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

IV. **Cooling, Lubricating Oil, Fuel Oil, and Air Systems**
   - 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
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)