

Exhaust Gas Recirculation (EGR) System Basics

eLearning courses designed to increase productivity and profits



Learning made Simple, Visual, and Interactive

The THORS Exhaust Gas Recirculation (EGR) System Basics course explores the components that allow the EGR system to function. This course provides a visually engaging learning experience that shows the operation of an EGR system and the various failure modes.

Learning Hours **2**

Learning Objectives

- Identify the various EGR valve types.
- Understand the importance and operation of an EGR cooler.
- Recall the various EGR mass measurement devices.
- Define the style of the EGR system used in a vehicle.
- Determine the location of the EGR valve.
- Explain the EGR system failure modes.



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I. EGR System Components

- EGR Valve**
 - EGR Valve Types
 - Valve Actuation
 - EGR Bypass Valve
- EGR Cooler**
 - EGR Cooler Components
 - EGR Cooler Types
- EGR Mass Measurement Devices**
 - Mass Air Flow (MAF) Measurement

I. EGR System Components (continued)

- Differential Pressure (DP) Measurement
- EGR Temperature Sensor**
- EGR Plumbing and Crossover Tubes**

II. EGR System Operation

- EGR System Types**
- EGR System Working Principle**
 - Precooler
 - Post Cooler

II. EGR System Operation (continued)

- EGR System Management**
 - Data-Linked Communication
 - Non-Data-Linked Communication
- EGR System Failure Modes**
 - EGR Valve Sticking
 - EGR Cooler Failure
 - EGR Mass Measurement Failure

