

MAINTENANCE MANUAL

GMC MODEL AFKX-352

BUILT FOR

UNITED STATES ARMY

U.S.A. REGISTRATION NUMBERS:

W-001927 to W-002851

W-003698 to W-003746

General Motors Truck

Maintenance Manual



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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 below. 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.

Model Designation




Vehicles covered by this publication are as follows: GMC Model AFKX-352

<u>CHASSIS NOS.</u>	<u>U.S.A. REGISTRATION NOS.</u>	<u>TC NOS.</u>
1055 TO 1085	W-001927 TO W-001957	25129
1086 TO 1768	W-001958 TO W-002640	25309
1769 TO 1911	W-002641 TO W-002783	25310
1912 TO 1976	W-002784 TO W-002848	25311
1977 TO 1979	W-002849 TO W-002851	200031
1980 TO 2017	W-003698 TO W-003735	200056
2018 TO 2023	W-003736 TO W-003741	200057
2024 TO 2028	W-003742 TO W-003746	200058

Serial Number Locations

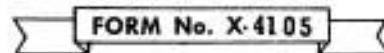
Delay and confusion can be avoided when correct serial numbers of vehicle are specified on parts orders and correspondence.

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.



GMC MAINTENANCE MANUAL

MODEL AFKX-352 GMC TRUCK

General Data

Wheelbase-----	131"
Engine	
Horsepower - S.A.E.-----	33.19
Displacement -- Cu. In.-----	248.5
Bore-----	3-23/32"
Stroke-----	3-13/16"
Cylinders-----	6

CAPACITIES

Fuel Tank (Gals.)-----	30
Engine Crankcase - Refill (Qts.)-----	10
Cooling System (Qts.)-----	23
Transmission (Pts.)-----	6-1/2
Transfer Case (Pts.) (Refill)-----	2-1/2
Transfer Case - at Assembly-----	See "Transfer Case" Group
Front Axle Differential (Pts.)-----	7
Rear Axle Differential (Pts.)-----	7
Oil Bath Air Cleaner (Qts.)-----	1

LAMP BULBS

Head Lamp (Sealed Beam)		
Driving Beam (Upper)-----		45 Watts
Passing Beam (Lower)-----		35 Watts
	<u>C.P.</u>	<u>Mazda No.</u>
Fender Lamps-----	3	63
Tail Lamps-----	3	63
Stop Lamps-----	15	87
Instrument Lamps-----	3	63
Beam Indicator Lamp-----	1	51

G M C MAINTENANCE MANUAL

Group Index

Instructions and Illustrations Covering Various Units in These Vehicles are Shown in Following Groups:

GROUP NAME	GROUP NO.
Driver's Instructions-----	DR.151
Front Axle-----	1.7901
Rear Axle-----	2.10261
Body-----	3.2501
Brakes-----	4.11301
Clutch-----	5.9001
Cooling System -----	6.8701
Wiring-----	7W.0501
Starting Motor and Battery-----	7S.0501
Distributor, Coil and Spark Plugs-----	7D.0401
Generator-----	7G.0401
Lighting Equipment-----	7L.0401
Engine -----	8.8801
Frame-----	11.5401
Fuel System-----	12.10,001
Lubrication-----	13.551
Springs-----	15.6801
Steering Gear-----	16.8401
Transmission-----	17.12301
Transfer Case-----	17.12801
Propeller Shafts-----	18.8401
Wheels, Hubs and Bearings-----	19.9401
Alphabetical Index-----	I

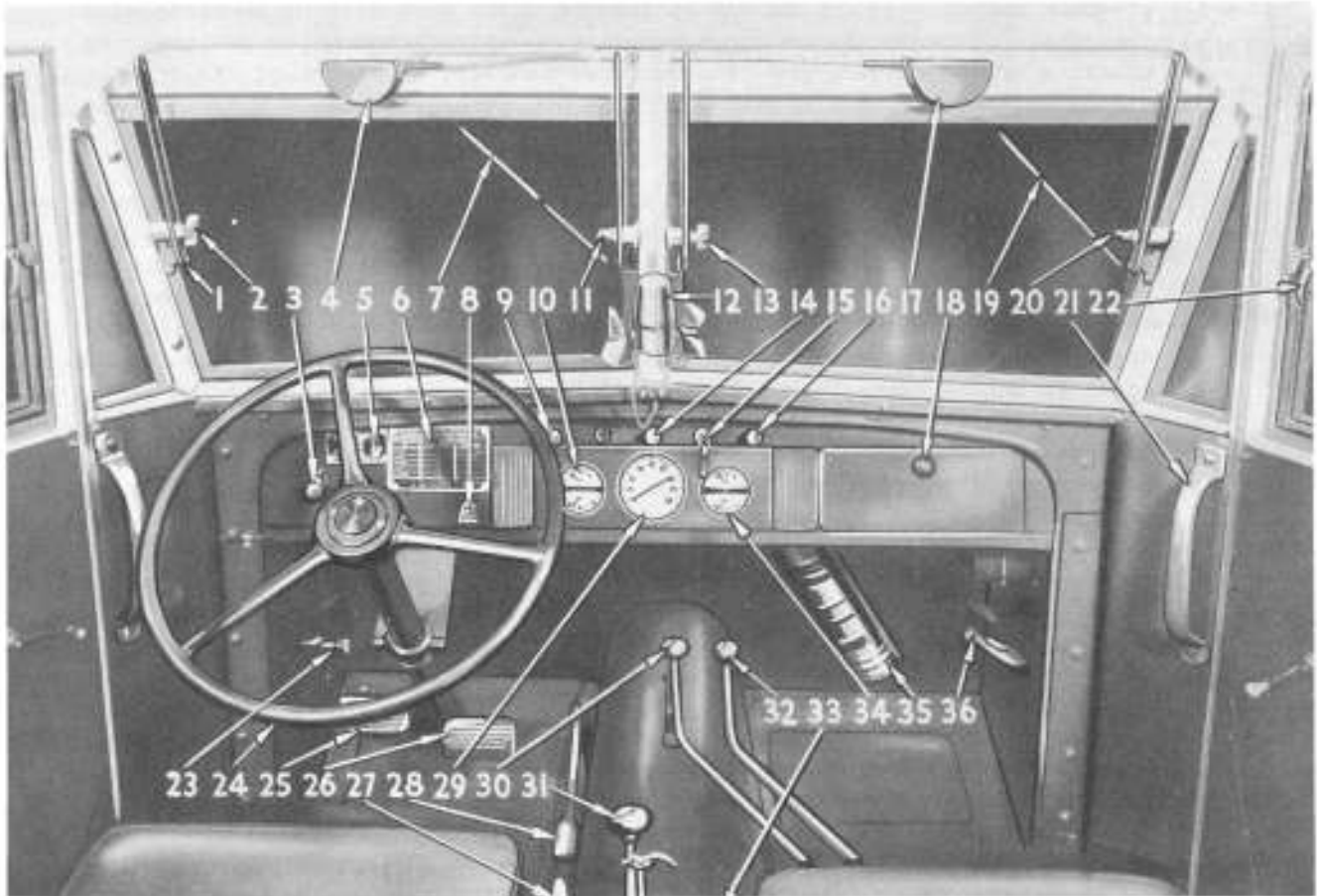
Driver's Instructions

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

- | | |
|-----------------------------------|--|
| 1. Windshield Quadrant - L.H. | 19. Windshield Wiper |
| 2. Windshield Quadrant Wing Nut | 20. Windshield Quadrant Wing Nut |
| 3. Light Switch | 21. Entrance Assist Handle |
| 4. Windshield Wiper Motor | 22. Window Regulator |
| 5. Shifting Arrangement Plate | 23. Cowl Ventilator Control |
| 6. Road Speed Caution Plate | 24. Steering Wheel |
| 7. Windshield Wiper | 25. Clutch Pedal |
| 8. Beam Indicator Light | 26. Brake Pedal |
| 9. Heater Water Control Button | 27. Hand Brake Lever |
| 10. Fuel and Temperature Gauge | 28. Accelerator Pedal |
| 11. Windshield Quadrant | 29. Speedometer |
| 12. Windshield Defroster | 30. Transfer Case Speed Shift Lever |
| 13. Windshield Quadrant Wing Nut | 31. Transmission Shift Lever |
| 14. Choke Button | 32. Front Axle Declutching Lever |
| 15. Ignition Switch | 33. Power Take-Off Control Lever (Not Shown) |
| 16. Throttle Button | 34. Ammeter and Oil Gauge |
| 17. Windshield Wiper Motor | 35. Fire Extinguisher |
| 18. Package Compartment Door Lock | 36. Cowl Ventilator |

NOTE: Heater Control Switch located just below shifting arrangement.

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 function of all 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.

CAB (ALSO SEE GROUP #3)

WINDSHIELD WIPER SWITCH. This switch may be pulled out to operate L.H. windshield wipers. Speed of windshield wiper action is controlled by switch 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 to right or left as required.

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.

SPEEDOMETER. Speedometer indicates road speed of vehicle in miles per hour. During break in period (500 miles) vehicle should not be operated faster than 40 miles per hour.

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

DRIVERS INSTRUCTIONS

PACKAGE COMPARTMENT LOCK. Pressing downward on button unlocks door of package compartment. Door may be locked with key which also fits ignition lock and spare tire.

DOOR LOCKS

Keys are provided to lock front and rear doors. Keys for these two doors do not fit ignition lock.

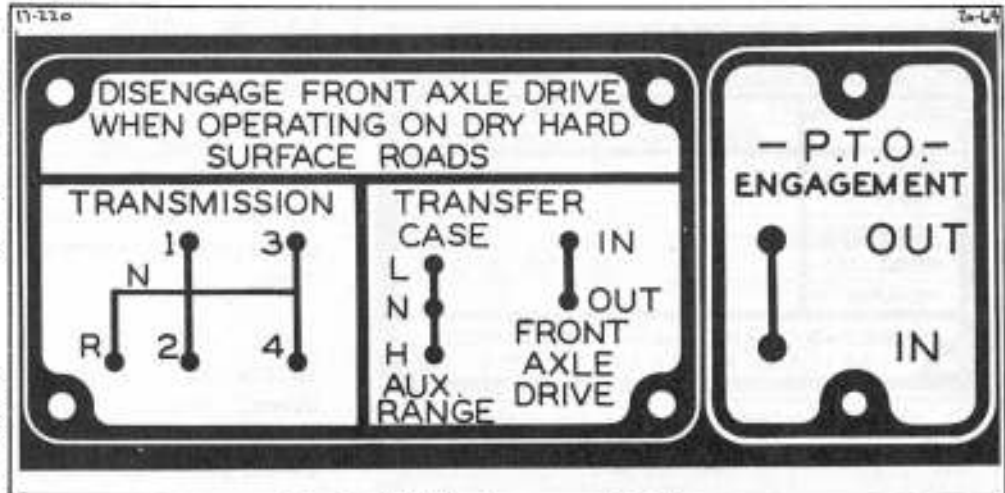


Fig. 2 Shifting Arrangement Plates.

COWL VENTILATOR. This knob is attached to a lever which opens and closes ventilating door on side of cab cowl.

SERIAL PLATE. Whenever corresponding or ordering parts; model and chassis serial number should always be given.

BRAKES (ALSO SEE GROUP #4)

BRAKE PEDAL. Pressing brake pedal applies brakes at all wheels. Pedal 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.

HAND BRAKE LEVER. Hand brake lever operates brakes at rear wheels. 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 GROUP #5)

CLUTCH PEDAL. Pressing on 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. Driving with foot on pedal will cause wear of clutch facings and of release bearing.

COOLING (ALSO SEE GROUP #6)

ENGINE WATER TEMPERATURE INDICATOR. This instrument indicates temperature of water in cooling system. Water temperature is dependent upon operating conditions, load, etc., however, temperature range should be within 140° F. to 180° F. If temperature should reach 212° F. (boiling point) vehicle should be stopped and trouble corrected before proceeding.

ELECTRICAL (ALSO SEE GROUPS 75, 7D, 7L AND 7M)

DOME LAMP. Illumination of inside of cab is controlled by toggle switch located above left hand windshield.

IGNITION SWITCH. Ignition switch is turned "on" or "off" by switch key. Turning key "on" completes electrical circuit which is necessary before engine can be started. Turning key "off" breaks electrical circuit and stops engine.

AMMETER. Ammeter indicates rate of flow of electric current being supplied to battery by generator or rate of discharge from battery. When vehicle speed reaches 7 to 10 M.P.H. generator starts charging and ammeter needle will move to positive (+) side. Current will increase with vehicle speed until maximum of 14 to 16 amperes is reached at 25 M.P.H.; at speeds below 7 to 10 M.P.H. ammeter needle will move to negative (-) side indicating that battery is discharging.

DRIVERS INSTRUCTIONS

20-51

TRANSMISSION IN	TRANSFER CASE IN	
	HIGH RANGE	LOW RANGE
DIRECT	48	24 M.P.H.
THIRD	27	14
SECOND	13	7
FIRST	6	3
REVERSE	6	3

BASED ON 3000 R.P.M. ENGINE MAXIMUM SPEED
6.6 - 1 AXLE RATIO & 7.50 - 20 TIRES

Fig. 3 Road Speed Caution Plate.

LIGHT SWITCH. Lights are controlled by hand operated switch on instrument board. Switch has three positions and operates as follows:

1. Knob pressed in - "ALL" lights "OFF".
2. Knob pulled out to latch stop turns on "BLACKOUT" lights located on each front fender; also in right and left tail lamps.
3. Latch stop depressed and knob pulled out all the way turns on all "SERVICE" lights. In this position either upper or lower headlamp beam is selected by foot switch as later described.

HEADLAMP DIMMER SWITCH. After headlamps are turned on (by depressing latch stop and pulling instrument panel switch all the way out) upper and lower beam is controlled by foot switch. Upper or lower headlamp beam is selected by pressing down on foot switch. The use of this switch permits operator to "dim" lights when passing other vehicles, or to turn on "bright" lights when needed.

HEADLAMP BEAM INDICATOR. This indicator light is "on" when headlamp "brights" (driving beam) are on. Indicator light is "off" when headlamp "dimmer" (passing beam) lights are on.

STARTER CONTROL LEVER. Starter is operated by pressing downward on lever. Initial movement of lever engages starter pinion with flywheel teeth, further movement completes electrical circuit between battery and starter, causing starter to rotate, thus cranking engine through gear engagement. When engine starts, hand should be removed from lever immediately.

ENGINE (ALSO SEE GROUP #8)

OIL FILTER. Oil filter cap is accessible through small door in right hand floor board.

OIL LEVEL INDICATOR ROD. Daily check of oil supply can be made by opening small door in right hand floor board and removing indicator rod to determine level of oil in crankcase.

OIL PRESSURE GAUGE. Oil pressure gauge indicates pressure of engine lubricating oil. Normal reading of pressure gauge should be approximately 35 to 40 lbs., at speeds above 15 M.P.H. If oil pressure should fall to zero, while engine is running, stop engine immediately and determine cause of pressure failure. This gauge DOES NOT indicate the AMOUNT of oil in crankcase.

FUEL (ALSO SEE GROUP #12)

HAND PRIMER - FUEL PUMP. When vehicle has been standing idle for long periods of time, or has been drained of fuel, it is advisable to assure supply of fuel at carburetor by operating hand primer at fuel pump. Hand primer is accessible through oil filler door on right hand floor board in drivers compartment. It is operated by pulling up and releasing wire ring at side of oil filler neck.

CHOKE. Choke should only be used when necessary. If not properly used, fuel mixture will be too rich, and may cause serious injury by allowing unburned fuel to pass piston rings into crankcase and dilute lubricating oil. Choke should only be pulled out far enough to allow engine to run smoothly during warm up period. Choke should always be pushed in as soon as possible after engine is started. Choke should not be used when starting warm engine unless absolutely necessary.

FUEL GAUGE. Gasoline gauge indicates level of fuel in tank, and is only operative when ignition switch is turned on.

THROTTLE BUTTON. Throttle button controls speed of engine, and is used when starting engine or making engine adjustments. When button is pushed in, engine will run at