

TECHNICAL MANUAL

VOLUME 2 OF 2

PART 1 OF 3

MAINTENANCE

DIRECT SUPPORT AND GENERAL SUPPORT LEVEL

2½-TON 6X6, M44A1 AND M44A2 SERIES TRUCKS

(MULTIFUEL)

TRUCK, CARGO: M35A1,

M35A2, M35A2C, M36A2; TRUCK,

TANK, FUEL: M49A1C, M49A2C; TRUCK, TANK,

WATER: M50A1, M50A2, M50A3; TRUCK, VAN,

SHOP: M109A2, M109A3; TRUCK, REPAIR SHOP:

M185A2, M185A3; TRUCK, TRACTOR: M275A1,

M275A2; TRUCK, DUMP: M342A2; TRUCK,

MAINTENANCE, PIPELINE CONSTRUCTION:

M756A2; TRUCK, MAINTENANCE,

EARTH BORING AND POLESETTING: M764

NOTE:

THE STYLE OF THIS TM IS
EXPERIMENTAL. IT IS BEING TRIED
BY THE ARMY ONLY ON
A LIMITED BASIS

Chapter 1
General
Maintenance
Information

Chapters 2, 3, 4
Engine, Clutch
and Fuel Systems

Chapters 5, 6
Exhaust and
Cooling Systems

Chapter 7
Electrical
System

Chapter 8
Transmission System

Chapter 9
Transmission
Transfer System

Chapters 10, 11
Front Axle and
Rear Axle

Chapters 12, 13, 14
Brake
Wheel, and
Steering Systems

Chapter 15, 16
Frame and
Towing Attachments,
and Springs

DEPARTMENTS OF THE ARMY AND THE AIR FORCE

MAY 1981

***TM 9-2320-209-34-2-1**
T.O. 36A12-1B-1092-2-2

TECHNICAL MANUAL
 NO. 9-2320-209 -34-2-1
 TECHNICAL ORDER
 NO. 36A12-1B-1092-2-2

DEPARTMENTS OF THE ARMY
 AND
 THE AIR FORCE
 Washington, DC, 20 May 1981

TECHNICAL MANUAL

VOLUME 2 OF 2

PART 1 OF 3

MAINTENANCE

DIRECT SUPPORT AND GENERAL SUPPORT LEVEL

2½-TON 6X6, M44A1 AND M44A2 SERIES TRUCKS
(MULTIFUEL)

Model		NSN without Winch	NSN with Winch
Truck, Cargo	M35A1	2320-00-542-5633	2320-00-542-5634
	M35A2	2320-00-077-1616	2320-00-077-1617
	M35A2C	2320-00-926-0873	2320-00-926-0875
	M36A2	2320-00-077-1618	2320-00-077-1619
Truck, Tank, Fuel	M49A1C	2320-00-440-3349	2320-00-440-3346
	M49A2C	2320-00-077-1631	2320-00-077-1632
Truck, Tank, Water	M50A1	2320-00-440-8307	2320-00-440-8305
	M50A2	2320-00-077-1633	2320-00-077-1634
	M50A3	2320-00-937-4036	2320-00-937-5264
Truck, Van, Shop	M109A2	2320-00-440-8313	2320-00-440-8308.
	M109A3	2320-00-077-1636	2320-00-077-1637
Truck, Repair Shop	M185A2	4940-00-987-8799	4940-00-987-8800
	M185A3	4940-00-077-1638	4940-00-077-1639
Truck, Tractor	M275A1	2320-00-446-2479	
	M275A2	2320-00-077-1640	2320-00-077-1641
Truck, Dump	M342A2	2320-00-077-1643	2320-00-077-1644
Truck, Maintenance, Pipeline Construction	M756A2		2320-00-904-3277
Truck, Maintenance, Earth Boring and Polesetter	M764		2320-00-937-5980

*This manual, together with TM 9-2320-209-34-1, 20 May 1981; TM 9-2320-209-34-2-2, 20 May 1981; and TM 9-2320-209-34-2-3, 20 May 1981, supersedes TM 9-2320-209-34, dated 30 March 1979.

REPORTING OF 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 procedure, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publication and Blank Forms), or DA Form 2028-2 located in the back of this manual direct to: Commander, U.S. Army Tank Automotive Materiel Readiness Command, ATTN: DRSTA-MB, Warren Michigan 48090. A reply will be furnished to you.

TABLE OF CONTENTS

	Paragraph	Page
CHAPTER 1. GENERAL MAINTENANCE INFORMATION		
Scope	1-1	1-1
General Maintenance	1-2	1-1
Cleaning	1-3	1-1
Painting	1-4	1-2
Torque Values	1-5	1-2
Special Tools and Equipment	1-6	1-2
Safety Inspection and Testing of Lifting Devices	1-7	1-2
Forms and Records	1-8	1-2
Equipment Improvement Report and Maintenance Digest (EIR MD) and Equipment Improvement Report and Maintenance Summary (EIR MS)	1-9	1-2
Reporting Improvement Recommendations	1-10	1-2
Metric System	1-11	1-2
Destruction to Prevent Enemy Use	1-12	1-2
Administrative Storage	1-13	1-3
Tabulated Data	1-14	1-3
Vehicle Description	1-15	1-3
General Shipping Instructions	1-16	1-3
Transportability Guidance	1-17	1-3
Maintenance Repair Parts	1-18	1-3
CHAPTER 2. ENGINE SYSTEM GROUP MAINTENANCE		
Section 1. Scope		2-1
Equipment Items Covered	2-1	2-1
Equipment Items Not Covered	2-2	2-1
Section II. Engine Assembly		2-1
Engine Removal and Replacement	2-3	2-1
Preliminary Procedures	2-3a	2-1
Removal	2-3b	2-2
Replacement	2-3c	2-22
Engine (LD 465-1, LD 465-1C, and LDT 465-1C) Repair	2-4	2-42
Engine (LDS 427-2) Repair	2-5	2-42

TABLE OF CONTENTS - CONT

	Paragraph	Page
Section III. Crankcase, Block, and Cylinder Head		2-42
Cylinder Head Removal, Repair, and Replacement (Trucks with Engines LD 465-1, LD 465-1C, and LDT 465-1C)	2-6	2-42
Preliminary Procedures	2-6a	2-42
Removal	2-6b	2-43
Cleaning, Inspection, and Repair	2-6c	2-69
Replacement	2-6d	2-69
Cylinder Sleeve Removal and Replacement	2-7	2-106
Section IV. Crankshaft		2-106
Vibration Damper Removal and Replacement	2-8	2-106
Preliminary Procedures	2-8a	2-106
Removal	2-8b	2-106
Replacement	2-8c	2-113
Main Bearings Removal and Replacement	2-9	2-120
Crankshaft Front Oil Seal Removal and Replacement	2-10	2-120
Preliminary Procedures	2-10a	2-120
Removal	2-10b	2-120
Replacement	2-10c	2-121
Section V. Flywheel		2-123
Flywheel Removal, Repair, and Replacement (Engines LD 465-1, LD465-1C, and LDT465-1C)	2-11	2-123
Preliminary Procedures	2-11a	2-123
Removal	2-11b	2-123
Cleaning	2-11c	2-126
Inspection and Repair	2-11d	2-126
Replacement	2-11e	2-126
Test	2-11f	2-128
Section VI. Pistons and Connecting Rods		2-132
Connecting Rod Bearings Removal and Replacement	2-12	2-132
Piston and Connecting Rod Assembly Removal, Repair, and Replacement	2-13	2-132
Section VII. Valves, Camshaft, and Timing System		2-132
Poppet Valve Pushrod Removal and Replacement	2-14	2-132
Preliminary Procedure	2-14a	2-132
Removal	2-14b	2-133
Replacement	2-14c	2-137

TABLE OF CONTENTS - CONT

	Paragraph	Page
Camshaft Assembly Removal and Replacement	2-15	2-148
Preliminary Procedures	2-15a	2-148
Removal	2-15b	2-149
Replacement	2-15c	2-153
Camshaft and Crankshaft Gears		
Removal and Replacement	2-16	2-157
Preliminary Procedures	2-16a	2-157
Removal	2-16b	2-158
Replacement	2-16c	2-163
Section VIII. Engine Lubricating System and Manifolds		2-169
Lubricating Oil Pump Assembly Removal, Repair, and Replacement	2-17	2-169
Preliminary Procedure	2-17a	2-169
Removal	2-17b	2-170
Disassembly	2-17c	2-175
Cleaning	2-17d	2-179
Inspection and Repair	2-17e	2-179
Assembly	2-17f	2-181
Replacement	2-17g	2-185
Oil Cooler Radiator Removal and Replacement	2-18	2-189
Preliminary Procedures	2-18a	2-189
Removal	2-18b	2-189
Replacement	2-18c	2-193
Oil Pressure Regulator Removal, Repair, and Replacement	2-19	2-197
Preliminary Procedures	2-19a	2-197
Removal	2-19b	2-198
Cleaning, Inspection, and Repair	2-19c	2-200
Replacement	2-19d	2-200
Oil Cooler Bypass Valve Removal, Repair and Replacement	2-20	2-203
Preliminary Procedure	2-20a	2-203
Removal	2-20b	2-203
Inspection and Repair	2-20c	2-204
Replacement	2-20d	2-204
Air Intake and Exhaust Manifolds		
Removal, Repair and Replacement	2-21	2-205
Preliminary Procedures	2-21a	2-205
Removal	2-21b	2-206
Repair	2-21c	2-231
Replacement	2-21d	2-231

TABLE OF CONTENTS - CONT

	Paragraph	Page
CHAPTER 3. CLUTCH SYSTEM GROUP MAINTENANCE		
Section I. Scope		3-1
Equipment Items Covered	3-1	3-1
Equipment Items Not Covered	3-2	3-1
Section II. Clutch Assembly		3-1
Clutch Assembly Removal and Replacement	3-3	3-1
Preliminary Procedure	3-3a	3-1
Removal	3-3b	3-2
Replacement	3-3c	3-3
Clutch Assembly Repair	3-4	3-5
Section III. Clutch Release Mechanism		3-5
Clutch Release Bearing and Throwout		
Shaft Yoke Removal and Replacement	3-5	3-5
Preliminary Procedure	3-5a	3-5
Removal	3-5b	3-5
Replacement	3-5c	3-7
CHAPTER 4. FUEL SYSTEM GROUP MAINTENANCE		
Section I. Scope		4-1
Equipment Items Covered	4-1	4-1
Equipment Items Not Covered	4-2	4-1
Section II. Fuel Injector		4-1
Fuel Injector Nozzle and Holder Assembly		
Removal and Replacement	4-3	4-1
Preliminary Procedure	4-3a	4-1
Removal	4-3b	4-2
Replacement	4-3c	4-4
Fuel Injector Nozzle and Holder Assembly		
Repair	4-4	4-6
Fuel Injector Pump Repair	4-5	4-6
Section III. Turbocharger		4-6
Turbocharger Repair	4-6	4-6
Section IV. Fuel Tanks		4-6
Fuel Tank Repair (All Except Trucks		
M275A1, M275A2, and M342A2)	4-7	4-6
Preliminary Procedures	4-7a	4-6
Disassembly	4-7b	4-7
Cleaning	4-7c	4-8
Inspection and Repair	4-7d	4-9
Assembly	4-7e	4-10
Fuel Tank Repair (Trucks M275A1,		
M275A2, and M342A2)	4-8	4-11
Preliminary Procedures	4-8a	4-11
Disassembly	4-8b	4-11
Cleaning, Inspection, and Repair	4-8c	4-12
Assembly	4-8d	4-13

TABLE OF CONTENTS - CONT

	Paragraph	Page
CHAPTER 5. EXHAUST SYSTEM GROUP MAINTENANCE		
Section I. Scope		5-1
Equipment Items Covered	5-1	5-1
Equipment Items Not Covered	5-2	5-1
Section II. Exhaust Pipes and Mufflers		5-1
Exhaust Bypass Fording Valve Removal, Repair, and Replacement (Trucks M50A1 and M50A2)	5-3	5-1
Preliminary Procedure	5-3a	5-1
Removal	5-3b	5-2
Disassembly	5-3c	5-3
Cleaning	5-3d	5-5
Inspection and Repair	5-3e	5-5
Assembly	5-3f	5-6
Replacement	5-3g	5-8
CHAPTER 6. COOLING SYSTEM GROUP MAINTENANCE		
Section I. Scope		6-1
Equipment Items Covered	6-1	6-1
Equipment Items Not Covered	6-2	6-1
Section II. Radiator and Shrouds		6-1
Radiator Repair and Test	6-3	6-1
Radiator Shroud Repair	6-4	6-1
CHAPTER 7. ELECTRICAL SYSTEM GROUP MAINTENANCE		
Section I. Scope		7-1
Equipment Items Covered	7-1	7-1
Equipment Items Not Covered	7-2	7-1
Section II. Charging System		7-1
Alternator and Regulator Repair	7-3	7-1
Section III. Battery System		7-1
Battery Inspection, Removal, Service, and Replacement	7-4	7-1
Section IV. Chassis Wiring Harness		7-2
Wiring Harness Clamps Removal and Replacement	7-5	7-2
Removal	7-5a	7-2
Replacement	7-5b	7-3
Front Wiring Harness Removal and Replacement (All Trucks Except M275A1 and M275A2)	7-6	7-4
Preliminary Procedures	7-6a	7-4
Removal	7-6b	7-5
Replacement	7-6c	7-9

TABLE OF CONTENTS - CONT

	Paragraph	Page
Rear Wiring Harness Removal and Replacement (All Trucks Except M275A1 and M275A2)	7-7	7-13
Preliminary Procedure	7-7a	7-13
Removal	7-7b	7-13
Replacement	7-7c	7-15
Chassis Wiring Harness Removal and Replacement (Trucks M275A1 and M275A2)	7-8	7-17
Preliminary Procedures	7-8a	7-17
Removal	7-8b	7-18
Replacement	7-8c	7-23
Clearance Light Wiring Harnesses Removal and Replacement (Truck M756A2)	7-9	7-28
Preliminary Procedure	7-9a	7-28
Removal	7-9b	7-29
Replacement	7-9c	7-31
Floodlight Harness Removal and Replacement (Truck M756A2)	7-10	7-33
Preliminary Procedure	7-10a	7-33
Removal	7-10b	7-33
Replacement	7-10c	7-34
Van Main Wiring Harness Removal and Replacement	7-11	7-36
Preliminary Procedures	7-11a	7-36
Removal	7-11b	7-36
Replacement	7-11c	7-38
Van 24-Volt Wiring Harness Removal and Replacement	7-12	7-40
Preliminary Procedure	7-12a	7-40
Removal	7-12b	7-40
Replacement	7-12c	7-41
CHAPTER 8. TRANSMISSION SYSTEM GROUP MAINTENANCE		
Section I. Scope		8-1
Equipment Items Covered	8-1	8-1
Equipment Items Not Covered	8-2	8-1
Section II. Transmission Assembly		8-1
Transmission Cover Removal and Replacement	8-3	8-1
Preliminary Procedure	8-3a	8-1
Removal	8-3b	8-2
Disassembly	8-3c	8-6
Cleaning	8-3d	8-12
Inspection and Repair	8-3e	8-12
Assembly	8-3f	8-14
Replacement	8-3g	8-20

TABLE OF CONTENTS - CONT

	Paragraph	Page
Transmission, Removal, Repair and Replacement	8-4	8-24
Preliminary Procedures	8-4a	8-24
Removal	8-4b	8-25
Repair	8-4c	8-27
Replacement	8-4d	8-27
CHAPTER 9. TRANSMISSION TRANSFER SYSTEM GROUP MAINTENANCE		
Section I. Scope		9-1
Equipment Items Covered	9-1	9-1
Equipment Items Not Covered	9-2	9-1
Section II. Transmission Transfer Assembly		9-1
Air Actuated Transmission Transfer Assembly Removal and Replacement	9-3	9-1
Preliminary Procedures	9-3a	9-1
Removal	9-3b	9-2
Replacement	9-3c	9-5
Air Actuated Transmission Transfer Assembly Repair	9-4	9-8
Double Sprag Transmission Transfer Removal, Repair, and Replacement	9-5	9-8
Preliminary Procedures	9-5a	9-8
Removal	9-5b	9-9
Repair	9-5c	9-11
Replacement	9-5d	9-11
CHAPTER 10. FRONT AXLE GROUP MAINTENANCE		
Section I. Scope		10-1
Equipment Items Covered	10-1	10-1
Equipment Items Not Covered	10-2	10-1
Section II. Front Axle Assembly		10-1
Front Axle Assembly Removal and Replacement	10-3	10-1
Preliminary Procedures	10-3a	10-1
Removal	10-3b	10-2
Replacement	10-3c	10-4
Front Axle Assembly Repair	10-4	10-8
Preliminary Procedures	10-4a	10-8
Disassembly	10-4b	10-9
Cleaning	10-4c	10-16
Inspection and Repair	10-4d	10-17
Assembly	10-4e	10-19
Front Axle Shaft And Universal Joint Repair	10-5	10-27
Preliminary Procedure	10-5a	10-27
Disassembly	10-5b	10-27
Cleaning	10-5c	10-31
Inspection and Repair	10-5d	10-31
Assembly	10-5e	10-35

TABLE OF CONTENTS-CONT

	Paragraph	Page
Front Axle Drive Flange Repair	10-6	10-38
Preliminary Procedure	10-6a	10-38
Cleaning	10-6b	10-38
Disassembly	10-6c	10-38
Inspection and Repair	10-6d	10-39
Assembly	10-6e	10-40
Section III. Differential Carrier Assembly		10-41
Differential Carrier Assembly Removal, Repair and Replacement	10-7	10-41
Preliminary Procedures.	10-7a	10-41
Removal	10-7b	10-43
Disassembly	10-7c	10-44
Cleaning	10-7d	10-62
Inspection and Repair	10-7e	10-63
Assembly and Adjustment	10-7f	10-69
Replacement	10-7g	10-97
Maintenance of Bearings	10-8	10-99
Removal of Bearing from Shaft by Pressing	10-8a	10-99
Removal of Bearing from Shaft by Pulling	10-8b	10-100
Removal of Bearing from Housing by Pressing	10-8c	10-101
Removal of Bearing from Housing by Pulling	10-8d	10-102
Cleaning of Bearings	10-8e	10-103
Inspection of Bearings	10-8f	10-104
Replacement of Bearing onto Shaft	10-8g	10-105
Replacement of Bearing into Housing	10-8h	10-106
Section IV. Steering Mechanism		10-107
Front Axle Steering Arm Repair	10-9	10-107
Preliminary Procedure	10-9a	10-107
Removal	10-9b	10-107
Disassembly	10-9c	10-109
Cleaning	10-9d	10-110
Inspection and Repair	10-9e	10-110
Assembly.	10-9f	10-111
Replacement	10-9g	10-112
Wheel Hub Spindle Repair	10-10	10-114
Preliminary Procedure	10-10a	10-114
Removal	10-10b	10-115
Cleaning	10-10c	10-116
Inspection and Repair	10-10d	10-116
Replacement	10-10e	10-117

TABLE OF CONTENTS-CONT

	Paragraph	Page
CHAPTER 11. REAR AXLE GROUP MAINTENANCE		
Section I. Scope		11-1
Equipment Items Covered	11-1	11-1
Equipment Items Not Covered	11-2	11-1
Section II. Rear Axle Assembly		11-1
Forward-Rear Axle Assembly Removal and Replacement	11-3	11-1
Preliminary Procedures	11-3a	11-1
Removal	11-3b	11-2
Replacement	11-3c	11-5
Rear-Rear Axle Assembly Removal and Replacement	11-4	11-8
Preliminary Procedures	11-4a	11-8
Removal	11-4b	11-8
Replacement	11-4c	11-11
Forward-Rear and Rear-Rear Axle Housing Repair	11-5	11-14
Preliminary Procedures	11-5a	11-14
Disassembly	11-5b	11-14
Cleaning	11-5c	11-15
Inspection and Repair	11-5d	11-15
Assembly	11-5e	11-16
Rear Axle Hub Repair	11-6	11-17
Preliminary Procedures	11-6a	11-17
Disassembly	11-6b	11-17
Cleaning	11-6c	11-19
Inspection	11-6d	11-20
Repair	11-6e	11-21
Assembly	11-6f	11-21
Rear Suspension System Removal, Repair, and Replacement	11-7	11-23
Preliminary Procedures	11-7a	11-23
Removal	11-7b	11-24
Inspection and Cleaning Before Disassembly	11-7c	11-26
Disassembly	11-7d	11-26
Cleaning	11-7e	11-32
Inspection and Repair	11-7f	11-32
Assembly	11-7g	11-33
Replacement	11-7h	11-39
Crossrod and Spring Brackets Removal, Repair, and Replacement	11-8	11-41
Preliminary Procedures	11-8a	11-41
Removal	11-8b	11-42
Cleaning	11-8c	11-43
Inspection and Repair	11-8d	11-43
Replacement	11-8e	11-44

TABLE OF CONTENTS-CONT

	Paragraph	Page
CHAPTER 12. BRAKE SYSTEM GROUP MAINTENANCE		
Section I. Scope		12-1
Equipment Items Covered	12-1	12-1
Equipment Items Not Covered	12-2	12-1
Section II. Handbrake and Service Brake Assemblies.		12-1
Handbrake and Service Brakeshoe		
Repair	12-3	12-1
Preliminary Procedure	12-3a	12-1
Disassembly	12-3b	12-2
Cleaning	12-3c	12-3
Inspection and Repair	12-3d	12-3
Assembly	12-3e	12-4
Front and Rear Service Brake Drum		
Repair	12-4	12-5
Preliminary Procedure	12-4a	12-5
Cleaning	12-4b	12-5
Inspection and Repair	12-4c	12-6
Section III. Hydraulic Brake System		12-7
Air Hydraulic Cylinder Assembly		
Repair	12-5	12-7
Preliminary Procedures	12-5a	12-7
Disassembly Into Subassemblies	12-5b	12-8
Air Cylinder Piston Assembly		
Repair	12-5c	12-16
Air Cylinder and Air Tube Cleaning,		
Inspection, and Repair	12-5d	12-23
Slave Cylinder Body Repair.	12-5e	12-24
Pushrod Bushing Assembly Repair	12-5f	12-27
Slave Cylinder Compensator Assembly		
Repair	12-5g	12-28
Slave Cylinder Compensator piston		
Assembly Repair	12-5h	12-33
Slave Cylinder Control Valve Piston		
Assembly Repair	12-5i	12-35
Assembly of Air Hydraulic Cylinder		
Assembly	12-5j	12-37
Front Brake Hose Removal and		
Replacement	12-6	12-47
Preliminary Procedures	12-6a	12-47
Removal	12-6b	12-48
Replacement	12-6c	12-52
Section IV. Trailer Brake Connections and Controls		12-59
Air Brake Hand Control Valve		
Repair	12-7	12-59
Preliminary Procedure	12-7a	12-59
Disassembly	12-7b	12-60
Cleaning	12-7c	12-63
Inspection and Repair	12-7d	12-63
Assembly	12-7e	12-63

TABLE OF CONTENTS-CONT

	Paragraph	Page
CHAPTER 13. WHEEL SYSTEM GROUP MAINTENANCE		
Section I. Scope		13-1
Equipment Items Covered	13-1	13-1
Equipment Items Not Covered	13-2	13-1
Section II. Wheel Assembly		13-1
Wheel Repair	13-3	13-1
Preliminary Procedures	13-3a	13-1
Cleaning	13-3b	13-2
Inspection and Repair	13-3c	13-2
Tire Repair	13-4	13-3
CHAPTER 14. STEERING SYSTEM GROUP MAINTENANCE		
Section I. Scope		14-1
Equipment Items Covered	14-1	14-1
Equipment Items Not Covered	14-2	14-1
Section II. Mechanical Steering Gear Assembly		14-1
Mechanical Steering Gear Removal, Repair, and Replacement	14-3	14-1
Preliminary Procedures	14-3a	14-1
Removal	14-3b	14-2
Disassembly	14-3c	14-11
Cleaning	14-3d	14-20
Inspection and Repair	14-3e	14-20
Assembly	14-3f	14-26
Replacement	14-3g	14-37
Steering Gear Check Level Plug Installation	14-4	14-46
Preliminary Procedure	14-4a	14-46
Removal	14-4b	14-46
Replacement	14-4c	14-48
CHAPTER 15. FRAME AND TOWING ATTACHMENTS GROUP MAINTENANCE		
Section I. Scope		15-1
Equipment Items Covered	15-1	15-1
Equipment Items Not Covered	15-2	15-1
Section II. Frame Assembly		15-1
Frame Alinement Check	15-3	15-1
Preliminary Procedures	15-3a	15-1
Alinement Check	15-3b	15-2
Frame Components Removal, Repair, and Replacement	15-4	15-7
Side Member Support (Trucks M275A1 and M275A2)	15-4a	15-7
Fuel Tank Support (Trucks M275A1 and M275A2)	15-4b	15-9

TABLE OF CONTENTS-CONT

	Paragraph	Page
Taillight and Stoplight Assembly Bracket (Trucks M275A1 and M275A2)	15-4c	15-11
Skid Plate Bracket (Trucks M275A1 and M275A2)	15-4d	15-13
Rear Member Bracket (Trucks M275A1 and M275A2)	15-4e	15-15
Trailer Air Brake Coupling Bracket (Trucks M275A1 and M275A2)	15-4f	15-17
Rear Member (Trucks M275A1 and M275A2)	15-4g	15-19
Air Tank Support Brackets (Trucks M35A1, M35A2, M35A2C, M36A2, M49A1C, M49A2C, M50A1, M50A2, M50A3, M109A2, and M109A3)	15-4h	15-23
Running Board and Fuel Tank Supports (Trucks M35A1, M35A2, M35A2C, M36A2, M49A1C, M49A2C, M50A1, M50A2, M50A3, M109A2, and M109A3)	15-4i	15-25
Front Fender Supports (Trucks M35A1, M35A2, M35A2C, M36A2, M49A1C, M49A2C, M50A1, M50A2, M50A3, M109A2, and M109A3)	15-4j	15-27
Spare Tire Carrier (Trucks M35A1, M35A2, M35A2C, M36A2, M49A1C, M49A2C, M50A1, M50A2, M50A3, M109A2, and M109A3)	15-4k	15-29
Running Board Support (Trucks M35A1, M35A2, M35A2C, M36A2, M49A1C, M49A2C, M50A1, M50A2, M50A3, M109A2, and M109A3)	15-4l	15-31
Rear Frame Bracket (Trucks M35A1, M35A2, M35A2C, M36A2, M49A1C, M49A2C, M50A1, M50A2, M50A3, M109A2, and M109A3)	15-4m	15-33
Bumperettes (Trucks M35A1, M35A2, M35A2C, M36A2, M49A1C, M49A2C, M50A1, M50A2, M50A3, M109A2, and M109A3)	15-4n	15-35
Tool Box Supports (Truck M342A2)	15-4o	15-37
Right Running Board Supports (Truck M342A2)	15-4p	15-39
Left Running Board Supports (Truck M342A2)	15-4q	15-41

TABLE OF CONTENTS-CONT

	Paragraph	Page
Running Board Support (Truck M342A2)	15- 4r	15-43
Front Fender Supports (Truck M342A2)	15-4s	15-45
Fuel Filter Bracket (Truck M342A2)	15-4t	15-47
Front Crossmember Replacement Kit Installation Removal and Replacement	15-5	15-49
Preliminary Procedures	15-5a	15-49
Removal	15-5b	15-49
Replacement	15-5c	15-53
Section III. Fifth Wheel Assembly		15-57
Fifth Wheel Assembly, Disassembly and Repair	15-6	15-57
Preliminary Procedure	15-6a	15-57
Disassembly	15-6b	15-57
Cleaning	15-6c	15-65
Inspection	15-6d	15-65
Repair	15-6e	15-66
Assembly	15-6f	15-66
CHAPTER 16. SPRINGS GROUP MAINTENANCE		
Section I. Scope		16-1
Equipment Items Covered	16-1	16-1
Equipment Items Not Covered	16-2	16-1
Section II. Springs		16-1
Drilling and Tapping Rear Spring Seat for Lubrication	16-3	16-1
Installation of Lubrication Plug	16-3a	16-2
Lubrication of Rear Spring Seat	16-3b	16-4
PART 2 OF 3		
CHAPTER 17. BODY, CAB, HOOD, AND HULL GROUP MAINTENANCE		
Section I. Scope		17-1
Section II. Hood and Cab Components		17-1
Section III. Fenders, Running Boards, and Windshield Assembly		17-79
Section IV. Seats		17-122
Section V. Cargo Body Components		17-147
Section VI. Tank Body Components		17-165
Section VII. Special Purpose Body Components		17-376

TABLE OF CONTENTS-CONT**PART 3 OF 3**

	Paragraph	Page
CHAPTER 18. WINCH, HOIST, AND POWER TAKEOFF ASSEMBLIES GROUP MAINTENANCE		
Section I. Scope		18-1
Section II. Winch and Hoist Assemblies		18-1
Section III. Power Takeoff Assembly		18-274
CHAPTER 19. BUMPER AND GUARDS GROUP MAINTENANCE		
Section I. Scope		19-1
Section II. Bumper, Brackets, Guards, and Protective Devices		19-1
CHAPTER 20. BODY ACCESSORY ITEMS GROUP MAINTENANCE		
Section I. Scope		20-1
Section II. Canvas and Rubber Items		20-1
CHAPTER 21. MAINTENANCE OF MATERIAL USED IN CONJUNCTION WITH MAJOR ITEMS		
Section I. Scope		21-1
Section II. Winterization Kits		21-1
Section III. Deep Water Fording Kit		21-140
Section IV. Special Purpose Kits		21-199
APPENDIX A. REFERENCES		A-1
INDEX		Index 1

LIST OF TABLES

Number	Title	Page
1-1	Standard Torque Specifications	1-4
1-2	Special Tools and Equipment	1-5
10-1	Front Axle Assembly (Steering Knuckle) Wear Limits	10-17
10-2	Front Axle Assembly (Seal Retainer Seat) Wear Limits	10-32
10-3	Front Axle Shaft and Ball-Type Universal Joint Wear Limits	10-30
10-4	Front Axle Shaft and Universal Joint Wear Limits	10-34
10-5	Differential Case and Bearing Wear Limits	10-64
10-6	Spider and Spider Gear Wear Limits	10-65
10-7	Bearing Wear Limits	10-66
10-8	Pinion Gear and Shaft Wear Limits	10-68
11-1	Rear Axle Hub Assembly Wear Limits	11-20
14-1	Mechanical Steering Gear Wear Limits	14-24

LIST OF TABLES-CONT

Number	Title	Page
17-1	Rotor Shaft and Vane Wear Limits	17-238
17-2	Vane and Liner Wear Limits and Fit	17-239
17-3	Boring Case Gear Assembly Wear Limits	17-503
17-4	Adjusting Bearing, Worm, Gear Shaft, and Thrust Washer Wear Limits	17-596
17-5	Leveling Worm Gear Assemblies Wear Limits	17-617
17-6	Power Leveler Assembly Wear Limits	17-618
17-7	Feed and Drive Clutch Assembly Wear Limits	17-658
17-8	Power Leveler Wear Limits	17-680
18-1	Front Winch (Drum Shaft and Bearing) Wear Limits	18-15
18-2	Front Winch (Drum Sliding Clutch) Wear Limits	18-16
18-3	Front Winch (Gearcase and Gearcase Cover Bearings) Wear Limits	18-18
18-4	Front Winch (Drum Lock Poppet Spring and Clutch Control Lever Ball Spring) Wear Limits	18-19
18-5	Front Winch (Drag Brake Spring and End Frame Sleeve) Wear Limits	18-20
18-6	Rear Winch (Drum Shaft and Bearings) Wear Limits	18-49
18-7	Rear Winch (First Reduction Drive Assembly) Wear Limits	18-101
18-8	Rear Winch (Second Reduction Drive Assembly) Wear Limits	18-102
18-9	Rear Winch (Cable Level Winder Assembly) Wear Limits	18-105
18-10	Rear Winch (Drum and Shaft) Wear Limits	18-109
18-11	Rear Winch (Automatic Brake Assembly) Wear Limits	18-112

CHAPTER 1

GENERAL MAINTENANCE INFORMATION

1-1. SCOPE. This manual contains the direct support and general support maintenance instructions for the trucks listed below. This manual includes procedures for disassembly, cleaning, inspection, repair, test, adjustment and overhaul as authorized by the maintenance allocation chart.

Truck, Cargo:	2 1/2 ton, 6x6, M35A1, M35A2, M35A2C, and M36A2
Truck, Dump:	2 1/2 ton, 6x6, M342A2
Truck, Tractor:	2 1/2 ton, 6x6, M275A1 and M275A2
Truck, Tank, Fuel:	2 1/2 ton, 6x6, M49A1C and M49A2C
Truck, Tank, Water:	2 1/2 ton, 6x6, M50A1, M50A2, and M50A3
Truck, Repair Shop:	2 1/2 ton, 6x6, M185A2 and M185A3
Truck, Van, Shop:	2 1/2 ton, 6x6, M109A2 and M109A3
Truck, Maintenance, Earth Boring and Polesetting:	2 1/2 ton, 6x6, M764
Truck, Maintenance, Pipeline Construction:	2 1/2 ton, 6x6, M756A2

Information is provided on maintenance of trucks which is beyond the scope of tools, equipment, personnel or supplies normally available to operator or using organization.

1-2. GENERAL MAINTENANCE. The general maintenance and repair covered by other manuals and called out in this manual are as follows:

TM 9-214	Inspection, Care and Maintenance of Antifriction Bearings
TM 9-237	Operator's Manual: Welding Theory and Application (TO 34W4-1-5)
FM 43-3	General Repair for Canvas and Webbing
TM 9-247	Materials Used for Cleaning, Preserving, Abrading and Cementing Ordnance Materiel and Related Materials Including Chemicals
FM 43-2	Metal Body Repair and Related Operations.
TB 750-254	Cooling Systems: Tactical Vehicles
TB 43-0212	Purging, Cleaning and Coating Interior Ferrous and Terne Sheet Vehicle Fuel Tanks
TM 43-0139	Painting Instructions for Field Use.
TB 43-0209	Color, Marking and Camouflage Painting of Military Vehicles, Construction Equipment, and Materials Handling Equipment
TB 43-0213	(Rustproofing)
TM 9-2300-422-20	Security of Tactical Wheeled Vehicles

WARNING

Dry cleaning solvent is flammable. Do not use near an open flame. Keep a fire extinguisher nearby when solvent is used. Use only in well-ventilated places. Failure to do this may result in injury to personnel and damage to equipment.

1-3. CLEANING. All parts must be cleaned before inspection and assembly and after repair. Clean inner and outer surfaces of metallic parts and all areas subject to oil or grease with dry cleaning solvent, type II (SD-2), Fed. Spec P-D-680. Clean out sludge and gum with a stiff brush. Use steam cleaning to take off accumulated grease and dirt after dry cleaning solvent has been applied. Dry with clean rags. To clean

bearings, refer to TM 9-214. The general cleaning covered by other manuals and references called out in this manual are as follows:

- TM 9-247 Materials Used for Cleaning, Preserving, Abrading and Cementing Ordnance Materiel and Related Materials Including Chemicals.
- TM 9-214 Inspection, Care and Maintenance of Antifriction Bearings.

1-4. PAINTING. Instructions for the preparation of the material for painting, how to paint, and material to be used are in TM 43-0139. Instructions for camouflage painting are contained in FM 5-20B. Stenciling and marking must be done periodically due to weathering or repainting. Instructions for marking military trucks is called out in TB 746-93-1.

1-5. TORQUE VALUES. Critical torque values for a particular component are given in the maintenance procedures in chapter 2. When torque values are not given, bolts, screws, and nuts are to be tightened as given in table 1-1.

1-6. SPECIAL TOOLS AND EQUIPMENT. Special tools and equipment are provided to make it easier to do particular maintenance tasks and to keep the truck in good repair. Table 1-2 lists special tools and equipment and gives a reference to the maintenance paragraph where they are used and what they are used for.

1-7. SAFETY INSPECTION AND TESTING OF LIFTING DEVICES. Refer to TB 43-0142 for safety inspection and testing of lifting devices used in this manual.

1-8. FORMS AND RECORDS. Maintenance forms, records, and reports which are to be used by maintenance personnel at all levels are listed in and prescribed by TM 38-750.

1-9. EQUIPMENT IMPROVEMENT REPORT AND MAINTENANCE DIGEST (EIR MD) AND EQUIPMENT IMPROVEMENT REPORT AND MAINTENANCE SUMMARY (EIR MS). The quarterly Equipment Improvement Report and Maintenance Digest, TB 43-0001-39 series, contains valuable field information on the equipment covered in this manual. The information in the TB 43-0001-39 series is compiled from some of the Equipment Improvement Reports that you prepared on the vehicles covered in this manual. Many of these articles result from comments, suggestions, and improvement recommendations that you submitted to the EIR program. The TB 43-0001-39 series contains information on equipment improvements, minor alterations, proposed Modification Work Orders (MWO's), warranties (if applicable), actions taken on some of your DA Form 2028's (Recommended Changes to Publications), and advance information on proposed changes that may affect this manual. In addition, the more maintenance significant articles, including minor alterations, field-fixes, etc, that have a more permanent and continuing need in the field are republished in the Equipment Improvement Report and Maintenance Summary (EIR MS) for TARCOM Equipment (TM 43-0143). Refer to both of these publications (TB 43-0001-39 series and TM 43-0143) periodically, especially the TB 43-0001-39 series, for the most current and authoritative information on your equipment. The information will help you in doing your job better and will help in keeping you advised of the latest changes to this manual. Also refer to DA Pam 310-4, Index of Technical Publications, and Appendix A, References, of this manual.

1-10. REPORTING IMPROVEMENT RECOMMENDATIONS. If your truck needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design. Tell us why a procedure is hard to perform. Put it on an SF 368 (Quality Deficiency Report). Mail it to us at: Commander, U.S. Army Tank Automotive Material Readiness Command, AT TN: DRSTA-MB, Warren, Michigan 48090. We'll send you a reply.

1-11. METRIC SYSTEM. The equipment/system described herein is nonmetric and does not require metric common or special tools. Therefore, metric units are not supplied. Tactical instructions, for sake of clarity, will also remain nonmetric.

1-12. DESTRUCTION TO PREVENT ENEMY USE. Follow procedures given in TM 750-244-6 for destruction of Army material to prevent enemy use.

1-13. ADMINISTRATIVE STORAGE. Refer to TM 740-90-1 for truck storage procedures.

1-14. TABULATED DATA. Refer to TM 9-2320-209-20 for tabulated data for the trucks covered by this manual. Additional data can be found in paragraphs dealing with individual trucks or components.

1-15. VEHICLE DESCRIPTION. For vehicle description refer to TM 9-2320-209-10 and TM 9-2320-209-20.

1-16. GENERAL SHIPPING INSTRUCTIONS. When shipping 2 1/2 ton, 6x6 trucks, the officer in charge of preparing shipments will be responsible for the materiel being shipped in a serviceable condition. Also, the trucks must be properly processed for shipment, including the preparation of shipping documents.

1-17. TRANSPORTABILITY GUIDANCE, Transportability guidance for logistic handling and movement of 2 1/2 ton, 6x6 trucks is in TM 55-2320-209-15-1.

1-18. MAINTENANCE REPAIR PARTS . Repair parts for direct and general support maintenance are listed and illustrated in TM 9-2320-209-34P.