MULTI-TEMP INSTALLATION PROCEDURE

IMPORTANT: INSTALLATION OF REMOTE EVAPORATORS MUST BE DONE, IN PART, BY A TECHNICIAN IN POSSESSION OF A CURRENT EPA SECTION 608 CERTIFICATION IN THE USA, OR OTHER APPROPRIATE CERTIFICATION OUTSIDE THE USA.

1. SELECT LOCATION FOR REMOTE EVAPORATOR WHICH OPTIMIZES AIR CIRCULATION.

CAUTION: TRUCK BODY MFR TO DETERMINE IF ADJUSTMENT IN CORNER MOLDING IS NECESSARY TO AVOID INTERFERENCE WITH EVAPORATOR MOUNTING.

2. THE TRUCK BODY MANUFACTURER TO PROVIDE SMOOTH FLAT SURFACE IN SAME PLANE TO ACCEPT MOUNTING OF EVAPORATOR. INSTALL REMOTE EVAPORATOR. SEE BODY PREPARATION, SHEET 2.

3. CEILING MOUNTING STUDS SHOULD BE LOCATED BY THE BODY BUILDER PER EVAPORATOR DRAWING LOCATIONS. EVAPORATORS ARE DELIVERED WITH 1/4"-20 x 3/4" BOLTS TO ACCOMODATE MOUNTING STUD SIZE: 1/2"-13 UNC. ON AN 1100 EVAPORATOR, SHMS1340, ARE TO BE INSTALLED BETWEEN THE CEILING AND EVAPORATOR TO PROVIDE A SUFFICIENT DRAINAGE SLOPE. TWO (2) SHMS ARE TO BE INSTALLED ON EACH MOUNTING STUD CLOSEST TO THE EVAPORATOR DRAIN AND ONE (1) SHM INSTALLED ON THE CENTER MOUNTING STUD. AN ADDITIONAL, TWO (2) SHMS ARE PROVIDED FOR SPECIAL MOUNTING APPLICATIONS (i.e., MOUNTING AN EVAPORATOR GUARD). NO SHMS ARE REQUIRED ON THE STUDS LOCATED FARTHEST FROM THE DRAIN SIDE OF THE EVAPORATOR.

3.1 FOR 1100 EVAPORATORS ONLY, THE TWO CENTER MOUNTING STUDS ARE NOT REQUIRED WHEN 1/2-13 UNC STUDS ARE USED ON THE FOUR CORNER MOUNTING LOCATIONS.

4. AFTER MAIN UNIT IS MOUNTED, ROUTE REFRIGERANT LINES FROM MAIN UNIT TO REMOTE EVAPORATOR. APPLY A LIGHT COAT OF CLEAR REFRAIGERANT OIL TO O-RINGS AT MAIN UNIT AND REMOTE EVAPORATOR(S) BEFORE ASSEMBLY.

5. TROUGH LOCATIONS:

5.1 WHEN USING A WALL TROUGH FOR TUBING AND ELECTRICAL WIRING, THE TROUGH SHOULD BEGIN AT A POINT 1-1/2 INCHES DOWN FROM THE CEILING. THIS WILL ALLOW THE TUBING FROM EVAPORATOR TO DIRECTLY ENTER THE TROUGH BEFORE MAKING THE FIRST BEND TOWARDS THE HOST UNIT.

5.2 IF A WALL TROUGH IS USED, THE TROUGH SHOULD CONTINUE TO A POINT 6 INCHES PAST THE SIDE TUBING CONNECTIONS OF A DUAL DISCHARGE EVAPORATOR.

5.3 IF A CEILING TROUGH IS USED, THE TROUGH SHOULD CONTINUE TO WITHIN 6 INCHES FROM THE REAR OF A SINGLE DISCHARGE EVAPORATOR.

CONTINUED ON SHEET 2
6. REFRIGERANT LINE SIZES:
6.2 WHEN CONNECTING THE REMOTE EVAPORATORS, STEP UP THE SUCTION LINE SIZE NEAR THE EVAPORATOR AND RUN THE ENTIRE LENGTH WITH 1-1/8 INCH PIPE.
6.4 THE SUCTION & HEAT GAS LINES MUST BE INSULATED. IT IS NOT NECESSARY TO INSULATE THE LIQUID LINES.

7. REFRIGERANTS:
7.1 IF R-404A REFRIGERANT IS TO BE USED, IT IS MANDATORY THAT NITROGEN FLUSHING BRAZE TECHNIQUES ARE USED ON EVERY SOLDER TUSING JOINT. IT IS RECOMMENDED THAT THIS SAME PROCEDURE BE USED ON R-22 REFRIGERANT UNIT BUT IT IS NOT MANDATORY. THIS TECHNIQUE ELIMINATES OXIDATION WHICH WILL REDUCE SYSTEM RELIABILITY.
7.2 LEAK TEST AND THEN EVACUATE THE SYSTEM THROUGH RECEIVER PORT AND SUCTION PORT. SEE SERVICE MANUAL FOR PROPER PROCEDURE.

CAUTION: DISCONNECT ALL BATTERIES BEFORE WORKING ON ELECTRICAL SYSTEM.

8. ELECTRICAL CONNECTIONS:
8.1 THE WIRING HARNESS FOR THE REMOTE EVAPORATOR SHOULD BE RUN ALONG WITH THE SUCTION, HOT GAS, LIQUID LINE TO THE HOST UNIT.
8.2 AFTER ROUTING THE WIRING HARNESS(S) AND INSTALLING THE REMOTE EVAPORATOR(S), DETERMINE REQUIRED HARNESS LENGTH(S) AND CUT HARNESS AT THE REMOTE EVAPORATOR END.

CAUTION: USE EXTREME CAUTION TO AVOID CUTTING THE INSULATION ON WIRES WHEN CUTTING WIRE HARNESS SLEEVES.

8.3 USE THE PRE-INSULATED TERMINALS SUPPLIED (11,2) AND PROPER CRIMPING TOOL (AMP #98264-1) TO MAKE ELECTRICAL CONNECTIONS.
8.4 COMPLETE ALL ELECTRICAL CONNECTIONS ON THE MAIN UNIT AND ON THE REMOTE EVAPORATOR PER WIRING INSTRUCTIONS ON SHEETS 5 & 6.
8.5 IF A REAR MOUNTED REMOTE CONTROL/INDICATOR PANEL IS USED, THE CONTROL CABLE MAY BE RUN WITH THE SUCTION, HOT GAS, LIQUID LINE AND THE EVAPORATOR WIRE HARNESS TO THE HOST UNIT OR UNDERNEATH THE TRUCK BODY TO THE HOST UNIT.

9. DRAIN TUBE CONNECTIONS:
9.1 DEFROST DRAIN TUBES PROVIDED BY THE TRUCK MANUFACTURER SHOULD BE CENTERED ON THE EVAPORATOR AND PLACED 10 TO 11 INCHES FROM THE CEILING. A 7/8 INCH I.D. / 15/16 INCH O.D. DRAIN TUBE IS SUPPLIED FOR CONNECTION OF THE REMOTE EVAPORATOR DRAIN OUTLET WHICH IS TO BE INSTALLED INTO THE TRAILER OEM SUPPLIED WALL DRAIN. THE DRAIN TUBE SUPPLIED BY CARRIER IS DESIGNED TO GO INSIDE THE WALL DRAIN PIPE SUPPLIED BY THE BODYBUILDERS OEM. THE WALL DRAIN MUST BE CPVC SCHEDULE 40 RATED AT 200°F (93°C) OR EQUIVALENT.
9.2 THE 1100 EVAPORATOR USES ONLY ONE OF THE TWO DEFROST DRAINS. THE UNUSED DRAIN IS PLUGGED WITH PLUG PROVIDED WITH THE EVAPORATOR.
9.3 THE 2200 WIDTH EVAPORATOR USES BOTH DEFROST DRAINS UNLESS IN 96" WIDE APPLICATIONS.

10. CONSULT APPLICATION ENGINEERING FOR PROPER INSTALLATION OF FEATURES NOT SUPPLIED BY CARRIER.

INSTALLATION TIPS

(A) USE FLAT FLOORING IN THE FLOOR SECTION UNDER THE BULKHEAD.
(B) PROVIDE A THERMAL BREAK IN THE FLOOR UNDER THE BULKHEAD FOR MOBILE LOCATION BULKHEADS, USE RUBBERIZED HARDWOOD FLOORS.
(C) COVER REFRIGERANT LINES TO AVOID IMPACT DAMAGE.
(D) INSTALL A GUARD AROUND THE EVAP. TO PREVENT IMPACT DAMAGE.

TRUCK BODY PREPARATION FOR EVAPORATOR
TUBING INSTRUCTIONS

CAUTION: HOT UNIT IS SHIPPED FULLY CHARGED FROM FACTORY.

1.0 PUMP DOWN REFRIGERATION SYSTEM AND REMOVE CAPS FROM EVAPORATOR CONNECTIONS.

2.0 ROUTE TUBING TO REAR EVAPORATORS TO MINIMIZE EXPOSURE TO DAMAGE.

3.0 FOR COPPER TO COPPER BRAZING IT IS RECOMMENDED THAT A BRAZING MATERIAL OF 15% SILVER, 85% PHOSPHORUS BE USED. FLUX IS NOT REQUIRED FOR COPPER TO COPPER JOINTS.

"SOFT SOLDER" BRAZING MATERIAL IS NOT RECOMMENDED.

4.0 CLOSED CELL FOAM INSULATION IS RECOMMENDED TO COVER THE ENTIRE SUCTION & HOT GAS LINE LENGTH.

IMPORTANT: USE ONLY NEW O-RINGS SUPPLIED IN KIT WHEN INSTALL UNIT. DISCARD FACTORY INSTALLED O-RINGS TO INSURE PROPERLY SEALED CONNECTIONS.

CAUTION: MAKE SURE ALL BRAZING IS COMPLETE AND HAS WILL RESULT IN O-RING DAMAGE.

6.00 36.00 12.00 36.00
[152.4] [914.4] [308.4] [914.4]

COMPARTMENT NO. 3

COMPARTMENT NO. 2

COMPARTMENT NO. 1

72.00 MIN
[1829.2]
(8 FEET RECOMMENDED MINIMUM)

2 OR 3 COMPARTMENT INSTALLATION

REFRIGERANT LINE ROUTING

CEILING TROUGH CONFIGURATION

WALL TROUGH CONFIGURATION

TORQUE NUT FROM 20 TO 24 FT-LBS. TO 23 NM.

TORQUE NUT FROM 17 TO 21 FT-LBS. TO 23 TO 28 NM.

TORQUE NUT FROM 53 TO 65 FT-LBS. TO 72 TO 88 NM.
**MAIN CONTROL BOX**

1CP = COMPARTMENT 1  
2CP = COMPARTMENT 2  
3CP = COMPARTMENT 3

**ELECTRICAL CONNECTIONS (SEE SHT'S 2 & 6)**

1. Connect the wire colors in accordance with the following:

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<tr>
<th>Conn 19V</th>
<th>Compartment</th>
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<tbody>
<tr>
<td>1</td>
<td>YELLOW (1)</td>
</tr>
<tr>
<td>2</td>
<td>YELLOW (2)</td>
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<tr>
<td>3</td>
<td>BLACK</td>
</tr>
<tr>
<td>4</td>
<td>BLACK</td>
</tr>
<tr>
<td>5</td>
<td>ORANGE</td>
</tr>
<tr>
<td>6</td>
<td>ORANGE</td>
</tr>
<tr>
<td>7</td>
<td>GREY</td>
</tr>
<tr>
<td>8</td>
<td>RED (1)</td>
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<tr>
<td>9</td>
<td>WHITE</td>
</tr>
<tr>
<td>10</td>
<td>RED (2)</td>
</tr>
<tr>
<td>11</td>
<td>PURPLE</td>
</tr>
<tr>
<td>12</td>
<td>RED (3)</td>
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<tr>
<td>13</td>
<td>DARK BLUE</td>
</tr>
<tr>
<td>14</td>
<td>CAVITY PLUG</td>
</tr>
<tr>
<td>15</td>
<td>GREEN</td>
</tr>
<tr>
<td>16</td>
<td>CAVITY PLUG</td>
</tr>
<tr>
<td>17</td>
<td>BLUE</td>
</tr>
<tr>
<td>18</td>
<td>CAVITY PLUG</td>
</tr>
<tr>
<td>19</td>
<td>BROWN</td>
</tr>
</tbody>
</table>

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RED (1)  = 1C HEATERS  
RED (2)  = 3C HEATERS  
RED (3)  = 5C HEATERS  
BROWN    = 9C FANS  
BLUE     = 7C FANS  
PURPLE   = 160 HV  
DARK BLUE = 178 DS  
GREY     = 228 DS  
WHITE    = 238 LSV  
ORANGE   = 198 HT  
ORANGE   = 248 HT  
YELLOW (2) = 208 DTS  
YELLOW (1) = 258 DTS  
BLACK    = 218 RASA  
BLACK    = 260 RASB  
GREEN    =  
GREEN/YELLOW =  

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**EVAPORATOR JUNCTION BOX**
1.0 CONNECT THE WIRE COLORS IN ACCORDANCE TO THE FOLLOWING CHARTS.
ELECTRICAL CONNECTIONS (SEE SHEET 1)

1.0 CONNECT THE WIRE COLORS IN ACCORDANCE TO THE FOLLOWING CHARTS.

<table>
<thead>
<tr>
<th>Connector PIN No.</th>
<th>Wire Color</th>
<th>Terminal</th>
</tr>
</thead>
<tbody>
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<td>0400-202-1514</td>
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<tr>
<td>14</td>
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</tr>
<tr>
<td>19</td>
<td>BROWN</td>
<td>0400-202-1514</td>
</tr>
</tbody>
</table>

* INDICATES A LARGE CAVITY.

HEATERS

DELTA

MAIN CONTROL BOX

1CP....COMPARTMENT 1
2CP....COMPARTMENT 2
WIRING DIAGRAM FOR FAN 1 TO FAN 4 (INFORMATION ONLY)

FOR FAN 1
- Blue
- Brown
- Black
- White

FOR FAN 2
- Blue
- Brown
- Black
- White

FOR FAN 3
- Blue
- Brown
- Black
- White

FOR FAN 4
- Blue
- Brown
- Black
- White

HEATER WIRING DIAGRAM FOR SINGLE DISCHARGE (SEE NOTE)

400V/3/50 (ORIGINAL COUPLING)

- Red (1)
- Black (2)
- Blue (3)

SEE SHUNT REP A

SEE SHUNT REP B

SEE SHUNT REP C

230V/3/50
240V/3/60

STAR COUPLING

400V/3/50

PLACE THE TWO LONG SHUNT A AND B IN ACCORDANCE WITH THE TERMINAL MARK.

TO CHANGE THE STAR TO TRIANGLE COUPLING, YOU MUST PUT THE SHUNT IN ACCORDANCE WITH THE DESCRIPTION.

SUPPLY WIRES

A OR Δ

RED (1) ... 1C
RED (2) ... 1C
RED (3) ... 1C

TRIANGLE COUPLING

230V/3/50
240V/3/60

PLACE THE THREE SHORT SHUNT A, B AND C IN ACCORDANCE WITH THE TERMINAL MARK.

NOTE: FOR ALL UNITS WITH 19 PIN CONNECTOR, A HARNESS PLUG-IN IS PROVIDED FOR EITHER WYE OR DELTA CIRCUITING.

WIRING DIAGRAM FOR THE DRAIN HOSE HEATERS

RESISTANCE 25W (13W FOR NAD) PER HEATER

PURPLE
PIPING SCHEMATIC

SCHEMATIC FOR INFORMATION ONLY
EXACT PIPING TO BE DETERMINED BY REMOTE
EVAPORATOR STYLE, APPLICATION AND LOCATION.

2 COMPARTMENT SYSTEMS WITH TWO 1100 SIZE REMOTE EVAPORATORS
2 COMPARTMENT SYSTEM WITH ONE 1100 & ONE 1450 SIZE SIZE REMOTE EVAPORATORS

PIPING SCHEMATIC

Schematic for information only
Exact piping to be determined by remote evaporator style, application and location.

SYSTEM C
1 MTS 1450-3 SINGLE DISCHARGE EVAP AND
1 MTS 1100-2 SINGLE DISCHARGE EVAP

SYSTEM SPECIAL A
1 MTS 2200-3 SINGLE DISCHARGE EVAP AND
1 MTS 1100-2 SINGLE DISCHARGE EVAP
SYSTEM SPECIAL B

2 MTS 1450-3 SINGLE DISCHARGE EVAP'S

PIPING SCHEMATIC

SCHEMATIC FOR INFORMATION ONLY

EXACT PIPING TO BE DETERMINED BY REMOTE
EVAPORATOR STYLE, APPLICATION AND LOCATION.

2 COMPARTMENT SYSTEM WITH TWO 1450 SIZE REMOTE EVAPORATORS
INSULATE THE ENTIRE LENGTH OF TUBING.

SCHHEMATIC FOR INFORMATION ONLY
EXACT PIPING TO BE DETERMINED BY REMOTE
EVAPORATOR STYLE, APPLICATION AND LOCATION.

3 COMPARTMENT SYSTEMS WITH THREE 1100 SIZE REMOTE EVAPORATORS
INSULATE THE ENTIRE LENGTH OF TUBING.

CEILING TROUGH SHOWN (REF)

CONNECT TO HOST UNIT. USE NEW O-RINGS, ITEMS 65 & 68 (SEE SH. 3)

PARTS SHOWN ARE SUPPLIED WITH REMOTE EVAPORATOR

PIPING SCHEMATIC

SCHEMATIC FOR INFORMATION ONLY

EXACT PIPING TO BE DETERMINED BY REMOTE EVAPORATOR STYLE, APPLICATION AND LOCATION.

SINGLE COMPARTMENT SYSTEM

SYSTEM SPECIAL C
1 MTS 2200-4 SINGLE DISCHARGE EVAP