GENERAL MOTORS LOCOMOTIVES

Operation

GENERAL MOTORS CORPORATION
GENERAL MOTORS OVERSEAS OPERATIONS
NEW YORK 22, N.Y., U.S.A.
ELECTRO-MOTIVE DIVISION
LA GRANGE, ILL., U.S.A.

DIESEL-ELECTRIC LOCOMOTIVE OPERATING MANUAL

NO. 2352

FOR MODEL "G" GENERAL PURPOSE LOCOMOTIVES

2ND EDITION

JUNE, 1956

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PRINTED IN U.S.A.

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 any 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

	G8	G12
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 (Less Trucks)	87,385 Lbs. 39,630 Kg.	96,945 Lbs. 43,966 Kg.
Meter Gauge Locomotives		
Min. Total — 4-Wheel Truck (Fully Loaded)	150,800 Lbs. 68,390 Kg.	160,400 Lbs. 72,740 Kg.
Min. Total — 6-Wheel Truck (Fully Loaded)	162,925 Lbs. 73,885 Kg.	172,500 Lbs. 78,230 Kg.

GENERAL DATA (Cont'd)

	G8	G12
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

	4-Wheel	6-Wheel
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

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

GENERAL DATA (Cont'd)

AXLE LOADING

		G8	G12
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

	Feet	Meters
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)

	Feet	Meters
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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