

EMD Locomotive

This five-day course is designed to provide students with a thorough knowledge of the EMD locomotive mechanics.

I. General Description

- Locomotive Operation
- Auxiliary Equipment
- Operating Controls
- Engineman's Control Panel
- Switches
- Engine Room
- Air Brake Equipment
- Miscellaneous Equipment

II. Engine Starting and Cab Controls

- Engine Starting Controls
- Switch and Fuse Panel
- Circuit Breaker Panel
- Engine Control Panel
- Locomotive Control Console
- Mechanical Interlocks on the Controller
- Air Brake Equipment
- Brake Equipment Positions

III. Operation

- Preparation for Service
- Starting the Diesel Engine
- Trailing Unit Cab Inspection
- Starting the Trailing Unit Diesel Engines
- Placing Units on the Line
- Precautions Prior to Moving the Locomotive
- Handling Light Locomotive
- Draining Air Reservoirs and Strainers

- Engine Air Box Drain
- Engine, Air Compressor, and Cab Heater Water Drain Valves
- Coupling Locomotive Units Together
- Coupling Locomotive Units to Trains
- Pumping Up Air
- Brake Pipe Leakage Test
- Kicking Cars
- Starting a Train
- Accelerating a Train
- Slowing Down for Grades
- Air Braking With Power
- Operating Over Rail Crossing
- Running Through Water
- Wheel Slip Light Indications
- Locomotive Speed Limit
- Hump Speed Control
- Multiple Unit Operation
- Double Heading
- Isolating a Unit
- Changing Operating Ends
- Stopping the Engine
- Securing the Locomotive for Layover
- Towing Locomotive in Train
- Freezing Weather Precautions

IV. Cooling, Lubricating Oil, Fuel Oil, and Air Systems

- Operating Water Level
- Lubricating Oil System
- Fuel Oil System
- Air System

V. Electrical Equipment

- Basic Electrical Equipment
- Main Generator
- Traction Motors
- Reversing the Locomotive
- Electrical Control Cabinet
- Relay Operation
- Wheel Slip Relay Operation
- Ground Relay (GR)
- Current Limit Relay (CLR)
- Voltage Regulator
- Reverse Current Relay
- ER Relay (If Used)