

R.A.A.F. Publication No. 562
(2nd Edition)

M660-C1

MAINTENANCE MANUAL

CANADIAN MILITARY PATTERN

3 Ton 6 x 6
(Chassis and Cab Only)



General Motors Products of Canada Limited

Ottawa Ontario Canada

SEPTEMBER, 1945

PRINTED IN CANADA

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Changes and additions to the basic
Maintenance Manual will be covered
by Service Information Bulletins.



General Motors Products of Canada, Ltd.
OSHAWA, ONTARIO, CANADA

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INTRODUCTION

This publication contains complete descriptive information and maintenance data covering the Canadian Military Pattern 3 Ton 6 x 6 chassis.

The Manual is arranged in sections as shown in the "Section Index" on the preceding page. A complete index of individual subjects is contained at the end of the Manual.

A ruled page is provided at the end of each section for the notation of modifications to the manual which will be supplied in bulletin form.

GENERAL DESCRIPTION

The Canadian Military Pattern chassis described in this manual is primarily designed for cross country service over unimproved roads and difficult grades, trailing reasonable loads if required. It is powered with a 6 cylinder G.M.C. valve-in-head engine having 269.52 cu. in. displacement, governed at 2750 R.P.M.

The power from the engine is transmitted through a single dry disc clutch to the transmission which has four speeds forward and one reverse. The transmission is close-coupled to a transfer case by means of a short propellor shaft having a needle bearing universal joint at each end. The transfer case has a high and low gear ratio and is connected to the front axle, the front rear axle, and the rear rear axle by separate propellor shafts.

The drive is normally through the two rear axles only. The front axle drive is to be used only when operating under adverse conditions where six wheel drive is essential in order to provide traction.

The front, front rear, and rear rear axles are of the full floating type, having identical differentials. The front axle is equipped with constant velocity universal joints to enable the front wheels to be turned for steering while they are driving.

The foot brake is hydraulically operated and acts on all six wheels. A vacuum booster cylinder is attached to the brake linkage to assist in brake application. The hand brake is mechanically operated and is independent of the foot brake. It acts on the drive shaft connected to the front rear axle and is located directly behind the transfer case.

The rear springs are of the inverted semi-elliptic type, with the centre of the springs held to the spring seats by U-Bolts. The ends of the springs ride in brackets on the axle housings. The drive torque from the rear axles is taken through radius rods.

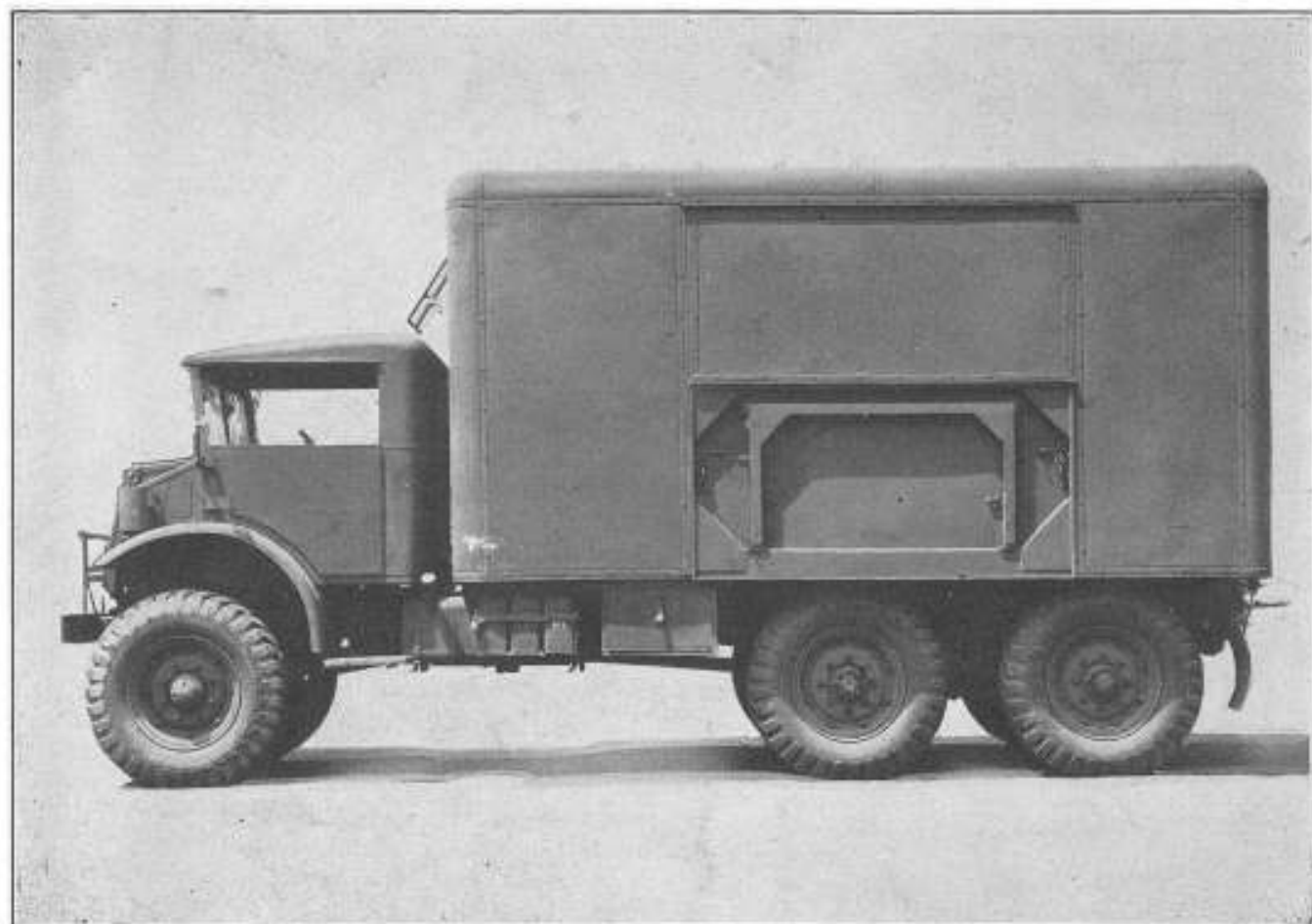
Various types of bodies and equipment are optional with this chassis, as described on the following pages.



3 TON 6 x 6 CHASSIS

The following is a representative list of special body types and equipment which are mounted on the G.M. 3 Ton 6 x 6 chassis illustrated above:

BODY TYPE	EQUIPMENT
Machinery Lorry, R.E. (E. & M.)	7½ K.W. Engine Generator, and General Electrical and Mechanical Repair Equipment.
Machinery Lorry "B"	Milling and Drilling Equipment.
Machinery Lorry "C"	7½ K.W. Engine Generator, 14" Long Bed Lathe.
Machinery Lorry "F"	7½ K.W. Engine Generator, Electrical Test and Repair Equipment.



3 TON 6 x 6 WITH M.G.O. STORES BODY

BODY TYPE

Machinery Lorry "H"

Machinery Lorry "L"

Q.M.G. W/S Lorry

M.G.O. Stores

Q.M.G. Stores

EQUIPMENT

Heavy Turning, 24" Long Bed Lathe.

Wood Working Equipment.

7½ K.W. Engine Generator Bench Grinder and Bench Drill.

M.T. Spares.

M.T. Spares.

Chassis Record Name Plate

A chassis record name plate, illustrated below, is assembled to each vehicle. The plate is located on the top of the instrument panel along with the "Vehicle Model" and "Publications" plate. (The numbers shown in the illustration below are only typical and, therefore, must not be quoted).

GENERAL MOTORS OF CANADA LTD.	
OSHAWA, CANADA	
CHASSIS MODEL	C-60660-M
CAB MODEL	13
CHASSIS SERIAL	2866010756
ENGINE SERIAL	27069495
ORDER No.	LV587
DATE OF MFG.	MAY 29-42

The chassis model number "C-60660-M" is a code set up to identify the particular chassis type. The letter on the left "C" indicates the chassis manufacturer, in this case, General Motors of Canada Limited. The letter on the right "M" indicates the pattern, whether Military (M) or Commercial (C). The group of numbers between the letters represents the general chassis type;—the first digit from the right indicates the wheelbase (last digit); in this case the "0" represents a wheelbase of 160". The second digit from the right "6" is the number of driving wheels. The third digit from the right "6" is the number of road wheels. The fourth and fifth digits from the right are the rated capacity in cwts.

The cab model number—13— is a code representing the model of the cab. The first digit indicates the pattern of the cab; the second indicates the class of modification (first, second or third design).

The Chassis Serial Number—2866010756—is an example of the number used to distinguish one chassis from another of the same model. The first five digits of the group represent the year the chassis was built and the Factory series number. The last five represent the number of the chassis in order of manufacture, beginning at 00001, for the model year.

The figures after "Engine Serial" are merely a Serial Number of the engine and will correspond with the number stamped on a boss located on the right hand side of the engine next to the ignition distributor.

The figures and letters shown after "Order No." on the plate, indicate the "Spdy/Mech" or "Contract Demand" number on which the vehicle was ordered by the British or Canadian Government respectively.

A thorough knowledge of the Serial and Model Numbers is important, as only through such knowledge can one appreciate the necessity for quoting Serial Numbers completely in connection with Parts Orders, etc.

Vehicle Model Plate

VEHICLE MODEL
C-60660-M-MACH-A-1

A vehicle model plate, shown above, is assembled to each vehicle. The plate is located on top of the instrument panel beside the Chassis Record Name Plate. (The numbers shown in the illustration are only typical and, therefore, must not be quoted).

The first seven places in the vehicle model number (C-60660-M on the example above) are identical with the Chassis Model Number shown on the Chassis Record Name Plate. An explanation of this code has been previously given. The last six places in the model number (MACH-A-1 in the example above) indicate that the vehicle is a Machinery Lorry of the "A" Type and the figure "1" designates that it is the first engineering design. A similar code is used to designate each of the various body types which may be mounted on the chassis.

Publications Plate

To accurately identify this Manual with the vehicle to which it applies, a "Publications Plate", as illustrated below, has been assembled to the panel in front of the steering wheel. This plate will be stamped with the symbol shown on the cover of the applicable manual (in this case M660-C1). The correct Spare Parts List is indicated in the same manner (in this case C60X-C1).

PUBLICATIONS APPLYING TO THIS VEHICLE	
<input type="radio"/> SPARE PARTS LIST	<input type="radio"/>
<input type="radio"/> MAINTENANCE MANUAL	<input type="radio"/>

When making reference to a Manual or Parts List, first determine that the identifying symbol corresponds to that stamped on the "Publications Plate".

It is to be noted that there is a separate Manual for each body type and its equipment. A separate "Publications Plate" for this Manual is mounted in the body.

Model Identification

Model Designation	Rated Capacity and Type	Wheelbase	G.M. Series Number
C-60X	3 Ton 6 x 6	160"	8660

General Data

ENGINE

Type	270
Horse Power—S.A.E.	34.35
Displacement—Cu. In.	269.52
Bore	3-25/32"
Stroke	4"
Cylinders	6
Engine Governed Speed—Maximum	2750 R.P.M.
Torque—Ft. lbs.	220 at 1800 R.P.M.

CAPACITIES

Fuel Tanks (Total)	24 gals.
Engine Crankcase—Dry ..	8 qts.
Engine Crankcase—Refill	7 qts.
Oil Bath Air Cleaner	1-2/3 pts.
Cooling System	15 3/4 qts.
Transmission	3 qts.
Transfer Case	3-2/3 pts.
Front Axle Differential	7 1/2 pts.
Rear Axle Differentials (each)	7 1/2 pts.

ENGINE ADJUSTMENTS

Intake Valve Clearance—Hot012"
Exhaust Valve Clearance—Hot012"
Distributor Point Opening018"-.024"
Spark Plug Type.....	AC-44
Spark Plug Gap025"

CLUTCH

Type	Single Dry Disc
Diameter	11 1/2"
Clutch Pedal Lash	1"

TRANSMISSION 4-speed

DRIVE Hotchkiss

TRANSFER CASE 2-speed

AXLE RATIOS 7.16 to 1

BRIDGE CLASSIFICATION DATA

Allowable Gross Weight	18000 lbs.
Wheelbase	160 1/2"

Track

Front	70 1/2"
Rear	69"

Tires

Type	Pneumatic or Run Flat
Size	10.50 x 20

Pressures—

Recommended tire pressures for any particular vehicle body type will be found in the special body equipment manual. They may also be accurately determined from the load inflation tables given in section "D" of this manual, by first obtaining actual loading per tire.

Overall Width of Vehicle (at front fenders) 83"

Overall Length of Vehicle (Front Bumper to rear of frame) 246-3/16"

Overall Height (to top of Cab) 91-3/32"

Road Clearance

Axle Differentials to ground	11 1/8"
Lowest point under centre of chassis	19 3/4"

