



Professional Installer Training



**FREE to first 40 customers
to sign up online@
www.carpartswarehouse.net**

DRV.6041.1.FC Diagnosing Variable Valve Timing

This seminar will focus on the different types of variable valve timing (VVT) systems used by vehicle manufacturers today. After multi-valve technology became standard in engine design, VVT became the next step to enhance engine output, increasing engine power and torque output along with reducing emissions. Without VVT technology, engineers previously had to choose the best compromise in valve/cam timing and ended up sacrificing one thing to gain in another area. VVT allows the best of both worlds – increased performance and economy and lower emissions. There are a multitude of Diagnostic Trouble Codes (DTCs) that can set related to VVT faults stemming from oil contamination to inoperative cam actuators and oil control solenoids. We will explain the variations of VVT systems used by manufacturers today and look at diagnostic tests that can be performed on this system using the scan tool and other diagnostic equipment to confidently diagnose these systems before the costly and labor intensive engine teardown for service.

At this comprehensive clinic you will learn to:

- Identify the VVT system types used by manufacturers
- Understand the VVT DTC stored in the Powertrain Control Module (PCM)
- Relate to the scan tool parameters used by various manufacturers to validate camshaft control and operation
- Realize the importance of lab scope testing to validate camshaft to crankshaft correlation
- Perform mechanical engine tests with a variety of test equipment to avoid timely engine teardowns for diagnostic purposes
- Utilize new scan tool information and techniques to reduce diagnostic time in the service bay for VVT related faults or symptoms

DRV.6041.1.FC Diagnosing Variable Valve Timing

Date:
Tuesday October 3rd 2017

Time:
Dinner: 5-6PM
Class: 6-9PM

Location:
Car Parts Warehouse COPLEY
2799 Copley Road Copley Ohio

Cost:
FREE to first 40 customers to sign up @
www.carpartswarehouse.net

Date:
Wednesday October 4th 2017

Time:
Dinner: 5-6PM
Class: 6-9PM

Location:
Car Parts Warehouse PERRY
3382 North Ridge Rd. Perry, Ohio 44081

Cost:
FREE to first 40 customers to sign up @
www.carpartswarehouse.net