(Superseding 1st Edition dated March 2003)





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# CARRIER ARMOURED STAFF VEHICLE, FULL TRACKED, MK 2 AND 2/1 FV436 (ASV) (BOWMAN)

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# **REPAIR INSTRUCTIONS**

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  - Electrical system

#### **PREFACE**

Sponsor: LASS IPT DLO Andover

File Ref: 13045 Publication Agency:

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#### 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 this document; it should be photocopied and used for forwarding comments on this AESP.
- 2 AESPs are issued under Defence Council authority and where AESPs specify action to be taken, the AESP will itself be of sufficient authority for such action and also for the demanding of the necessary stores, subject to the provision of Para 3 below.
- 3 The subject matter of the 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, they are to be taken as the overriding authority.

#### **RELATED AND ASSOCIATED PUBLICATIONS**

#### **Related Publications**

- 4 The Octad for the subject equipment consists of the Publications shown. All references are prefixed with the first eight digits of this Publication. The availability of the publications can be checked by reference to the relevant Group Index (refer to AESP 0100-A-001-013).
- 5 This publication has been produced in both hard copy and microfiche formats. Each page therefore carries a number page and a frame number.

		Information level				
Category/Sub-category			1 User/ Operator	2 Unit Maintenance	3 Field Maintenance	4 Base Maintenance
1	0	Purpose and Planning Information		*	•	•
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	2	Training Aids	*	*	*	*
3		Technical Description	201	302	302	302
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5	3	Inspection Standards	•	•		
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7	3	Complete Equipment Schedule, Production				•
	4	Complete Equipment Schedule, Service Edition (Simple Equipment)	741	741	741	741
	5	Complete Equipment Schedule, Service Edition (Complex Equipment)	•	*	*	•
	1	Modification Instructions	•			*
8	2	General Instructions, Special Technical Instructions and Servicing Instructions	*	•	*	+
	3	Service Engineered Modification Instructions (RAF only)	*	*	*	•

<sup>\*</sup> Categories/Sub-categories not published

# **Associated Publications**

Reference	<u>Title</u>
AESP 0200-A-221-013	Painting of service equipment
AESP 0200-A-220-013	Preservation, Identification and Packaging of assemblies
AESP 6140-H-100-013	Secondary batteries Lead-acid
AESP 2300-A-200-Octad	Introduction to 'A' 'B' and 'C' vehicle hydraulic systems
AESP 2350-T-250-Octad	FV430 Series, Vehicles, All Marks
AESP 5800-H-280-Octad	Electronic installations for Staff Users in Carrier Full Tracked FV436
ALO: 000011200 Ooldu	system
AESP 5800-H-281-Octad	ASV 436 Harness and installation kits
AESP 5800-H-282-Octad	ASV 436 Basic Installation
AESP 5800-H-285-412	ADCIS installation in ASV 436
AESP 5800-H-290-412	C3I ASV 436, Armoured Staff Vehicle (BATES)
AESP 5800-H-291-412	C3I installation in ASV 436 BATES Minor Access Cell
ALOI 0000-11-201-412	OUT ITS CONTROL AND DATES WILLON ACCESS SEN
Army Code 71276	Standing orders for the safety of crews of Armoured Fighting Vehicles
Army Code 45334	INSTALLATION KIT Electronic Equipment, Basic loom and furniture kit
•	for FV436 (ASV)
Army Code 45335	CONVERSION KIT Electronic Equipment for Armoured Staff Vehicle
Army Code 45338	INSTALLATION KIT Electronic Equipment, Radio Station, UK/VRC 322 in
•	FV436
Army Code 45341	INSTALLATION KIT Electronic Equipment, Radio Station, UK/VRC 323 in
•	FV436 (3 <sup>rd</sup> set) (ASV)
Army Code 45342	INSTALLATION KIT Electronic Equipment Radio Station, UK/PRC 344 in
	FV436
Army Code 45343	INSTALLATION KIT Mast 8 metre mounting for FV432/FV436
Army Code 45345	INSTALLATION KIT Electronic Equipment, Facsimile set in (FV436/ASV)
Army Code 45346	INSTALLATION KIT Electronic Equipment combat Net Radio Interface in
	FV436
Army Code 45347	INSTALLATION KIT Electronic Equipment, Single Channel Radio Access
	in FV436
Army Code 45350	INSTALLATION KIT Electronic Equipment, for UK/TGC 401 Teleprinter
	on FV436
Army Code 46177	INSTALLATION KIT Electronic Equipment for TASV conversion from
A O. d. 40444	FV432 Mk 2 to FV436 Mk 2/2
Army Code 46441	INSTALLATION KIT Electronic Equipment for Digital Master Unit (DMU)
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Army Code 46548	INSTALLATION KIT Electronic Equipment for ADCIS in ASV 436
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Army Code 46597	INSTALLATION KIT Electronic Equipment DED in FV436 ASV (Bates Mac)
Army Code 46839	INSTALLATION KIT Electronic Equipment UK 321 in FV436 (Bates
Airily Code 40039	Processing Cell)
Army Code 46840	INSTALLATION KIT Electronic Equipment Tie and MCE in FV436 (Bates
Almy Code 40040	Processing Cell)
Army Code 46841	INSTALLATION KIT Electronic Equipment COMPUTER and Disc Unit in
ramy code 40041	FV436 (Bates Processing Cell)
Army Code 46842	INSTALLATION KIT Electronic Equipment TELEPRINTER and PCU in
747119 0000 70012	FV436 (Bates Processing Cell)
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Army Code 46844	INSTALLATION KIT Electronic Equipment PTARMIGAN Subset in A
	position (Bates) in FV436 (Bates Processing Cell)
Army Code 46845	INSTALLATION KIT Electronic Equipment PTARMIGAN Subset in B
•	Position in FV436 (Bates Processing Cell)
Army Code 46846	INSTALLATION KIT Electronic Equipment DMU (D) in B Position in
-	EV/436 (Pates Processing Call)

FV436 (Bates Processing Cell)

Army Code 46847	INSTALLATION KIT Electronic Equipment SANIE in B Position in FV436
74111y 0000 40041	(Bates Processing cell)
Army Code 46848	INSTALLATION KIT Electronic Equipment UK/VRC 353 in B position in
, a.i., 0000 10010	FV436 (Bates Processing Cell)
Army Code 46849	INSTALLATION KIT Electronic Equipment VISUAL Display Unit in A
	Position in FV436
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,	Position in FV436 (Bates Processing Cell)
Army Code 46851	INSTALLATION KIT Electronic Equipment IKEE DMU (D) in A Position in
•	FV436 (Bates Processing Cell)
Army Code 46873	INSTALLATION KIT Electronic Equipment IKEE DIV HQ Arty Ops in
•	FV436 (Bates Processing Cell
Army Code 46874	INSTALLATION KIT Electronic Equipment IKEE CLANSMAN Basic
	Harness for FV436
Army Code 46875	INSTALLATION SET Electronic Equipment Div HQ Arty Int in FV436
	(Bates Processing Cell)
Army Code 46876	INSTALLATION SET Electronic Equipment Field Regt TAC HQ in FV436
	(Bates Processing Cell)
Army Code 46877	MODIFICATION KIT, Vehicular Equipment Components, Stage 3 in
	FV436 (Bates Processing Cell)
Army Code 46924C	BATES Minor Access Cell FV436 ASV (ARTY Plans NUC OPS & CRA)
Army Code 46950C	BATES - Processing Cell FV436 (D1 HQ Arty Ops)
Army Code 46951C	BATES - Processing Cell FV436 (DIV HQ Arty Int)
Army Code 46952C	BATES - Processing Cell FV436 (FSCC TAC HQ Arty Ops)
EMED Con O 221	Deposition for the vancin of validate first tools, and other materials.
EMER Gen O 331	Preparation for the repair of vehicle fuel tanks and other metal containers for flammable liquid
EMER Pwr M 106	Fuel injection equipment technical handbook – Preferred repair scheme
EMER Pwr M 112/3	Fuel injection equipment CAV fuel injection pumps, types N and NN
EWER FWI W 112/3	technical handbook – Technical description
EMER Pwr M 114/3	CAV Fuel injection pumps, types N and NN technical handbook – Field
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EMER Pwr M 132	Fuel Injection equipment, CAV Governors and stop assemblies,
EMERT WINITOZ	Technical Handbook – Technical Description
EMER Pwr M 134	Fuel Injection equipment, CAV Governors and stop assemblies,
	Technical Handbook – Field & Base Repairs
EMER Pwr P 154/11	Panel, Distribution, No 6 Mk 1 (FV 534891) Technical Handbook - Field
	& Base Repairs
EMER Pwr P 324/11	Starter, No 3 Mk 1 (FV546101) & Mk 2 (FV546165) Technical Handbook
	- Field & Base Repairs
EMER Pwr P 424/1	Pump, fuel pressurizing, No 2 Mk 1 (FV342593) Technical Handbook -
	Field & Base Repairs
EMER Pwr P 454/4	Firewire control box, No 1 Mk 1 (FV494568) Technical Handbook - Field
	& Base Repairs
EMER Pwr S 562/1	Engines, K60, No 4, Mk 4G, Technical Handbook – Technical Description
EMER Pwr S 567/1	Engine, Rolls Royce, K60, Multi fuel technical handbook - Modification
	Instructions 1-29
EMER T & M A 028 Ch 56	Material Quality Assessment - Principles and Practices in REME -
	Inspection and Testing of Mechanical Components
EMER T & M A 028 Ch 60	Material Quality Assessment - Principles and Practices in REME -
<b></b>	Inspection and Examination of Ball and roller bearings
EMER T & M A 028 Ch 153	Tester, Radiator and Cooling Systems
EMER T & M B 021	Operators instructions for Avometer universal
EMER Pwr W 001	Vehicles equipped with Alternators / AC Generators
EMER Pwr W 104/12	Alternator, No 1 Mk 1
EMER Pwr W 114/2	Control Panel, alternator, No 1 Mk 1
EMER Pwr W 124/2	Rectifier unit, No 1 Mk 1, (FV342588) Technical Handbook - Field &
<b></b>	Base Repairs
EMER Wksp G 300	The cleaning, de-rusting and phosphation of iron and steel

IETP (TBA)

Bowman radio publications

#### **ABBREVIATIONS**

6 Throughout this Publication any reference to right or left is as seen from the rear of the vehicle looking forward, unless otherwise stated. Where non-standard abbreviations are used, the full meaning is written out in full the first time the subject is mentioned in the text, followed by the abbreviation in brackets.

#### **WARNINGS**

- (1) PERSONNEL HAZARD. ENSURE THAT ALL LOCAL STANDING OPERATING PROCEDURES AND ALL CURRENT HEALTH AND SAFETY REGULATIONS ARE COMPLIED WITH, WHEN CARRYING OUT ANY OF THE PROCEDURES DETAILED WITHIN THIS PUBLICATION.
- (2) HEAVY WEIGHT. THE POWER PACK WEIGHS 1816 kg (4000 lb). DUE CONSIDERATION MUST BE GIVEN TO THE REGULATIONS GOVERNING THE LIFTING OF HEAVY WEIGHTS WHEN MOVING THIS EQUIPMENT.
- (3) HEAVY WEIGHT. THE LOUVRE ASSEMBLY WEIGHS 254 kg (560 lb)). DUE CONSIDERATION MUST BE GIVEN TO THE REGULATIONS GOVERNING THE LIFTING OF HEAVY WEIGHTS WHEN MOVING THIS EQUIPMENT.
- (4) SAFETY HAZARD. DO NOT WALK OR WORK UNDER A SUSPENDED POWER PACK.
- (5) HEAVY WEIGHT. THE AIR CLEANER WEIGHS APPROX 40 kg (90 lb). DUE CONSIDERATION TO THE REGULATION GOVERNING THE LIFTING OF HEAVY WEIGHTS, SHOULD BE GIVEN.
- (6) HEAVY WEIGHT. THE RADIATOR WEIGHS 72 kg (160 lb). DUE CONSIDERATION TO THE REGULATION GOVERNING THE LIFTING OF HEAVY WEIGHTS SHOULD BE GIVEN.
- (7) HEAVY WEIGHT. THE HEAT EXCHANGER WEIGHS 46 kg (102 lb). DUE CONSIDERATION SHOULD BE GIVEN TO THE REGULATIONS GOVERNING THE LIFTING OF HEAVY WEIGHTS.
- (8) HEAVY WEIGHT. EACH SPROCKET HUB, COMPLETE WITH RINGS, WEIGHS 86 KG (190 LB). DUE CONSIDERATION SHOULD BE GIVEN TO THE REGULATIONS GOVERNING THE HANDLING OF HEAVY WEIGHTS.
- (9) HEAVY WEIGHT. THE COMMANDERS CUPOLA WEIGHS 109 kg (240 lb). DUE CONSIDERATION WARNING SHOULD BE GIVEN TO THE REGULATIONS GOVERNING THE LIFTING OF HEAVY WEIGHTS.
- (10) HEAVY WEIGHT. THE ROTATING RING WEIGHS 76 kg (167 lb). DUE CONSIDERATION SHOULD BE GIVEN TO THE REGULATIONS GOVERNING THE LIFTING OF HEAVY WEIGHTS
- (11) ASBESTOS. THE STEERING BRAKE BANDS USED ON THIS EQUIPMENT CONTAIN ASBESTOS. NO ATTEMPT IS TO BE MADE TO WORK WITH ASBESTOS MATERIALS WITHOUT CONFORMING TO DEPARTMENTAL/UNIT INSTRUCTIONS.
- (12) HEAVY WEIGHT. THE HATCH COVER WEIGHS 100 kg (220 lb). DUE CONSIDERATION SHOULD BE GIVEN TO THE REGULATIONS GOVERNING THE LIFTING OF HEAVY WEIGHTS.
- (13) HEAVY WEIGHT. THE OUTER FLAP WEIGHS 49 kg (108 lb). DUE CONSIDERATION SHOULD BE GIVEN TO THE REGULATIONS GOVERNING THE LIFTING OF HEAVY WEIGHTS.

- (14) PERSONNEL HAZARD. 'DO NOT' ATTEMPT TO REMOVE STRIKER HEAD FROM FIXED FIRE EXTINGUISHER CYLINDERS.
- (15) PERSONNEL HAZARD. UNDER NO CIRCUMSTANCES IS THE CYLINDER CLAMP TO BE REMOVED UNTIL BOTH CONTROL CABLES HAVE BEEN DISCONNECTED.
- (16) PERSONNEL HAZARD. UNDER NO CIRCUMSTANCES IS WORK ON THE CONTROL CABLE TO BE UNDERTAKEN UNTIL SECURITY OF CYLINDERS HAS BEEN CONFIRMED.
- (17) HEAVY WEIGHT. THE STEERING LEVERS WEIGH 23 kg (50 lb). DUE CONSIDERATION SHOULD BE GIVEN TO THE REGULATION GOVERNING THE LIFTING OF HEAVY WEIGHTS.
- (18) LETHAL VOLTAGE. THE SUPPRESSION SYSTEM OF THE FAN MOTOR INCLUDES CAPACITORS RATED AT D.C. WORKING VOLTAGES OF 150 VOLTS. THE MOTOR MUST BE ISOLATED PRIOR TO INSULATION TESTS BEING CARRIED OUT ON THE REMAINDER OF THE SYSTEM. LIMITED INSULATION TESTS ON THE MOTOR MAY BE CARRIED OUT AT UNIT LEVEL ONLY IF A 100 MEGOHMMETER IS AVAILABLE.
- (19) HEALTH HAZARD. ASBESTOS. THIS EQUIPMENT/ASSEMBLY CONTAINS ASBESTOS COMPONENTS. NO ATTEMPT IS TO BE MADE TO WORK WITH ASBESTOS MATERIALS WITHOUT CONFORMING TO APPROPRIATE DEPARTMENTAL/UNIT INSTRUCTIONS.
- (20) HEAVY WEIGHT. EACH BATTERY WEIGHS 80LB. DUE CONSIDERATION MUST BE GIVEN TO THE REGULATIONS GOVERNING THE LIFTING OF HEAVY WEIGHTS WHEN MOVING EQUIPMENT.
- (21) ACCIDENTAL GRENADE DISCHARGE. BEFORE CARRYING OUT ANY MAINTENANCE ON THE SMOKE GRENADE DISCHARGER SYSTEM, ENSURE EACH GRENADE TUBE IS UNLOADED.
- (22) HEAVY WEIGHT. EACH ALTERNATOR WEIGHS 32 kg (701b). DUE CONSIDERATION MUST BE GIVEN TO THE REGULATIONS GOVERNING THE LIFTING OF HEAVY WEIGHTS WHEN MOVING EQUIPMENT.
- (23) PERSONNEL DANGER. SHOULD IT BE NECESSARY TO TURN THE ENGINE IN ORDER TO OBSERVE THE CHAMFERED TEETH OR DOWELS IN THE GEARBOX THE FUEL PIPES BETWEEN THE FUEL PUMP AND THE INJECTORS SHOULD BE SLACKENED OFF AND OPEN TO ATMOSPHERE. THIS WILL PREVENT THE ENGINE FROM BEING INADVERTENTLY STARTED.
- (24) PERSONNEL HAZARD. BEFORE USING ANY HAZARDOUS SUBSTANCE OR MATERIAL, ENSURE THAT YOU KNOW THE SAFETY AND FIRST AID INSTRUCTIONS:
  - (24.1) ON THE LABEL OF THE CONTAINER IT WAS SUPPLED IN.
  - (24.2) ON THE MATERIAL SAFETY DATA SHEEET.
  - (24.3) IN THE LOCAL SAFETY ORDERS AND REGULATIONS.
- (25) LETHAL VOLTAGES. DANGEROUS VOLTAGES EXIST IN THIS EQUIPMENT. WHEN CARRYING OUT WORK ON ANY BOWMAN RADIO EQUIPMENT DURING FAILURE DIAGNOSTICS, REFER TO EMER MGMT S-262.
- (26) FIRE HAZARD. BOWMAN EQUIPMENT MAY CAUSE FLAMMABLE SUBSTANCES TO IGNITE AT REFUELLING POINT. BOWMAN SYSTEM MUST BE TURNED TO STANDBY DURING REFUELLING.

- (27) PERSONNEL INJURY. BOWMAN ANTENNAS MAY TRANSMIT AT ANY TIME. SHOULD A CREW MEMBER GRAB AN ANTENNA WHILST TRANSMITTING THEY MAY SUFFER RF BURNS. UNDER NO CIRCUMSTANCES MUST AN ANTENNA BE TOUCHED WHEN FITTED TO THE VEHICLE UNLESS EQUIPMENT IS TURNED TO STANDBY.
- (28) PERSONNEL INJURY. CARE MUST BE TAKEN WHILST MOVING THE VEHICLE WITH THE ANTENNAS FITTED. TOUCHING OF OVERHEAD CABLES MAY INDUCE HIGH VOLTAGES INTO THE VEHICLE CAUSING POSSIBLE ELECTROCUTION OF CREW MEMBERS.
- (29) PERSONNEL INJURY. WHEN CARRYING OUT <u>ANY</u> TYPE WORK ON THE FV432 (BOWMAN) VEHICLE ATTENTION MUST BE MADE TO THE VARIOUS SAFETY NOTICES WHICH ARE POSITIONED THROUGHOUT THE VEHICLE.
- (30) PERSONAL INJURY. ALL USERS AND MAINTAINERS MUST PAY ATTENTION TO THE BOWMAN SAFETY NOTICES AS ISSUED BY BOWMAN LAND DIGITIZATION (BLD) TO UNITS.

#### **CAUTIONS**

- (1) ELECTRICAL COMPONENT PROTECTION. Semi-conducting devices and capacitors, having a comparatively low d.c. working voltage, are included in some of the assemblies. The following precautions must therefore be taken when carrying out insulation tests with a test set, Megohmmeter. Harnesses both ends of interconnecting harnesses or cables must be disconnected. Any semi-conducting device or capacitor, which is included in the circuit of an assembly, must be isolated.
- (2) FILTER PROTECTION. The fan unit of the ventilation and NBC system must not be run unless the paper element has been fitted to the filter unit, otherwise dust particles in incoming air can erode fan blades and reduce the efficiency of the equipment.
- (3) ELECTRICAL PRECAUTION. Both the ventilation system and vehicle batteries are charged from the belt driven generator. If the former batteries are disconnected or removed, the positive lead MUST be secured to the insulated terminal post located on the left hand side of the hull wall in the vicinity of the batteries
- (4) SEALING INSPECTION. All sealing throughout the vehicle must be maintained in a serviceable condition at all times. This is important, as efficient operation of NBC equipment will depend on good and sound sealing of the vehicle. Hull sealing should be inspected at regular intervals.
- (5) OIL AND COOLANT TEMPERATURES. The maximum engine coolant temperature should not exceed 105°C (220°F). The maximum gearbox oil temperature should not exceed 122°C (250°F).
- (6) EQUIPMENT DAMAGE. With the power pack removed, it is essential that the propeller shaft be removed from the gearbox output flange before running the engine. Failure to do so will result in considerable damage.
- (7) EQUIPMENT DAMAGE. Before test running the power pack, check that all tools are removed, particularly from fan casing.
- (8) EQUIPMENT DAMAGE. It is essential that engine coolant temperature is kept under constant observation during test running; the engine must be switched 'OFF' immediately when the coolant temperature reaches 100°C (212°F). A coolant temperature time graph, based on an ambient temperature of 18°C (65°F) with engine speed at 1500 rev/min under NO LOAD is shown in Fig 1 as a guide only.
- (9) EQUIPMENT DAMAGE. The thermostat must NOT be removed from the engine for normal running, otherwise overheating, resulting in damage to the engine will occur.

- (10) EQUIPMENT DAMAGE. Except in (11) below, vehicles should not be towed without first removing or disconnecting the gearbox coupling connecting main gearbox to steering unit.
- (11) EQUIPMENT DAMAGE. In an emergency, vehicle may be towed up to half a mile without action as in (10) above.
- (12) EQUIPMENT DAMAGE. In cases of defective steering unit where it is necessary to tow the vehicle, the drive shafts between the steering unit and final drives must be disconnected.
- (13) EQUIPMENT DAMAGE. In the event of final drive failure, tracks must be removed.
- (14) EQUIPMENT DAMAGE. An 'A' frame tow bar should be used and towing must not exceed 16 kph (10 mph).
- (15) EQUIPMENT DAMAGE. Finger marks alone can cause the sealing surfaces to deteriorate. Avoid touching surfaces, except with clean tissue, at every stage in dismantling and assembling.
- (16) EQUIPMENT DAMAGE. If this setting procedure is not adhered to either the engine will not shut down in the event of governor failure or the pump will be damaged possibly in the full speed condition.
- (17) EQUIPMENT DAMAGE. The distribution panel is a sealed unit and should not be opened up at unit level. If frequent changing of the desiccator's element is found necessary the panel should be removed and sent to workshops for drying out, resealing and subsequent pressure testing.
- (18) EQUIPMENT DAMAGE. Before insulation testing is carried out on the cable harness, the harness must be disconnected at each end, to prevent damage to the semi-conductor devices. Megohometer testing must not be used on any assemblies except the alternators.
- (19) EQUIPMENT DAMAGE. Do not let cable ends touch or earth, feed to horn bypasses master switch, when test switch at firewire control box is operated.
- (20) EQUIPMENT DAMAGE. Before insulation testing is carried out on the cable harness, the harness must be disconnected at each end, to prevent damage to the semi-conductor devices. Megohmeter testing must not be used on any assemblies except the alternators.
- (21) EQUIPMENT DAMAGE. Do not disturb settings of other potentiometers in the control panel.
- (22) EQUIPMENT DAMAGE. Do not let cable ends touch or earth, feed to horn bypasses master switch, when test switch at firewire control box is operated.
- (23) EQUIPMENT DAMAGE. When running the power pack outside the vehicle, one man is to occupy the driver's seat to start the engine and observe the instruments; the second man is to control operations at the power pack.
- (24) EQUIPMENT DAMAGE. All components must be thoroughly checked for correct functioning whilst test running the power pack. Particular attention should be given to all hose/pipe connections, since most of these will be inaccessible when the power pack is installed. Test run after any adjustments or rectifications have been made.
- (25) EQUIPMENT DAMAGE. It is essential that the blower be blanked off with a clean cover plate when the air cleaner is removed. Failure to protect the blower assembly from dirt/foreign matter will result in severe damage to the blower assembly and/or engine. The cover plate, which may be of steel, wood, hardboard or any suitable material available, is to be manufactured to the required dimensions.

- (26) EQUIPMENT DAMAGE. When the Pitot tube bolts have been slackened, the flange must NOT be turned, as this will cause damage to the rear governor housing and the pitot tubes. Hold flange firmly in one position with tool throughout removal procedure.
- (27) EQUIPMENT DAMAGE. Personnel are to ensure that care is taken to prevent locking wire and nuts from falling inside steering unit.
- (28) EQUIPMENT DAMAGE. DO NOT keep an axle arm jacked up for excessively long periods, as this will adversely affect the torsion bar.
- (29) EQUIPMENT DAMAGE. The upper and lower mounting bolts are finished to close limits and are chrome surfaced on bearing diameters. Accurate alignment of holes before entering bolts is essential so as not to damage them. Additionally, smear bearing surfaces of bolts with jointing compound, H1/8030-99-220-2370 before entering them.

# **POWER PACK ASSEMBLY - LIST OF CHAPTERS**

#### **CONTENTS**

#### Para.

1 List of chapters (this chapter)

#### **LIST OF CHAPTERS**

1 This chapter is further sub-divided as follows:

#### Chap

- 1-1 Power pack
- 1-2 Engine
- 1-3 Fuel system
- 1-4 Cooling system
- 1-5 Transmission

**POWER PACK** 

CONTENTS

Para

1 General

# **GENERAL**

1 The power pack for the Carrier, Armoured Staff Vehicle, Full Tracked MK 2 and 2/1 FV436 (ASV) is similar to that used on the FV432 Vehicles, All Marks. Repair instructions are detailed in AESP 2350-T-251-523 Chap 1-1.

**ENGINE** 

**CONTENTS** 

Para

1 General

#### **GENERAL**

1 The engine for the Carrier Armoured Staff Vehicle, Full Tracked MK 2 and 2/1 FV436 (ASV) is similar to that used on the FV432 Vehicles, All Marks. Repair instructions are detailed in AESP 2350 -T-251-523 Chap 1-2.

**FUEL SYSTEM** 

**CONTENTS** 

Para

General

#### **GENERAL**

1 The fuel system for the Carrier Armoured Staff Vehicle, Full Tracked MK 2 and 2/1 FV436 (ASV) is similar to that used on the FV432 Vehicles, All Marks. Repair instructions are detailed in AESP 2350-T-251-523 Chap 1-3.

#### **COOLING SYSTEM**

#### **CONTENTS**

Para

1 General

#### **GENERAL**

1 The cooling system for the Carrier Armoured Staff Vehicle, Full Tracked MK 2 and 2/1 FV436 (ASV) is similar to that used on the FV432 Vehicles, All Marks. Repair instructions are detailed in AESP 2350-T-251-523 Chap 1-4.

Chap 1-4 Page 1/2

WE SECTIFICATED



TRANSMISSION

**CONTENTS** 

Para

1 General

#### **GENERAL**

1 The transmission for the Carrier Armoured Staff Vehicle, Full Tracked MK 2 and 2/1 FV436 (ASV) is similar to that used on the FV432 Vehicles, All Marks. Repair instructions are detailed in AESP 2350-T-251-523 Chap 1-5.



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# **CHAPTER 2-0**

# FINAL DRIVE, SUSPENSION AND TRACKS – LIST OF CHAPTERS CONTENTS

#### Рага

1 List of chapters

# **LIST OF CHAPTERS**

1 This chapter is further sub-divided as follows:

# Chap

- 2-1 Final drive
- 2-2 Suspension and tracks



**CHAPTER 2-1** 

**FINAL DRIVE** 

**CONTENTS** 

Para

1 General

#### **GENERAL**

1 The Final Drive for the Carrier Armoured Staff Vehicle, Full Tracked MK 2 and 2/1 FV436 (ASV) is similar to that used on the FV432 Vehicles, All Marks. Repair instructions are detailed in AESP 2350-T-251-523 Chap 2-1.

#### **CHAPTER 2-2**

#### SUSPENSION AND TRACKS

#### **CONTENTS**

Para

1 General

#### **GENERAL**

1 The suspension and tracks for the Carrier Armoured Staff Vehicle, Full Tracked MK 2 and 2/1 FV436 (ASV) is similar to that used on the FV432 Vehicles, All Marks. Repair instructions are detailed in AESP 2350-T-251-523 Chap 2-2.

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#### **CHAPTER 3**

# **HULL, FITTINGS AND CONTROLS**

#### **CONTENTS**

Para

1 General

#### **GENERAL**

1 The hull, fittings and controls for the Carrier Armoured Staff Vehicle, Full Tracked MK 2 and 2/1 FV436 (ASV) is similar to that used on the FV432 Vehicles, All Marks. Repair instructions are detailed in AESP 2350-T-251-523 Chap 3.

#### **CHAPTER 4**

#### **VENTILATION CONTROL SYSTEM**

#### **CONTENTS**

Para

General

#### **GENERAL**

1 The Ventilation Control System for the Carrier Armoured Staff Vehicle, Full Tracked MK 2 and 2/1 FV436 (ASV) is similar to that used on the FV432 Vehicles, All Marks. Repair instructions are detailed in AESP 2350-T-251-523 Chap 4.

#### **CHAPTER 5**

#### **ELECTRICAL SYSTEM**

#### **CONTENTS**

Para

1 General

#### **GENERAL**

- 1 The Electrical system for the Carrier Armoured Staff Vehicle, Full Tracked MK 2 and 2/1 FV436 (ASV) are similar to that used on FV432 Vehicles, All Marks, with the exception of specialist to role equipment (refer to Para 2). Common item repair instructions to the vehicle are detailed in AESP 2350-T-251-523 Chap 5.
- 2 The following publications may be necessary to repair specialist to role equipment.
  - 2.1 AESP 5800-H-281-Octad ASV 436 Harness and installation kits
  - 2.2 AESP 5800-H-282-Octad ASV 436 Basic installation.
  - 2.3 Bowman radio IETP (TBA).

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