

TM 9-1710C

WAR DEPARTMENT

TECHNICAL MANUAL



ORDNANCE MAINTENANCE

**CHASSIS AND BODY
FOR HALF-TRACK VEHICLES**

SEPTEMBER 11, 1942

FOR ORDNANCE PERSONNEL ONLY

TECHNICAL MANUAL |
No. 9-1710C |

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CHASSIS AND BODY FOR HALF-TRACK VEHICLES

Prepared under the direction of the
Chief of Ordnance

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ORDNANCE MAINTENANCE—CHASSIS AND BODY FOR HALF-TRACK VEHICLES

Section I

INTRODUCTION

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1. PURPOSE.

This technical manual is published for the information and guidance of ordnance maintenance personnel and is the third of a series of three maintenance publications provided for the subject vehicles.

2. SCOPE OF INFORMATION.

a. **Vehicle.** Information concerning the service maintenance, technical inspection, and lubrication of the entire vehicle will be found in TM 9-710.

b. **Chassis and Body.** Information is included in this manual concerning the detailed description, operation, inspection and trouble diagnosis, disassembly, maintenance and repair, assembly, and test of major components of the chassis (exclusive of power train and power plant) and body, supplementing TM 9-710 prepared for the using arm.

c. **Power Train.** For maintenance information concerning the power train, refer to TM 9-1710.

d. **Power Plant.** For maintenance information concerning the power plant and its accessories, refer to TM 9-1711.

3. REFERENCES.

All pertinent standard nomenclature lists, technical manuals, and other publications having reference to the materiel described herein, are listed in section XIII.

Section II

SERVICE MAINTENANCE

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4. OBJECTIVE.

There is a distinct difference between the missions of organizational maintenance and of service maintenance. Organizational maintenance by the using arms has for its prime objective the routine preventive maintenance care and adjustment of vehicles so that they will be in good operating condition at all times with a minimum loss of elapsed time for repairs. Service maintenance by light and heavy maintenance organizations of the Quartermaster Corps and Ordnance Department has for its prime objectives, supply, technical inspection and corrective action, and repairs beyond the capacity of the using arms—either by unit replacement, overhauling, rebuilding, reclaiming, manufacturing, or any other methods considered most suitable.

5. SCOPE.

The scope of maintenance and repairs by maintenance personnel is determined by the ease with which the project can be accomplished, the amount of time available, weather conditions, concealment, shelter, proximity to hostile fire, equipment, tools and parts available, and skill of the personnel. Since all of these factors are variable, no exact system or procedure can be prescribed or followed.

6. ALLOCATION OF REPAIR JOBS.

The operations herein augment those which may be performed by personnel of the using arms.

a. Front and Rear Axles.

(See TM 9-1710).

b. Body.

Body	Replace
Body plates and supports	Repair, replace, or rebuild
Seats	Repair or rebuild
Sheet metal	Repair, weld, or rebuild
Tops	Repair, weld, or rebuild
Upholstering	Repair or replace
Windshields	Repair
Windshield wipers	Repair or rebuild

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Sprockets	Repair
Bogie wheels	Repair
Hubs	Repair
Track supporting roller assemblies	Repair
Axle tube suspension	Repair
Idlers	Repair
Axle tube suspension	Repair, weld, machine, and align
Brackets, rear suspension	Repair, weld, machine, and align
Track adjusting mechanism	Rebuild
Bogie components	Machine, weld, and align

d. Brakes.

Brake cylinders	Repair and hone
Brake shoes	Reline
Brake vacuum booster	Adjust, repair, and rebuild

e. Cooling System.

Fan	Repair
Fan bearings	Replace
Radiator	Repair

f. Electrical Generating and Starting System.

(See TM 9-1711.)

g. Electrical Ignition System.

(See TM 9-1711.)

h. Electrical Lighting System and Accessories.

Battery	Repair
Heater	Repair
Horn	Repair
Lights	Repair

i. Engine.

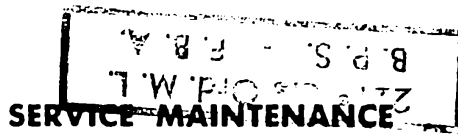
(See TM 9-1711.)

j. Frame.

Frame	Repair or straighten
Pinch	Repair
Roller	Replace or repair

k. Fuel System.

Fuel gage components	Repair
Fuel tanks	Repair



l. Instruments.

- Cluster Repair
- Meters Repair

m. Propeller Shafts.

(See TM 9-1710).

n. Springs and Shock Absorbers.

- Absorbers Repair
- Springs Repair or rebuild

o. Steering Gear.

- Drag link Repair
- Steering gear Repair or rebuild

p. Transmission—Transfer Case.

(See TM 9-1710).

q. Wheels.

- Line casings and tube Repair
- Wheels Repair, weld, machine, and align

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Section III

TECHNICAL INSPECTION

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7. DESCRIPTION.

Technical inspections are a follow-up and check on organizational maintenance inspections and other maintenance functions, and determine whether the vehicle should be continued in service or withdrawn from operation for overhaul. These inspections are covered in AR 850-15.

8. INSPECTION FORM.

War Department Quartermaster Corps Form No. 260, "Technical Inspection Report of Motor Vehicles," is the standard and official form for recording the inspection of all motor vehicles, including combat vehicles of the Ordnance Department. The extent to which use is made of this form or modifications thereof depends entirely on the technical ability of available personnel, the time factor, and the test and shop equipment available.

9. PRACTICAL APPLICATION.

a. External Inspection of Body and Frame Components.

(1) **BUMPERS.** Examine for straightness; use wrench to test channel bolts for tightness; inspect brackets for breaks.

(2) **TOW HOOKS.** Inspect for straightness and fractures; use wrench to test mounting bolts for tightness.

(3) **FRONT ROLLER.** Check freedom of rotation; inspect springs and supporting brackets for breaks.

(4) **RADIATOR SHUTTERS.** Inspect for breaks in armor plate and loose screws; open right door and operate louver lever to check opening and closing of shutters.

(5) **RADIATOR.** Examine underneath for leaks; inspect front of core for plugged air passages.

(6) **HEADLIGHT GUARDS.** Shake to determine looseness; inspect for breaks and fractures.

(7) **TIRES.** Inspect for serviceability; examine for indications of improper inflation or use, cuts, blisters, breaks, uneven wear, etc.; record defects for each tire.

(8) **HOOD.** Inspect for breaks in armor plate and loose screws; exam-

TECHNICAL INSPECTION

ine fasteners and hinges; inspect lacings for breaks; open and shut to check for fit.

(9) **RUNNING BOARDS AND FENDERS.** Examine for cracks and dents; shake up and down to test for looseness; use wrench to test mounting bolts for tightness; inspect support brackets for breaks.

(10) **DOORS.** Open and close to test for fit; shake up and down while open to test for loose hinges; turn handles and check locks and latches; inspect for loose and missing screws; check operation and securement of observation slot covers.

(11) **GLASS.** Inspect windshields for cracks and fit; check mounting details; examine for leaks and defective seals.

(12) **BODY.** Inspect for breaks in armor plate and loose screws; examine under side for bent or broken frame, angles, battens and welds; check for loosened floor plates, and check securement of grab handles.

(13) **PAINT.** Inspect for chipped paint, rust spots, scratches, bright metal, gloss, peelings, and cracks.

(14) **TOP AND CURTAINS.** Inspect for breaks in material and indications of leaks; examine straps and keepers.

(15) **PINTLE.** Inspect towing device for securement; examine latch effectiveness; check operation; test tightness of pintle hook retaining nut with wrench.

(16) **LIGHTS.** Inspect for broken glass and reflectors; check wire connections; test tightness of head lamp mounting stud nuts with wrench; check securement of tail lamps, turn on lights, and check all bulbs for different positions of light switch; be sure to turn off lights.

(17) **AMMUNITION RACKS.** Check covers; inspect shelves.

(18) **BATTERY AND COMPARTMENT.** Remove top housing plate; check level and specific gravity of electrolyte in each cell; check voltage drop across cells with tong tester; examine terminals for looseness and corrosion; inspect cables and ground straps; check vents and tighten plugs.

b. External Inspection of Chassis Components.

(1) **WHEELS.** Check all wheel nuts with wrench; check lubrication of bearings.

(2) **SPRINGS.** Inspect for broken leaves, loose clips, worn or damaged shackles, and misalignment; check shackle lubrication; test all shackle bolts with wrench; use pry bar to check flexing of springs.

(3) **SHOCK ABSORBERS.** Check fluid level; examine linkage; inspect securement and lubrication.

(4) **FRAME.** Inspect frame side rails and cross members for distortion and fractures; examine front end for evidence of stress due to overhang of loads; inspect all rivets and especially those for the roller brackets, spring brackets, engine supports, and steering gear bracket; examine battery tray support rivets for corrosion.

(5) **STEERING GEAR HOUSING.** Test all nuts with wrench. While some-

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one turns steering wheel, observe housing for leaks, shimmy or looseness. Check lubrication.

(6) **STEERING GEAR LINKAGE.** Inspect drag link for straightness; check lubrication and presence of boots; test all nuts with wrench.

(7) **BRAKE LINKAGE.** Check all clevis pins for lubrication, presence of cotter pins, and looseness; inspect rods for straightness, cracks, rust and corrosion.

(8) **BRAKE LINES.** Check for leaks, breaks, and loose connections; examine flexible tubing for cracks.

(9) **VACUUM BOOSTER.** Examine linkage and securement.

(10) **FUEL LINES.** Check for leaks, breaks, and loose connections.

c. Engine Compartment (Engine Stopped).

(1) **RADIATOR.** Examine for leaks, rust, corrosion, and clear air passages; shake to observe if it is loose in the frame; tighten all stud nuts with wrench; check clearance of fan blades; check vent; check for presence of radiator cap and proper water level; test antifreeze solution with suitable hydrometer.

(2) **FAN.** Inspect blades for breaks, looseness, and proper pitch; shake to test for looseness and worn bearings.

(3) **FAN BELT.** Inspect for matching of belts and play; examine for fraying, tears, and presence of grease or oil; check alinement of pulleys.

(4) **SHROUD.** Inspect for fit and securement; check clearance of fan blades; tighten screws.

d. Interior Inspection (Engine Started).

(1) **SWITCHES.** Check operation; examine securement; inspect wiring.

(2) **METERS.** Check operation; examine securement; inspect connections.

(3) **GAGES.** Check operation; examine securement; inspect connections; feel tachometer and speedometer cables for excessive heat and vibration.

(4) **WINDSHIELD WIPERS.** Check operation.

(5) **PANEL LIGHTS.** Check operation.

(6) **HORN.** Check operation.

(7) **FIRE EXTINGUISHER.** Check securement; inspect for full charge.

(8) **CHOKE AND VENTILATOR CONTROLS.** Check free operation and note a movement of ventilator slides; have an assistant note movement of choke valve in carburetor.

(9) **ACCELERATOR.** Check for proper alinement and operation.

(10) **PEDALS.** Check for proper operation.

(11) **BRAKE FLUID.** Remove floor cover in front of driver's seat and inspect master cylinder; examine fluid; check securement and connections.