

Introducing



Online

CARQUEST Technical Institute is pleased to offer online technical training for CARQUEST customers. CTI now offers three distinct online training programs for service facility owners and technicians. To register or learn more about these new programs visit www.CARQUEST.com/CTI.

CTI Technical e-Courses

are comprehensive online training programs that allow technicians to learn critical diagnostic and repair fundamentals and the foundation skills that support all automotive service operations. Each course consists of multiple modules, knowledge checks, animations and mentor post-class worksheets that will ensure the student will be able to apply their new found skills in the service bay.

Fundamentals of Automotive Air Conditioning
Thermal Expansion Valves (TXV) | Working of Thermal Expansion Block Valve

The operation, in a block valve is through refrigerant expansion/contraction within a diaphragm, but not sensed through a separate capillary tube. It is sensed by changes in the refrigerant temperature and pressure passing from the evaporator outlet through the block valve.

Increased flow of refrigerant
When the temperature of the evaporator outlet refrigerant passing over the sensing element increases, the sealed refrigerant expands against the diaphragm. This moves the activating pin downwards, causing the ball valve to move away from the metering orifice. This allows more refrigerant to enter the evaporator inlet side. The refrigerant drops to a lower pressure after passing the metering orifice.

Restricted flow of refrigerant
As the evaporator outlet refrigerant passing over the sensing element becomes cooler, the refrigerant in the sealed diaphragm and sensor assembly contracts. This causes the activating pin to move upward, allowing the ball valve to move towards the metering orifice. The ball valve blocks the metering orifice and restricts the refrigerant flow to evaporator inlet.

Click play to view the working of a TX block valve.

Click the play button.

Click NEXT to continue. PREVIOUS 16 of 44 NEXT

ADVANCED ENGINE PERFORMANCE AND OBDII

Question 02 / 106

These gas analyzer readings (see Reference) caused a vehicle to fail its emissions test. Which of the following problems could be the cause?

Select an option from the choices below.

- Restricted fuel return line
- Secondary air injection downstream
- Shorted coolant temperature circuit
- Brake booster has a vacuum leak

	ENGINE SPEED	IDLE	2500 RPM
HC (ppm)	60	1156	
CO (percent)	0.23	0.22	
CO2 (percent)	14.1	13.3	
O2 (percent)	0.8	4.6	

Performance Progress: 0% (Assessment Completed: 0%, Correct Answers: 0%)

Legend: Questions attempted (Blue), Below 50% (Red), Between 50 - 70% (Yellow), Above 70% (Green)

CTI Technician Assessments

provide the service facility owner with the information needed to more effectively target the training actually needed by their employees rather than requiring a more wholesale approach to their ongoing education. A total of ten unique assessments each averaging over 100 questions provide accurate data needed to develop focused learning plans for service technicians and consultants.

CTI ASE Test Prep e-Courses

give your staff the ability to better prepare for the unique questions found on ASE certification tests. Each course allows the student to practice taking the test with or without reference material or review information. The review information appears when a question is answered incorrectly providing an instant review of the topic. This program mirrors the new Computer Based Testing (CBT) system recently launched by ASE.

Electrical and Electronic System

Q:09 A voltmeter measures:

Select an option from the choices below.

- Magnetic fields surrounding any conductor
- Electrical current between two points
- Electrical resistance between two points
- Electrical pressure differential between two points

Incorrect. A voltmeter measures electrical pressure differential between two points.

Click the explanation link to learn more. More about voltmeters

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To register, visit www.CARQUEST.com/CTI and click on **CTI Online Login** then follow these simple steps;

If this is your first visit, click here to create an account

Log into your account below. If you do not have an account, please [click here](#) to create your account.

Account ID:

PIN:

Password:

1. Complete the registration form and submit for activation.
2. You will receive an e-mail within a few minutes that will verify your email address. You must follow the instructions to verify your email address before CTI can activate your account.
3. The CTI staff will verify you are a CARQUEST customer and activate your account within one business day*. When your account is activated you will receive an email advising you that your account is now active. (*Cash customers may take additional time to verify)
4. When your account becomes active you will be able to login to the site via the link on www.CARQUEST.com/CTI. Now you will be able to view all available online training products and purchase them securely online.

HOME PARTS PROFESSIONALS FIND A LOCATION DO IT YOURSELF ABOUT CARQUEST

Create Account

** = required*

Account Information
Please tell us about your organization.

Organization Name: *

Mailing Address: *

City: *

State: *

Zip: *

Contact Information
This person will become the primary contact and administrator for the account.

First Name: *

Last Name: *

E-Mail: *

Phone Number: - - *

Fax Number: - -

Access Information
The following information will be used to set up your log in codes for your account.

Account ID: ⓘ

Password: * ⓘ

PIN: * ⓘ

Admin Password: * ⓘ

I have read and agree with the [Terms & Conditions](#).

CTI Technical e-courses

Basic Automotive Electrical
Electrical Starting & Charging
Fundamentals of Auto A/C
Auto A/C Diagnosis & Service
Fundamentals of Brakes
Brake Diagnosis & Service
Anti-Lock Brake Systems
Suspension & Steering
Fundamentals of Alignment
Logical Troubleshooting
Hybrid Vehicle Service

Vehicle Maintenance e-courses

Tire Service and Repair
Tire Pressure Monitoring
Complete Oil Change Process
Battery Service & Replacement
Belt & Hose Replacement
Transmission Flush Service
Cooling System Service

CTI ASE Test Prep & Assessments

A1 – Engine Repair
A2 – Automatic Transaxle
A3 – Manual Drivetrain
A4 – Suspension & Steering
A5 – Brakes
A6 – Electrical/Electronic Systems
A7 – Heating & Air Conditioning
A8 – Engine Performance
L1 – Advanced Engine Performance
P2 – Parts Specialist
C1 – Service Consultant