

Locomotive Mechanical

EMD-567 Diesel Engine Maintenance-Mechanical

Objective: The student should be able to effectively maintain the Model 8, 12 and 16-EMD-567E diesel engines through the description, maintenance and service data provided and, be aware of special tools needed in maintaining that equipment.

Audience: Maintenance personnel, foremen or others responsible for the maintenance, inspection and proper repairs to the EMD-567 engine.

Item Code	Lesson Title
D.1	General Information-Operation-Crankcase and Oil Pan
D.2	Cylinder Heads-Valve Grinding-Hydraulic Lash Adjusters
D.3	Pistons-Piston Rings-Connecting Rods
D.4	Cylinder Liners
D.5	Crankshaft and Accessories
D.6	Camshaft-Gear Train Timing-Overspeed Trip
D.7	Blower-Air Intake-Exhaust System
D.8	Lubricating Oil System
D.9	Cooling System-Water Pumps
D.10	Fuel System-Injectors-Timing-Testing-Filters
D.11	Speed Control-Load Regulator Pilot Valve-Setting and Maintenance
D.12	Protective Devices

Item Code	Required Textbook
BKDEM	<i>567E Engine Maintenance Manual</i>
	This book not available separately.

Easy Enroll Guide

Item Code	Full Course Title (Includes Textbook)	Price
D1FC	EMD-567 Diesel Eng. Maint. - Mechanical	\$ 293.25

Or Choose the Lessons You Want

Textbook Fee	\$ 29.25
Number of Lessons _____ x \$22.00 =	\$ _____
Your Total Cost = (Remember to include textbook fee)	\$ _____

EMD 645E3 Diesel Engine Maintenance-Mechanical

Objective: The student will acquire knowledge of maintenance for the 8, 12, 16 and 20 cylinder Model 645E3 diesel engines and be aware of any special tools required in the maintenance of these engines. Use the specifications and service data provided in the text book in maintaining the engines and quick reference.

Audience: Maintenance personnel, foremen, inspectors, or anyone else responsible for the correct maintenance of the 645E3 diesel motors.

Item Code	Lesson Title
DM.30A	General Description-Operation-Engine Data
DM.31A	Crankcase-Oil Pan
DM.32A	Cylinder Head and Accessories-Valve Grinding
DM.33A	Pistons-Connecting Rods
DM.34A	Cylinder Liners
DM.35A	Crankshaft-Accessories-Main Bearing
DM.36A	Crankshaft-Gear Train
DM.37A	Air Intake-Exhaust System-Turbocharger
DM.38A	Lubricating Oil System-Oil Pumps
DM.39A	Cooling System-Water Pumps-Aftercoolers
DM.40A	Fuel System-Injectors-Filters
DM.41A	Governor
DM.42A	Protective Devices
DM.43A	Starting Systems

Item Code	Required Textbook
BK645E3	<i>EMD 645E3 Turbocharged Engine Maintenance Manual</i>
	This book not available separately.

Easy Enroll Guide

Item Code	Full Course Title (Includes Textbook)	Price
DM30AFC	EMD 645E3 Diesel Maint. - Mechanical	\$ 308.00

Or Choose the Lessons You Want

Textbook: Call for availability	
Number of Lessons _____ x \$22.00 =	\$ _____
Your Total Cost = (Remember to include textbook fee)	\$ _____

Basic Diesel Theory

Objective: Gain advance knowledge of the theory of modern engines and become familiar with how they work, its significance in a practical sense.

Audience: Anyone wishing to become more conversant with the workings of modern engines and how they apply those forces to our modern world.

Item Code	Lesson Title
DT.1	History and Development, Power Terms Defined
DT.2	Engine Efficiency and Construction, Engine Timing, Timing Diagrams
DT.3	Engine Combustion, Fuel Injection Systems and Equipment
DT.4	Induction Systems, Lubrication, Cooling Systems and Speed Control

Item Code	Required Textbook
BKDT	<i>Modern Diesel Theory</i>

Easy Enroll Guide

Item Code	Full Course Title (Includes Textbook)	Price
DT1FC	Basic Diesel Theory	\$ 107.95

Or Choose the Lessons You Want

Textbook Fee	\$	19.95
Number of Lessons _____ x \$22.00 =	\$	_____
Your Total Cost = (Remember to include textbook fee)	\$	_____

Locomotive Draft Gears

Objective: Introduce the student to a general concept of locomotive draft gears; their inspection and removal. Explain, the functions of the components of draft gears; their inspection and removal. Gives a detailed description for the inspection, maintenance and reconditioning of locomotive draft gears used on the locomotives built by Electro-Motive Division of General Motors Corporation and on those built by General Electric Company.

Audience: Carmen, apprentices, shop foremen, or anyone who works on locomotive draft gears or wishes to gain a better understanding of them.

Item Code	Lesson Title
DG.1	General Information-Operation
DG.2	Maintenance-Parts Information

Item Code	Required Textbook
BKLDG	<i>Locomotive Draft Gears - Under Revision, Please Call.</i>

Easy Enroll Guide

Item Code	Full Course Title (Includes Textbook)	Price
DG1FC	Locomotive Draft Gears	\$ CALL

Or Choose the Lessons You Want

Textbook Fee	\$	CALL
Number of Lessons _____ x \$22.00 =	\$	_____
Your Total Cost = (Remember to include textbook fee)	\$	_____

Diesel Engine Maintenance for EMD Model 710G3

Objective: The student will become familiar with the maintenance information for the 8, 12, 16 and 20-cylinder Model 710G3 diesel engines. Learn about the basic engine and common extra equipment, use illustrations which depict the 16-cylinder model as representative of the location, size, and relative shape of various components and accessories.

Audience: Maintenance personnel, foremen, inspectors, or anyone else responsible for the correct maintenance of 8, 12, 16, and 20-cylinder Model 710G3 diesel engines.

Easy Enroll Guide

Item Code	Full Course Title (Includes Textbook)	Price
DM1AFC	Diesel Eng. Maint. for EMD 710G3	\$ 330.00

Or Choose the Lessons You Want

Textbook: Call for availability	
Number of Lessons _____ x \$22.00 =	\$ _____
Your Total Cost = (Remember to include textbook fee)	\$ _____

Item Code	Lesson Title
DM.1A	Engine Information-Service Data
DM.2A	Crankcase and Oil Pan
DM.3A	Cylinder Head and Accessories-Valve Grinding
DM.4A	Piston Assembly and Connecting Rods
DM.5A	Cylinder Liner
DM.6A	Cylinder Power Assembly
DM.7A	Crankshaft-Accessories-Main Bearings
DM.8A	Camshaft-Gear Train
DM.9A	Air Intake-Exhaust System-Turbocharger
DM.10A	Lubricating Oil System-Oil Pumps
DM.11A	Cooling System-Water Pump-Aftercooler
DM.12A	Fuel Systems-Injectors-Filters
DM.13A	Governor
DM.14A	Protective Devices
DM.15A	Troubleshooting

Item Code	Required Textbook
BK710G3	<i>710G3/G3A Engine Maintenance Manual – Turbocharged</i> This book not available separately.

Diesel and High-Compression Gas Engine Fundamentals

Objective: The student will receive complete clarification of the diesel engine, its stationary parts and an explanation in simple terms of the major moving parts and their lubrication. Basic terms of physics and engineering, fuel systems, engine power and rating performances, testing, instrumentation, maintenance and troubleshooting and auxiliary systems.

Audience: Carmen, apprentices, shop foremen, students of diesel engines, diesel mechanics and others wanting a good basic understanding of the diesel engine, its components and how it works.

Easy Enroll Guide

Item Code	Full Course Title (Includes Textbook)	Price
DH1FC	Diesel and High Compression Gas Engines	\$ 260.75
Or Choose the Lessons You Want		
Textbook Fee		\$ 40.75
Number of Lessons _____ x \$22.00 =		\$ _____
Your Total Cost = (Remember to include textbook fee)		\$ _____

Item Code	Lesson Title
DH.1	Distinguishing Features of Diesel Engines-What a Diesel Engine Is
DH.2	Basic Construction of a Diesel Engine-Classification of Diesel Engines
DH.3	Stationary Parts-Frames, Cylinders and Heads-Major Moving Parts
DH.4	Lubricating the Diesel-Basic Terms of Physics and Engineering
DH.5	Heat and Combustion-Oil and Gaseous Fuels
DH.6	Engine Power and Fuel Consumption-Engine Rating
DH.7	Intake and Exhaust Systems-Scavenging and Supercharging Injecting Fuel
DH.8	Burning the Fuel-Governing
DH.9	Diesel Engine Testing, Instrumentation and Designs-High Compression Gas Burning Engines
DH.10	Auxiliary Systems-Operation and Maintenance

Item Code	Required Textbook
BKDH BK	<i>Diesel and High Compression Gas Engines</i>

GE Dash 8 Locomotives—Mechanical and Electrical

Objective: The student will study the principles of maintenance on General Electric 1987 Series-8 Locomotives and learn about any special tools required to properly maintain GE locomotives. Be aware of warnings, cautions, or hazards and additional clarifications when performing maintenance.

Audience: Maintenance personnel, foremen, inspectors or anyone responsible for the maintenance of GE DASH 8 Locomotives.

Item Code	Required Textbook
BKDS BK	<i>GE Dash 8 Locomotive Service Manual</i>
	This book not available separately.

Easy Enroll Guide

Item Code	Full Course Title (Includes Textbook)	Price
DS1FC	GE Dash 8 Locomotives-Mech. & Elect.	\$ 391.00
Or Choose the Lessons You Want		
Textbook Fee		\$ 39.00
Number of Lessons _____ x \$22.00 =		\$ _____
Your Total Cost = (Remember to include textbook fee)		\$ _____

Item Code	Lesson Title
DS.1	Introduction
DS.2	Diagnostic Display Panel-Level 1
DS.3	Diagnostic Display Panel-Level 2
DS.4	Engine Support Systems
DS.5	Locomotive Electrical Systems Operation and Locomotive Engine Overspeed System
DS.6	Nose, Operator, Dynamic Braking, Engine and Radiator Cab Equipment
DS.7	Locomotive Alternator Blower, Removal and Installation, Locomotive Equipment Blower 1, Air Compressor Removal and Installation
DS.8	Victaulic Couplings, Radiator Removal and Installation of Locomotive Radiator Fan
DS.9	26L Air Brake System, Air Supply System and Air Compressors
DS.10	Trucks
DS.11	Traction Motors Running Maintenance, Traction Motors Installation and Removal
DS.12	5GMG186 and 5GMG187 Alternators, Load and Insulation Testing
DS.13	Control and Power Devices
DS.14	Description of Electrical Equipment, Power Cable Termination and Connection
DS.15	Diesel Engine Checks and Adjustments
DS.16	Diesel Engine Replacements

EMD Maintenance-Mechanical

Objective: Use the pictures, diagrams and detailed instructions to gain an understanding of particular areas of mechanical maintenance i.e., various types of journal boxes, types of locomotive truck assemblies, wheels, axles, pinions and alignment of locomotive rotating equipment.

Audience: Carmen, apprentices, maintenance personnel interested in gaining information in a particular area or type of equipment.

Item Code	Lesson Title
MM.11	New Departure-Hyatt Journal Boxes with Resilient Rubber Thrust Units
MM.20	Locomotive Truck Assemblies Swing Hanger and Switcher Trucks (MM.21 must be sold with MM.20 if taking selected lessons)
MM.21	Locomotive Truck Assemblies Swing Hanger and Switcher Trucks (MM.21 must be sold with MM.20 if taking selected lessons)
MM.22	Locomotive Truck Assemblies and Flexcoil Switcher Trucks
MM.23	Wheels, Axles, Axle Gear and Pinions
MM.50	Alignment of Rotating Equipment

Easy Enroll Guide

Item Code	Full Course Title (Includes Booklets)	Price
MM11FC	EMD Maintenance - Mechanical	\$ 167.00

Or Choose the Lessons You Want

Reference Material Fee _____ x \$7.00 for each lesson = \$ _____
 Number of Lessons _____ x \$22.00 = \$ _____
 Your Total Cost = (Remember to include materials fee) \$ _____

EMD-GP-38 Locomotive Maintenance-Mechanical

Objective: Provide the student with the basis to perform “on-the-locomotive” maintenance, along with instructions for testing and adjustment of systems for both mechanical and electrical maintenance. Use service data pages for reference.

Audience: Maintenance personnel, foreman responsible for the maintenance, repair, servicing and/or repair of EMD-GP38.

Item Code	Lesson Title
GP.1M	Fuel System and Engine Starting
GP.2M	Lubricating Oil System
GP.3M	Cooling System
GP.4M	Central Air System
GP.5M	Compressed Air System

Item Code	Required Textbook
BKGP38M	EMD Locomotive Service Manual GP38 with Static Excitation
	This book not available separately.

Easy Enroll Guide

Item Code	Full Course Title (Includes Textbook)	Price
GP1MFC	EMD GP-38 Loco. Maint. - Mechanical	\$ 133.25

Or Choose the Lessons You Want

Textbook Fee \$ 23.25
 Number of Lessons _____ x \$22.00 = \$ _____
 Your Total Cost = (Remember to include textbook fee) \$ _____

Guide to Locomotive Mechanical Maintenance on SD and GP Type Locomotives

NEW!

Objective: The student will gain an understanding of the bottom to top items to check for when doing scheduled maintenance work. The booklet is designed as a job aid in performing locomotive mechanical scheduled maintenance work on General Motors SD and GP type locomotives.

Audience: All mechanical department personnel responsible for the inspection and maintenance of locomotives.

Easy Enroll Guide

Item Code	Full Course Title (Includes Textbook)	Price
GLMM1FC	Guide to Locomotive Mechanical Maintenance	\$ 141.25

Or Choose the Lessons You Want

Textbook Fee \$ 31.25
 Number of Lessons _____ x \$22.00 = \$ _____
 Your Total Cost = (Remember to include textbook fee) \$ _____

Item Code	Lesson Title
GLMM.1	Wheel Defects and Gauging
GLMM.2	Truck Component Defects and Truck Assemblies
GLMM.3	Underframe
GLMM.4	Air Dryer Inspection, Truck Center Plate Lubrication; Engine Checks; Filter Maintenance; Exhaust System and; Engine Room Checks
GLMM.5	Car Body; Running Work and Air Brake Test

Item Code	Required Textbook
BKGLMM	Guide to Locomotive Mechanical Maintenance

EMD 645/F3B Turbocharged Engine Maintenance

Objective: Study the maintenance for the 8, 12, 16, and 20 cylinder Model 645E3C and Model 645F3B diesel engines and be aware of any special tools required in use of that maintenance. Also, be able to use references, specifications, and a list of service equipment presented in the Service Data at the end of most sections.

Audience: Mechanical maintenance personnel, foremen, inspectors or others responsible for the repair or servicing of EMD 645F3B diesel engines.

Item Code	Lesson Title
TE.1	General Description-Operation-Engine Data
TE.2	Crankcase-Oil pan
TE.3	Cylinder Head and Accessories-Valve Grinding
TE.4	Pistons-Connecting Rods
TE.5	Cylinder Liners
TE.6	Cylinder Power Assembly
TE.7	Crankshaft-Accessories-Main Bearings
TE.8	Camshaft-Gear Train
TE.9	Air Intake-Exhaust System-Turbocharger
TE.10	Lubricating Oil System-Oil Pumps
TE.11A	Cooling System-Water Pump-Aftercooler
TE.12	Fuel System-Injectors-Filters
TE.13	Governor
TE.14	Protective Devices
TE.15	Starting System

Item Code	Required Textbook
BKDM BK	645E3C/F3B Turbocharged Engine Maintenance Manual This book not available separately.

Easy Enroll Guide		
Item Code	Full Course Title (Includes Textbook)	Price
TE1FC	EMD 645/F3B Turbocharged Eng. Maint.	\$ 330.00
Or Choose the Lessons You Want		

Textbook: Call for availability
 Number of Lessons _____ x \$22.00 = \$ _____
 Your Total Cost = (Remember to include textbook fee) \$ _____

GP50 Locomotive-Mechanical and Electrical Maintenance

Objective: Provide, from a servicing standpoint, a general familiarity with EMD locomotive systems and equipment, instructions for electrical and mechanical maintenance that can be performed on the locomotive. Use service data pages as reference and metric conversion table.

Audience: Mechanical maintenance personnel, foremen or others responsible for servicing and maintaining the GP50 Locomotive.

Item Code	Lesson Title
G.1	General Information- Engine Starting
G.2	Fuel Oil System-Lubrication Oil System
G.3	Cooling System
G.4	Central Air System
G.5	Compressed Air System
G.6	Compressed Air System
G.7	Electrical Equipment-AR15 Generator-Voltage Suppression-D14 Alternator-Traction Motors-Fans-Pumps
G.8	Electrical Equipment-Locomotive Control Stand-Assembly-Dynamic Brake Throttle and Reverser Handles-Air Gauges-Panel Lights
G.9	Electrical Equipment-More on Engine Panel Lights-Gauges and What They Mean-Switches-Circuit Breaker Panels
G.10	Electrical Equipment-Generator Field-Fuse Test Equipment and Switch Panel-Electrical Devices Located in the Main Electrical Cabinet Listed Alphabetically A to ER
G.11	Electrical Devices ETS to TLTD Located in the Main Electrical Cabinet
G.12	Electrical Cabinet TSR to WL-Pneumatic Devices-Hose Systems-Ground Relay Protection System-Main Generator and Dynamic Braking Grid Grounds-Wheel Creep Control System
G.13	Radar Module RA-Motor E/N Generator Module-Current Maximizer Module
G.14	Electrical Control System, Wheel Slip System
G.15	Wheel Overspeed Module-Load Control Module-Dynamic Brake System Module and Dynamic Brake Protection Module
G.16	Load Test and Horsepower Standardization-High Potential Test for Locomotives in Service

Item Code	Required Textbook
BKGP50	GP50 Locomotive Service Manual This book not available separately.

Easy Enroll Guide		
Item Code	Full Course Title (Includes Textbook)	Price
G1FC	GP50 Loco. - Mech. & Elect. Maintenance	\$ 352.00
Or Choose the Lessons You Want		

Textbook: Call for availability
 Number of Lessons _____ x \$22.00 = \$ _____
 Your Total Cost = (Remember to include textbook fee) \$ _____

EMD-MP 15 Locomotive Maintenance

Objective: Have knowledge of both the mechanical and electrical maintenance necessary on an EMD-MP 15 Locomotive. Use the service data provided at the end of each section of the manual in maintaining the EMD-MP 15 locomotive.

Audience: Mechanics, electrical, apprentices or anyone involved with the maintenance of an EMD-MP 15 Locomotive.

Item Code	Lesson Title
MP.1	Information, Fuel System and Engine Starting
MP.2	Lubricating Oil System, Cooling System
MP.3	Central Air System, Compressed Air System
MP.4	Excitation Control System and Contact Tips
MP.5	Electrical Equipment
MP.6	Testing and Setting Power Control, Wheel Slip Detection and Control and Transition Control Systems, Load Test and Horsepower Standardizational High Potential Tests

Item Code	Required Textbook
BKMP15	MP 15 Locomotive Service Manual

Easy Enroll Guide

Item Code	Full Course Title (Includes Textbook)	Price
MP1FC	EMD MP 15 Locomotive Maintenance	\$ 159.50

Or Choose the Lessons You Want

Textbook Fee	\$ 27.50
Number of Lessons _____ x \$22.00 =	\$ _____
Your Total Cost = (Remember to include textbook fee)	\$ _____

Coming Soon!!
Watch for NEW
courses on
SD90 MAC
Locomotives -
Mechanical and
Electrical.

EMD 645E3C Engine – GM

Objective: The student will gain experience in the maintenance for the 8, 12, 16, and 20 cylinder Model 645E3C and Model 645F3B diesel engines and be aware of any special tools required in use of that maintenance. Also, be able to use references, specifications and a list of service equipment presented in the Service Data at the end of most sections.

Audience: Mechanical maintenance personnel, foremen, inspectors or others responsible for the repair or servicing of EMD 645E3C diesel engines.

Item Code	Lesson Title
DM.81	General Description-Operation-Engine Data
DM.82	Crankcase-Oil Pan
DM.83	Cylinder Head and Accessories-Valve Grinding
DM.84	Pistons-Connecting Rods
DM.85	Cylinder Liners
DM.86	Cylinder Power Assembly
DM.87	Crankshaft, Accessories, Main Bearings
DM.88	Camshaft-Gear Train
DM.89	Air Intake-Exhaust System-Turbocharger
DM.90	Lubricating Oil System-Oil Pumps
DM.91A	Cooling System-Water Pump-Aftercooler
DM.92	Fuel System-Injectors-Filters
DM.93	Governor
DM.94	Protective Devices
DM.95	Starting System

Item Code	Required Textbook
BKDM BK	645E3C/F3B Turbocharged Engine Maintenance Manual
	This book not available separately.

Easy Enroll Guide

Item Code	Full Course Title (Includes Textbook)	Price
DM81FC	EMD 645E3C Engine Manual - GM	\$ 330.00

Or Choose the Lessons You Want

Textbook: Call for availability	
Number of Lessons _____ x \$22.00 =	\$ _____
Your Total Cost = (Remember to include textbook fee)	\$ _____

EMD SD50 Locomotive Maintenance-Mechanical

Objective: Gain a general familiarity with EMD locomotive systems and equipment and study the electrical and mechanical maintenance that can be performed on the locomotive. Use the service data pages provided as references along with the metric conversion table as needed.

Audience: Maintenance personnel, foremen or others responsible for the maintenance of the EMD SD50 Locomotive.

Item Code	Lesson Title
SD.50	Engine Starting-Fuel Oil System
SD.51	Lubricating Oil System-Cooling System
SD.52	Central Air System-Compressed Air System
SD.53	Electrical Equipment
SD.54	Electrical Equipment
SD.55	Electrical Control Equipment-Super Series Wheel Creep Control System
SD.56	Motor E/N Generator Module EN-Current Maximizer Module CM Generator Feedback Module FG
SD.57	Motor Feedback Module FM-Wheel Slip Correction System-Starting Wheel Slip Module SW-Sanding Module 8A
SD.58	Load Control System Sec. 8C Introduction-Load Control Module LC-Motor Temperature Simulator Module MS
SD.59	Sensor Module SE and SCR Assembly-Barometric Compensation Module BC-Generator Transition Control Module TR
SD.60A	Excitation Limit Module EL-Dynamic Brake System-Dynamic Brake Regulator Module DR
SD.61A	Dynamic Brake Protection Module DP-Dynamic Brake Extended Range Module DE-Load Test and Horsepower Standardization-High Potential Test for Locomotives in Service

Item Code	Required Textbook
BKSD50BK	<i>SD50 Locomotive Service Manual</i>
	This book not available separately.

Easy Enroll Guide

Item Code	Full Course Title (Includes Textbook)	Price
SD50FC	EMD SD50 Loco. Maint. - Mechanical	\$ 264.00
Or Choose the Lessons You Want		

Textbook: Call for availability

Number of Lessons _____ x \$22.00 = \$ _____

Your Total Cost = (Remember to include textbook fee) \$ _____

SD60M Locomotive Service

Objective: Gain an overview of EMD locomotive systems and equipment as well as specific electrical and mechanical procedures which can be performed on board the locomotive. Also, get an introduction to the computer control system and representative circuitry. Use service data references and metric conversion tables as needed.

Audience: 'Qualified' service personnel.

Note: 'Qualified', for the purpose of this lesson means skilled personnel, knowledgeable in proper safety procedures and trained to perform maintenance on GM/EMD 60 Series computer-controlled locomotive(s).

Item Code	Lesson Title
SD.60M	Forward and General Locomotive Information-Engine Starting
SD.61M	Fuel Oil System
SD.62M	Lubricating Oil System
SD.63M	Cooling System
SD.64M	Central Air System
SD.65M	Compressed Air System
SD.66M	Electrical Equipment
SD.67M	Electrical Equipment
SD.68M	Electrical Equipment
SD.69M	Electrical Control System
SD.70M	Electrical Control System
SD.71M	Load Test and Horsepower Calculating-High Potential Test for Locomotive Service-Metric Conversion-Logic System Troubleshooting

Item Code	Required Textbook
BKSD60BK	<i>SD60M Locomotive Service Manual</i>
	This book not available separately.

Easy Enroll Guide

Item Code	Full Course Title (Includes Textbook)	Price
SD60MFC	SD60M Locomotive Service Manual	\$ 264.00
Or Choose the Lessons You Want		

Textbook: Call for availability

Number of Lessons _____ x \$22.00 = \$ _____

Your Total Cost = (Remember to include textbook fee) \$ _____

Woodward Governor Maintenance

Objective: The student will study the manual on the PGEV and PGE Locomotive Governors with all parts listed, how to tear it down, put it back together, install/maintain the governors, perform various tests and do troubleshooting.

Audience: Mechanics, maintenance personnel, shop foremen or others who work on the PGEV or PGE Locomotive Governors.

Item Code	Lesson Title
PG.1	PGE Locomotive Governor-General Information
PG.2	PGE Locomotive Governor-Basic Operation
PG.3	PGE Locomotive Governor-Basic Operation
PG.4	PGE Locomotive Governor-Troubleshooting

Item Code	Required Textbook
BKPG BK	<i>Woodward – PGEV and PGE Locomotive Governors</i>
	This book not available separately.

Easy Enroll Guide

Item Code	Full Course Title (Includes Textbook)	Price
PG1FC	Woodward Governor Maintenance	\$ 106.95

Or Choose the Lessons You Want

Textbook Fee	\$	18.95
Number of Lessons _____ x \$22.00 =	\$	_____
Your Total Cost = (Remember to include textbook fee)	\$	_____

FRA Railroad Safety Appliance Standards- Locomotives

Objective: Use the Federal Railroad Administration regulations as a resource for: proper-number, dimensions, location, and manner of application of various parts of the locomotive.

Audience: Repairmen, mechanics, or other workers responsible for the correct/standard of repair and safe operating condition of the various parts of the locomotive.

Item Code	Lesson Title
SA.3C	Road Locomotives with Corner Stairways, Locomotives used in Switching Service

Item Code	Required Textbook
BKSAS	<i>Safety Appliance Standards (Code of Federal Regulations)</i>

Easy Enroll Guide

Item Code	Full Course Title (Includes Textbook)	Price
SA3CFC	FRA RR Safety Appliance Standards-Locomotives	\$ 29.95

Diesel Electric Locomotive Maintenance

Objective: Study schematics and the explanation of parts of the power plant for the various locomotives, preliminary checkup before starting the engine, starting engines, troubleshooting the engine, moving and stopping the locomotive and shutting the engine down.

Audience: Anyone who has reason to learn the maintenance of the locomotives with the particular engines mentioned in the lesson material. (Personnel familiar with the operation of large equipment).

Item Code	Lesson Title
N.22-1	The Power Plants of The Electro-Motive Switchers, 1000 and 600 HP
N.22-2	Electro-Motive Switchers 1200 and 800 Horsepower Plants
N.25	E-7 Passenger Locomotives
N.41	The Electro-Motive GP-9 Locomotives
N.42	The Electro-Motive GP-9 Locomotive-Power Details-Troubleshooting

Easy Enroll Guide

Item Code	Full Course Title (Includes Booklets)	Price
N22FC	Diesel Electric Loco. Maint.	\$ 155.00

Or Choose the Lessons You Want

Number of Lessons _____ x \$9.00 per booklet =	\$	_____
Number of Lessons _____ x \$22.00 =	\$	_____
Your Total Cost = (Remember to include booklet fee)	\$	_____

Textbook prices are subject to change.

General Electric Mechanical Maintenance for Series-7 Road Locomotives

Objective: Study how to maintain “running maintenance” on General Electric Series-7 Locomotives built since January, 1977. Become familiar with major locomotive equipment’s and systems of the standard Series-7 locomotive and frequently installed optional equipment. “Running maintenance” is defined as maintenance done on board the locomotive and which can ordinarily be done in eight hours or less time.

Audience: Mechanical maintenance personnel responsible for the servicing and maintenance of GE SERIES-7 Road Locomotives.

Item Code	Lesson Title
JM.1A	Data-Qualification and Troubleshooting Systems
JM.2A	Cabs and Underframes
JM.3A	Air Brake Equipment
JM.4A	Diesel Engine-Servicing and Inspecting Engine Oil and Water, Overspeed Crankcase, Governor, etc.
JM.5A	Diesel Engine-Differential Pressure-Fuel Oil System-Crankcase Cylinder-Gear Assemblies
JM.6A	Diesel Engine-Adjustments-Fuel Pump-Lube Oil and Fuel Oil Valves-Valve Tappet Clearance
JM.7A	Diesel Engine-Fuel Oil Valves-Replacements of Fuel Oil Filters-Strainers-Fuel Injection Nozzle and Pump-Water and Lubricating Oil Pump-Power Assembly Removal-Installation
JM.8A	Diesel Engine-Pistons-Rods-Bearings-Over-Speeds-Crankcase-Governors-Exhaust Manifold and Turbochargers

Item Code	Required Textbook
BKSERIES7	<i>Locomotive Service Manual Running Maintenance and Troubleshooting for Series-7 Road Locomotives</i>
	This book not available separately.

Easy Enroll Guide

Item Code	Full Course Title (Includes Textbook)	Price
JM1AFC	GE Mech. Maint. for Series-7 Road Locos.	\$ 216.50

Or Choose the Lessons You Want

Textbook Fee	\$ 40.50
Number of Lessons _____ x \$22.00 =	\$ _____
Your Total Cost = (Remember to include textbook fee)	\$ _____

SD70 MAC Locomotive Mechanical

NEW!

Objective: To train locomotive personnel in the repair and troubleshooting of the SD70 MAC locomotive. Giving a complete review of the locomotive components and mechanical systems.

Audience: Mechanical maintenance personnel responsible for the servicing and maintenance of SD70 MAC locomotives.

Item Code	Lesson Title
MAC70M.1	General Information
MAC70M.2	Engine Starting and Stopping
MAC70M.3	Fuel System
MAC70M.4	Lubricating Oil System
MAC70M.5	Cooling System and Forced Air System
MAC70M.6	Compressed Air Systems
MAC70M.7	Compress Air Systems
MAC70M.8	HTCR Radial Truck
MAC70M.9	Functionally Integrated Rail Electronics
MAC70M.10	Integrated Cab Electronics ICE and Locomotive Data Screens
MAC70M.11	Locomotive Data Screens (FIRE and ICE)
MAC70M.12	Load Test and Horsepower Evaluations
MAC70M.13	Troubleshooting – Heating, Ventilation and Air Conditioning Systems and Microflush Half Gallon Toilets

Item Code	Required Textbook
BKSD70MAC	<i>SD70 MAC Locomotive Service Manual</i>
	This book not available separately.

Easy Enroll Guide

Item Code	Full Course Title (Includes Textbook)	Price
MAC70M1FC	SD70 MAC Locomotive Mechanical	\$ 286.00

Or Choose the Lessons You Want

Textbook: Call for availability	
Number of Lessons _____ x \$22.00 =	\$ _____
Your Total Cost = (Remember to include textbook fee)	\$ _____

Put yourself in the driver seat! You *choose* the number of lessons that best fit your needs and REMEMBER you *do not* have to take the entire course.

Railroad Locomotive Safety Standards and Locomotive Inspection

Objective: This course is designed for the student to develop an understanding of the safety rules and regulations based on the FRA (Federal Railroad Administration) Locomotive Safety Standards and Locomotive Inspection.

Audience: Engineers, inspectors, supervisors and others responsible for the safe operation and regulations of running locomotives.

Item Code	Lesson Title
LSSH1	Locomotive Safety Standards-Locomotive Inspection
LSSH2	Locomotive Safety Standards-Safety Requirements-Brake System, Draft System, Suspension System
LSSH3	Locomotive Safety Standards-Safety Requirements-Electrical System, Internal Combustion System, Steam Generators, Cabs and Cab Equipment

Item Code	Required Textbook
BKLSSH	<i>Locomotive Safety Standards and Locomotive Inspection (Code of Federal Regulations)</i>

Easy Enroll Guide

Item Code	Full Course Title (Includes Textbook)	Price
LSSH1FC	RR Loco. Safety Standards & Loco Inspec.	\$ 79.95

Or Choose the Lessons You Want

Textbook Fee	\$ 13.95
Number of Lessons _____ x \$22.00 =	\$ _____
Your Total Cost = (Remember to include textbook fee)	\$ _____

EMD SD40-2 Locomotive Maintenance-Mechanical

Objective: The student will gain an understanding of mechanical and electrical maintenance for “on-the-locomotive” maintenance, applicable to the basic locomotive and common extra equipment and be generally familiar with locomotive components and systems.

Audience: Maintenance personnel, foreman or others responsible for the maintenance and service of EMD SD40-2 Locomotives.

Item Code	Lesson Title
SD.1M	Fuel System and Engine Starting
SD.2M	Lubricating Oil Systems
SD.3M	Cooling System
SD.4M	Central Air System
SD.5M	Compressed Air System

Item Code	Required Textbook
BKSD ME	<i>SD40-2 Locomotive Service Manual</i>
	This book not available separately.

Easy Enroll Guide

Item Code	Full Course Title (Includes Textbook)	Price
SD1MFC	EMD SD40-2 Loco. Maint. - Mechanical	\$ 134.00

Or Choose the Lessons You Want

Textbook Fee	\$ 24.00
Number of Lessons _____ x \$22.00 =	\$ _____
Your Total Cost = (Remember to include textbook fee)	\$ _____

Basics of Railroad Wheels

Objective: Recognize wheel types, reasons for the differences, how to distinguish and classify wheels by size, material, method of manufacture and design differences. Inspect and identify wheel defects (per Federal Railroad Administration), learn and use the various types of gages for measuring wheel defects. Use tables for Association of American Railroads (AAR) Why Made Codes and learn Railroad and/or Shop Identifying marks. Use this standard reference by the AAR for all railroad wheel and axle work.

Audience: Railroad Mechanical Department Supervisors, inspectors, craftsmen and other railroad employees involved in the safe and proper maintenance of wheels.

Item Code	Lesson Title
RW.1	History and Types of Wheels
RW.2	Wheel Manufacturing and Markings
RW.3	Wheel Inspection and Defects
RW.4	Wheel Defects

Item Code	Required Textbook
BKWHEEL	<i>The Basics of Railroad Wheels</i>

Easy Enroll Guide

Item Code	Full Course Title (Includes Textbook)	Price
RW1FC	Basics of Railroad Wheels	\$ 105.50

Or Choose the Lessons You Want

Textbook Fee	\$ 17.50
Number of Lessons _____ x \$22.00 =	\$ _____
Your Total Cost = (Remember to include textbook fee)	\$ _____

EMD-SD45 Locomotive Maintenance-Mechanical

Objective: Provides the student with the basis to perform “on-the-locomotive” maintenance, along with instructions for testing and adjustment of systems. Also, use service data pages for reference.

Audience: Maintenance personnel, foremen or others responsible for the maintenance of EMD-SD45.

Item Code	Lesson Title
LS.1M	Fuel System
LS.2M	Lubricating Oil System
LS.3M	Cooling System
LS.4M	Central Air System
LS.5M	Compressed Air System

Item Code	Required Textbook
BKSD45M	<i>SD45 Locomotive Service Manual</i>
	This book not available separately.

Easy Enroll Guide

Item Code	Full Course Title (Includes Textbook)	Price
LS1MFC	EMD SD45 Loco. Maint. - Mechanical	\$ 134.00

Or Choose the Lessons You Want

Textbook Fee	\$	24.00
Number of Lessons _____ x \$22.00 =	\$	_____
Your Total Cost = (Remember to include textbook fee)	\$	_____

Locomotive Truck Assemblies

Objective: To inspect trucks, their components, disassemble, repair/rebuild, understand and follow recommended practices and procedures for locomotive trucks.

Audience: Mechanics, inspectors, foremen and others responsible for maintenance or repair of locomotive trucks.

Item Code	Lesson Title
LT.1	Introduction, GE Two-and Three-Axle Floating Bolster Truck Assembly
LT.2	GE Locomotive Trucks; Swing Bolster and Spring Rigging, Pedestal Guide and Wear Plates, Truck Removal, etc.
LT.3	GM-EMD GP Truck Assembly with Single Brake Shoe Rigging
LT.4	GM-EMD HT-C Truck Assembly; Locomotive Swing Hanger Truck Assemblies with Clasp Brakes

Item Code	Required Textbook
BKLTA	<i>Locomotive Truck Assemblies</i>

Easy Enroll Guide

Item Code	Full Course Title (Includes Textbook)	Price
LT1FC	Locomotive Truck Assemblies	\$ 101.75

Or Choose the Lessons You Want

Textbook Fee	\$	13.75
Number of Lessons _____ x \$22.00 =	\$	_____
Your Total Cost = (Remember to include textbook fee)	\$	_____

Roller Bearing Maintenance

Objective: The goal of this course is to have an understanding of the mandatory standards, recommended practices and general information of journal bearings. Also, the best possible shop requirements; some field practices for inspection reconditioning, repairing, assembly and lubrication of journal roller bearings.

Audience: Anyone responsible for the inspection and maintenance of journal roller bearings.

Item Code	Lesson Title
RB.11C	Mandatory Instruction and Practices
RB.12C	Terminology and Explanation of Bearing Damage
RB.13C	Review of AAR Roller Bearing Manual

Item Code	Required Textbook
BKRB BK	<i>Roller Bearing Manual (AAR Manual of Standards)</i>
	This book not available separately.

Easy Enroll Guide

Item Code	Full Course Title (Includes Textbook)	Price
RB11CFC	Roller Bearing Maintenance	\$ 135.00

Or Choose the Lessons You Want

Textbook Fee	\$	69.00
Number of Lessons _____ x \$22.00 =	\$	_____
Your Total Cost = (Remember to include textbook fee)	\$	_____