

STAND-ALONE HEAVY VEHICLE HVAC TRAINER Freightliner Business Class M2



The HV-101 Heavy Vehicle HVAC System is based on a Freightliner Business Class M2 commercial truck and has been specifically designed for the instruction of air conditioning systems used in heavy duty vehicles. The trainer is designed and constructed using brand new OEM components and has been engineered with respect to OEM design and function. The trainer is equipped with an electrical break out box providing easily accessible electrical test points for the HVAC control head. Clear sight glasses have been installed in the high side (liquid) and low side (suction vapor) lines at the H-Block TXV that allow students to observe the changes of state of the refrigerant.

Educational Advantages

- Accessibility of HVAC components is enhanced by not having the requirement of whole vehicles in the shop
- Ability to insert faults creating real-world abnormal operating conditions for student diagnostic training
- Trainer can have refrigerant recovered, evacuated and recharged using service equipment with trainers OEM service ports
- A/C high and low side gauges and service port fittings for evacuation and recharge
- All rotating components are covered with safety shields or guards to prevent injuries
- Ability to operate a functional HVAC system in a classroom environment without needing exhaust extraction equipment

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SPECIFICATIONS

APPLICATION

- 2007 Freightliner Business Class M2.

FEATURES

- Fully functional original equipment HVAC system based on the Freightliner Business Class M2 commercial truck.
- Sanden A/C compressor, model 4314/ SD7H15
- Using all new OEM components.
- Trainer is mounted on a heavy duty bench with casters (2- swivel w/brakes and 2- fixed).
- Break Out Box for A/C control module with electrical test points sized for test equipment.
- High and Low Side clear sight glasses for student observation of refrigerant change of state.
- A/C Service Ports for high and low side.
- Additional High and Low Pressure Safety Control switches.
- Motor switch.
- Uses OEM TXV H-block valve.
- Electrical panic disconnect button.
- 16 Electrical test points on A/C control module.
- Lockable Manual Fault Box with four (4) faults.

INCLUDED OEM COMPONENTS

- Underdash unit
- HVAC Control Head
- Condenser
- Compressor
- TXV H-block
- Receiver-Drier

INCLUDED NON-OEM COMPONENTS

- Condenser Cooling Fan (2 speed)
- High & Low Side Pressure Safety switches
- High & Low Side Clear Sight Glasses
- Ignition Switch
- A/C unit break out box for pinpoint testing with DMM or other test equipment
- Lockable fault box allowing instructors to insert from one to four faults for student diagnostic training
- 12 VDC Power Supply
- AC electric drive motor (for unit compressor) and controls
- High & Low Side Service Ports

TECHNICAL INFORMATION

Requires

- 240VAC 60Hz 15A separate circuit (drive motor for A/C compressor)
- 120VAC 60Hz 15A separate circuit (trainer power supply and controls)
- HD bench with casters (2-swivel w/locks & 2-fixed)
- Refrigerant type- Type: R134A Qty: 1.75-1.85 lb (0.79-0.84 kg)
- Refrigerant Oil - SP-15 PAG Qty in compressor originally: 10 oz (243.4 g)

Dimensions: W 34" x L 64" x H 48" high (86.4 x 162.5 x 121.9 cm) / W 36" x L 66" x H 50" (91.4 x 167.6 x 127 cm) (w/packaging)
Shipping Weight: 300 lbs / 136.1 kg / 392 lbs / 177.8 kg (w/packaging)