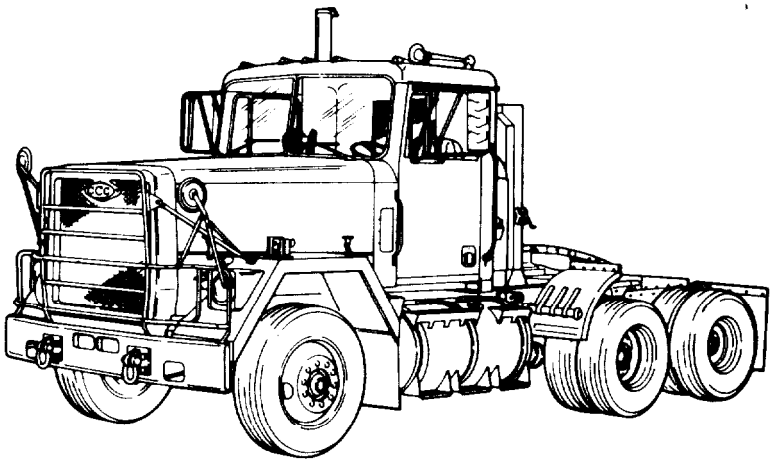
TECHNICAL MANUAL

ORGANIZATIONAL MAINTENANCE

TRUCK TRACTOR, LINE HAUL, 50,000 GVWR, 6 x 4, M915A1

(NSN 2320-01-125-2640)



This copy is a reprint which includes current pages from Change 1.

WHEELS
PAGE 3-1203

STEERING SYSTEM
PAGE 3-1245

FRAME AND TOWING ATTACHMENTS
PAGE 3-1329

SPRINGS, SHOCK ABSORBERS, AND TORQUE RODS
PAGE 3-1470

CAB AND BODY
PAGE 3-1492

ACCESSORY ITEMS
PAGE 3-1672

GAGES (NON-ELECTRICAL)
PAGE 3-1786

STE/ICE COMPONENTS
PAGE 3-1832

APPENDICES
PAGE A-1

HEADQUARTERS,
DEPARTMENT OF THE ARMY

DECEMBER 1983

TECHNICAL MANUAL
TM 9-2320-283-20-3

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, DC, 8 December 1983

ORGANIZATIONAL MAINTENANCE MANUAL

TRUCK TRACTOR, LINE HAUL, 50,000 GVWR, 6 X 4, M915A1

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual directly to Commander, U.S. Army Tank-Automotive Command, ATTN: DRSTA-MB, Warren, MI 48090. A reply will be furnished to you.

VOLUME 3 OF 3

		Page
Section XII.	WHEELS	3-1203
	3-201. General	3-1203
	3-202. Task Summary	3-1203
	3-203. Front Wheel Alinement	3-1206
	3-204. Front Drum Replacement	3-1210
	3-205. Front Hub, Bearings, and Seals Replacement	3-1214
	3-206. Rear Brake Drum Replacement	3-1222
	3-207. Rear Hub, Bearings, and Seals Replacement	3-1226
	3-208. Tire Replacement	3-1238
Section XIII.	STEERING SYSTEM	3-1245
	3-209. General	3-1245
	3-210. Task Summary	3-1245
	3-211. Steering System Service	3-1248
	3-212. Steering System Testing	3-1254
	3-213. Steering Wheel Replacement	3-1264

Page

Section XIII. STEERING SYSTEM (Continued).
3-214. Upper Steering Column Replacement and Repair . . 3-1270
3-215. Lower Steering Column Replacement and Repair . . 3-1282
3-216. Vertical Link Replacement 3-1292
3-217. Steering Arm Replacement 3-1298
3-218. Tie Rod and Ball Joints Replacement 3-1304
3-219. Steering Pump and Reservoir Replacement 3-1310
3-220. Power Steering Lines and Fittings Replacement 3-1318

Section XIV. FRAME AND TOWING ATTACHMENTS 3-1329
3-221. General 3-1329
3-222. Task Summary 3-1329
3-223. Secondary Reservoir Support Replacement 3-1334
3-224. Muffler Inlet Pipe Support Replacement 3-1338
3-225. Supply Reservoir Mounting Brackets Replacement 3-1344
3-226. Step Replacement 3-1350
3-227. Air Dryer Mounting Bracket Replacement 3-1358
3-228. Tiedown Bracket Replacement 3-1362
3-229. Vehicle Lifting Bracket Replacement 3-1366
3-230. Clevis Pin Replacement 3-1372
3-231. Transmission Oil Filter Mounting Bracket Replacement 3-1376
3-232. Forward-Rear Axle Stop Replacement 3-1380
3-233. Blackout Taillamp Mounting Bracket Replacement 3-1384
3-234. Taillamp Bracket Replacement 3-1388
3-235. Rear Tow Eye Bracket, Shackle, and Pin Replacement 3-1392
3-236. Brush Guard Replacement 3-1398
3-237. Bumper, Towing Eyes, and Vehicle Class Sign Replacement 3-1404
3-238. Tow Pintle Replacement 3-1412
3-239. Service Deck Replacement 3-1420
3-240. Spare Tire Carrier Replacement 3-1426
3-241. Spare Tire Winch Cable Replacement 3-1432
3-242. Spare Tire Winch Replacement and Repair 3-1438
3-243. Spare Tire Winch Pillar Replacement 3-1446
3-244. Fifth Wheel Adjustment 3-1452
3-245. Fifth Wheel Replacement 3-1458
3-246. Fifth Wheel Ramp Replacement 3-1466

Section XV. SPRINGS, SHOCK ABSORBERS, AND TORQUE RODS 3-1470
3-247. General 3-1470
3-248. Task Summary 3-1470
3-249. Front Spring Pin Screws and Fittings Replacement 3-1472
3-250. Shock Absorber Replacement 3-1478
3-251. Torque Rods Replacement 3-1484

Page

Section XVI. CAB AND BODY 3-1492
3-252. General 3-1492
3-253. Task Summary 3-1492
3-254. Right-Hand Instrument Cluster Panel Assembly Replacement 3-1498
3-255. Left-Hand Instrument Cluster Panel Assembly Assembly Replacement 3-1504
3-256. Instrument Panel Center Panel Assembly Replacement 3-1510
3-257. Glove Compartment Door Assembly Replacement 3-1516
3-258. Instrument Panel Assembly Replacement 3-1522
3-259. Inside Assist Handle Replacement 3-1528
3-260. Center Floor Pan Access Cover Replacement 3-1532
3-261. Ventilator Replacement 3-1536
3-262. Padlock Bracket Replacement 3-1540
3-263. Outside Rear Handle Replacement 3-1544
3-264. Outside Front Handle Replacement 3-1548
3-265. Door Plate Replacement 3-1552
3-266. Door Frame Seal Replacement 3-1556
3-267. Insulator Replacement 3-1560
3-268. Grille Replacement 3-1566
3-269. Hood Replacement 3-1576
3-270. Hood Panel and Component Replacement 3-1584
3-271. Front Fender Replacement 3-1600
3-272. Quarter Fender Replacement 3-1612
3-273. Splash Shield Replacement 3-1618
3-274. Rear Mud Flap and Bracket Replacement 3-1622
3-275. Cab Headliner Panel Replacement 3-1626
3-276. Cab Trim Panel Replacement 3-1630
3-277. Insulation Replacement 3-1634
3-278. Sun Visor Replacement 3-1638
3-279. Floor Mat Replacement 3-1642
3-280. Driver's Seat Replacement 3-1646
3-281. Driver's Seat Riser Replacement 3-1650
3-282. Seat Belt Replacement 3-1654
3-283. Companion Seat Replacement 3-1660
3-284. Companion Seat Riser, Fire Extinguisher Brackets, and Toolbox Replacement 3-1664

Section XVII. ACCESSORY ITEMS 3-1672
3-285. General 3-1672
3-286. Task Summary 3-1672
3-287. Door Mirror Replacement 3-1676
3-288. Spotter Mirror Replacement 3-1682
3-289. Air Horn and Control Valve Replacement 3-1688
3-290. Windshield Washer Replacement 3-1694
3-291. Windshield Washer Control Valve Replacement 3-1700
3-292. Windshield Wiper Control Replacement 3-1704

Page

Section XVII. ACCESSORY ITEMS (Continued).
3-293. Windshield Wiper Blade Assembly Replacement 3-1710
3-294. Windshield Wiper Assembly Replacement 3-1714
3-295. Windshield Wiper Motor Replacement 3-1720
3-296. Heater Air Hose Replacement 3-1726
3-297. Heater Valve, Hoses, Tubes, and Clamps Replacement 3-1730
3-298. Heater Assembly Replacement and Repair 3-1736
3-299. Heater Blower Assembly Replacement and Repair 3-1746
3-300. Heater Control Panel Replacement 3-1754
3-301. Heater Control Panel Repair 3-1760
3-302. Air Diffuser Assembly Replacement 3-1766
3-303. Defroster Fan Replacement 3-1772
3-304. Defroster Fan Repair 3-1776
3-305. Data and Instruction Plates Replacement 3-1782
3-306. Winterization Kit (Refer to TB 9-2320-283-14)

Section XVIII. GAGES (NONELECTRICAL) 3-1786
3-307. General 3-1786
3-308. Task Summary 3-1786
3-309. Tachograph Replacement 3-1788
3-310. Speedometer Shaft Replacement 3-1798
3-311. Speedometer Drive Sleeve Adapter Replacement 3-1802
3-312. Speedometer Driven Gear Replacement 3-1806
3-313. Tachometer Shaft Replacement 3-1810
3-314. Pressure Gage Replacement 3-1816
3-315. Air Cleaner Restriction Gage and Bracket Replacement 3-1822
3-316. Air Cleaner Restriction Gage Tube Replacement 3-1828

Section XIX. STE/ICE COMPONENTS 3-1832
3-317. General 3-1832
3-318. Task Summary 3-1832
3-319. Pulse Tachometer Replacement 3-1834
3-320. Pressure Transducer Replacement 3-1838

APPENDIX A. REFERENCES A-1
A-1. Publication Indexes A-1
A-2. Forms A-1
A-3. Other Publications A-1

Page

APPENDIX B. MAINTENANCE ALLOCATION CHART B-1

Section I. INTRODUCTION B-1
B-1. General B-1
B-2. Maintenance Functions B-1
B-3. Explanation of Columns in the MAC, Section II B-2
B-4. Explanation of Columns in Tool and Test Equipment Requirements, Section III B-4

Section II. MAINTENANCE ALLOCATION CHART B-5

Section III. TOOL AND TEST EQUIPMENT REQUIREMENTS B-24

APPENDIX C. EXPENDABLE SUPPLIES AND MATERIALS LIST C-1

Section I. INTRODUCTION C-1
C-1. Scope C-1
C-2. Explanation of Columns C-1

Section II. EXPENDABLE SUPPLIES AND MATERIALS LIST C-2

APPENDIX D. SCHEMATIC DIAGRAMS D-1

Section I. INTRODUCTION D-1
D-1. Scope D-1
D-2. Electrical System Diagrams D-1
D-3. Compressed Air System Diagrams D-1

APPENDIX E. ILLUSTRATED LIST OF MANUFACTURED ITEMS E-1

Section I. INTRODUCTION E-1
E-1. General E-1
E-2. Manufactured Item Part Number Index E-1

Section II. ILLUSTRATED MANUFACTURING INSTRUCTIONS E-2

GLOSSARY . . . . . Glossary 1

Section I. LIST OF ABBREVIATIONS . . . . . Glossary 1

Section II. DEFINITION OF UNUSUAL TERMS . . . . . Glossary 1

ALPHABETICAL INDEX . . . . . Index 1

Section XII. WHEELS

3-201. GENERAL.

This section provides procedures authorized at the organizational maintenance level to replace wheel components. To find a specific procedure contained in this section, see the task summary below.

3-202. TASK SUMMARY.

INITIAL SETUP

APPLICABLE CONFIGURATIONS	EQUIPMENT CONDITION PARAGRAPH	CONDITION DESCRIPTION
All.	(Refer to specific paragraph for this information).	

TEST EQUIPMENT

None.

SPECIAL TOOLS

Handle
(80201) 450237.
Adapter
(80201) 427.
Plug, bearing
(80201) 706.
Wrench, hexagon locknut, 2-1/4 inch
(45225) 1920.
Adapter
(80201) 446.
Plug
(80201) 715.
Wrench, hexagon locknut, 4-1/8 inch
(45225) 1915.

MATERIALS/PARTS (P/N)

Solvent, drycleaning, SD-2
Item 29, Appendix C.
Rag, wiping
Item 22, Appendix C.
Solution, soap
Item 28, Appendix C.
Antiseize compound
Item 5, Appendix C.
Sealant, flange
Item 23, Appendix C.
Pin, cotter
(52304) H1005727.
Seal assembly, front axle bearing
(80201) 35066.
Gasket, hubcap
(26151) 330-3009.
Oil, lubricating: Gear GO
Refer to LO 9-2320-283-12.
Seal, rear axle bearing
(80201) 47697.

PERSONNEL REQUIRED

Two (MOS-63S).

SPECIAL ENVIRONMENTAL CONDITIONS

Vehicle on level ground with front wheels straight.

WHEELS.

3-202. TASK SUMMARY (Continued).

INITIAL SETUP (Continued)

REFERENCES (TM)
TM 9-2320-283-10.
TM 9-214.
TM 9-2320-283-20P.
LO 9-2320-283-12.
TM 9-2610-200-20.

TROUBLESHOOTING REFERENCES
Paragraph 2-11.

GENERAL SAFETY INSTRUCTIONS
Engine off.
Transmission in neutral.
Park brake set.
Axle on safety stand.
Wheels chocked.
Vehicle parked on level ground.
Always remove air pressure from tire before servicing. Personal injury or part damage could result, from working on an inflated tire.

LIST OF TASKS

TASK NO.	TASK	TASK REF	TROUBLESHOOTING REF NO. (PARA)
1	Front Wheel Alinement	3-203	2-11
	a. Checking Alinement.	3-203a	
	b. Adjust Alinement.	3-203b	
2	Front Drum Replacement	3-204	2-11
	a. Removal.	3-204a	
	b. Cleaning and Inspection.	3-204b	
	c. Installation.	3-204c	
3	Front Hub, Bearings, and Seals Replacement	3-205	2-11
	a. Removal.	3-205a	
	b. Cleaning and Inspection.	3-205b	
	c. Installation.	3-205c	
4	Rear Brake Drum Replacement	3-206	2-11
	a. Removal.	3-206a	
	b. Cleaning and Inspection.	3-206b	
	c. Installation.	3-206c	

WHEELS.

3-202. TASK SUMMARY (Continued).

LIST OF TASKS

TASK NO.	TASK	TASK REF	TROUBLESHOOTING REF NO. (PARA)
5	Rear Hub, Bearings, and Seals Replacement	3-207	2-11
	a. Removal.	3-207a	
	b. Cleaning.	3-207b	
	c. Inspection.	3-207c	
	d. Installation.	3-207d	
6	Tire Replacement	3-208	2-11
	a. Removal.	3-208a	
	b. Cleaning and Inspection.	3-208b	
	c. Repair.	3-208c	
	d. Installation.	3-208d	

WHEELS.

3-203. FRONT WHEEL ALINEMENT.

THIS TASK COVERS

a. Checking Alinement.
b. Adjust Alinement.

INITIAL SETUP

APPLICABLE CONFIGURATIONS	EQUIPMENT CONDITION PARAGRAPH	CONDITION DESCRIPTION
All.	TM 9-2320-283-10.	Front tires properly inflated.

TEST EQUIPMENT
None.

SPECIAL TOOLS
None.

MATERIALS/PARTS (P/N)
None.

PERSONNEL REQUIRED
One (MOS-63S)

SPECIAL ENVIRONMENTAL CONDITIONS
Vehicle on level ground with front wheels straight.

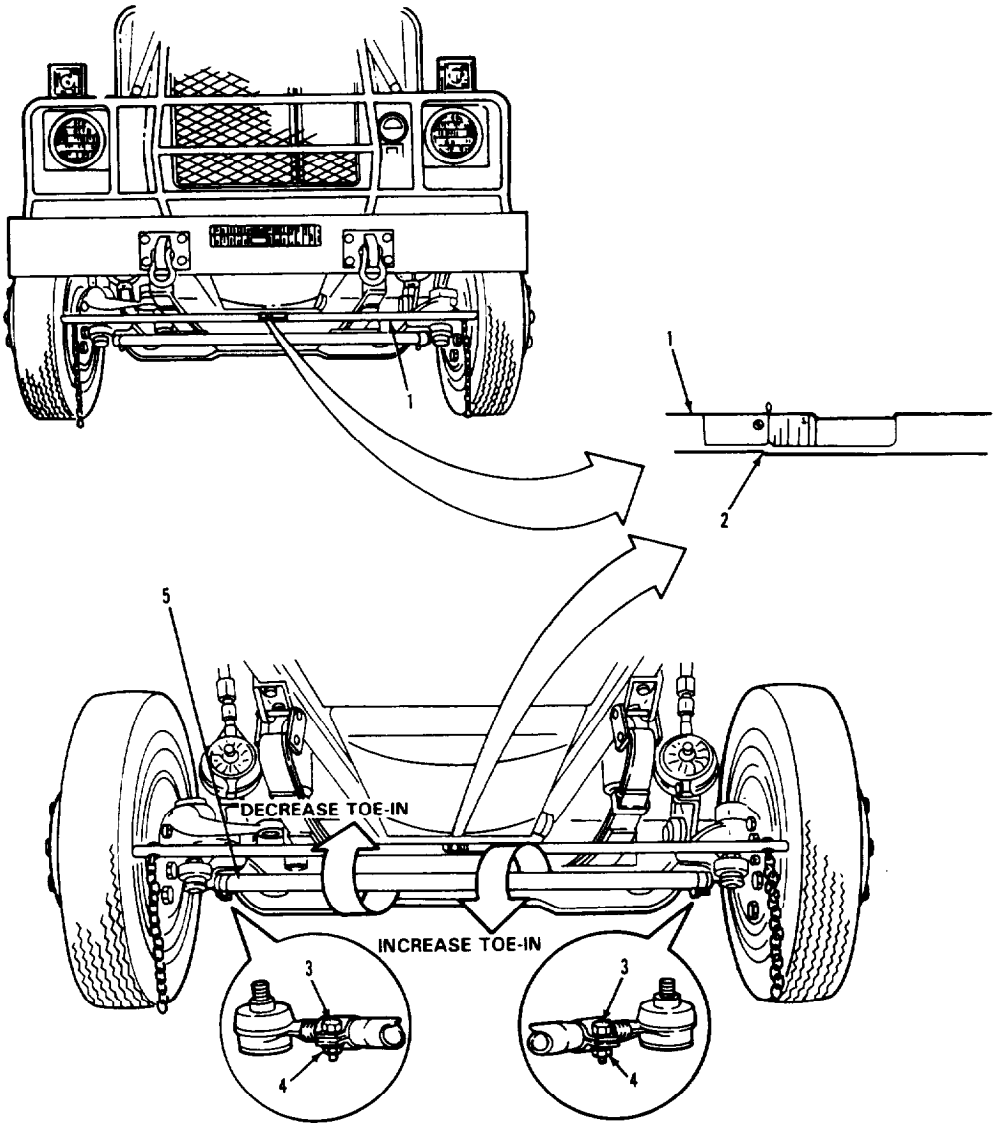
REFERENCES (TM)
TM 9-2320-283-10.

GENERAL SAFETY INSTRUCTIONS
Engine off.
Transmission in neutral.
Park brake set.

TROUBLESHOOTING REFERENCES
Paragraph 2-11.

WHEELS.

3-203. FRONT WHEEL ALINEMENT (Continued).



LEGEND:

1. TOE-IN GAGE
2. GAGE POINTER
3. SCREW (2)
4. NUT (2)
5. TIE ROD TUBE ASSEMBLY

TA 237566

WHEELS.

3-203. FRONT WHEEL ALINEMENT (Continued).

LOCATION/ITEM	ACTION	REMARKS
A. CHECKING ALINEMENT.		
1. Gage (1).	From the front of vehicle, install between tires so both chains just touch ground.	Gage (1) should be on same spot of both tires.
2. Pointer (2).	Set to read zero.	
3. Gage (1).	a. Remove.	
	b. From behind front wheels, install between tires so both chains just touch ground.	Gage (1) should be on same spot of both tires.
4. Pointer (2).	Check reading.	Reading should be 1/32 ± 1/32 for both wheels. If not, adjust alinement.
B. ADJUST ALINEMENT.		
5. Two bolts (3) and nuts (4).	Loosen.	
6. Tie rod tube assembly (5).	a. Turn to adjust.	As shown.
	b. Check alinement again.	
7. Two bolts (3) and nuts (4).	Torque between 40 and 55 lb-ft.	

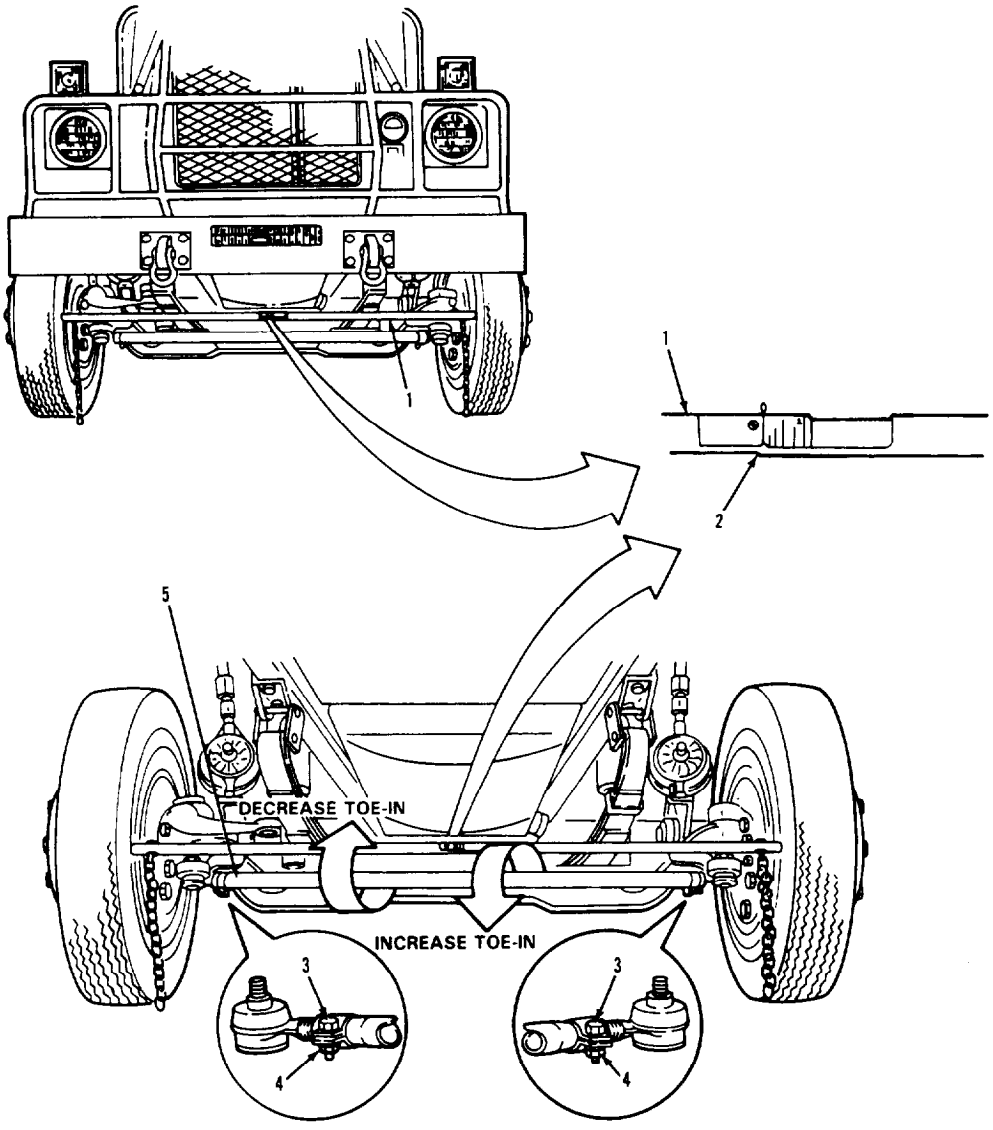
NOTE

Follow-on maintenance action required:

None.

WHEELS.

3-203. FRONT WHEEL ALINEMENT (Continued).



LEGEND:

1. TOE-IN GAGE
2. GAGE POINTER
3. SCREW (2)
4. NUT (2)
5. TIE ROD TUBE ASSEMBLY

TA 237567

WHEELS.

3-204. FRONT DRUM REPLACEMENT.

THIS TASK COVERS

a. Removal.
b. Cleaning and Inspection.
c. Installation.

INITIAL SETUP

APPLICABLE CONFIGURATIONS	EQUIPMENT CONDITION PARAGRAPH	CONDITION DESCRIPTION
All.	TM 9-2320-283-10.	Front wheel removed.

TEST EQUIPMENT
None.

SPECIAL TOOLS
None.

MATERIALS/PARTS (P/N)
Solvent, drycleaning, SD-2
Item 29, Appendix C.
Rag, wiping
Item 22, Appendix C.
Solution, soap
Item 28, Appendix C.

PERSONNEL REQUIRED
Two (MOS-63S).

SPECIAL ENVIRONMENTAL CONDITIONS
None.

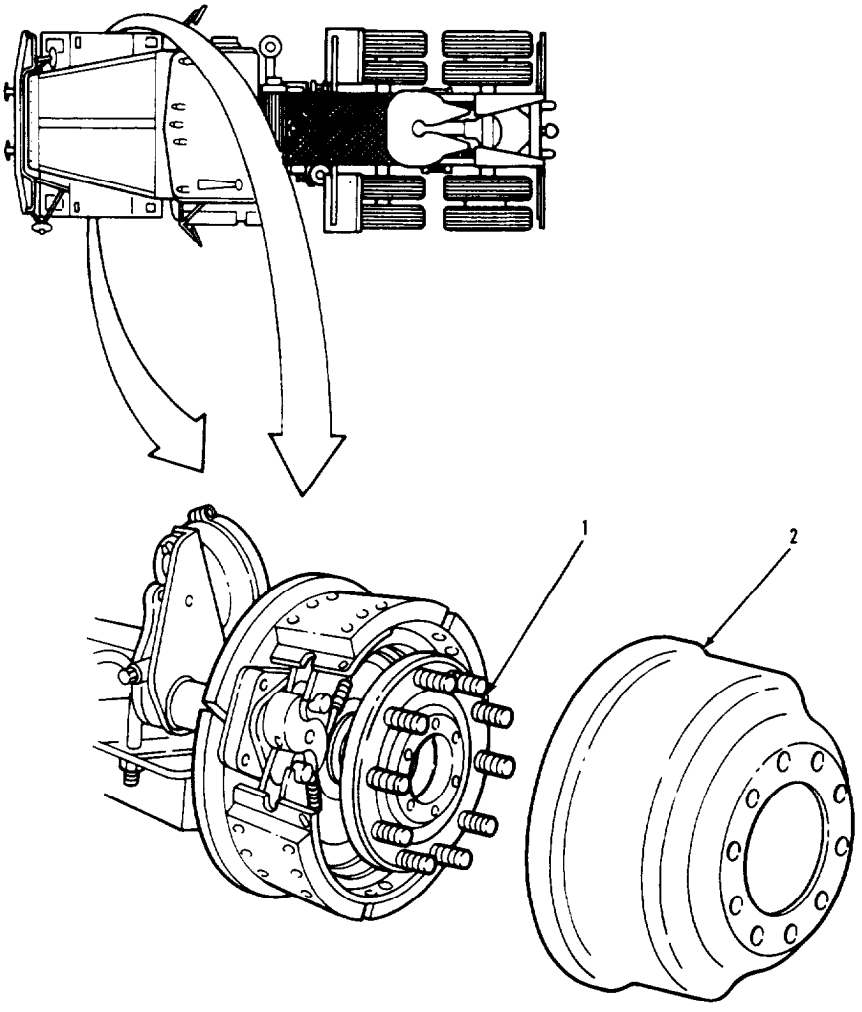
REFERENCES (TM)
TM 9-2320-283-10.

GENERAL SAFETY INSTRUCTIONS
Engine off.
Transmission in neutral.
Park brake set.
Axle on safety stand.

TROUBLESHOOTING REFERENCES
Paragraph 2-11.

WHEELS.

3-204. FRONT DRUM REPLACEMENT (Continued).



LEGEND:

1. HUB AND CUP ASSEMBLY
2. FRONT BRAKE DRUM

TA 237568

WHEELS.

3-204. FRONT DRUM REPLACEMENT (Continued).

LOCATION/ITEM	ACTION	REMARKS
	WARNING	
	Front drum is heavy. Two or more personnel are needed to lift drum.	
	NOTE	
	Replacement of front drums is the same for both sides.	
A. REMOVAL.		
1. Drum (2).	Remove from item (1).	Tap with hammer if necessary.
B. CLEANING AND INSPECTION.		
2. Drum (2).	a. Clean with solvent and rag, then with soap solution and water.	Refer to paragraph 3-4.
	b. Inspect for cracks, scores, gouges, heat spots, out-of-roundness, or a mirror-like shine.	If damaged, refer to DS/GS maintenance for repair.
	c. Measure inside diameter.	Replace if more than 16.580 inches.
C. INSTALLATION.		
3. Drum (2).	Install on item (1).	
	NOTE	
	Follow-on maintenance action required:	
	Install front wheel (TM 9-2320-283-10).	
	Adjust slack adjuster (para 3-157).	