

MAINTENANCE MANUAL



CHEVROLET

1½-TON (LC) 4x4 TRUCK

Built for

UNITED STATES ARMY

MODELS

**G-7105, G-7106, G-7107, G-7113,
G-7116, G-7117, G-7127—G-7133**

CONTRACT NUMBERS

U.S.A. REGISTRATION NUMBERS

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W-398-QM-10912 . . .

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Chevrolet Motor Division

General Motors Corporation

Detroit, Michigan

TM 10-1127
WAR DEPARTMENT

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By order of the Secretary of War:

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Chief of Staff

Official:

E. S. ADAMS,
Major General,
The Adjutant General

MAINTENANCE MANUAL

CHEVROLET 1½-TON 4 x 4 TRUCKS

FOREWORD

This manual contains information covering the Operation, Maintenance and Repair of Chevrolet 1½-Ton — 4 x 4 Trucks.

For the convenience of the user it is arranged in sections. All information pertaining to a given unit will be found in the section devoted to that unit. The manual is written for the guidance of the operator and repair men who are responsible for the vehicle. Keep it handy and refer to it often.

CHEVROLET MOTOR DIVISION
General Motors Corporation
DETROIT, MICHIGAN

SECTION INDEX

SECTION	NAME	PAGE
0	DRIVER INSTRUCTIONS	0-1
	LUBRICATION	0-101
1	BODY	1-1
2	FRAME	2-1
	SHOCK ABSORBERS	2-2
3	FRONT AXLE	3-1
	FRONT SPRINGS	3-10
4	REAR AXLE	4-1
	PROPELLER SHAFT UNIVERSAL JOINTS }	4-8
	REAR SPRINGS	4-11
5	BRAKES	5-1
	HYDROVAC BRAKE SYSTEM	5-11
6	ENGINE	6-1
	FUEL SYSTEM	6-101
	COOLING SYSTEM	6-201
	CLUTCH	6-301
7	TRANSMISSION	7-1
	TRANSFER CASE	7-101
8	FUEL AND EXHAUST	8-1
9	STEERING GEAR	9-1
10	WHEELS AND TIRES	10-1
11	CHASSIS SHEET METAL	11-1
12	ELECTRICAL	12-1
13	AUXILIARY EQUIPMENT	13-1
14	INDEX	14-1



CHEVROLET 1½ TON—4x4 TRUCK

SECTION 0

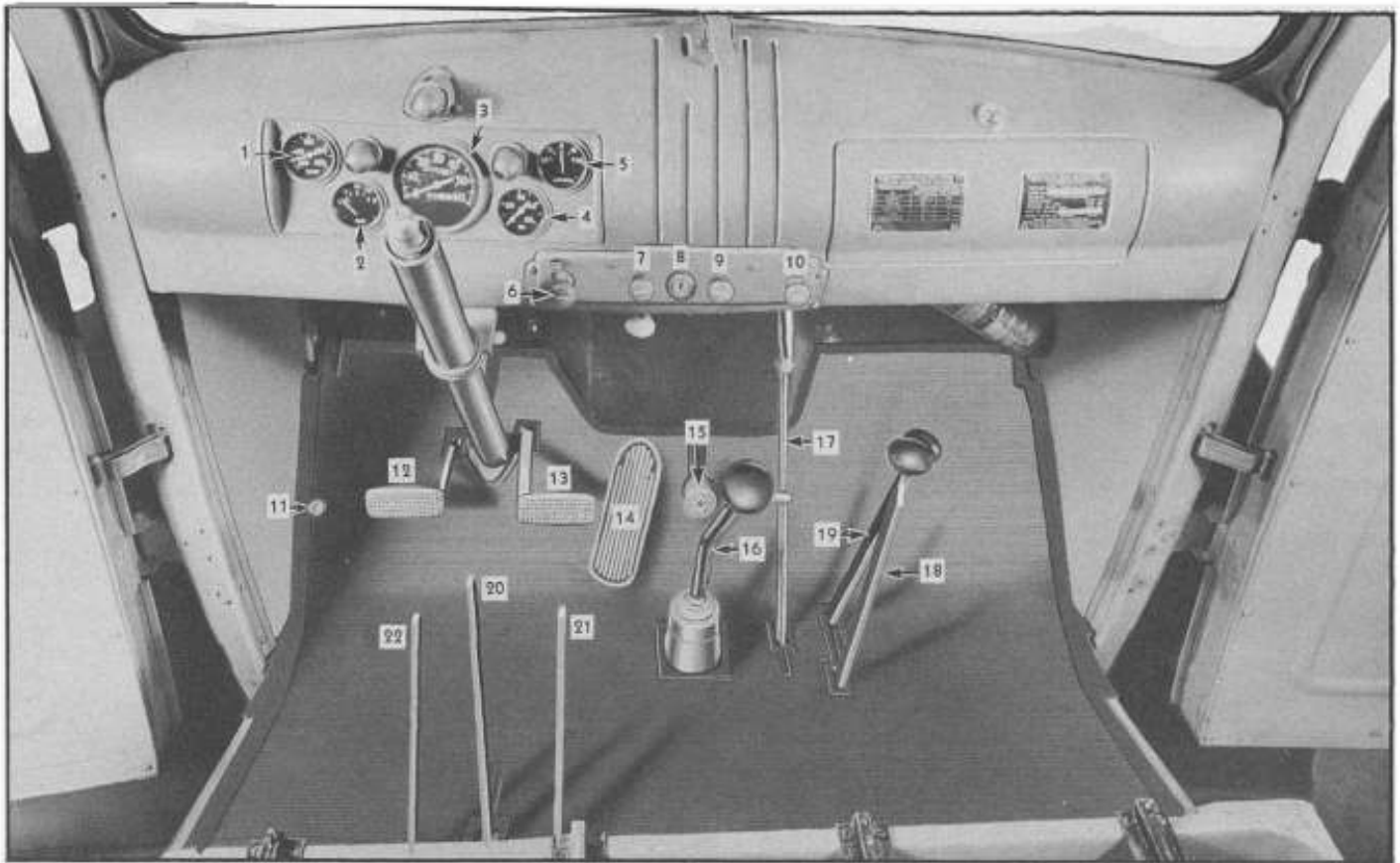


Fig. 1—Interior of Cab, Showing Controls and Instruments

- | | | | |
|-------------------------|----------------------------|---------------------------------|---------------------------------------|
| 1—Temperature Indicator | 7—Carburetor Choke | 13—Brake Pedal | 19—Front Axle Control Lever |
| 2—Fuel Gauge | 8—Ignition Switch | 14—Foot Accelerator | 20—Winch Power Take-off Control Lever |
| 3—Speedometer | 9—Hand Throttle | 15—Starting Switch Pedal | 21—Hoist Valve Control Lever |
| 4—Oil Pressure Gauge | 10—Instrument Light Switch | 16—Transmission Gearshift Lever | 22—Hoist Power Take-off Control Lever |
| 5—Ammeter | 11—Headlight Dimmer Switch | 17—Hand Brake Lever | |
| 6—Lighting Switch | 12—Clutch Pedal | 18—Transfer Case Shifting Lever | |

DRIVER INSTRUCTIONS

It is of definite importance that the driver of one of these vehicles be thoroughly familiar with the various controls and their proper use. Even the experienced driver should study the controls, as there are a number which are not ordinarily found on standard vehicles.

Figs. 1 and 2 illustrate the controls, instruments and instruction plates; in the following paragraphs, we will refer to these illustrations by the key number of the control or instrument being discussed, so the reader may easily follow the instructions.

TEMPERATURE INDICATOR No. 1 indicates the temperature of the liquid in the cooling system at all times. The dial of the instrument indicates temperature in degrees Fahrenheit. The driver should watch this instrument closely for any indication of excessive temperature. Whenever the indicator hand shows over 180 degrees, the driver should immediately investigate the cause of the excessive temperature. Continuing to drive an overheated engine may cause permanent damage to its working parts.

FUEL GAUGE No. 2 registers the amount of

fuel in the tank when the ignition switch is turned on. The dial has graduations for empty, $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ and full.

SPEEDOMETER No. 3 indicates the speed at which the vehicle is being driven. The odometer registers the total number of miles the vehicle has been driven.

OIL GAUGE No. 4 indicates the oil pressure in the lubrication system. The driver should watch this instrument closely 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.

AMMETER No. 5 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 discharged.

LIGHTING SWITCH No. 6 controls the lighting circuits. When the lighting switch is pulled out to the first position, it turns on the blackout head lamps and tail light and, in addition, this position

permits turning on the blackout stop lamp when the brakes are applied. To turn on the regular headlights, depress the blackout button on top of the switch and pull the control button out to the second position. In this position, circuits are established to the regular tail and stop lights.

When the lighting switch button is pulled out to the third position, it closes circuits for the service stop light during daylight driving.

CARBURETOR CHOKE No. 7 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 is unnecessary.

IGNITION SWITCH No. 8 is operated by turning the ignition switch key. Turning the key to the right turns on the ignition by closing the ignition primary circuit, while turning the key to the left turns off the ignition by opening the primary circuit.

INSTRUMENT LIGHT SWITCH No. 10 is used to turn on the instrument lights when the lighting switch is in the headlight bright position.

NOTE—These lights will not operate with the light switch in the blackout position.

HEADLIGHT DIMMER SWITCH No. 11 is a foot switch used to select the headlight beam (upper or lower) desired after the headlights are turned on, by depressing the switch button with the foot. Always use the lower beam when passing approaching vehicles. This is an important highway safety rule.

CLUTCH PEDAL No. 12 is used to disengage the engine from the transmission when shifting gears. The clutch should never be engaged 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.

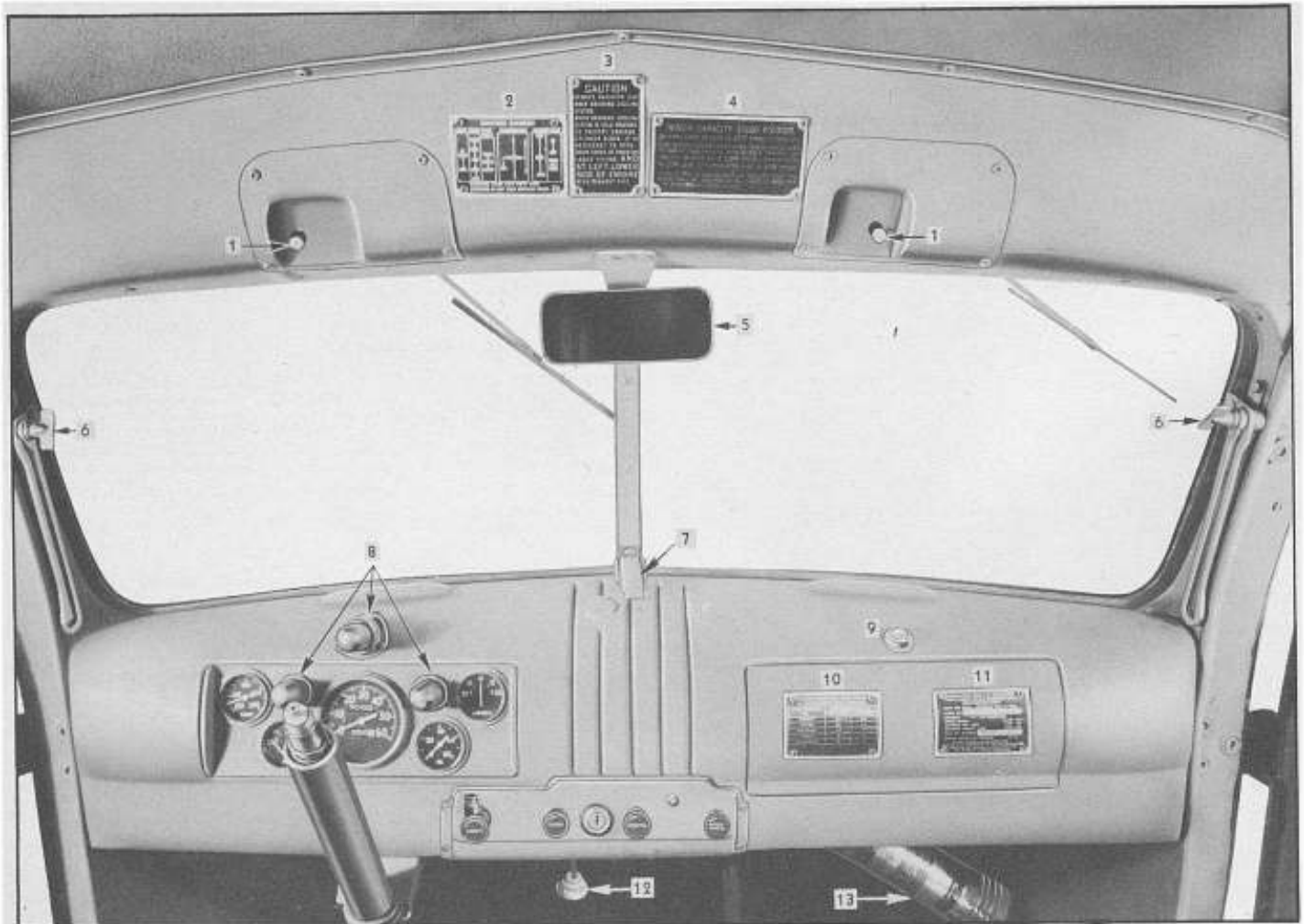


Fig. 2—Interior of Cab Instruction Plates, etc.

- 1—Windshield Wiper Switch
- 2—Shifting Diagram Plate
- 3—Cooling System Draining Caution Plate

- 4—Winch Operation Instruction Plate
- 5—Rear View Mirror
- 6—Windshield Quadrant Adjusting Screws

- 7—Windshield Center Lock
- 8—Instrument Lights
- 9—Glove Compartment Lock
- 10—Maximum Permissible Road Speeds Plate

- 11—Serial Number and Load Data Plate
- 12—Cowl Ventilator Control Lever
- 13—Fire Extinguisher

HAND THROTTLE No. 9 is located on the instrument panel to the right of the ignition switch, pulling this button opens the throttle. This control may be used when starting or, if it is desired, to run the engine at a constant speed.

BRAKE PEDAL No. 13 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. 14 is used in driving to control the speed of the engine.

STARTER SWITCH PEDAL No. 15 pressing down on pedal with foot engages the starter and fly-wheel 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.

TRANSMISSION GEARSHIFT LEVER No. 16 is used to select various gear ratios provided in the transmission. There are four forward speeds and one reverse. Reverse gear can only be engaged when latch on gearshift lever is raised. Lever positions for various gears will be discussed under "Operating Instructions."

HAND BRAKE LEVER No. 17 is used to control the parking brake at the rear of the transfer case. Pulling the hand brake lever toward the rear applies the parking brake, while pushing it forward releases the brake. 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.

TRANSFER CASE SHIFTING LEVER No. 18 is used to select either "high," "low" or "neutral" speed ranges in the transfer case. The shifting lever is linked to the front axle control lever No. 19 in such a way that it is impossible to shift into the low speed in the transfer case without the drive to the front axle being engaged.

FRONT AXLE CONTROL LEVER No. 19 permits engaging or disengaging the front axle drive through the transfer case. When the lever is pushed forward, the front drive is engaged and when it is pulled toward the rear, it is disengaged.

NOTE—The front axle drive should be disengaged when operating on hard-surfaced roads.

WINCH POWER TAKE-OFF CONTROL LEVER No. 20 is the lever which controls the power winch through the power take-off attached to the transmission. When the winch is not in use, a hinged plate locks the winch control lever in the neutral position.

HOIST VALVE CONTROL LEVER No. 21 is used to control the valve in the hydraulic hoist. When the hoist is not being used, the lever is pulled back toward the seat.

HOIST POWER TAKE-OFF CONTROL LEVER No. 22 is used in connection with the hoist valve lever to operate the hydraulic hoist.

Instructions covering the operation of the winch and hoist controls are contained in Section 13 of this Manual which is devoted to Auxiliary Equipment.

WINDSHIELD WIPER SWITCHES No. 1, Fig. 2, are used to turn the windshield wipers on and off.

SHIFTING DIAGRAM PLATE No. 2, Fig. 2, gives the driver instructions on the various shifting lever positions. There are four different shifting

gram plates on the series of trucks covered by this Manual. These plates differ depending on the special equipment furnished with the individual truck.

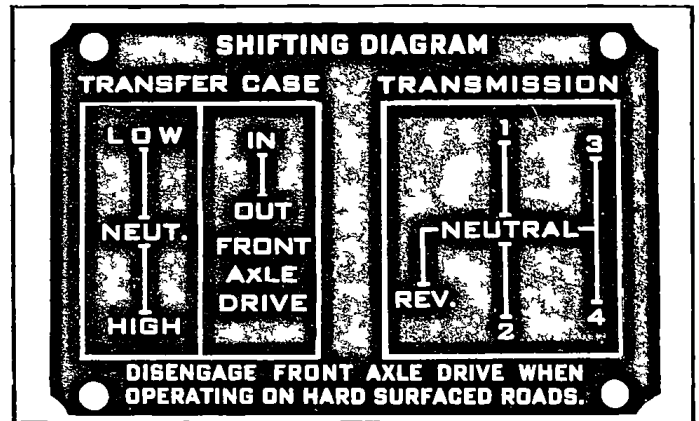


Fig. 3—Shifting Diagram Plate—Four-speed Transmission and Transfer Case

Fig. 3 illustrates the shifting diagram plate for trucks having four speed transmission and transfer case without special equipment.

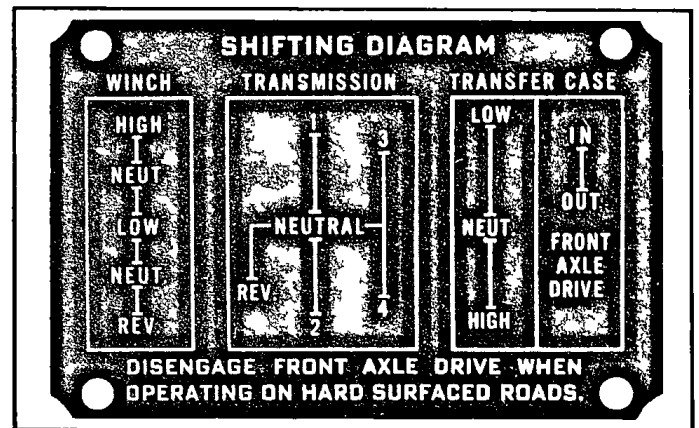


Fig. 4—Shifting Diagram Plate—Four-speed Transmission, Transfer Case and Winch

Fig. 4 illustrates the shifting diagram plate for trucks having a winch in addition to the four speed transmission and transfer case.

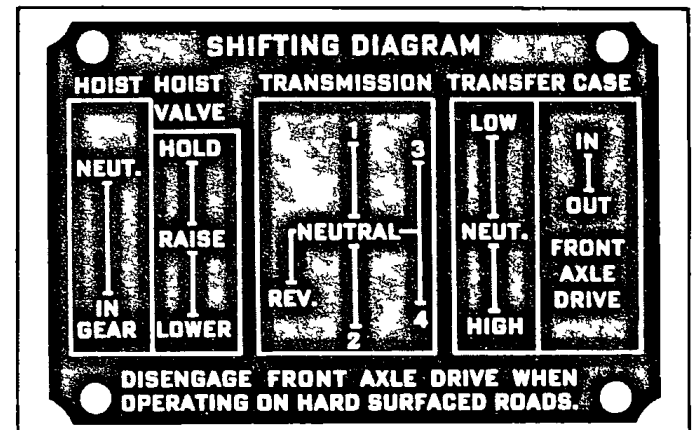


Fig. 5—Shifting Diagram Plate—Four-speed Transmission, Transfer Case and Hoist Plate

Fig. 5 illustrates the shifting diagram plate for trucks having a hoist in addition to the four speed transmission and transfer case.

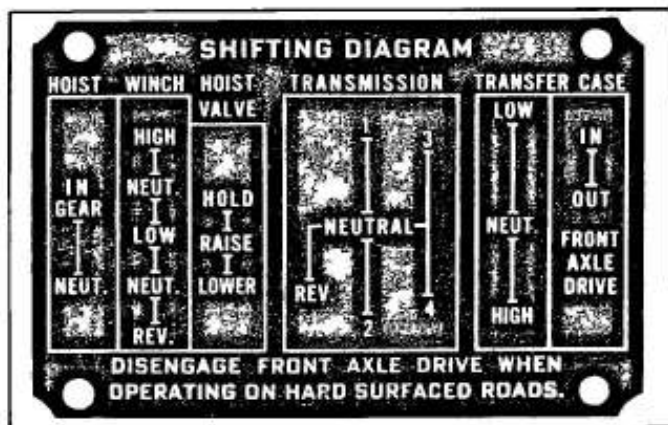


Fig. 6—Shifting Diagram Plate—Four-speed Transmission, Winch and Hoist

Fig. 6 illustrates the shifting diagram for trucks having both a winch and hoist in addition to the four speed transmission and transfer case.

COOLING SYSTEM DRAINING CAUTION PLATE No. 3, Fig. 2, gives the driver important instructions regarding draining the cooling system.

POWER WINCH OPERATION INSTRUCTION PLATE No. 4, Fig. 2, gives the driver instructions regarding operation of the winch.

WINDSHIELD QUADRANT ADJUSTING SCREWS No. 6, Fig. 2, are used to lock the windshield at various degrees of opening.

WINDSHIELD CENTER LOCK No. 7, Fig. 2, is a small spring clamp lever which hooks over a catch on windshield frame at the center, pulling it downward, locks the windshield in the fully closed position. The windshield center lock must be released before attempting to open the windshield.

INSTRUMENT LIGHTS No. 8, Fig. 2, illuminate the various instruments on the panel when the instrument light switch is turned on.

GLOVE COMPARTMENT LOCK No. 9, Fig. 2, pressing downward on the lock cylinder opens the glove compartment door. The glove compartment door may be locked with the key supplied with the vehicle.

MAXIMUM PERMISSIBLE ROAD SPEEDS PLATE No. 10, Fig. 2—This plate gives the maximum permissible road speeds at which the vehicle shall be driven in the various gear positions with the transfer case in high or low gear. Fig. 7 shows an enlarged view of this plate.

MAXIMUM PERMISSIBLE ROAD SPEEDS IN THE FOLLOWING GEAR POSITIONS.		
TRANSMISSION	TRANSFER CASE IN	
	HIGH RANGE	LOW RANGE
DIRECT	48	24
THIRD	28	14
SECOND	14	7
FIRST	8	3
REVERSE	6	3

Fig. 7—Maximum Permissible Road Speeds Plate

SERIAL NUMBER and LOAD DATA PLATE No. 11, Fig. 2—This plate gives the serial number of the truck and the load data. The gross weight and maximum payload will vary depending upon the body type and equipment on the truck. Avoid overloading. Fig. 8 illustrates a sample of the serial number and load data plate.

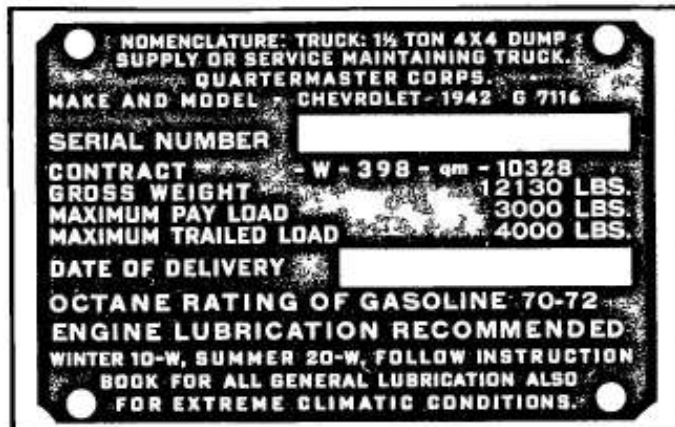


Fig. 8—Serial Number and Load Data Plate

VENTILATOR CONTROL LEVER No. 12, Fig. 2, 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.

FIRE EXTINGUISHER No. 13, Fig. 2, is mounted on the cowl panel with a positive lock. This lock consists of a spring type clamp which must be opened before fire extinguisher can be removed. After clamp has been sprung open, fire extinguisher can be pulled off the mounting bracket and operated by turning the handle to the left and then working it in and out like a pump. Best results will be obtained by directing stream of liquid at base of flame unless used on burning liquids—for which stream from extinguisher should be directed against inside of burning liquid container above surface of liquid.

After fire extinguisher has been used, it should be refilled at the earliest possible moment so the vehicle will always be equipped with fire fighting equipment.



Fig. 9—Steam Relief Tube and Shut-off Cock

WATER BY PASS SHUT-OFF COCK—The water by-pass shut-off cock, shown in Fig. 9, is located between the water temperature indicator adapter and the steam relief tube leading to the radiator and should be kept closed except when the air temperature is above 60 degrees Fahrenheit and the truck is operating on extreme grades. The pur-

pose of this shut-off cock is to prevent the cooling liquid by-passing the thermostat under cold operating conditions and thereby preventing proper operating temperature of the engine being maintained.

A metal caution tag wired to the shut-off cock reads as follows: "This shut-off cock is to be kept closed. Open only when operating in air temperatures above 60° F. on extreme grades."

OPERATING INSTRUCTIONS

Each day the following inspections should be made before starting the truck:

1. Check the oil level on the dip stick. If oil is down to the low mark, add oil.
2. Check the water in the radiator, and fill if necessary. Check hose connections for leaks. Check fan belt for looseness.
3. Note condition of tires and see that they are properly inflated.

Starting the Engine

1. Transmission gearshift lever and transfer case shift lever must be in neutral position. See shifting diagram plate.
2. Pull out hand throttle about $\frac{3}{8}$ inch. This is not necessary if engine is warm.
3. Pull out on choke button to obtain proper fuel and air mixture for starting. If the engine is warm, choking will be unnecessary.
4. Insert key in ignition switch and turn switch to "On" position.
5. Step on starter pedal to crank the engine. Release pedal as soon as engine starts.
6. Push in on choke button and adjust hand throttle to obtain even idling. When engine is cold, it should be run several minutes before attempting to move the vehicle.

Starting the Truck

1. Push clutch pedal downward to disengage the clutch.
2. Shift transfer lever into either "high" or "low" speed position (see Shifting Diagram Plate).
3. Move transmission gearshift lever to the left and forward into first gear position.
4. Release the hand brake lever.
5. Step down on accelerator pedal to speed up the engine. Engage clutch pedal slowly and push accelerator pedal down as necessary to pick up the load and prevent stalling the engine as the truck starts to move.
6. As truck speed increases, release accelerator pedal, depress the clutch pedal, move the gearshift lever to neutral and then to the next higher speed. Step down on accelerator and engage clutch as explained above. Repeat this operation until transmission is in high gear.

Shifting Gears in Transfer Case

The transfer case may be operated in either "high" or "low" speed range when the front axle is engaged, but cannot be operated in "low" speed range when the front axle is disengaged.

Instructions for shifting gears in transfer case and disengagement of the front axle drive are as follows:

1. To engage the front axle, first, shift the transfer case into neutral, then engage the front axle by moving front axle shift lever forward.
2. To disengage the front axle, shift the transfer case into neutral, then disengage the front axle by moving front axle shift lever toward the rear.

Shifting Gears in Transfer Case from High to Low Speed

This shift should not be attempted except when the vehicle is being operated at low speeds or at a standstill. Front axle must be engaged for this shift.

1. Depress the clutch pedal and move transfer case shift lever to neutral position.
2. Engage clutch pedal and accelerate engine to approximately twice that of vehicle speed.
3. Depress clutch pedal again and move shift lever forward (without applying excessive pressure) into low speed position. Then release clutch and accelerate engine.

This method of shifting is termed "Double-Clutching." A little practice will enable driver to make shift smoothly and efficiently.

Shifting Gears in Transfer Case from Low to High Speed

This shift may be accomplished at any time, regardless of vehicle speed.

1. Release accelerator, depress clutch pedal and move shift lever to neutral position.
2. Release clutch pedal and accelerate engine to synchronize engine speed with that of vehicle.
3. Depress clutch pedal and move shift lever toward rear into high speed position.

Shifting to Lower Speed in Transmission

The transmission should always be shifted to the next lower speed before engine begins to labor or before vehicle speed is reduced appreciably. Shifting to lower speed is accomplished as follows:

1. Depress the clutch pedal quickly, maintaining the same pressure on accelerator. Move gearshift lever to neutral and at the same instant engage the clutch.
2. Again depress the clutch pedal and move the gearshift lever to the next lower speed. Engage the clutch slowly and at the same time accelerate the engine speed to synchronize it with that of the vehicle.

DRIVER INSTRUCTIONS — 0 - 6

It is advisable to use the same transmission gear going downhill as would be required to climb the same hill. This is a safety rule followed by all good drivers in hilly territory.

Shifting into Reverse

Before attempting to shift into reverse, the truck must be brought to a complete stop.

1. Push clutch pedal downward to disengage clutch.
2. Raise latch on gearshift lever and move lever to left as far as possible, then toward the rear — see Shifting Diagram Plate.

3. Engage clutch and accelerate the engine in the same manner as previously explained under the heading "Starting the Truck."

Stopping the Truck

1. Remove foot from accelerator pedal and apply brakes by pressing down on foot pedal.
2. When speed of truck has been reduced to idling speed of engine, disengage the clutch and move transmission gearshift lever into neutral position.
3. When truck has come to a complete stop, release clutch pedal and apply hand brake.