

MAINTENANCE MANUAL



CANADIAN MILITARY PATTERN VEHICLES

15 Cwt. 4x2

3 Ton 4x4

15 Cwt. 4x4

3 Ton 6x4

30 Cwt. 4x4

F.A.T. 4x4

Ford Motor Company of Canada
LIMITED

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MAINTENANCE MANUAL MB-F1

This is the first Maintenance Manual covering Ford Canadian Military Pattern Vehicles. Subsequent editions will bear the designations MB-F2 — MB-F3, etc.

MAINTENANCE PUBLICATIONS APPLYING TO PREVIOUS VEHICLES

Service instructions for vehicles built prior to the issuance of this manual were contained in the following "Instruction Books":

Department of National Defence (Canada)

Editions—First

—Second

—Third

—Fourth

—Fifth—Second and third printing.

British War Department

Editions—First

—Second

—Third—Second, third and fourth printing.

Inasmuch as each edition of the above-mentioned Instruction Book was retroactive to the start of vehicle production the fifth edition of the D.N.D. Series and the third edition of the B.W.D. Series contain the latest information on all prior vehicles.

OPERATING INSTRUCTIONS and MAINTENANCE MANUAL

For **CANADIAN MILITARY PATTERN VEHICLES**

15 CWT. 4x2 3 Ton 4x4
15 CWT. 4x4 3 Ton 6x4
30 CWT. 4x4 F.A.T. 4x4

Changes and additions to this Manual will be covered in service information bulletins.

*Prepared under the direction of The Director General
Army Engineering Design, Ottawa, Canada.*

Ford Motor Company of Canada
LIMITED

SE-93-C

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INTRODUCTION

This manual contains complete descriptions, specifications and maintenance data covering the Canadian Military Pattern Vehicles shown on pages A-5, A-6, A-7.

The manual is arranged in sections as shown in the "Section Index" on the preceding page. A complete index of individual subjects will be found at the back of the manual.

Some of the information given herein is not applicable to all models. Where this occurs the models affected are shown in brackets below the subject heading.

MODEL IDENTIFICATION

Vehicle Type	Model Designation	Drive	Wheelbase	Ford Model No.
15 Cwt., 4x2	F-15	4 x 2	101"	C291W
15 Cwt., 4x4	F-15A	4 x 4	101 $\frac{1}{4}$ "	C291WQ
30 Cwt., 4x4	F-30	4 x 4	134 $\frac{1}{4}$ "	C29Q
3 Ton, 4x4	F-60T	4 x 4	115"	C395Q
3 Ton, 4x4	F-60S	4 x 4	134 $\frac{1}{4}$ "	C29Q
3 Ton, 4x4	F-60L	4 x 4	158 $\frac{1}{4}$ "	C298Q
3 Ton, 6x4	F-60H	6 x 4	160 $\frac{1}{4}$ "	C290Q
F.A.T., 4x4	F-GT	4 x 4	101 $\frac{1}{4}$ "	C291Q

The model designations listed above (i. e., F-15, etc.) will be used throughout the manual to identify the vehicles being discussed.

The illustrations and brief descriptions on the following pages will be of assistance in identifying the different models.

GENERAL DESCRIPTION

Vehicles covered in this manual are designed for cross-country operation on unimproved roads, and are powered by Ford V-8, 95-H.P. engines.

Power from the engine is transmitted to the transmission by a single-plate dry disc "semi-centrifugal" clutch. The transmission provides four speeds forward and one reverse.

A short drive shaft and two universal joints of the needle bearing type transmit power to the transfer case, except in the F-15 which is not equipped with a transfer case.

The transfer case is bolted to a cross member directly behind the transmission and is insulated from the chassis by four rubber and fibre insulating washers.

Both types of transfer cases (large or small) have front wheel declutching units and the power transmitted to the front axle may be engaged or disengaged at will.

The large transfer case has two speeds, normal ratio being 1 to 1, and the low gear 1.87 to 1. It also includes the drive for the power take-off. All transfer case controls are placed in the cab.

On the 4 x 4 vehicles both front and rear axles are full floating, the weight of the vehicle being supported by the axle housing. Front and rear differentials are identical.

Constant velocity universal joints are used in the front axle. These allow the front wheels to be turned for steering and assure "con-

stant" velocity of the axle shafts regardless of the turning angle.

Vehicles are equipped with tires considered best suited to the type of service to which they will be subjected. The different types of tires supplied are Run Flat, Cross Country or Sand Tread tires.

The brakes are hydraulically operated and act on all wheels. Some vehicles are equipped with a vacuum booster, which assists in applying the brakes. The hand brake acts on the drive shaft of the F-30, F-60-S, F-60-L, F-60-T, F-60-H and F-GT, and on the rear wheel brake shoes of the F-15 and F-15-A.

The frame and cab are supported on four semi-elliptic leaf springs. Suitable shock absorbers of the adjustable type control the action of the springs. Some vehicles have auxiliary springs which provide additional support when the vehicle is heavily loaded and permits adequate flexibility when empty or carrying a light load. Various types of bodies and equipment are optional on each chassis.

All electrical equipment is operated from a six-volt, single wire positive grounded system. The maximum output of the generator is limited by a generator regulator.

This manual contains information essential to the proper care and maintenance of these vehicles. Operators and personnel responsible for performance and servicing should familiarize themselves with its contents and use it as a reference when information pertaining to these vehicles is required to "Keep 'em Rolling."

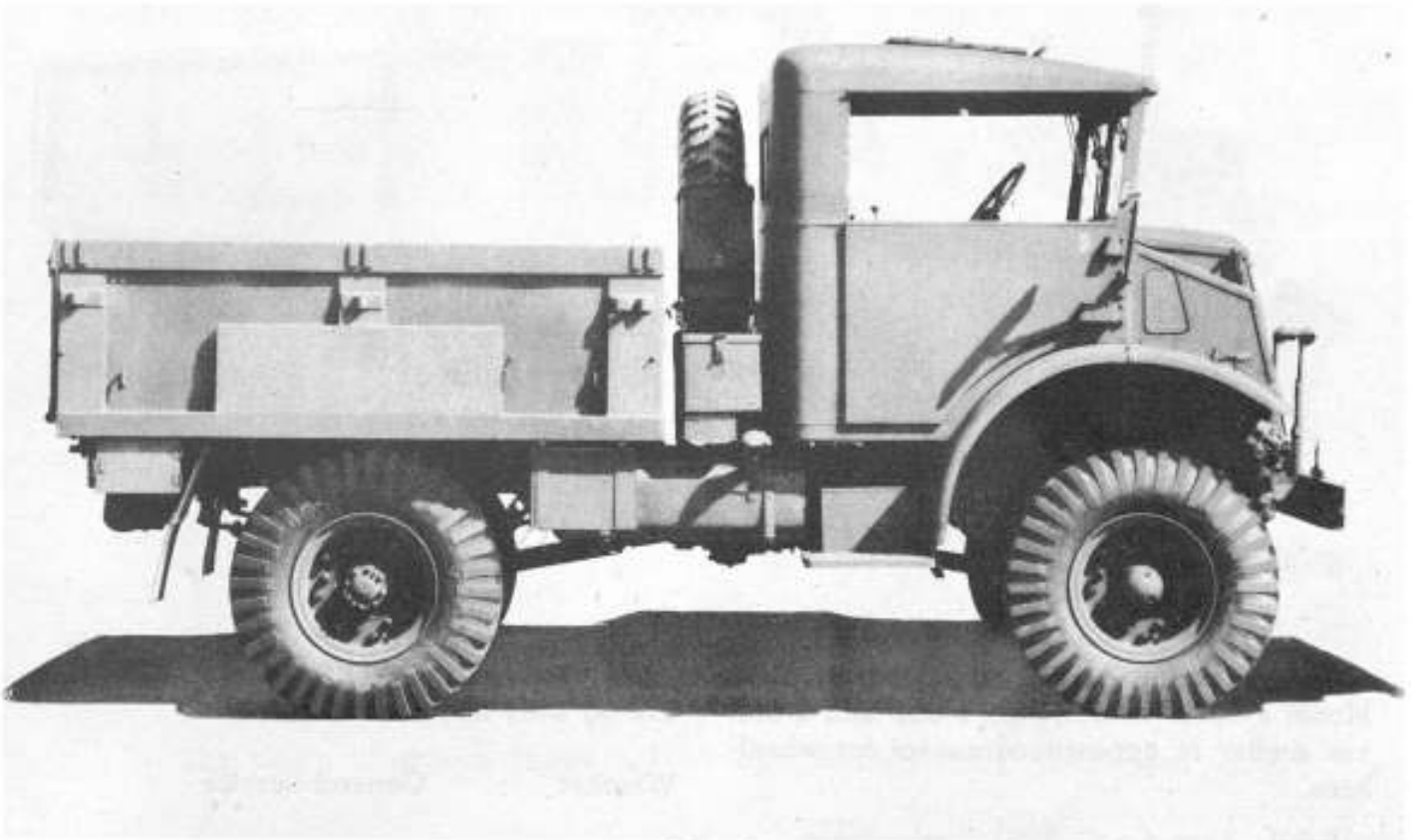


Fig. 1

The above illustration shows a view of a Model F-15A (15 CWT. 4 x 4). Model F-15 (15 CWT. 4 x 2) has the same appearance as the F-15A with the exception of the front axle and drive shaft to the front wheels from the transfer case.

The following body options are available for these chassis:

G.S. (Wireless)
 General Service
 Personnel Carrier
 A. A. and A. T.
 Machinery
 Van

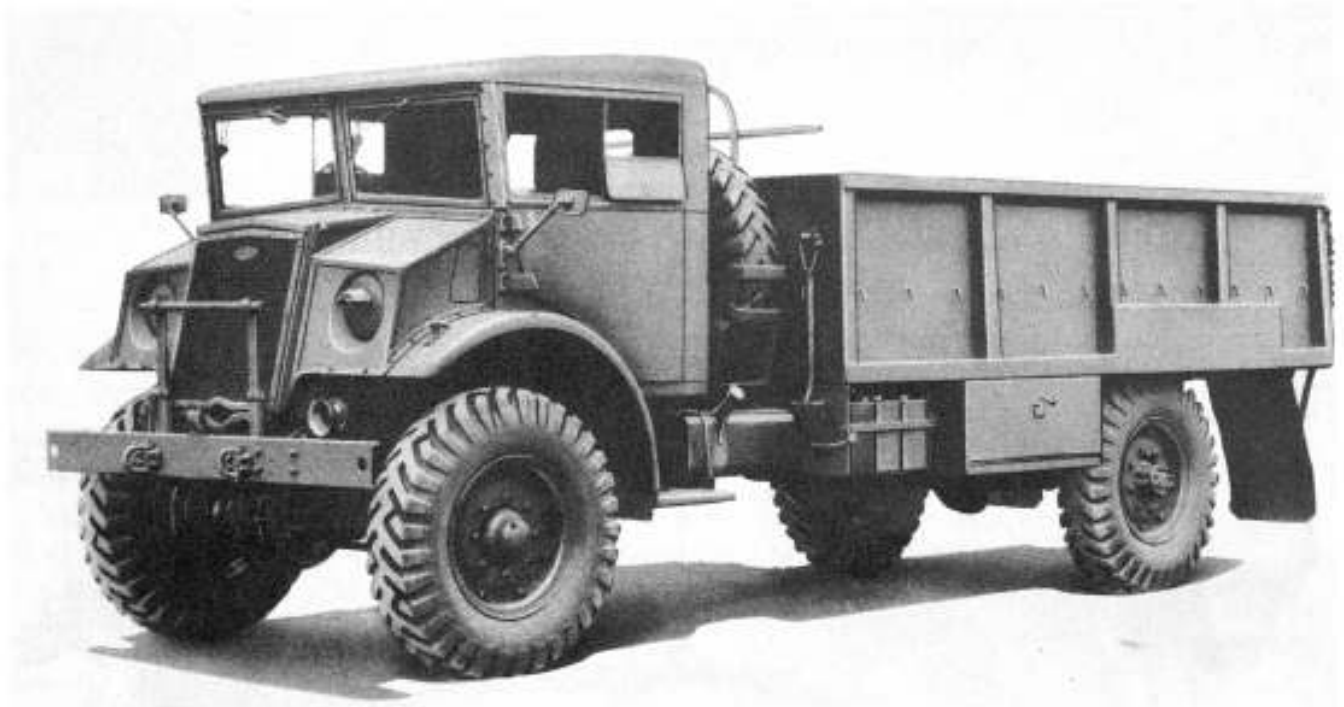


Fig. 2

The above illustration shows a view of a Model F-60L, Model F-30, F-60T and F-60S are similar in appearance except for wheelbase.

F-60L, 3-ton 4 x 4—158 $\frac{1}{4}$ " wheelbase.

F-60S, 3-ton 4 x 4—134 $\frac{1}{4}$ " wheelbase.

F-60T, 3-ton 4 x 4—115" wheelbase.

F-30, 30-cwt. 4 x 4—134 $\frac{1}{4}$ " wheelbase.

For quick identification, the F-30 is equipped with 10.50x16 tires, and the F-60S with 10.50x20 tires. The F-60T is easily identified by its short wheelbase.

These vehicles are equipped with the large transfer case, having two speed ranges, 1:1 and 1.87:1. Provision is also made for a power winch as optional equipment.

The following body options are available.
F-30 134 $\frac{1}{4}$ " W.B.

M.G.O.
Q.M.G.
L.A.A.T.

The F-60L 158 $\frac{1}{4}$ " W.B. 4x4 has the following body options:

Wrecker	General Service
Workshop	Anti-tank Portee 6 pounder
Tractor	Ambulance
Stores	

The F-60S 134 $\frac{1}{4}$ " W.B. has the following body options:

G.S.
Derrick
Dump

The F-60T, 115" wheelbase is supplied as a tractor only.