



BlueCool Truck System - Checklist

This checklist has been developed to aid technicians in determining the cause of a failure and the prevention of future malfunctions. All of the following items on this checklist should be checked and, where required, adjusted or repaired as necessary. The series of checks listed here should be carried out before and after the repair or replacement of components to ensure reliable operation thereafter.

CHECKLIST

= Passed

= Failed

= Corrected

Power Inverter:



CAUTION: FIRST! Switch off the Power Inverter at the switch on the face plate of the inverter. Do not switch back on until instructed.

- While in the vicinity of the Power Inverter, check the DC input cable terminals for looseness, damage and signs of short circuits.
- Check for the presence of a rubber boot protecting the positive terminal of the inverter. If missing, correct accordingly or note for later correction.
- Ensure there are no other connections on the DC input terminals other than the two battery cables. Any other harness connections at these terminals will require their removal and relocation to the vehicle battery bank.
- Check all terminals and connections of the inverter control harness at the two switching relays. There cannot be any looseness in these connections whether it be the wire-to-terminal crimping or the mating terminal connections. Correct accordingly.
- Check the "Key On Signal" wire (pink) for proper connection to a key on circuit such as the main buss bar or ignition switch ON position. Correct accordingly.

Vehicle Batteries:

- Check battery terminals for looseness, corrosion and damage. Correct accordingly.
- Check power inverter DC cable connections to batteries for conformity to the installation instructions laid out in the installation manual and correct accordingly. (See web site for latest edition of the installation manual, also see Product Information Document P/N BCT010244A "BlueCool Truck System - Battery Connections")
- Check system harness connections to batteries for conformity to the installation instructions laid out in the installation manual and correct accordingly. (See web site for latest edition of the installation manual, also see Product Information Document P/N BCT010244A "BlueCool Truck System - Battery Connections")
- Check system harness for corrosion on terminals, damage and loose crimping. Correct accordingly.
- Check system fuses. There are 2 fuses, a 10 Amp. and a 15 Amp., located at the battery end of the two red system harness leads.
- Check vehicle battery ground cables-to-frame connections for looseness and corrosion. Correct accordingly.

Refrigeration Unit:

Remove refrigeration unit cover.

- Check all electrical connections and terminals, including grounding points, for looseness, corrosion and damage. Pay close attention to the terminals of the run-capacitor (silver color). Correct accordingly.
- Check position and security of ambient temperature sensor. Check terminals for looseness, corrosion and damage. Correct accordingly.
- Check routing of cables and harnesses including the **digital temperature sensor cable**, coolant pump, and condenser fan wiring for conformity to the installation instructions laid out in the installation manual and correct accordingly. Ensure all are securely tied.

Refrigeration Circuit

- Check pressure sensor located on top of compressor for looseness. Check sensor for continuity with an Ohm meter. An open circuit indicates low refrigerant pressure and a possible loss of refrigerant.
- Check refrigerant lines for signs of chaffing, damage and looseness at all connection points. Correct accordingly.
- If a loss of refrigerant is suspected, a full diagnosis with a refrigerant charging station and leak detection equipment will be required. Refer to the table and special instructions below.

Symptom/Malfunction	Inspection	Remedy
IMPORTANT! The storage core must be discharged and as close to ambient temperature as possible for the following checks.		
High/Low refrigerant pressure switch - open circuit.	Check for continuity across terminals of the pressure switch located on top of the compressor. Switch will be open at pressures less than 29 psi (2.0 bar) or above 326 psi (22.5 bar). Low refrigerant pressures with discharged cold storage core.	Replace if damaged or defective. See "Low pressure or no refrigerant."
Low pressure or no refrigerant.	Using an electronic leak detector, check for refrigerant leaks at refrigerant connections, fittings and pressure sensor within the charge unit. See "Special Instructions" item 1". Check cold storage core unit in the area of the TXV for leaks.	Repair leaks and service refrigeration system. See "Special Instructions" item 2.

Special instructions:

1. If no refrigerant pressure is detected, fill system with 0.25 lb. of refrigerant to enable leak detection with electronic leak detector.
2. For refrigerant leaks found in the area of the Thermal Expansion Valve located on the storage core unit, contact Webasto Product North America at 1-800-432-8371 for further information concerning the repair or replacement of the storage core assembly.

Coolant Circuit

- Check routing of coolant hoses for conformity to the installation instructions laid out in the installation manual. Correct accordingly.
- Check coolant reservoir level. Correct accordingly.
- Check all hose clamps for looseness. Tighten as necessary.
- Check all complete hose circuit for pinched lines and signs of damage and leakage. Correct accordingly.
- With the vehicle key OFF, switch on the controls of the air handler unit and check operation of the coolant circulating pump. Correct accordingly.
- Remove the air handler cover and check coolant hoses for pinching and leakage. Correct accordingly.
- Check for presents of air in the heat exchanger. Purge air according to the instructions laid out in the installation manual.

At the Control Unit

- Check for grounded core temperature digital sensor cable shield as explained in the Technical Service Bulletin under part number BCT010239A "BlueCool Truck System – Malfunctions Caused By Radio Frequency Interference (RFI) from CB Radios and Electrical Noise". Update as required.

Final System Performance Test

Install air handler cover. Start vehicle engine and allow to run for 1/2 hour. At this point check for the following:

- Inverter switched ON automatically by the BCT control system.
- AC compressor operating.
- Condenser fan operating.

Recording:

Customer or Company Name: _____

BlueCool System Serial Number: _____

Vehicle Make and Model: _____ Year: _____

Vehicle VIN Number: _____

Inspecting Technician: _____ Employed by: _____

- Return Power Inverter for credit. A call tag (return form) is provided. Shipping paid by Webasto Product N.A., Inc.**