NOTE:

1.0 COMPLETE INSTALLATION INCLUDES AND IS NOT LIMITED TO:
   1.1 UNIT INSTALLATION
   1.2 BATTERY INSTALLATION, INCLUDING DRAIN HOSE
   1.3 COMPLETION OF PRE-DELIVERY INSPECTION (PDI) PER MODEL
   1.3.1 UNIT PREP AND INITIAL ADJUSTMENTS
   1.3.2 CHECKLIST
   1.3.3 UNIT RUN IN PER PDI CHECKLIST
   1.2.4 WARRANTY REGISTRATION CARD SUBMITTAL
   1.5 FUEL LINE CONNECTIONS TO UNIT

2.0 THE TRAILER OR BOXCAR STRUCTURE MUST BE EVALUATED BY THE TRAILER OR BOXCAR MANUFACTURER TO DETERMINE ITS ABILITY TO WITHSTAND THE LOADS IMPOSED BY THE UNIT OVER ITS SERVICE LIFE. CARRIER TRANSICOLD DOES NOT CONVEY ANY ENDORSEMENT OR WARRANTY FOR THE TRAILER'S OR BOXCAR'S STRUCTURAL INTEGRITY.

WEIGHTS:

VECTOR 8500 REEFER UNIT (WET, LESS BATTERY): 1810 LBS [821.0 kg]
VECTOR 8500 REEFER UNIT W/EES (WET, LESS BATTERY): 1855 LBS [841.0 kg]
BATTERY (TYPICAL): 80 LBS [36 kg] MAXIMUM

3.0 UNIT MOUNTING SURFACES OF THE TRAILER OR BOXCAR THAT CONTACT THE UNIT MOUNTING PADS MUST BE UNI-PLANAR TO WITHIN 0.13 [3] TO PREVENT DISTORTION OF THE UNIT AND/OR TRAILER.

4.0 TRAILER OR BOXCAR SURFACES THAT CONTACT THE UNIT MOUNTING GASKET SHOULD NOT PROTRUDE MORE THAN 0.19 [5] ABOVE THE PLANE DEFINED BY THE MOUNTING PAD SURFACES TO ENSURE PROPER AIR SEAL.

5.0 ALL DIMENSIONS SHOWN ARE IN INCHES, WITH THE METRIC CONVERSIONS IN [MILLIMETERS].

6.0 PRE-DELIVERY INSPECTION AND WARRANTY REGISTRATION DOCUMENTS ARE SHIPPED WITH UNIT AND ARE LOCATED IN THE SIDE DOOR POCKET WITH UNIT MANUAL AND SCHEMATIC.

SEE SEPARATE PARTS LIST
REAR VIEW: WITH UPPER AND LOWER BACK PANELS

REAR VIEW: UPPER BACK PANEL ONLY

NOTE: EITHER LOCATION MAY BE USED BUT ROADSIDE LOCATION OFFERS EASIER ACCESS. PLUG UNUSED HOLE AFTER INSTALLATION (SEE SHT 4)
TRAILER OR BOXCAR BODY PREPARATION

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**CAUTION**

UNIT MOUNTING SURFACES OF TRAILER OR BOXCAR THAT CONTACT THE UNIT MOUNTING PAD MUST BE UNI-PLANAR TO WITHIN 0.013" TO PREVENT DEFORMATION OF UNIT AND/OR TRAILER/BOXCAR.

**NOTE:** EITHER LOCATION MAY BE USED BUT ROAD SIDE LOCATION OFFERS EASIER ACCESS.

PLUG UNUSED HOLE AFTER INSTALLATION.

---

**SIDE VIEW**

---

**TRAILER OR BOXCAR FRONT VIEW**

---

**LIGHT BAR OPTIONAL**

SEE DWG 98-03246

---

METRIC CONVERSIONS IN [MILLIMETERS] UNLESS OTHERWISE SPECIFIED

DIMENSIONS ARE IN INCHES
UNIT INSTALLATION:

1.0 PREPARE THE BODY TO RECEIVE THE UNIT. DIMENSIONS FOR EVAPORATOR OPENING AND MOUNTING STUD LOCATIONS CAN BE FOUND ON SHEET 4 OF THIS DRAWING.

2.0 DEMOUNT UNIT LIFTING APPARATUS. REMOVE TAILGATE (TRAILER) AND FULL LINING (BOXCAR). MAKE SURE THE UNIT IS SECURE. REMOVAL OF TAILGATE (TRAILER) AND FULL LINING (BOXCAR) WILL NOT CAUSE DAMAGE TO THE UNIT.

3.0 INSTALL BATTERY ACCORDING TO INSTRUCTIONS ON SHEETS 6 & 7. IF UNIT HAS BEEN SHIPPED WITHOUT BATTERY, INSTALL BATTERY ACCORDING TO THE INSTRUCTIONS ON SHEETS 6 & 7.

4.0 INSTALL UNIT LIFTING LOCATION (SERIAL NUMBER PLATE) TO ACTIVATE WARRANTY COVERAGE. IN-SERVICE DATE MUST BE STAMPED ON THE UNIT IN THE PROPER LOCATION (SERIAL NUMBER PLATE).

5.0 PERFORM PRE-DELIVERY INSPECTION. COPIES OF COMPLETED CHECKLIST SHOULD BE SUPPLIED TO SELLING DEALER AND CUSTOMER. USE OF EACH PART OF THE CHECKLIST SHOULD BE VERIFIED.

6.0 REFER TO THE PRE-DELIVERY INSPECTION FORM SUPPLIED WITH UNIT FOR THE RECOMMENDED LENGTH OF TIME. REFER TO THE PRE-DELIVERY INSPECTION FORM SUPPLIED WITH UNIT FOR THE RECOMMENDED LENGTH OF TIME.

7.0 INSTALL BUTTON PLUGS (ITEM 92) IN UNIT FRAME WHERE MOUNTING STUDS ARE LOCATED AND ADDITIONAL UNLOADED HOLES. INSTALL BATTERY ACCORDING TO INSTRUCTIONS ON SHEETS 6 & 7. IF UNIT HAS BEEN SHIPPED WITHOUT BATTERY, INSTALL BATTERY ACCORDING TO THE INSTRUCTIONS ON SHEETS 6 & 7.

8.0 INSTALL BUTTON PLUGS (ITEM 92) IN UNIT FRAME WHERE MOUNTING STUDS ARE LOCATED AND ADDITIONAL UNLOADED HOLES.

9.0 INSTALL UNIT LIFTING LOCATION (SERIAL NUMBER PLATE) TO ACTIVATE WARRANTY COVERAGE.

10.0 PERFORM PRE-DELIVERY INSPECTION. COPIES OF COMPLETED CHECKLIST SHOULD BE SUPPLIED TO SELLING DEALER AND CUSTOMER. USE OF EACH PART OF THE CHECKLIST SHOULD BE VERIFIED.

11.0 OPERATE UNIT IN CONTINUOUS RUN MODE. REFER TO THE PRE-DELIVERY INSPECTION FORM SUPPLIED WITH UNIT FOR THE RECOMMENDED LENGTH OF TIME. REFER TO THE PRE-DELIVERY INSPECTION FORM SUPPLIED WITH UNIT FOR THE RECOMMENDED LENGTH OF TIME.

12.0 IMPORTANT: PRIOR TO FINAL DELIVERY TO CUSTOMER, WARRANTY REGISTRATION MUST BE COMPLETED. INSTALL UNIT IN CONTINUOUS RUN MODE. REFER TO THE PRE-DELIVERY INSPECTION FORM SUPPLIED WITH UNIT FOR THE RECOMMENDED LENGTH OF TIME. REFER TO THE PRE-DELIVERY INSPECTION FORM SUPPLIED WITH UNIT FOR THE RECOMMENDED LENGTH OF TIME.

13.0 OPTIONAL BULKHEAD CONFIGURATION: WILL PATTERN OR OPEN AREA FOR RETURN UNIT INSTALLATION. WILL INSTALL AT LEAST 1 TO 2 FT. OF AIR FLOW MUST TOTAL AT LEAST 2.75 SQ.FT. OF AIR FLOW. HOLE PATTERN OR OPEN AREA MUST BE RECESSED SO THAT CARGO LOADED AGAINST BULKHEAD WILL NOT OBSTRUCT AIR PASSAGE OPENINGS. PERFORATED BULKHEADS THAT MEET THE REQUIREMENTS, MAY BE INSTALLED TIGHT WITH FLOOR.
BATTERY INSTALLATION INSTRUCTIONS

SEE NEXT SHEET FOR PICTORIALS OR REFER TO BATTERY INSTALLATION DOCUMENT IN POLY BAG FASTENED TO BATTERY TRAY PLATE.

UNITS SUPPLIED WITH BATTERY INSTALLED
1.0 COTTER PIECES THAT HOLD BATTERY CABLES TO UNIT FRAME.
2.0 CONNECT RED BATTERY CABLE TO THE POSITIVE (+) BATTERY TERMINAL CONNECT BLACK CABLE TO NEGATIVE (-) BATTERY TERMINAL (USE OF CORROSION INHIBITOR IS RECOMMENDED).
3.0 POSITION TERMINAL COVERS SUPPLIED WITH CABLES OVER TERMINALS.

UNITS SUPPLIED WITHOUT BATTERY INSTALLED
1.0 USE THE FOLLOWING INFORMATION TO CORRECTLY SELECT THE BATTERY PERFORMANCE NEEDED FOR REFRIGERATION UNITS.
GROUP SIZE: GROUP 31
VENT LOCATION: SIDE VENT
VOLTS: 12 VOLTS DC
AMPERAGE: MINIMUM 700 COLD CRANKING AMPS @ 0°F
MINIMUM 545 COLD CRANKING AMPS @ -20°F
NOTE: WHEN SELECTING A SPECIFIC BRAND OF BATTERY, ALWAYS ENSURE THAT THE BATTERY CHOOSE IS RATED AT 0°F (0 DEGREES FAHRENHEIT) AND NOT 0°C (0 DEGREES CELSIUS). FAILURE TO USE THE PROPER BATTERY SIZE WILL RESULT IN REDUCED BATTERY LIFE AND A NO-START CONDITION. THE RECOMMENDED MAXIMUM BATTERY WEIGHT IS 80 LBS.
2.0 CUT WIRE TIE HOLDING THESE PARTS IN THE BATTERY TRAY AND REMOVE PARTS. PLACE BATTERY IN TRAY WITH POSITIVE (+) TERMINAL TO THE REAR OF THE UNIT (AS SHOWN). CONNECT BATTERY CABLES (THE USE OF A CORROSION INHIBITOR ON THE TERMINALS IS RECOMMENDED); RED CABLE TO POSITIVE (+) TERMINAL, BLACK CABLE TO THE NEGATIVE (-) TERMINAL. CABLES SHOULD BE ROUTED TOWARD THE COMPRESSOR (AS SHOWN). INSTALL TERMINAL CONNECTORS SECURELY TO PREVENT MOVEMENT OF THE BATTERY.
3.0 INSTALL SCREWS AND HOLD-DOWN CHANNEL USING PLAIN AND LOCK WASHERS AS SHOWN. POSITION TERMINAL COVERS SUPPLIED WITH CABLES OVER TERMINALS.
4.0 POSITION TERMINAL COVERS SUPPLIED WITH CABLES OVER TERMINALS.

NOTE 2: ‘POSITIVE (+) WAS NEGATIVE (-)’ 05NOV2012 RS 72N0521P12
REM'D NOTE 4.0 FROM "UNITS SUPPLIED WITH BATTERY INSTALLED" NOTES, REM'D NOTE 5.0 FROM "UNITS SUPPLIED WITHOUT BATTERY INSTALLED" NOTES

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SEE NEXT SHEET FOR PICTORIALS OR REFER TO BATTERY INSTALLATION DOCUMENT IN POLY BAG FASTENED TO BATTERY TRAY PLATE.
Battery Installation Procedure for Units Shipped Without Battery.

Install battery into unit with positive (+) terminal toward the rear.

Battery cables must be installed as shown above to prevent rubbing.

Positive terminal (Red)
- Torque to 19.0#1.0 FT-LBS

Negative terminal (Black)
- Torque to 19.0#1.0 FT-LBS

BATTERY INSTALLATION PROCEDURE FOR UNITS SHIPPED WITHOUT BATTERY.

1.0 Caution: Due to different battery MFG. when applying torque to battery U-bracket, make sure there is no battery housing distortion or crushing.

2.0 When installing positive battery cable to battery post ensure there is clearance between the cable and the frame.

2.1 Vector 8500/8600: 0$
2.2 Vector NDKA: 15$

3.0 When installing left J-hook into L-bracket rotate opposite of right J-hook.

Right 5/16-18 J Hook
- See Note 3.0

Left 5/16-18 J Hook
- See Note 3.0

Top view

Typical cable routing for:
Vector 8500, 8500R
# Electrical Specifications & Minimum Standby Infrastructure for Carrier Transicold Trailer units equipped with Standby

<table>
<thead>
<tr>
<th>Specification</th>
<th>Vector 8500 W/STBY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Voltage</td>
<td>460V / 3ph / 60Hz</td>
</tr>
<tr>
<td>Full Load Amp Draw (FLA)</td>
<td>22 A</td>
</tr>
<tr>
<td>kVA</td>
<td>18.5</td>
</tr>
<tr>
<td>Locked Rotor Amp Draw (LRA)</td>
<td>90 A</td>
</tr>
<tr>
<td>Electrical Receptacle (installed on unit)</td>
<td>IEC IP 67 pin &amp; sleeve, 480V, 30A, 4 wire, 3 pole</td>
</tr>
<tr>
<td>Receptacle p/n</td>
<td>22-04166-01</td>
</tr>
<tr>
<td>Phase reversal</td>
<td>Automatic</td>
</tr>
<tr>
<td>Standby circuit breaker &amp; cordset specifications</td>
<td></td>
</tr>
<tr>
<td>Standby cable type &amp; gauge (min 50 long, up to 75 long)</td>
<td>SOOW, 600V, 90C, 10/4 (3ph + G)</td>
</tr>
<tr>
<td>Recommended external circuit breaker</td>
<td>30A</td>
</tr>
<tr>
<td>Connector p/n</td>
<td>22-02944-00</td>
</tr>
</tbody>
</table>

## Minimum Requirements for Standby Infrastructure

1. Ensure that the standby power installation is performed by a licensed electrician who is familiar with both local and national electric codes and requirements.
2. Each refrigeration unit must be protected by an individual circuit breaker sized per the appropriate unit electrical specification listed above.
3. A continuous earthing ground conductor must be provided at the plug and through the power cord to the refrigeration unit.
4. Carrier Transicold recommends that customers establish an Assured Equipment Grounding Conductor Program per the National Electric Code (NEC). Per the Assured Equipment Grounding Conductor Program, the NEC calls for all cordsets to be verified for ground continuity and correct wiring on a 3 month basis.
5. A neutral conductor MUST NOT be connected to the refrigeration units. All Carrier Transicold refrigeration units are balanced three phase systems; therefore, the unit only requires three phase wires and a ground conductor.
6. Standby power cordsets between the circuit breaker and the refrigeration unit MUST be constructed from 10/4 SOOW cable. Carrier recommends a minimum cable length of 50 feet to limit maximum fault currents and prevent damage to the power circuits within the unit.

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**WARNING:**

Be sure power is dis-connected to customer cable.

Read entire supplier directions supplied with plug before starting installation.

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**CUSTOMER CABLE AND PLUG ASSEMBLY**

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**PARTIAL LOWER ROADSIDE VIEW**

**STANDBY PLUG MOUNTING**

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**INSTALLATION INSTRUCTIONS**
1. INSTALL (3) MOUNTING ANGLES (ITEM #80), WITH RIVNUTED FLANGE DOWN, TO FRAME USING SUPPLIED SCREWS (ITEM #75). TORQUE SCREWS TO 96 IN-LBS, KEEPING THE BOTTOM OF THE ANGLES FLUSH AND PARALLEL TO THE BOTTOM OF THE FRAME.

2. SLIDE (5) OPENINGS IN THE BOTTOM PANEL OVER THE (5) REAR MOUNTING ANGLES ON THE FRAME AND SECURE BOTTOM PANEL TO OTHER (5) MOUNTING ANGLES USING SUPPLIED SCREWS (ITEM #75). TORQUE SCREWS SECURELY TO 96 IN-LBS.