Ministry of Defence

Defence Equipment and Support
Secretariat
#2043 Maple 0a
Ministry of Defence
Abbey Wood
Bristol BS34 8JH

Email: DES SEC-PolSec LE-JSC-WPNS@mod.uk

[redacted]
email [redacted]

Our Reference:
FOI2020/12536
Date: 15 December 2020

Dear [redacted]

I am writing about your recent request for the following information:

'I am looking for maintenance and repair information for ex-mod Pinzgauer vehicles.

I have been given AESP 2320-d-400.601

I however cannot seem to find a list online of publications i need for specific models only that i should ask for Categories 1 through 8 and levels 1 through 4 where possible.'

On 9 December 2020, you kindly clarified that you do wish to receive a copy of this AESP.

Your request has been handled in accordance with the Freedom of Information (FOI) Act 2000.

A search has been carried out of Ministry of Defence (MOD) records which has revealed a document falling within the scope of your request. This is:

- Army Equipment Support Publication (AESP) 2320-D-400-601 (January 2005) - TRUCK UTILITY MEDIUM (HEAVY DUTY), (PINZGAUER) ALL VARIANTS – Maintenance Schedule (Joint Service)

A copy is attached to this letter.

Section 40(2) has been applied in order to protect personal information as governed by the General Data Protection Regulations (GDPR). Section 40 is an absolute exemption and there is no requirement to consider the public interest in deciding to withhold the information.

It also was necessary to consider withholding some information under Section 26(1)(a) and (b) (Defence) and Section 38(1) (a and b) of the FOI Act.

Section 26(1)(b) (Defence) applies to information which if disclosed would, or would likely prejudice the capability, effectiveness or security of any relevant forces. Section 38(1) (a and b) (Health and Safety) applies to information which if disclosed would or would likely endanger the physical or mental health of any individual or endanger the safety of any individual.

As these two exemptions are both qualified it was necessary to undertake a Public Interest Test to determine whether the balance for withholding the information outweighs that for public disclosure.

There would be public interest in enhancing the accountability of government by releasing, which would also demonstrate the MOD's commitment to openness and transparency, thus making the Government more accountable to the electorate. The FOI Act also contains a presumption of release. However, releasing information about certain onboard equipment and components of the vehicle you own would provide a tactical advantage to those wishing to inhibit the MOD's current capability, effectiveness and security, thus resulting in potential physical and mental harm to military personnel.

On balance, the weight of public interest lies in withholding some information under qualified exemptions Section 26 (Defence) and Section 38 (Health and Safety) of the FOI Act. I have set the level of prejudice against release of the exempted information at the higher level of "would" rather than "would be likely to".

If you have any queries regarding the content of this letter, please contact this office in the first instance. If you wish to complain about the handling of your request, or the content of this response, you can request an independent internal review by contacting the Information Rights Compliance team, Ground Floor, MOD Main Building, Whitehall, SW1A 2HB (e-mail CIO-FOI-IR@mod.gov.uk). Please note that any request for an internal review should be made within 40 working days of the date of this response.

If you remain dissatisfied following an internal review, you may raise your complaint directly to the Information Commissioner under the provisions of Section 50 of the Freedom of Information Act. Please note that the Information Commissioner will not normally investigate your case until the MOD internal review process has been completed. The Information Commissioner can be contacted at: Information Commissioner's Office, Wycliffe House, Water Lane, Wilmslow, Cheshire, SK9 5AF. Further details of the role and powers of the Information Commissioner can be found on the Commissioner's website at https://ico.org.uk/.

Yours sincerely,

DE&S Secretariat

CONDITIONS OF RELEASE

1 This information is released by the UK Government for Defence purposes only.

2 This information must be afforded the same degree of protection as that afforded to information of an equivalent security marking originated by the recipient Government or as required by the recipient Government's security regulations.

3 This information may be disclosed only within the Defence Department of the recipient Government, except as otherwise authorized by the Ministry of Defence (Army).

4 This information may be subject to privately owned rights.

TRUCK UTILITY MEDIUM (HEAVY DUTY), (PINZGAUER) ALL VARIANTS

MAINTENANCE SCHEDULE (JOINT SERVICE)

Sponsored for use in the
UNITED KINGDOM MINISTRY OF DEFENCE
AND ARMED FORCES

by

DEC GM
KCU92

Publication Authority:

DE&S Abbey Wood
KCU92

AMENDMENT RECORD

Amdt No.	Incorporated By (Signature)	Date
1	BAE Systems Land Systems Pinzgauer Limited	Apr 06
2	BAE Systems Land Systems Pinzgauer Limited	Aug 06
3	BAE Systems Land Systems Pinzgauer Limited	Aug 07
4	BAE Systems Land Systems Pinzgauer Limited	Aug 07
5	BAE Systems Land Systems Pinzgauer Limited	Oct 08
6	BAE GCS	Jun 11
7	BAE GCS	Mar 12
8	BAE GCS	Sep 12
9	Incorporated	Jan 13
10	Incorporated	May 14
11	Incorporated	Mar 16
12	Incorporated	Nov 19
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		

Amdt No.	Incorporated By (Signature)	Date
32		
33		
34		
35		
36		
37		
38		
39		
40		
41		
42		
43		
44		
45		
46		
47		
48		
49		
50		
51		
52		
53		
54		
55		
56		
57		
58		
59		
60		
61		
62		

CONTENTS

PRELIMINARY MATERIAL Page

MAINTENANCE SCHEDULE

Chapter

PREFACE

Sponsor : DEC CSS

Publications Authority: DLO Andover

INTRODUCTION

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

2 AESPs are issued under Defence Council authority and where AESPs specify action to be taken, the AESP will of itself be sufficient authority for such action and also for the demanding of the necessary stores, subject to the provisions of Para 3 below.

3 The subject matter of this publication may be affected by Defence Council Instructions (DCIs), by Standing 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.

4 The subject matter of this publication details information specific to 4x4 **and** 6x6 Pinzgauer variants.

5 For periods of servicing and lubricants to be used reference must be made to the Maintenance Schedule.

EQUIPMENT IDENTITY

6 Equipment identity details are listed in Table 1

TABLE 1 EQUIPMENT IDENTITY

Serial (1)	Asset Code (2)	Designation (3)
1	1032 3100	TUM (HD) 6 x 6 Ambulance Trauma Management
2	1741 3100	TUM (HD) 6 x 6 TCB Box Body Psyops
3	1742 3100	TUM (HD) 6 x 6 FFR Box Body [redacted]
4	1742 3101	TUM (HD) 6 x 6 FFR Hard Top [redacted]
5	1743 3100	TUM (HD) 6 x 6 W/W Euro III TCB
6	1743 3101	TUM (HD) 6 x 6 W/W Euro II [redacted]
7	1743 3102	TUM (HD) 6 x 6 W/W Euro II [redacted]
8	1743 3103	TUM (HD) 6 x 6 FFR Hard Top [redacted]
9	1744 3100	TUM (HD) 6 x 6 FFR TCB with Winch [redacted]
10	1744 3101	TUM (HD) 6 x 6 FFR TCB with Winch [redacted]
11	1746 3100	TUM (HD) FFR Soft Top with Winch HVM
12	1747 3100	TUM (HD) FFR Hard Top
13	1749 3100	TUM (HD) FFR Hard Top with W/Waterproofed
14	1749 3101	TUM (HD) FFR Hard Top with Winch Waterproofed Vaisala VIK
15	1749 3102	TUM (HD) FFR Hard Top with Winch Waterproofed BATES VIK
16	1750 3100	TUM (HD) GS Soft Top
17	1750 3199	TUM (HD) GS Soft Top Trials Vehicle

TABLE 1 EQUIPMENT IDENTITY (continued)

Serial (1)	Asset Code (2)	Designation (3)
18	1751 3100	TUM (HD) GS Soft Top with Winch
19	1752 3100	TUM (HD) GS Soft Top Winterised/Waterproofed
20	1753 3100	TUM (HD) GS Soft Top with Winch W/W
21	1754 3100	TUM (HD) FFR Soft Top Javelin HVM VIK
22	1754 3101	TUM (HD) FFR Soft Top HVM VIK
23	1755 3100	TUM (HD) FFR Hard Top
24	1755 3101	TUM (HD) FFR Hard Top [redacted]
25	1755 3102	TUM (HD) FFR Hard Top [redacted]
26	1755 3103	TUM (HD) FFR Hard Top [redacted]
27	1755 3104	TUM (HD) FFR Hard Top [redacted]
28	1755 3105	TUM (HD) FFR Hard Top [redacted]
29	1755 3106	TUM (HD) FFR Hard Top [redacted]
30	1755 3107	TUM (HD) FFR Hard Top [redacted]
31	1755 3108	TUM (HD) FFR Hard Top GS
32	1755 3109	TUM (HD) FFR Hard Top GS CLANSMAN
33	1756 3100	TUM (HD) FFR Soft Top Waterproofed
34	1756 3170	TUM (HD) FFR Soft Top
35	1757 3100	TUM (HD) GS Soft Top with Winch Waterproofed
36	1758 3100	TUM (HD) 6 x 6 FFR Ptarmigan
37	1758 3101	TUM (HD) 6 x 6 FFR Ptarmigan SAS/MC(AP)
38	1758 3102	TUM (HD) 6 x 6 FFR Ptarmigan RR(AP)
39	1759 3100	TUM (HD) FFR W/W HVM VIK Javelin
40	1759 3101	TUM (HD) FFR Hard Top W/W [redacted]
41	1759 3102	TUM (HD) FFR Hard Top W/W [redacted]
42	1759 3103	TUM (HD) FFR Hard Top W/W [redacted]
43	1759 3104	TUM (HD) FFR Hard Top W/W [redacted]
44	1761 3100	TUM (HD) FFR [redacted]
45	1761 3101	TUM (HD) FFR [redacted]
46	1763 3101	TUM (HD) GS HT [redacted]
47	1763 3102	TUM (HD) GS HT [redacted]
48	1764 3100	TUM (HD) 6 x 6 FFR HT EURO III Winterised [redacted]
49	1766 3100	TUM (HD) 6 x 6 FFR HT EURO III Winterised W/W [redacted]
50	1766 3101	TUM (HD) 6 x 6 GS ST [redacted] (EURO III)
51	1767 3100	TUM (HD) 6 x 6 GS ST W/W EURO III
52	1767 3101	TUM (HD) 6 x 6 GS ST W/W HVM VIK HILLS (EURO III)
53	1768 3100	TUM (HD) 4 x 4 FFR Hard Top W/W (EURO III)

TABLE 1 EQUIPMENT IDENTITY (continued)

Serial (1)	Asset Code (2)	Designation (3)
54	1769 3100	TUM (HD) 6 x 6 FFR ST W/W Winch Royal Artillery
55	1769 3101	TUM (HD) 6 x 6 FFR ST W/W Winch GTV
56	1769 3102	TUM (HD) 6 x 6 FFR ST W/W Winch GTV / Limber
57	1770 3100	TUM (HD) 6 x 6 FFR HT Command [redacted]
58	1775 3100	TUM (HD) 6 x 6 FFR HT EURO III ABS [redacted]
59	1776 3100	TUM (HD) 6 x 6 FFR HT EURO III ABS [redacted]
60	1782 3100	TUM (HD) 6 x 6 FFR HT EURO III ABS [redacted]
61	1783 3100	TUM (HD) 6 x 6 FFR HT EURO III ABS [redacted]
62	1784 3100	TRUCK UTY MED (HD) FFR HT 6X6 [redacted]
63	1790 3100	TRUCK UTY MED (HD) FFR [redacted]

6.1 The Original Equipment Manufacturer (OEM) is as follows:

BAE Systems Ltd
PO Box 106
Hadley Castle Works
Hadley
Telford
Shropshire, TF1 6QW, England

6.2 Contract Nos:

LV2A/173 / LV2A/285 / MCP 12a/008 6 x 6 Ptarmigan / LV2/DBG/143 6 x 6 Trauma Management Vehicle / [redacted] / LLV/DBG/440 6 x 6 Psyops / LLV/DBG/453 6x6 HILLS / [redacted] / CSVLL/00009 4x4 TUM FFR Top up buy

RELATED AND ASSOCIATED PUBLICATIONS

Related publications

7 The Octad for the subject equipment consists of the publications shown below. All 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 (see AESP 0100-A-001-013).

Category/Sub-category			Information Level			
			1 User/ Operator	2 Unit Maintenance	3 Field Maintenance	4 Base Maintenance
1	0	Purpose and Planning	101	101	101	101
	1	Equipment Support Policy Directives	111	111	111	111
2	0	Operating Information	201	201	201	201
	1	Aide Memoire	*	*	*	*
	2	Training Aids	*	*	*	*
3		Technical Description	*	302	302	302
4	1	Installation Instructions	*	*	*	*
	2	Preparation for Special Environments	421	421	421	421
5	1	Failure Diagnosis	*	512	512	512
	2	Maintenance Instructions	201	522	522	522
	3	Inspection Standards	*	532	532	532
	4	Calibration Procedures	*	*	*	*
6		Maintenance Schedules	601	601	601	601
7	1	Illustrated Parts Catalogue	711	711	711	711
	2	Commercial Parts List	*	*	*	*
	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)	*	*	*	*
8	1	Modification Instructions	811	811	811	811
	2	General Instructions, Special Technical Instructions and Servicing Instructions	821	821	821	821
	3	Service Engineered Modification Instructions (RAF only)	*	*	*	*

* Category/Sub-category not published

NOTES

(1) Reference to AESP 0100-A-001-013 must be made to ensure the availability of the listed publications.

(2) Category 8 preliminary pages to be issued with the first Modification or General Instruction.

Associated publications

6

Reference	Title
AESP 2320-D-403	Truck Utility Medium (Heavy Duty), 4x4, Pinzgauer, High Velocity Missile (HVM), LML/SL, Vehicle Installation Kit
AESP 2320-D-405	Truck Utility Medium (Heavy Duty) 6x6, Pinzgauer, High Velocity Missile (HVM), LML/SL, Vehicle Installation Kit
AESP 2300-A-050-013	'B' Vehicle Maintenance, Inspection, Test and Certification
JSP 341	Road Transport Regulations
AP 3260 Book 1	Mechanical Transport Maintenance Regulations for the Royal Air Force
AP 3260 Book 3	Mechanical Transport – General Orders
AGAI Vol 4	Equipment and Stores – Periodic REME Examination

REFERENCE ORGANISATIONS AND ADDRESSES

The organisations listed in Table 1 are referred to throughout this AESP.

TABLE 1 REFERENCE ORGANISATIONS AND ADDRESSES

Serial (1)	Organisation (2)	Address (3)
1	Publication Authority	Conventional Vehicle Solutions (CVS) Operational Support Vehicle Programme (OSVP) [redacted] Abbey Wood Bristol BS34 8JH
2	Technical Authority	Pinzgauer Platform Manager Defence Support Group Defence & Security Babcock International Group Donnington Telford Shropshire TF2 8JT [redacted]

ARMY EQUIPMENT AND SUPPORT PUBLICATION (AESP) AND ELECTRICAL AND MECHANICAL ENGINEERING REGULATIONS (EMER) - FORM 10

AESP/EMER NUMBER:		* IS THIS SAFETY RELATED?	Yes		No	

Send Form 10 via the Email or Post address. However email is preferred.	Tel	[redacted]
Email: [redacted] (To email this form send as a copy to the email address above)	Post to	[redacted]

ORIGINATOR'S DETAILS

*Address		*Name	
		Rank/Grade	
		*Phone	
		*Sender's Reference	
		*Date Raised	
* E-Mail		Eqpt Asset Code (if applicable)	

AESP/EMER DETAILS

*Full Title of AESP/EMER (Not the AESP/EMER Number)							
*Edition	*Amendment	*Chapter	*Page	*Paragraph	Figure	Instruction	Other

*Comments: If additional information is to be supplied, please e-mail with the Form 10 as separate attachments.

FORM 10 CELL USE

*Date Received		*Form 10 Reference	
*Date Sent to PT/SME		Problem Report	

PROJECT TEAM / SME RESPONSE TO COMMENTS:

Project Team (PT)/SME		*Sponsor's Name	
*Phone		Rank/Grade	
*Email		*Date Received	

*The following action is to be carried out:	Mark:		Mark:
Issue a revised/amended AESP/EMER:		Under investigation:	
Incorporate comment(s) in future amendments:		No action required:	

Remarks:

SPONSOR/PT FINAL CLOSURE STEPS	Mark:	Form 10 Cell notified of Date action taken	Date:
Form 10 Originator notified of the action taken:			

* Mandatory Fields for Originator
* Mandatory Fields for Sponsor* AESP or EMER R

Form 10 Guidance

Form 10 can be found within the AESP or as a template from the JAMES Portal (Hot Topic – Forms) & TDOL (FORM 10).

Originator responsibility is to enter the following details marked *:

- In the **AESP/EMER Number**: enter the full document number e.g. AESP 1256-I-400-711.
- Is this **Safety Related**? – select Yes or No as appropriate.
- Originator Details:
  - Full address Inc Post Code or BFPO NO.
  - Originator email address.
  - Sender's Reference – that must be unique.
- AESP Details shall enter the following details:
  - The Full Title of AESP/EMER should not include the AESP/EMER Number.
  - Enter details in all other mandatory fields marked *.
  - Additional information relating to the Comments (AESP copies, additional text details or photographs) should be attached to the Email at the same time.
- Originator makes up the Form 10 & Sends to Form 10 cell via:
  - Post to [redacted] address.
  - Email to DESLE-Form10@mod.uk.
  - **Any AESP that holds a Security marking higher than 'UK OFFICIAL SENSITIVE' should be securely circulated.**

FORM 10 CELL responsibilities:

The Form 10 Cell enters:

- Date Received.
- Form 10 Reference.
- Date sent to Sponsor.
- Register all Form 10 details in the MOSS Form 10 Tracker.

Sponsor Responsibility:

The Sponsor will:

- Enter their name, email address & phone contact details.
- Enter Date Received.
- Enter Details in the non-mandatory field as & when required.
- Acknowledge receipt of Form 10, within 5 working days, by email to Form 10 Cell.
- Assess the contents of comments and details received.
- Mark the relevant Action box and fill out the Remarks field.
- Enter date when the Form 10 is returned to Form 10 Cell.
- Email copy of completed Form 10, within 6 weeks, to the Form 10 Cell and Originator.

Form 10 Cell on receipt will:

- Record final stage of the Form 10 into the MOSS Form 10 Tracker.
- Close off the Form 10 and archive.

CHAPTER 1

MAINTENANCE SCHEDULE

CONTENTS

INTRODUCTION

1 This Maintenance Schedule is the authority for carrying out all scheduled maintenance tasks on the subject equipment and takes precedence over any other conflicting publication.

2 The Unit Commander (Army) or Mechanical Transport (MT) Officer (RAF) is responsible for ensuring that the operations detailed in this Maintenance Schedule are properly carried out by appropriately qualified and trained personnel or, where annotated, a Qualified Tradesman (QT) (Army only). These personnel are defined as:

2.1 A REME Vehicle Mechanic (VM).

2.2 Any person who has been formally trained as a Driver/Operator Mechanic on the subject equipment type - (Army only).

2.3 Any person who has been taught how to carry out that task during a formal training course.

2.4 A civilian equivalent of the above.

3 The Unit Commander (Army) or MT Officer (RAF) may order any operation to be carried out more frequently than is specified if the conditions under which the equipment operates render it necessary. For Army equipment the Senior Maintenance Advisor should be consulted.

4 Scheduled Maintenance is to be recorded in the appropriate equipment document in accordance with JSP 341, Part IV, Chap 11, Annex C (Army), Annex D (RAF) and AP 3260, Book 1, Chap 3 (RAF).

5 Serial numbers left blank in the tables may be taken up by amendment action at a later date.

6 The following maintenance schedules are provided:

6.1	Chapter 1-1	6 cylinder engine, manual gearbox, 4x4 variants
6.2	Chapter 1-2	6 cylinder engine, automatic gearbox, 6x6 variants
6.3	Chapter 1-3	5 cylinder Euro 3 engine, automatic gearbox, 4x4 and 6x6 variants

DEFINITIONS

7 As far as this document is concerned, the following definitions apply:

7.1 Examine. Carry out a survey of the condition of an item without dismantling, **unless** specifically instructed to do so in the relevant task requirement. The condition of an item may be impaired by the following:

7.1.1 Insecurity of attachment.

7.1.2 Cracks or fractures.

7.1.3 Corrosion, contamination or deterioration.

7.1.4 Distortion.

7.1.5 Loose or missing fasteners.

7.1.6 Chafing, fraying, scoring or wear.

7.1.7 Faulty or broken locking devices.

7.1.8 Loose clips or packing, obstruction of, or leakage from pipelines.

7.1.9 Discoloration due to overheating or leakage of fluids.

7.1.10 Damage due to external sources.

7.2 Check. Make a comparison of measurement of time, pressure, temperature, resistance, dimension or other quantity, with a known figure.

7.3 Operate. As far as possible, ascertain that a component or system functions correctly without the use of test equipment or reference to measurement.

7.4 Replenish. Refill a container to a predetermined level, pressure or quantity. This includes any necessary cleaning of orifices, examination of caps, covers, gaskets and washers, renewal of locking devices and clearing of vents.

7.5 Replace. Remove an item and then fit a new or reconditioned item.

WARNINGS, CAUTIONS AND MAINTENANCE NOTES

8 Before any maintenance task is carried out, the WARNINGS, CAUTIONS and Maintenance Notes preceding the appropriate table must be read and understood.

MAINTENANCE INTERVALS AND AREAS OF RESPONSIBILITY

9 Table 4 - Action on Receipt. The maintenance detailed in Table 4 covers the action taken when the equipment arrives in a unit. These operations will normally be of a once only nature, eg the recording of lifting equipment with the appropriate test authority, actions that are necessary to be undertaken before the equipment is put into service or actions that are only required during the running in period. The maintenance detailed in Table 4 maintenance must be carried out by appropriately trained personnel, as described in Para 2.

10 Table 5 - Out of Phase Maintenance. The maintenance detailed in Table 5 covers tasks that do not fall into line with the time/usage interval requirements of Table 6 or 7. The maintenance detailed in Table 5 maintenance must be carried out by appropriately trained personnel, as described in Para 2.

11 Table 6 - Driver/Operator Maintenance. The maintenance detailed in Table 6, Maintenance Intervals A, B, C and D must be carried out by appropriately trained personnel, as described in Para 2.

11.1 A Daily before use (only on days used).

11.2 B Daily after use (after the equipment has been operated).

11.3 C Weekly, whether the equipment is used or not.

11.4 D Not applicable.

12 Table 7 - Time/Usage Maintenance. The maintenance detailed in Table 7, Maintenance Interval 1st, A, B, C and D must be carried out by appropriately trained personnel, as detailed in Para 2, at the following intervals:

12.1 1st (RAF Initial) - After the first 600 miles (1,000 km).

12.2 A (RAF Lubrication) - Every 5,000 miles (8,000 km) or 6 months, whichever occurs first.

12.3 B (RAF Minor) - Every 10,000 miles (16,000 km) or 12 months, whichever occurs first.

12.4 C (RAF Major) - Not taken up, see out of phase maintenance.

12.5 D - Contains the Area Maintenance indicator which may be used, at the discretion of the MT Officer, to carry out Area Maintenance at the appropriate time/usage intervals (RAF only).

NOTES (RAF ONLY)

(1) Vehicles that do less than 6000 miles annually and are on Area Maintenance are to have a Lubrication Maintenance at 6 monthly intervals in accordance with AP 3260, Book 1, Chap 2.

(2) The number in Maintenance Interval D indicates which Area is to be carried out.

(3) The area maintenance detailed is to be carried out in conjunction with its associated prime mover/specialist equipment scheduled maintenance if applicable.

13 Table 8 - Out of Use Maintenance. For Army equipment, this maintenance is to be carried out as follows:

13.1 When the equipment is taken out of use for periods exceeding one month on the advice of the local Maintenance Advisor.

13.2 Any equipment taken out of use for periods exceeding four months is to be put into preservation in accordance with EMER Wheeled Vehicles A 019 Miscellaneous Instruction No. 9.

13.3 The equipment is to be cleaned, dried and stored under cover where possible.

13.4 Any overdue maintenance is to be carried out when the equipment is brought back into use.

13.5 The maintenance detailed in Table 8 is to be carried out by appropriately trained personnel, as described in Para 2.

14 For RAF equipment, out of use vehicles or vehicles in second echelon are to be maintained in accordance with AP 3260, Book 1, Chap 1, Para 0109 and Chap 2, Para 0227. Any specific operation appertaining to this equipment will be listed in Table 8 of this AESP.

CHAPTER 1-1

MAINTENANCE SCHEDULE - 6 CYLINDER ENGINE MANUAL GEARBOX 4X4 VARIANTS

CONTENTS

INTRODUCTION

1 This Maintenance Schedule is the authority for carrying out all scheduled maintenance tasks on the subject equipment (6 cylinder engine, manual gearbox, 4x4 Pinzgauer variants) and takes precedence over any other conflicting publication.

DEFINITIONS

2 Refer to Chapter 1.

WARNINGS, CAUTIONS AND MAINTENANCE NOTES

3 Before any maintenance task is carried out, the WARNINGS, CAUTIONS and Maintenance Notes preceding the appropriate table must be read and understood.

MAINTENANCE INTERVALS AND AREAS OF RESPONSIBILITY

4 Refer to Chapter 1.

TABLE 1 EQUIPMENT APPLICABILITY

Serial (1)	Equipment Asset Code (2)	Designation (3)	Contract Numbers (4)
1	1746 3100	TUM (HD) FFR Soft Top with Winch HVM	
2	1747 3100	TUM (HD) FFR Hard Top	
3	1749 3100	TUM (HD) FFR Hard Top with W/Waterproofed	
4	1749 3101	TUM (HD) FFR Hard Top with Winch Waterproofed [redacted]	
5	1749 3102	TUM (HD) FFR Hard Top with Winch Waterproofed [redacted]	
6	1750 3100	TUM (HD) GS Soft Top	
7	1750 3199	TUM (HD) GS Soft Top Trials Vehicle	
8	1751 3100	TUM (HD) FFR GS Soft Top with Winch	
9	1754 3100	TUM (HD) FFR Soft Top HVM Javlin VIK	
10	1755 3100	TUM (HD) FFR Hard Top	
11	1755 3101	TUM (HD) FFR Hard Top [redacted]	
12	1755 3102	TUM (HD) FFR Hard Top [redacted]	
13	1755 3103	TUM (HD) FFR Hard Top [redacted]	
14	1755 3104	TUM (HD) FFR Hard Top [redacted]	
15	1755 3105	TUM (HD) FFR Hard Top [redacted]	
16	1755 3106	TUM (HD) FFR Hard Top [redacted]	
17	1756 3100	TUM (HD) GS Soft Top Waterproofed	
18	1756 3170	TUM (HD) GS Soft Top	
19	1757 3100	TUM (HD) FFR GS Soft Top with Winch Waterproofed	
20	1759 3100	TUM (HD) FFR W/W HVM VIK Javelin	
21	1759 3101	TUM (HD) FFR W/W [redacted]	
22	1759 3102	TUM (HD) FFR Hard Top W/W [redacted]	
23	1759 3103	TUM (HD) FFR Hard Top W/W [redacted]	
24	1763 3101	TUM (HD) GS HT with [redacted]	
25	1763 3102	TUM (HD) GS HT with [redacted]	

TABLE 2 FUELS, LUBRICANTS AND ASSOCIATED PRODUCTS

NOTES

(1) The products listed below are to be used on this equipment. Alternative products must not be used without the approval of an appropriately qualified REME Advisor (Army) or MT Officer (RAF).

(2) Oil changes at the -15 deg C point shall only be made on the advice of the MT Officer.

(3) The capacities listed are to be used as a guide only. A physical check is to be carried out to ensure that all fluid levels are correct. This check should be carried out with the vehicle unladen and standing on level ground whenever possible.

Serial	Assembly	Product		Capacity	
		Above -15 deg C	Below -15 deg C	Litres	Pints
(1)	(2)	(3)	(4)	(5)	(6)
1	Engine.	OX 90	OMD 55	7.0	12.3
2	Engine coolant.	AL 39/water mixture		19.6	34.5
3	Transmission - Manual gearbox.	OEP 220	OEP 220	2.0	3.5
4	Axle drive - per drive.	OEP 220	OEP 220	2.0	3.5
5	Transfer transmission.	OEP 220	OEP 220	1.8	3.2
6	Steering gearbox.	OEP 220	OEP 220	0.7	1.2
7	Servo steering system.	OX 75	OX 75	2.75	4.8
8	Wheel drives:				
	8.1 Front.	OX 165	OX 165	0.4	0.7
	8.2 Rear.	OX 165	OX 165	0.35	0.6
9	Brake fluid reservoir.	OX 8	OX 8	0.6	1.1
10	Clutch reservoir.	OX 8	OX 8	0.7	1.2
11	Windscreen washer reservoir.	AL 11 /washer fluid/water mix		8.0	14.0
12	Fuel tank.	Dieso	Dieso	80.0	17.5 gal
13	General greasing.	XG 279	XG 279		
14	Winch rope lubricant:				
	14.1 Army.	XG 279	XG 279		
	14.2 RAF (AP 4545, Vol.2, Leaflet A98).	34D1 5490384	34D1 5490384		
15	Batteries.	PX 71 Demin water			
16	Undersealing,	PX-28	PX-28		

TABLE 3 EQUIPMENT DATA

Serial	Item (2)	Detail (3)
	ADJUSTMENTS	
1	ITEM DELETED	
2	Front wheel alignment.	Toe-in 3-5 mm
3	Front hub swivel pin/bush wear limit	0.35 mm (0.014 in.)
4	Rear air suspension pressure	3 bar (44 lbf/in^2)
5	Idle speed.	750 ± 50 rpm
6	Maximum engine speed.	4600 ± 50 rpm
	TYRES (SUBJECT TO VARIANT)	
7	Size.	Michelin 8.25 R 16 XZL
8	Pressure.	In accordance with vehicle marking or: 2.8 bar front and rear
	or	
9	Size.	BF Goodrich 285/75 R 16 M/T
10	Pressure.	In accordance with vehicle marking or: 3.5 bar front and rear
	or	
11	Size	BF Goodrich LT285/75 R16/D 122Q
12		In accordance with vehicle marking or: 3.5 bar front and rear
13	Wheel nuts.	260 Nm (192 lbf ft)
14	Axle drive housing tie rods.	80 Nm (59 lbf ft)
15	Axle clamping screws.	250 Nm (185 lbf ft)
16	Axle centring screws.	250 Nm (185 lbf ft)
17	Body bracket mounting bolts.	250 Nm (185 lbf ft)
18	Retaining screw on brake floating calliper,	35 Nm (26 lbf ft)
19	Engine oil drain plug.	50 Nm (37 lbf ft)
20	Seat-belt anchorage points.	35 Nm (26 lbf ft)
21	Seat securing bolts.	49 Nm (36 lbf ft)

TABLE 4 ACTION ON RECEIPT

Table 4 Maintenance is to be carried out in accordance with the instructions shown at Para 8.

Serial (1)	Action (2)
1	Carry out an inspection in accordance with current regulations (AESP 2590-E-100-013). Carry out the maintenance tasks from the Driver/Operator Table 6, Column A.
2	On receipt of a vehicle from a source where the maintenance condition of the vehicle is unknown, carry out the maintenance tasks from the Driver/Operator Table 6, Column A, followed by the maintenance tasks from the Time/Usage Maintenance Table 7, Columns B, C and Out of Phase maintenance Table 5.
3	On receipt of **WINTERISED/WATERPROOFED** variants, Units are to carry out initial inspection as detailed in Table 7 Column B.

TABLE 5 OUT OF PHASE MAINTENANCE

Table 5 Maintenance is to be carried out in accordance with the instructions shown at Chapter 1, Para 10.

NOTES

(1) If the vehicle has waded in the 12-month period following the previous camshaft belt change, then the camshaft belt must be renewed at the yearly interval (Table 5, Serial 7). If the vehicle has not waded during this time then the camshaft belt need not be changed (see following para for exception). A dated entry should be made in the vehicle documents each time the vehicle has been waded, and each time the cam-belt has been changed, this will ensure that the belt is changed at the correct interval.

Regardless of whether a vehicle has waded or not, the camshaft belt must be changed at the 30,000 miles (48,000 km) or 3 year interval as stated in Table 5, Serial 6.

Serial (1)	Action (2)	Interval (3)
1	Replace coolant.	3 yearly
2	Replace brake fluid.	2 yearly
3	Replace manual gearbox oil.	2 yearly
4	Replace transfer gearbox oil.	2 yearly
5	Replace axle drives oil.	2 yearly
6	Replace camshaft belt - Record details in AB 562.	Every 30,000 miles (48,000 km) or 3 yearly whichever occurs first.
7	Replace camshaft belt - Record details in AB 562 (Waterproofed variants only).	1 yearly
8	Replace camshaft belt tension pulley. (Waterproofed variants only).	1 yearly
9	Replace injector pump belt - Record details in AB 562.	Every 37,500 miles (60,000 km) or 3 yearly whichever occurs first.
10	Waterproofing - Carry out tasks in Table 7 column B.	Prior to fitting waterproofing kit Stage B.

TABLE 6 DRIVER/OPERATOR MAINTENANCE

Table 6 Maintenance is to be carried out by the tradesman at the intervals shown at Chapter 1, Para 11.

The following WARNINGS, CAUTIONS and MAINTENANCE NOTES must be read and understood before commencing these maintenance tasks.

WARNINGS

(1) DANGER OF SCALDING. DO NOT REMOVE COOLANT FILLER CAP WHEN THE ENGINE IS HOT.

(2) ACID SPLASH. EXERCISE CAUTION WHEN CHECKING BATTERY LEVELS.

(3) TOXICITY. AL39 IS BOTH TOXIC AND HAZARDOUS. MINIMUM PRECAUTION AFTER CONTACT IS TO WASH THE AFFECTED AREA WITH SOAP AND WATER.

(4) HEALTH HAZARD. INFLAMMABLE LIQUID, AL11, IS HIGHLY INFLAMMABLE. THE PREPARATION OF THE FLUID FOR WINDSCREEN WASHERS IS TO BE CARRIED OUT IN THE OPEN AND AWAY FROM NAKED FLAME. MINIMUM PRECAUTION AFTER CONTACT IS TO WASH THE AFFECTED AREA WITH SOAP AND WATER.

(5) PERSONAL INJURY. NEVER HANDLE A WIRE ROPE WHEN ANYONE ELSE IS AT THE CONTROLS, BARE HAND CONTACT OF STEEL ROPES IS TO BE AVOIDED AT ALL TIMES.

CAUTIONS

(1) EQUIPMENT DAMAGE. After starting the engine, let it idle for 10 seconds to allow oil to circulate through the turbo-charger bearings.

(2) DAMAGE TO BEARING. Before switching off the engine, let it idle for two minutes to prevent damage to the turbo-charger bearings.

(3) EQUIPMENT DAMAGE. Check oil level when engine is cold.

(4) EQUIPMENT DAMAGE. After changing a wheel retighten wheel nuts to 260 Nm after driving 30 miles (50 Km).

(5) EQUIPMENT DAMAGE. OX 75 and OX 165 oils used in servo steering and wheel drives are not compatible with other oils. If they need to be changed the oil must be drained and finished before refilling with a new type of oil.

MAINTENANCE NOTE

The battery master switch key can be removed when in the switched off position.

(continued)

TABLE 6 DRIVER/OPERATOR MAINTENANCE (continued)

Serial (1)	Task (2)	Fig/ Item No. (3)	Product (4)	Maintenance Interval			
				A (5)	B (6)	C (7)	D (8)
1	Examine vehicle for obvious signs of damage.			X	X	X	
2	Ensure that vehicle has sufficient fuel, oil and coolant for the journey or task.			X			
3	Examine vehicle for fuel, oil or coolant leaks.			X	X	X	
4	Cab interior and exterior: Examine for damage and security of attachment of panels, fasteners and interior trim.					X	
5	Seat-belts: Examine for serviceability and security of attachment.					X	
6	Doors: Examine and operate mechanism.			X		X	
7	Rear view mirrors: Examine for damage and security of attachment.			X	X		
8	Windscreen washer reservoir: Check level and replenish as necessary. (See Warning 4)		AL 11	X			
9	Lamps, horn, windscreen wipers and washers, directional indicators and hazard flashers, heaters and demisters, instruments and gauges: Examine and ensure correct operation.			X		X	
10	Warning lamps and buzzers: As far as practical ensure correct operation.			X		X	
11	Windscreen and windows: Examine for damage and cleanliness.			X		X	
12	Wiper arms and blades: Examine for serviceability.			X		X	
13	Reflectors: Examine for damage, cleanliness and security of attachment.			X		X	
14	Registration plates, warning signs, instruction plates and other markings: Examine for damage, cleanliness and security of attachment.			X		X	
15	Fire extinguishers: Ensure vehicle is fitted with serviceable fire extinguishers.			X		X	
16	Battery: Examine terminals for security of attachment, check electrolyte level, replenish as necessary. (See Warning 2)		PX7/ Demin water			X	
17	Engine drive belts: Examine for damage and correct tension.					X	
18	Radiator matrix: Examine and clean as necessary.					X	

(continued)

TABLE 6 DRIVER/OPERATOR MAINTENANCE (continued)

Serial (1)	Task (2)	Fig/ Item No. (3)	Product (4)	Maintenance Interval A (5)	B (6)	C (7)	D (8)
19	Brake and clutch hydraulic reservoirs: Check fluid levels and replenish as necessary.		OX 8	X	X	X	
20	Servo steering reservoir: Check fluid levels and replenish as necessary.		OX 75	X	X	X	
21	Fuel/water separator: Drain.					X	
22	Tyre pressures (including spare wheel): Check and adjust as necessary.			X		X	
23	Tyres (including spare wheel): Examine for cuts, damage and uneven wear.			X		X	
24	Road wheels (including spare wheel): Visually examine for damage and security of attachment. Re-tighten if necessary.			X		X	
25	Wheel nuts: Check tightness of all wheel nuts to the recommended torque loading.					X	
26							
27	Loose equipment: Ensure items are stowed correctly.			X			
28	CES equipment: Examine for serviceability and correct stowage.			X		X	
29	Body and specialist fitments: Examine for serviceability and security of attachment.			X		X	
30	Electrical accessories: Examine and ensure correct operation.					X	
31	Steering: Ensure correct operation.			X		X	
32	Brakes: Ensure correct operation.			X		X	
33	Towing pintle: Examine.					X	
34	Coolant: Check SG reading.					X	
35	Winch: Check free spool clutch is fully engaged into drive.			X			
36	Winch: Clean rope and guide rollers, check rope and end fittings for damage and ensure rope is wound tightly and layered correctly onto drum.				X		
37	Winch: Check operation of free spool clutch, winch brake, guide rollers, controls and emergency stop/isolator switch.					X	
38	Winch: Apply grease to all grease nipples on winch and guide rollers.		XG 279			X	
39	Winch: Check all warning labels are in place and legible.			X			

(continued)

TABLE 6 DRIVER/OPERATOR MAINTENANCE (continued)

Serial (1)	Task (2)	Fig/ Item No. (3)	Product (4)	Maintenance Interval A (5)	B (6)	C (7)	D (8)
40	Generator: Ensure waterproof type with disconnect facility and flushing adaptor is fitted (Waterproofed variants only).					X	
41	Starter motor: Check seal to flywheel housing, electrical terminals and all joint seams. Ensure screw heads are coated with sealing compound. (Waterproofed variants only)					X	
42	Engine air intake: Examine all hose joints to air filter casing and cyclone unit. Ensure that air filter cover seals onto felt ring of air filter casing correctly. (Waterproofed variants only)					X	
43	Brake servo unit: Check for air leaks Examine condition of vacuum breather hose. (Only connected when deep fording) (Waterproofed variants only)					X	
44	Low range selector lever: Operate function of lever. (Waterproofed variants only)					X	
45	Handbrake switch: Check function of switch. (Waterproofed variants only)					X	
46	Foot brake switch: Examine sealing of electrical terminals. (Waterproofed variants only)					X	
47	Intervehicle slave socket: Check function of socket. (Waterproofed variants only)					X	
48	Engine oil pressure switch: Examine rubber cover seal to switch body. (Waterproofed variants only)					X	
49	Fuel stop solenoid: Examine sealing of electrical terminals. (Waterproofed variants only)					X	
50	Static functional test: Carry out to confirm the serviceability of all functions and particularly door locks, window regulators/catches, seat adjusters, seat belts and obligatory lights.				X		
51	Mobile function test: Carry out to confirm the serviceability of all functions of starting, driving through the gears and stopping the vehicle.				X	X	
52	ADP 658/FMT658A/FMT1001/FMT1001A (Duty Movement Authorisation/Driver Tasking Sheet) as appropriate: Sign.			X		X	
53	AF G 1084A or STAMA 3 monthly record as appropriate: Sign. (RAF only)					X	

(continued)

TABLE 6 DRIVER/OPERATOR MAINTENANCE (continued)

Serial (1)	Task (2)	Fig/ Item No. (3)	Product (4)	Maintenance Interval			
				A (5)	B (6)	C (7)	D (8)
54	Record action in FMT 1004 (Army only) and record on JAMES LAND (all users)					X	

TABLE 7 TIME/USAGE MAINTENANCE

Table 7 Maintenance is to be carried out by the tradesman and at the intervals shown at Chapter 1, Para 12.

The following WARNINGS, CAUTIONS and NOTES must be read and understood before commencing these maintenance tasks.

WARNINGS

(1) DANGER OF SCALDING. DO NOT REMOVE COOLANT FILLER CAP WHEN THE ENGINE IS HOT.

(2) ACID SPLASH. EXERCISE CAUTION WHEN CHECKING BATTERY LEVELS.

(3) TOXICITY. AL39 IS BOTH TOXIC AND HAZARDOUS. MINIMUM PRECAUTION AFTER CONTACT IS TO WASH THE AFFECTED AREA WITH SOAP AND WATER.

(4) HEALTH HAZARD. INFLAMMABLE LIQUID, AL11 IS HIGHLY INFLAMMABLE. THE PREPARATION OF THE FLUID FOR WINDSCREEN WASHERS IS TO BE CARRIED OUT IN THE OPEN AND AWAY FROM NAKED FLAME. MINIMUM PRECAUTION AFTER CONTACT IS TO WASH THE AFFECTED AREA WITH SOAP AND WATER.

(5) PERSONAL INJURY. NEVER HANDLE A WIRE ROPE WHEN ANYONE ELSE IS AT THE CONTROLS, BARE HAND CONTACT OF STEEL ROPES IS TO BE AVOIDED AT ALL TIMES.

CAUTIONS

(1) EQUIPMENT DAMAGE. After starting the engine, let it idle for 10 seconds to allow oil to circulate through the turbo-charger bearings.

(2) EQUIPMENT DAMAGE. Before switching off the engine, let it idle for 2 minutes to prevent damage to the turbo-charger bearings.

(3) EQUIPMENT DAMAGE. Check oil level when engine is cold.

(4) WHEEL NUT TORQUE. After changing a wheel retighten wheel nuts to 260 Nm after driving 30 miles (50 Km).

(5) OIL INCOMPATIBILITY. OX 75 and OX 165 oils used in servo steering and wheel drives are not compatible with other oils. Should they need to be changed the oil must be drained and flushed before refilling with a new type of oil.

NOTES

(1) The battery master switch key can be removed when in the switched off position.

(2) When pressure testing the coolant system, ensure that the heater valve is open.

(3) With the ignition switched off, the transmission automatically selects all wheel drive so that the handbrake operates on all six wheels.

(4) Minimum legal brake lining thickness is 2 mm.

(5) Check engine oil level when engine is cold.

(continued)

TABLE 7 TIME/USAGE MAINTENANCE (continued)

(6) Steering gear and transmission components have combined filler/level plugs and are correctly filled when the oil is up to the oil filler opening.

(7) Wire ropes are to be examined by a competent SNCO as detailed in AESP 2590-E-100-013.

(8) Lubricate winch rope in accordance with AP 4545, Vol 2 Leaflet A98 – (RAF Only).

Serial (1)	Task (2)	Fig/ Item No. (3)	Product (4)	Maintenance Interval				
				1st (5)	A (6)	B (7)	C (8)	D (9)
	ENGINE							
1	Engine: Examine particularly for oil and coolant leaks.	1		X	X	X		1
2	Engine oil: Drain and replace. (See Maintenance Note 5		OMD 90	X	X	X		1
3	Coolant header tank: Examine, check coolant level and replenish as required. (See Table 5)	2	AL39/ Water mix	X	X	X		1
4	Engine oil filter: Replace.	3		X	X	X		1
5	Coolant: Measure specific gravity.					X		1
6	Fuel filter: Drain water from sedimenter.	4			X	X		1
7	Fuel filter: Replace.					X		1
8	Fuel injection and lift pumps: Examine and check operation of governor. (VM)			X	X	X		1
9	Fuel injection and lift pumps: Examine, particularly for security of attachment, leaks and chafing.			X	X	X		1
10	Coolant and lubrication system: Check hoses and fitting for security of attachment and chafing.			X	X	X		1
11	Air filter: Clean cartridge.				X			1
12	Air filter: Replace cartridge.					X		1
13	Exhaust and turbo-charger system: Examine for damage and leaks, check mountings for security of attachment.			X	X	X		1
14	V-belts: Check tensions and retighten if required, replace if necessary.			X	X	X		1
15	Camshaft belt: Examine, replace if required. (See Table 5) (VM)				X	X		1
16	Fan and viscous coupling: Examine.				X	X		1
17	Injection pump drive belt: Examine, replace if required. (See Table 5) (VM)				X	X		1
18	Engine mountings: Examine for condition and security of attachment.			X	X	X		1

(continued)

TABLE 7 TIME/USAGE MAINTENANCE (continued)

Serial (1)	Task (2)	Fig/ Item No. (3)	Product (4)	Maintenance Interval				
				1st (5)	A (6)	B (7)	C (8)	D (9)
19	Engine controls: Lubricate.		OMD 90		X	X		1
20	Engine idle speed: Examine and adjust as necessary. (VM)				X	X		1
21	Fuel tank sender unit: Check sealing of electrical terminals. (Waterproofed variants only)			X		X		
22	Fuel filter: Check sealing of fuel preheating. (Waterproofed variants only)			X		X		1
23	Fuel injection pump: Examine condition of breather pipe and security of information. Check condition of rubber gaiter. Check sealing of fuel stop solenoid. (Waterproofed variants only)					X		1
24	Camshaft belt: Replace camshaft belt – Record details in FMT 1004. (Waterproofed variants only) (See Table 5) (VM)					X		1
25	Replace camshaft belt tension pulley. (Waterproofed version only) (See Table 5) (VM)					X		1
26	Generator: Ensure waterproof type with disconnect facility and flushing adaptor is fitted. Check sealing of electrical terminals. (Waterproofed variants only)			X	X	X		1
27	Starter motor: Check seal to flywheel housing, electrical terminals and all joint seams. Ensure screw heads are coated with sealing compound. (Waterproofed variants only)			X	X	X		1
28	Engine air intake: Examine all hose joints to air filter casing and cyclone unit. Ensure air filter cover seals onto felt ring of air filter casing correctly. (Waterproofed variants only)			X	X	X		1
29	Turbo boost wastegate: Check wastegate adaptor complete with breather fitted. Check sealing of wastegate and rubber sleeve. Check rubber is free to slide on pushrod. (Waterproofed variants only)			X		X		1
30	Cold start mechanism: Examine condition of rubber gaiter. (Waterproofed variants only)					X		1
31	Engine glow plugs: Examine sealing of electrical terminals. (Waterproofed variants only)							

(continued)

TABLE 7 TIME/USAGE MAINTENANCE (continued)

Serial (1)	Task (2)	Fig/ Item No. (3)	Product (4)	Maintenance Interval 1st (5)	A (6)	B (7)	C (8)	D (9)
32	Engine oil pressure switch: Examine rubber cover is sealed to switch body. (Waterproofed variants only)			X	X	X		1
33	Engine oil dipstick tube: Check tightness of connection with oil pan. (Waterproofed variants only)			X	X	X		1
34	Coolant temperature switch: Examine sealing of electrical terminals. (Waterproofed variants only)					X		1
35	Temperature sensor switch: Examine sealing of electrical terminals. (Waterproofed variants only)					X		1
36	Auxiliary coolant pump: Examine sealing of electrical terminals. (Waterproofed variants only)					X		1
	STEERING AND SUSPENSION							
37	Servo, steering pump and steering gear: Check oil level, replenish as necessary. (See Maintenance Note 6) (See Caution 5)	5	OX 75	X	X	X		2
38	Servo steering (joints at power piston): Lubricate.	6	XG 279		X	X		2
39	Steering operating cylinders: Examine for leaks and security of attachment.			X	X	X		2
40	Steering control linkages: Examine for damage, wear and security of attachment.			X	X	X		2
41	Front wheel alignment: Check and adjust as necessary. (VM)					X		2
42	Steering wheel and column: Examine.					X		2
43	Tyres (including spare wheel): Examine for cuts, damage and uneven wear, replace as necessary.			X	X	X		2
44	Tyre pressures (including spare wheel): Check and adjust as necessary.			X	X	X		2
45	Wheel nuts: Check tightness of all wheel nuts to the recommended torque loading.			X	X	X		2
46	Shock absorbers: Examine for leaks and security of attachment.				X	X		2
47	Steering gearbox: Check oil level, replenish as required.	7	OEP 220	X		X		2
48	Level control system: Ensure correct operation. (VM)			X	X	X		2

(continued)

TABLE 7 TIME/USAGE MAINTENANCE (continued)

Serial (1)	Task (2)	Fig/ Item No. (3)	Product (4)	Maintenance Interval 1st (5)	A (6)	B (7)	C (8)	D (9)
49	Level control compressor: Check quick release adapter fitted to air pipe. (Waterproofed variants only)			X		X		2
50	Steering column: Examine steering wheel oil seal, rubber sleeve and ignition switch clamp tube sealing. (Waterproofed variants only)			X		X		2
51	Steering wheel: Check sealing of the fixing nut. (Waterproofed variants only)			X		X		2
	TRANSMISSION							
52	Gearbox, transfer gearbox, wheel drives and axle drives: Check for leaks and security of attachment.			X	X	X		3
53	Gearbox: Check oil level and replenish as necessary. (See Maintenance Note 6)	8	OEP 220	X		X		3
54								
55	Transfer gearbox: Check oil level and replenish as necessary. (See Maintenance Note 6)	9	OEP 220	X		X		3
56	Wheel drives: Check oil levels and replenish as necessary. (See Maintenance Note 6) (See Caution 5)	10	OX 165	X		X		3
57	Axle drives: Check oil level and replenish as necessary. (See Maintenance Note 6)	11	OEP 220	X		X		3
58	Propshaft: Examine.			X	X	X		3
59	Propshaft: Lubricate.	12	XG 279	X		X		3
60	Gearbox lower rubber mounting pad: Release both lower retaining screws, allow pad to reassert itself and retighten retaining screws.			X				
61	Axle drive housing: Tighten tie rod to prescribed torque.			X		X		3
62	Axle clamping screws: Tighten to prescribed torque loading.			X		X		3
63	Axle centring screws: Tighten to prescribed torque loading.			X		X		3
64	Front hub swivel pins and bushes: Examine particularly for excessive wear. (VM)			X		X		3
65	Clutch pedal and linkage: Lubricate.		OMD 90		X	X		3

(continued)

TABLE 7 TIME/USAGE MAINTENANCE (continued)

Serial (1)	Task (2)	Fig/ Item No. (3)	Product (4)	Maintenance Interval 1st (5)	A (6)	B (7)	C (8)	D (9)
66	Clutch pedal, master cylinder, slave cylinder, pipes and hoses: Examine.			X	X	X		3
67	Differential locks: Ensure correct operation. (VM)			X		X		3
68	Clutch housing: Examine condition and security of breather pipe. Ensure flywheel drain plug is fitted. (Waterproofed variants only)			X	X	X		3
69	Gearbox housing: Check sealing of the three bores for stop bolt. Examine condition and security of breather pipe. (Waterproofed variants only)			X		X		3
70	Axle breathers: Examine condition and security of breather pipe. (Waterproofed variants only)			X		X		3
71	All wheel drive dryer and filter: Check condition of vent hoses. (Waterproofed variants only)					X		3
72	Range selector lever: Check function of lever and drain hole. (Waterproofed variants only)			X		X		3
	BRAKES							
73	Connections and hoses: Examine for tightness and damage, secure or replace as necessary.			X	X	X		4
74	Brake fluid reservoir: Check fluid level, replenish if required. (See table 5)	13	OX 8	X	X	X		4
75	Brake callipers and discs: Examine for damage and security of attachment.			X	X	X		4
76	Brake linings: Examine and replace if required. (See Maintenance Note 4)				X	X		4
77	Handbrake: Check and adjust as necessary. (See Maintenance Note 3)				X	X		4
78	Hand brake: Lubricate.		OMD 90		X	X		4
79	Brake pedal and linkage: Lubricate.		OMD 90		X	X		4
80	Brake system: Carry out brake test or decelerometer test. (In accordance with AP 4545, Vol 2, Leaflet A64 - RAF only) (VM)					X		4
81	Brake servo unit: Check for air leaks and condition of pushrod gaiter. Check condition of vacuum breather hose. (Only connected when deep fording) (Waterproofed variants only)			X	X	X		4

(continued)

TABLE 7 TIME/USAGE MAINTENANCE (continued)

Serial (1)	Task (2)	Fig/ Item No. (3)	Product (4)	Maintenance Interval				
				1st (5)	A (6)	B (7)	C (8)	D (9)
82	Brake/Clutch reservoir breather: Examine condition of vent, check sealing of electrical terminals. (Waterproofed variants only)			X		X		4
	ELECTRICS							
83	Lamps, horn, windscreen wipers and washers, direction indicators and hazard flashers: Examine and ensure correct operation.			X	X	X		5
84	Switches and warning devices: Examine and as far as reasonably practical ensure correct operation.			X	X	X		5
85	Electrical wiring, junction boxes and conduits: Examine for signs of chafing, burning or other damage and for security of attachment.				X	X		5
86	Fuses, fuse holders and relays: Examine and ensure fuses of correct rating are fitted.				X	X		5
87	Battery isolate switch: Examine and operate.				X	X		5
88	Cold start device: Examine and operate.				X	X		5
89	Heaters and demisters: Examine and operate.				X	X		5
90	Electrical accessories: Examine and operate.				X	X		5
91	Windscreen washer fluid reservoir: Check level and replenish as necessary.		AL 11	X	X	X		5
92	Batteries: Check electrolyte level, replenish if required. (See Warning 2)		Demin water	X	X	X		5
93	Batteries: Examine terminals for security of attachment and apply protective lubricant.		PX 7		X	X		5
94	Battery stowage area: Examine for corrosion, restore surface finish as necessary.				X	X		5
95	Starter motor: Examine.				X	X		5
96	Alternator: Examine and check output voltage. (VM)					X		5
97	Headlight alignment: Check and adjust as necessary. (In accordance with AP 4545, Vol 2, Leaflet A13 - RAF only) (VM)					X		5

(continued)

TABLE 7 TIME/USAGE MAINTENANCE (continued)

Serial (1)	Task (2)	Fig/ Item No. (3)	Product (4)	Maintenance Interval				
				1st (5)	A (6)	B (7)	C (8)	D (9)
98	Winch: Check and clean all power connections.	14			X			5
99	Winch: Check electrical wiring for signs of chaffing.				X			5
100	Instrument panel: Check connection of instrument panel box. Check condition of vent hoses. (Waterproofed variants only)			X		X		5
101	Heater motor: Check flushing pipe is fitted to heater motor casing. (Waterproofed variants only)			X		X		5
102	Heater fan switch: Check function of switch. (Waterproofed variants only)			X		X		5
103	Cigar lighter: Check function of switch. (Waterproofed variants only)					X		5
104	Rear bulkhead relays and connections: Check seal on box lid, relays and all electrical connections. (Waterproofed variants only)					X		5
105	Handbrake switch: Check function and sealing of switch. (Waterproofed variants only)			X	X	X		5
106	Footbrake switch: Check sealing of electrical terminals. (Waterproofed variants only)			X	X	X		5
107	Intervehicle start socket: Check sealing and function of socket. (Waterproofed variants only)			X	X	X		5
108	Battery isolate switch: Check sealing of electrical terminals, check rubber cover. (Waterproofed variants only)			X	X	X		5
109	Number plate light: Check sealing of electrical terminals. (Waterproofed variants only)			X		X		5
110	Rear lights: Check sealing of electrical cables. (Waterproofed variants only)			X		X		5
111	Front indicator light: Check drain hole and sealing of electrical terminals. (Waterproofed variants only)			X		X		5
112	Windscreen wiper motor: Check rubber cover is fitted over motor. (Waterproofed variants only)			X		X		5

(continued)

TABLE 7 TIME/USAGE MAINTENANCE (continued)

Serial (1)	Task (2)	Fig/ Item No. (3)	Product (4)	Maintenance Interval				
				1st (5)	A (6)	B (7)	C (8)	D (9)
113	Winch remote control: Check sealing of wiring harness to remote control socket on bumper. (Waterproofed variants only)			X		X		5
114	Electrical boxes 1-4: Check electrical connections. Check seal on box lid. (Waterproofed variants only)			X		X		
115	Transfer gearbox, selector switch: Check function and sealing of switch. (Waterproofed variants only)			X	X	X		5
116	Horn: Check sealing of electrical connections. (Waterproofed variants only)			X		X		5
117	Earth connections: Check corrosion protection of earth connections.			X		X		5
118	Check all harnessflex bayonet connector assemblies and harnessflex conduit assemblies. (Waterproofed variants only)			X		X		5
119	Auxiliary heating dosing pump: Check sealing of electrical pump. (Waterproofed variants only)			X		X		5
	BODY AND CHASSIS							
120	Cab and bodywork: Examine particularly for damage and corrosion.				X	X		6
121	Windscreen and windows: Examine.			X	X	X		6
122	Mudguards: Examine.			X	X	X		6
123	Cab doors and locks: Examine, ensure correct operation.			X	X	X		6
124	Registration, marker and legal plates: Examine.			X	X	X		6
125	Towing pins/hitches: Examine and lubricate.					X		6
126	Underseal: Examine and restore finish as necessary.		PX-28		X	X		6
127	Seat adjuster: Examine, ensure correct operation and lubricate. (See Table 3)					X		6
128	Seat-belts: Examine, for damage and security of attachment. (See Table 3)			X	X	X		6
129	Oil can lubrication: General lubrication of all locks, hinges, catches, linkages and pins.		OMD 90	X	X	X		6

(continued)

TABLE 7 TIME/USAGE MAINTENANCE (continued)

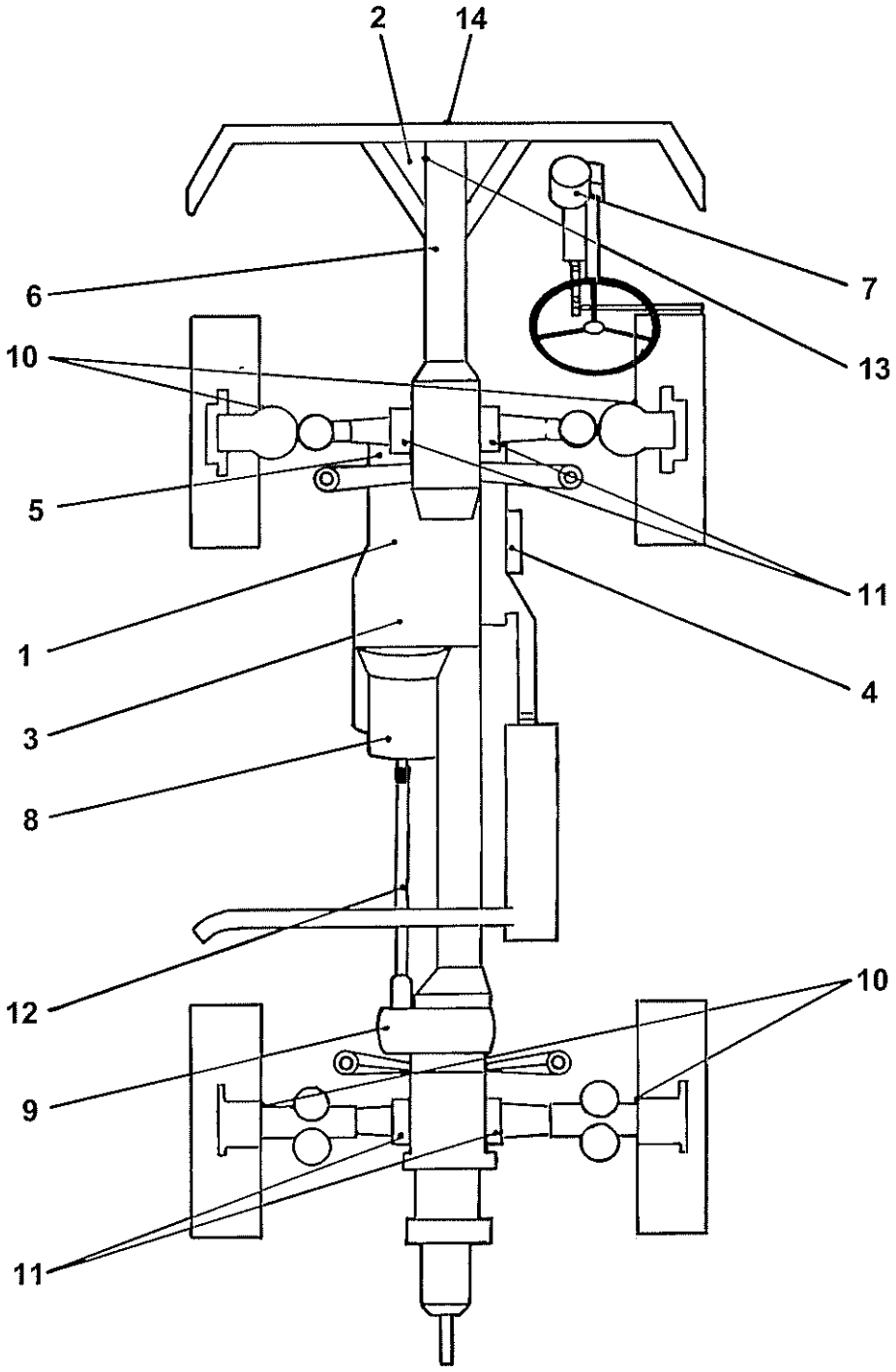
Serial (1)	Task (2)	Fig/ Item No. (3)	Product (4)	Maintenance Interval				
				1st (5)	A (6)	B (7)	C (8)	D (9)
130	Vehicle jack: Operate throughout its range on the vehicle for which it was issued. Hydraulic jacks are to be left at maximum height for five minutes then checked for creep.					X		6
131	Drivers fresh air vent: Operate function of vent. (Waterproofed variants only)					X		6
	WINCH							
132	Winch rope: Examine as per the following. (See Maintenance Note 7)	14		X	X	X		6
	132.1 Examine the rope layout throughout its working length for fraying, corrosion and kinks. (See Warning 5)			X	X	X		6
	132.2 Ensure the rope anchorage is secure and not excessively worn.			X	X	X		6
	132.3 Examine the guide rollers for damage and freedom of rotation.			X	X	X		6
	132.4 Ensure that the rope lies evenly on the drum.			X	X	X		6
	132.5 Examine the rope reeve (eye) for damage.			X	X	X		6
	132.6 Ensure the safe working load tag is fitted to the rope.			X	X	X		6
	132.7 Lubricate the winch rope. (See Maintenance Note 8)			X	X	X		6
	132.8 Check rope identification for five turns left on winch drum.				X			6
133	AF G 1084A Worksheet or STAMA Worksheet for tradesman and countersigning NCO: Sign. (RAF only)			X	X	X		All
134	Road test (VM) or NCO MT Technician): Carry out			X	X	X		All
135	AF G 1084A Worksheet or STAMA Worksheet: Insert co-ordinating signature. (RAF only)			X	X	X		All
136	Record action in FMT 1004. (Army only)			X	X	X		All
137	Annotate FMT 1004: "Waterproofing integrity checked in accordance with Maintenance Schedule" (Army only)					X		All

TABLE 8 OUT OF USE MAINTENANCE

Table 8 Maintenance is to be carried out in accordance with the instructions shown at Chapter 1, Para 13.

WARNINGS, CAUTIONS and Maintenance Notes preceding Tables 6 and 7 must be read and understood before commencing these maintenance tasks.

Serial (1)	Operation (2)	Fig/ Item No. (4)	Product (4)
	Prior to vehicle entering storage:		
1	Carry out Table 6, Columns A, B and C maintenance, check coolant specific gravity and patch paint.		
2	Carry out next maintenance due if it falls during out of use period.		
3	Rectify all faults affecting road/task worthiness.		
4	Fill fuel tanks.		
5	Isolate batteries using battery isolator switch or by disconnecting earth lead.		
	Monthly while in storage:		
6	Carry out Table 6, Columns A and B maintenance.		
7	Operate equipment and all systems.		
8	Carry out road test over 8 km (5 miles) if possible.		
9	Update FMT 1004.		
	Winch		
10	Carry out load test 48 months.		



1	Engine	8	Gearbox
2	Oil filter	9	Transfer gearbox
3	Coolant header tank	10	Wheel drives
4	Fuel filter	11	Axle drives
5	Servo steering pump	12	Propshaft
6	Servo steering joints	13	Brake reservoir
7	Steering gearbox	14	Winch

Fig 1 Lubrication diagram

CHAPTER 1-2

MAINTENANCE SCHEDULE - 6 CYLINDER ENGINE AUTOMATIC GEARBOX 6X6 VARIANTS

CONTENTS

INTRODUCTION

1 This Maintenance Schedule is the authority for carrying out all scheduled maintenance tasks on the subject equipment (6 cylinder engine, automatic gearbox, 6x6 Pinzgauer variants) and takes precedence over any other conflicting publication.

DEFINITIONS

2 Refer to Chapter 1.

WARNINGS, CAUTIONS AND MAINTENANCE NOTES

3 Before any maintenance task is carried out, the WARNINGS, CAUTIONS and Maintenance Notes preceding the appropriate table must be read and understood.

MAINTENANCE INTERVALS AND AREAS OF RESPONSIBILITY

4 Refer to Chapter 1.

TABLE 1 EQUIPMENT APPLICABILITY

Serial (1)	Equipment Asset Code (2)	Designation (3)	Contract Numbers (4)
1	1032 3100	TUM (HD) 6 x 6 Ambulance Trauma Management	
2	1741 3100	TUM (HD) 6 x 6 TCB Box Body Psyops	
3	1742 3100	TUM (HD) 6 x 6 Box Body [redacted]	
4	1742 3101	TUM (HD) 6 x 6 FFR Hard Top [redacted]	
5	1743 3103	TUM (HD) 6 x 6 FFR Hard Top [redacted]	
6	1744 3100	TUM (HD) 6 x 6 FFR TCB with Winch [redacted]	
7	1744 3101	TUM (HD) 6 x 6 FFR TCB with Winch [redacted]	
8	1747 3100	TUM (HD) FFR Hard Top	
9	1752 3100	TUM (HD) GS Soft Top Winterised/Waterproofed	
10	1753 3100	TUM (HD) GS Soft Top with Winch Winterised/Waterproofed	
11	1758 3100	TUM (HD) 6 x 6 FFR Ptarmigan	
12	1758 3101	TUM (HD) 6 x 6 FFR Ptarmigan SAS/MC(AP)	
13	1758 3102	TUM (HD) 6 x 6 FFR Ptarmigan RR(AP)	
14	1761 3100	TUM (HD) 6 x 6 FFR [redacted]	
15	1761 3101	TUM (HD) 6 x 6 FFR [redacted]	
16	1763 3102	TUM (HD) GS HT with [redacted]	
17	1769 3102	TUM (HD) 6 x 6 FFR ST W/WINCH GTV / Limber	
18	1790 3100	TRUCK UTY MED (HD) FFR [redacted]	

TABLE 2 FUELS, LUBRICANTS AND ASSOCIATED PRODUCTS

NOTES

(1) The products listed below are to be used on this equipment. Alternative products must not be used without the approval of an appropriately qualified REME Advisor (Army) or MT Officer (RAF).

(2) Oil changes at the -15 deg C point shall only be made on the advice of the MT Officer.

(3) The capacities listed are to be used as a guide only. A physical check is to be carried out to ensure that all fluid levels are correct. This check should be carried out with the vehicle unladen and standing on level ground whenever possible.

Serial	Assembly	Product		Capacity	
		Above -15 deg C	Below -15 deg C	Litres	Pints
(1)	(2)	(3)	(4)	(5)	(6)
1	Engine.	OMD 90	OMD 55	7.0	12.3
2	Engine coolant.	AL 39/water mixture		19.6	34.5
3	Transmission - automatic gearbox without draining torque converter.	OX 75	OX 75	6.0	10.5
4	Transmission - automatic gearbox with drained torque converter.	OX 75	OX 75	8.0	14.0
5	Axle drive - per drive.	OEP 220	OEP 220	2.0	3.5
6	Transfer transmission.	OEP 220	OEP 220	1.8	3.2
7	Steering gearbox.	OEP 220	OEP 220	0.7	1.2
8	Servo steering system.	OX 75	OX 75	2.75	4.8
9	Wheel drives:				
	9.1 Front.	OX 165	OX 165	0.4	0.7
	9.2 Rear.	OX 165	OX 165	0.35	0.6
10	Brake fluid reservoir.	OX 8	OX 8	0.6	1.1
11	Clutch reservoir.	OX 8	OX 8	0.7	1.2
12	Windscreen washer reservoir.	AL 11/washer fluid/ water mix		8.0	14.0
13	Fuel tank.	Dieso	Dieso	Subject to variant	
14	General greasing.	XG 279	XG 279		
15	Batteries.	PX7/Demin water			
16	Undersealing.	PX-28	PX-28		
17	Winch rope lubricant:				
	17.1 Army.	XG 279	XG 279		
	17.2 RAF (AP 4545, Vol 2, Leaflet A98).	34D/ 5490384	34D/ 5490384		

TABLE 3 EQUIPMENT DATA

Serial (1)	Item (2)	Detail (3)	
	ADJUSTMENTS		
1	ITEM DELETED		
2	Front wheel alignment.	Toe-in 3 to 5 mm	
3	Front hub swivel pin/bush wear limit.	0.35 mm	(0.014 in.)
4	Rear air suspension pressure.	3 bar	(44 lbf/in.²)
5	Idle speed.	750 ± 50 rev/min	
6	Maximum engine speed.	4600 ± 50 rev/min	
	TYRES (SUBJECT TO VARIANT)		
7	Size.	Michelin 8.25 R 16 XZL	
8	Pressure.	In accordance with vehicle marking or: 2.8 bar front and rear	
	or		
9	Size.	BF Goodrich 285/75 R 16 M/T	
10	Pressure.	In accordance with vehicle marking or: 3.5 bar front and rear	
	or		
11	Size	BF Goodrich LT285/75 R16/D 122Q	
12		In accordance with vehicle marking or: 3.5 bar front and rear	
	TORQUE SETTINGS		
13	Wheel nuts.	260 Nm	(192 lbf ft)
14	Axle drive housing tie rods.	80 Nm	(59 lbf ft)
15	Axle clamping screws.	250 Nm	(185 lbf ft)
16	Axle centring screws.	250 Nm	(185 lbf ft)
17	Body bracket mounting bolts.	250 Nm	(185 lbf ft)
18	Retaining screw on brake floating calliper.	35 Nm	(26 lbf ft)
19	Engine oil drain plug.	50 Nm	(37 lbf ft)
20	Automatic gearbox drain-plug.	15 Nm	(11 lbf ft)

TABLE 4 ACTION ON RECEIPT

Table 4 Maintenance is to be carried out in accordance with the instructions shown at Para 8.

Serial (1)	Action (2)
1	Carry out an inspection in accordance with current regulations (AESP 2590-E-100-013). Carry out the maintenance tasks from the Driver/Operator Table 6, Column A.
2	On receipt of a vehicle from a source where the maintenance condition of the vehicle is unknown, carry out the maintenance tasks from the Driver/Operator Table 6, Column A, followed by the maintenance tasks from the Time/Usage Maintenance Table 7, Columns B, C and Out of Phase maintenance Table 5.

TABLE 5 OUT OF PHASE MAINTENANCE

Table 5 Maintenance is to be carried out in accordance with the instructions shown at Chapter 1 Para 10.

Serial (1)	Action (2)	Interval (3)
1	Replace coolant.	3 yearly
2	Replace brake fluid.	2 yearly
3	Replace automatic gearbox oil.	4 yearly
4	Replace transfer gearbox oil.	2 yearly
5	Replace axle drives oil.	2 yearly
6	Replace camshaft belt - Record details in AB 562.	Every 30,000 miles (48,000km) or 3 yearly whichever occurs first.
7	Replace injector pump belt - Record details in AB 562.	Every 37,500 miles (60,000km) or 3 yearly whichever occurs first.

TABLE 6 DRIVER/OPERATOR MAINTENANCE

Table 6 Maintenance is to be carried out by the tradesman and at the intervals shown at Para 10.

The following WARNINGS, CAUTIONS and MAINTENANCE NOTES must be read and understood before commencing these maintenance tasks.

WARNINGS

(1) DANGER OF SCALDING. DO NOT REMOVE COOLANT FILLER CAP WHEN THE ENGINE IS HOT.

(2) ACID SPLASH. EXERCISE CAUTION WHEN CHECKING BATTERY LEVELS.

(3) TOXICITY. AL39 IS BOTH TOXIC AND HAZARDOUS. MINIMUM PRECAUTION AFTER CONTACT IS TO WASH THE AFFECTED AREA WITH SOAP AND WATER.

(4) INFLAMMABLE LIQUID. AL11 IS HIGHLY INFLAMMABLE. THE PREPARATION OF THE FLUID FOR WINDSCREEN WASHERS IS TO BE CARRIED OUT IN THE OPEN AND AWAY FROM NAKED FLAME. MINIMUM PRECAUTION AFTER CONTACT IS TO WASH THE AFFECTED AREA WITH SOAP AND WATER.

(5) PERSONAL INJURY. NEVER HANDLE A WIRE ROPE WHEN ANYONE ELSE IS AT THE CONTROLS BARE HAND CONTACT OF STEEL ROPES IS TO BE AVOIDED AT ALL TIMES.

CAUTIONS

(1) MASTER SWITCH. The battery master switch key can be removed when in the switched off position.

(2) EQUIPMENT DAMAGE. After starting the engine, let it idle for 10 seconds to allow oil to circulate through the turbo-charger bearings.

(3) EQUIPMENT DAMAGE. Before switching off the engine, let it idle for 2 minutes to prevent damage to the turbo-charger bearings.

(4) EQUIPMENT DAMAGE. Check oil level when engine is cold.

(5) WHEEL NUT TORQUE. After changing a wheel retighten wheel nuts to 260 Nm after driving 30 miles (50 Km).

(6) OIL INCOMPATIBILITY. OX 75 and OX 165 oils used in servo steering and wheel drives are not compatible with other oils. Should they need to be changed the oil must be drained and flushed before refilling with a new type of oil.

MAINTENANCE NOTES

(1) In-service coolant specific gravity meters will give a false reading when testing manufacturer's antifreeze (orange in colour). If there is any doubt as to the strength of the antifreeze mixture, then the system should be drained, flushed and refilled with AL 39. (See also Table 5, Serial 1).

(2) Automatic gearbox oil level should be between MIN - MAX when cold. Correct gearbox oil level can only be checked if oil is warm, (80 deg C) the engine is idling and Park is selected on the gearshift.

(3) Steering gear and transmission components have combined filler/level plugs and are correctly filled when the oil comes up to the level of the oil filler opening.

(continued)

TABLE 6 DRIVER/OPERATOR MAINTENANCE (continued)

Serial (1)	Task (2)	Fig/ Item No. (3)	Product (4)	Maintenance Interval			
				A (5)	B (6)	C (7)	D (8)
1	Examine vehicle for obvious signs of damage.			X	X	X	
2	Ensure that vehicle has sufficient fuel, oil and coolant for the journey or task.			X			
3	Examine vehicle for fuel, oil or coolant leaks.			X	X	X	
4	Cab interior and exterior: Examine for damage and security of attachment of panels, fasteners and interior trim.					X	
5	Seat-belts: Examine for serviceability and security of attachment.					X	
6	Doors: Examine and operate mechanism.			X		X	
7	Rear view mirrors: Examine for damage and security of attachment.			X	X		
8	Windscreen washer reservoir: Check level and replenish as necessary. (See warning 4)		AL 11	X			
9	Lamps, horn, windscreen wipers and washers, directional indicators and hazard flashers, heaters and demisters, instruments and gauges: Examine and ensure correct operation.			X		X	
10	Siren, blue repeater lamps, map light, blue flashing beacon, ambulance sign and fluorescent saloon lamps: Examine and ensure correct operation.			X		X	
11	Warning lamps and buzzers: As far as practical ensure correct operation.			X		X	
12	Windscreen and windows: Examine for damage and cleanliness.			X		X	
13	Wiper arms and blades: Examine for serviceability.			X		X	
14	Reflectors: Examine for damage, cleanliness and security of attachment.			X		X	
15	Registration plates, warning signs, instruction plates and other markings: Examine for damage, cleanliness and security of attachment.			X		X	
16	Fire extinguishers: Ensure vehicle is fitted with serviceable fire extinguishers.			X		X	
17	Battery: Examine terminals for security of attachment, check electrolyte level, replenish as necessary. (See Warning 2)		PX7/ Demin water			X	

(continued)

TABLE 6 DRIVER/OPERATOR MAINTENANCE (continued)

Serial (1)	Task (2)	Fig/ Item No. (3)	Product (4)	Maintenance Interval A (5)	B (6)	C (7)	D (8)
18	Engine drive belts: Examine for damage and correct tension.					X	
19	Radiator matrix: Examine and clean as necessary.					X	
20	Brake and clutch hydraulic reservoirs: Check fluid levels and replenish as necessary.		OX 8	X	X	X	
21	Power steering reservoir: Check fluid levels and replenish as necessary.		OX 75	X	X	X	
22	Fuel/water separator: Drain.					X	
23	Tyre pressures (including spare wheel): Check and adjust as necessary.			X		X	
24	Tyres (including spare wheel): Examine for cuts, damage and uneven wear.			X		X	
25	Road wheels (including spare wheel): Visually examine for damage and security of attachment. Re-tighten if necessary.			X		X	
26	Wheel nuts: Check tightness of all wheel nuts to the recommended torque loading.					X	
27	6 x 6 Rear air suspension: Check pressure, adjust if necessary.			X		X	
28	Loose equipment: Ensure items are stowed correctly.			X			
29	CES equipment: Examine for serviceability and correct stowage.			X		X	
30	Body and specialist fitments: Examine for serviceability and security of attachment.			X		X	
31	Electrical accessories and air conditioning system: Examine and ensure correct operation.					X	
32	Steering: Ensure correct operation.			X		X	
33	Brakes: Ensure correct operation.			X		X	
34	Towing pintle: Examine.					X	
35	Coolant: Check SG reading. (See Maintenance Note 1) AP 4545 Vol 2 leaflet A9 RAF only)					X	
36	Winch: Check free spool clutch is fully engaged into drive and rope is wound tightly and neatly onto drum. (See Warning 5)			X			
37	Winch: Clean rope and guide rollers, check rope and end fittings for damage and ensure rope is wound tightly and neatly onto drum.				X		

(continued)

TABLE 6 DRIVER/OPERATOR MAINTENANCE (continued)

Serial (1)	Task (2)	Fig/ Item No. (3)	Product (4)	Maintenance Interval			
				A (5)	B (6)	C (7)	D (8)
38	Winch: Check operation of free spool clutch, winch brake, guide rollers, controls and emergency stop/isolator switch.					X	
39	Winch: Apply grease to all grease nipples on winch and guide rollers.					X	
40	Winch: Check all warning labels are in place and legible.			X			
41	Static functional test: Carry out to confirm the serviceability of all functions and particularly door locks, window regulators/catches, seat adjusters, seat belts and obligatory lights.					X	
42	Mobile functional test: Carry out to confirm the serviceability of all functions of starting, driving through the gears and stopping the vehicle.					X	
43	ADP 658/FMT658A/FMT1001/FMT1001A (Duty Movement Authorisation/Driver Tasking Sheet) as appropriate: Sign.			X			
44	AF G 1084A or STAMA 3 monthly record as appropriate: Sign. (RAF only)					X	
45	Record action in FMT 1004 (Army only) and record on JAMES LAND (all users)					X	

TABLE 7 TIME/USAGE MAINTENANCE

Table 7 Maintenance is to be carried out by the tradesman and at the intervals shown at Para 11.

The following WARNINGS, CAUTIONS and MAINTENANCE NOTES must be read and understood before commencing these maintenance tasks.

WARNINGS

(1) DANGER OF SCALDING. DO NOT REMOVE COOLANT FILLER CAP WHEN THE ENGINE IS HOT.

(2) ACID SPLASH. EXERCISE CAUTION WHEN CHECKING BATTERY LEVELS.

(3) TOXICITY. AL39 IS BOTH TOXIC AND HAZARDOUS. MINIMUM PRECAUTION AFTER CONTACT IS TO WASH THE AFFECTED AREA WITH SOAP AND WATER.

(4) INFLAMMABLE LIQUID. AL11 IS HIGHLY INFLAMMABLE. THE PREPARATION OF THE FLUID FOR WINDSCREEN WASHERS IS TO BE CARRIED OUT IN THE OPEN AND AWAY FROM NAKED FLAME. MINIMUM PRECAUTION AFTER CONTACT IS TO WASH THE AFFECTED AREA WITH SOAP AND WATER.

(5) PERSONAL INJURY. NEVER HANDLE A WIRE ROPE WHEN ANYONE ELSE IS AT THE CONTROLS BARE HAND CONTACT OF STEEL ROPES IS TO BE AVOIDED AT ALL TIMES.

CAUTIONS

(1) MASTER SWITCH. The battery master switch key can be removed when in the switched off position.

(2) EQUIPMENT DAMAGE. After starting the engine, let it idle for 10 seconds to allow oil to circulate through the turbo-charger bearings.

(3) EQUIPMENT DAMAGE. Before switching off the engine, let it idle for 2 minutes to prevent damage to the turbo-charger bearings.

(4) EQUIPMENT DAMAGE. Check oil level when engine is cold.

(5) WHEEL NUT TORQUE. After changing a wheel retighten wheel nuts to 260 Nm after driving 30 miles (50 Km).

(6) OIL INCOMPATIBILITY. OX 75 and OX 165 oils used in servo steering and wheel drives are not compatible with other oils. Should they need to be changed the oil must be drained and flushed before refilling with a new type of oil.

MAINTENANCE NOTES

(1) When pressure testing the coolant system, ensure that the heater valve is open.

(2) With the ignition switched off, the transmission automatically selects all wheel drive so that the handbrake operates on all six wheels.

(3) Minimum legal brake lining thickness is 2 mm.

(continued)

TABLE 7 TIME/USAGE MAINTENANCE (continued)

(4) Automatic gearbox oil level should be between MIN - MAX when cold. Correct gearbox oil level can only be checked if oil is warm, (80 deg C) the engine is idling and Park is selected on the gearshift.

(5) Steering gear and transmission components have combined filler/level plugs and are correctly filled when the oil is up to the oil filler opening.

(6) Wire ropes are to be examined by a competent SNCO, as detailed in AESP 2590-E-100-013.

(7) Lubricate winch rope in accordance with AP 4545, Vol 2, Leaflet A98 (RAF only).

(8) In-Service coolant specific gravity meters will give a false reading when testing manufacturer's antifreeze (orange in colour). If there is any doubt as to the strength of the antifreeze mixture, then the system should be drained, flushed and refilled with AL 39. (See Table 5, Serial 1).

(9) Insulation testing of 240 volt equipment is to be carried out at 500 volts. The insulation resistance is not to be less than 1 Megohm.

Serial (1)	Task (2)	Fig/ Item No. (3)	Product (4)	Maintenance Interval				
				1st (5)	A (6)	B (7)	C (8)	D (9)
	ENGINE							
1	Engine: Examine particularly for oil and coolant leaks.	1		X	X	X		1
2	Engine oil: Drain and replace. (See Caution 4)		OMD 90	X	X	X		1
3	Engine oil filter: Replace.	2		X	X	X		1
4	Coolant header tank: Examine, check coolant level and replenish as required. (See Table 4)	3	AL39/ Water mix	X	X	X		1
5	Coolant: Measure specific gravity. (See Maintenance Note 8)					X		1
6	Fuel filter: Drain water from sedimenter.	4			X			1
7	Fuel filter: Replace.					X		1
8	Fuel injection and lift pumps: Examine and check operation of governor. (VM)			X	X	X		1
9	Fuel injection and lift pumps: Examine, particularly for security of attachment, leaks and chafing.			X	X	X		1
10	Cooling and lubrication systems: Check hoses and fittings for security of attachment and chafing.			X	X	X		1
11	Air filter: Clean cartridge.				X			1
12	Air filter: Replace cartridge.					X		1
13	Exhaust and turbo-charger system: Examine for damage and leaks, check mountings for security of attachment.			X	X	X		1

(continued)

TABLE 7 TIME/USAGE MAINTENANCE (continued)

Serial (1)	Task (2)	Fig/ Item No. (3)	Product (4)	Maintenance Interval				
				1st (5)	A (6)	B (7)	C (8)	D (9)
14	V-belts: Check tensions and retighten if required, replace if necessary.			X	X	X		1
15	Camshaft belt: Replace Camshaft belt – Record details in FMT 1004. (Waterproof variants only) (See Table 5) (VM)				X	X		1
16	Fan and viscous coupling: Examine.				X	X		1
17	Injection pump drive belt: Examine, replace if required. (See Table 5) (VM)				X	X		1
18	Engine mountings: Examine for condition and security of attachment.			X	X	X		1
19	Engine controls: Lubricate.		OMD 90		X	X		1
20	Engine idle speed: Examine and adjust as necessary. (VM)				X	X		1
21	Webasto Coolant Heater: Examine for leaks, damage and security of attachment. (TMER/SIBCA variants only)				X	X		1
22	Webasto Coolant Heater: Clean the combustion air and exhaust pipes. Check CO_2 value and adjust as necessary. (TMER/SIBCA variants only) (VM)				X	X		1
23								
24								
25								
	STEERING AND SUSPENSION							
26	Servo, steering pump and steering gear: Check oil level, replenish as necessary. (See Maintenance Note 6) (See Caution 6)	5	OX 75	X	X	X		2
27	Servo steering (joints at power piston): Lubricate.	6	XG 279		X	X		2
28	Steering operating cylinders: Examine for leaks and security of attachment.			X	X	X		2
29	Steering control linkages: Examine for damage, wear and security of attachment.			X	X	X		2
30	Front wheel alignment: Check and adjust as necessary. (VM)					X		2
31	Steering wheel and column: Examine.					X		2
32	Tyres (including spare wheel): Examine for cuts, damage and uneven wear, replace as necessary.			X	X	X		2
33	Tyre pressures (including spare wheel): Check and adjust as necessary.			X	X	X		2

(continued)

TABLE 7 TIME/USAGE MAINTENANCE (continued)

Serial (1)	Task (2)	Fig/ Item No. (3)	Product (4)	Maintenance Interval				
				1st (5)	A (6)	B (7)	C (8)	D (9)
34	Wheel nuts: Check tightness of all wheel nuts to the recommended torque loading.			X	X	X		2
35	6 x 6 Rear air suspension: Check pressure, adjust if necessary.			X	X	X		2
36	6 x 6 Rear air suspension: Check for security of attachment and condition of suspension units and pipe-work.			X	X	X		2
37	Shock absorbers: Examine for leaks and security of attachment.				X	X		2
38	Steering gearbox: Check oil level, replenish as required.	7	OEP 220	X		X		2
39	Level control system: Ensure correct operation. (VM)			X	X	X		2
40	6 x 6 Leaf springs: Examine for security of attachment and condition of leaves and bushes.			X	X	X		2
	TRANSMISSION							
41	Gearbox, torque converter, transfer gearbox, wheel drives and axle drives: Check for leaks and security of attachment.			X	X	X		3
42	Automatic gearbox: Check oil level and replenish as necessary. (See Maintenance Notes 4 and 5)	8	OX 75	X		X		3
43	Transfer gearbox: Check oil level and replenish as necessary. (See Maintenance Note 5)	9	OEP 220	X		X		3
44	Wheel drives: Check oil levels and replenish as necessary. (See Maintenance Note 5) (See Caution note 6)	10	OX 165	X		X		3
45	Axle drives: Check oil level and replenish as necessary. (See Maintenance Note 5)	11	OEP 220	X		X		3
46	Propshaft: Examine.			X	X	X		3
47	Propshaft: Lubricate.	12	XG 279	X		X		3
48	Axle drive housing: Tighten tie rod to prescribed torque.			X		X		3
49	Axle clamping screws: Tighten to prescribed torque loading.			X		X		3

(continued)

TABLE 7 TIME/USAGE MAINTENANCE (continued)

Serial (1)	Task (2)	Fig/ Item No. (3)	Product (4)	Maintenance Interval				
				1st (5)	A (6)	B (7)	C (8)	D (9)
50	Axle centring screws: Tighten to prescribed torque loading.			X		X		3
51	Front hub swivel pins and bushes: Examine particularly for excessive wear. (VM)			X		X		3
52	Differential locks: Ensure correct operation. (VM)			X		X		3
	BRAKES							
53	Connections and hoses: Examine for tightness and damage, secure or replace as necessary.			X	X	X		4
54	Brake fluid reservoir: Check fluid level, replenish if required. (See table 5)	13	OX 8	X	X	X		4
55	Brake callipers and discs: Examine for damage and security of attachment.			X	X	X		4
56	Brake linings: Examine and replace if required. (See Maintenance Note 3)				X	X		4
57	Handbrake: Check and adjust as necessary. (VM) (See Maintenance Note 2)				X	X		4
58	Hand brake: Lubricate.		OMD 90		X	X		4
59	Brake pedal and linkage: Lubricate.		OMD 90		X	X		4
60	Brake system: Carry out brake test or decelerometer test. (In accordance with AP 4545, Vol 2, Leaflet A64 - RAF only) (VM)					X		4
	ELECTRICAL EQUIPMENT							
61	Lamps, horn, windscreen wipers and washers, direction indicators and hazard flashers: Examine and ensure correct operation.			X	X	X		5
62	Siren, blue repeater lamps and flasher unit: Examine and operate. (TMER variant only).			X	X	X		5

(continued)

TABLE 7 TIME/USAGE MAINTENANCE (continued)

Serial (1)	Task (2)	Fig/ Item No. (3)	Product (4)	Maintenance Interval				
				1st (5)	A (6)	B (7)	C (8)	D (9)
63	Switches and warning devices: Examine and as far as reasonably practical ensure correct operation.			X	X	X		5
64	Electrical wiring, junction boxes and conduits: Examine for signs of chafing, burning or other damage and for security of attachment.				X	X		5
65	Fuses, fuse holders and relays: Examine.				X	X		5
66	Battery isolate switch: Examine and operate.				X	X		5
67	Cold start device: Examine and operate.				X	X		5
68	Heaters and demisters: Examine and operate.				X	X		5
69	Webasto Air Top 5000 Heater: Examine for leaks and security of attachment. Check operation. (TMER variant only).				X	X		5
70	Webasto Air Top 5000 Heater: Clean the combustion air and exhaust pipes. Check CO_2 value and adjust as necessary. (TMER variants only) (VM)				X	X		5
71	Electrical accessories: Examine and operate.				X	X		5
72	Instruments, gauges and transmitters: Examine and ensure correct operation.				X	X		5
73	Wiper arms and blades: Examine for serviceability.			X	X	X		5
74	Windscreen washer fluid reservoir: Check level and replenish as necessary.		AL 11	X	X	X		5
75	Batteries: Check electrolyte level, replenish if required.		PX7/ Demin water	X	X	X		5
76	Batteries: Examine terminals for security of attachment and apply protective lubricant.				X	X		5
77	Battery stowage area: Examine, restore surface finish as necessary.				X	X		5
78	Starter motor: Examine.				X	X		5
79	Alternator: Examine and check output voltage. (VM)					X		5
80	Headlight alignment: Check and adjust as necessary. (In accordance with AP 4545, Vol 2, Leaflet A13 - RAF only) (VM)					X		5

(continued)

TABLE 7 TIME/USAGE MAINTENANCE (continued)

Serial (1)	Task (2)	Fig/ Item No. (3)	Product (4)	Maintenance Interval				
				1st (5)	A (6)	B (7)	C (8)	D (9)
81	Winch: Check and clean all power connections.	14			X			5
82	Winch: Check electrical wiring for signs of chaffing.				X			5
83	Alarm System: Examine and operate. (TMER/SIBCA variants only)			X	X	X		5
84	Air extraction/ventilation system: Examine and operate. (TMER/SIBCA variants only)			X	X	X		5
85	Air conditioning system: Examine and operate. (TMER/SIBCA variants only)			X	X	X		5
86	Fluorescent strip lamps: Examine and operate.			X	X	X		5
87	Auxiliary spotlights: Examine and operate			X	X	X		5
	MAINS ELECTRICAL EQUIPMENT (If applicable)							
88	Mains electrical supply: Ensure current is switched "OFF" and the supply lead is disconnected			X	X	X		5
89	Mains plug: Examine, ensure tightness of conductor securing screws.			X	X	X		5
90	Mains socket: Visually examine. Report any defects to DOE/PSA.			X	X	X		5
91	Mains equipment: Carry out continuity check of all live, neutral, earth and pilot earth conductor. (REME Electrician)			X	X	X		5
92	Mains equipment: Carry out insulation test of wiring and individual mains supplied apparatus. (See Maintenance Note 10) (REME Electrician)			X	X	X		5
93	Miniature circuit-breakers: Examine and operate.			X	X	X		5
94	Microprocessor controlled automatic battery charger 240V: Examine and as far as reasonably practical ensure correct operation. (TMER variant only)				X	X		5
95	240V battery charging system (24V/12V): Examine and as far as reasonably practical ensure correct operation. (SIBCA variant only)				X	X		5
96	Mains electrical supply: Reconnect supply lead socket and switch "ON" power.			X	X	X		5

(continued)

TABLE 7 TIME/USAGE MAINTENANCE (continued)

Serial (1)	Task (2)	Fig/ Item No. (3)	Product (4)	Maintenance Interval				
				1st (5)	A (6)	B (7)	C (8)	D (9)
97	Functional-test: Carry out functional-test of all mains apparatus.			X	X	X		5
	BODY AND CHASSIS							
98	Cab and bodywork: Examine particularly for damage and corrosion.				X	X		6
99	Windscreen and windows: Examine.			X	X	X		6
100	Mudguards: Examine.			X	X	X		6
101	Cab doors and locks: Examine, ensure correct operation.			X	X	X		6
102	Rear and side doors, locks and safety catches. Examine.			X	X	X		6
103	Rear step and side step assembly: Examine,			X	X	X		6
104	Registration, marker and legal plates: Examine.			X	X	X		6
105	Towing pins/hitches: Examine and lubricate.					X		6
106	Vehicle body mounting brackets: Tighten to prescribed torque.					X		6
107	Underseal: Examine and restore finish as necessary.		PX-28		X	X		6
108	Seat adjuster: Examine, ensure correct operation and lubricate.		OMD 90			X		6
109	Seat-belts: Examine, particularly for security of attachment.			X	X	X		6
110	Oilcan lubrication: General lubrication of all locks, hinges, catches, linkages and pins.		OMD 90	X	X	X		6
111	Vehicle jack: Operate throughout its range on the vehicle for which it was issued. Hydraulic jacks are to be left at maximum height for 5 minutes then checked for creep.					X		6
112	Ptarmigan box body: Examine particularly for security of attachment.			X	X	X		6
113	Spare wheel and mounting: Examine for serviceability and security of attachment.			X	X	X		6

(continued)

TABLE 7 TIME/USAGE MAINTENANCE (continued)

Serial (1)	Task (2)	Fig/ Item No. (3)	Product (4)	Maintenance Interval 1st (5)	A (6)	B (7)	C (8)	D (9)
	AMBULANCE BODY							
114	Warning, safety and instruction notices: Ensure all signs and notices are legible and correctly positioned.			X	X	X		6
115	Rear compartment windows: Examine.			X	X	X		6
116	Rear compartment seats, seatbelts and attachments: Examine.			X	X	X		6
117	Stretcher drawbridge: Examine.			X	X	X		6
118	Stowage lockers: Examine and check that doors lock securely.			X	X	X		6
119	Grab handles and rails: Examine.			X	X	X		6
120	Oxygen stowage and connections: Examine.			X	X	X		6
121	Ventilation filters: Remove, clean, examine and refit.			X	X	X		6
	WINCH							
122	Winch rope: Examine as per the following. (See Maintenance Note 6 and Warning 5)	14		X	X	X		6
123	123.1 Examine the rope layout throughout its working length for fraying, corrosion and kinks.			X	X	X		6
	123.2 Ensure the rope anchorage is secure and not excessively worn.			X	X	X		6
	123.3 Examine the guide rollers for damage and freedom of rotation.			X	X	X		6
	123.4 Ensure that the rope lays evenly on the drum.			X	X	X		6
	123.5 Examine the rope reeve (eye) for damage.			X	X	X		6
	123.6 Ensure the safe working load tag is fitted to the rope.			X	X	X		6
	123.7 Lubricate the winch rope. (See Maintenance Note 7)			X	X	X		6
	123.8 Check rope identification for five turns left on winch drum.				X			6

(continued)

TABLE 7 TIME/USAGE MAINTENANCE (continued)

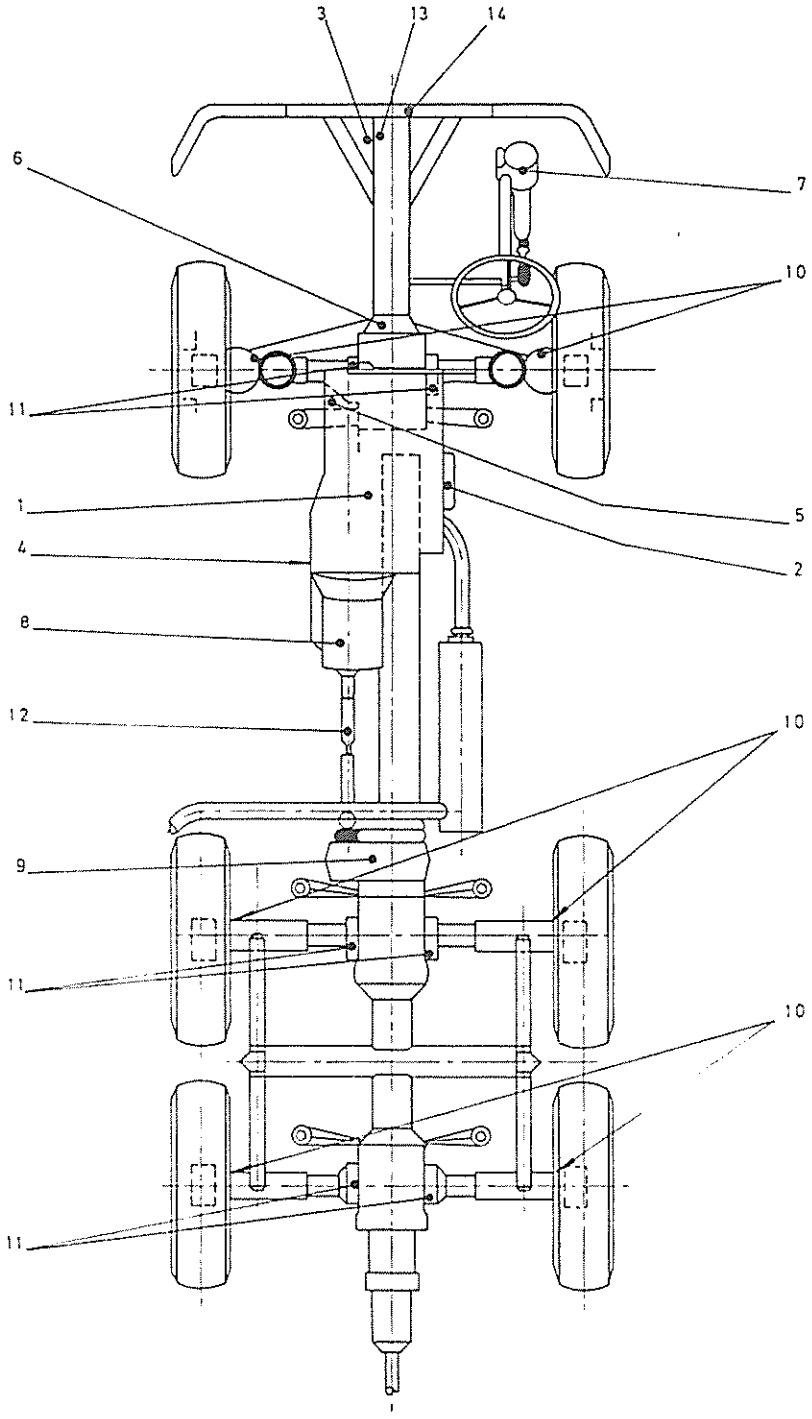
Serial (1)	Task (2)	Fig/ Item No. (3)	Product (4)	Maintenance Interval				
				1st (5)	A (6)	B (7)	C (8)	D (9)
124	AF G1084A Worksheet or STAMA Worksheet Tradesman and countersigning NCO: Sign. (RAF only)			X	X	X		All
125	Road-test (VM or NCO MT Technician): Carry out.			X	X	X		All
126	AF G 1084A Worksheet or STAMA Worksheet: Insert co-ordinating signature. (RAF only)			X	X	X		All
127	Record action in FMT 1004. (Army only)			X	X	X		All
128	Annotate FMT 1004: "Waterproofing integrity checked in accordance with Maintenance Schedule" (Army only)					X		All

TABLE 8 OUT OF USE MAINTENANCE

Table 8 Maintenance is to be carried out in accordance with the instructions shown at Chap 1, Para 13.

WARNINGS, CAUTIONS and Maintenance Notes preceding Tables 6 and 7 must be read and understood before commencing these maintenance tasks.

Serial (1)	Operation (2)	Fig/ Item No. (4)	Product (4)
	Prior to vehicle entering storage:		
1	Carry out Table 6, Columns A, B and C maintenance, check coolant specific gravity and patch paint.		
2	Carry out next maintenance due if it falls during out of use period.		
3	Rectify all faults affecting road/task worthiness.		
4	Fill fuel tanks.		
5	Isolate batteries using battery isolator switch or by disconnecting earth lead.		
	Monthly while in storage:		
6	Carry out Table 6, Columns A and B maintenance.		
7	Operate equipment and all systems.		
8	Carry out road test over 8 km (5 miles) if possible.		
9	Update FMT 1004.		
	Winch		
10	Carry out load test 48 months		



1	Engine	8	Gearbox
2	Oil filter	9	Transfer gearbox
3	Coolant header tank	10	Wheel drives
4	Fuel filter	11	Axle drives
5	Servo steering pump	12	Propshaft
6	Servo steering joints	13	Brake reservoir
7	Steering gearbox	14	Winch

Fig 1 Lubrication diagram

CHAPTER 1-3

MAINTENANCE SCHEDULE - 5 CYLINDER EURO 3 ENGINE, AUTOMATIC GEARBOX, 4X4 AND 6X6 VARIANTS

CONTENTS

INTRODUCTION

1 This Maintenance Schedule is the authority for carrying out all scheduled maintenance tasks on the subject equipment (5-cylinder Euro 3 engine, automatic gearbox, 4x4 and 6x6 variants) and takes precedence over any other conflicting publication.

DEFINITIONS

2 Refer to Chapter 1.

WARNINGS, CAUTIONS AND MAINTENANCE NOTES

3 Before any maintenance task is carried out, the WARNINGS, CAUTIONS and Maintenance Notes preceding the appropriate table must be read and understood.

MAINTENANCE INTERVALS AND AREAS OF RESPONSIBILITY

4 Refer to Chapter 1.

TABLE 1 EQUIPMENT APPLICABILITY

Serial (1)	Equipment Asset Code (2)	Designation (3)	Contract Numbers (4)
1	1743 3100	TUM (HD) 6 x 6 W/W Euro III	
2	1743 3101	TUM (HD) 6 x 6 W/W Euro III	
3	1743 3102	TUM (HD) 6 x 6 W/W Euro III	
4	1747 3100	TUM (HD) FFR Hard Top	
5	1754 3101	TUM HD 4 x 4 FFR ST HVM VIK	
6	1755 3107	TUM (HD) FFR Hard Top	
7	1755 3108	TUM (HD) FFR Hard Top GS	
8	1755 3109	TUM (HD) 4 x 4 FFR hard Top GS CLANSMAN	
9	1759 3104	TUM (HD) FFR Hard Top W/W	
10	1759 3102	TUM (HD) FFR Hard Top W/W	
11	1763 3102	TUM (HD) GS HT with	
12	1764 3100	TUM (HD) 6 x 6 FFR HT/EURO III Winterised	
13	1766 3100	TUM (HD) 6 x 6 FFR HT/EURO III Winterised W/W	
14	1766 3101	TUM (HD) 6 x 6 GS ST (EURO III)	
15	1767 3100	TUM (HD) 6 x 6 GS ST W/W EURO III	
16	1767 3101	TUM (HD) 6 x 6 GS ST W/W	
17	1768 3100	TUM (HD) 6 x 6 FFR Hard Top W/W	
18	1769 3100	TUM (HD) 6 x 6 FFR ST W/WWINCH Royal Artillery	
19	1769 3101	TUM (HD) 6 x 6 FFR ST WINCH GTV	
20	1770 3100	TUM (HD) 6 x 6 FFR HT	
21	1775 3100	TUM (HD) 6 x 6 FFR HT EURO III ABS	
22	1776 3100	TUM (HD) 6 x 6 FFR HT EURO III ABS	
23	1782 3100	TUM (HD) 6 x 6 FFR HT EURO III ABS	
24	1783 3100	TUM (HD) 6 x 6 FFR HT ABS	
25	1784 3100	TUM (HD) 6 x 6 FFR HT PINZGAUER	

TABLE 2 FUELS, LUBRICANTS AND ASSOCIATED PRODUCTS

NOTES

(1) The products listed below are to be used on this equipment. Alternative products must not be used without the approval of an appropriately qualified REME Advisor (Army) or MT Officer (RAF).

(2) Oil changes at the -15 °C point shall only be made on the advice of the MT Officer.

(3) The capacities listed are to be used as a guide only. A physical check is to be carried out to ensure that all fluid levels are correct. This check should be carried out with the vehicle unladen and standing on level ground whenever possible.

Serial	Assembly	Product		Capacity	
		Above -15 °C	Below -15 °C	Litres	Pints
(1)	(2)	(3)	(4)	(5)	(6)
1	Engine.	OMD 90	OMD 55	7.0	12.3
2	Engine coolant.	AL 39/water mixture		19.6	34.5
3	Gearbox oil circuit (automatic gearbox without draining torque converter).	OX 75	OX 75	6.0	10.5
4	Gearbox oil circuit (automatic gearbox with drained torque converter).	OX 75	OX 75	8.0	14.0
5	Axle drive - per drive.	OEP 220	OEP 220	2.0	3.5
6	Transfer transmission.	OEP 220	OEP 220	1.8	3.2
7	Steering gearbox.	OEP 220	OEP 220	0.7	1.2
8	Servo steering system.	OX 75	OX 75	2.75	4.8
9	Wheel drives:				
	9.1 Front.	OX 165	OX 165	0.4	0.7
	9.2 Rear.	OX 165	OX 165	0.35	0.6
10	Brake fluid reservoir.	OX 8	OX 8	0.6	1.1
12	Windscreen washer reservoir.	AL 11/washer fluid/ water mix		8.0	14.0
13	Fuel tank.	Dieso	Dieso	Subject to variant	
14	General greasing.	XG 279	XG 279		
15	Winch rope lubricant:				
	14.1 Army.	XG 279		XG 279	
	14.2 RAF (AP 4545, Vol.2, Leaflet A98).	34D1		34D1	
		5490384		5490384	
16	Batteries (wet lead acid only).	PX 71			
		Demin water			
17	Undersealing.	PX-28	PX-28		
18	Hydraulic system (where fitted).	OM 15	OM 15	15.0	26.4

TABLE 3 EQUIPMENT DATA

Serial (1)	Item (2)	Detail (3)	
	ADJUSTMENTS		
1	DELETED		
2	Front wheel alignment.	Toe-in 3 to 5 mm	
3	Front hub swivel pin/bush wear limit.	0.35 mm	(0.014 in.)
4	Rear air suspension pressure	3 bar	(44 lbf/in^2)
5	Idle speed.	750 ± 50 rpm	
6	Maximum engine speed.	4600 ± 50 rpm	
	TYRES (SUBJECT TO VARIANT)		
7	Size.	Michelin 8.25 R 16 XZL	
8	Pressure.	In accordance with vehicle marking or: 2.8 bar front and rear	
	or		
9	Size.	BF Goodrich 285/75 R 16 M/T	
10	Pressure.	In accordance with vehicle marking or: 3.5 bar front and rear	
	or		
11	Size	BF Goodrich LT285/75 R16/D 122Q	
12		In accordance with vehicle marking or: 3.5 bar front and rear	
	TORQUE SETTINGS		
13	Wheel nuts.	260 Nm	(192 lbf ft)
14	Axle drive housing tie rods.	80 Nm	(59 lbf ft)
15	Axle clamping screws.	250 Nm	(185 lbf ft)
16	Axle centring screws.	250 Nm	(185 lbf ft)
17	Body bracket mounting bolts.	250 Nm	(185 lbf ft)
18	Retaining screw on brake floating calliper.	35 Nm	(26 lbf ft)
19	Engine oil drain plug.	50 Nm	(37 lbf ft)
20	Automatic gearbox drain-plug.	15 Nm	(11 lbf ft)
21	Seat-belt anchorage points.	35 Nm	(26 lbf ft)
22	Seat securing bolts	49 Nm	(36 lbf ft)

TABLE 4 ACTION ON RECEIPT

Serial (1)	Action (2)
1	Carry out an inspection in accordance with current regulations (AESP 2590-E-100-013). Carry out the maintenance tasks from the Driver/Operator Table 6, Column A.
2	On receipt of a vehicle from a source where the maintenance condition of the vehicle is unknown, carry out the maintenance tasks from the Driver/Operator Table 6, Column A, followed by the maintenance tasks from the Time/Usage Maintenance Table 7, Columns B, C and Out of Phase maintenance Table 5.

TABLE 5 OUT OF PHASE MAINTENANCE

NOTE

For EGR boost solenoid change procedure see AESP 2320-D-400-522 Chapter 11-2.

Serial (1)	Action (2)	Interval (3)
1	Replace coolant	36 months
2	Replace EGR boost solenoid filter (see note 1)	36 months
3	Replace toothed belt and toothed belt tensioner for camshaft - Record details in FMT 1004 and record on JAMES LAND all users	Every 40,000 miles (64,000 km) or 48 months whichever occurs first.
4	Replace toothed injector pump belt and tensioning element - Record details in FMT 1004 and record on JAMES LAND all users	Every 40,000 miles (64,000 km) or 48 months whichever occurs first.
5	Replace ribbed V (FEAD) belt and tensioning element	Every 40,000 miles (64,000 km) or 48 months whichever occurs first.
6	Replace brake fluid	24 months
7	Replace transfer gearbox oil	24 months
8	Replace axle drives oil	24 months

TABLE 6 DRIVER/OPERATOR MAINTENANCE

Driver/operator maintenance outlined in Table 6, is to be carried out by the tradesman and at the intervals shown at Chapter 1, Para 11. The following WARNINGS, CAUTIONS and NOTES must be read and understood before commencing these maintenance tasks.

WARNINGS

(1) DANGER OF SCALDING. DO NOT REMOVE COOLANT FILLER CAP WHEN THE ENGINE IS HOT.

(2) ACID SPLASH. EXERCISE CAUTION WHEN HANDLING BATTERIES.

(3) TOXICITY. AL39 IS BOTH TOXIC AND HAZARDOUS. MINIMUM PRECAUTION AFTER CONTACT IS TO WASH THE AFFECTED AREA WITH SOAP AND WATER.

(4) INFLAMMABLE LIQUID. AL11 IS HIGHLY INFLAMMABLE. THE PREPARATION OF THE FLUID FOR WINDSCREEN WASHERS IS TO BE CARRIED OUT IN THE OPEN AND AWAY FROM NAKED FLAME. MINIMUM PRECAUTION AFTER CONTACT IS TO WASH THE AFFECTED AREA WITH SOAP AND WATER.

(5) PERSONAL INJURY. NEVER HANDLE A WIRE ROPE WHEN ANYONE ELSE IS AT THE CONTROLS. BARE HAND CONTACT OF STEEL ROPES IS TO BE AVOIDED AT ALL TIMES.

CAUTIONS

(1) MASTER SWITCH. The battery master switch key can be removed when in the switched off position.

(2) EQUIPMENT DAMAGE. After starting the engine, let it idle for ten seconds to allow oil to circulate through the turbo-charger bearings.

(3) EQUIPMENT DAMAGE. Before switching off the engine, let it idle for two minutes to prevent damage to the turbo-charger bearings.

(4) EQUIPMENT DAMAGE. Check oil level when engine is hot.

(5) WHEEL NUT TORQUE. After changing a wheel retighten wheel nuts to 260 Nm after driving 30 miles (50 km).

(6) OIL INCOMPATIBILITY. OX 75 and OX 165 oils used in servo steering and wheel drives are not compatible with other oils. Should they need to be changed the oil must be drained and flushed before refilling with a new type of oil.

(7) DAMAGE TO HYDRAULIC SYSTEM. Do not use a high pressure hose on the hydraulic system.

NOTES

(1) In-service coolant specific gravity meters may give a false reading when testing antifreeze other than that specified in Table 2, Serial 2. If there is any doubt as to the strength of the antifreeze mixture, then the system should be drained, flushed and refilled with AL 39 / water mixture. (See also Table 5, Serial 1).

(2) Automatic gearbox oil level should be checked in accordance with the procedure detailed in AESP 2320-D-400-201 Chapter 4-4.

(3) Steering gear and transmission components have combined filler/level plugs and are correctly filled when the oil comes up to the level of the oil filler opening.

TABLE 6 DRIVER/OPERATOR MAINTENANCE

Serial (1)	Task (2)	Fig/ Item No. (3)	Product (4)	Maintenance interval A (5)	B (6)	C (7)	D (8)
1	Examine vehicle for obvious signs of damage.			X	X	X	
2	Ensure that vehicle has sufficient fuel, oil and coolant for the journey or task.	1/All 2/All		X			
3	Examine vehicle for fuel, oil or coolant leaks.			X	X	X	
4	Cab interior and exterior: Examine for damage and security of attachment of panels, fasteners and interior trim.					X	
5	Seat-belts: Examine for serviceability and security of attachment.					X	
6	Doors: Examine and operate mechanism.			X		X	
7	Rear view mirrors: Examine for damage and security of attachment.			X	X		
8	Windscreen washer reservoir: Check level and replenish as necessary. (See Warning 4).		AL 11	X			
9	Lamps, horn, windscreen wipers and washers, directional indicators and hazard flashers, heaters and demisters, instruments and gauges: Examine and ensure correct operation.			X		X	
10	Warning lamps and buzzers: As far as practical ensure correct operation.			X		X	
11	Windscreen and windows: Examine for damage and cleanliness.			X		X	
12	Wiper arms and blades: Examine for serviceability.			X		X	
13	Reflectors: Examine for damage, cleanliness and security of attachment.			X		X	
14	Registration plates, warning signs, instruction plates and other markings: Examine for damage, cleanliness and security of attachment.			X		X	
15	Fire extinguishers: Ensure vehicle is fitted with serviceable fire extinguishers.			X		X	
16	Battery: Examine terminals for security of attachment. (See Warning 2).					X	
17	Radiator matrix: Examine and clean as necessary.					X	
18	Brake reservoir: Check fluid level and replenish as necessary.	1/13 2/13	OX 8	X	X	X	
19	Power steering reservoir: Check fluid levels and replenish as necessary.	1/15 2/15	OX 75	X	X	X	

(continued)

TABLE 6 DRIVER/OPERATOR MAINTENANCE (continued)

Serial (1)	Task (2)	Fig/ Item No. (3)	Product (4)	Maintenance interval			
				A (5)	B (6)	C (7)	D (8)
20	Fuel/water separator: Drain.					X	
21	Fuel filter: Drain.	1/4 2/4				X	
22	Tyre pressures (including spare wheel): Check and adjust as necessary.			X	X	X	
23	Tyres (including spare wheel): Examine for cuts, damage and uneven wear.			X		X	
24	Road wheels (including spare wheel): Visually examine for damage and security of attachment. Re-tighten if necessary.			X		X	
25	Wheel nuts: Check tightness of all wheel nuts to the recommended torque loading.					X	
26	6 x 6 Rear air suspension (where fitted): Check pressure, adjust if necessary.			X		X	
27	Loose equipment: Ensure items are stowed correctly.			X			
28	CES equipment: Examine for serviceability and correct stowage.			X		X	
29	Body and specialist fitments: Examine for serviceability and security of attachment.			X		X	
30	Electrical accessories: Examine and ensure correct operation.					X	
31	Steering: Ensure correct operation.			X		X	
32	Brakes: Ensure correct operation.			X		X	
33	Towing pintle: Examine.					X	
34	Coolant: Check SG reading. (See Maintenance Note 1) AP 4545 Vol 2 leaflet A9 RAF only).					X	
35	Static functional test: Carry out to confirm the serviceability of all functions and particularly door locks, window regulators/catches, seat adjusters, seat belts and obligatory lights.					X	
36	Mobile functional test: Carry out to confirm the serviceability of all functions of starting, driving through the gears and stopping the vehicle.					X	
37	Winch: Check free spool clutch is fully engaged into drive.			X			
38	Winch: Clean rope and guide rollers, check rope and end fittings for damage and ensure rope is wound tightly and layered correctly onto drum. (See Warning 5)				X		

(continued)

TABLE 6 DRIVER/OPERATOR MAINTENANCE (continued)

Serial (1)	Task (2)	Fig/ Item No. (3)	Product (4)	Maintenance interval A (5)	B (6)	C (7)	D (8)
39	Winch: Check operation of free spool clutch, winch brake, guide rollers, controls and emergency stop/isolator switch.					X	
40	Winch: Apply grease to all grease nipples on winch and guide rollers.	1/14 2/14	XG 279			X	
41	Winch: Check all warning labels are in place and legible.			X			
42	Hydraulic system: Check fluid level and replenish as necessary.		OM 15	X		X	
43	Hydraulic module louvers: Examine and clean as necessary. (See Caution 7).			X		X	
44	Cooler matrix and alternators (hydraulic module): Examine and clean as necessary. (See Caution 7).					X	
45	Hydraulic system filter: check blocked indicator					X	
46	ADP 658/FMT658A/FMT1001/FMT1001A (Duty Movement Authorisation/Driver Tasking Sheet) as appropriate: Sign.			X			
47	AF G 1084A or STAMA 3 monthly record as appropriate: Sign. (RAF only).					X	
48	Record action in FMT 1004 (Army only) and record on JAMES LAND (all users).					X	

TABLE 7 TIME/USAGE MAINTENANCE

Time/usage maintenance outlined in Table 7 is to be carried out by the tradesman and at the intervals shown at Chapter 1, Para 12. The following WARNINGS, CAUTIONS and NOTES must be read and understood before commencing these maintenance tasks.

WARNINGS

(1) DANGER OF SCALDING. DO NOT REMOVE COOLANT FILLER CAP WHEN THE ENGINE IS HOT.

(2) ACID SPLASH. EXERCISE CAUTION WHEN CHECKING BATTERY LEVELS.

(3) TOXICITY. AL39 IS BOTH TOXIC AND HAZARDOUS. MINIMUM PRECAUTION AFTER CONTACT IS TO WASH THE AFFECTED AREA WITH SOAP AND WATER.

(4) INFLAMMABLE LIQUID. AL11 IS HIGHLY INFLAMMABLE. THE PREPARATION OF THE FLUID FOR WINDSCREEN WASHERS IS TO BE CARRIED OUT IN THE OPEN AND AWAY FROM NAKED FLAME. MINIMUM PRECAUTION AFTER CONTACT IS TO WASH THE AFFECTED AREA WITH SOAP AND WATER.

(5) PERSONAL INJURY. NEVER HANDLE A WIRE ROPE WHEN ANYONE ELSE IS AT THE CONTROLS. BARE HAND CONTACT OF STEEL ROPES IS TO BE AVOIDED AT ALL TIMES.

CAUTIONS

(1) MASTER SWITCH. The battery master switch key can be removed when in the switched off position.

(2) EQUIPMENT DAMAGE. After starting the engine, let it idle for ten seconds to allow oil to circulate through the turbo-charger bearings.

(3) EQUIPMENT DAMAGE. Before switching off the engine, let it idle for two minutes to prevent damage to the turbo-charger bearings.

(4) EQUIPMENT DAMAGE. Check oil level when engine is hot.

(5) WHEEL NUT TORQUE. After changing a wheel retighten wheel nuts to 260 Nm after driving 30 miles (50 km).

(6) OIL INCOMPATIBILITY. OX 75 and OX 165 oils used in servo steering and wheel drives are not compatible with other oils. Should they need to be changed the oil must be drained and flushed before refilling with a new type of oil.

(7) DAMAGE TO HYDRAULIC SYSTEM. Do not use a high pressure hose on the hydraulic system.

NOTES

(1) When pressure testing the coolant system, ensure that the heater valve is open.

(2) With the ignition switched off, the transmission automatically selects all wheel drive so that the handbrake operates on all six wheels.

(3) Minimum legal brake lining thickness is 2 mm. When changing brake pads, replacement of the ABS sensors and sensor bushes is also recommended.

(4) Automatic gearbox oil level should be checked in accordance with the procedure detailed in AESP 2320-D-400-201 Chapter 4-4.

(5) Steering gear and transmission components have combined filler/level plugs and are correctly filled when the oil is up to the oil filler opening.

(6) Wire ropes are to be examined by a competent SNCO, as detailed in AESP 2590-E-100-013.

(7) Lubricate winch rope in accordance with AP 3260, Book 3, Chap 10-2, Instruction 2.

(8) In-service coolant specific gravity meters may give a false reading when testing antifreeze other than that specified in Table 2, Serial 2. If there is any doubt as to the strength of the antifreeze mixture, then the system should be drained, flushed and refilled with AL 39 / water mixture. (See also Table 5, Serial 1).

(9) The majority of Time/Usage Maintenance tasks require the removal of the driver seat, passenger seat to permit the engine cover to be removed. Installation of the driver and passenger seats may only be performed by a qualified VM or equivalent.

(10) As with all maintenance activities, the interval for Hydraulic System and air compressor maintenance should, in particular, be performed more frequently if the conditions under which the equipment operates render it necessary e.g. when operating in a high sand/dust environment.

TABLE 7 TIME/USAGE MAINTENANCE

Serial (1)	Task (2)	Fig/ Item No. (3)	Product (4)	Maintenance interval				
				1st (5)	A (6)	B (7)	C (8)	D (9)
	ENGINE							
1	Engine: Examine for damage and particularly for oil and coolant leaks.	1/1 2/1		X	X	X		1
2	Engine oil: Drain and replace.	1/1 2/1	OMD 90	X		X		1
3	Engine oil filter: Replace.	1/3 2/3		X		X		1
4	Air filter: Clean cartridge.				X			1
5	Air filter: Replace cartridge.					X		1
6	Fuel filter: Drain water from fuel filter.	1/4 2/4			X	X		
7	Fuel filter: Drain water from fuel/water separator.	1/4 2/4			X	X		
8	Fuel filter: Replace fuel filter	1/4 2/4				X		1
9	Fuel tank, pipes and fittings: Examine, particularly for security of attachment and chafing.			X	X	X		
10	Fault memory codes: Interrogate fault code memories of all systems with diagnostic software.(VM)			X		X		
11	Ribbed V (FEAD) belt: Check condition, replace if required. (See Table 5).					X		1
12	Camshaft belt: Replace camshaft belt – record details in FMT 1004 (Waterproofed variants only) (See Table 5).					X		1

(continued)

TABLE 7 TIME/USAGE MAINTENANCE (continued)

Serial (1)	Task (2)	Fig/ Item No. (3)	Product (4)	Maintenance interval				
				1st (5)	A (6)	B (7)	C (8)	D (9)
13	Toothed fuel injection pump belt: Injection pump drive belt Check condition, replace if required. (See Table 5)					X		1
14	Coolant header tank: Examine, check coolant level and replenish as required.	1/2 2/2	AL39/ Water mix	X	X	X		1
15	Cooling and lubrication systems: Check hoses and fittings for security of attachment and chafing.			X	X	X		1
16	Coolant: Measure specific gravity. (See Maintenance Note 8).					X		1
17	Exhaust and turbo-charger system: Examine for damage and leaks, check mountings for security of attachment.			X	X	X		1
18	Electro magnetic fan clutch: Examine.					X		1
19	Engine mountings: Examine for condition and security of attachment.			X	X	X		1
20	Webasto Coolant Heater: Examine for leaks, damage and security of attachment (winterised variants only).							
21	Webasto Coolant Heater: Clean the combustion air and exhaust pipes. Check CO2 value and adjust as necessary (winterised variants only).							
	STEERING AND SUSPENSION							
22	Servo, steering pump and steering gear: Check oil level, replenish as necessary. (See Maintenance Note 5) (See Caution 6).	1/5 2/5	OX 75	X	X	X		2
23	Servo steering (joints at power piston): Lubricate.	1/6 2/6	XG 279		X	X		2
24	Steering operating cylinders: Examine for leaks and security of attachment.			X	X	X		2
25	Steering control linkages: Examine for damage, wear and security of attachment.			X	X	X		2
26	Front wheel alignment: Check and adjust as necessary (VM).					X		2
27	Steering wheel and column: Examine.					X		2
28	Tyres (including spare wheel): Examine for cuts, damage and uneven wear, replace as necessary.			X	X	X		2
29	Tyre pressures (including spare wheel): Check and adjust as necessary.			X	X	X		2
30	Wheel nuts: Check tightness of all wheel nuts to the recommended torque loading.			X	X	X		2

(continued)

TABLE 7 TIME/USAGE MAINTENANCE (continued)

Serial (1)	Task (2)	Fig/ Item No. (3)	Product (4)	Maintenance interval				
				1st (5)	A (6)	B (7)	C (8)	D (9)
31	Shock absorbers: Examine for leaks and security of attachment.				X	X		2
32	Steering gearbox: Check oil level, replenish as required.	1/7 2/7	OEP 220	X		X		2
33	Level control system: Ensure correct operation. (VM)			X	X	X		2
34	6 x 6 Rear air suspension (where fitted): Check pressure, adjust if necessary.			X	X	X		2
35	6 x 6 Rear air suspension (where fitted): Check for security of attachment and condition of suspension units and pipe-work.			X	X	X		2
36	6 x 6 Leaf springs: Examine for security of attachment and condition of leaves and bushes.			X	X	X		2
	TRANSMISSION							
37	Gearbox, torque converter, transfer gearbox, wheel drives and axle drives: Check for leaks and security of attachment.			X	X	X		3
38	Automatic gearbox: Drain and replenish automatic gearbox oil.	1/8 2/8	OX 75			X		
39	Automatic gearbox: Check oil level and replenish as necessary. (See Maintenance Notes 4 and 5).	1/8 2/8	OX 75	X	X			3
40	Transfer gearbox: Check oil level and replenish as necessary. (See Maintenance Note 5)	1/9 2/9	OEP 220	X		X		3
41	Wheel drives: Check oil levels and replenish as necessary. (See Maintenance Note 5) and (See Caution note 6).	1/10 2/10	OX 165	X		X		3
42	Axle drives: Check oil level and replenish as necessary. (See Maintenance Note 5).	1/11 2/11	OEP 220	X		X		3
43	Propshaft:- Examine.			X	X	X		3
44	Propshaft:- Lubricate.	1/12 2/13	XG 279	X		X		3
45	Axle drive housing: Tighten tie rod to prescribed torque.			X		X		3
46	Axle clamping screws: Tighten to prescribed torque loading.			X		X		3
47	Axle centring screws: Tighten to prescribed torque loading.			X		X		3

(continued)

TABLE 7 TIME/USAGE MAINTENANCE (continued)

Serial (1)	Task (2)	Fig/ Item No. (3)	Product (4)	Maintenance interval				
				1st (5)	A (6)	B (7)	C (8)	D (9)
48	Front hub swivel pins and bushes: Examine particularly for excessive wear. (VM).			X		X		3
49	Differential locks: Ensure correct operation. (VM).			X		X		3
	BRAKES							
50	Connections and hoses: Examine for tightness and damage, secure or replace as necessary.			X	X	X		4
51	Brake fluid reservoir: Check fluid level, replenish if required. (See table 5).	1/13 2/13	OX 8	X	X	X		4
52	Brake callipers, discs and ABS sensors (where fitted): Examine for damage and security of attachment.			X	X	X		4
53	Brake linings: Examine and replace if required. (See Maintenance Note 3).				X	X		4
54	Handbrake: Check and adjust as necessary. (See Maintenance Note 2).				X	X		4
55	Hand brake: Lubricate.		OMD 90		X	X		4
56	Brake pedal and linkage: Lubricate.		OMD 90		X	X		4
57	Brake system: Carry out brake test or decelerometer test. (In accordance with AP 4545, Vol 2, Leaflet A64 - RAF only) (VM).					X		4
	ELECTRICAL EQUIPMENT							
58	Lamps, horn, windscreen wipers and washers, direction indicators and hazard flashers: Examine and ensure correct operation.			X	X	X		5
59	Switches and warning devices: Examine and as far as reasonably practical ensure correct operation.			X	X	X		5
60	Electrical wiring, junction boxes and conduits: Examine for signs of chafing, burning or other damage and for security of attachment.				X	X		5
61	Fuses, fuse holders and relays: Examine.				X	X		5
62	Battery isolate switch: Examine and operate.				X	X		5
63	Cold start device: Examine and operate.				X	X		5
64	Heaters and demisters: Examine and operate.				X	X		5

(continued)

TABLE 7 TIME/USAGE MAINTENANCE (continued)

Serial (1)	Task (2)	Fig/ Item No. (3)	Product (4)	Maintenance interval				
				1st (5)	A (6)	B (7)	C (8)	D (9)
65	Electrical accessories: Examine and operate.				X	X		5
66	Instruments, gauges and transmitters: Examine and ensure correct operation.				X	X		5
67	Wiper arms and blades: Examine for serviceability.			X	X	X		5
68	Windscreen washer fluid reservoir: Check level and replenish as necessary.		AL 11	X	X	X		5
69	Batteries: Examine terminals for security of attachment and apply protective lubricant.				X	X		5
70	Battery stowage area: Examine, restore surface finish as necessary.				X	X		5
71	Starter motor: Examine.				X	X		5
72	Alternator: Examine.					X		5
73	Headlight alignment: Check and adjust as necessary. (In accordance with AP 4545, Vol 2, Leaflet A13 - RAF only) (VM).					X		5
74	Earth bonding: Check IAW AESP 2320-D-400-522 Chap 13-3 page 3 para 4 & 5				X	X		
75	Winch (where fitted): Check and clean all power connections.	1/14 2/14			X			5
76	Winch (where fitted): Check electrical wiring for signs of chaffing.				X			5
	MAINS ELECTRICAL EQUIPMENT (If applicable)							
77	Mains electrical supply: Ensure current is switched "OFF" and the supply lead is disconnected			X	X	X		5
78	Mains plug: Examine, ensure tightness of conductor securing screws.			X	X	X		5
79	Mains socket: Visually examine. Report any defects to DOE/PSA.			X	X	X		5
80	Mains equipment: Carry out continuity check of all live, neutral, earth and pilot earth conductor. (REME Electrician)			X	X	X		5
81	Mains equipment: Carry out insulation test of wiring and individual mains supplied apparatus. (See Maintenance Note 10) (REME Electrician)			X	X	X		5
82	Miniature circuit-breakers: Examine and operate.			X	X	X		5

(continued)

TABLE 7 TIME/USAGE MAINTENANCE (continued)

Serial (1)	Task (2)	Fig/ Item No. (3)	Product (4)	Maintenance interval				
				1st (5)	A (6)	B (7)	C (8)	D (9)
83	Microprocessor controlled automatic battery charger 240V: Examine and as far as reasonably practical ensure correct operation. (TMER variant only)				X	X		5
84	240V battery charging system (24V/12V): Examine and as far as reasonably practical ensure correct operation. (SIBCA variant only)				X	X		5
85	Mains electrical supply: Reconnect supply lead socket and switch "ON" power.			X	X	X		5
86	Functional-test: Carry out functional-test of all mains apparatus.			X	X	X		5
	BODY AND CHASSIS							
87	Cab and bodywork: Examine particularly for damage and corrosion.				X	X		6
88	Windscreen and windows: Examine.			X	X	X		6
89	Mudguards: Examine.			X	X	X		6
90	Cab doors and locks: Examine, ensure correct operation.			X	X	X		6
91	Rear and side doors, locks and safety catches. Examine.			X	X	X		6
92	Rear step and side step assembly: Examine,			X	X	X		6
93	Registration, marker and legal plates: Examine.			X	X	X		6
94	Towing pins/hitches: Examine and lubricate.					X		6
95	Vehicle body mounting brackets: Tighten to prescribed torque.					X		6

INTENTIONALLY LEFT BLANK

TABLE 7 TIME/USAGE MAINTENANCE (continued)

Serial (1)	Task (2)	Fig/ Item No. (3)	Product (4)	Maintenance interval				
				1st (5)	A (6)	B (7)	C (8)	D (9)
96	Underseal: Examine and restore finish as necessary.		PX-28		X	X		6
97	Seat adjuster: Examine, ensure correct operation and lubricate.		OMD 90			X		6
98	Seat-belts: Examine, particularly for security of attachment.			X	X	X		6
99	Seat-mounting: Examine, particularly for security of attachment (VM). (See Maintenance Note 9)					X		6
100	Engine Cover: Examine, particularly for security / serviceability of insulation on inside face.					X		6
101	Oilcan lubrication: General lubrication of all locks, hinges, catches, linkages and pins.		OMD 90	X	X	X		6
102	Vehicle jack: Operate throughout its range on the vehicle for which it was issued. Hydraulic jacks are to be left at maximum height for five minutes then checked for creep.					X		6
103	Spare wheel and mounting: Examine for serviceability and security of attachment.			X	X	X		6
104	Barracuda (where fitted): Examine for damage and security of attachment of panels.				X	X		
	WINCH (where fitted)							
105	Winch rope: Examine as per the following: (See Maintenance Note 6)			X	X	X		6
106	95.1 Examine the rope layout throughout its working length for fraying, corrosion and kinks. (See Warning 5)			X	X	X		6
107	95.2 Ensure the rope anchorage is secure and not excessively worn.			X	X	X		6
108	95.3 Examine the guide rollers for damage and freedom of rotation.			X	X	X		6
109	95.4 Ensure that the rope lies evenly on the drum.			X	X	X		6
110	95.5 Examine the rope reeve (eye) for damage.			X	X	X		6
111	95.6 Ensure the safe working load tag is fitted to the rope.			X	X	X		6
112	95.7 Lubricate the winch rope. (See Maintenance Note 7)	1/14 2/14		X	X	X		6

(continued)

TABLE 7 TIME/USAGE MAINTENANCE (continued)

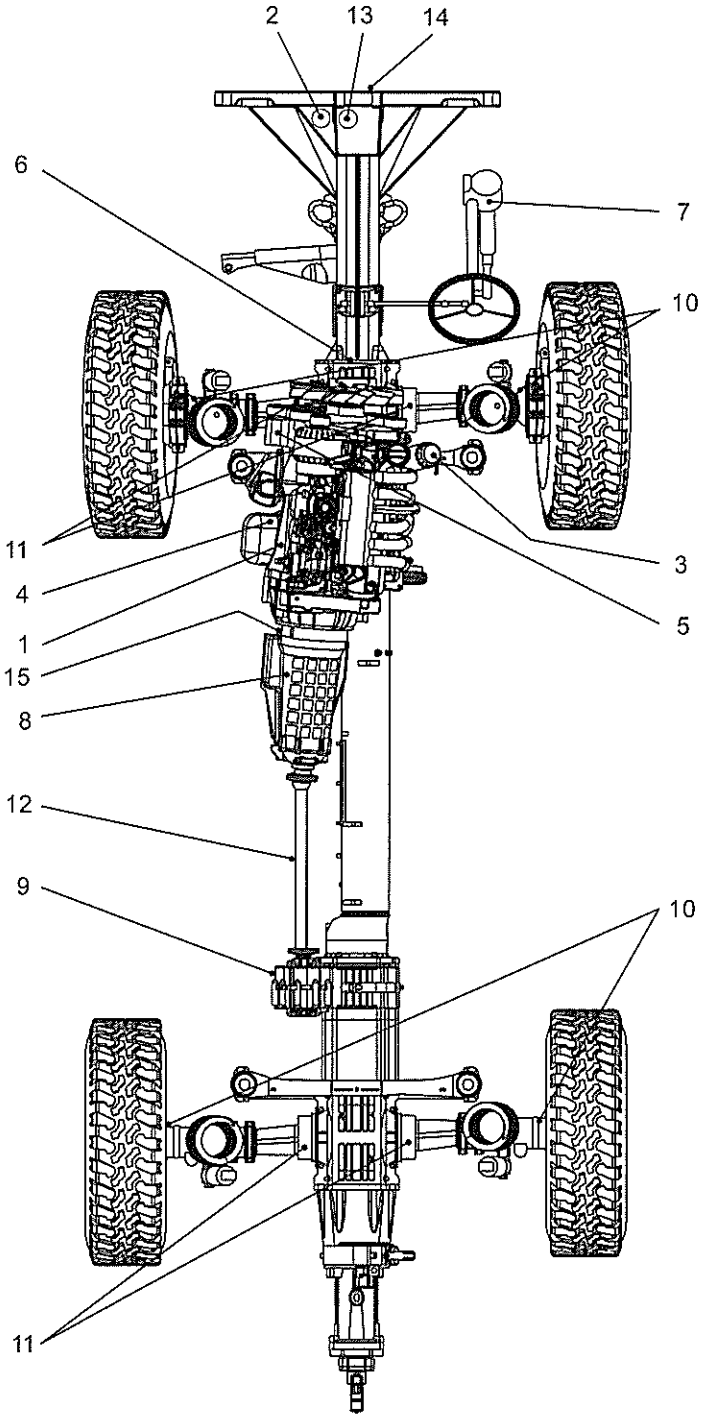
Serial (1)	Task (2)	Fig/ Item No. (3)	Product (4)	Maintenance interval				
				1st (5)	A (6)	B (7)	C (8)	D (9)
113	95.8 Check rope identification for five turns left on winch drum.				X			6
	HYDRAULIC SYSTEM (where fitted) (see Maintenance Note 10)							
114	Hydraulic system: Examine for damage and particularly for oil leaks. Check security of attachment.			X	X	X		
115	Hydraulic module louvers: Examine and clean as necessary. (See Caution 7).			X	X	X		
116	Cooler matrix and alternators (hydraulic module): Examine and clean as necessary. (See Caution 7).			X	X	X		
117	Hydraulic system filter: check blocked indicator, replace filter if required			X	X			
118	Hydraulic oil: Drain and replace.		OM 15			X		
119	Hydraulic oil filter: Replace.					X		
120	Boost filter: Replace.					X		
121	System breather: Replace							
122	Alternator/air compressor belts: Check condition, replace if required.			X	X			
123	Alternator/air compressor belts: Replace					X		
	GENERAL							
124	AF G1084A Worksheet or STAMA Worksheet Tradesman and countersigning NCO: Sign. (RAF only).			X	X	X		All
125	Road-test (VM or NCO MT Technician): Carry out.			X	X	X		All
126	AF G 1084A Worksheet or STAMA Worksheet: Insert co-ordinating signature. (RAF only).			X	X	X		All
127	Record action in FMT 1004. (Army only).			X	X	X		All

TABLE 8 OUT OF USE MAINTENANCE

The out of use maintenance outlined in Table 8 is to be carried out in accordance with the instructions shown at Chap 1, Para 13. WARNINGS, CAUTIONS and NOTES preceding Tables 6 and 7 must be read and understood before commencing these maintenance tasks.

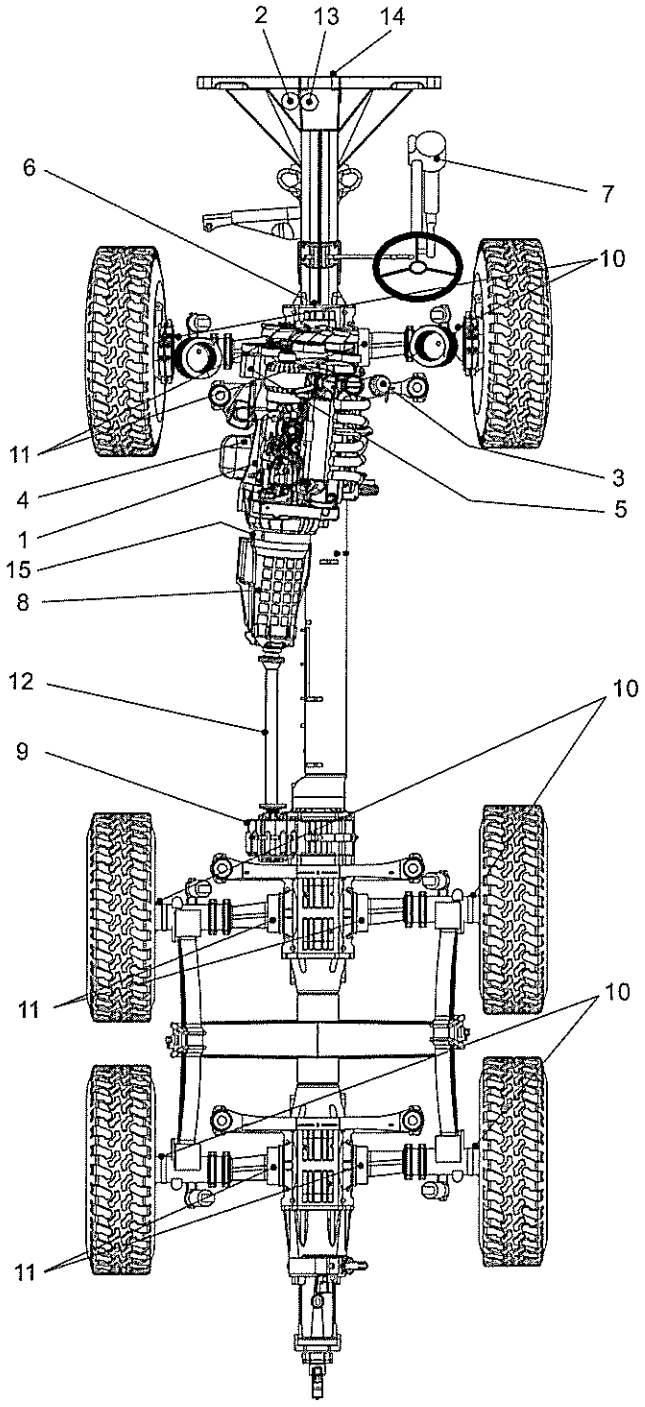
TABLE 8 OUT OF USE MAINTENANCE

Serial (1)	Operation (2)	Fig/ Item No. (4)	Product (4)
	Prior to vehicle entering storage:		
1	Carry out Table 6, Columns A, B and C maintenance, check coolant specific gravity and patch paint.		
2	Carry out next maintenance due if it falls during out of use period.		
3	Rectify all faults affecting road/task worthiness.		
4	Fill fuel tanks.		
5	Isolate batteries using battery isolator switch and disconnect batteries.		
	Monthly while in storage:		
6	Carry out Table 6, Columns A and B maintenance.		
7	Operate equipment and all systems.		
8	Carry out road test over 8 km (5 miles) if possible.		
9	Update FMT 1004.		
	Winch		
10	Carry out load test 48 months		



1	Engine	9	Transfer gearbox
2	Coolant header tank	10	Wheel drives
3	Oil filter	11	Axle drives
4	Fuel filter	12	Propshaft
5	Servo steering pump	13	Brake reservoir
6	Servo steering joints	14	Winch (where fitted)
7	Steering gearbox	15	Power steering reservoir
8	Gearbox		

Fig 1 Lubrication diagram (4x4 variants)



1	Engine	9	Transfer gearbox
2	Coolant header tank	10	Wheel drives
3	Oil filter	11	Axle drives
4	Fuel filter	12	Propshaft
5	Servo steering pump	13	Brake reservoir
6	Servo steering joints	14	Winch (where fitted)
7	Steering gearbox	15	Power steering reservoir
8	Gearbox		

Fig 2 Lubrication diagram (6x6 variants)