EMD’S 4,300 HORSEPOWER “SD70M” LOCOMOTIVE

The SD70M: Highly Reliable and Versatile DC Power

**Performance Specifications**
- 4,300 THP locomotive equipped with EMD’s 16-710G3C-T1 engine
- Ttractive and braking effort capability with half-worn 1092 mm wheels:
  - 51,000 kg continuous TE at 19.7 km/h
  - 74,000 kg starting TE
  - 39,400 kg braking effort
- 12.2% improvement in fuel efficiency and reduced emissions compared with SD40-2 with 16-645E3B engine

**Reliability and Serviceability**
- True 92-day maintenance intervals
  - Oil-filled gear cases
  - Tapered roller support bearings
- Advanced EM2000 microprocessor control
  - Increased speed and efficiency
  - Reduced parts and increased reliability
  - Improved diagnostic capability
- Extended engine overhaul period
- Reliable & durable D90TR traction motors
- HTSC2 bogie with fewer wear components

**Performance Impact**
- The SD70M locomotive provides potential for unit reduction, fuel savings and additional revenue tonnage capability over SD40-2 locomotives
- Train simulations indicate that three (3) SD70M’s can replace four (4) SD40-2’s

**Safety Aspects**
- Satisfies FRA/AAR crashworthiness requirements
- Impact-resistant fuel tank minimizes spills and leakage
- 450,000 kg buff load capacity
- 450,000 kg collision posts for increased crew protection
- Frame-mounted anti-climbers improve crew and equipment protection

SD70M Fact Sheet  April 2006
EMD’S 4,300 HORSEPOWER “SD70M” LOCOMOTIVE

The “SD70M” General Outline: Basic Locomotive Features

BASIC FEATURES

Specifications
- Total weight on rails: 180,000 kg
- Height (top of rail to top of cooling fan): 4.76 meters
- Overall length: 22.05 meters
- Fuel capacity: 18,500 liters
- Lube oil capacity: 1,650 liters
- Cooling water capacity: 1,045 liters

Engine
- 16-710G3C-T1
- High efficiency turbocharger
- Reduced emissions

DC Traction Technology
- AR20/CA7 generator/alternator
- D90TR traction motors
  - Seal tapered roller bearings
  - D100 armature
  - Oil-filled gear cases
  - Eliminates wick lubricators
  - Provisioned for speed sensor
- Traction motor management system
  - Protects traction motors from abuse

Air System
- Integrated Knorr CCB-II single MU pipe air brake system
- Direct-drive air compressor

HTSC2 Bogie
- 1,600 mm gauge bolsterless bogie
- Higher speed stability
- Reduced component wear extends bogie overhaul intervals
- Enhanced adhesion over conventional 3-axle trucks
- Optional HTCR bogie in 1,435 mm gauge

EM2000 Advanced Computer
- Utilizes 32-bit microprocessor
- Reduction in modules and components compared to 60-Series and Dash-2
- Improved reliability and performance
- Information can be downloaded to a laptop computer
- Flexible and expandable to accommodate future system enhancements

Impact-Resistant Fuel Tank
- Increased tank skin thickness
- Redesigned end sheets to reduce peeling potential in collisions
- Redesigned structure for increased tank strength
- Optional electronic fuel gauge

SD70M Fact Sheet
April 2006
EMD’S 4,300 HORSEPOWER “SD70M” LOCOMOTIVE

Cab Arrangement with Modified AAR Style Control Stand

BASIC AND OPTIONAL FEATURES

Cab Features
- Two (2) seat crew arrangement
- Air conditioning
- Air-operated windshield wipers
- Desk-style control console

Other Optional Components
- Integrated distributed power
- Maximum life power assemblies

Optional Crew Amenities
- Various cab seat selections
- Refrigerator/water cooler
- Toilet applications
- Cab appurtenances
- 115 volt AC electrical outlet
For Further Information Contact  
Electro-Motive Inquiry Group  
Telephone: +1 (708) 387-5853  
Fax: +1 (708) 387-5239  
or  
Visit our website  
www.emdiesels.com

Important: A Word About This Brochure  
EMD reserves the right to make changes to the  
features and specifications noted within, at any time without notice.

©2006 Electro-Motive Diesel, Inc. All rights reserved. Neither this brochure, nor any part thereof,  
may be printed without the express written consent of Electro-Motive Diesel, Inc.