



LOCOMOTIVES



710 ECO™ REPOWER

710ECO™ Repowers extend locomotive life for up to 40 years and lower life cycle costs by equipping older models with EMD 710 engines.

For more than 90 years, we have produced the most durable, reliable and sustainable locomotive products and services in the rail industry. We design and manufacture diesel-electric locomotives for all commercial rail applications, with 65,000 EMD-powered locomotives delivered to more than 75 countries. Our technology leadership and superior performance drive our reputation for exceptional quality, service and innovation.

Repower locomotives available from Progress Rail provide the greatest flexibility of any provider in the marketplace. By replacing old, inefficient engines, and antiquated control systems with new, state-of-the-art, clean technology, the next generation of single-engine locomotives are ready to provide reliable service for decades to come. Packages can be tailored to provide kits for customer installation or as complete turnkey solutions, both using the latest generation of EMD or Cat engines meeting the latest emissions standards along with a choice of control systems.

710 ECO™ REPOWER Features and Benefits

- ▶ Low emissions
- ▶ Fuel savings up to 25%
- ▶ Lube oil savings over 50%
- ▶ Increased all-weather adhesion
- ▶ 90% parts commonality with existing fleet
- ▶ Predictable 184-day maintenance intervals
- ▶ 30 years of demonstrated 710 engine reliability
- ▶ Available as a kit or repowered locomotive

EM2000™ Microprocessor Control System

- ▶ Excitation and load control
- ▶ Adhesion control
- ▶ Engine control
- ▶ Diagnostic system
- ▶ Archived unit history data

710ECO™ Repower Kit Contents

- ▶ 8 or 12-cylinder 710 engine
- ▶ AR10 / CA6 alternator
- ▶ Separate loop aftercooling system
- ▶ EM2000™ Microprocessor Control System
- ▶ Automatic Engine Start Stop (AESS™)

[RE]

use
new
manufacture
invest
cycle

Typical Improvement with a REpower

	EXISTING LOCOMOTIVE	REPOWER LOCOMOTIVE
Control System	Manual Control by Operator	EMD Microprocessor
Emissions	Unregulated	Up to US EPA Tier 3
NOx	Baseline	Over 50% NOx Reduction
Particulate Matter	Baseline	Over 70% PM Reduction
Nominal Traction Power	1,119 kW / 1,500 hp	1,491 kW / 2,000 hp
Starting Tractive Effort	274 kN / 61,500 lbf	390 kN / 87,500 lbf
Adhesion	Baseline	30% Improvement
Fuel Consumption	Baseline	25%+ Reduction

710ECO™ REpower Technical Details

Engine Model	8-710G3A-T3 / 12-710G3A-T3
Engine Type	Two Cycle - 45° Vee
Brake Power	2,320 hp / 3,150 hp
Number of Cylinders	8 / 12
Displacement Per Cylinder	710 cu. in.
Compression Ratio	18:1
Bore and Stroke	9.06 x 11 in.
Fuel Injectors	Electronic Unit Injection
Charge Air	Single Turbocharger
Low Idle Speed	200 rpm
Full Speed	904 rpm
Emissions Certification	US EPA Tier 3 and EU Stage III A
Alternator	AR10
Companion Alternator	CA6



EMD 8-710 Engine



EMD 12-710 Engine

Progress Rail
A Caterpillar Company

QUALITY. RELIABILITY. INNOVATION.

Progress moves you forward.

800-476-8769 | progressrail.com | [@Progress_Rail](https://twitter.com/Progress_Rail)