

ELECTRO MOTIVE.

Certified Emissions Kits for EMD Locomotives

Electro-Motive Diesel has provided emissions solutions for its engines for over 25 years and continues to lead the industry in emissions compliance. One of the EPA's guiding principles for the 40 CFR Part 1033 rule was to achieve sizeable reductions in emissions as early as possible. EMD has met this challenge. Its skilled emissions research team has used extensive iterative testing to develop the most advanced emission solutions for locomotive applications using EMD 645 and 710 engines.

System Integration

EMD's complete OEM system knowledge allows for the most reliable and fuel efficient emission kits. Meeting emissions is not a piece-part activity but a finely-tuned balance between emissions compliance and fuel efficiency. Reverse engineered parts lack the proven reliability, systems integration, and support that only the OEM can provide.

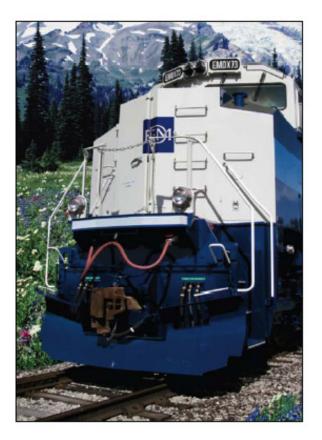
EPA Compliance

EPA 40 CFR Part 1033 requires locomotive engines, including all EMD models originally manufactured in 1973 or later, to meet strict particulate matter and NOx standards when overhauled. Installing an EPA certified EMD emissions kit ensures full regulatory compliance with Part 1033 requirements.

Emissions Kit Contents

EMD emissions kits include the following components:

- UL Power Assemblies
- OEM Emission Specification Fuel Injectors
- Aftercoolers and Plumbing (as needed)
- Software Upgrade (as required)
- Oil Separator and Fittings (as needed)
- Engine Emission Label
- Locomotive Emission Label
- Installation Instructions
- Kit Registration Card



EMD Emissions Solution Benefits

- OEM engineered, designed, and tested upgrades, which provide particulate matter and NOx reductions.
- Cuts lube oil consumption significantly.
- Fuel consumption is reduced or maintained at previous levels.
- Application of the kits per EMD Maintenance Instructions achieves full compliance with EPA regulations per 40 CFR Part 1033.

EMD Emissions Kit Availability

Kits are available for all EMD Model 645 and 710 locomotive engines.

The EMD OEM Advantage

EMD replacement parts are the result of extensive development and testing in the same engineering facilities where new EMD engines are designed, built, and tested. This OEM focus ensures the same performance, reliability, and durability for which EMD engines are legendary.

- OEM fuel injectors are fully remanufactured to precise internal specs vs. partially rebuilt retrofits. This ensures sustained fuel economy and emissions performance over their full useful life and avoids the operating penalties and expense of non-compliance.
- Power Assemblies and all emissions critical components are the result of fully integrated OEM design vs. partial substitution of non-optimized third party components.
- Engines and critical subsystems are carefully calibrated to optimize performance, reduce emissions, and minimize fuel consumption.
- EMD emissions kits require no cumbersome catalyst retrofits which can suffer from excessive backpressure, ash fouling, and extreme temperatures.
- EMD has stood solidly behind its products since 1922. As the EPA certificate holder for its engines and kits, their in-use emission compliance and engine performance is covered by the EMD OEM factory warranty.



