MAINTENANCE MANUAL

CHEVROLET

CHEVROLET

SPECIAL NOTICE The 160" Wheelbase, CHEVROLET TRUCKS imported by the Commonwealth Government for essential civilian users are equipped with:—

HEAVY 10" x 5/16" FRAME REINFORCEMENTS, AUXILIARY SPRINGS, 7" WHEELS, 7–7.50 x 20 TYRES AND HAVE AN ALLOWABLE GROSS VEHICLE-WEIGHT OF 14,300 lbs.

TARE WEIGHTS ARE:—CHASSIS AND CAB 4,368 lbs.: TRUCK WITH PLATFORM BODY 5,068 lbs. TRUCK WITH DROPSIDES BODY 5,348 lbs.: WITH STAKESIDES BODY 5,488 lbs.

CONTRACT NUMBER

W-374-ORD-3794

General Motors Overseas Operations
Division of General Motors Corporation
Detroit, Michigan

TM 10-1677

WAR DEPARTMENT

Washington, April 17, 1943

TM 10-1677, Maintenance Manual, Chassis 160" 4 x 2 RHD, Chevrolet (Models 4403, 4408, 4409 and 4412) published by the General Motors Overseas Operations, Division of General Motors Corporation, is furnished for the information and guidance of all concerned.

[AG 062.11 (4/26/41) PC (C), June 10, 1941]

By order of the Secretary of War:

G. C. MARSHALL,
Chief of Staff

Official:
J. A. ULIO,
Major General,
The Adjutant General

MAINTENANCE MANUAL

CHEVROLET 1½-TON

(RIGHT DRIVE)

4 x 2 TRUCK

MODELS

4403, 4408, 4409 and
4412

CONTRACT NUMBER

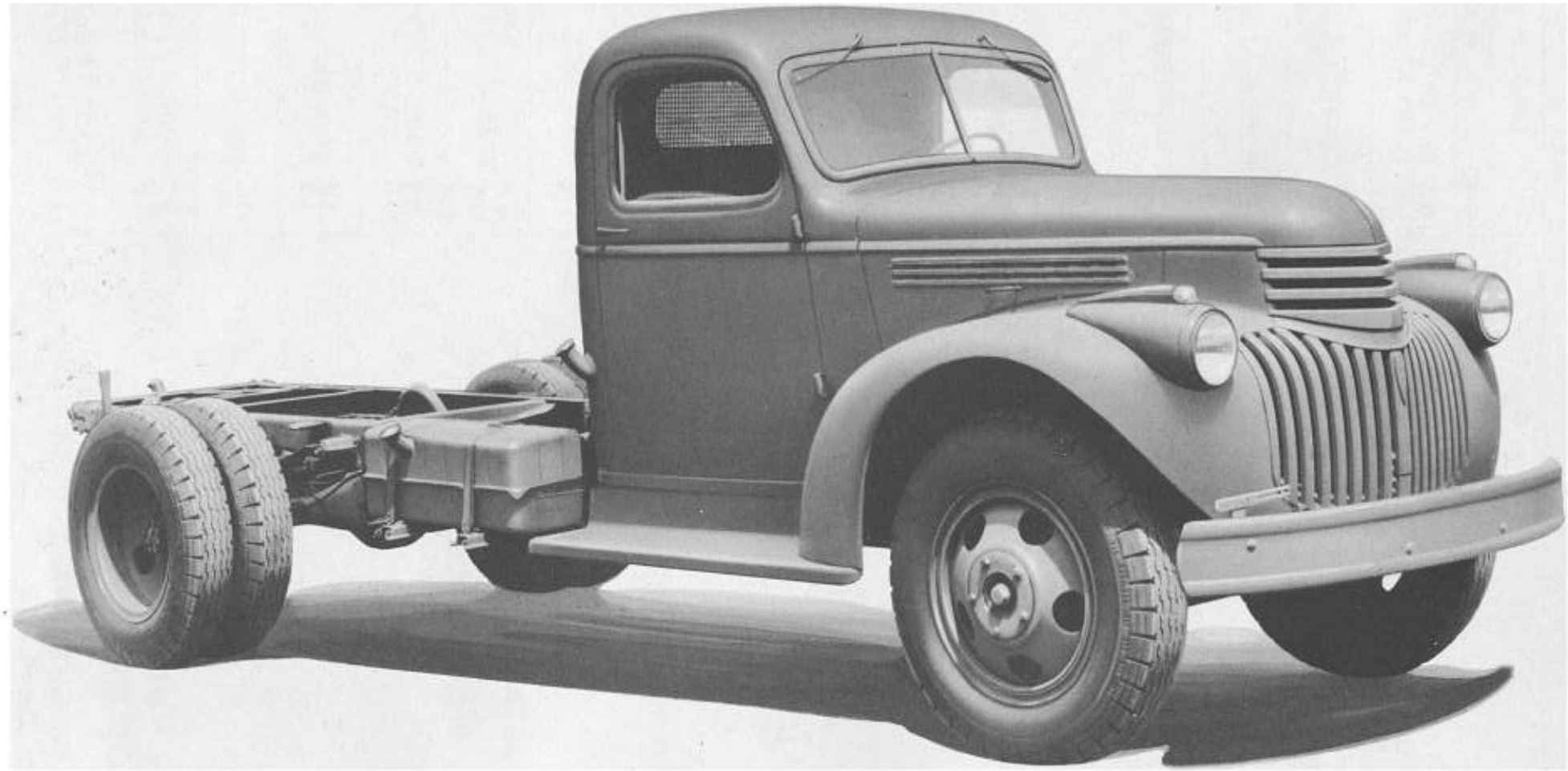
W-374-ORD-3794

GENERAL MOTORS OVERSEAS OPERATIONS

DIVISION OF GENERAL MOTORS CORPORATION
Detroit, Michigan

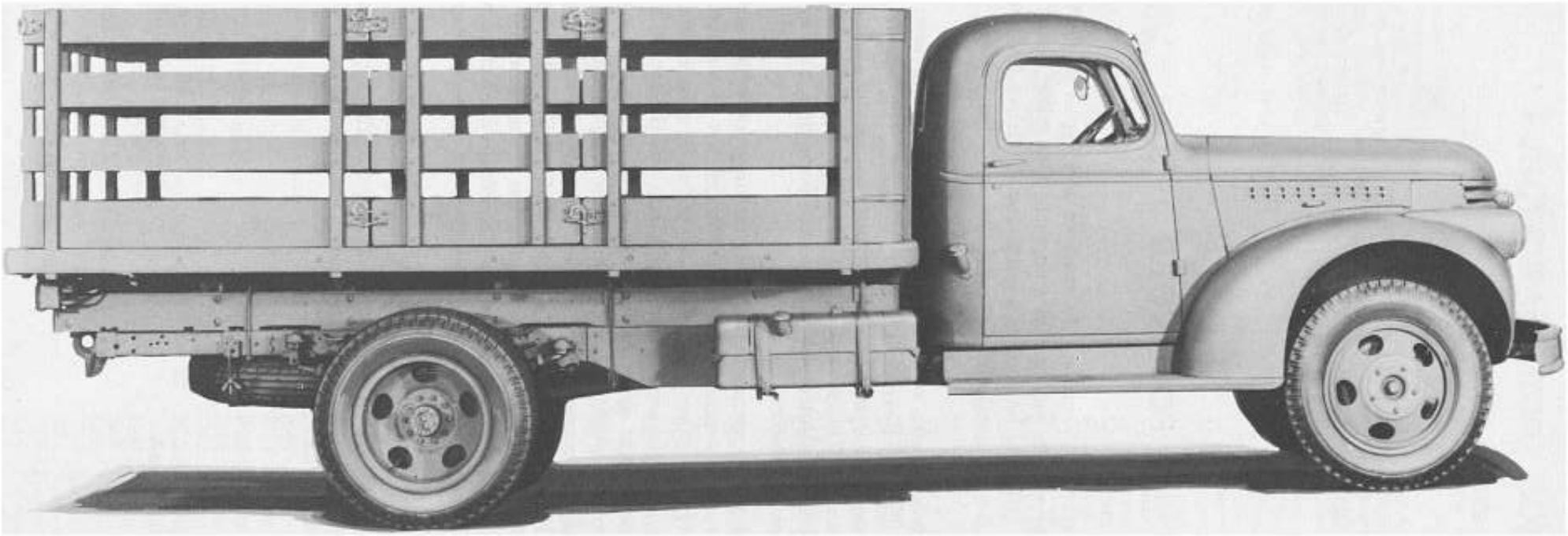
GROUP INDEX

LITHO IN U.S.A.



CHEVROLET 1½-TON TRUCK CHASSIS WITH CAB, MODEL 4403

NOTE—Chevrolet 1½ Ton Truck Chassis Model 4412, also covered in this Manual is same as above except it has cowl and windshield instead of cab.



CHEVROLET 1½-TON TRUCK CHASSIS WITH CAB AND STAKE BODY, MODEL 4409

NOTE—Chevrolet 1½-Ton Truck Chassis with Cab and Platform Body, Model 4408, also covered in this manual, is same as above less stake sides.

FOREWORD

This manual covers the Operation, Maintenance and Repair of the Chevrolet 1½-Ton 4x2 Truck as well as any special equipment that might be attached or built into the vehicle. It should be used as a guide for the driver and repair men who are responsible for the continued operation of the trucks. Keep it handy and refer to it often.

The manual is divided into sections according to the major assemblies of the vehicle, such as—Engine, Rear Axle, Front Axle, etc. The location of these sections within the manual follows the Army Functional Group Coding System shown on the opposite page. This system of Major and Sub-major grouping permits correlation between all maintenance manuals and parts lists, making it easier to refer from one book to another.

The section heading corresponds to the Army major group which is identified by a two-digit number. A sub-major group which covers part of a main assembly is located within a section or major group, and is identified by a four-digit number. The first two digits indicate the section or major group and the second two digits the sub-assembly or sub-major group. For example: If information concerning the Manifold is desired, we would look for it under the Engine Group, as it is a part of that main assembly. Reference to the opposite page shows the number "0108" for Manifold. The "01" indicates the relative location of the Engine Group within the manual, while the "08" indicates the relative location of the Manifold write-up within the Engine Group. Wherever practical, the sub-groups are located within the main groups according to the above; however, this does not necessarily apply in all cases because of the logical sequence of repairs.

In addition to the Functional Group Code Index, a section index is shown at the front of the book and a complete alphabetical index at the back of the book. All three are provided for quick, easy reference in locating the subject desired.

FUNCTIONAL GROUP CODE

01 Engine Group

0100 Engine Assembly
0101 Cylinder Block and Head
0102 Crankshaft, Bearings and Caps
0103 Pistons, Rings and Piston Pins
0104 Connecting Rods and Bearings
0105 Valves, Springs, Guides, Tappets, Etc., Lifts, Rocker Arm and Shaft
0106 Camshaft, Timing, Bearings, Etc.
0107 Oil Pump, Oil Pan, Gauge
0108 Manifold
0109 Flywheel, Ring Gear, Etc.
0110 Mountings

02 Clutch Group

0201 Clutch Disc
0202 Cover, Pressure Plate and Springs
0203 Release Lever, Bearing, Forks, Etc.
0204 Pedal
0205 Pilot Bearing

03 Fuel System Group

0300 Gasoline Tank
0301 Carburetor, Air Cleaner and Choke
0302 Fuel Pump, Fuel Pump Tube, Hose, Etc.
0303 Accelerator, Throttle
0304 Fuel Tank Lines
0305 Governor

04 Exhaust Group

0401 Muffler
0402 Pipe and Tail Pipe

05 Cooling Group

0501 Radiator Shell and Core, Filler Grille
0502 Thermostat and Thermometer
0503 Water Pump, Fan, Belt
0504 Radiator Mountings
0505 Engine Water Fittings and Hose

06 Electrical Group

0601 Generator and Regulator
0602 Starting Motor
0603 Distributor
0604 Ignition Coil and Wiring (Spark Plugs, Ignition Lock, Lamp)
0605 Instruments and Carrier
0606 Light Switches and Cables
0607 Headlamps, Sealed Beams, Bulbs and Fuses
0608 Tail and Auxiliary Lamp
0609 Horn
0610 Battery, Starting Cables and Connections

07 Transmission Group

0700 Transmission
0701 Case
0702 Gears
0703 Main Drive Pinion and Bearings
0704 Main Shaft, Countershaft, and Reverse Idler Countershaft
0705 Speedometer Drive Gears
0706 Shift Forks, Levers, Gearshift Instruction Plate

08 Transfer Case Group

0800 Transmission Transfer Assembly
0801 Case
0802 Drive Gear, Shaft, Bearings
0803 Driven Gear, Shaft, Bearings
0804 Idler Gear, Shaft, Bearings and Caps
0805 Shifter Shafts, Yokes, and Shift Levers

09 Propeller Shaft and Universal Joint Group

0901 Propeller Shaft Assembly, Hanger and Support
0902 Universal Joints

10 Front Axle Group

1000 Front Axle Assembly
1001 Housing
1002 Differential and Carrier Assembly
1003 Drive Gear, Pinion and Bearings
1006 Steering Knuckle, Flange and Arm
1007 Axle Shaft and Universal Joint

11 Rear Axle Group

1100 Rear Axle Assembly
1101 Housing Assembly
1102 Axle Drive Shafts
1103 Differential and Carrier Assembly
1104 Differential Side Gears and Pinions
1105 Drive Gear and Bearings

12 Brakes Group

1201 Hand Brake
1202 Shoes and Facing
1203 Brake Shoe Support, Guide, Springs, Adjusting Pins, and Anchor Plate
1204 Pedal
1205 Master Cylinder
1206 Tubes and Clips, Brackets, Springs
1207 Wheel Cylinders
1208 Brake Dust Shield
1209 Brake Lines, Pipes, Hoses
1210 Power Brake Cylinder
1211 Power Brake Lines and Fittings
1212 Cross Shafts and Pull Rods
1213 Trailer Brake Control Parts

13 Wheels, Hubs and Drums Group

1301 Wheel Assembly, Bearings, Retainers, Etc.
1302 Hubs and Drums

14 Steering Group

1401 Steering Connecting Rod (Drag Link)
1402 Tie Rod
1403 Gear Assembly
1404 Wheel Assembly
1405 Brackets

15 Frame and Brackets Group

1500 Frame and Brackets
1501 Towing Attachment
1502 Pintle Hooks
1504 Running Board Hangers
1505 Spare Wheel Carrier and Tire Lock

16 Springs and Shock Absorbers Group

1601 Front and Rear Springs and Spring Bumpers
1602 Shackles and Spring Attaching Parts
1603 Shock Absorbers and Mountings

17 Hoods, Fenders, Running Boards, Aprons (Misc. Sheet Metal) Group

1701 Fenders
1702 Engine Side Pans
1703 Running Boards
1704 Hoods

18 Body Group

1800 Cab and Panel Body Assy. and Parts
Cargo Body Parts List
Dump Body Parts List
1801 Windshield Wiper and Parts
1802 Floor Mats

19 Winch Assy.—Winch and Hoist Control Levers

1900 Winch and Winch Drive Shifts
1910 Control Levers and Rods

20 Hoist and Power Take-Off

2000 Hoist Assembly and Parts
2010 Power Take-Off Assembly and Parts

21 Bumpers and Guards Group

2101 Bumpers
2103 Radiator Guard

22 Miscellaneous Body, Chassis and Accessories Group

2200 Identification and Caution Plates
2201 Rear View Mirrors
2202 Tarpaulins, Bows, and End Curtains
2203 Speedometers and Parts
2204 Tachometers and Parts
2205 Heater Unit and Parts
2206 Defroster Unit and Parts

23 General Use, Standardized Parts Group

2300 Miscellaneous Tools, Tire Chains, Extinguishers
2304 Miscellaneous Nuts, Bolts, Screws and Washers
2305 Miscellaneous Cotter Keys, Woodruff Keys

25 Bearings

GENERAL DATA, CAPACITIES AND DIMENSIONS

ENGINE

Type	Valve-in-Head
Horsepower — S.A.E.	29.4
Displacement — Cu. In.	216.5
Bore	3½"
Stroke	3¾"
Cylinders	6

CAPACITIES

Fuel Tank, Main — (gallons)	18
Fuel Tank, Auxiliary — (gallons)	18
Engine Crankcase — (Refill) (qts.)	6
Cooling System (qts.)	16
Transmission (pts. or lbs.)	5½
Oil Bath Air Cleaner (pts.)	1
Rear Axle Differential (pts. or lbs.)	11

DIMENSIONS

	Model 4403 Chassis with Cab	Model 4408 with Platform Body	Model 4409 with Stake Body	Model 4412 Chassis with Cowl and Windshield
Turning radius	All models—28′ Right; 30′ Left			
Height (overall)	80"	80"	80"	73½"
Width (overall)	82½"	87 5/16"	87 5/16"	82½"
Length (overall)	259"	260½"	260½"	234½"
Curb weight (fully equipped, without load and driver)	4775 lbs.	5500 lbs.	5775 lbs.	4145 lbs.
Road Clearance	Front—11¾" Rear—9½"	Front—12" Rear—10"	Front—12" Rear—10"	Front—11¾" Rear—9½"

Group 00

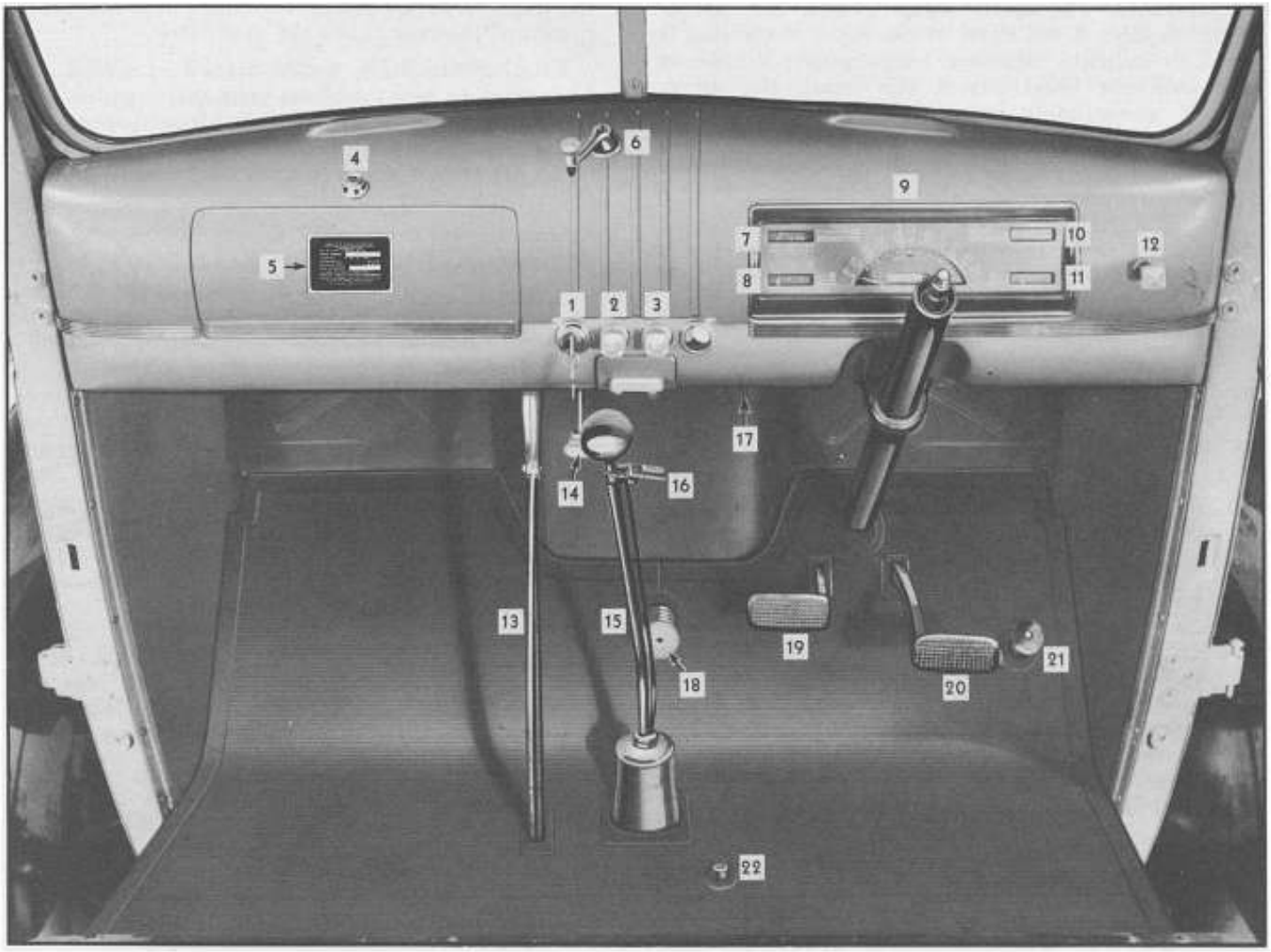


Fig. 1—Interior of Cab, Showing Controls and Instruments

1—Ignition Switch
2—Hand Throttle
3—Carburetor Choke
4—Glove Compartment Lock
5—Serial Number and Load Data Plate
6—Windshield Operating Crank
7—Temperature Indicator
8—Fuel Gauge
9—Speedometer
10—Ammeter
11—Oil Pressure Gauge
12—Lighting Switch
13—Hand Brake Lever
14—Ventilator Control Lever
15—Transmission Gearshift Lever
16—Reverse Gear Latch Lock Lever
17—Instrument Light Switch
18—Starter Switch Pedal
19—Clutch Pedal
20—Brake Pedal
21—Accelerator
22—Headlight Dimmer Switch

DRIVER INSTRUCTIONS

It is very important that the operator be thoroughly familiar with the various controls and instruments and the proper use of them. Drivers experienced in handling other makes of vehicles should not attempt to operate this unit without first studying these controls and instruments.

Fig. 1 shows the locations of the controls and instruments in the cab, and the key number applying to each. These controls and instruments are discussed in the following paragraphs in numerical order.

IGNITION SWITCH No. 1 is operated on some units by a key as shown in the illustration; however, on other units this switch is operated by a lever.

HAND THROTTLE No. 2 is located on the instrument panel to the right of the ignition switch; pulling out this button opens the throttle. This control may be used when starting or, if desired, to run the engine at a constant speed.

CARBURETOR CHOKE No. 3 is used when starting a cold engine. Pulling out this control button shuts off the air to the carburetor, providing a rich mixture. The choke button should be pushed in when the engine starts. If the engine is warm, the use of the choke should be unnecessary.

COMPARTMENT LOCK No. 4. Pressing in on center of compartment lock with lock unlocked, releases the compartment door latch and opens door. The compartment door may be locked with the key supplied with the vehicle.

SERIAL NUMBER AND LOAD DATA PLATE No. 5. This plate gives the serial number of the truck and the load data.

WINDSHIELD OPERATING CRANK No. 6. Turning the windshield operating crank clockwise opens the windshield and turning the crank anticlockwise closes the windshield.

TEMPERATURE INDICATOR No. 7 indicates the temperature of the liquid in the cooling system at all times. The driver should watch this instrument closely. A red band at the right of the dial is used to indicate excessive temperature. Whenever the indicator hand enters this band, the driver should immediately investigate the cause of the excessive temperature. Continuing to drive an overheated engine may cause permanent damage to the working parts.

FUEL GAUGE No. 8 registers the amount of fuel in the main tank when the ignition switch is turned on. The dial has graduations for empty, half full and full. See "Fuel Gauge Switch," page 00-3, when two fuel tanks are used.

SPEEDOMETER No. 9 indicates the speed at which the vehicle is being driven. The odometer registers the total distance the vehicle has been driven.

AMMETER No. 10 is used to indicate whether the battery is being charged or discharged when the vehicle is in operation. If the ammeter shows discharge at all times, the cause should be investigated and corrected, otherwise the battery will be run down.

OIL PRESSURE GAUGE No. 11 indicates the oil pressure. The dial has three divisions showing 0, 15 and 30. The driver should glance at this instrument often and, if the indicator hand drops to zero, the engine should be stopped immediately and the cause of oil pressure failure investigated and corrected before continuing to run the engine.

LIGHTING SWITCH No. 12 controls the lighting circuits. When the lighting switch is pulled out to the first position, it turns on the blackout front marker lamps and the blackout tail light in each rear lamp. Also, when the brakes are applied, the blackout stop light in the right rear lamp will be lighted.

When the switch button is out to the second (service) position, it turns on the regular headlamps and bright rear lamps (front and rear service lamps). The bright stop light goes on only when the brakes are applied.

As a safety measure, to prevent unintentional use of the service position, a "blackout button" to the left of the light switch must be depressed before the switch button can be pulled out to the second position.

When the switch button is pulled out to the third or last position all lights are out, but a circuit is established for the bright (service) stop light in left rear lamp. This position is used principally for daylight driving.

NOTE—When the switch button is pushed all the way in to the "off" position, neither of the stop lights will go on when the brakes are applied.

HAND BRAKE LEVER No. 13 operates the brakes on the rear wheels mechanically. Whenever the vehicle is parked, the lever should be pulled toward the rear as far as possible. Before moving the vehicle, lever should be pushed forward to the fully released position.

VENTILATOR CONTROL LEVER No. 14 is used to open and close the cowl ventilator. Pushing the lever forward opens the ventilator, while pulling it toward the rear closes the ventilator.

TRANSMISSION GEARSHIFT LEVER No. 15 is used to select various gear ratios provided in the transmission. There are four forward speeds and one reverse. Lever positions for the various gear ratios are shown in the shifting diagram, Fig. 2.

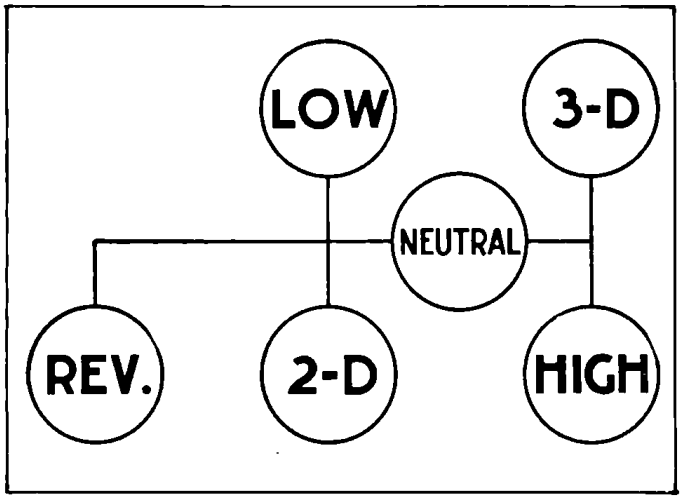


Fig. 2—Transmission Gearshifting Diagram

REVERSE GEAR LATCH LOCK LEVER No. 16 must be raised before gearshift lever can be shifted into reverse gear position.

INSTRUMENT LIGHT SWITCH No. 17 is used to turn on the instrument and ignition switch light. Moving the switch handle to the right turns on the ignition switch light, while moving it to the left turns on the instrument lights. When the handle is in the center neither light is on.

STARTER SWITCH PEDAL No. 18. Pressing down on pedal with foot engages the starter and flywheel gears and also closes the starter switch, completing the electrical circuit between battery and starter. Rotation of starter armature through the gears cranks the engine. When the engine starts, foot should be removed from pedal immediately.

CLUTCH PEDAL No. 19 is used to disengage the engine from the transmission when shifting gears. The clutch pedal should never be released quickly when the vehicle is in gear. Driving with foot on pedal will cause wear of clutch facings and throw-out bearing. There should be one inch of free travel of the clutch pedal before the clutch starts to disengage.

BRAKE PEDAL No. 20. Pressing on the brake pedal applies the Hydraulic brakes at all four wheels. Avoid driving with foot on brake pedal, as brakes will be partially applied and cause rapid wear of lining.

ACCELERATOR No. 21 is used to control the speed of the engine.

HEADLIGHT DIMMER SWITCH No. 22 is a foot switch used to select the headlight beam (upper or lower) desired, after the headlights are turned on by pulling out the lighting switch, No. 12, to the second position. Pressing down on the switch button with the foot changes the headlight