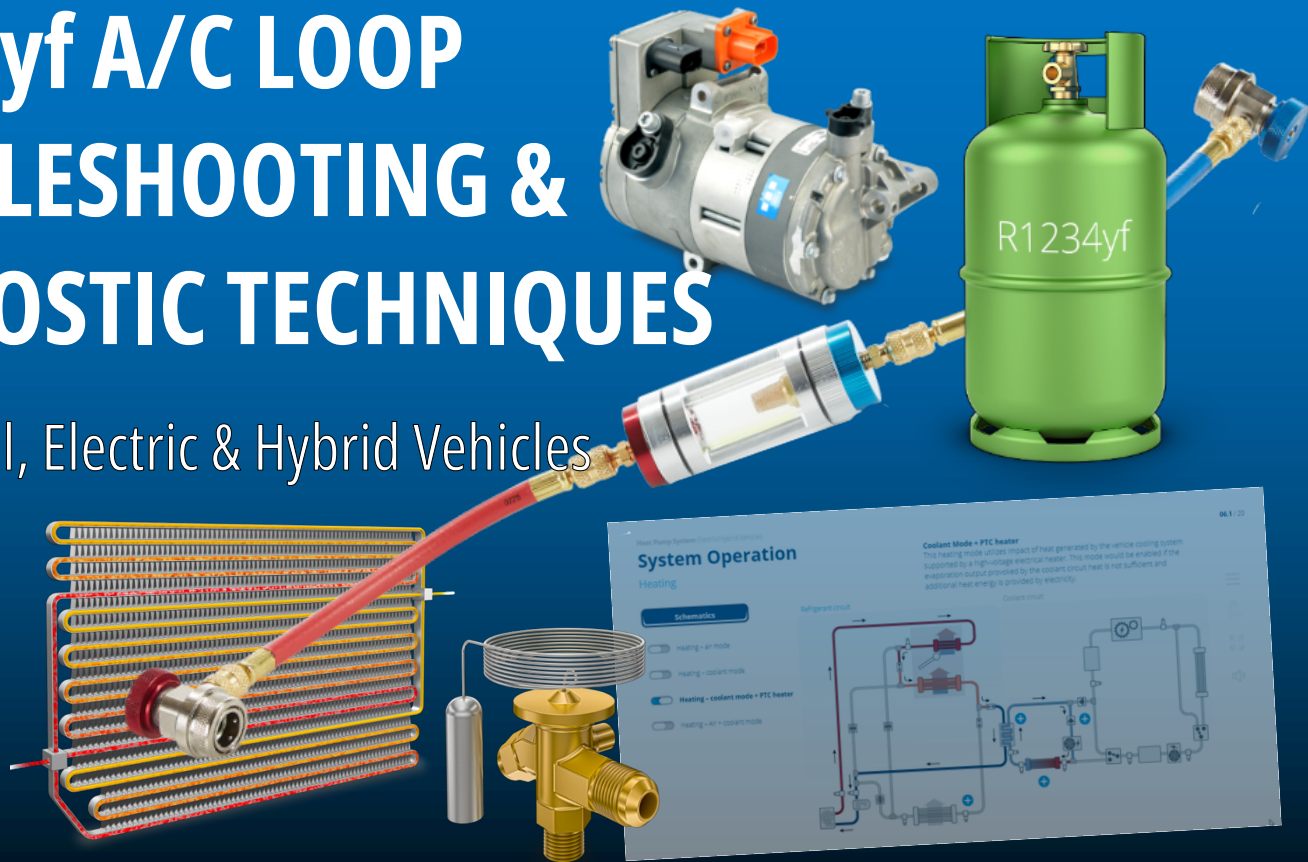


# R-1234yf A/C LOOP TROUBLESHOOTING & DIAGNOSTIC TECHNIQUES

Conventional, Electric & Hybrid Vehicles



- AC Loop Configurations - Accumulator, Expansion Valve, Dual-Climate
- Loop System Components - Design Variations, Operation, Common Failures & Solutions
- Refrigerants - Characteristics, Suitability, Safety & Regulatory Concerns
- AC Oil - Types, Applications, Failures & Causes
- Diagnostics & Service
  - Tools & Equipment
  - Service Cycles & System Flushing Methods
  - Checking Refrigerant for Impurities
  - Pressure & Temperature Diagnostics, Visual Leak Detection
- Electric / Hybrid Vehicle Heat Pump Systems
  - Design & Configurations
  - Operation - Cooling, Heating, Battery Thermal Management
  - Components - Function, Operation, Common Problems & Solutions

## 1 DAY CLASS

DATE: Sunday, Oct. 15th, 2023      TIME: 8:00am - 5:00pm

CLASS ID: SEM1811

LOCATION: Holiday Inn  
8439 NE Columbia Court.  
Portland, OR 97220  
503-256-5000

COST: \$325

INSTRUCTOR: Michael Ingvarsen

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