The SD70ACe-T4™ Locomotive

The Next Generation of Progress

WORLD-CLASS FUEL EFFICIENCY
Designed to lower emissions while optimizing fuel efficiency

LEADING RELIABILITY
Robust design and validation with service-proven systems for reliable performance

EASE OF MAINTENANCE
Locomotive systems and components strategically located for easy access

ENHANCED CREW SAFETY AND COMFORT
Engineered for increased visibility, reduced noise and vibration and ergonomics

ADVANCED ELECTRONICS
Improved asset utilization, optimized efficiency and performance

LOWER EMISSIONS AND COSTS
Meets EPA Tier 4 emissions standards without urea after-treatment

ELECTRO-MOTIVE®

Loaded with Technology

EMD's new Tier 4 locomotive was developed utilizing cutting-edge technologies.

VALUE-ADDED LOCOMOTIVE FEATURES

- EMD 12-Cylinder 1010 Engine
- Enhanced AC Traction Motors
- Locomotive Cab Designed for Safety and Ergonomics
- Individual Axle Control

OTHER KEY FEATURES

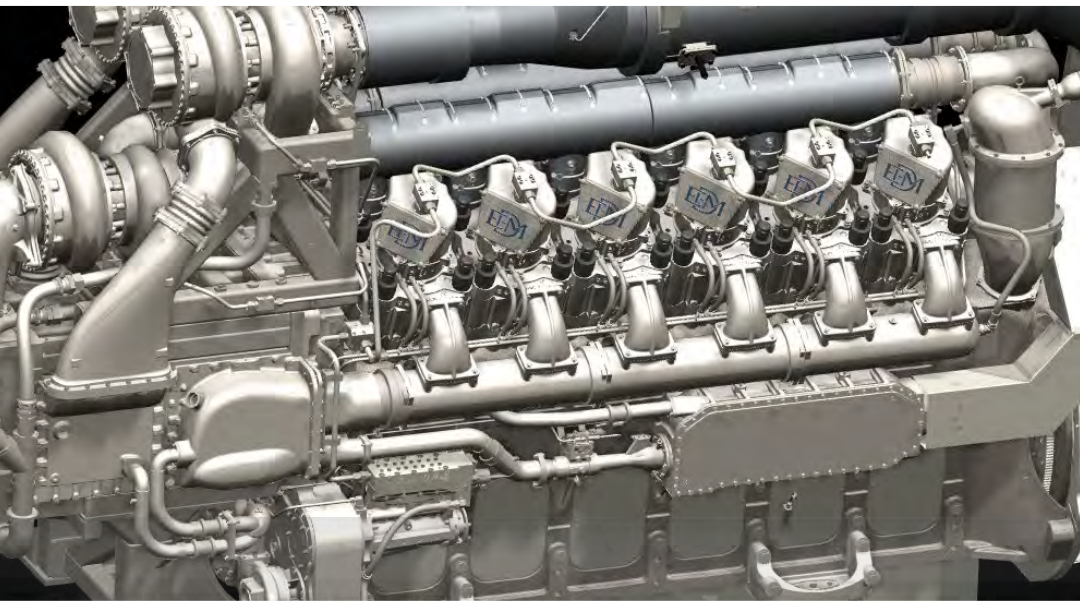
- Inverter Driven Accessories
- Motor Driven Air Compressor
- Automatic Winterization Shutters
- High Capacity Oil Filtration

DESIGN, DEVELOPMENT AND VALIDATION

The Caterpillar CAVE™ – an immersive visualization system – was integral to the design and development of the SD70ACe-T4. This highly advanced technology provides a 3D, 1:1 scale, interactive environment allowing EMD design experts, service professionals and railroad customers to walk through the locomotive in virtual reality.

EMD 12-Cylinder 1010™ Engine

The 4600 BHP 1010 Engine was developed utilizing the combined engineering expertise and resources of EMD, PRS and Caterpillar.



SUSTAINABILITY

Meets EPA Tier 4 standards without urea after treatment, providing substantial savings for the railroads

ENGINEERED FOR FUEL SAVINGS

Meets Tier 4 emissions standards with world-class fuel efficiency

DOUBLE-WALLED FUEL INJECTION SYSTEM

Provides increased safety and simplified maintenance

TWO-STAGE TURBOCHARGING

EMD turbos are custom designed to optimize locomotive performance across operating environments

ISOLATED POWERTRAIN

Reduced noise and vibration, increased reliability and less maintenance for surrounding parts

ALTERNATOR START

Increased engine start reliability and reduced maintenance

PE-9961-02

PROGRESS RAIL SERVICES
A Caterpillar Company

Operator Cab

The redesigned cab provides increased safety and comfort for the locomotive crew.

ENHANCED SAFETY

Increases visibility with larger, sloped, teardrop windshield

Adds egress window for crew safety

Provides fifth step on all corner stairs for ease of boarding

DESIGNED FOR COMFORT

Reduces noise and vibration

Provides additional head room

Features larger conductor's workspace

Offers standard LED lighting with four times more light

Traction System and Bogies

Simple and robust designs with high performance.

INDIVIDUAL AXLE CONTROL

Improved mission reliability performance and maintenance

ENHANCED AC TRACTION MOTORS

Improved reliability and productivity, together with increased hauling power

RADIAL BOGIES

Offers increased adhesion with proven ride quality and maintainability

ELECTRO-MOTIVE®

The SD70ACe-T4 Locomotive

Electro-Motive heard very clearly from our railroad customers that reliability and efficiency drive total cost of ownership. With that we set out to develop the SD70ACe-T4 locomotive to reduce NOx by an additional 80 percent and particulates by 70 percent – while delivering world-class fuel efficiency…and the leading reliability, maintainability and safety the railroads expect from EMD locomotives.

Our new Tier 4 locomotive meets the stringent emissions regulations without the use of urea after-treatment – resulting in substantial savings for the railroads.

In fact, our Tier 4 locomotive is the result of the combined expertise and resources of the EMD, PRS and Caterpillar engineering teams and state-of-the-art design and validation tools and facilities — all driven by the mission to achieve life cycle cost optimization for the railroads.

SD70ACe-T4™ Technical Details

Traction Horsepower	4400 THP
Continuous Tractive Effort	175,000 lbs.
Starting Tractive Effort	200,000 lbs.
Dynamic Braking Effort	105,000 lbs.
Maximum Speed	75 mph
Approximate Weight	428,000 lbs.
Length	76 ft. 8 in.
Height	15 ft. 11 in.
Fuel Capacity (useable)	4,800 gal.
Sand Capacity	55 cu. ft.