

Product Name :
Training Platform for Automobile Air Conditioning System

Product Code :
CIVIL-TRA-149-0001



Description :

Training Platform for Automobile Air Conditioning System

Technical Specification :

Introduction to the Training Platform

This training board uses a Chevrolet Cruze model based on an entire automatic A/C system that fully supports auxiliary systems. It demonstrates the entire vehicle structure and operation, leading to its wide usage in teaching electrical theory, practical operation, fault

diagnosis and other mechanical or engineering vehicle operations in the higher, vocational colleges and training institutions.

Basic Configuration of the Training Platform

Frequency converter

Three-phase asynchronous motor

Ignition switch

A/C switch

Diagnosis socket

High low pressure pipeline

A/C pressure switch

Cold and hot damper conversion motor

Face damper actuator motor

Middle damper actuator motor

Foot damper actuator motor

Heater

Refrigerant pressure sensor

Sunshine sensor

Environment temperature sensor

Outlet temperature sensor

Intake temperature sensor

Evaporation box temperature sensor

Room temperature sensor

Automatic A/C control unit

Dryer assembly

Expansion valve

Condensator

Evaporator

Heater

Measurement plate and movable bracket

Supporting manual

Training guide book

Features of the Training Platform for Automobile Air Conditioning System

1. Speed control motor as the power source, properly working automatic A/C system, which operates in a steady manner and shows the entire structure and working principle of the A/C system.
2. The bench plate is assembled with a high/low pressure gauge to directly show pressure changes in the refrigeration pipe.
3. An assembled digital indicator gauge shows the related sensors' static value and dynamic value.
4. The training bench is equipped with automatic A/C system color schematics and detection terminals. The element signal parameter of A/C system, such as voltage, resistance, frequency, and other parameters can be detected using special instruments.
5. The training bench is equipped with diagnostic blocks and can be connected to a dedicated or universal car decoder for reading the entire vehicle's electrical fault codes, clear fault codes, read data stream, actuate components test, parameter settings, waveform analysis, and other self-diagnostic functions.
6. Fault setting and appraisal system: use the fault setting box set manually or delete single and combination faults, including all the sensors, actuators and controller faults. Fault setting types: disconnection, short circuit, and virtual connection- turn the fault switch to the original position, and the fault is deleted. Users can set any recombination fault and delete the original fault. Using concealed fault settings is convenient for student testing, and the instructor can set various hard emulation faults in the sensors and controlling unit (example: magnetic, thermosensitive, pressure-sensitive, photoelectric, and electromagnetic). The fault type is signal distortion or accidental fault.
7. The training board is assembled with a protection cover.
8. A mobile device with locking casters moves freely to better facilitate teaching.

Training Content

1. Automatic A/C system structure and working principle training

2. The students can carry out vacuuming, injecting refrigerant, and fault checking training
3. Automatic A/C system elements assembled position training
4. Automatic A/C system elements voltage, resistance, signal and refrigerant pressure measurement training
5. Automatic A/C system refrigeration and heating principle analyzing training
6. Controlling unit DTC (diagnostic trouble code) reading, DTC elimination, data flow reading, guard against theft matching adjustment, programming, terminal element detecting training
7. Automatic A/C system fault diagnosis and elimination training
8. Automatic A/C system operation and theory examination training

Technique Features of the Training Platform

1. Auto type: Chevrolet Cruze (custom-made)
2. Input power: AC 380V \pm 10% 50Hz; 220V \pm 10% 50Hz (single phase?)
3. Working power: DC12V
4. Three phase asynchronous motor
type?Y100L1-2
voltage?AC 380V
power?2.2KW
current?5.0A
rotary speed?1430r/min
5. Working environment temperature: -40??+50?
6. Dimensions: 1600×850×1800mm
7. The bracket is welded using high quality material and powder coating.

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