# RESTRICTED

WAR DEPARTMENT

TECHNICAL MANUAL

TRUCK, ¾ TON 4x4 (DODGE)

WEAPON CARRIER, WC-51

WEAPON CARRIER WITH WINCH, WC-52

WEAPON CARRIER WITH WINCH, LESS BODY, WC-52 (Modified)

CARRYALL, WC-53

AMBULANCE, WC-54

COMMAND RECONNAISSANCE, WC-56

COMMAND RECONNAISSANCE WITH WINCH, WC-57

TELEPHONE MAINTENANCE, WC-59

EMERGENCY REPAIR CHASSIS, WC-60

NOVEMBER 14, 1942

TM 9-808

# RESTRICTED

TECHNICAL MANUAL No. 9-808

WAR DEPARTMENT
Washington, November 14, 1942

# TRUCK, ¾ TON 4x4 (DODGE)

Prepared under the direction of
The Chief of Ordnance
with the cooperation of
The Fargo Motor Corporation
Subsidiary of Chrysler Corporation

## INTRODUCTION

### PURPOSE AND SCOPE

TM 9-808 dated November 14, 1942 is intended to serve temporarily (pending the publication of a revision now in preparation) to give information and guidance to the personnel of the using arms charged with the operation and maintenance of this materiel.

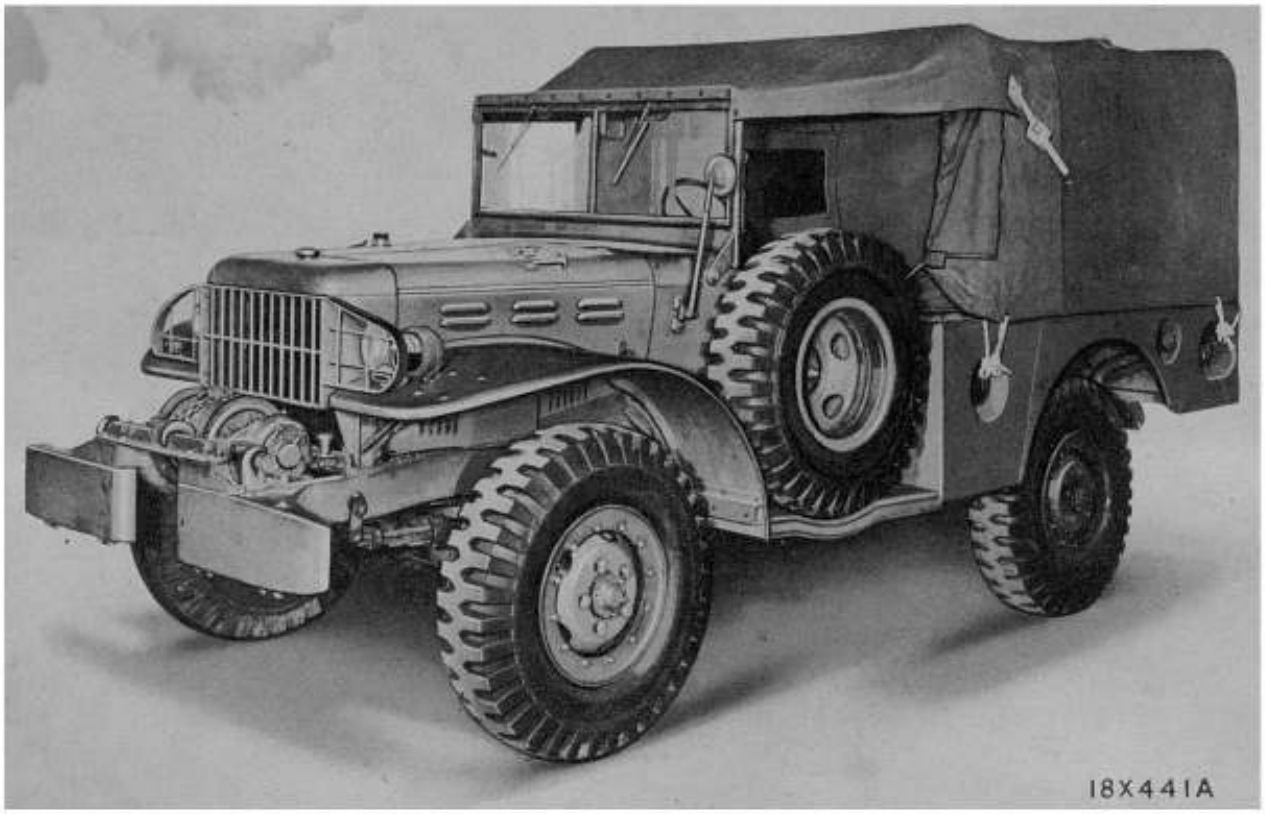
### CONTENT AND ARRANGEMENT OF THE MANUAL

Groups "D", "L" and "PM" contain information chiefly for the guidance of operating personnel. Groups 01 through 19 contain information intended chiefly for the guidance of personnel doing maintenance work.

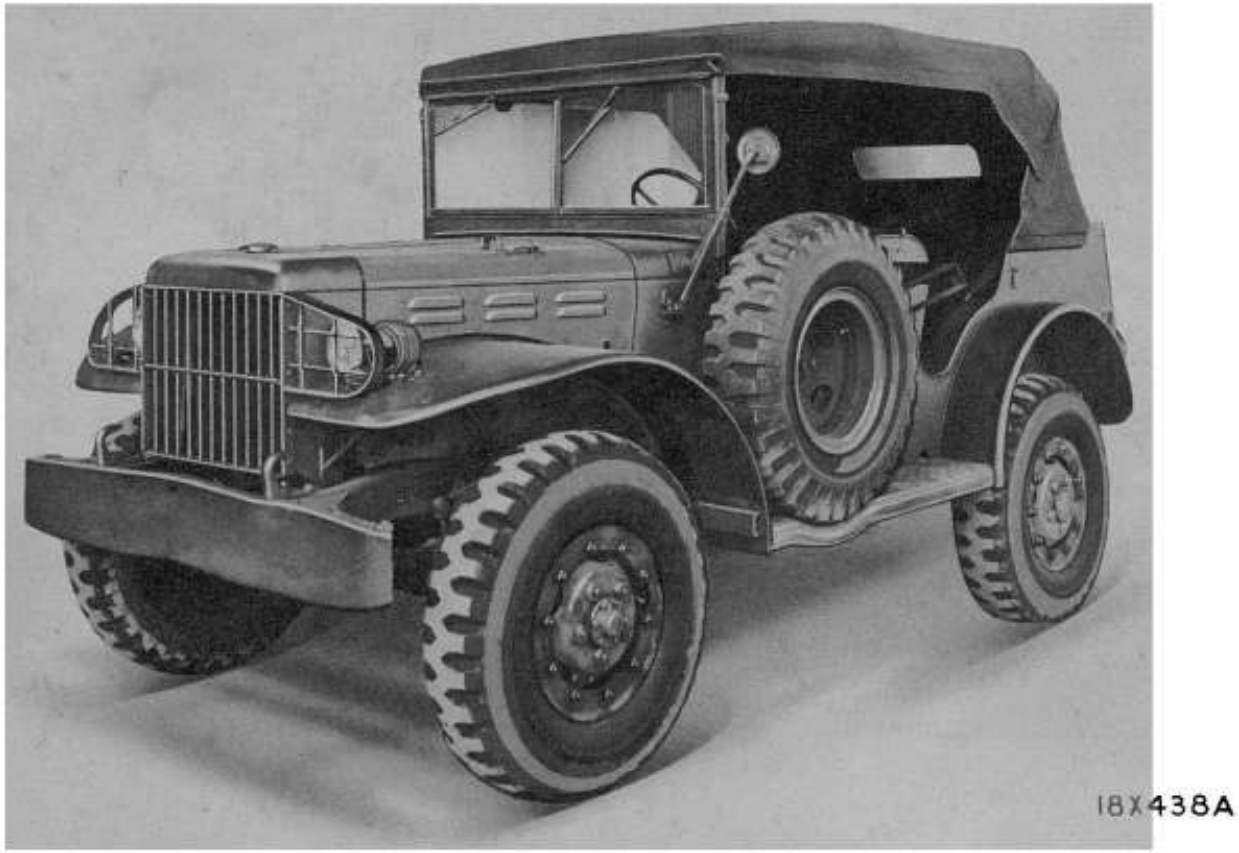
### REFERENCES

The last page of this manual lists all Standard Nomenclature Lists, Technical Manuals, and other publications for the materiel described herein.

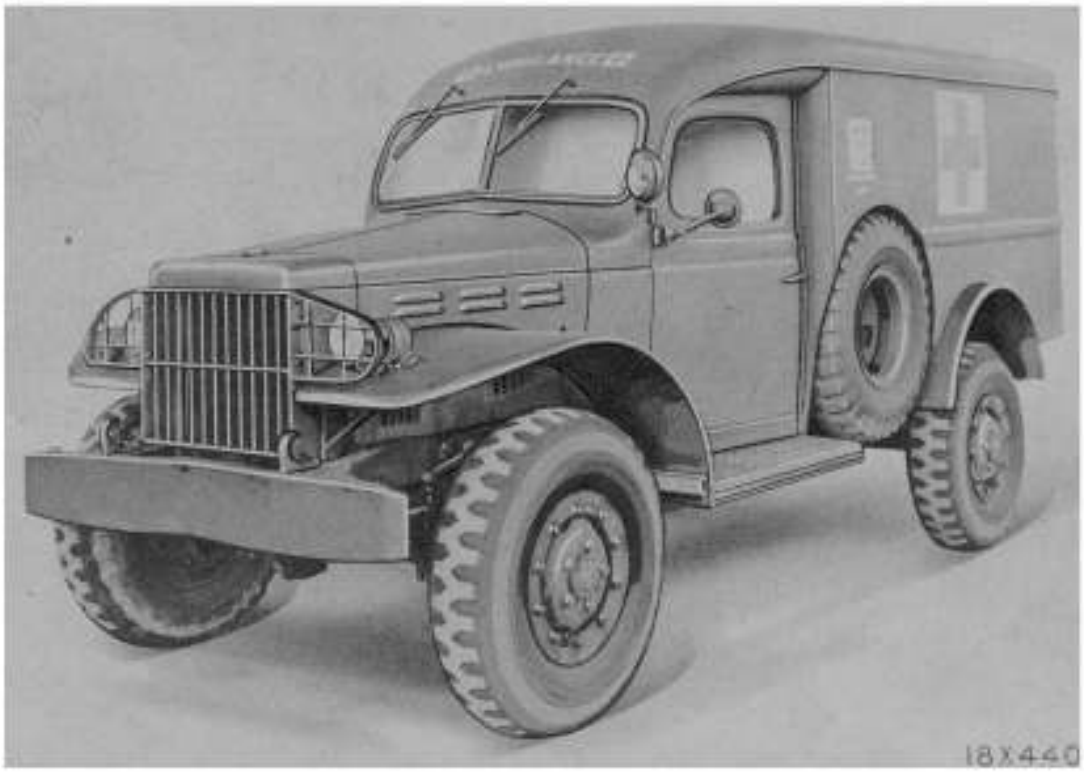
INDEX



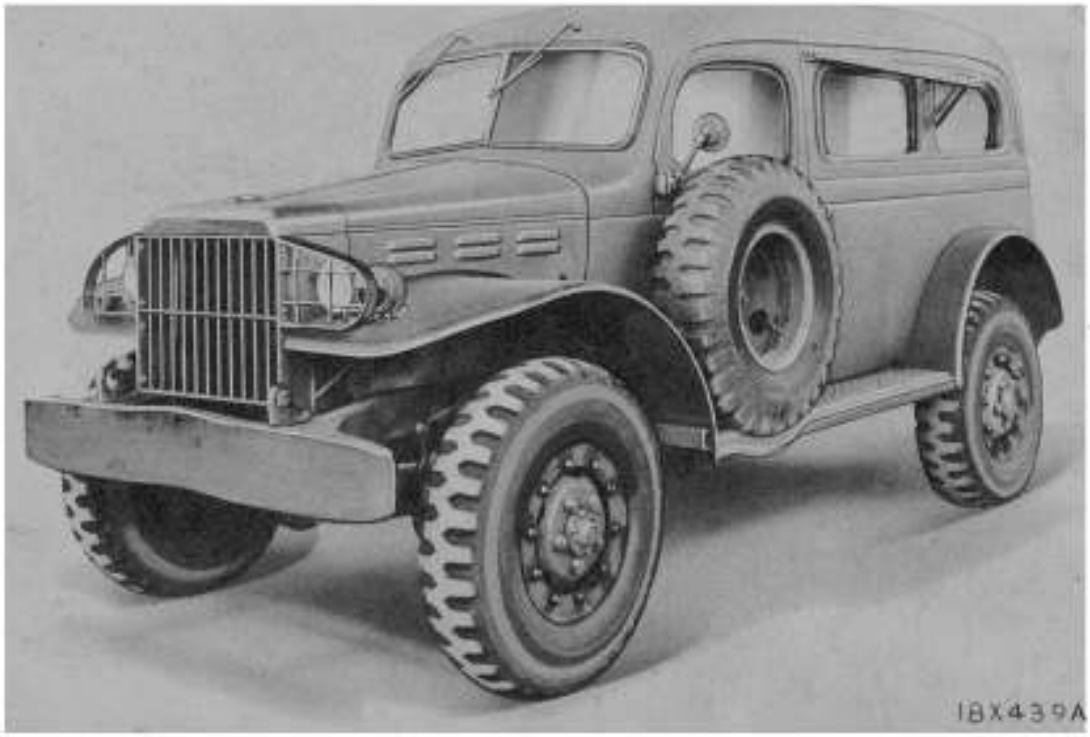

DODGE WEAPONS CARRIER — MODEL WC-51
DODGE WEAPONS CARRIER (with winch) — MODEL WC-52



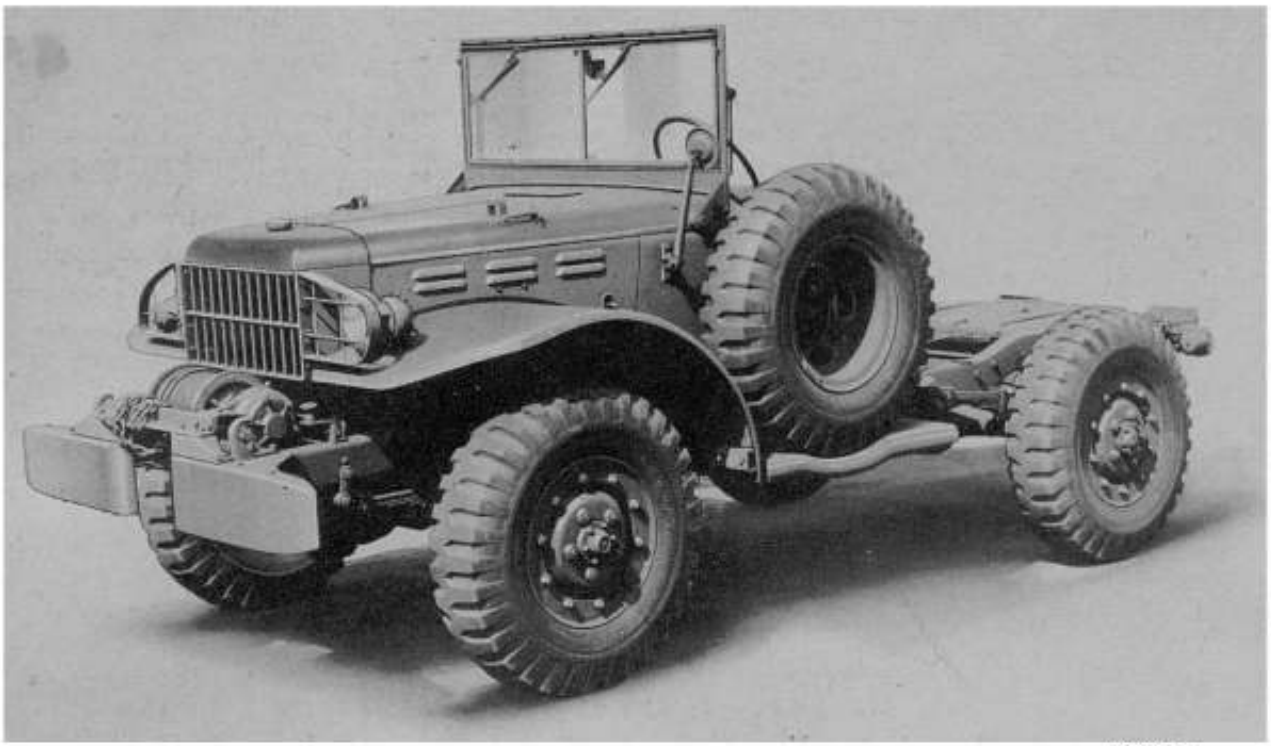

DODGE RECONNAISSANCE — MODEL WC-56
DODGE RECONNAISSANCE (with Winch) — MODEL WC-57
DODGE RADIO — MODEL WC-58




DODGE AMBULANCE MODEL WC-54

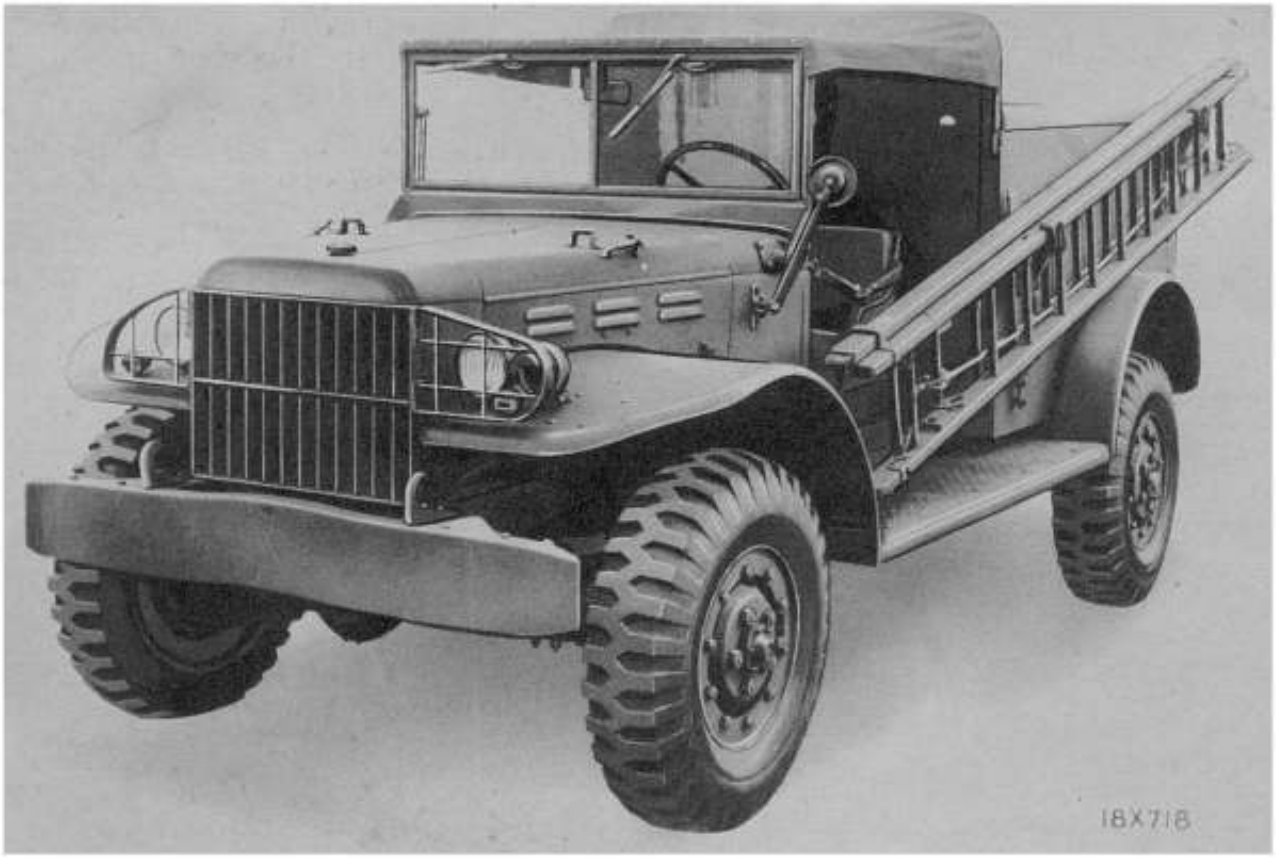



DODGE CARRYALL MODEL WC-53



18X719

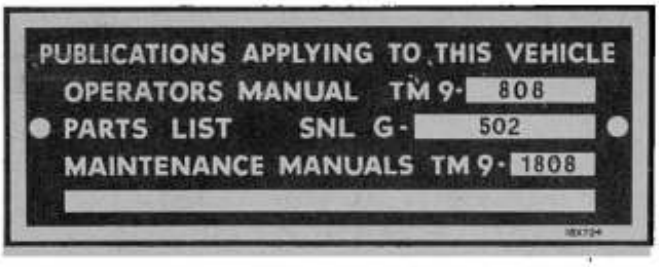
DODGE WEAPON CARRIER (with winch—less body) MODEL WC-52 (Mod.)
DODGE EMERGENCY REPAIR CHASSIS (less winch, body and spare tire) MODEL WC-60




DODGE TELEPHONE MAINTENANCE MODEL WC-59

# MAINTENANCE NUMBER PLATE

The number assigned to this Manual appears on a Maintenance Number Plate attached to the instrument panel to the left of the steering column. The Maintenance Number Plate also contains a number for the Parts List so that both the Maintenance Manual and the Parts List, applicable to the truck being serviced, can be easily identified by referring to the Maintenance Number Plate.




Maintenance Number Plate

The Functional Group Code

| | |
|---|---|
| D | Driver's Instructions |
| L | Lubrication |
| PM | Preventive Maintenance |
| 01 | Engine |
| 02 | Clutch |
| 03 | Fuel |
| 04 | Exhaust |
| 05 | Cooling |
| 06 | Electrical |
| 07 | Transmission |
| 08 | Transfer Case |
| 09 | Propeller Shaft |
| 10 | Front Axle |
| 11 | Rear Axle |
| 12 | Brakes |
| 13 | Wheels and Tires |
| 14 | Steering |
| 15 | Frame |
| 16 | Springs and Shock Absorbers |
| 18 | Body and Sheet Metal |
| 19 | Winch |

# HOW TO USE THIS MANUAL

Operating and Service information will be found in this Manual in the Group Sequence as outlined in the Functional Group Code reproduced to the left. To quickly locate the group desired, turn to page 1, bend back the edges of the pages and select the black thumb-dot which will appear opposite that index name.

Major groups are divided into Subjects which are numbered consecutively for convenient reference. These numbers are used to make quick reference to related Subjects, so that all information pertaining to the service operation in question is cross-referenced for convenience of the reader.

Information in each group in the Manual, beginning with Group 01— Engine, is presented, insofar as practicable, in the following sequence:

Trouble Shooting and General Solution

Adjustments or Tune-up Procedure

Disassembly—Repair—Reassembly

Specifications

Special Tools

Divisions of each major group entitled "Specifications" are tabulated summaries of adjustment specifications, dimensions of parts, as well as the name and type of units built by other manufacturers.

Special Service tools mentioned throughout the Manual are listed at the end of each group. They are identified by Federal Stock Numbers and names whenever possible. Special tools for which Federal stock numbers are not available are listed in the tool list, showing the tool number and names of suppliers from whom they can be obtained.

# GENERAL DATA

## Engine

| | |
|---|---|
| Type | "L" Head |
| Horse Power—S. A. E. | 25.35 |
| Displacement | 230.2 cu. in. |
| Bore | 3¼" |
| Stroke | 4⅝" |
| Number of Cylinders | 6 |
| Engine Governed Speed | 3200 R.P.M. |
| Battery terminal grounded | Negative |
| Firing Order | 1-5-3-6-2-4 |

## Capacities

| | |
|---|---|
| Fuel Tank | 30 Gals. |
| Crankcase (refill) | 5 Qts. |
| Cooling System | 18 Qts. |
| Transmission | 6 Pts. |
| Transmission (with power take-off) | 7½ Pts. |
| Oil Bath Air Cleaner | 1 Qt. |
| Rear Axle Differential | 4½ Pts. |
| Front Axle Differential | 4½ Pts. |
| Transfer Case | 4 Pts. |
| Winch | 1 Qt. |

## Clearances

| | |
|---|---|
| Overall Width (at front fenders) | 77¾" |
| Overall Length: | |
| Weapon Carrier, Reconnaissance, Radio (without winch) | 165 31/32" |
| Weapon Carrier and Reconnaissance (with winch) | 175 19/32" |
| Carryall | 185 21/32" |
| Ambulance | 194½" |
| Telephone Maintenance | 187 13/32" |
| Emergency Repair Chassis | 191½" |
| Overall Height: | |
| Weapon Carrier | 82" |
| Reconnaissance, Radio | 81½" |
| Carryall | 80¼" |
| Ambulance | 90⅜" |
| Telephone Maintenance | 80 11/16" |
| Road Clearance—Front and Rear Axle | 10 23/32" |
| Turning Radius: | |
| Weapon Carrier | 21' 8" |
| Reconnaissance, Radio | 21' 8" |
| Carryall | 24' 6" |
| Ambulance, Telephone Maintenance and Emergency Repair Chassis | 26' 3" |

## Weights (Road weight of fully equipped vehicle without passengers)

| | |
|---|---|
| Weapon Carrier without winch | 5250 Lbs. |
| Weapon Carrier with winch | 5550 Lbs. |
| Reconnaissance and Radio without winch | 5375 Lbs. |
| Reconnaissance with winch | 5675 Lbs. |
| Carryall | 5750 Lbs. |
| Ambulance | 5920 Lbs. |
| Telephone Maintenance | Lbs* |

* Not available.

# UNLOADING INSTRUCTIONS (Rail Shipments)

## VEHICLE EQUIPMENT

To assure proper delivery of U.S. Army vehicles shipped by rail some of the equipment is removed when the vehicle is loaded.

1. **A Tool and Equipment Check List** is placed in tool box kit for convenience of unloading personnel. Vehicle equipment should be checked against this list when the vehicles are unloaded. Shortages or damages should be noted on the Bill of Lading as carrier responsibilities, except for back-ordered material, which will be noted on the check sheet attached to original Bill of Lading.

2. **Reconnaissance Top Side Curtains** are placed in rear tail gate compartment.

3. **Tool Kit Boxes** are laid on the floor of each vehicle. Handle with care to avoid breakage of box and loss of tool equipment.

4. **Tire Chains** are contained in bags fastened to the floor of each vehicle.

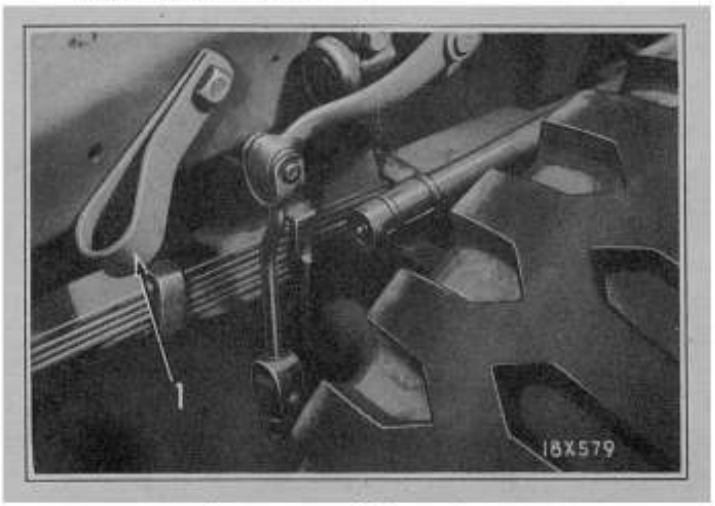
5. **Starting Cranks** are placed in tool kit box.

6. **Snatch Blocks** (supplied with winch equipped vehicles) are fastened to floor of the vehicle together with tire chains.

7. **Tarpaulins and Safety Straps** are placed in the body of vehicle.

8. **Bows and Ridge-Poles** for Weapons Carriers are placed in the body of the vehicle, when removed, to provide loading clearance. Bolts and nuts for bows and poles are placed in package compartment.

9. **Keys:** Two identical keys for all vehicle locks are placed in a bag and attached to the steering column.




Chassis Hold-Down Strap (1) for Shipping Purposes

## VEHICLE INSPECTION

**Do not attempt to start a new vehicle which has just been unloaded from a freight car, until the following inspections have been made.**

10. **Starting Motor Cable:** Connect to starter switch terminal. (If battery terminal is disconnected instead, be sure it is properly connected.)

11. **Cooling System:** Tighten drain cocks (one located at front of radiator and the other on left side of engine). Fill cooling system with water or antifreeze solution depending on the season of the year. Make sure all the hose connections are tight.

12. **Engine Oil Level:** Check engine oil level. The oil level gauge rod, (located on the left side of the engine between the distributor and the starting motor) is marked at "full" and "half-full". A third marking between "full" and "half-full" indicates the "running" level. The "full" mark shows the proper level of oil before the engine has been run. Never allow the oil level to drop below the "half-full' mark.

13. **Brake Fluid:** Inspect level of fluid in brake master cylinder. Level should not be lower than ½" from bottom of reservoir cover. Remove rubber nipple installed over vent.

14. **Battery and Connections:** Check level of electrolyte solution in battery and fill to proper level. See Group 06—Electrical in this Manual. See that the battery connections are tight.

15. **Chassis Lubrication:** Refer to the Lubrication Chart for complete lubrication instructions. Check level of lubricant in the transmission, transfer case, front and rear axles, steering gear and winch if so equipped. The lubricant should be level with filler plug opening.

16. **Wheels and Tires:** Check all tires and inflate or deflate to correct pressure (40 lbs. for 9.00/16 - 8 ply). Make certain that wheel stud nuts and front and rear axle drive flange nuts are securely tightened.

17. **Hold Down Straps:** On rail shipped vehicles, hold down straps are fastened to the frame side members under each fender. Remove the straps after the vehicle is unloaded to avoid interference between the straps and other vehicle parts.

# GROUP D

# DRIVER'S INSTRUCTIONS

By learning the location of each control lever, pedal and button before attempting to operate the vehicle, the driver will find driving easier than by trying to develop such knowledge while driving.

## THE CONTROLS

The accompanying illustrations (Figs. 1, 2, 3 and 4) show the location of each control. By thoroughly fixing the location of each of these controls in his mind and by knowing their purpose and how to use them, the driver who is unaccustomed to driving a Dodge Military Vehicle will find it easier to follow the Operating Instructions outlined in this section of the manual.

### 1—Ignition Switch

The ignition switch can be operated by turning the switch in a clockwise direction. In this position the ignition and fuel gauge circuits are connected.

### 2—Choke Control Button

The choke control button closes the choke when the control button is pulled "out" to the limit of its travel. Pull the choke control "out" when starting a cold engine and gradually push it in as the engine becomes warm. Always run the engine with the choke button pushed in after the engine has reached normal operating temperature. Excessive use of the choke causes a flooding condition in the engine and excess fuel works its way past the pistons into the crankcase diluting the engine oil. It also increases fuel consumption unnecessarily. Use of the choke control is unnecessary in starting a hot engine.

### 3—Throttle Control Button

The hand throttle control button is for use when starting the engine. Pulling the button outward opens the throttle.

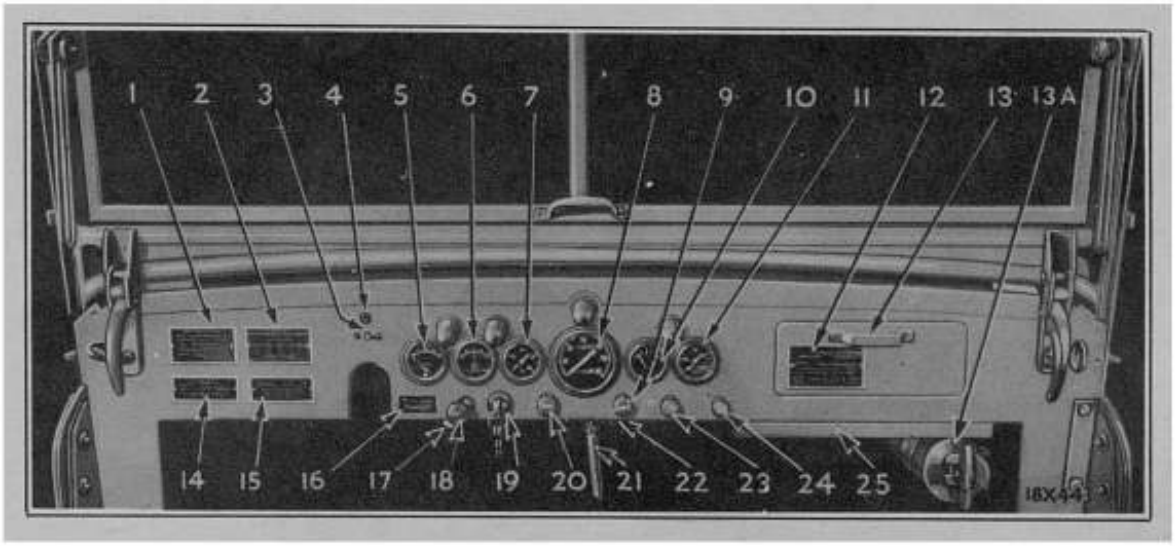



Fig. 1—Instrument Panel (Open Bodies)

1—Cooling system drain caution plate
2—Speed caution plate
3—Voltmeter switch (Reconnaissance and Radio)
4—Headlight bright beam indicator light
5—Voltmeter (Reconnaissance and Radio)
6—Ammeter
7—Oil pressure gauge
8—Speedometer
9—Throttle control button
10—Fuel gauge
11—Heat indicator
12—Serial number plate
13—Compartment door
13A—Fire extinguisher
14—Transmission shift diagram plate
15—Maintenance number plate
16—Voltmeter instruction plate
17—Service light lock-out button
18—Main lighting switch
19—Ignition switch
20—Carburetor choke control button
21—Cowl ventilator handle
22—Speedometer trip mileage set stem
23—Instrument panel light switch
24—Black-out driving light switch
25—Map board