

## 2400 H.P. PASSENGER LOCOMOTIVE

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	INSTRUMENT ALL REAL STAND FRINCED SASK MAIN GENERATOR & TAIN WATCH. SAND BOX WINGED SASK BATTERIES MARKER LIGHT TAIN VENT TAIN	
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double dependability—two engines per unit horsepower increased to 2400—greater tractive effort new high-speed wheel-slip control



### **GENERAL MOTORS E9 PASSENGER LOCOMOTIVE**

Among the many good reasons why General Motors locomotives pull a majority of America's fastest-scheduled trains are these:

Ability to maintain high speed schedules. Rapid acceleration of heavy trains due to high initial tractive effort.

Better riding qualities due to Electro-Motive system of load suspension, lightest weight on drivers compatible with traction and even distribution of weight upon all axles.

Sufficient fuel and boiler water capacity to permit long runs between service stops.

To all these basic advantages, the great new E9 brings the addition of higher horsepower in its two 12-cylinder 567C engines, along with higher-capacity D-37 traction motors; new six-year maintenance-free control apparatus; new high-speed wheelslip control; new gear case with stable lubricant.

Even more than its famous predecessors, this new 2400-horsepower locomotive ideally meets the demands of single-unit passenger service, because two engines plus availability of two steam generators per unit provide 100% factor of safety in both propulsion and train heating.

#### SPECIFICATIONS

#### DIMENSIONS

Length over coupler pulling faces	70'- 3"
Width over hand holds	10'- 8"
Height above rails	14'-101/2"
Distance between truck centers	43'- 0"
Truck rigid wheelbase	14'- 1"
Wheel diameter	36"
Minimum curve radius	274'- 0"

#### SUPPLIES

Fuel oil	1,200 gals.	
Boiler water	1,350 gals.	
Lubricating oil (2 engines)	330 gals.	
Cooling water (2 engines)	436 gals.	
Sand	18 cu. ft.	

#### WEIGHT

Total weight fully loaded approximately

324,800 lbs.





The E9 locomotive offers a choice of 4 different gear ratios to meet a wide range of services. Not only can the locomotive be more exactly fitted to conditions on a given railroad at time of delivery, but it can be quickly and economically tailored to meet changing conditions at any time by simply changing gears and pinions.

GEAR RATIO			
OPTION	GEARING	MAX. SPEED	
1	57:20	85	
2	56:21	92	
3	55:22	98	
4	52:25	117	



#### ENGINE

The E9 locomotive is powered by two 12-567C Diesel engines, each rated at 1200 H.P. The new "C" model is the latest development in the 567 series of General Motors 2-cycle V-type engines which power 70% of the world's main line Diesel trains. Designed for longer service life with greatly reduced maintenance, this new engine features the following improvements: 1) Entirely new crankcase with heavier frame members, 2) New cylinder head, 3) new cylinder liner with extended water jacket, 4) new replaceable-tube water inlet manifold, 5) new water jumper lines to individual liners and heads, 6) new trunnion rod and piston carrier, 7) new replaceable wear ring between liner and stress plate, 8) new handhole covers and seals, 9) new top deck covers and seals.

#### MAIN GENERATOR

The new AC-DC generator, really two generators in one, provides direct current for driving the traction motors and alternating current for operating the engine cooling fans and traction motor blowers. It is the result of more than a quarter century of experience dating back to the development of the first successful variable voltage generator which made possible the practical application of the internal combustion engine to railroad service. It is a rugged, compact unit, easily accessible for service.



#### TRACTION MOTOR

The new D37 traction motor, used on all General Motors locomotives, comprises a number of electrical and mechanical improvements that substantially increase performance, while eliminating short-time ratings in most applications. Due to these improvements both stator and armature can operate at higher ratings with lower temperatures, resulting in longer life, less maintenance, and fewer removals for dipping and baking. New grease-lubricated pinion-end armature bearings, sealed for the regular overhaul period, further reduce maintenance. And all new features are in line with Electro-Motive's policy of designing improvements to be applicable to older assemblies.





#### TRUCKS

The 2-motor 6-wheel truck used on the E9 locomotive is designed for smoother operation in the upper high-speed range, the middle wheels being employed to aid in weight distribution only. Outside swing-hanger suspension (an Electro-Motive development) provides for increased stability on curves, better riding qualities and reduced body roll. Specially designed journal boxes with protection against lateral impacts through a built-in thrust arrangement, and roller bearing journals, are standard equipment.



# ELECTRO-MOTIVE DIVISION GENERAL MOTORS

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