TM 10-1501

MAINTENANCE MANUAL

GMC MODELS CCKW-352 & 353

BUILT FOR

UNITED STATES ARMY

U.S.A. REGISTRATION NUMBERS:

W-429270 to W-457269

General Motors Truck

Maintenance Manual

GENERAL MOTORS TRUCK & COACH
DIVISION OF
YELLOW TRUCK & COACH MANUFACTURING COMPANY
PONTIAC, MICHIGAN

Introduction

This publication contains complete descriptive information and maintenance data on models shown. The suggested maintenance procedure given will assist in obtaining continued economical and trouble-free operation.

As in previous manuals, this book is conveniently arranged in groups. A quick index appears on Title page, and each group throughout book has black tabs showing these same numbers.

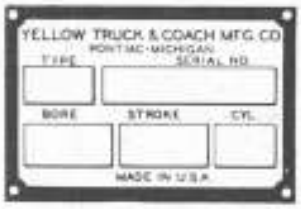
Serial Number Locations

Delay and confusion can be avoided when correct serial numbers of vehicle are specified on parts orders and correspondence.

The following illustrations show where numbers appear on this particular model. (Serial numbers shown in these pictures are only typical and therefore must not be quoted.)

Chassis Number

Stamped on right hand frame side rail above front spring.



Engine Number

Plate on left hand side of engine.

Cab Number

At engine side of cowl on L.H. side.

Form Number

This publication is identified by a Form Number. Specify this number in all references to this book.

FORM No. X-4109

Printed in U. S. A.

VEHICLE IDENTIFICATION

THIS CHART GIVES COMPLETE IDENTIFICATION OF THE 28,000 GMC TRUCKS ORDERED ON GOVERNMENT CONTRACT NUMBER W-398-QM-9095

These vehicles covered in GMC Maintenance Manual Form X-4109

GMC SALES ORDER NUMBER	GOVERMENT CONTRACT NUMBER	CONTRACT ITEM NO.	QUANTITY OF VEHICLES ON ORDER	GMC MODEL	GMC CHASSIS SERIAL NO.	WHEEL-BASE	U. S. A. REGISTRATION NO.	DESIGN CHARACTERISTICS
TC-200014	**W-398-QM-9095**	**1-A**	**10,967**	**CCKW-353**		**164″**	**W-429270 to W-440236**	**HAS 12′ CARGO BODY—LESS WINCH**
	THIS ORDER CONSISTS OF TWO PARTS, AS FOLLOWS:							
			(1) 2,333	CCKW-353	13189-A2 to 15521-A2			These 2,333 vehicles have front and rear axles of the one-piece or "Banjo" type housing.
			(2) 8,634	CCKW-353	15522-A1 to 24155-A1			These 8,634 vehicles have front and rear axles of the split housing type.
TC-200071	**W-398-QM-9095**	**1-A**	**33**	**CCKW-353**	**24156-C-1 to 24188-C-1**	**164″**	**W-440237 to W-440269**	**HAS 12′ STOCK RACK BODY—LESS WINCH** These 33 vehicles have front and rear axles of the split housing type.
TC-200015	**W-398-QM-9095**	**1-B**	**8,250**	**CCKW-352**		**145″**	**W-440270 to W-448519**	**HAS 9′ CARGO BODY—LESS WINCH**
	THIS ORDER CONSISTS OF TWO PARTS, AS FOLLOWS:							
			(1) 2,334	CCKW-352	24189-A2 to 26522-A2			These 2,334 vehicles have front and rear axles of the one-piece or "Banjo" type housing.
			(2) 5,916	CCKW-352	26523-A1 to 32438-A1			These 5,916 vehicles have front and rear axles of the split housing type.
TC-200016	**W-398-QM-9095**	**1-C**	**4,000**	**CCKW-353**	**32439-B1 to 36438-B1**	**164″**	**W-448520 to W-452519**	**HAS 12′ CARGO BODY—WITH WINCH** These 4,000 vehicles have front and rear axles of the split housing type.
TC-200017	**W-398-QM-9095**	**1-D**	**4,750**	**CCKW-352**	**36439-B1 to 41188-B1**	**145″**	**W-452520 to W-457269**	**HAS 9′ CARGO BODY—WITH WINCH** These 4,750 vehicles have front and rear axles of the split housing type.
TOTAL QUANTITY OF VEHICLES ON ORDER			28,000					

General Data

Engine

Type	270
Horsepower - S.A.E.	34.35
Displacement - Cu. In.	269.52
Bore	3-25/32"
Stroke	4"
Cylinders	6
Engine Governed Speed (R.P.M.)	2750

CAPACITIES

Fuel Tank - (Gals.)	40
Engine Crankcase - Refill (Qts.)	10
Cooling System (Qts.)	19
Transmission (Pts. or Lbs.) (Without Power Take-Off)	13
Transmission (Pts. or Lbs.) (With Power Take-Off)	14
Oil Bath Air Cleaner (Qts.)	1
Winch (For Trucks So Equipped)(Pts. or Lbs.)	3-3/4
Vehicles With Split Housing Type Axles (Refill)	
Transfer Case (Pts. or Lbs.)	7
Front Axle Differential (Pts. or Lbs.)	7
Rear Axle Differential (Pts. or Lbs.)	7
Vehicles With Banjo Type Axles (Refill)	
Transfer Case (Pts. or Lbs.)	4
Front Axle Differential (Pts. or Lbs.)	13-1/2
Rear Axle Differential (Pts. or Lbs.)	17

SECTION INDEX

FOLLOWING INDEX LISTS VARIOUS SECTION NUMBERS WHICH DESCRIBE UNITS USED ON THESE VEHICLES TOGETHER WITH TYPE OF VEHICLE TO WHICH THEY APPLY. REFERENCE SHOULD BE MADE TO "VEHICLE IDENTIFICATION" LISTING IN INTRODUCTORY PAGES OF THIS BOOK TO DETERMINE SERIAL NUMBERS OF VEHICLES EQUIPPED WITH BANJO OR SPLIT TYPE AXLE HOUSINGS.

Section Name In Order Shown	Type of Axle Housing Used on Vehicle.	
	Banjo Type Housing Section Number	Split Type Housing Section Number
DRIVER'S INSTRUCTIONS	DR.200	DR.200
FRONT AXLE	1.8301	1.8401
REAR AXLE	2.10501	2.10610
CAB	3.2601	3.2601
BRAKES	4.11201	4.11201
CLUTCH	5.9101	5.9101
COOLING SYSTEM	6.8801	6.8801
WIRING	7W.0551	7W.0551
STARTING MOTOR AND BATTERY	7S.0551	7S.0551
DISTRIBUTOR, COIL, AND SPARK PLUGS	7D.0451	7D.0451
GENERATOR AND CONTROL	7G.0451	7G.0451
LIGHTING EQUIPMENT	7L.0451	7L.0451
MISCELLANEOUS ELECTRICAL	7M.0051	7M.0051
ENGINE	8.9201	8.9201
FRAME	11.5501	11.5501
FUEL SYSTEM	12.10101	12.10101
LUBRICATION	13.601	13.601
SPRINGS	15.6701	15.6701
STEERING GEAR	16.8501	16.8501
TRANSMISSION	17.12401	17.12401
TRANSFER CASE	17.12501	17.12601
PROPELLER SHAFTS	18.8501	18.8501
WHEELS, HUBS, AND BEARING	19.9801	19.9801
WINCH	Not Used	W.001

Tool List and Alphabetical Index are shown at back of Book.

Driver's Instructions

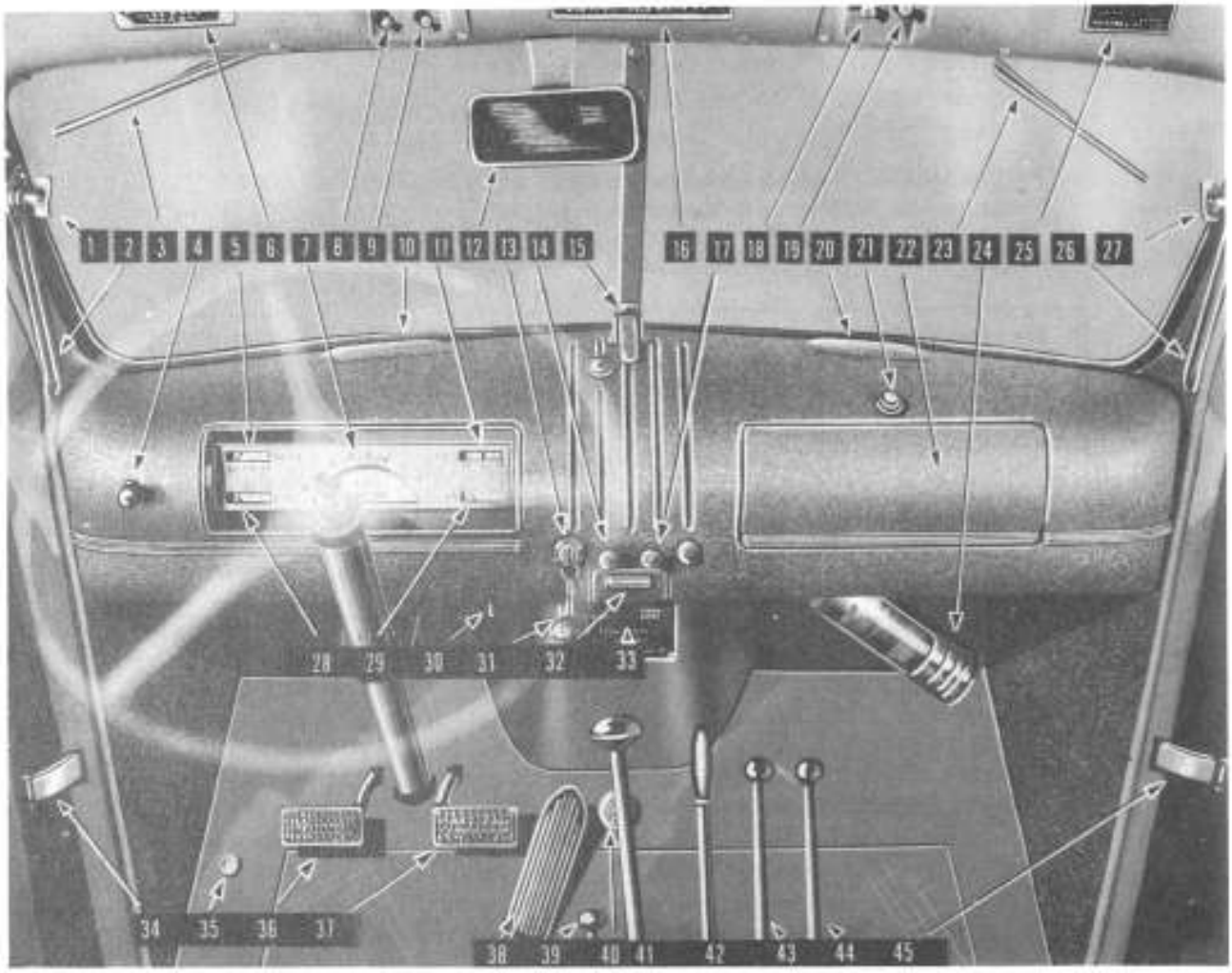


Fig. 1 Interior of Driver's Cab - Showing Controls and Instruments

1. Windshield Quadrant Adjusting Screw.
2. Windshield Quadrant.
3. Windshield Wiper - L.H.
4. Light Switch.
5. Water Temperature Gauge.
6. Shifting Arrangement Plate.
7. Speedometer.
8. Windshield Wiper Switch.
9. Windshield Wiper Speed Regulator.
10. Defroster Opening.
11. Ammeter.
12. Rear View Mirror.
13. Ignition Switch.
14. Throttle Button.
15. Windshield Lock.
16. Road Speed Caution Plate.
17. Choke Button.
18. Windshield Wiper Speed Regulator.
19. Windshield Wiper Switch.
20. Defroster Opening.
21. Package Compartment Button.
22. Package Compartment.
23. Windshield Wiper - R.H.
24. Fire Extinguisher.
25. Winch Caution Plate (On Trucks with Winch).
26. Windshield Quadrant.
27. Windshield Quadrant Adjusting Screw.
28. Fuel Gauge.
29. Oil Gauge.
30. Instrument Panel Light Switch
31. Ventilator Control
32. Ash Tray.
33. Serial Number and Operating Data Plate.
34. Door Check - L.H.
35. Dimmer Switch.
36. Clutch Pedal.
37. Brake Pedal.
38. Accelerator Pedal.
39. Power Take-Off Control Lever (On Trucks with Winch).
40. Starter Pedal.
41. Transmission Shift Lever.
42. Hand Brake Lever.
43. Transfer Case Shifting Lever.
44. Front Axle Control Lever.
45. Door Check - R.H.

DRIVERS INSTRUCTIONS

Our instructions to Drivers constitute one of the most important purposes of this manual - as it is our contention that good driving embraces more than the basic acts of starting, operating and stopping a motor vehicle. By adhering to good driving practices and thru complete knowledge of the vehicle a good Driver will obtain full benefit of GMC economy - in low operating and low maintenance costs.

The natural function of a GMC truck is smooth and "rhythmic" without sharp clicks, knocks, or sounds of metal scraping metal. The good Driver soon becomes accustomed to the operation or "feel" of his vehicle and is quick to detect any changes in its normal operation. On the other hand the Driver is not expected to rely entirely upon sound for trouble diagnosis - and, accordingly, instruments are provided which indicate the condition of such vital items as Engine Temperature, Engine Oil Pressure, Electrical Charging Rate, Quantity of Fuel etc., all of which are useful aids to good driving. These instruments as well as all items of vehicle control are described in succeeding paragraphs below.

In addition to the information contained in this section, we particularly refer all Drivers to "Service Diagnosis" data at end of each division of this book. Careful study of these items will enable the Driver to recognize even gradual changes in the mechanical condition of various units, and will thus encourage the application of corrective service BEFORE costly repairs become necessary.

Whether or not the Driver is thoroughly acquainted with properly handling a truck, or is only a beginner - a study should first be made of the following instruments and controls - then refer to "Operating Instructions" towards end of this section.

FUNCTION OF CONTROLS AND INSTRUMENTS

Items are listed in same sequence as the groups in this manual - reference to those groups should be made for additional service information of interest to the driver.

CAB (ALSO SEE SECTION #3 IN THIS BOOK)

WINDSHIELD WIPER. Dual windshield wipers are each operated independently - separate control switches are provided to turn windshield wiper "on" or "off" and to regulate speed of wiper action.

WINDSHIELD WIPER SWITCH. Switch is pulled out to operate windshield wipers. Speed of windshield wiper action is controlled by other button which must also be turned on.

WINDSHIELD WIPER SPEED REGULATOR. After windshield wiper switch is pulled out, speed of wiper action can be regulated by turning valve button to right or left as required.

WINDSHIELD QUADRANT. Quadrants, one on each side of windshield, act as support and guides to hold windshield in any desired open position.

WINDSHIELD QUADRANT THUMB SCREW. Windshield can be opened outward and upward by loosening these thumb screws. Thumb screws must be tightened down securely to hold windshield in open position.

WINDSHIELD LOCK. This lock consists of a spring type clamp and lever arrangement which engages hook on windshield and is pulled downward to lock windshield in fully closed position.

ASH TRAY. This handy tray can easily be removed for emptying by pressing downward on

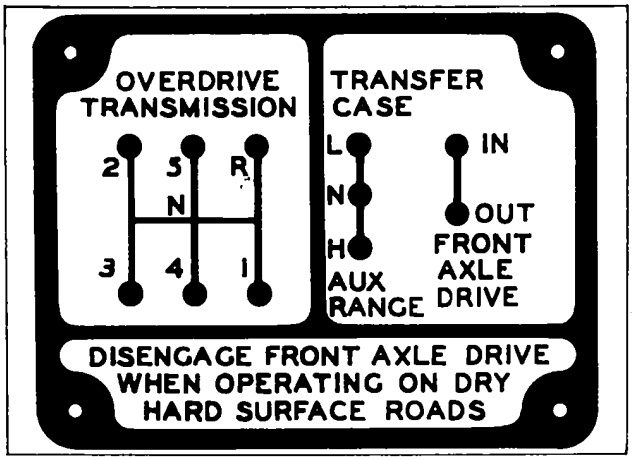


Fig. 2 Transmission and Transfer Case Shifting Arrangement Plate (for Trucks not Equipped with Winch)

small metal disc in tray and pulling tray outward.

DOOR CHECK. A metal strap limits opening angle of doors, and in addition, design of this part tends to hold door in either open or closed position until further manually operated.

REAR VIEW MIRROR. This mirror permits driver to see through rear window of cab when body tarpaulin does not obscure vision. Outside rear view mirror will provide satisfactory rear vision at all times.

SPEEDOMETER. Speedometer indicates road speed of vehicle in miles per hour. See Fig. 4.

PACKAGE COMPARTMENT. Located on R.H. side in instrument panel is a handy built-in container for any small articles such as this Maintenance Manual, Flashlight, Glasses, etc.

PACKAGE COMPARTMENT. Pressing downward on button unlocks door of package compartment.

DOOR LOCKS. Right hand door is locked from outside with octagonal shaped key which also fits ignition lock and spare tire. Left hand door is locked from inside by "wing" type lock.

DEFROSTER OPENING. This is an item of standard construction which permits installation of heater-defroster connections to act as a fan upon windshield and keep it free from frost and steam during cold weather.

VENTILATOR CONTROL. Control knob is attached to a lever which opens and closes ventilating door on cab cowl.

SERIAL PLATE. Numbers on this plate identify vehicle - they should always be stated when ordering parts or requesting any other service.

FIRE EXTINGUISHER. Special care should be exercised to SEE THAT ALL DRIVERS ARE COMPLETELY FAMILIAR WITH THE REMOVAL AND OPERATION OF THIS ITEM. It is mounted on dash 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 easily be pulled off of mounting bracket and operated by turning handle to left and then working up and down 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 of liquid should be directed against inside of liquid container above surface of liquid.

BRAKES (ALSO SEE SECTION #4 OF THIS BOOK)

BRAKE PEDAL. Depressing brake pedal applies brakes at all wheels. Pedal and power cylinder pressure displaces brake fluid in master cylinder and lines, and builds up pressure in wheel cylinders applying brakes evenly at each wheel. Avoid driving with foot on brake pedal as brakes will be partially applied and cause rapid wear of brake lining. Smooth and even application of brakes whenever possible is a good driving practice.

HAND BRAKE LEVER. Hand brake lever operates brake at rear of transfer case. Whenever vehicle is parked, lever should be applied by pulling toward rear as far as possible. Before attempting to move vehicle, lever should be in released position - as far forward as it will go.

CLUTCH (ALSO SEE SECTION #5 IN THIS BOOK)

CLUTCH PEDAL. Depressing clutch pedal disengages engine from transmission so that transmission gears may be shifted. Clutch pedal should never be released quickly when vehicle is in gear and whenever engine is