TM 10-1701

MAINTENANCE MANUAL

GMC MODEL AFKX-804

BUILT FOR

UNITED STATES ARMY

U.S.A. REGISTRATION NUMBERS

W-418659 to W-418850

General Motors Truck

TM 10-1701

WAR DEPARTMENT

Washington, August 20, 1941

TM 10-1701 Maintenance Manual, Truck, 4-Ton, 4 x 4 (HC) COE, GMC (Model AFKX-804) published by the General Motors Truck & Coach Division of Yellow Truck & Coach Manufacturing Company, 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:
E. S. ADAMS,
Major General,
The Adjutant General

Maintenance Manual

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

Index

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-804

CHASSIS NOS.	U.S.A. REGISTRATION NOS.	TC NO.
001-192	W-418659 TO W-418850	25162

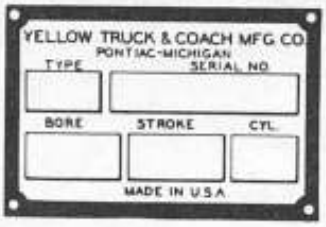
Serial Number Locations

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-4106

Printed in U. S. A.

10-5-41-DM

MODEL AFKX-804 GMC TRUCK

General Data

Wheelbase	165"
Engine	
Type	426
Horsepower - S.A.E.	43.34
Displacement - Cu. In.	425.58
Bore	4-1/4"
Stroke	5"
Cylinders	6

CAPACITIES

Fuel Tank - R.H. Side Rail (Gals.)	45
Engine Crankcase - Refill (Qts.)	15
Cooling System (Qts.)	25
Transmission (Pts.)	18
Transfer Case (Pts.)	5-1/2
Front Axle Differential (Pts.)	16
Rear Axle Differential (Pts.)	21
Oil Bath Air Cleaner (Qts.)	1

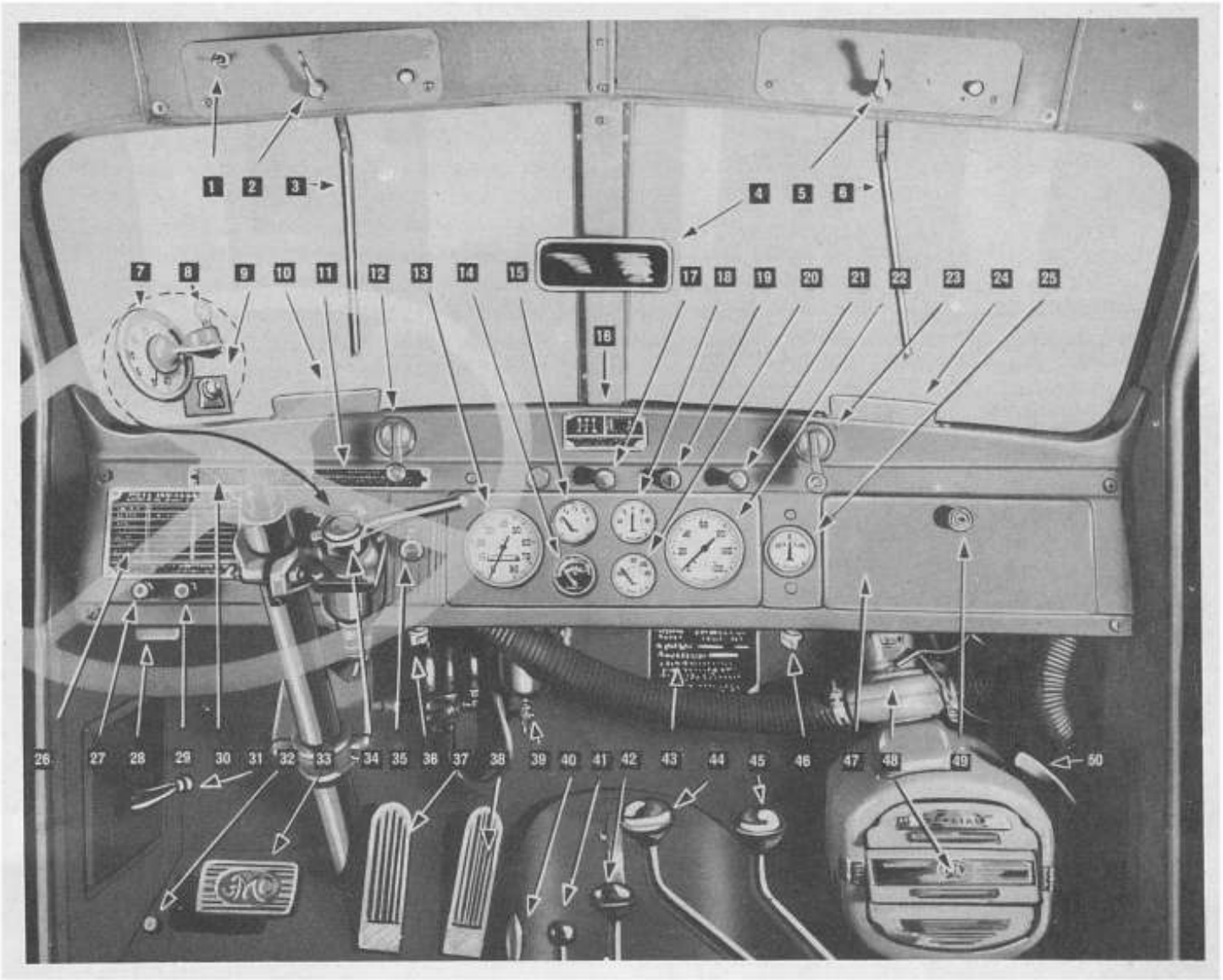
LAMP BULBS

Head Lamp (Sealed Beam) - Unit	Guide 925000
Driving Beam (Upper)	45 Watts
Passing Beam (Lower)	35 Watts

	C.P.	Mazda No.
Blackout Headlamp	3	63
Blackout Tail and Stop Lamps	3	63
Service Stop and Tail Lamps	21-3	1154
Instrument Lamps	3	63
Beam Indicator Lamp	1	51
Dome Light	6	81
Fuse (Thermal Type - in Light Switch	30 Amp.	

Group Index

Instructions and Illustrations covering various Units in these Vehicles are shown in following sections.



Interior View of Cab Showing Controls and Instruments

1. Dome Lamp Switch
2. Windshield Wiper Manual Control-L.H.
3. Windshield Wiper
4. Rear View Mirror
5. Windshield Wiper Manual Control - R.H.
6. Windshield Wiper
7. Tachometer
8. Tachometer Recording Hand Reset Lock
9. Headlamp Beam Indicator Light
10. Defroster Inlet Fitting - L.H.
11. Air Pressure Buzzer Warning Plate
12. Windshield Regulator - L.H.
13. Speedometer
14. Viscometer and Oil Gauge
15. Fuel Gauge
16. Shifting Arrangement Plate
17. Choke Button
18. Main Ammeter
19. Ignition Switch
20. Engine Temperature Gauge
21. Throttle Button
22. Air Gauge
23. Windshield Regulator - R.H.
24. Defroster Inlet Fitting - R.H.
25. Auxiliary Ammeter
26. Road Speed Caution Plate
27. Windshield Wiper Control Button - L.H.
28. Air Pressure Buzzer
29. Windshield Wiper Control Button - R.H.
30. Maximum Engine Speed Warning Plate
31. Ventilator Control - L.H.
32. Headlamp Dimmer Switch
33. Clutch Pedal
34. Trailer Brake Control Valve
35. Light Switch
36. Heater Switch
37. Brake Treadle
38. Accelerator Pedal
39. Windshield Wiper Air Strainer
40. Hand Brake Lever
41. Starter Switch Lever
42. Transmission Gear Shift Lever
43. Serial Number and Operating Data Plate
44. Transfer Case High-Low Speed Lever
45. Front Axle Declutching Lever
46. Defroster Switch
47. Package Compartment Door
48. Heater and Defroster
49. Package Compartment Door Lock
50. Ventilator Control - R.H.
51. Cooling System Drain Plate - Not Shown Above. See "Cooling System".

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 SWITCH #3 IN THIS BOOK)

WINDSHIELD WIPER. Air operated dual windshield wipers are each operated independently - separate control buttons are provided for each windshield wiper. These buttons also regulate speed of wiper action. Windshield wipers may also be operated manually by control lever above windshield.

WINDSHIELD WIPER BUTTONS. Button is turned to operate windshield wipers. Speed of windshield wiper action is also controlled by these buttons.

WINDSHIELD WIPER MANUAL CONTROL LEVER: To permit manual operation of windshield wipers when engine is not running, or before air pressure is obtained, separate control levers are provided for each wiper blade above windshield.

WINDSHIELD REGULATOR: Opening and closing of windshield is accomplished by turning these handles. They provide a means of operating right hand and left hand windshields independently.

WINDSHIELD WIPER AIR STRAINER: This unit acts as an air strainer to remove all moisture from air before reaching windshield wiper motors. IMPORTANT: It is essential that drain cock at bottom of unit be opened DAILY and all moisture be allowed to drain.

HEATER SWITCH: Heater unit which is connected into and obtains heat from hot water return of engine is operated by heater switch located on instrument panel lower ledge near

steering column. Switch is operative with ignition switch turned "on".

DEFROSTER SWITCH: Windshield defroster operates in connection with heater which supplies warm air to openings above instrument panel and removes steam and frost from windshield. Switch is located below and to right of instrument panel cluster.

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

SPEEDOMETER: Speedometer indicates road speed of vehicle in miles per hour. Refer to Fig. 3, also plate on instrument panel, and learn permissable speeds in various gear ratios.

TACHOMETER: This unit indicates engine speed in revolutions per minute (RPM). Tachometer is fitted with a key operated lock and recording hand which indicates the highest operated R.P.M. This "maximum speed indicator" hand may be reset to zero (0) by unlocking cover on face of tachometer with key provided and using a small screwdriver to return the hand.

The tachometer is an important instrument for satisfactory vehicle operation. The driver should be constantly aware of tachometer readings - which will indicate when engine speed is falling off while ascending hills or grades under load and thus help driver to shift into lower gear ratios at the proper time; also, it is EXTREMELY IMPORTANT that driver watch tachometer while descending hills, as it is at this time when vehicle may, particularly if loaded, cause engine to operate in excess of governed speed. Watch tachometer carefully and do not allow a reading higher then 2400 R.P.M.

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

DOOR LOCKS: Right hand door is locked from outside with key which also fits ignition lock cab doors. Both cab doors are locked from inside by pushing down on locking knobs.

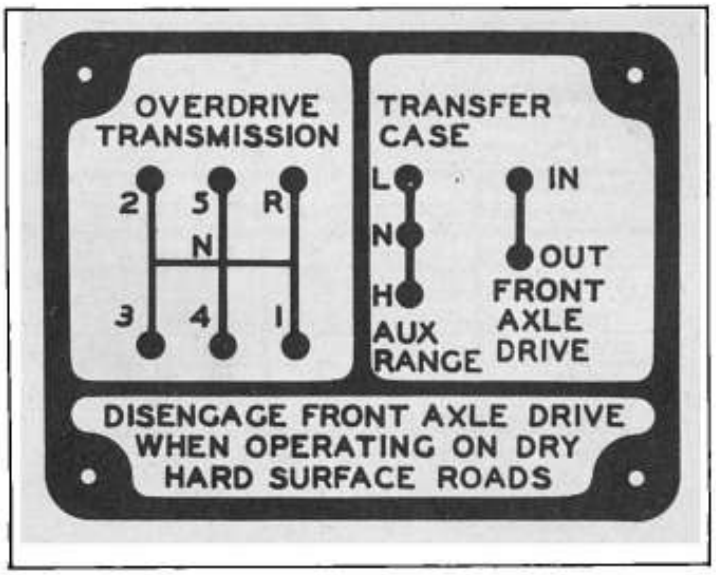


Fig. 2 Shifting Arrangement Plate.

VENTILATOR CONTROL: Control handle is attached to a lever which opens and closes ventilating door on each side of cowl. Ventilator is also provided on cab roof operated by levers from inside of cab.

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

ROAD SPEED PLATE. The maximum permissable speeds in various transmission and transfer case gear ratios are outlined on this plate. See Fig. 3, also see plate on instrument panel.

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 between seats 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 (SEE ALSO SECTION #4 OF THIS BOOK)

BRAKE PEDAL: Depressing brake pedal applies brakes at all wheels of chassis and trailer. Pedal and air pressure from air reservoir

DRIVERS INSTRUCTIONS

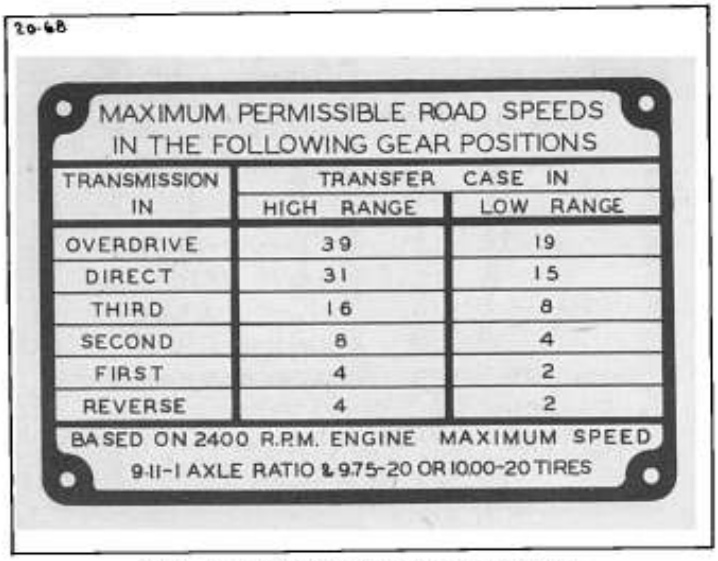


Fig. 3 Road Speed Caution Plate.

builds up pressure in wheel chambers 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.

AIR GAUGE: Air gauge indicates amount of air pressure (in lbs. per sq. in.) in supply tank for application of brakes. Engine should be run with vehicle at a standstill until air pressure is 60 to 65 lbs. A buzzer unit is provided which operates as a WARNING to driver to prevent vehicle operation when air pressure is below 60 lbs.

TRAILER BRAKE APPLICATION VALVE: This application valve is attached to steering column and is provided with a convenient handle for independent operation of trailer brakes. This valve operates trailer brakes only and does not have anything to do with truck brakes. Down hill operation is sometimes greatly simplified, where problems in trailer control may develop, by partial application of trailer brakes. Foot brake treadle operates BOTH trailer and truck brakes. Driver should refer to Introductory section of "Brake" division (group #4) for complete instructions for making trailer connections.

AIR LINE FITTING FOR TIRE PUMP: Air pressure line is provided with a fitting for inflation of tires. Air hose for this purpose may be connected into fitting located on left hand side of chassis on side member at rear of cab.

TRAILER CONNECTION: Each trailer or towing connection is marked with metal tag bearing inscription "Emergency Line" or "Service Line". When facing connections at front or rear, Emergency Line Connections are at right hand, Service line connection at left hand. When making connections to trailer or towing truck, similar connection must be coupled together. This necessitates crossing connection lines.

HAND BRAKE LEVER: Hand brake lever operates brake at rear of transfer case. Whenever vehicle is parked, brake should be applied by pulling lever 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 running. Driving with foot on pedal will cause needless wear of clutch facings and of release bearing.

COOLING (ALSO SEE SECTION #6 IN THIS BOOK)

RADIATOR FILLER CAP: Cooling system should be checked daily and water added if necessary. CAUTION: Special care must be exercised when removing radiator cap after engine operation which has thoroughly heated liquid. Under these conditions cap must be removed SLOWLY, a little turn at a time until all steam has escaped. See instructions in "Cooling" section of this book regarding sealing cap.

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. Temperature gauge operates when ignition switch is turned on.