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**TRUCK UTILITY HEAVY (TUH), 4X4
REYNOLDS BOUGHTON - ALL VARIANTS**

**INSPECTION STANDARD PART 2
COMPONENTS AND ASSEMBLIES**

This publication contains information covering the
requirements of Category 5-3 at
information levels 3 and 4

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1			32		
2			33		
3			34		
4			35		
5			36		
6			37		
7			38		
8			39		
9			40		
10			41		
11			42		
12			43		
13			44		
14			45		
15			46		
16			47		
17			48		
18			49		
19			50		
20			51		
21			52		
22			53		
23			54		
24			55		
25			56		
26			57		
27			58		
28			59		
29			60		
30			61		
31			62		

CONTENTS

PRELIMINARY MATERIAL	Page
Front cover (title page)	(i)
Conditions of release	(ii)
Amendment record	(iii)/(iv)
Contents (this list)	(v)/(vi)
Preface	(v)/(vi)
Related and associated publications	(v)/(vi)

Para

INSPECTION STANDARD PART 2	
1	Equipment identity
2	Introduction
5	Index to schedule
	Section 1 - examination of components
6	Schedule
7	Section 2 - testing of assemblies

PREFACE

- 1 Amendments are identified by marginal side lining.
- 2 Comments on this publication are to be forwarded in accordance with AESP 0100-P-011-013 to Vehicles and Weapons Branch REME, Chobham Lane, Chertsey, Surrey KT16 OEE.

RELATED AND ASSOCIATED PUBLICATIONS

Reference	Title
AESP 2815-F-641-Octad	Engine Diesel, Perkins Phaser 1000 Series
AESP 2520-C-122-Octad	Gearbox, 5 Speed, Spicer T5-250 with T5-290 Supplement
EMER T&M A 028 Chap 056	Inspection and Testing of Mechanical Components
EMER T&M A 028 Chap 012	Crack detection, Magnetic particle flaw detection
EMER T&M A 028 Chap 060	Inspection and Examination of Ball and Roller Bearings

INSPECTION STANDARD PART 2

EQUIPMENT IDENTITY

- 1 This standard covers the following equipment:
 - 1.1 Truck Utility Heavy (TUH), 4x4, Reynolds Boughton (All Variants).

INTRODUCTION

- 2 This publication details the Acceptable Quality Levels (AQL) for the Transfer box, Front axle, and Rear axle to meet the quality standards of levels 3 and 4. Standards for the engine and gearbox are covered by their own AESP's (See Associated Publications).
- 3 It is to be applied in conjunction with the general principles contained in Chap 150 of EMER T&M, A 028.
- 4 The following abbreviations are used H = high, L = low, ID = Inside Diameter, OD = Outside Diameter.

INDEX TO SCHEDULE

- 5 The main breakdown of inspection and testing is as follows:

Serial

- 1 Transfer box
- 2 Front axle
- 3 Rear axle

SECTION 1 - EXAMINATION OF COMPONENTS**Schedule**

6

Serial (1)	Detail (2)	Acceptable Quality Level (AQL)		Remarks (5)
		Level 3 (3)	Level 4 (4)	
1	TRANSFER BOX			
	Output shaft assembly			
	Driven chain wheel			
	1.1 Gear teeth OD, (51 teeth)	H 207.071 mm L 206.614 mm		Measured over two pins, Pin Dia 6.985 mm
	1.2 Gear teeth OD (64 teeth)	H 260.312 mm L 259.855 mm		Measured over two pins, Pin Dia 6.985 mm
	Differential drive flange			
	1.3 External spline OD (20 splines)	H 57.200 mm L 56.880 mm		Measured over two pins, Pin Dia 4.800 mm
	Output shaft forward			
	1.4 10 Tooth spline major OD.	H 34.595 mm L 34.417 mm		
	1.5 10 Tooth spline minor OD.	H 29.896 mm L 29.642 mm		
	1.6 10 Tooth spline tooth width	H 5.423 mm L 5.334 mm		
	1.7 19 Tooth spline OD.	H 34.648 mm L 34.394 mm		Measured over two pins, Pin Dia 3.048 mm
	Output flange forward			
	1.8 Internal spline major ID.	H 34.798 mm L 34.620 mm		
	1.9 Internal spline minor ID.	H 30.505 mm L 30.327 mm		
	1.10 Internal spline space width.	H 5.512 mm L 5.436 mm		

(continued)

Schedule (continued)

Serial (1)	Detail (2)	Acceptable Quality Level (AQL)		Remarks (5)
		Level 3 (3)	Level 4 (4)	
	Output shaft - rear			
	1.11 19 Tooth involute spline OD.	H 34.648 mm L 34.394 mm		Measured over two pins, Pin Dia 3.048 mm
	1.12 20 Tooth involute spline OD.	H 57.200 mm L 56.880 mm		Measured over two pins, Pin Dia 4.800 mm
	1.13 10 Tooth spline major OD.	H 34.595 mm L 34.417 mm		
	1.14 10 Tooth spline minor OD.	H 29.896 mm L 29.642 mm		
	1.15 10 Tooth spline tooth width	H 5.423 mm L 5.334 mm		
	Output flange - rear			
	1.16 Internal spline major ID.	H 34.798 mm L 34.620 mm		
	1.17 Internal spline minor ID.	H 30.505 mm L 30.327 mm		
	1.18 Internal spline space width	H 5.512 mm L 5.436 mm		
	Input shaft assembly			
	1.19 10 Tooth spline major OD.	H 34.595 mm L 34.417 mm		
	1.20 10 Tooth spline minor OD.	H 29.896 mm L 29.642 mm		
	1.21 10 Tooth spline tooth width	H 5.423 mm L 5.334 mm		
	1.22 12 Tooth involute spline OD.	H 45.943 mm L 45.689 mm		Measured over two pins, Pin Dia 4.763 mm
	High speed chainwheel			
	1.23 Gear teeth OD (39 teeth)	H 157.797 mm L 157.416 mm		Measured over two pins, Pin Dia 6.985 mm

(continued)

Schedule (continued)

Serial (1)	Detail (2)	Acceptable Quality Level (AQL)		Remarks (5)
		Level 3 (3)	Level 4 (4)	
	1.24 Dog teeth - circular thickness	H 3.835 mm L 3.635 mm		
	1.25 ID bore.	H 50.863 mm L 50.787 mm		
	Slow speed chainwheel			
	1.26 Gear teeth OD (26 teeth)	H 103.827 mm L 103.446 mm		Measured over two pins, Pin dia 6.985 mm
	1.27 Dog teeth - circular thickness	H 3.835 mm L 3.635 mm		
	1.28 ID bore.	H 50.863 mm L 50.787 mm		
	Power Take Off gear			
	1.29 Gear teeth OD (35 teeth)	H 158.067 mm L 157.686 mm		Measured over two pins, Pin dia 7.315 mm
	1.30 Internal spline major ID.	H 34.798 mm L 34.620 mm		
	1.31 Internal spline minor ID.	H 30.505 mm L 30.327 mm		
	1.32 Internal spline space width	H 5.512 mm L 5.436 mm		
	1.33 Internal spline major ID.	H 34.798 mm L 34.620 mm		
	1.34 Internal spline minor ID.	H 30.505 mm L 30.327 mm		
	1.35 Internal spline space width	H 5.512 mm L 5.436 mm		
	Clutch dog			
	1.36 Backlash between clutch ring and clutch hub	H 0.152 mm L 0.025 mm		
	Drive chain, high speed			
	1.37 Chain length (80 pitches)	H 1035.91 mm L 1022.70 mm		

(continued)

Schedule (continued)

Serial (1)	Detail (2)	Acceptable Quality Level (AQL)		Remarks (5)
		Level 3 (3)	Level 4 (4)	
	Drive chain, slow speed			
	1.38 Chain length (78 pitches)	H 1010.0 mm L 997.10 mm		
	1.39 High/low selector shaft OD.	H 19.025 mm L 18.900 mm		
	1.40 High/low selector fork ID.	H 94.107 mm L 93.345 mm		
	1.41 Width of high/low selector fork thrust faces.	H 9.423 mm L 9.296 mm		
	1.42 High/low selector shaft housing, ID bore.	H 19.150 mm L 19.050 mm		
	1.43 Differential lock yoke, ID of forks	H 71.50 mm L 67.50 mm		
	1.44 Differential lock yoke, width of fork at thrust faces.	H 7.90 mm L 7.75 mm		
	1.45 Speedometer driven gear housing. Spindle ID.	H 10.668 mm L 10.566 mm		
	1.46 Speedometer shaft OD.	H 10.520 mm L 10.393 mm		
	1.47 Speedometer driven gear (17 teeth).	H 21.49 mm L 21.18 mm		Measure over two balls Ball dia 2.3813 mm
	1.48 Speedometer backlash OD.	H 0.38 mm L 0.23 mm		
	1.49 Speedometer driving gear	H 28.194 mm L 27.991 mm		Measure over two balls Ball dia 2.0 mm
2	FRONT AXLE			
	2.1 Swivel bearing housing ID bore.	H 57.137 mm L 57.112 mm		
	2.2 Knuckle housing swivel pin bore ID.	H 34.05 mm L 34.00 mm		
	2.3 Cap, bearing, king pin, lower journal OD.	H 25.40 mm L 25.37 mm		

(continued)

Schedule (continued)

Serial (1)	Detail (2)	Acceptable Quality Level (AQL)		Remarks (5)
		Level 3 (3)	Level 4 (4)	
	2.4 Cap, bearing, king pin, upper journal OD.	H 25.40 mm L 25.37 mm		
	2.5 Pivot, arm, steering journal OD.	H 25.40 mm L 25.37 mm		
	2.6 Halfshafts spline (18 teeth).	H 40.292 mm L 40.254 mm		Measured over two pins Pin dia 3.05 mm
	2.7 Halfshafts spline (35 teeth)	H 40.043 mm L 39.989 mm		Measured over two pins Pin dia 2.032 mm
	2.8 Constant velocity joint external spline (22 teeth)	H 39.601 mm L 39.546 mm		Measured over two pins Pin dia 3.048 mm
	2.9 Constant velocity joint internal spline (18 teeth)	H 29.926 mm L 29.847 mm		Measured over two pins Pin dia 3.50 mm
	Wheel spindle			
	2.10 Oil seal land OD.	H 76.30 mm L 76.15 mm		
	2.11 Journal OD outer bearing.	H 49.975 mm L 49.954 mm		
	2.12 Journal OD inner bearing.	H 59.970 mm L 59.949 mm		
	Wheel hub			
	2.13 Housing ID inner bearing	H 94.960 mm L 94.927 mm		
	2.14 Housing ID outer bearing.	H 82.499 mm L 82.448 mm		
	2.15 Drum ID.	H 331.72 mm L 330.20 mm		
	2.16 Axle shaft flange internal spline (22 teeth).	H 31.978 mm L 31.902 mm		Measured between pins Pin dia 2.286 mm

(continued)

Schedule (continued)

Serial (1)	Detail (2)	Acceptable Quality Level (AQL)		Remarks (5)
		Level 3 (3)	Level 4 (4)	
3	REAR AXLE			
	3.1 Stub axle oil seal land OD. Wheel hub	H 84.252 mm L 83.997 mm		
	3.2 ID bore inner bearing.	H 112.69 mm L 112.65 mm		
	3.3 ID bore outer bearing.	H 93.23 mm L 93.19 mm		
	3.4 Drum ID.	H 309.49 mm L 307.97 mm		
	3.5 Half shaft external spline.	H 40.053 mm L 39.891 mm		Measured over two pins Pin dia 2.032 mm

SECTION 2 - TESTING OF ASSEMBLIES

7 The testing procedures for overhauled components and assemblies are, where relevant, detailed in AESP 2320-E-200-524. A suitable electric motor should be used to "no load" test the transfer box and axles. Excessive noise should be investigated and any oil leaks rectified.