



# LOCOMOTIVES



## SD70ACe-T4™ Freight Locomotive

Progress Rail heard very clearly from our railroad customers that reliability and efficiency drive total cost of ownership. With that we engineered 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 provides a solution specifically tailored to North American railroad operations, meeting stringent emissions regulations without the use of urea and providing substantial savings for railroad applications.

In fact, our Tier 4 locomotive is the result of the combined expertise and resources of the Progress Rail 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 Freight Locomotive Features and Benefits

- ▶ **EMD 12-cylinder 1010™ engine**
  - > Meets EPA Tier 4 standards without urea aftertreatment while optimizing fuel efficiency
  - > Double-walled fuel injection system for increased safety and simplified maintenance
- ▶ **Cab designed for operator safety and comfort**
- ▶ **Isolated powertrain for reduced noise and vibration, increased reliability and less maintenance**
- ▶ **Enhanced AC traction motors for improved reliability, productivity and hauling power**
- ▶ **Individual Axle Control for enhanced mission reliability, performance and maintenance**
- ▶ **Inverter driven accessories for improved fuel economy**
- ▶ **Motor Driven Air Compressor**
- ▶ **High Capacity Oil Filtration**
- ▶ **Advanced electronics for improved asset utilization, optimized efficiency and performance**

## SD70ACe-T4 - Locomotive Technical Details

	SD70ACe-T4
<b>Number of Axles / Powered</b>	6 / 6
<b>Brake Horsepower</b>	4,600 BHP
<b>Traction Horsepower</b>	4,400 THP
<b>Maximum Speed</b>	75 mph
<b>Continuous Tractive Effort</b>	175,000 lbs.
<b>Starting Tractive Effort</b>	200,000 lbs.
<b>Dynamic Braking Effort</b>	105,000 lbs.
<b>Weight</b>	428,000 lbs.
<b>Length</b>	76 ft. 8 in.
<b>Height</b>	15 ft. 11 in.
<b>Fuel Capacity (usable)</b>	4,800 gal.
<b>Designed for</b>	North America

## Design, Development and Validation

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