

# GENERAL MOTORS

## LOCOMOTIVES



### *Operation*

GENERAL MOTORS CORPORATION

GENERAL MOTORS OVERSEAS OPERATIONS

300 NORTH ZEEB ROAD, WARREN, U.S.A.

LOCOMOTIVE DIVISION

SAINT-ETIENNE, FRANCE

**DIESEL-ELECTRIC  
LOCOMOTIVE  
OPERATING  
MANUAL**

**NO. 2352**

**FOR  
MODEL "G"  
GENERAL PURPOSE  
LOCOMOTIVES**

2ND EDITION

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**GENERAL MOTORS CORPORATION**

GENERAL MOTORS OVERSEAS OPERATIONS

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## INTRODUCTION

The purpose of this manual is to aid and guide those involved in the operation of General Motors Model "G" locomotives. Much of the information contained herein will also be of definite interest to those concerned with the maintenance of these locomotives.

The first three sections of the manual present the necessary information to enable the driver to successfully operate the locomotive "over the road." A general description and location of the component parts is contained in each Section. Section 1 is devoted to a general description of the locomotive and components. Section 2 outlines the recommended procedures to be followed for successful operation of the locomotive equipment. A description and general operation of the most commonly used "extras," including dynamic brakes, is found at the end of Section 2. Section 3 outlines the possible causes, location and correction of difficulties that may be encountered while "on the road."

Sections 4 and 5 of the manual have been included for those who desire a more thorough knowledge of the locomotive's Systems and Electrical equipment. Charts and wiring diagrams are used to illustrate the descriptive material.

Principal articles of each section are numbered consecutively for ready reference, as is each page of the section. Articles and pages are numbered in the 100 series type of numbering. A page in the 400's is in Section 4 as is article numbered in the 400's.

No attempt has been made in this manual to cover all of the various versions of the Model "G" locomotive, as such would confuse rather than assist the reader; however, those components which are considered as

"basic" and those which may be desirable to the customer to fulfill the requirements of operation under special conditions, are explained in general. Some of the variations may include any number or all of the following "non-basic" features:

1. Vacuum Brake Equipment
2. Dynamic Brake Equipment
3. Six Wheel Trucks
4. Narrow or Meter Gauge Trucks
5. D19 Traction Motors
6. Buffer Type Couplers
7. Extended Engine Air Intake Ducts
8. Extended Exhaust Stacks
9. Overnight Heaters

GENERAL DATA  
BASIC MODEL "G" LOCOMOTIVES  
GENERAL

	<u>G8</u>	<u>G12</u>
Traction HP Rating	875	1310
Gross HP Rating	950	1425
Test HP Rating (100 hrs.)	1100	1650
Engine Model	8-567C	12-567C
Number of Cylinders	8	12
Bore	{ 8-1/2" (216 mm)	8-1/2" (216 mm)
Stroke	{ 10" (254 mm)	10" (254 mm)
Compression Ratio	16:1	16:1
Total Displacement	{ 4536 cu. in. 74.35 liters	6804 cu. in. 111.52 liters
Main Generator Model	D15	D12
Auxiliary Generator Model	10KW	10KW

ESTIMATED WEIGHTS

Dry Body Weight	{ 87,385 Lbs.	96,945 Lbs.
(Less Trucks)	{ 39,630 Kg.	43,966 Kg.

Meter Gauge Locomotives

Min. Total - 4-Wheel Truck	{ 150,800 Lbs.	160,400 Lbs.
(Fully Loaded)	{ 68,390 Kg.	72,740 Kg.
Min. Total - 6-Wheel Truck	{ 162,925 Lbs.	172,500 Lbs.
(Fully Loaded)	{ 73,885 Kg.	78,230 Kg.

## GENERAL DATA (Cont'd)

	<u>G8</u>	<u>G12</u>
Min. Total - 4-Wheel Truck (Fully Loaded)	{ 160,550 Lbs. 72,810 Kg.	170,100 Lbs. 77,140 Kg.
Min. Total - 6-Wheel Truck (Fully Loaded)	{ 173,100 Lbs. 78,500 Kg.	182,700 Lbs. 82,545 Kg.

## Single Trucks With Motors

	<u>4-Wheel</u>	<u>6-Wheel</u>
Standard Gauge (D37 Motors)	{ 30,000 Lbs. 13,600 Kg.	35,000 Lbs. 15,850 Kg.
Meter Gauge (D19 Motors)	{ 25,000 Lbs. 11,300 Kg.	30,000 Lbs. 13,600 Kg.

## SUPPLIES

	<u>G8</u>	<u>G12</u>
Lubricating Oil	{ U.S. Gals. 130 Imp. Gals. 108 Liters 492	165 137 625
Cooling Water	{ U.S. Gals. 190 Imp. Gals. 159 Liters 719	214 179 810
Fuel Oil	{ U.S. Gals. 750 Imp. Gals. 624 Liters 2840	750 624 2840
Sand	{ Cu. Ft. 12 Cu. Meters .34	12 .34

## GENERAL DATA (Cont'd)

## AXLE LOADING

		<u>G8</u>	<u>G12</u>
Meter Gauge			
0440 Truck	Metric Tons	17.10	18.19
	Lbs.	37,700	40,100
	Tons	18.85	20.05
0660 Truck (Minimum)	Metric Tons	12.32	13.04
	Lbs.	27,155	28,750
	Tons	13.58	14.38
0660 Truck (Maximum)	Metric Tons	16.21	17.29
	Lbs.	35,730	38,125
	Tons	17.87	19.06

## Standard Gauge

0440 Truck	Metric Tons	18.20	19.29
	Lbs.	40,135	42,525
	Tons	20.07	21.26
0660 Truck (Minimum)	Metric Tons	13.09	13.81
	Lbs.	28,850	30,450
	Tons	14.43	15.23
0660 Truck (Maximum)	Metric Tons	17.36	18.45
	Lbs.	38,275	40,675
	Tons	19.14	20.38

## DIMENSIONS - ALL MODELS

	<u>Feet</u>	<u>Meters</u>
End Sill To Centerline Of Truck	9' 0"	2.743
Between Bolster Centers	25' 0"	7.620
Front End Sill To Rear End Sill	43' 0"	13.106

## GENERAL DATA (Cont'd)

	<u>Feet</u>	<u>Meters</u>
Wheel Base - 4-Wheel Truck	8' 0"	2.438
Wheel Base - 6-Wheel Truck	10' 6"	3.200
Width Over Handholds	9' 3"	2.819
Overall Height	12' 4"	3.759
Diameter of Driving Wheels	40"	1.016
Diameter of Idler Wheel (6-Wheel Truck)	30"	.762
Roller Bearing Journals (All Axles)	5-1/2" × 10" -	- 140mm × 254mm
Minimum Curve Radius	193' 0"	58.82
Track Gauge (per requirement)	1 Meter to 5' 6"	

NOTE: Specifications Subject to Change.

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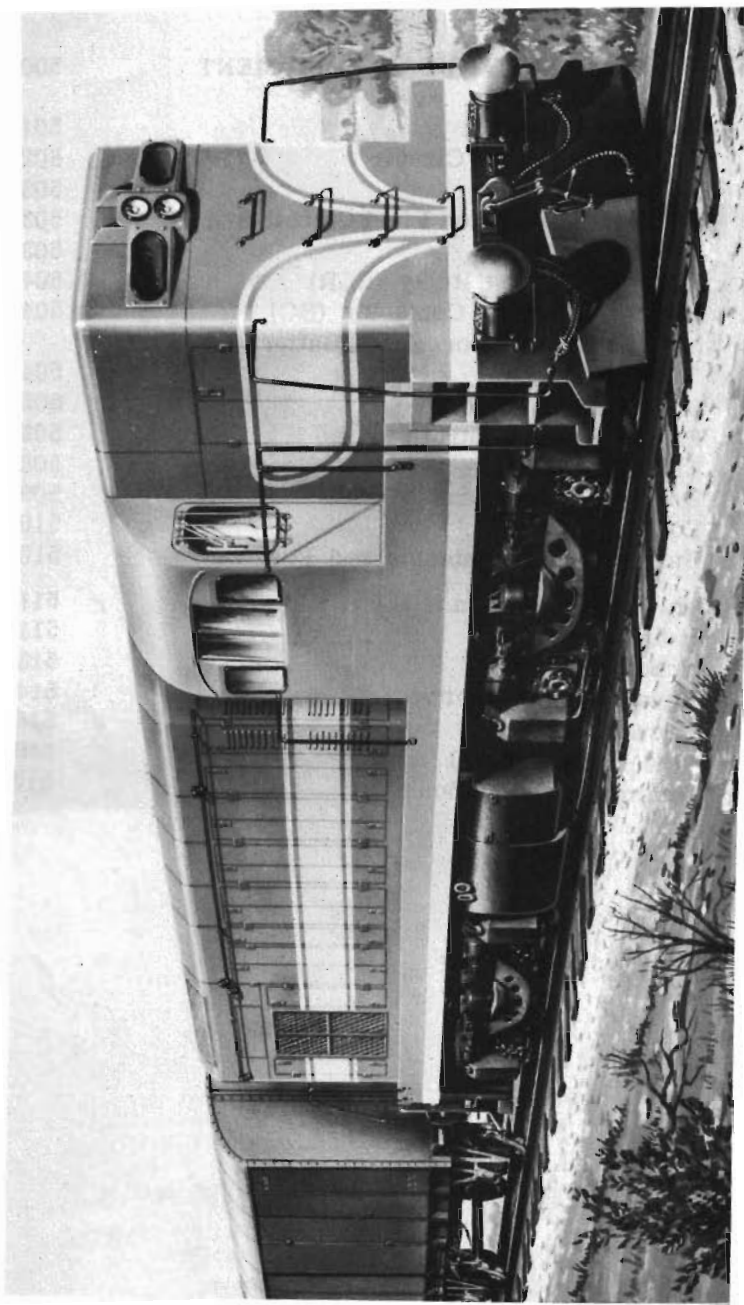
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