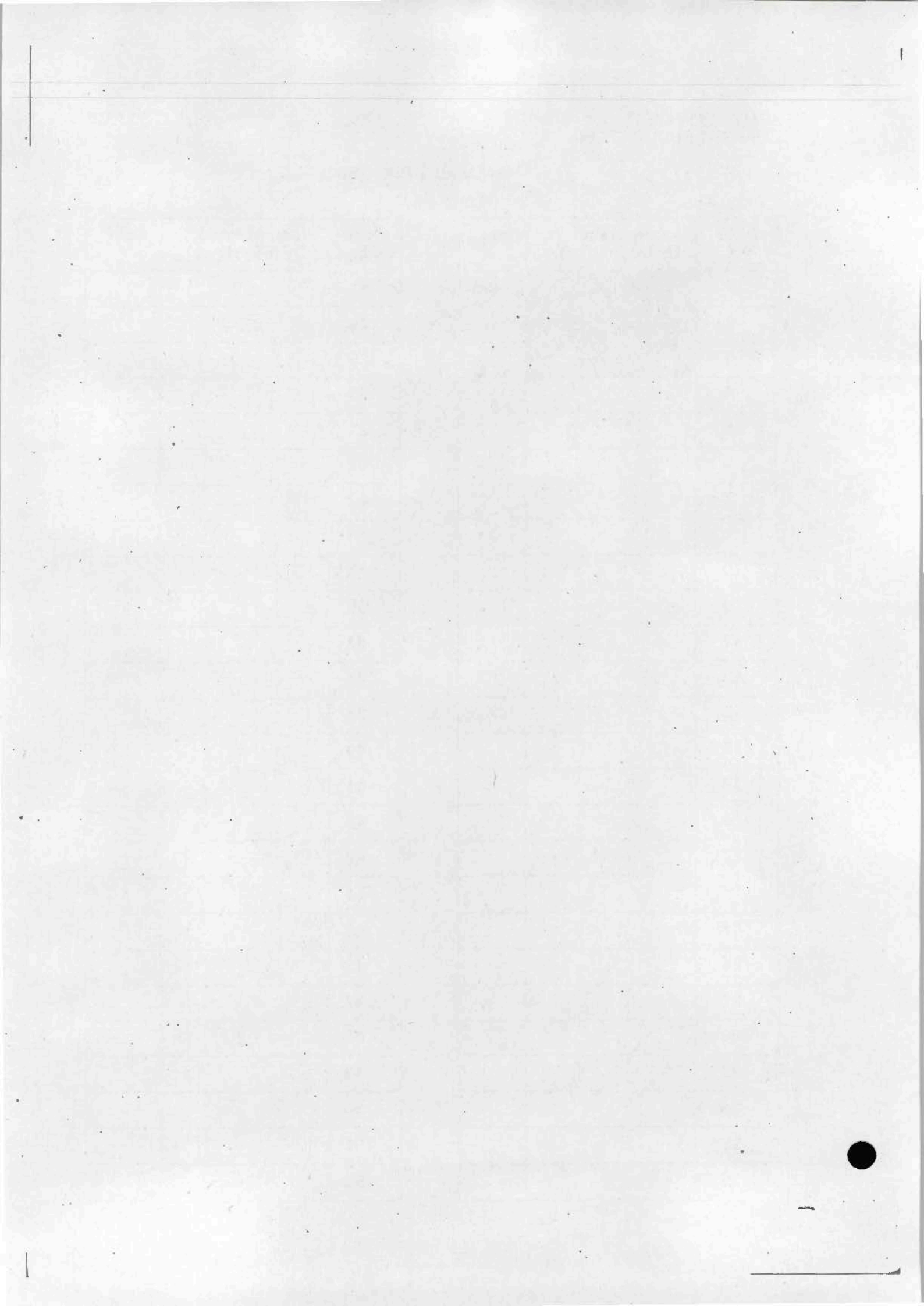
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AMENDMENT RECORD

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REPAIR INSTRUCTIONS

- Chapter 1 Unit repairs
- Chapter 2 Field repairs

EQUIPMENT APPLICABILITY

Serial (1)	Equipment Asset Code (2)	Designation (3)	Contract Numbers (4)
1	2853-3100	Trailer, 3/4 Tonne, 2 Wheeled, Cargo GS	LV1A/155
2	2853-3101	Trailer, 3/4 Tonne, 2 Wheeled, Cargo GS	LV1A/55
3	2853-3103	Trailer, 3/4 Tonne, 2 Wheel, GS	LV1A/231

PREFACE

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File ref: D/DGES(A)551/6/2

Publications Approving Authority:
Vehs & Wpns Br REME
Project No. ES52c4009(1B)
File Ref. ES52c4009(BVP)

INTRODUCTION

1 Service users should forward any comments concerning this publication through the channels prescribed in AESP 0100-P-011-013. An AESP Form 10 is provided at the end of the publication; it should be photocopied and used for forwarding comments on this AESP.

2 The subject matter of this publication may be affected by Defence Council Instructions (DCIs), Standard Operating Procedures (SOPs) or by local regulations. When any such Instruction, Order or regulation contradicts any portion of this publication, it is to be taken as the overriding Authority.

RELATED AND ASSOCIATED PUBLICATIONS

Related publications

3 The Octad for the subject equipment consists of the publications shown below. All references are prefixed with the first eight digits of this publication. The availability of the publication can be checked by reference to the relevant Group Index (see AESP 0100-A-001-013).

Publication Title: <u>Trailer, cargo, 3/4 tonne, wide track, 2 wheeled, FV 2381, Mk 3</u>																		
CATEGORIES AND INFORMATION LEVELS																		
Category	1		2		3		4		5				6		7		8	
Level	0	0	1	2	0	1	2	1	2	3	4	0	1	1	2	1	2	
1 USER/OPERATOR	101	201	*	*	201	*	*	*	201	*	*	601	*	711	*	*	*	
2 UNIT MAINTENANCE	*	*	*	*	201	*	*	*	522	*	*	*	*	*	*	*	*	
3 FIELD MAINTENANCE	*	*	*	*	*	*	*	*	522	*	*	*	*	*	*	*	*	
4 BASE MAINTENANCE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	

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| 1.0 Purpose and Planning Information | 5.2 Repair Instructions |
| 2.0 Operating Information | 5.3 Inspection Standards |
| 2.1 Special to Arms | 5.4 Calibration Standards |
| 2.2 Training Aids | 6.0 Maintenance Schedules (RAF) |
| 3.0 Technical Description | 7.1 Illustrated Parts Catalogue |
| 4.1 Installation Instructions | 7.2 Commercial Parts List |
| 4.2 Preparation for Special Environments | 8.1 Modification Instructions |
| 5.1 Failure Diagnosis | 8.2 General Instructions |

* Not published...

Associated publications

4	<u>Reference</u>	<u>Title</u>
	CES 31998	Complete Equipment Schedule
	EMER T & M A 028, Chap 060	Inspection and Examination of Ball and Roller Bearings

LIST OF ABBREVIATIONS

AESP	Army Equipment Support Publication
Ah	Ampere Hour
CES	Complete Equipment Schedule
dB	Decibel
dc	Direct Current
DCIs	Defence Council Instructions
EMER	Electrical Mechanical Engineering Regulation
GIE	Government Issued Equipment
LCT	Landing Craft Tank
LST	Landing Ship Tank
NATO	North Atlantic Treaty Organisation
NSN	Nato Stock Number
SOPs	Standard Operating Procedures
UK	United Kingdom

WARNINGS

WARNINGS

(1) WHEN PARKING THE TRAILER, ENSURE THAT THE PARKING AREA IS AS FLAT AS POSSIBLE, THAT THE HANDBRAKE IS APPLIED FIRMLY, THAT THE REAR SUPPORT LEG CLAMPING BOLTS ARE TIGHT, THE LOCKING PIN AND PLATE ARE CORRECTLY ENGAGED AND THAT THE JOCKEY WHEEL IS CLAMPED FIRMLY BEFORE BEING WOUND DOWN.

(2) PERSONNEL HAZARD. ENSURE THAT THE REAR SUPPORT LEGS ARE LOWERED AND SUPPORTING THE WEIGHT OF THE TRAILER BEFORE COUPLING TO OR UNCOUPLING FROM A PRIME MOVER.

(3) PERSONNEL HAZARD. BEFORE DRIVING THE PRIME MOVER WITH TRAILER ATTACHED, ENSURE THAT THE JOCKEY WHEEL AND REAR SUPPORT LEGS ARE SECURED IN THEIR STOWED POSITION.

(4) TRAILER LOADING. ENSURE THAT THE TRAILER PAYLOAD IS CORRECTLY DISTRIBUTED AND THAT THE DRAWBAR PREPONDERANCE WEIGHT IS STRICTLY OBSERVED.

(5) OBSERVE ALL APPROPRIATE SAFETY INSTRUCTIONS CONCERNING JACKING AND SCOTCHING WHEN CHANGING WHEELS OR EXAMINING BRAKE PADS.

(6) MECHANICAL FITNESS. IF THE OPERATOR/DRIVER IS IN ANY DOUBT AS TO THE MECHANICAL FITNESS OF A TRAILER IT MUST NOT BE USED UNTIL ADVICE HAS BEEN SOUGHT.

(7) BERYLLIUM/BERYLLIA. THE EQUIPMENT COVERED BY THIS PUBLICATION CONTAINS COMPONENTS INCORPORATING THE HIGHLY TOXIC MATERIAL BERYLLIUM AND/OR ITS OXIDE BERYLLIA. BERYLLIUM MATERIALS ARE ABSORBED INTO THE BODY TISSUES:

1 THROUGH THE SKIN, MOUTH OR A WOUND.

2 BY THE INHALATION OF DUST CREATED BY THE BREAKAGE OF BERYLLIA.

3 BY THE INHALATION OF TOXIC FUMES FROM BERYLLIUM/BERYLLIA INVOLVED IN A FIRE.

FURTHER INFORMATION ON THE HANDLING OF BERYLLIUM/BERYLLIA IS GIVEN IN EMER MANAGEMENT S 261.

(8) ELECTRICAL HAZARD. BEFORE COMMENCING WORK ON THE TRAILER, ENSURE THAT THE TRAILER ELECTRICAL PLUG IS DISCONNECTED FROM THE PRIME MOVER.

(9) TOXIN. CADMIUM IS USED IN SOME TRAILER COMPONENTS. CADMIUM DOES NOT PRESENT A HAZARD IN NORMAL USE, BUT MAY DO SO IF:

1 DUST IS RELEASED AS A RESULT OF DAMAGE, GRINDING, DRILLING OR FILING.

(continued)

WARNINGS (continued)

2 FUMES ARE RELEASED AS A RESULT OF EXCESSIVE HEATING, WELDING, OR SIMILAR OPERATIONS.

SAFETY PRECAUTIONS TO BE OBSERVED WHEN HANDLING THIS MATERIAL ARE DETAILED IN AP 100B-10 ORDER 1804.

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TO: Vehicles & Weapons Branch REME
Chobham Lane
Chertsey
Surrey KT16 0EE

FROM: (Sender's name and address)

Sender's Reference

Tel No

Date

Trailer, cargo, 3/4 tonne, wide track, 2 wheeled, FV 2381, Mk 3.

COMMENT

Signed

TO:
.....
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.....

FROM: Vehicles & Weapons
Branch REME
Chobham Lane
Chertsey
Surrey KT16 0EE

Thank you for commenting on AESP 2330-C-500-522

- * Action is being taken to:
 - * (i) Revise the AESP
 - * (ii) Amend the AESP

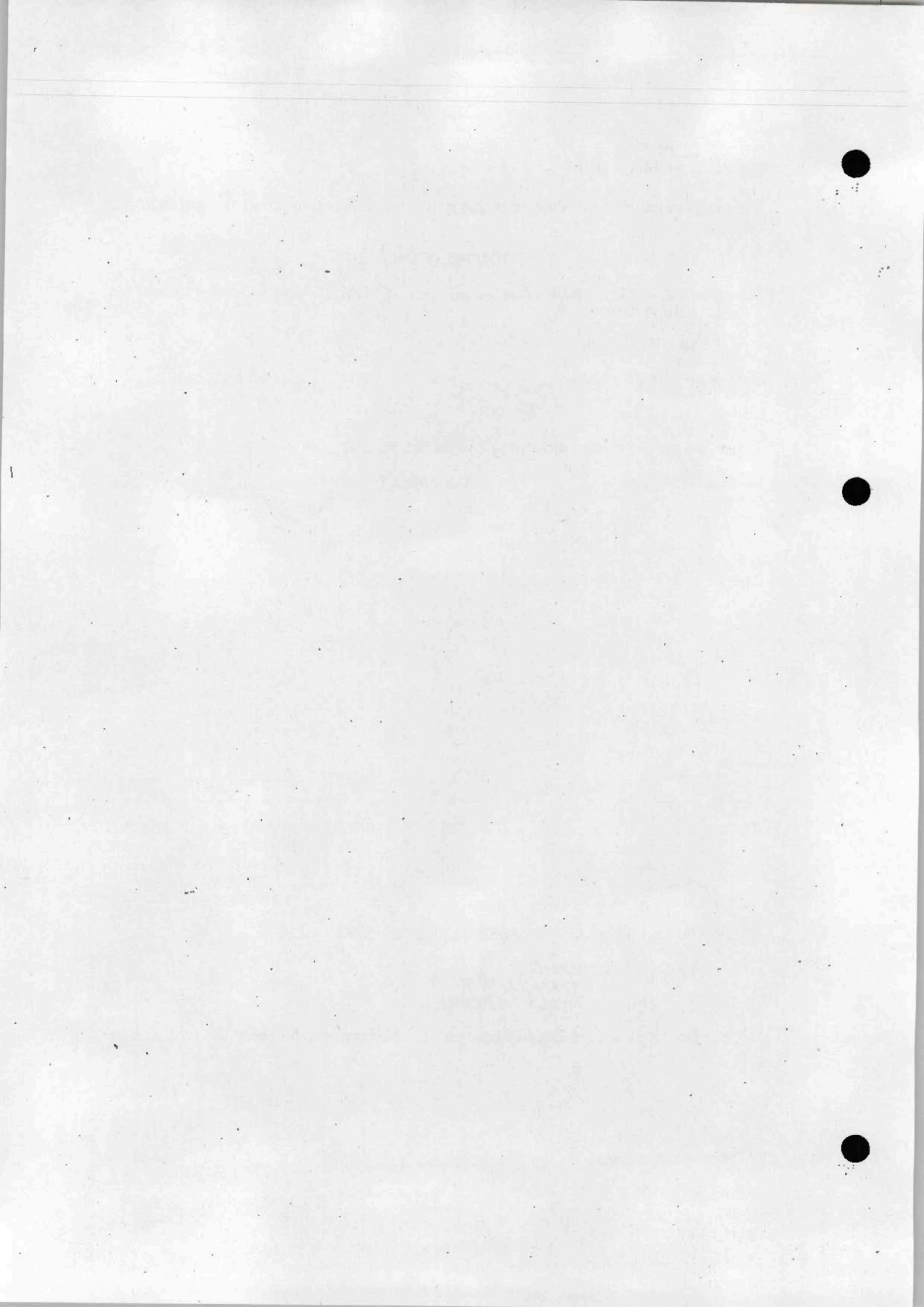
* No action is considered necessary for the following reasons:

* Delete as necessary

Signed

AESP Form 10

Date



CHAPTER 1
UNIT REPAIRS
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B03	3	Limitations
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Annex

E02	A	Electrical equipment, NSN 2330-99-893-8609 (Reynolds Boughton trailers)
E09	B	Electrical equipment, NSN 2330-99-893-8610 (Viking trailers)

INTRODUCTION

1 This chapter of AESP 2330-C-500-522 deals with unit repairs to the trailer, cargo, 3/4 tonne, wide track, 2 wheeled, FV 2381 Mk 3.

SCOPE OF UNIT REPAIRS

2 Most trailer assemblies and components on the trailer can be adjusted, repaired or replaced at unit level. The one action beyond unit scope is replacement of the axle assembly.

LIMITATIONS

3 This publication includes sufficient information to enable a Unit Vehicle Mechanic to adjust, repair or exchange a failed trailer assembly or component to restore the trailer to full operational use. Where replacement of an assembly is the repair instruction, no attempt should be made to dismantle the item further.

TOOLS

4 The tools required to perform repairs authorised at unit level, are contained in the kits listed in Table 1.

TABLE 1 TOOL KITS

SER (1)	NSN (2)	DESIGNATION (3)
1	F1 5180 - 99 - 763 - 5945	Tool Kit, Vehicle Mechanic

5 Special tools, required for brake caliper disassembly and assembly, are given in Table 2.

TABLE 2 SPECIAL TOOLS

SER (1)	NSN (2)	DESIGNATION (3)
1	TBA	Ford tool 12-006
2	TBA	Ford tool 12-007

6 Table 3 lists components and assemblies which are adjustable, repairable and exchange replaceable at unit level.

TABLE 3 UNIT ADJUSTABLE, REPAIRABLE AND EXCHANGE COMPONENTS AND ASSEMBLIES

SER (1)	ITEM (2)	ADJUSTABLE (A), REPAIRABLE (R), EXCHANGE (E) (3)
1	Hubs and wheels	A, R, E
2	Suspension assemblies and components	R, E
3	Hydraulic brake system	A, R, E
4	Handbrake assembly	A, R, E
5	Overrun damper assembly	E
6	Jockey wheel assembly	E
7	Rear steady legs	E
8	Rear towing assembly	E
9	Electrical system lights and reflectors	R, E

ADJUSTMENT, REPAIR, EXCHANGE PROCEDURES

General

7 Refer to AESPs 2330-C-500-101, 201 and 711 for assistance with the following procedures. The AESPs give information relating to routine maintenance, part numbers and exploded parts diagrams.

WARNING

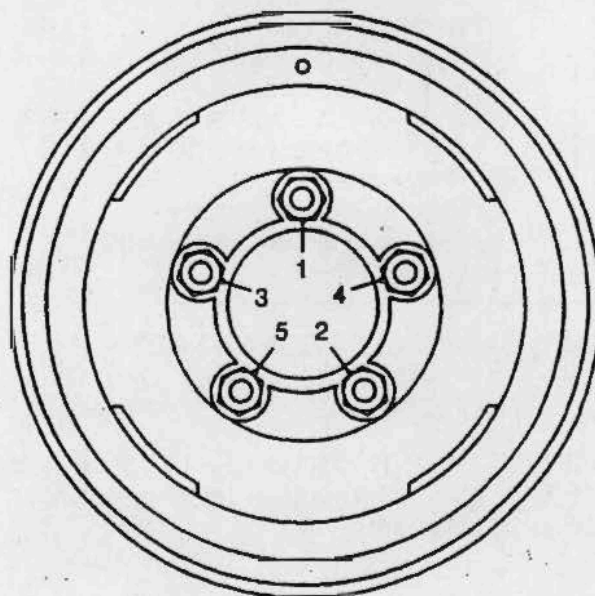
REFERENCE SHOULD BE MADE TO THE WARNINGS REGARDING TOWING, PARKING, SCOTCHING AND JACKING UP OF THE TRAILER GIVEN IN THE PRELIMINARY PAGES OF THIS PUBLICATION PRIOR TO ANY WORK BEING CARRIED OUT.

Hubs and wheelsTo remove a road wheel

- 8 Apply the trailer handbrake and scotch the road wheel on the opposite side of the trailer.
- 9 Place a jack under the road spring clamping plate.
- 10 Before raising the wheel, slacken the wheel securing nuts.
- 11 Raise the wheel clear of the ground, remove the five securing nuts and wheel from the hub, taking care not to damage the threads.

To refit a road wheel

- 12 Position the wheel as near to its location as possible and lift carefully onto the studs, taking care not to damage the threads.
- 13 Fit the wheel nuts and tighten to a torque load of 102 to 115 Nm (75 to 85 lbf ft), in the sequence shown in Fig 1.



80133/06

Fig 1 Wheel nut tightening sequence

14 Lower the wheel to the ground and remove the jack. Test the tyre pressure and adjust, if necessary, to 2.46 bar (35 lbf/in²).

Check and adjust hub bearing play

15 To check for hub bearing play.

15.1 Raise the road wheel as described in Paras 8 to 11. Release the handbrake.

15.2 Spin the road wheel to check for freedom of rotation.

15.3 Check for bearing play by grasping the wheel top and bottom and attempt to 'rock' in and out.

15.4 The wheel must be free to rotate and have slight detectable play in the bearings. If the wheel does not rotate freely or the bearings have excessive play in them, further checks are necessary.

16 Check that the brake pads are not binding on the disc, thereby causing the wheel to be stiff in rotation. If the brakes are causing stiffness, refer to the hydraulic brake section for further checks.

17 If the brakes are not binding, or excessive play is evident in the bearings, proceed as follows.

18 Remove the road wheel, as described in Para 11. Clean any road dirt from the hub assembly. Remove the hub cap and hub cap joint washer from the hub assembly by removing the six fixing bolts and lockwashers. Tap the tab washer clear of the outer hub nut. Remove the outer nut. Tap the tab washer clear of the inner hub nut. Remove and discard the tab washer. Adjust the inner nut, rotating the hub to seat the bearings, turning the nut clockwise to tighten the bearings and anti-clockwise to free the bearings. Torque the inner nut to a force of 75 lb/ft. Slacken the nut and re-apply a force of 10 lb/ft. Mark the position of the nut. Move the nut anticlockwise through an angle of 30 degrees. Fit a new tab washer and lock the inner nut. Refit the outer nut and tighten to the inner nut. Tap the tab washer to lock the outer nut. Replace the hub cap and a new hub cap joint washer on the hub assembly with the six bolts and lockwashers. Re-apply the handbrake.

19 Refit the road wheel as described in Paras 12 and 13 and recheck the bearing play and wheel rotation, as described in Para 15. Lower the wheel to the ground and remove the jack. Test the tyre pressure, as described in Para 14.

20 If the bearings are worn excessively, they must be replaced.

Replacement of bearings

21 Remove the road wheel, hub cap, hub cap joint washer, outer hub nut and tab washer, as described previously in Paras 8 to 11 and 18.

22 At the back of the hub assembly, remove the two bolts and lockwashers holding the brake caliper to the carrier plate. Tie the brake caliper to the road spring, up and clear of the hub assembly. Do not allow the flexible hose to support the weight of the caliper. Remove the inner hub nut and bearing washer. Discard the bearing washer. Remove the outer taper roller bearing by pulling the hub assembly away from the stub axle a short distance, then push the hub assembly back onto the axle. Remove the hub assembly away from the stub axle, leaving behind the inner taper roller bearing. Extract the inner hub taper roller bearing, collar and plain seal from the stub axle. Discard the plain seal. If required, the carrier plate and dust shield can be removed by unscrewing the four nuts and lockwashers fixing the carrier plate and dust shield to the stub axle. The four nuts are prevailing torque type nuts and must be discarded and new nuts fitted on re-assembly: Note and retain the spacer shims fitted between the carrier plate and the stub axle as these are shims selected to set the caliper/disc gap.

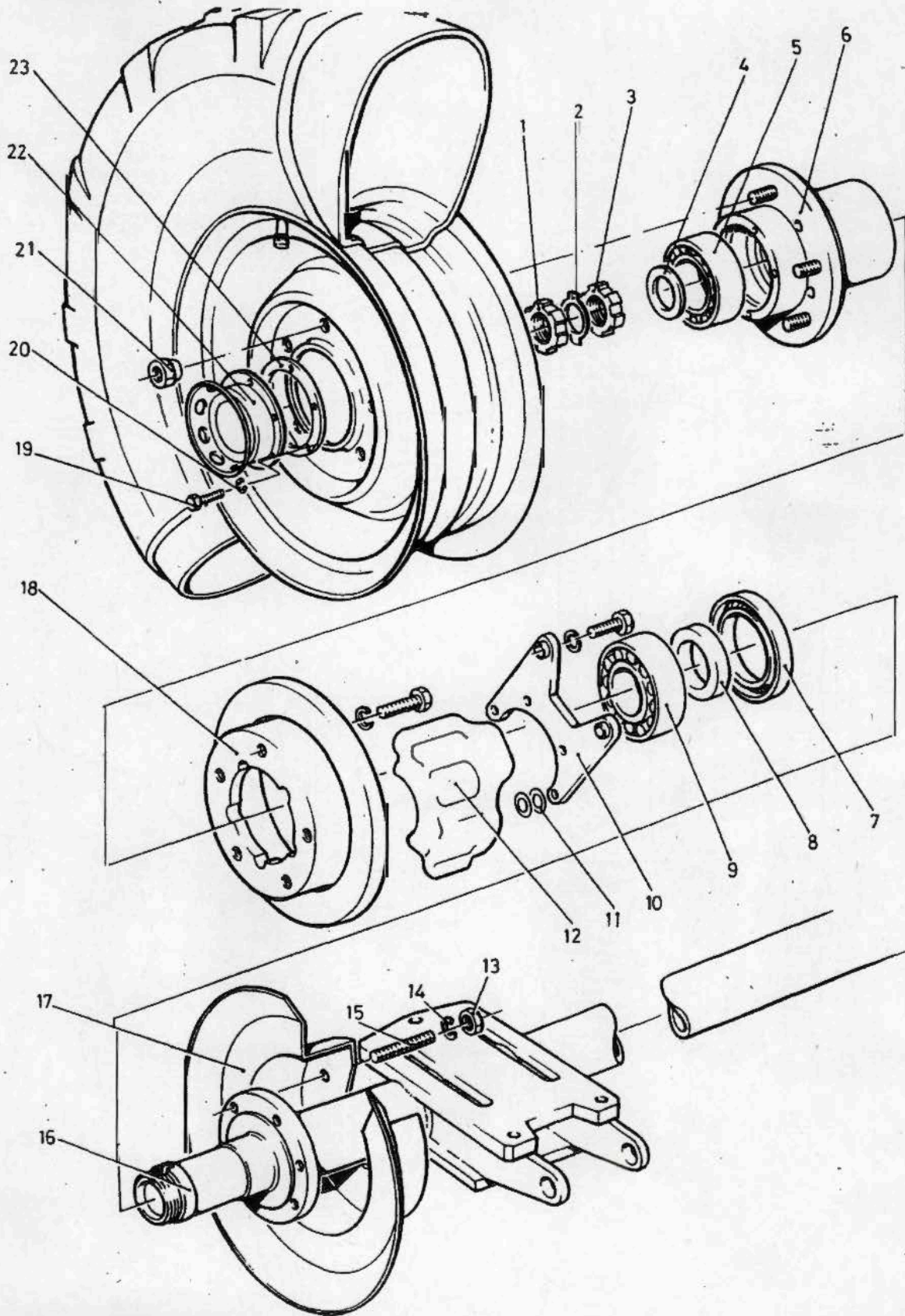
23 Examine the taper roller bearings for wear in accordance with EMER T & M A 028 Chap 060.

24 Clean any remaining grease from the stub axle. Refit the collar and a new inner seal to the stub axle. If re-using the original bearings, clean off any remaining grease. Re-pack new or original bearings with fresh Grease, Automotive and Artillery, G403-XG 279 and fit the inner bearing to the stub axle. Refit the carrier plate and dust shield to the studs on the stub axle, making sure that the packing washers noted in Para 22 are fitted correctly. Fix the carrier plate and dust shield in place with washers and new prevailing torque nuts. Refit the collar and a new plain washer to the stub axle.

25 Pack the hub assembly with the same grease and refit to the stub axle. Pack the outer taper roller bearing with grease and refit to the stub axle. Refit the bearing washer. Fit the inner hub nut to the stub axle and tighten, as described in Para 18. Wipe off any excess grease from the hub assembly and brake disc. Untie the brake caliper and fix to the carrier plate with the bolts and lockwashers. Check that the gap between the back face of the disc and the face of the caliper to carrier interface is between 31.625 and 33.055 mm (1.245 and 1.303 in.), as shown in Fig 3. Adjust the gap using spacer shims if necessary.

KEY TO FIG 2

- | | |
|------------------------------|-------------------------------|
| 1 Outer circular hub nut | 13 Self-locking hexagonal nut |
| 2 Tab washer | 14 Washer |
| 3 Inner circular hub nut | 15 Stud |
| 4 Bearing washer | 16 Stub axle |
| 5 Outer taper roller bearing | 17 Dust shield |
| 6 Hub assembly | 18 Brake disc |
| 7 Plain seal | 19 Hexagonal bolt, hub cap |
| 8 Collar | 20 Washer |
| 9 Inner taper roller bearing | 21 Wheel nut |
| 10 Carrier plate | 22 Hub cap |
| 11 Spacer shims | 23 Hub cap joint washer |
| 12 Brake caliper | |



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Fig 2 Hub assembly

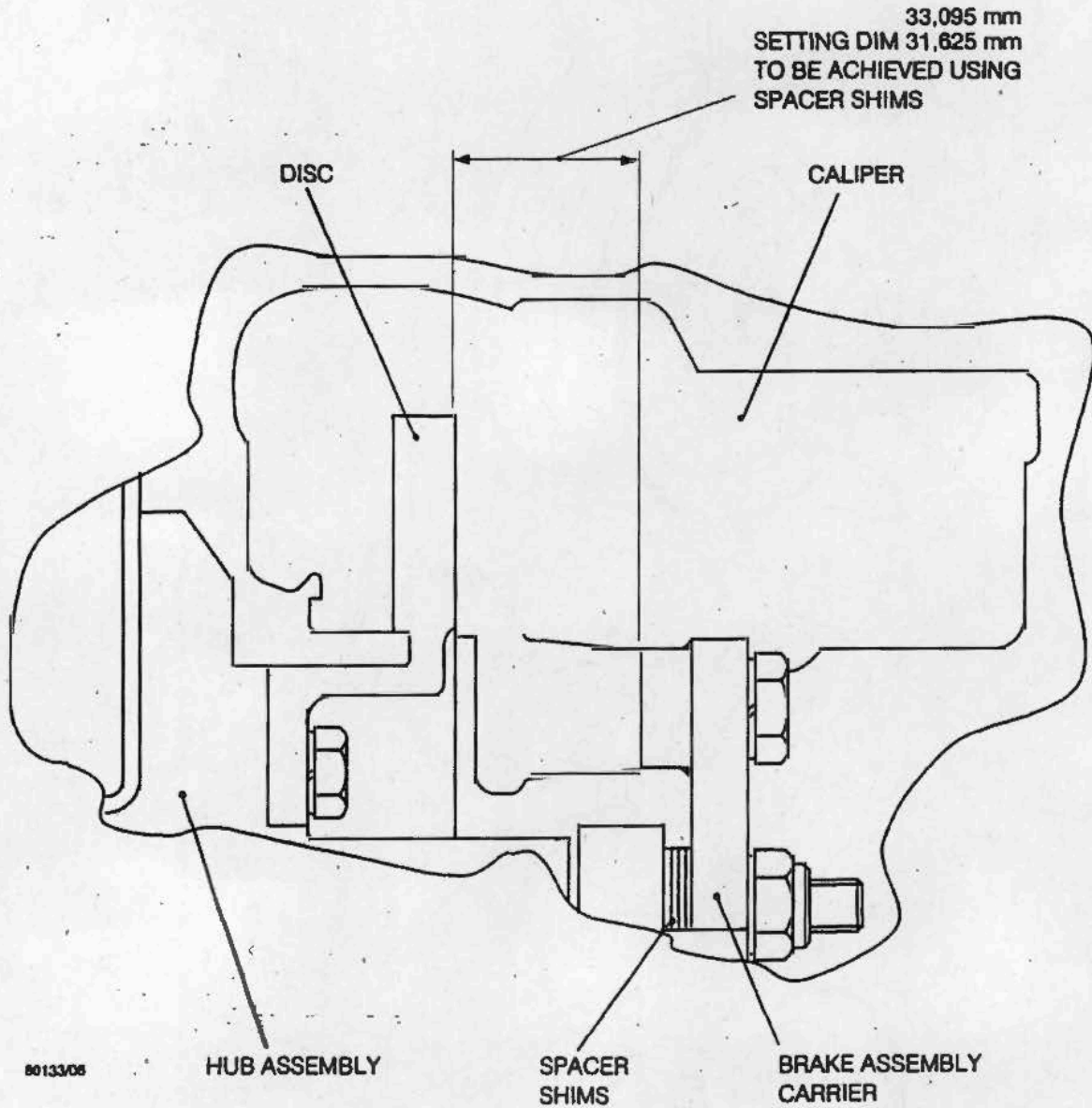


Fig 3 Brake caliper to brake disc distance

26 Refit the road wheel, as described in Paras 12 and 13, and recheck the bearing play and wheel rotation, as described in Para 15. Remove the jack and test the tyre pressures, as described in Para 14.

Removal and fitting of a brake disc

27 Although inspected for damage and tested as part of the braking system, the brake discs are fitted onto the hub assemblies. If it is necessary to remove or replace a brake disc, proceed as follows.

28 Remove the road wheel, hub cap and hub assembly, including washers, bearings and seals, as described in Paras 8 to 11, 18 and 22.

29 Carry the hub assembly to a workbench and clean off any road dirt. Remove the five bolts and lockwashers holding the brake disc to the hub assembly. Remove the brake disc.

30 Refit the new or skimmed brake disc to the hub assembly with the five bolts and lockwashers. Refit the hub assembly, together with seals, bearings and washers, to the stub axle, as described in Paras 24 to 26.

31 Refit the road wheel, remove the jack and test, as described in Paras 12 to 14.

Suspension assemblies and components

Removing and refitting road springs

32 Support the front and rear of the trailer on vehicle stands. The jockey wheel and rear support legs fitted to the trailer may be used to provide additional support. Remove the road wheel as described in Paras 8 to 11. Clean off any road dirt from the springs and fittings, having first placed a cloth over the brake caliper and hub assembly.

33 Place a jack or vehicle stand under the axle, clear of the spring assembly. Remove the shock absorber lower nut, washer and rubber buffer from the clamping plate. Retain the shock absorber fixtures. Remove the cover plate from the top of the axle spring bracket by removing three bolts. Remove the four U bolt locknuts and retaining nuts and remove the clamping plate from the spring. Remove the U bolts from the axle spring bracket. Remove the nut holding the front spring eye bolt and bush to the chassis. Use a soft faced hammer or hardwood drift to tap out the bolt until the spring eye is free from the chassis. Remove the nut holding the rear shackle assembly to the chassis. Use a soft faced hammer or hardwood drift to tap out the bolt until the spring eye is free from the chassis. Remove the road spring from the axle and trailer.

34 At the workbench, remove the nut holding the rear shackle assembly to the rear spring eye. Use a soft faced hammer or hardwood drift to tap out the bolt until the bolt is free from the spring eye. Remove the rubber bush fitted to each spring eye using a suitable drift.

35 Before refitting the road spring to the trailer check that the rubber bushes to be fitted to the spring eyes are in perfect order, otherwise replace with new bushes. Make sure that the threads on the U bolts and the nuts are in good condition, otherwise replace with new. Make sure that the road spring eyes are clean and free from rust or rubber debris.

36 Press the bushes into position in the spring eyes by slowly squeezing them into place with a vice.

KEY TO FIG 4

1 Machine screw	23 Flat washer
2 Suspension plate	24 Rubber buffer
3 Resilient mount	25 Clamping plate assembly
4 Washer	26 Rubber buffer
5 Lockwasher	27 Clamping plate assembly
6 Hexagonal nut	28 Nut
7 Self-locking hexagonal nut	29 Self-locking hexagonal Nut
8 Flat washer	30 Nut
9 Cable check buffer	31 Nut
10 Cable check assembly	32 Resilient mount
11 Inner shock absorber eye washer	33 Machine bolt
12 Hexagonal nut	34 Clamping plate assembly
13 Self-locking hexagonal nut	35 Outer shock absorber eye washer
14 Machine bolt	36 Resilient mount
15 Machine bolt	37 Cover plate
16 Resilient mount	38 Lockwasher
17 Rear shackle assembly	39 Machine screw
18 Hexagonal nut	40 Self-locking hexagonal nut
19 Hexagonal nut	41 Lockwasher
20 U bolt	42 Machine screw
21 Road spring	41 lock washer
22 Direct action shock absorber	42 Machine screw

37 Take the road spring to the trailer, locate it in its approximate position. Refit the U bolts through the axle spring bracket and refit the clamping plate with the four retaining nuts. Do not tighten the U bolt nuts completely at this time. Locate the road spring front eye in its chassis bracket and insert the bolt through the bracket, spring eye and rubber bush. Refit the fixing nut. Locate the shock absorber lower mounting bolt through the clamping plate and rubber buffer and fix in place with a washer and nut.

38 Examine the rear shackle assembly rubber bush and replace if damaged or worn. To replace the bush, drift out the old bush and press in the new bush after first coating the bush with a suitable silicone lubricant.

39 Refit the rear shackle assembly to the chassis bracket with the bolt and nut. Bring the rear spring eye and rear shackle assembly together using the jack under the axle to raise or lower the spring as necessary. Refit the bolt through the shackle assembly and spring eye and fix with the nut.

40 Temporarily fit the road wheel to the hub and lower the jacks supporting the trailer sufficiently so that the trailer weight falls on the refitted spring to allow the spring, bushes and U bolts to settle relative to each other.

41 Jack up the trailer on the supports and remove the road wheel. Tighten the U bolts and fit the locknuts. Tighten the nut holding the shock absorber and the front and rear shackle nuts. Refit the cover plate to the axle spring bracket with the three bolts.

42 Refit the road wheel, as described in Paras 12 to 14, remove any supporting stands and test the trailer by towing with a cargo load on board.

Removal and fitting of shock absorbers

43 Support the front and rear of the trailer on vehicle stands. The jockey wheel and rear support legs fitted to the trailer may be used to provide additional support. Remove the road wheel, as described in Paras 8 to 11. Cover the caliper and hub assembly with a cloth and clean off any road dirt from the spring and fittings.

44 Support the axle on a jack, clear of the shock absorber fittings. Remove the shock absorber lower nut, washer and rubber buffer from the clamping plate. Jack the axle up or down, as appropriate, to ease the shock absorber free from the clamping plate location hole. Remove the rubber buffer and washer from the lower end of the shock absorber and discard the two rubber buffers.

45 Remove the locknut, nut and washer fixing the top of the shock absorber to the chassis. Remove the shock absorber, resilient mount and washer from the fixed chassis stud. Discard the resilient mount.

46 It is anticipated that new rubber buffers and a new resilient mount will be supplied with the new shock absorber. If not, new components must be obtained.

47 Fit the washer and new shock absorber and resilient mount to the fixed stud. Refit the washer, nut and locknut to fix the top of the shock absorber to the chassis. Refit the washer and new rubber buffer to the lower end of the shock absorber and ease the lower end of the shock absorber into the locating hole in the clamping plate, adjusting the jack as necessary. Fit the new rubber buffer, washer and nut to the lower end of the shock absorber to fix the shock absorber to the clamping plate. Remove the jack from under the axle.

48 Refit the road wheel, as described in Paras 12 to 14, remove any supporting stands and test the trailer by towing the trailer with a cargo load on board.

Removal and fitting of rubber springs

49 Support the front and rear of the trailer on vehicle stands. The jockey wheel and rear support legs fitted to the trailer may be used to provide additional support. Remove the road wheel, as described in Paras 8 to 11. Cover the caliper and hub assembly with cloth and clean off any road dirt from the rubber spring and fittings.

50 Remove the two bolts, lockwashers and nuts fixing the rubber spring assembly to the trailer chassis and remove the rubber spring assembly to the workbench. Remove the nut, lockwasher and washer fixing the rubber spring to the plate. Discard the rubber spring.

51 Fit the new rubber spring to the stud in the plate with the washer, lockwashers and nut. Refit the rubber spring assembly to the chassis with the bolts, lockwashers and nuts.

52 Refit the road wheel, as described in Paras 12 to 14 and remove any supporting stands.

Removal and fitting of check cables

53 Support the front and rear of the trailer on vehicle stands. The jockey wheel and rear support legs fitted to the trailer may be used to provide additional support. Remove the road wheel, as described in Paras 8 to 11. Cover the caliper and hub assembly with a cloth and clean off any road dirt from the check cable assembly and fittings.

54 Remove the nuts and washers fixing the check cable to the chassis brackets. Discard the nuts. Remove the check cable buffers and discard. Remove the check cable from the chassis brackets and axle.

55 Fit the new check cable under the axle and up through the holes in the chassis brackets. Fit new check cable buffers and fix the check cable to the chassis with the washers and new locknuts. Before finally tightening the locknuts, ensure that the check cable hangs vertically below the chassis brackets.

56 Refit the road wheel, as described in Paras 12 to 14 and remove any supporting stands.

Removal and fitting of anti-roll bar (Fig 5)

57 Support the front and rear of the trailer on vehicle stands. The jockey wheel and rear support legs may be used to provide additional support. Remove both road wheels, as described in Paras 8 to 11. Ensure that the trailer is level on the jacks to minimise twist in the anti-roll bar, aiding removal and refitting. Cover both calipers and hub assemblies with cloth and clean off any road dirt on the anti-roll bar and fittings.

58 Remove the lubricating nipple from each of the four swivel pins. Remove the swivel pins and lockwashers holding the swivel block to the axle spring brackets on the trailer. Remove the locating pins, spacers and self locking nuts fixing the locating brackets to the trailer chassis. Discard the self locking nuts. Remove the anti-roll bar assembly from the trailer and carry it to the workbench.

59 Remove the bolts, lockwashers and nuts fixing the anti-roll bar to the anti-roll bar extensions and remove the anti-roll bar extensions and swivel blocks away from the anti-roll bar.

60 Remove the self locking nut and washer fixing an anti-roll bar extension to its swivel block. Remove the two sleeve bearings and the bush from each swivel block.

61 Remove the bolts, lockwashers and nuts fixing each of the two clamping brackets on the anti-roll bar to the locating brackets. Remove the locating brackets. Remove the clamping brackets and rubber bushes from the anti-roll bar. Discard the rubber bushes.

62 Thoroughly clean the anti-roll bar, removing all traces of road dirt and rust. Cover new rubber bushes with a suitable silicone lubricant and fit to the anti-roll bar in their approximate positions. Refit the two clamping brackets over the rubber bushes and fix to the two locating brackets with the bolts, lockwashers and nuts. Do not tighten the nuts fully at this time.

63 Fit a new metalastik bush and two new phosphor bronze sleeves to each swivel block, having first soaked the phosphor bronze sleeves in oil for 24 hours. Fit an anti-roll bar extension bar to each swivel block, through the metalastik bush and fix to the swivel block with a washer and a self locking nut. Fix each anti-roll bar extension to the anti-roll bar with a bolt, lockwasher and nut.

64 Carry the anti-roll bar assembly to the trailer and refit the locating brackets to the trailer chassis with the locating pins, spacers and new self locking nuts. Do not tighten fully at this time. Refit the swivel blocks to the axle spring brackets with the swivel pins. Refit a lubricating nipple to each swivel pin. Temporarily refit the road wheels to the trailer and jack the trailer down squarely to allow the trailer weight to fall on the suspension assemblies, allowing the anti-roll bar assembly to settle. Jack up the trailer, remove the road wheels and tighten all nuts on the anti-roll bar assembly.

65 Refit the road wheels, as described in Paras 12 to 14, and remove any supporting stands.

Hydraulic braking system

Removal and fitting of brake pads

66 Brake pad inspection, removal and fitting must always be carried out on both wheels.

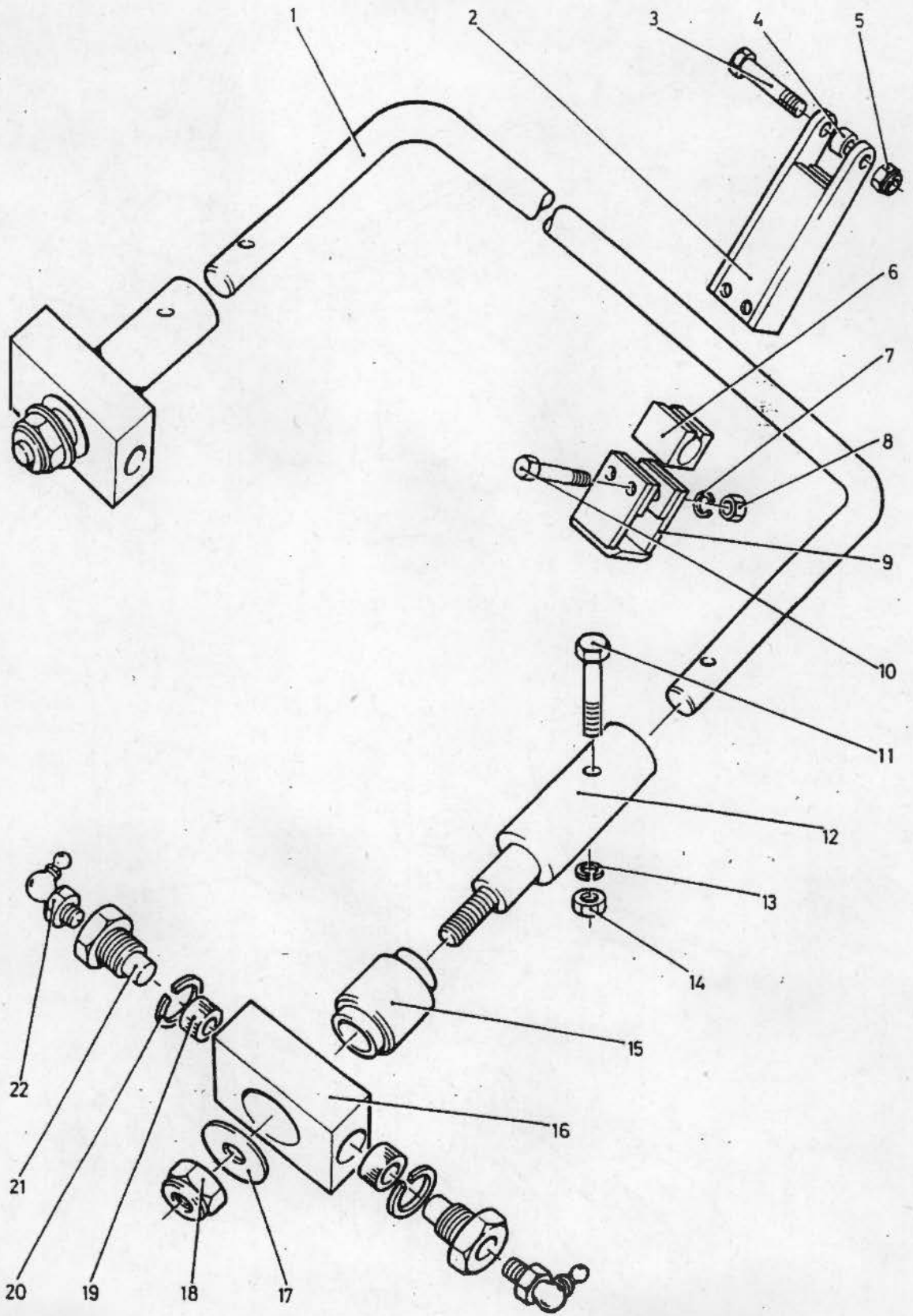
WARNING

NEVER USE AN AIR LINE TO REMOVE BRAKE DUST. IF INHALED, BRAKE DUST CAN DAMAGE HEALTH. WHENEVER POSSIBLE, REMOVE DRY DUST WITH A VACUUM BRUSH.

67 Support the front and rear of the trailer on vehicle stands. The jockey wheel and rear support legs fitted to the trailer may be used to provide additional support. Remove both road wheels, as described in Paras 8 to 11. Release the handbrake. Cover each of the hub assemblies with cloth and clean off any road dirt from the brake assemblies.

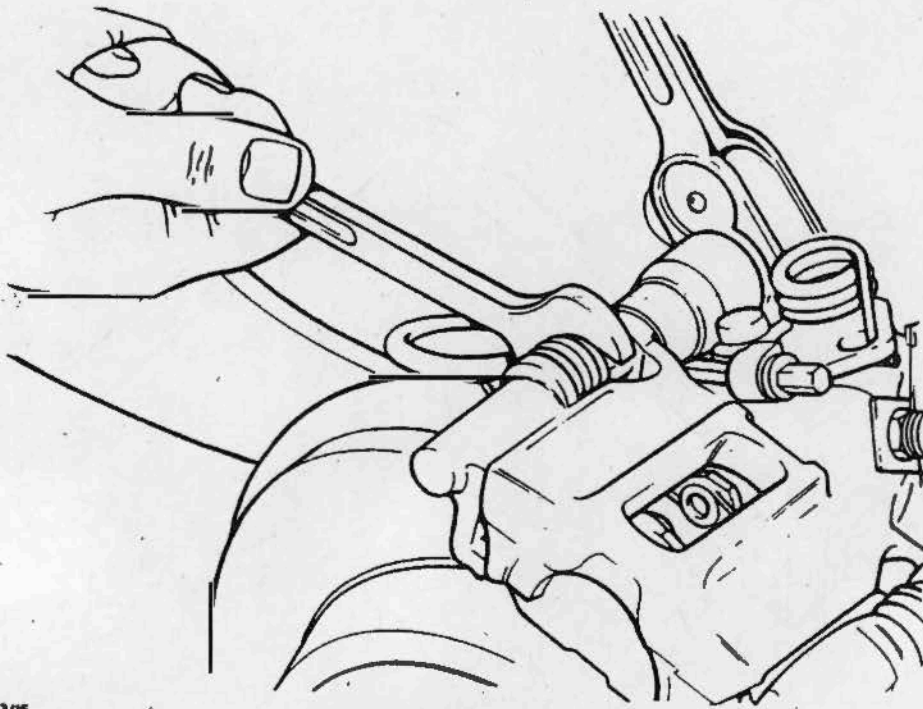
KEY TO FIG 5

- | | |
|--------------------|----------------------------|
| 1 Anti-roll bar | 12 Anti-roll bar extension |
| 2 Locating bracket | 13 Lockwasher |
| 3 Locating pin | 14 Hexagonal nut |
| 4 Spacer | 15 Bush |
| 5 Self-locking nut | 16 Swivel block |
| 6 Bush | 17 Flat washer |
| 7 Lockwasher | 18 Self-locking nut |
| 8 Hexagonal nut | 19 Sleeve bearing |
| 9 Clamping bracket | 20 Lockwasher |
| 10 Machine bolt | 21 Swivel pin |
| 11 Machine bolt | 22 Lubricating nipple |



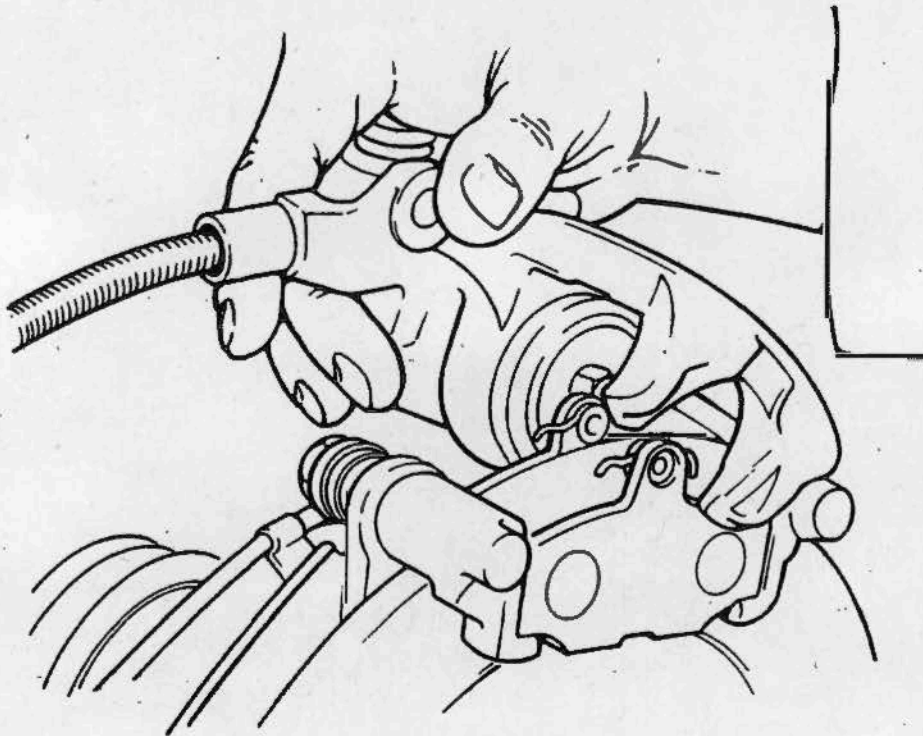
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Fig 5 Anti-roll bar assembly



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Fig 6 Removal of a guide pin bolt



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Fig 7 Swinging a caliper clear of pads

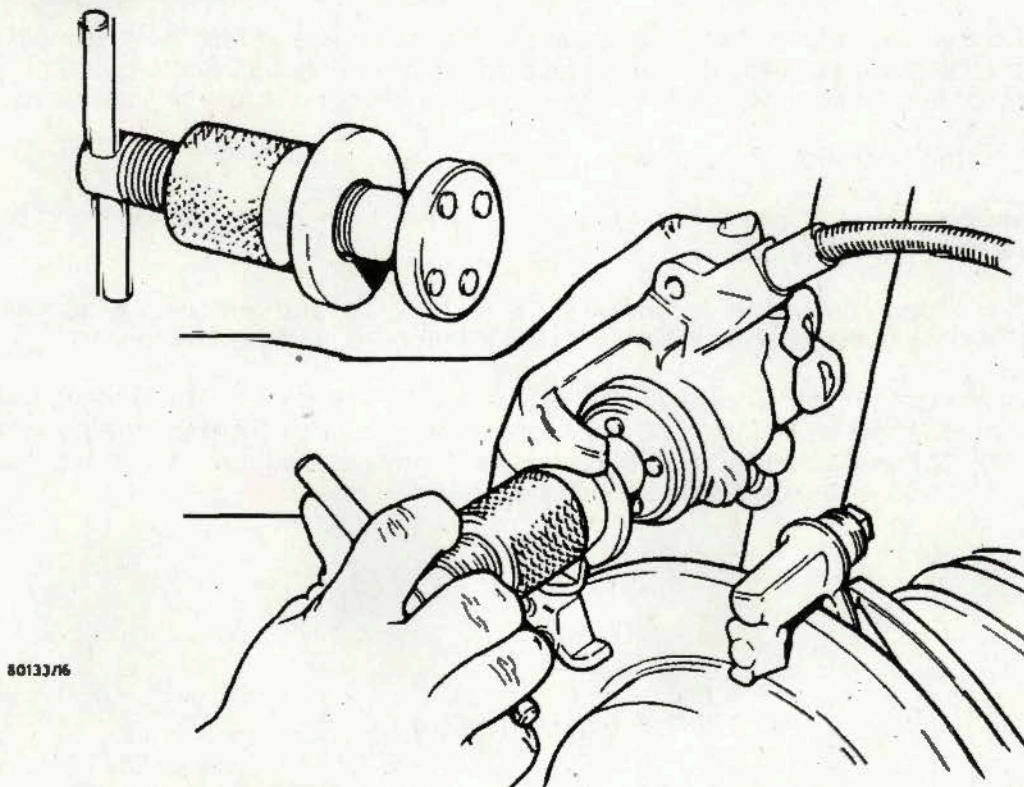


Fig 8 Ford tool 12-006 for winding back caliper pistons

68 To gain access to the pads the caliper body must be moved away from the caliper carrier. Normally, it is only necessary to remove one of the two guide pin bolts and pivot the caliper body, up or down around the remaining bolt, taking care not to damage the flexible hose. (Fig 6)

69 To remove a guide pin bolt, hold the guide pin steady with an open ended spanner to prevent damage to the guide pin gaiter, and remove the guide pin bolt with a ring or socket spanner. Temporarily loosen the other guide pin bolt in the same manner. Swing the caliper body away from the pad carrier and retighten the guide pin bolt. Do not operate the hydraulic brakes or handbrake with the caliper removed.

70 Clean brake dust and road dirt off the caliper body and surrounding components, protecting the disc surface and pads from contamination with a cloth. Remove the old pads and examine. Measure the thickness of the brake pad, including the backplate. Minimum acceptable thickness including the backplate is 7 mm (0.276 in.). If any brake pad is below this limit, all brake pads must be changed. Also examine the brake disc for scoring, warping and other damage. If damaged replace it (Refer to Paras 28 to 30) and fit new pads.

71 If new pads are to be fitted, the caliper piston must be retracted, by turning it clockwise, to accommodate the thickness of the new pads. Use the special Ford tool 12-006 to wind the caliper back. (Fig 8). Before retracting the caliper piston check the surface of the piston for any sign of pitting. If the surface is pitted, the piston must be replaced.

72 Remove any backing paper from the new pads, then fit them to the caliper bracket, one pad either side of the brake disc. Be careful not to contaminate the friction surfaces with oil or grease.

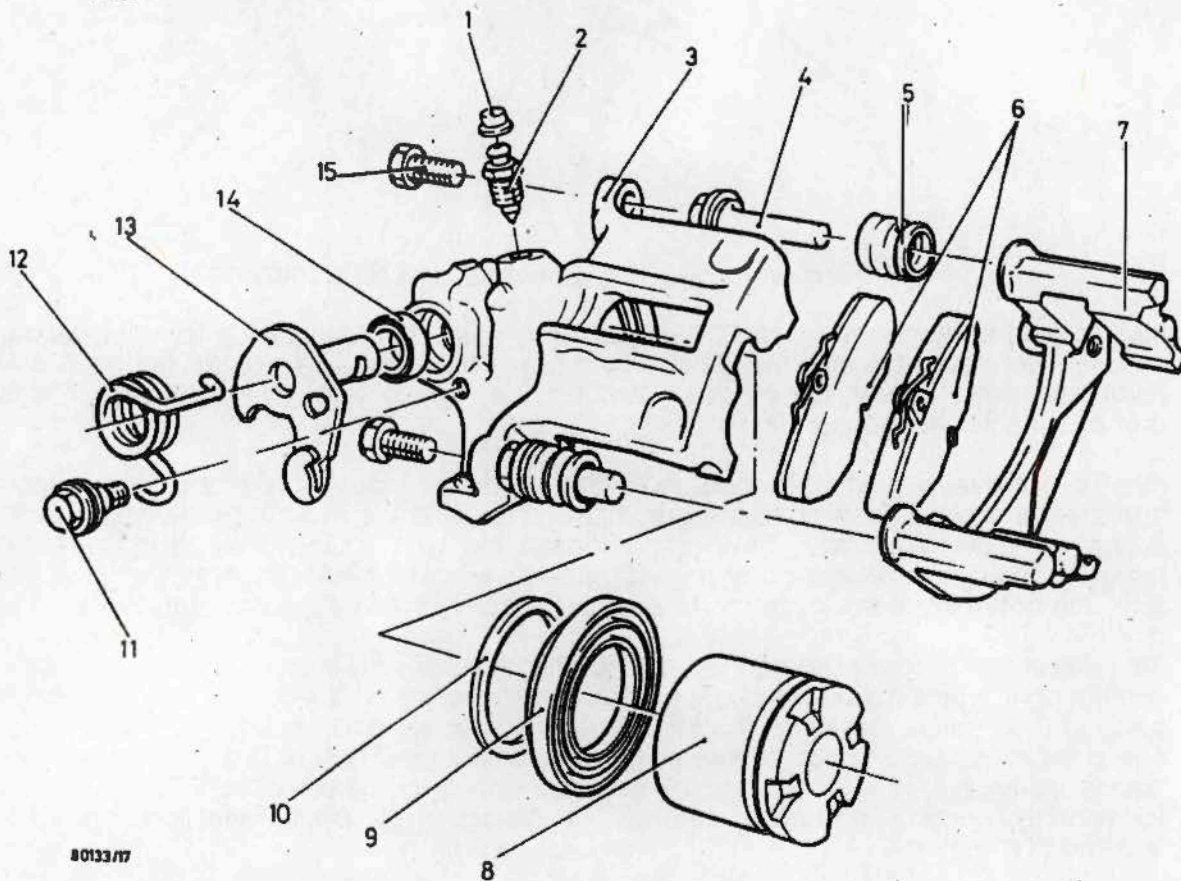
73 Swing the caliper body back into position on the carrier and refit the guide pin bolt by holding the guide pin with an open ended spanner and tightening the guide pin bolt with a ring or socket spanner. Retighten the other guide pin bolt in a similar manner.

74 Repeat the operations on the other caliper.

75 Operate the handbrake several times to operate both caliper pistons and make them bear onto the new pads.

76 Refit the road wheels, as described in Paras 12 to 14, and remove any supporting stands. Test the trailer brakes, initially with the handbrake, and then by towing.

77 After fitting new pads, care should be taken in braking. Brake gently, several times, from 80 to 50 km/h (50 to 30 miles/h) and only brake fully when the pads have bedded fully to the disc surfaces. Prolonged and heavy braking should be avoided for the first 80 km (50 miles) until the new pads are bedded in.

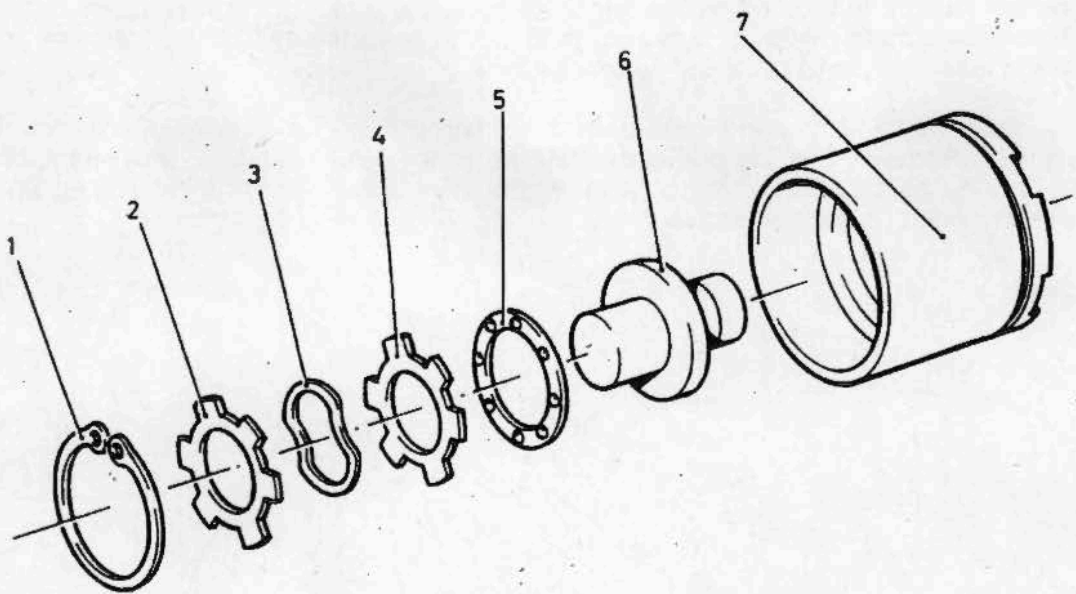


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- 1 Bleed screw cap
- 2 Bleed screw
- 3 Caliper body
- 4 Guide pin
- 5 Gaiter
- 6 Brake pads
- 7 Pad carrier
- 8 Caliper piston

- 9 Dust boot
- 10 Piston seal
- 11 Return spring stop bolt
- 12 Return spring
- 13 Handbrake lever
- 14 Shaft seal
- 15 Guide pin bolt

Fig 9 Brake caliper breakdown



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- 1 Circlip
- 2 Thrust washer
- 3 Wave washer
- 4 Thrust washer
- 5 Thrust bearing
- 6 Adjuster nut
- 7 Piston

Fig 10 Brake caliper piston breakdown

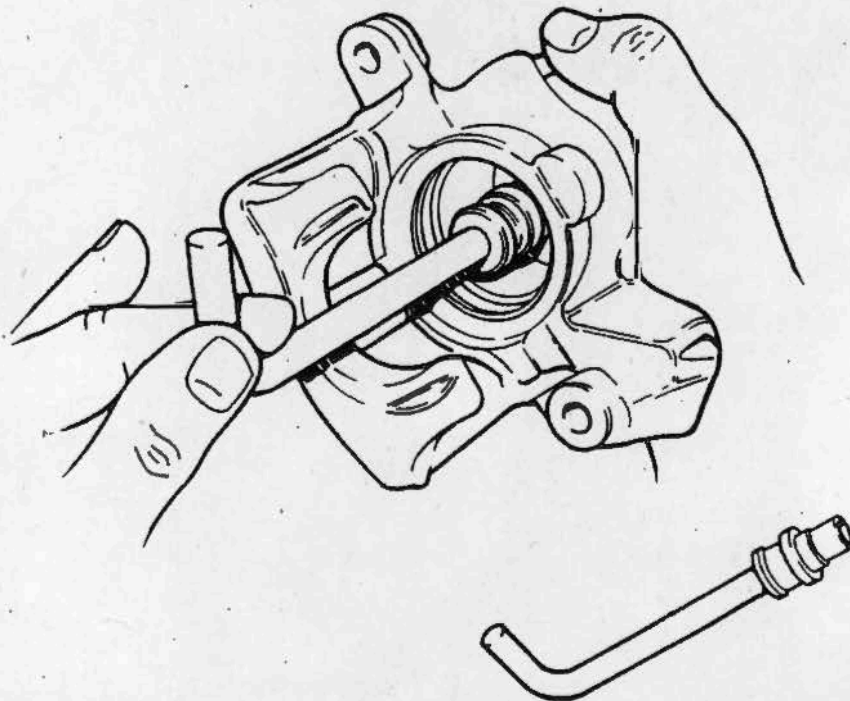
Removal and fitting of calipers**WARNING**

THE LOCKWASHER USED TO FIX THE FLEXIBLE HOSE TO THE CHASSIS IS MADE OF BERYLLIUM. REFER TO WARNING (4) IN PRELIMINARY PAGES.

78 Support the front and rear of the trailer on vehicle stands. The jockey wheel and rear support legs fitted to the trailer may be used to provide additional support. Remove the road wheel, as described in Paras 8 to 11. Release the handbrake. Cover the hub assembly with cloth and clean off any road dirt from the brake assembly. Place a drip tray under the hub assembly.

79 Undo the nut fixing the hydraulic pipework to the flexible hose. Undo the nut and lockwasher fixing the flexible hose to the bracket on the trailer chassis. Plug or cap the open brake unions to minimize hydraulic fluid spillage. Unscrew the flexible hose from the caliper assembly and place safely on one side.

80 Remove the two bolts and lockwashers holding the caliper assembly to the carrier assembly. Remove the caliper assembly from the stub axle, at the same time unhooking the handbrake cable from the caliper assembly. Carry the caliper assembly to the workbench for further disassembly.



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Fig 11 Ford tool 12-007 used to compress caliper spring

81 To refit the caliper, offer the assembly up to the stud axle carrier plate and fix in place with two bolts and lockwashers. Re-engage the handbrake cable with the hook and guide on the caliper. Screw the flexible hose into the caliper and tighten. Pass the free end of the flexible hose through the chassis bracket and fix into place with a lockwasher and nut, ensuring that no kinks are present in the flexible hose. Remove any plugs or caps fitted to the open unions and refit the hydraulic brake pipe to the flexible hose.

82 Bleed both calipers, as described in Paras 126 to 128. Refit the road wheel, as described in Paras 12 to 14, and remove any support stands. Test the trailer braking system, as described in Paras 75 and 76.

Brake caliper overhaul

83 Remove the brake caliper, as described in Paras 78 to 80.

84 Clean the caliper externally. Remove the two slide pin bolts, as described in Para 69 to release the caliper body from the pad carrier. Remove the pads from the carrier and clean the carrier. Discard the pads.

85 Remove the slide pins and gaiters from the carrier. Discard the pins and gaiters. Examine the slide pin bores in the carrier. If the bores are in good condition, with no sign of corrosion, the carrier may be re-used. If the bores are corroded or the condition of the carrier is suspect in any way, obtain a new carrier.

86 Re-assemble new pins and gaiters to the carrier bores, lubricating the pins with the brake grease supplied with the pins and gaiters. Push the gaiters over the lip on the carrier, and whilst pushing the pins fully home, slightly pucker the gaiters to expel any trapped air. Place the re-assembled carrier to one side.

87 Rotate the caliper piston anti-clockwise with Ford tool 12-006 until the piston protrudes from the bore by about 20 mm (0.8 in.). Free the dust boot from the groove in the piston, then carry on unscrewing the piston and remove it from the caliper. Remove and discard the dust boot.

88 Extract the piston seal from the groove in the caliper bore, using a blunt non-metallic instrument. Discard the piston seal. Clean the bore and piston with methylated spirit and inspect them for scuffs, scores or other damage. If the piston is corroded it must be renewed. Slight imperfections in the bore can be polished out with wire wool.

89 Refer to Fig 10 and turn the piston so that the face is to the bench. Use circlip pliers to remove the circlip from the piston. This will allow the removal of a thrust washer, a wave washer, a further thrust washer, a thrust bearing and the adjuster nut. Remove the seal from the nut and discard the seal, noting the direction of fit. Clean the nut with methylated spirit. Lubricate a new seal with clean hydraulic fluid and fit it to the nut.

90 Lubricate the face of the nut with a little brake grease. Refit the nut to the piston, followed by the thrust bearing, thrust washer, wave washer and thrust washer. Lock the components to the piston with the circlip. Place the piston to one side.

91 Refer to Fig 11 and use Ford Tool 12-007 to compress the adjuster spring in the caliper bore sufficiently to release the circlip. Release the circlip, remove the Ford tool and extract the circlip, spring cover, spring and washer from the caliper bore.

92 Use a long thin pair of circlip pliers to release and remove the key plate retaining circlip from the caliper bore. Remove the pushrod and key plate from the caliper bore. Remove the handbrake strut from the caliper bore.

93 Refer to Fig 9 and remove the handbrake lever return spring and stop bolt from the caliper body. Pull the lever and shaft out of the caliper. Prize out the shaft seal and discard.

94 Clean up the handbrake shaft using wire wool; renew the shaft if it is badly corroded. Check the condition of the shaft bush in the caliper body, renew if considered necessary. Pull out the old bush with a suitable internal puller, press in the new bush to 7.5 mm (0.30 in.) below the shaft seal lip. The slot in the side of the bush must line up with the pushrod bore in the caliper.

95 Remove the bleed nipple from the caliper body. Check that the bleed nipple is clean and undamaged. Replace the bleed nipple if it is damaged. Clean the caliper body thread and refit the bleed nipple, lubricated with clean hydraulic fluid OX8, into the caliper body.

96 Fit a new handbrake shaft seal to the caliper body. Pass the shaft through the seal and into the caliper, being careful not to damage the seal lips. Refit the handbrake lever stop bolt and return spring.

97 Refit the handbrake strut to the caliper, lubricating the strut with brake grease.

98 Fit a new O ring to the base of the pushrod. Refit the pushrod and the key plate, engaging the pipe on the key plate with the recess in the caliper bore. Secure the key plate to the caliper body with the circlip.

99 Refit the washer, spring and spring cover to the caliper bore. Compress the spring slightly with Ford tool 12-007 and refit the circlip. Remove Ford tool 12-007 from the caliper.

100 Lubricate the caliper bore with clean hydraulic fluid and fit a new piston seal to the groove.

101 Fit a new dust boot. The caliper manufacturer recommends that it be fitted to the caliper groove and the piston fitted afterwards. It is also possible to fit the dust boot to the piston first and engage it in the caliper groove afterwards.

102 Refit the piston and screw it into the caliper bore, using Ford tool 12-006, and fit whichever lip of the dust boot was left free.

103 Offer up the pad carrier, complete with slide pins, gaiters and new pads, to the caliper body and secure with the slide pin bolts.

104 Carry the complete caliper to the trailer and refit as described in Paras 81 and 82.

Removal and fitting of master cylinder

105 Support the front and rear of the trailer on vehicle stands. The jockey wheel and rear support legs fitted to the trailer may be used to provide additional support. Release the handbrake. Clean any road dirt from the brake assemblies and master cylinder. Place a drip tray under each hub assembly.

106 Drain off all the hydraulic fluid by attaching a tube to a bleed nipple on one of the brake assemblies. Open the bleed nipple half a turn and manually pump the operating lever attached to the master cylinder pushrod, catching the fluid expelled through the bleed nipple in a suitable container. Repeat the operation on the other brake assembly until all the fluid has been expelled from the system. Close the bleed screws.

107 Unscrew the brake pipe nut from the banjo on the master cylinder. Plug or cap the open brake union to prevent the ingress of dirt. Remove the clevis pin, washer and cotter pin holding the master cylinder pushrod to the operating lever. Discard the cotter pin and retain the clevis pin and washer.

WARNING

CADMIUM WASHERS ARE USED IN THE FIXING OF THE MASTER CYLINDER. REFER TO WARNING (6) IN PRELIMINARY PAGES.

108 Remove the bolts, lockwashers and nuts fixing the master cylinder to the chassis bracket. Remove the master cylinder from the trailer and carry it to the workbench for further disassembly.

109 Refit the new or serviced master cylinder to the chassis using bolts, lockwashers and nuts, with the bolts inserted from the reservoir side of the installation. Reconnect the master cylinder pushrod to the operating lever with the chassis pin, washer and a new cotter pin. Reconnect the brake pipe nut to the banjo on the master cylinder.

110 Refill the reservoir with clean hydraulic fluid and bleed the brakes thoroughly, as described in Paras 126 to 128.

111 Check that the damper assembly pushrod just bears on the operating lever without operating the master cylinder. Adjust the bolt and re-tighten the locknut, if necessary.

112 Remove any support stands. Test the brake operation by towing the trailer and applying the brakes.

Master cylinder overhaul (Fig 13)

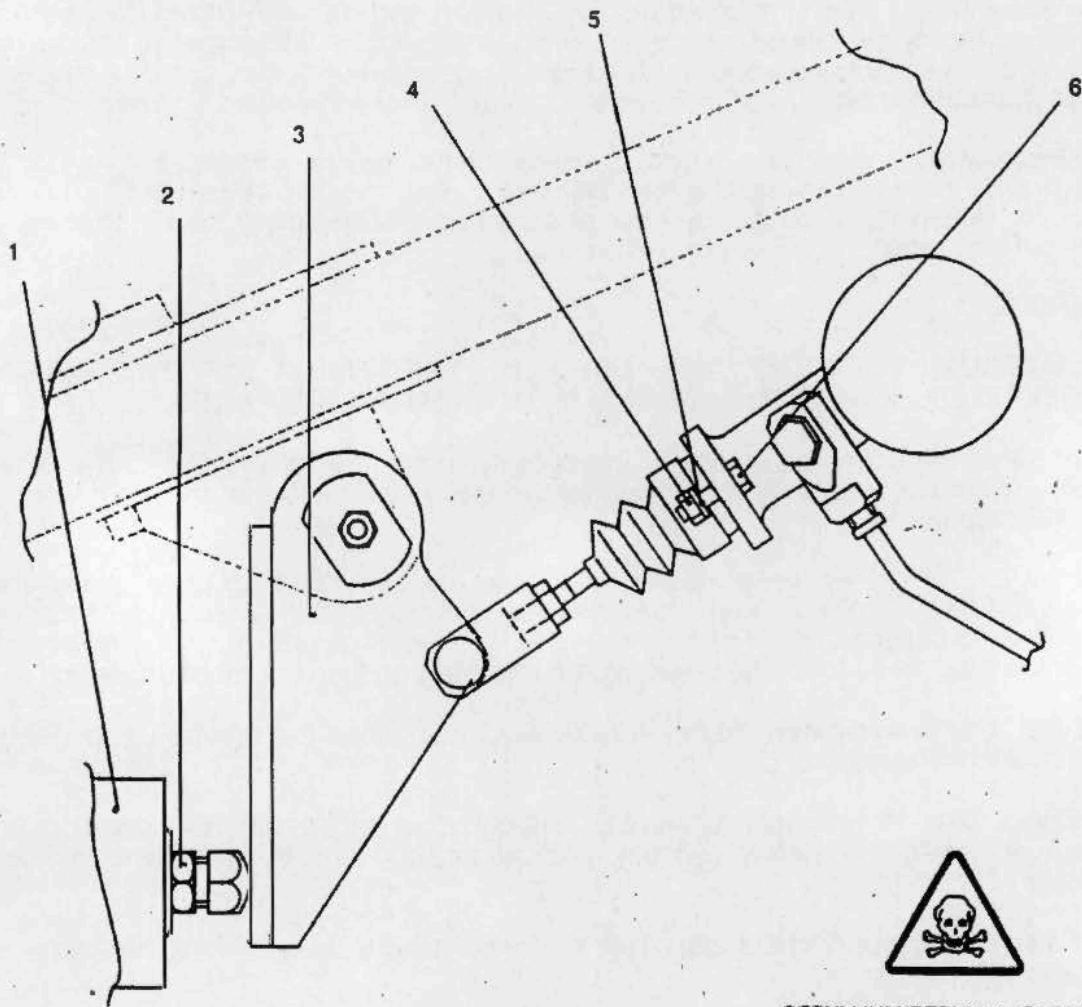
113 Remove the master cylinder from the trailer, as described in Paras 105 to 108. Clean the master cylinder externally.

114 At the workbench, remove the filler cap and drain out any surplus fluid. Peel back the dust cover and remove the circlip together with the retaining washer and pushrod. Shake the master cylinder to eject the plunger assembly.

115 Release the locknut on the pushrod and unscrew the fork end from the pushrod. Release the crimping band and remove the flexible rubber dust cover. Discard the dust cover. Fit a new dust cover, refit the crimping band and screw the fork end onto the pushrod. Lock the fork end in place with the locknut.

116 On the plunger assembly, lift the leaf of the spring retainer and remove the spring assembly from the plunger. Remove the rubber seal from the plunger. Discard the seal.

117 Compress the spring to free the valve stem from the keyhole of the spring retainer, thus releasing the tension of the spring. Remove the spring, valve spacer and valve spring from the valve stem. Remove the rubber seal from the valve head. Discard the seal.



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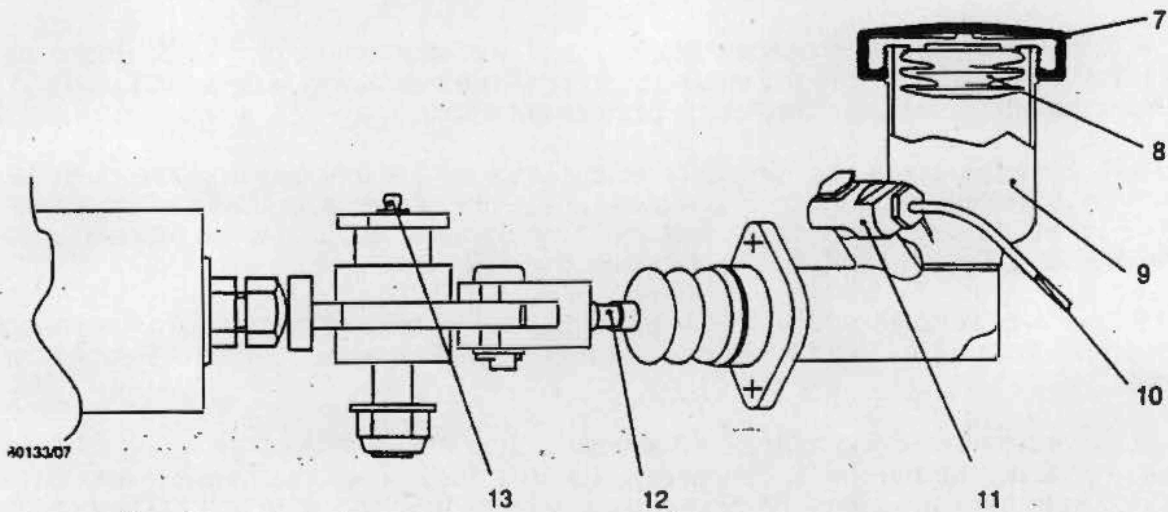


Fig 12 Master cylinder and operating lever assembly

KEY TO FIG 12

- | | |
|------------------------|---------------------------------|
| 1 Overrun damper | 8 Moisture barrier |
| 2 Locknut | 9 Reservoir |
| 3 Operating lever | 10 Hydraulic pipe to brakes |
| 4 Hexagonal nut | 11 Banjo |
| 5 Lockwasher (cadmium) | 12 Pushrod |
| 6 Hexagonal bolt | 13 Swivel pin and grease nipple |
| 7 Dust cap | |

118 Clean the master cylinder bore and all loose parts with methylated spirits and examine them for scores, burrs or ridges, renewing parts as necessary.

119 Fit the new seal to the plunger and the new valve seal, smallest diameter leading, to the valve head.

120 Position the valve spring on the valve stem so that it "flares" away from the valve stem shoulder, following with the valve spacer, legs first, and spring.

121 Fit the spring retainer to the spring and compress the spring until the valve stem passes through the keyhole slot and engages in the centre.

122 Fit the spring assembly to the plunger and press home the leaf of the spring retainer to secure.

123 Liberally lubricate the seals and plunger bore with clean unused hydraulic fluid OX8 and insert the plunger assembly, valve end leading, into the master cylinder.

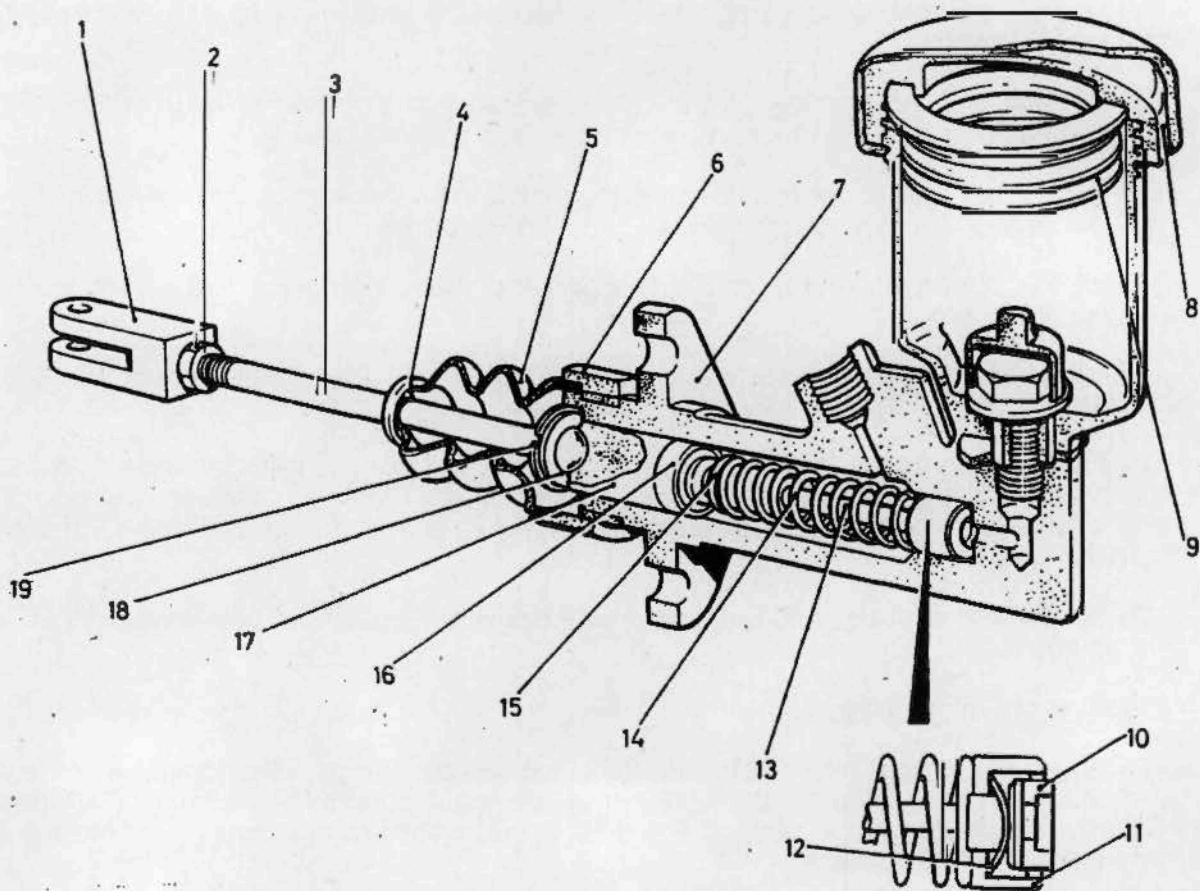
124 Fit the pushrod and retaining washer into the bore of the cylinder and retain with the circlip. Check that there is approximately 0.79 mm (0.031 in.) between the plunger and pushrod. Smear the lips of the dust cover with brake grease and refit the master cylinder body.

125 Fit the filler cap and refit the master cylinder to the trailer and test, as described in Paras 109 to 112.

Bleeding the hydraulic system

126 Support the front and rear of the trailer on vehicle stands. The jockey wheel and rear support legs fitted to the trailer may be used to provide additional support. Release the handbrake. Clean off any road dirt from the brake assembly. Place a drip tray under the hub assembly.

127 Attach a tube leading to a jar to the bleed screw on one of the brake assemblies. The jar should contain a small quantity of clean hydraulic fluid OX8. The tube should be long enough to allow the jar to be placed on a stand so that the fluid level in the jar is at least 40 mm (1.57 in.) above the bleed nipple. The arrangement will reduce the risk of sucking air back into the system when the master cylinder ram is drawn back at the end of the stroke. Open the bleed screw half a turn and manually operate the master cylinder pushrod. Keep the end of the tube below the surface of the fluid in the jar and, as the master cylinder pushrod is operated, look for bubbles of air emerging from the tube. At the end of the pushrod stroke, close the bleed screw, allow the master cylinder pushrod to return, check the level of hydraulic fluid in the master cylinder reservoir and top up if necessary, re-open the bleed screw and operate the pushrod again. Continue these operations, maintaining the level of hydraulic fluid in the master cylinder, until no more bubbles are seen. Close the bleed screw. Repeat the operations on the other brake assembly.



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- | | |
|------------------------------|---------------------|
| 1 Fork end | 11 Valve spacer |
| 2 Locknut | 12 Valve spring |
| 3 Pushrod | 13 Valve stem |
| 4 Crimping band | 14 Spring |
| 5 Flexible rubber dust cover | 15 Spring retainer |
| 6 Rubber band | 16 Plunger seal |
| 7 Master cylinder body | 17 Plunger |
| 8 Filler cap | 18 Retaining washer |
| 9 Moisture barrier | 19 Circlip |
| 10 Valve seal | |

Fig 13 Hydraulic master cylinder

128 Operate the handbrake a few times to equalize the caliper pistons. Remove any support stands. Test the trailer braking system by towing the trailer and applying the vehicle brakes.

Removal and fitting of brake discs

129 The operations necessary to remove a brake disc are given in Paras 27 to 29.

130 The operations necessary to refit a brake disc are given in Paras 30 and 31.

Removal and fitting of dust shields

131 The operations necessary to remove a dust shield are given in Paras 21 and 22.

132 The operations necessary to refit a dust shield are given in Paras 25 and 26.

Handbrake assembly

Removal and fitting of the handbrake (Fig 14)

WARNING

CADMIUM WASHERS ARE USED IN THE FIXING OF THE HANDBRAKE SUPPORT PLATE. REFER TO WARNING (6) IN PRELIMINARY PAGES.

133 Support the front and rear of the trailer on vehicle stands. The jockey wheel and rear support legs fitted to the trailer may be used to provide additional support. Clean off any road dirt from the handbrake lever, cable and adjuster. Insert two lengths of 1/8 in. diameter welding rod through the holes in the spring casing to restrain the spring. Release the handbrake.

134 Remove the bolts fixing the handbrake cable clamps to the chassis. Undo the handbrake cable adjustment nut and turn clear of the locknut. Undo the adjustment nut to allow slack to appear in the handbrake cable. Remove the bolt, washer and locknut fixing the handbrake yoke to the link. Discard the locknut. Pull the handbrake cable and yoke clear of the handbrake lever.

135 Remove the two screws and washers fixing the handbrake support plate to the drawbar crossmember bracket. Remove the locknut fixing the pivot bolt to the drawbar crossmember bracket. Move the handbrake assembly away from the bracket and temporarily refit the locknut to keep the assembly together. Remove the handbrake assembly from the trailer and carry it to the workbench for further disassembly.

136 The spring and spring casing are released from the handbrake assembly by removing the pivot pin. Being wary of residual spring tension, disengage the spring hook from its location on the handbrake lever and the spring casing from its engagement with the fork on the support plate. Remove the spring and spring casing.

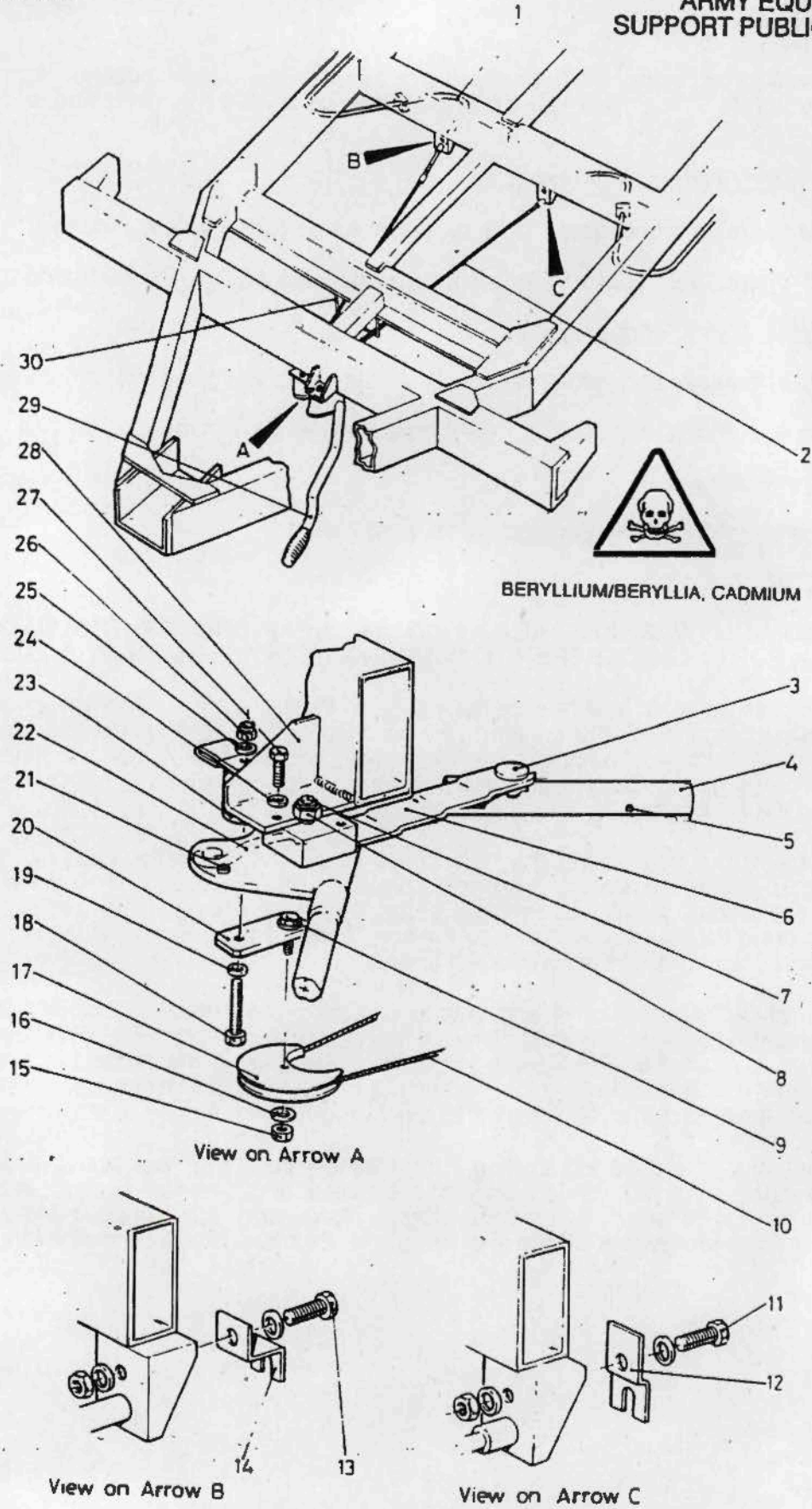


Fig 14 Handbrake assembly

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KEY TO FIG 14

- | | |
|-----------------------------|---|
| 1 Cable outer | 18 Hexagonal bolt, link to compensator |
| 2 Cable inner | 19 Washer |
| 3 Support | 20 Link |
| 4 Spring and spring casing | 21 Spirol pin |
| 5 Hole for spring lock pin | 22 Spring hook |
| 6 Support plate | 23 Compensator |
| 7 Pivot bolt | 24 Washer |
| 8 Pivot locknut | 25 Washer |
| 9 Hexagonal bolt (yoke) | 26 Locknut, link to compensator |
| 10 Cable inner | 27 Screw, chassis bracket to support plate |
| 11 LH cable clamp bolt | 28 Chassis bracket |
| 12 LH cable clamp | 29 Handbrake lever |
| 13 RH cable clamp bolt | 30 U shaped chassis loop to support handbrake cable |
| 14 RH cable clamp | |
| 15 Hexagonal locknut (yoke) | |
| 16 Washer (yoke) | |
| 17 Yoke | |

137 Remove the locknut from the compensator, releasing the bolt and washers fixing the link to the handbrake lever. Discard the locknut. Remove the locknut from the handbrake lever pivot bolt to release the lever from the support plate. Discard the locknut.

138 During re-assembly of the handbrake and associated components, all moving parts must be lubricated with grease, automotive and artillery, XG 279 (DEF STAN 91-27).

139 Refit the handbrake lever and support plate together with the pivot bolt. Fix the items together with a new locknut, but do not tighten the nut at this time as the locknut needs to be removed to fit the assembly to the trailer. Re-engage the spring hook with the pillar on the handbrake lever, ensuring that when the assembly is fitted to the drawbar, the open end of the hook will face the trailer centre line. Extend the spring until the boss on the spring case engages with the fork on the support plate, being wary of the strong spring. Fit a new spirol pin to the handbrake lever to prevent the spring hook from disengaging from the lever.

140 Refit the link to the handbrake with the bolt, washers top and bottom and a new locknut. Do not fully tighten the locknut at this time.

141 Carry the handbrake lever and components to the trailer. Remove the locknut from the pivot bolt, pass the pivot bolt through the bracket on the drawbar crossmember and refit the locknut. Fix the support plate to the trailer bracket with two screws and washers. Tighten the pivot bolt locknut sufficiently to allow free movement of the handbrake lever about the support plate.

142 Fix the handbrake cable yoke to the link with the bolt, washers top and bottom and a new locknut, ensuring that the cable and yoke pass through the U shaped loop attached to the chassis front crossmember. Do not tighten the link locknut fully at this time.

143 Ensure that the handbrake cable outers are engaged in the brackets on the centre crossmember and that the hooks and outers are engaged with the brake calipers correctly.

144 Remove the two pieces of welding rod from the spring casing or, if fitting a new spring assembly, remove the U clip from the spring casing.

145 Apply the handbrake a few times to adjust the cables and check brake operation. If necessary, release the handbrake and adjust the cable to obtain correct brake operation, as described in Paras 155 and 156.

146 Tighten locknuts on the pivot bolt, compensator bolt and link bolt sufficient to retain ease of movement with minimal backlash. Tighten the handbrake cable adjuster locknut and fit the cable clamps to the cable and chassis.

147 Test the handbrake operation fully.

Removal and fitting of handbrake cable (Fig 14)

148 Support the front and rear of the trailer on vehicle stands. The jockey wheel and rear support legs fitted to the trailer may be used to provide additional support. Clean off any road dirt from the handbrake compensator, cable and brake assemblies.

149 Remove the bolts fixing the handbrake cable clamps to the chassis. Undo the handbrake cable adjustment nut and turn the nut clear of the locknut. Undo the adjustment nut to allow slack to appear in the handbrake cable. Remove the bolt, washers and locknut fixing the handbrake yoke to the link. Discard the locknut. Pull the handbrake cable and yoke clear of the handbrake and compensator.

150 Unhook the inner cable from both brake caliper levers and disengage the outers from the guides on the calipers. Extract the grommets on the outers from the brackets on the chassis crossmember, allowing the cable and outers to be withdrawn from the calipers. Disengage the outers from the reaction brackets and pass the inner cable through the slots in the reaction brackets. Remove the handbrake cable from the trailer.

151 To fit the handbrake cable to the trailer, start by ensuring that the handbrake lever is in the OFF position. Pass the inner cable through the slots on the two reaction brackets on the chassis and locate the outer plastic sleeves through the holes in the brackets, with the adjuster and locknut to the right hand side of the trailer. Feed the inner cable and one outer through the bracket on one side of the chassis to the brake caliper, engaging the grommet on the outer with the bracket hole. Repeat on the other side of the trailer with the other outer. Hook the ends of the cable over the caliper levers and engage the outers in the caliper guides. Feed the handbrake cable and yoke through the loop on the front crossmember of the chassis. Refit the bolt, washers top and bottom and a new locknut to attach the yoke to the link.

152 Initially, set the distance between the handbrake adjuster locknut face and the end of the outer on the handbrake cable, on the right of the trailer to be 25 mm (0.984 in.). Turn the adjuster nut to meet the locknut. Refer to Fig 15.

153 Operate the handbrake lever a few times to equalise the cable distribution, then check the operation of the handbrake. If the handbrake operation is satisfactory, withdraw the cable portion rearwards away from the abutment face sufficient to enable both adjustment nut and locking nut to be grasped with self locking pliers or a peg spanner. Run the locking nut forward until face contact is made with the adjustment nut. Continue to rotate the locking nut clockwise until 3 to 5 clicks have been heard. Relocate the cable up to the abutment face. Refit the cable clamps to the cable at the reaction brackets with bolts and washers. Remove any support stands. Test the handbrake operation thoroughly. If the cable requires further adjustment, proceed as detailed in Paras 155 to 157 and refit the cable clamps after adjustment.

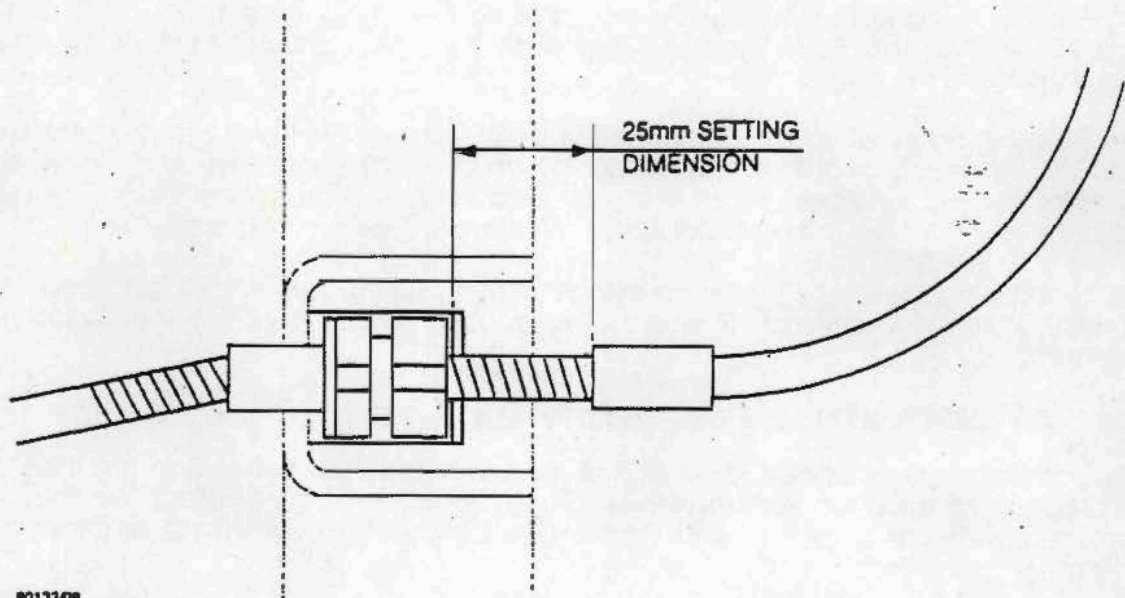
Handbrake cable adjustment

154 Support the front and rear of the trailer on vehicle stands. The jockey wheel and rear support legs fitted to the trailer may be used to provide additional support. Clean off any road dirt from the handbrake cable, cable adjuster and brake assemblies.

155 Remove the bolts fixing the RH handbrake cable clamp to the chassis. Undo the handbrake cable adjustment nut and turn clear of the locknut. Undo the adjustment nut enough so as to allow the brake caliper operating levers to reach the stop screws. Check that the hooks on the cable engage both brake levers fully and that the cable outers are firmly seated in the caliper brackets. Operate the handbrake lever a few times to equalise the cable.

156 Turn the handbrake adjustment nut until both levers are just about to move from the stops. Withdraw the cable portion rearwards away from the abutment face sufficient to enable both adjustment nut and locking nut to be grasped with self locking pliers or a peg spanner. Run the locking nut forward until face contact is made with the adjustment nut. Continue to rotate the locking nut clockwise until 3 to 5 clicks have been heard. Relocate the cable up to the abutment face. Refit the cable clamps.

157 Remove any support stands. Test the handbrake operation fully.



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Fig 15 Handbrake cable adjustment

Overrun brake damperRemoval and fitting of overrun brake damper

158 Remove the four bolts, washers and locknuts fixing the overrun brake damper to the trailer chassis. Discard the locknuts. Remove the damper from the trailer.

159 Refit the overrun damper to the trailer chassis using the bolts, washers and new locknuts, ensuring that the bolts are fitted from the top of the damper. Torque tighten the locknuts to 92.3 Nm (68.09 lbf ft).

Adjustment of overrun brake damper

160 After fitting the overrun brake damper to the chassis, the length must be checked and adjusted if necessary. Refer to Fig 12.

161 Scotch the trailer wheels and adjust the jockey wheel and rear support legs such that the trailer stands level. Release the handbrake. Ensure that the master cylinder reservoir is full and that the pushrod and lever have returned to the fully off position. Undo the locknut on the adjustment screw and screw in or out as appropriate so that the spherical head just touches the operating lever, without moving the lever. Tighten the locknut. Test the operation of the trailer braking system thoroughly.

Jockey wheel assembly (Fig 16)Removal and fitting of jockey wheel

162 Scotch the trailer wheels. Ensure that the handbrake is applied. Support the front and rear of the trailer on vehicle stands. The rear support legs on the trailer may be used to provide additional support.

163 Remove the two locknuts and washers fixing the jockey wheel and clamp to the pivot assembly on the trailer drawbar. Discard the locknuts. Remove the jockey wheel and clamp from the trailer.

164 Refit the jockey wheel and clamp to the trailer with washers and two new locknuts. Test the operation of the jockey wheel by winding the wheel up and down and swinging the jockey wheel about the pivot, ensuring that the spring loaded plunger locks the jockey wheel in the up position and the down position correctly.

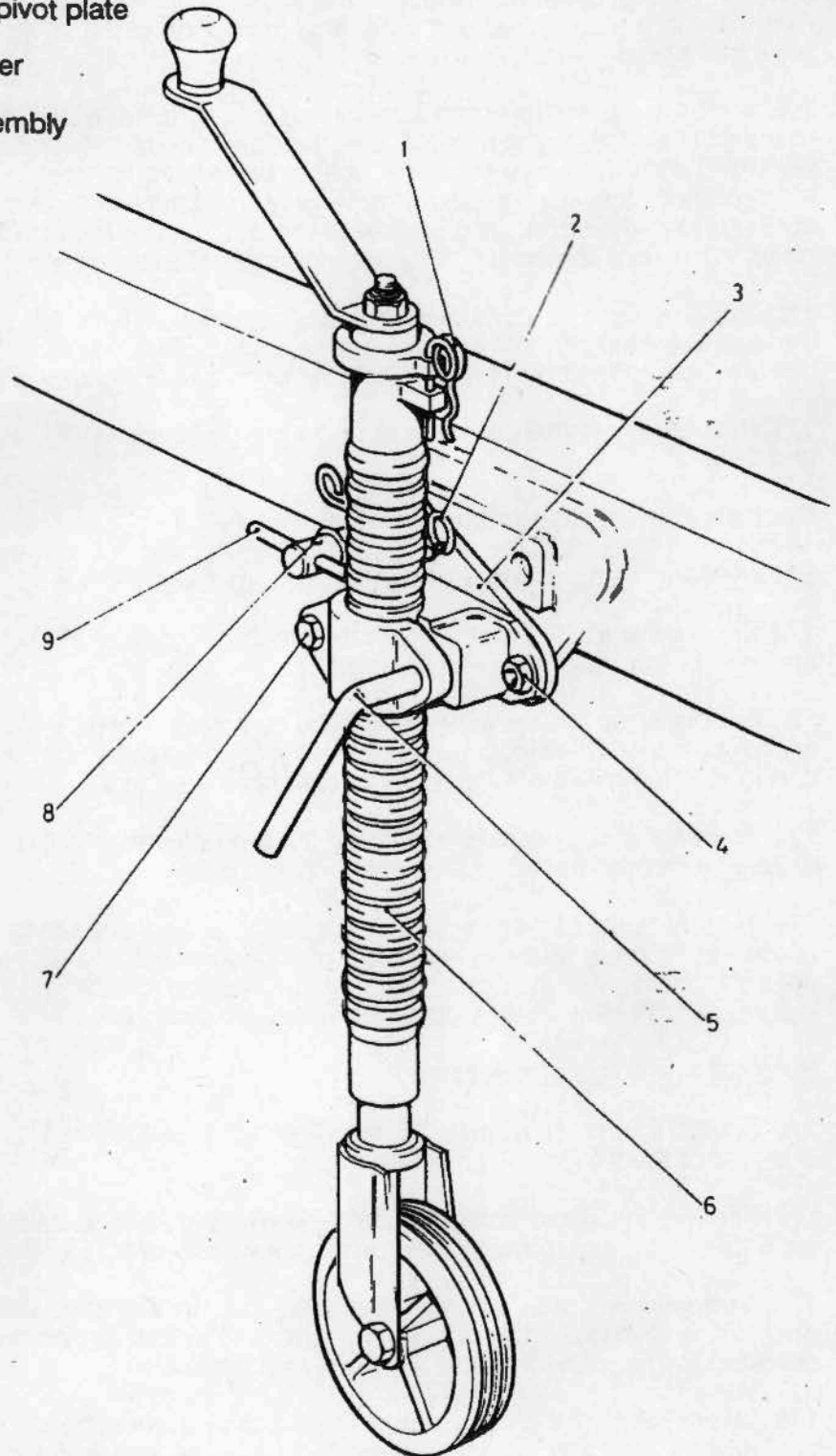
165 Swing the jockey wheel down and lock into place, with the safety clip through the plunger. Adjust the height of the wheel as appropriate. Remove all support stands and scotches.

Removal and fitting of jockey wheel pivot assembly

166 Scotch the trailer wheels. Ensure that the handbrake is applied. Support the front and rear of the trailer on vehicle stands. The rear support legs on the trailer may be used to provide additional support. Remove the jockey wheel and clamp, as described in Para 163.

167 Remove the locknut and washer fixing the pivot assembly to the trailer. Discard the locknut. Remove the pivot assembly to the workbench for further disassembly.

- 1 Spring clip, handle
- 2 Spring clip, pin to pivot plate
- 3 Pivot plate
- 4 Locknut and washer
- 5 Clamp
- 6 Jockey wheel assembly
- 7 Machine bolt
- 8 Spring pin
- 9 Plunger



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Fig 16 Jockey wheel

168 Tap the spring pin from the handle assembly with a suitable drift. Discard the spring pin. Remove the handle and internal spring from the pin, being wary of any residual spring tension. Remove the spring clip holding the pin to the pivot plate. Remove the pin from the pivot plate and the spring clip and wire securing loop from the pivot plate boss.

169 Start the assembly procedure by applying grease, automotive and artillery, XG 279 to the pin and fit the pin through the pivot plate boss. Relocate the spring clip with the wire loop over the boss, align the hole in boss with the hole in the pin and lock the pin in place with the spring clip. Apply grease, automotive and artillery, XG 279 to the spring and fit the spring and handle to the pin, turning the handle to align the spring pin holes in the handle and pin. Fit a new spring pin to lock the handle and pin together.

170 Apply grease, automotive and artillery, XG 279 to the pivot pin and fit the pin through the bearing and bracket on the trailer. Refit the washer and a new locknut to the pivot pin. Tighten the nut to lock the pivot assembly to the trailer.

171 Refit the jockey wheel and clamp to the pivot assembly, as described in Paras 164 and 165.

Rear support leg assemblies

Removal and fitting of rear support leg assemblies (Fig 17)

172 Scotch the trailer wheels. Ensure that the handbrake is applied. Support the front and rear of the trailer on vehicle stands.

173 On the support leg assembly to be removed, remove the four bolts, lockwashers and nuts fixing the support leg assembly to the trailer. Retain the bolts, lockwashers and nuts. Remove the support leg assembly from the trailer for further disassembly.

174 To refit the support leg assembly, fix the assembly to the trailer at the appropriate location with the four bolts, lockwashers and nuts.

175 Test the support leg by undoing the clamp and extending and reducing the length of the leg. Check that the full range of movement is available. Swing the support leg up and down and lock into place each time to check for correct operation of the locking pin. Remove the support stands and scotches.

Removal and fitting of pivot pin

176 Scotch the trailer wheels. Ensure that the handbrake is applied. Support the front and rear of the trailer on vehicle stands.

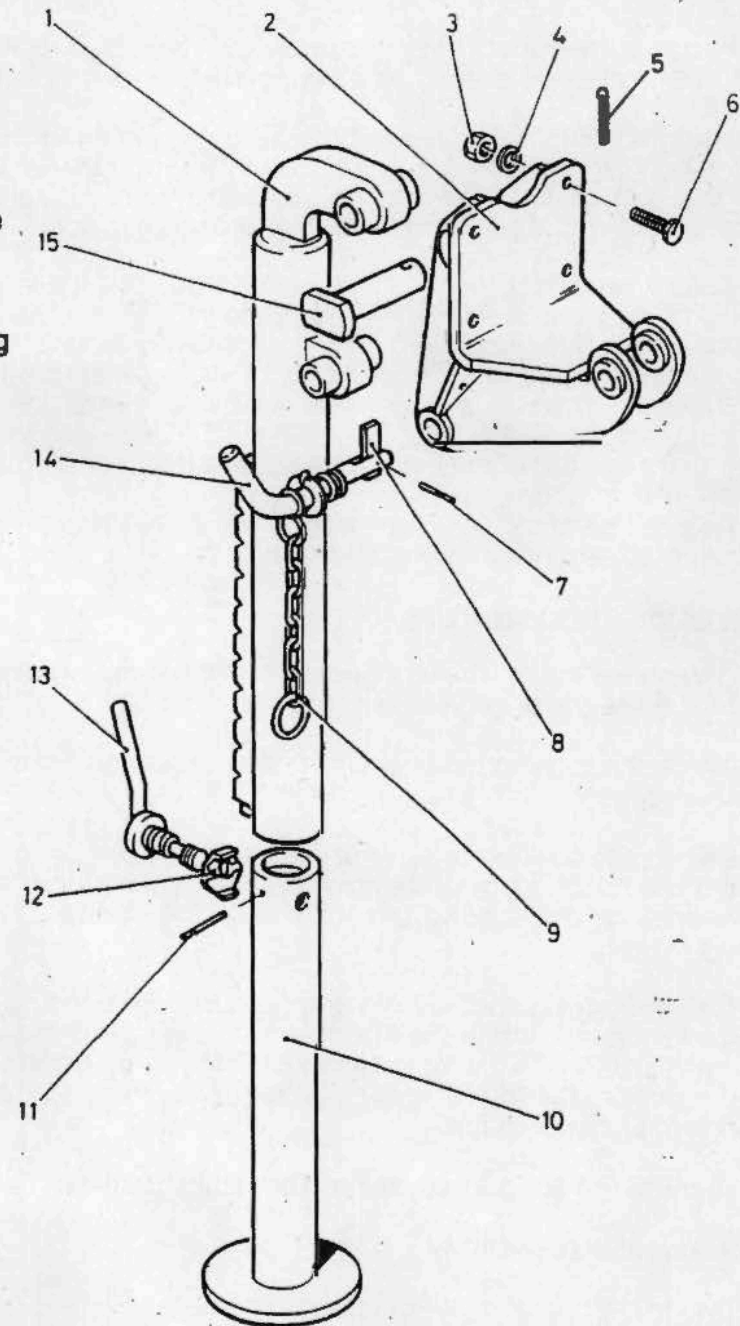
177 Remove the support leg assembly from the trailer, as described in Para 173. Carry the support leg assembly to workbench for further disassembly.

178 Remove the cotter pin from the pivot pin on the bracket assembly. Remove the pivot pin and discard the cotter pin. Extract the locking pin from the support leg and bracket. Remove the support leg from the bracket.

179 Before refitting the pivot pin to the bracket, smear the pin with grease, automotive and artillery, XG 279. Bring the support leg and bracket together and align the two pivot pin holes. Fit the pivot pin and fit a new cotter pin. Refit the locking pin.

180 Refit the support leg assembly to the trailer, as described in Paras 174 and 175.

- 1 Support leg outer tube
- 2 Bracket assembly
- 3 Hexagonal nut
- 4 Lockwasher
- 5 Cotter pin
- 6 Machine screw
- 7 Headless pin
- 8 Latch
- 9 Chain
- 10 Support leg inner tube
- 11 Headless pin
- 12 Locating washer
- 13 Clamping bolt
- 14 Locking pin and spring
- 15 Pivot pin



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Fig 17 Rear support leg

Disassembly and assembly of support leg

181 Scotch the trailer wheels. Ensure that the handbrake is applied. Support the front and rear of the trailer on vehicle stands.

182 Remove the support leg assembly, as described in Para 173. Remove the pivot pin and separate the bracket and support leg, as described in Para 178.

183 Using a suitable drift, tap out the headless pin fixing the clamping bolt assembly to the support leg. Discard the pin. Completely unscrew the clamping bolt assembly from the support leg, allowing the inner and outer tubes of the leg to separate. The locating washer can be removed from the clamping bolt.

184 Before assembly, apply a film of oil, type PX4 (DEF STAN 80-34) to the working surface of the inner tube. Insert inner tube into the outer tube and rotate the inner tube threaded hole into alignment with the grooved strip on the outer tube. Insert the clamping bolt assembly, complete with locating washer, to the inner tube thread and screw home. Drive in a new headless pin to fix the inner and outer tubes and the clamping bolt assembly together. Check by releasing the clamping bolt that the full range of movement of the inner tube relative to the outer tube is available.

185 Refit the pivot pin, as described in Para 179 and refit the support leg assembly to the trailer, as described in Paras 174 and 175.

Removal and fitting of locking pin

186 Scotch the trailer wheels. Ensure that the handbrake is applied. Support the front and rear of the trailer on vehicle stands.

187 Unclip the locking pin chain from the bracket and take the locking pin assembly to the workbench.

188 Using a suitable drift, tap out the headless pin fixing the latch to the locking pin. Discard the headless pin. Remove the latch. Bend the tang of the spring away from the washer on the locking pin to release the spring. Remove the spring from the locking pin.

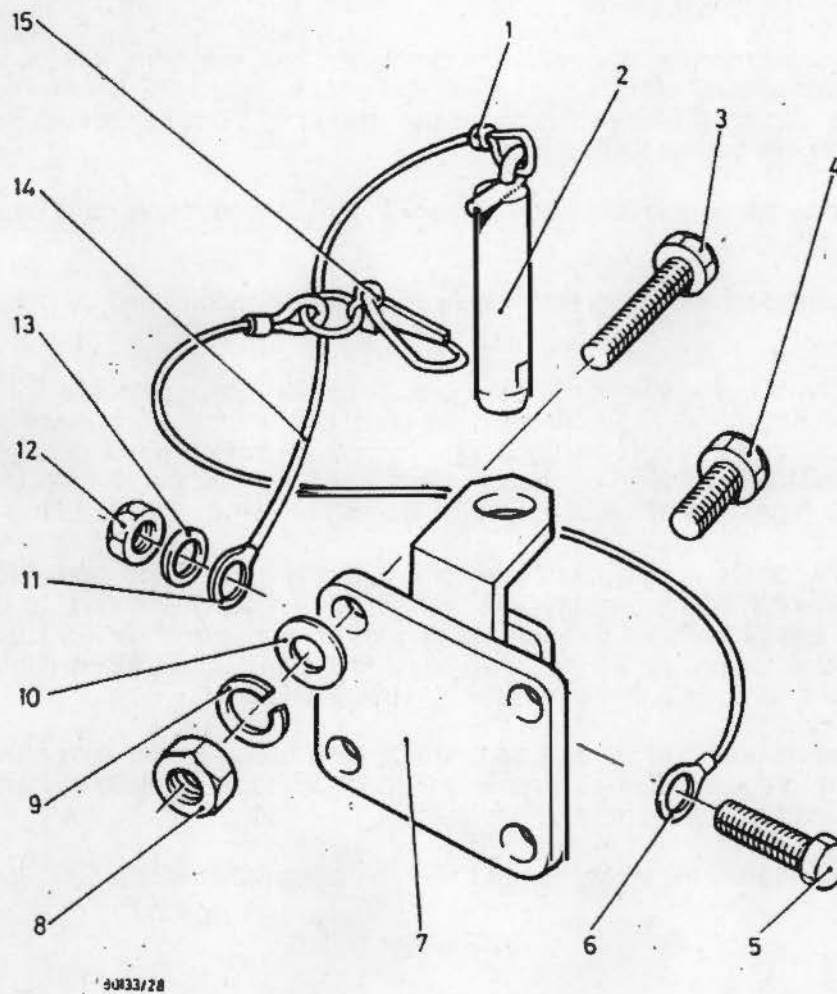
189 Refit the spring to the locking pin and fix by bending the tang of the spring over the fixed washer. Smear the spring and locking pin shaft with grease, automotive and artillery, XG 279. Fix the latch to the locking pin by driving in a new headless grooved pin. Reconnect the locking pin chain to the support leg bracket. Insert the locking pin into one of its two locations.

190 Remove the support stands and scotches from the trailer.

Trailer coupling assemblyRemoval and fitting of trailer coupling assembly

191 Ensure that the handbrake is applied and that the jockey wheel and support legs are adjusted to hold the trailer level.

192 Remove the four bolts, washers, lockwashers and nuts fixing the trailer coupling assembly to the trailer rear crossmember. Retain the four bolts, washers, lockwashers and nuts. Remove the trailer coupling assembly to the workbench for further disassembly, if required.



- 1 Parallel connector, HC1335
- 2 Towing pin
- 3 Machine bolt, 3 1/2 in. long
- 4 Machine bolt, 1 3/4 in. long
- 5 Machine screw
- 6 Ring terminal HC5115
- 7 Towing bracket
- 8 Hexagonal nut

- 9 Lockwasher
- 10 Flat washer
- 11 Ring terminal HL11506
- 12 Hexagonal nut
- 13 Lockwasher
- 14 Nylon cord
- 15 Spring clip cotter pin

Fig 18 Trailer coupling assembly

193 Fit the trailer coupling assembly to the trailer with the four bolts, washers, lockwashers and nuts used previously. Note that the longest bolts are fitted into the top two holes of the coupling assembly.

Removal and fitting of towing pin and snap ring cotter pin

194 Remove the trailer coupling assembly from the trailer, as described in Paras 191 and 192.

195 At the workbench, remove the screw, lockwasher and nut fixing the two nylon cords to the towing bracket. Retain the screw, lockwasher and nut. Unclip the snap ring from the cotter pin and remove the cotter pin assembly from the towing bracket. Remove the towing pin from the towing bracket.

196 Release the snap ring cotter pin and ring terminal from one nylon cord by cutting the cord.

197 Release the towing pin and ring terminal from the other nylon cord by cutting the cord.

198 For re-assembly of the towing pin, use a piece of nylon cord, diameter 3.175 mm (1/8 in.) length 304.8 mm (12 in.). Singe both ends of the cord to prevent fraying. Loop one end of the cord through the securing loop on the towing pin and crimp back on itself with a HC1335 parallel connector and a Hellerman hand tool Mk4/5W. Similarly double the other end of the cord and crimp ring terminal HC5115 to the cord.

199 For re-assembly of the spring clip cotter pin, use a piece a nylon cord, diameter 3.175 mm (1/8in.), length 304.8 mm (12 in.). Singe both ends of the cord to prevent fraying. Loop one end of the cord through the spring clip and crimp back on itself with a HC1335 parallel connector and a Hellerman hand tool Mk4/5W. Similarly double the other end of the cord and crimp ring terminal HL11506 to the cord.

200 Refit the ring terminals, one either side of the towing bracket web, with the screw, lockwasher and nut used previously. Secure the spring clip cotter pin to the left of the bracket and the towing pin to the right of the bracket.

201 Refit the trailer coupling assembly to the trailer, as described in Para 193.

CHAPTER 1 ANNEX A

ELECTRICAL EQUIPMENT, NSN 2330-99-893-8609
(REYNOLDS BOUGHTON TRAILERS)

CONTENTS

Frame	Para		
E02	1	Removal and fitting of stop, tail and turn lights	
E02	3	Removal and fitting of front position lamps	
E02	5	Removal and fitting of fog lamps	
E03	7	Removal and fitting of number plate and convoy plate lamps	
E03	9	Removal and fitting of stop, tail and turn light assemblies	
E03	11	Removal and fitting of fog lights	
E03	13	Removal and fitting of front position lights	
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Removal and fitting of stop, tail and turn lights

- 1 Release the lens from the appropriate light assembly by unscrewing six captive screws in the lens. Remove the lens, screws and gasket and retain. Remove the faulty lamp by pushing and turning anti-clockwise against the spring.
- 2 Fit the appropriate new lamp into the socket and push and turn clockwise to fit. Refit the lens using the six screws and sealing gasket, ensuring that the gasket seats and seals correctly.

Removal and fitting of front position lamps

- 3 Release the lens from the appropriate light by peeling back the rubber lip from the lens flange. Remove the faulty lamp by pushing and turning anti-clockwise against the spring.
- 4 Fit the new lamp into the socket and push and turn clockwise to fit. Refit the lens flange into the rubber casing.

Removal and fitting of fog lamps

- 5 Release the lens from the appropriate fog light by unscrewing the four captive screws in the lens. Remove the lens, screws and gasket and retain. Remove the faulty lamp by pushing and turning anti-clockwise against the spring.

6 Fit the new lamp into the socket and push and turn clockwise to fit. Refit the lens using the four screws and sealing gasket, ensuring that the gasket seats and seals correctly.

Removal and fitting of number plate and convoy plate lamps

7 Release the cover and lens from the appropriate light by unscrewing two screws. Retain the screws. Remove the faulty lamp by pushing and turning anti-clockwise against the spring.

8 Fit the new lamp into the socket and push and turn clockwise to fit. Refit the cover and lens using the two screws used previously.

Removal and fitting of stop, tail and turn light assemblies

9 Release the lens from the light assembly by unscrewing six screws in the lens. Remove the lamps. Remove the wiring connections to the lamp fittings and note the connections to aid re-assembly. Disconnect the lamp wiring. Remove the bolts and washers fixing the light assembly to the chassis. Retain the bolts and washers. Pull the cable through the light assembly shell. Remove the light assembly from the trailer.

10 Pass the cable through the back of the light assembly shell. Fix the light assembly to the chassis with the bolts and washers used previously if refitting the original light assembly or new bolts and washers if fitting a new light assembly. Reconnect the lamp wiring as noted previously. Fit any lamps removed. Fit the lens using the six screws used previously if refitting the original lens or the new screws if fitting a new lens.

Removal and fitting of fog lights

11 Release the lens from the light assembly by unscrewing four screws in the lens. Remove the lamp. Remove two screws to release the reflector plate to expose the wiring connections to the lamp assembly and note the connections. Disconnect the lamp wiring. Remove the bolts and washers fixing the light assembly to the chassis. Retain the bolts and washers and pull the cable through the light assembly shell. Remove the light assembly from the trailer.

12 Pass the cable through the back of the light assembly shell. Fix the light assembly to the chassis with the bolts and washers used previously. Reconnect the lamp wiring as noted previously. Fit any lamps removed. Fit the lens using the four screws used previously if refitting the original lens or the new screws if fitting a new lens.

Removal and fitting of front position lights

13 Release the lens from the light by peeling back the rubber lip from the lens flange. Remove the lamp. The light assembly is held on the trailer by friction acting on ribbing on the rubber cover and will pull free of the chassis with a gentle tug. Release the wiring connectors to the lamp assembly and remove the light assembly from the trailer.

14 Fit the wiring connectors to the lamp assembly. Refit the light assembly to the chassis by pushing the rubber cover into the chassis. Fit the lamp and lens.

Removal and fitting of number plate and convoy plate lights

15 Remove the two screws holding the light assembly to the chassis. Retain the screws. Disconnect the wiring connections to the lamp assembly. Remove the light assembly from the trailer.

16 Connect the wiring connections to the lamp assembly. Fix the light assembly to the chassis with the screws used previously.

Removal and fitting of reflectors

17 Each of the front and side reflectors is fixed to the chassis by two screws, washers and nuts. The rear reflector is fixed to the chassis by an adhesive.

18 To remove a front or side reflector, undo the fixing screws, washers and nuts and retain. To refit a reflector, re-use the fixing items.

Removal and fitting of cable harnesses

19 When removing cable harnesses from the trailer, note should be made of cable runs and support clips fitted to aid re-assembly.

20 The NATO plug and cable connects the towing vehicle socket to the Rubbolite connector block on the front chassis. Individual cable assemblies run from the connector block to each light assembly. A cable assembly can be removed by removing the appropriate cable clips and unscrewing the terminals from the connector block. Note that the cable assemblies to the front lights are in nylon sleeves for part of the run.

TABLE 1 INPUT CABLE TO CONNECTOR BOX

12 PIN NATO PLUG	MAIN INPUT CABLE COLOUR	FUNCTION	CONNECTOR BOX TERMINAL
J	Red	RH stop	1
M	Yellow	LH turn	2
Spare A	Turquoise	-	3
F	Pink	Fog	4
Spare H	Grey	-	5
			6
D	White	Negative	7 *
E	Brown	Tail	8 **
L	Light Blue	Negative	9 *
B	Orange	LH stop	10
N	Green	RH turn	11
			12 **
			13
K	Blue	Aux Pos	14
C	Black	Convoy	15

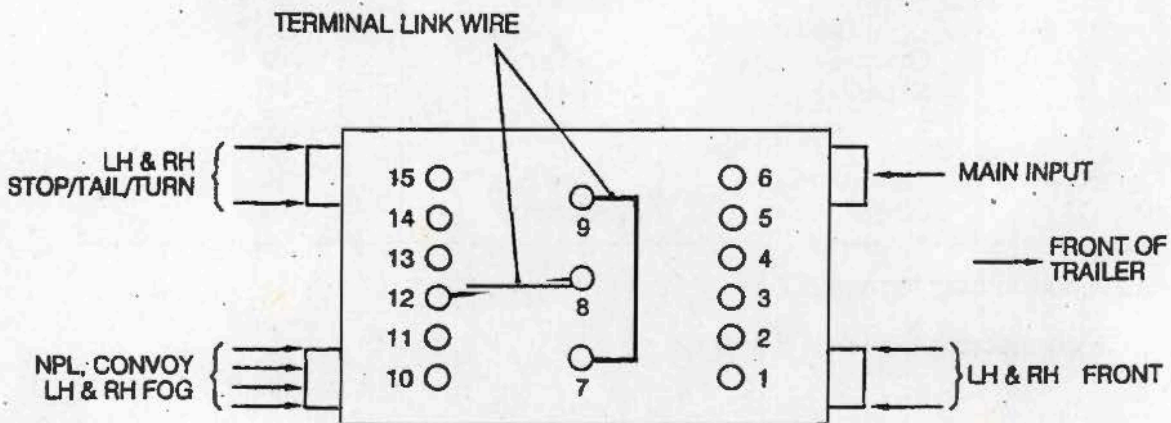
* Link connecting terminals 7 and 9

** Link connecting terminals 8 and 12

TABLE 2 CONNECTOR BOX OUTPUT CABLE CONNECTIONS

CONNECTOR BOX TERMINAL	RH STOP/ TAIL/ TURN	LH STOP/ TAIL/ TURN	CONVOY PLATE	LH FRONT	RH FRONT	RH FOG	LH FOG	NUMBER PLATE
1	Red	Yellow						
2								
3								
4								
5	Black	Black White Brown		Black				Black
6								
7								
8								
9	White	Red	Black		Red *8 Black	Black	Black	
10								
11	Green Brown							Red *12
12								
13								
14								
15								
			Red *15					

* Denotes id on cable



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Fig 1 Connector box terminals, NSN 2330-99-893-8609 trailers

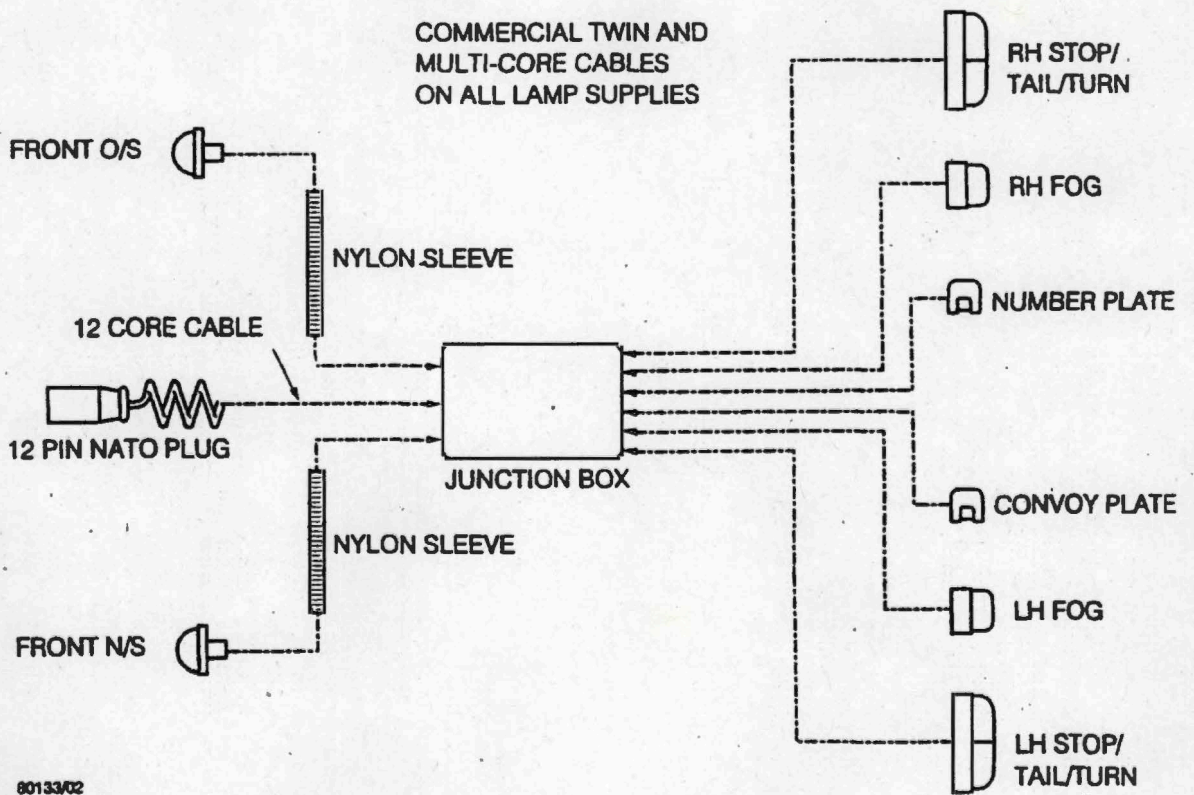
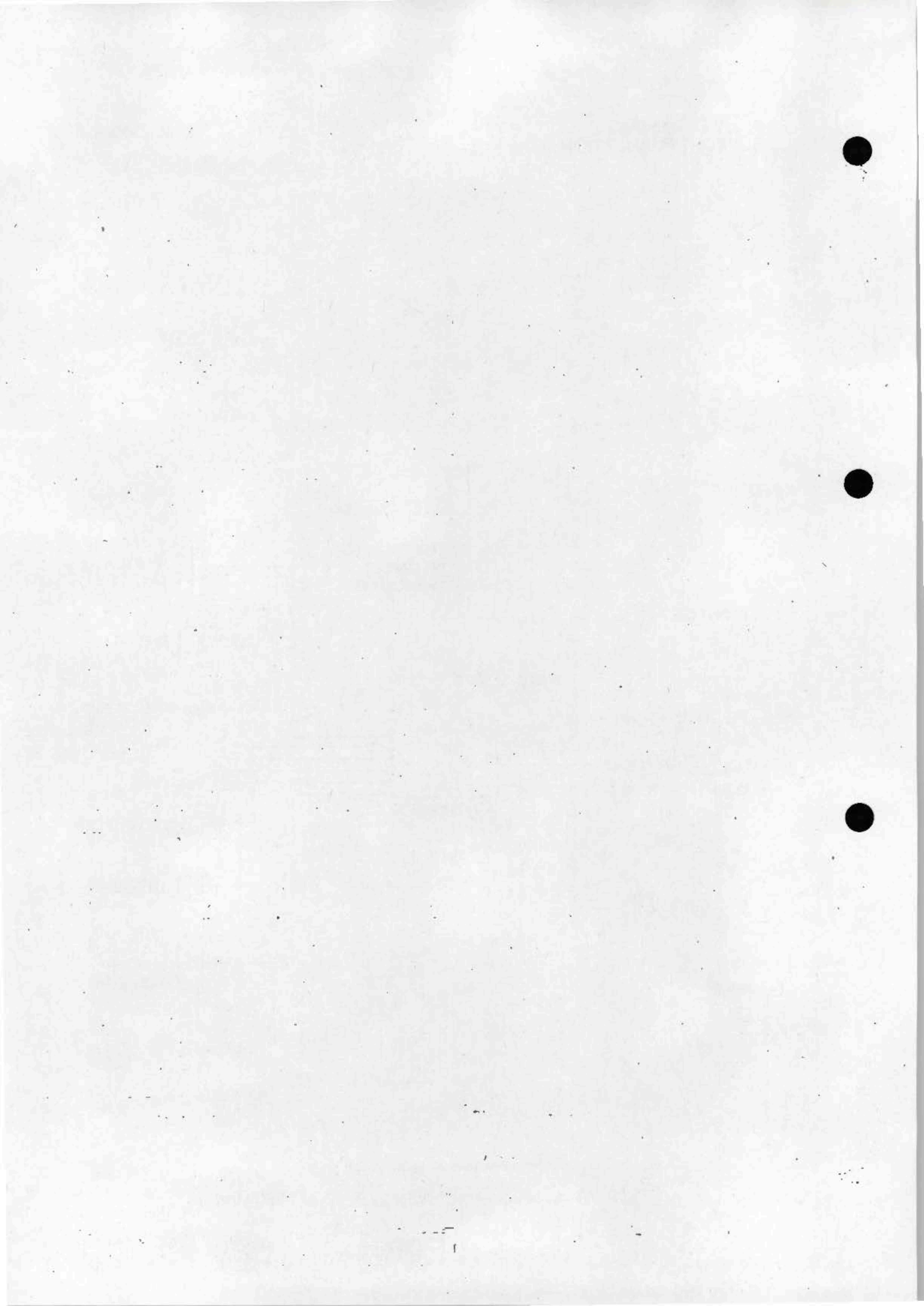


Fig 2 Wiring arrangement, NSN 2330-99-893-8609 trailers



CHAPTER 1 ANNEX B
ELECTRICAL EQUIPMENT, NSN 2330-99-893-8610
(VIKING TRAILERS)

CONTENTS

Frame Para

E09	1	Removal and fitting of lamps
E09	3	Removal and fitting of stop/tail, turn and front position lights
E09	5	Removal and fitting of number plate, convoy plate and fog lights
E10	7	Removal and fitting of reflectors
E10	9	Removal and fitting of cable harnesses

Table

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E11	1	Cable connections, trailer NSN 2330-99-893-8610	3
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Fig

E12-E13	1	Wiring arrangement, NSN 2330-99-893-8610 trailers (two sheets)	4-5/6
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Removal and fitting of lamps

1 Release the lens from the appropriate light by folding back the rubber surround away from the lens flange. Remove the faulty lamp by pushing and turning anti-clockwise against the spring. Remove the lamp.

2 Fit the new lamp into the socket and push and turn clockwise to fit. Refit the lens flange into the rubber casing.

Removal and fitting of stop/tail, turn and front position lights

3 Release the lens from the appropriate light, as described in Para 1. Pull the lamp assembly away from the light fitting to expose the terminals. Make a note of the terminal/cable colour connections. Disconnect the cables from the light fitting. Release the fixing screws, lockwashers and nuts. Retain the fixing items. Remove the light fitting from the trailer.

4 Refit the light fitting to the trailer with the screws, lockwashers and nuts used previously. Feed the cable assembly into the light fitting and connect to the terminals on the lamp assembly. Refit the lamp assembly inside the light fitting, refit the lamp and lens.

Removal and fitting of number plate, convoy plate and fog lights

5 These lights are connected to the main harness through local bullet connectors, two for each light. Disconnect the light from the bullet connectors, noting the wiring orientation. Remove the two nuts and lockwashers fixing the light assembly to the trailer chassis. Remove the light fitting from the trailer.

6 To refit, feed the light connector wires through the appropriate hole in the number plate or convoy plate and refit the light to the trailer with the nuts and lockwashers used previously. Reconnect the wires to the bullet connectors.

Removal and fitting of reflectors

7 Each of the reflectors, front and side, is fixed to the trailer chassis by two screws, washers and nuts. The rear triangular reflectors are fixed to the trailer by two screws and washers, into threads on the trailer mounting plates.

8 To remove a reflector, undo the fixing items, as appropriate, and retain. To refit a reflector, re-use the fixing items.

Removal and fitting of cable harnesses

9 When removing cable harnesses from the trailer, note should be made of cable runs and support clips fitted to aid reassembly.

10 The NATO plug and cable connects the towing vehicle socket to the front connector block. The cable assembly can be removed by removing the cable clamp holding the cable to the front crossmember and by pulling the pins from the front connector block.

11 Refer to Table 1 and Fig 1, sheets 1 and 2. Route the cable through the chassis from the drawbar, as noted during disassembly, and refit the cable clamp. Reconnect the cable pins to the connector block as shown.

12 Other cable assemblies in conduit tubing may be disconnected and connected similarly.

TABLE 1 CABLE CONNECTIONS, TRAILER NSN 2330-99-893-8610

12 PIN NATO PLUG	CABLE COLOUR	VIEW ON POINT A		VIEW ON POINT B		VIEW ON POINT C		VIEW ON POINT D
N	Green	RH turn	A	RH turn		RH stop	A	RH stop
C	Light Blue	Convoy	B	Convoy		RH turn	B	RH turn
D	White	Negative	C	Negative		LH turn	C	LH turn
-	-	Negative RH side light	D	Negative RH side light		LH stop	D	LH stop
F	Aquamarine	Spare F	E	Spare F		Convoy	E	Convoy
M	Yellow	LH turn	F	LH turn		Dummy	F	Dummy
J	Red	RH stop	G	RH stop		Spare F	G	LH fog
K	Grey	Aux Pos	H	Dummy		Dummy	H	RH fog
E	Brown	Tail light	J	Tail light		Tail light	J	RH tail light
-	-	LH side light	K	RH side light		LH tail light	K	Number plate light
H	Black	Spare H	L	Dummy				
B	Dark Blue	LH stop	M	LH stop				
A	Pink	-	-	-				
L	Orange	-	-	-				

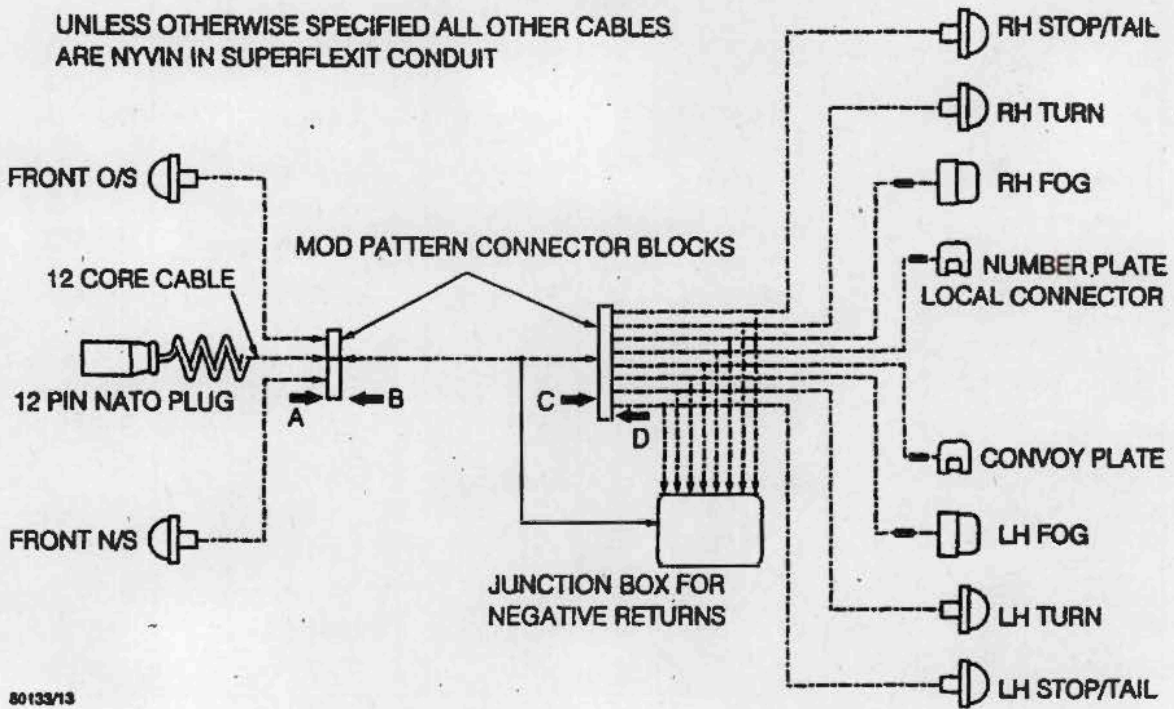
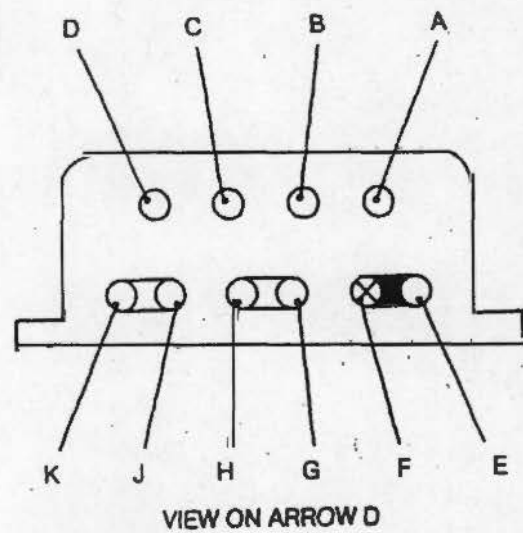
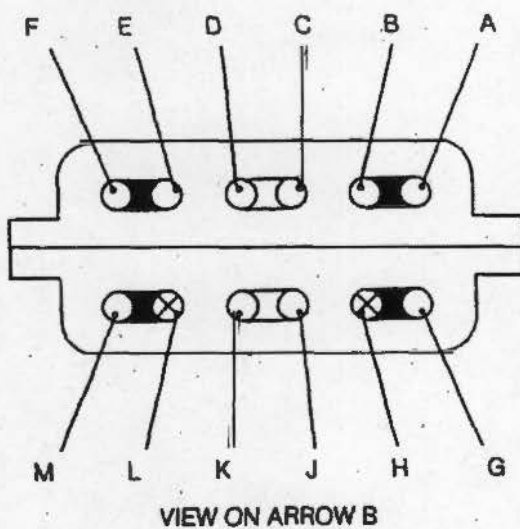
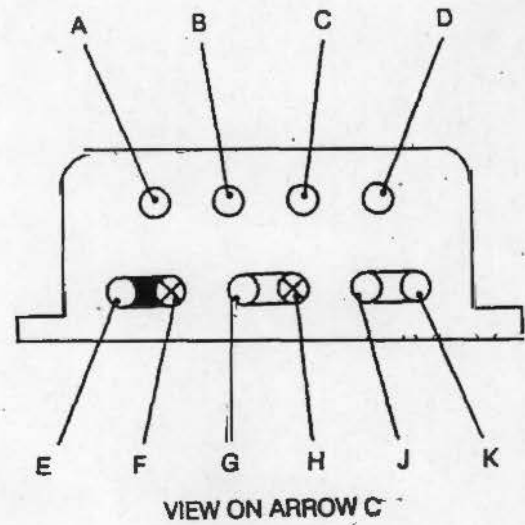
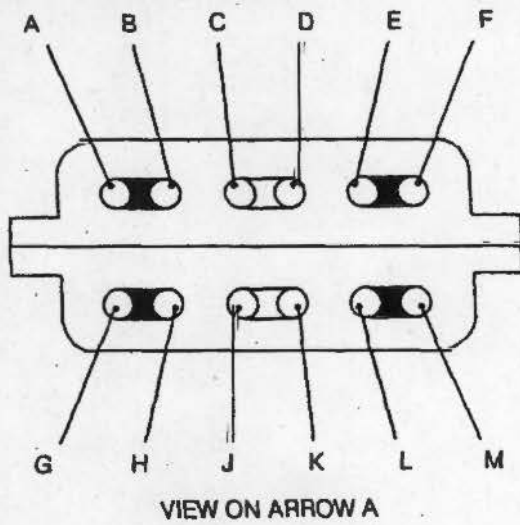


Fig 1 Wiring arrangement, NSN 2330-99-893-8610 trailers (sheet 1)

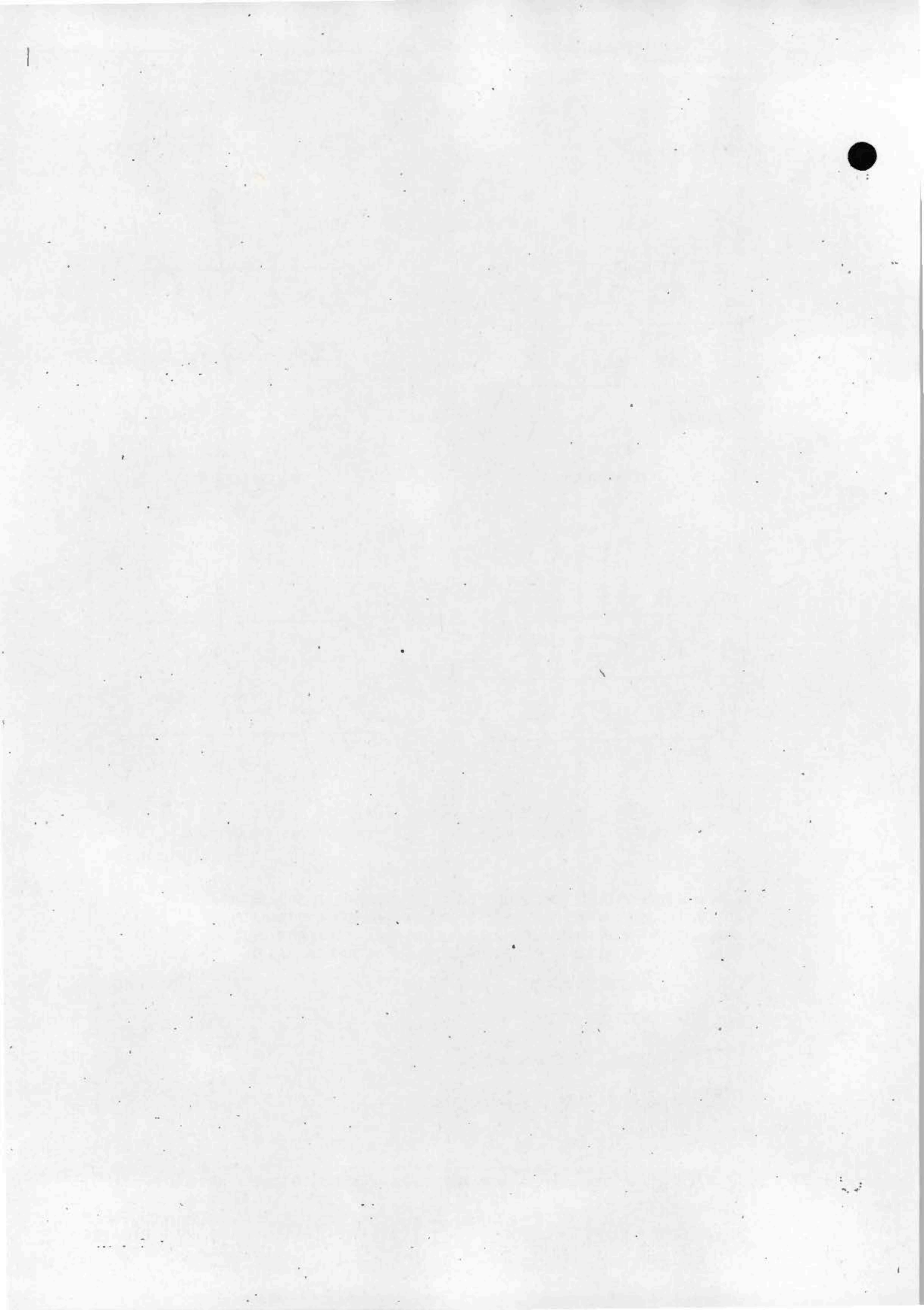


ARROW A IS VIEW ON FRONT CONNECTOR BLOCK FROM FRONT OF TRAILER
 ARROW B IS VIEW ON FRONT CONNECTOR BLOCK FROM REAR OF TRAILER
 ARROW C IS VIEW ON REAR CONNECTOR BLOCK FROM FRONT OF TRAILER
 ARROW D IS VIEW ON REAR CONNECTOR BLOCK FROM REAR OF TRAILER

- SINGLE CONNECTOR
- ⊗ DUMMY CONNECTOR
- ◯ DOUBLE CONNECTOR LINKED
- ◼ DOUBLE CONNECTOR NOT LINKED

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Fig 1 Wiring arrangement, NSN 2330-99-893-8610 trailers (sheet 2)



CHAPTER 2
FIELD REPAIRS
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INTRODUCTION

1 This chapter of AESP 2330-C-500-522 deals with field repairs to the trailer, cargo, 3/4 tonne, wide track, 2 wheeled, FV2381 Mk 3.

SCOPE OF FIELD REPAIRS

2 In addition to the repairs described in Chapter 1 of this AESP, field repairs also include replacement of the trailer axle assembly.

3 No attempt should be made to dismantle the axle assembly beyond the hubs, brakes and suspension components.

TOOLS

4 No additional tools, other than the tools called for in Chapter 1, are required to carry out field repairs.

ADJUSTMENT, REPAIR AND EXCHANGE PROCEDURES

General

5 Reference should be made to AESPs 2330-C-500-101, 201, 711 and Chapter 1 of this AESP for assistance in carrying out the following procedures. The AESPs give information relating to routine maintenance, part numbers and exploded parts diagrams which will assist in disassembly and reassembly of components and assemblies.

WARNING

REFERENCE SHOULD BE MADE TO THE WARNINGS GIVEN IN THE PRELIMINARY PAGES OF THIS PUBLICATION PRIOR TO ANY WORK BEING CARRIED OUT.

Removal and fitting of an axle assembly

6 Support the front and rear of the trailer on vehicle stands. The jockey wheel and rear support legs fitted to the trailer may be used to provide additional support.

7 Remove both road wheels, as described in Chapter 1. Cover the hub assemblies and brake calipers with cloth and clean off any road dirt from the axle, springs, shock absorbers, check straps and anti-roll bar. Support the axle assembly on two jacks, one either side of the trailer and clear of the suspension parts.

8 Remove both hub assemblies, brake discs, dust shields and brake calipers, as described in Chapter 1. Examine all items for excessive wear or damage and obtain replacements or repair items as required.

9 Remove the shock absorbers, check straps, road springs and anti-roll bar, as described in Chapter 1. Examine all items for excessive wear or damage and obtain replacements or repair items as required.

10 Remove the axle assembly from the trailer.

11 To fit the axle assembly to the trailer, support the axle assembly on the two jacks. Refit the road springs, check straps, shock absorbers and anti-roll bar, as described in Chapter 1.

12 Refit dust shields, brake discs, brake calipers and hub assemblies, as described in Chapter 1.

13 Refit the road wheels, as described in Chapter 1, remove any supporting stands and test the trailer by towing with a cargo load on board.