



4050 H.P. DIESEL FREIGHT LOCOMOTIVE . . DESIGNED AND BUILT BY ELECTRO-MOTIVE DIVISION . . GENERAL MOTORS . . LA GRANGE, ILLINOIS, U. S. A.

# 4050 H.P. DIESEL FREIGHT LOCOMOTIVE

*Designed and Built For*

## THE MINNEAPOLIS & ST. LOUIS RAILWAY COMPANY

BY ELECTRO-MOTIVE DIVISION • GENERAL MOTORS CORPORATION • LA GRANGE, ILLINOIS

This Diesel Freight Locomotive consists of two lead units and one booster unit arranged for double end control from either cab, each being equipped with one General Motors, sixteen cylinder, V-type, 2 cycle Diesel engine having a bore of 8½", stroke 10" with unit injection system, rated at 1350 H.P. at 800 R.P.M., and developing a total of 4050 H.P. Each engine is direct connected to a D.C. generator, the current of which is distributed to the traction motors mounted on the trucks which in turn are geared to the axles. There are a total of six 4-wheel trucks under the three units comprising this locomotive, each being equipped with two traction motors or a total of twelve

motors geared for a maximum speed of 65 M.P.H. All three engines are arranged for multiple control from either of the operator's cabs.

This locomotive is equipped with an infinitely variable speed *Electric Brake* which utilizes the traction motors for braking action, dissipating the electric current so generated through resistance grids located in the roof of the locomotive. This *Electric Brake* will develop a maximum braking effort of 73,500 lbs. at 17 M.P.H. and is capable of holding a large tonnage train on long mountainous grades without application of the ordinary air brakes.

### S P E C I F I C A T I O N S

#### D I M E N S I O N S

Overall length over couplers.....	140'-0"
Maximum width over grab irons.....	10'-6 <sup>7</sup> / <sub>8</sub> "
Width over body posts.....	9'-10"
Height over all, above rails.....	15'-0"
Wheel diameter.....	40"
Rigid wheel base of trucks.....	9'-0"
Roller bearing journals.....	6 <sup>1</sup> / <sub>2</sub> "x12"
Truck swing designed for 21° curve or 274-foot radius	
Distance between truck centers on lead unit.....	27'-3"
Distance between truck centers on booster unit.....	26'-6"

#### S U P P L I E S

Fuel oil.....	4800 gals.
Sand.....	76 cu. ft.
Lubricating oil (180 gals. per engine).....	540 gals.
Engine cooling water (250 lead-225 booster) . . .	725 gals.

#### W E I G H T S

Total weight fully loaded.....	692,200 lbs.
Weight of locomotive with one-half of variable supplies.....	674,350 lbs.
Maximum tractive effort at rim of driving wheels at 25% adhesion.....	168,500 lbs.

