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**WARRANTY  
BULLETIN**

Wb98-33

DATE :	October 1998	SECTION :	22, HVAC
EXPIRATION :	October 1999		
SUBJECT :	A/C SYSTEM MODIFICATIONS		

The present bulletin includes four parts:

Part	Subject	Model	Page
A	Installation of liquid solenoid valve	H3-41 and H3-45 coaches with <b>R134A*</b> and <b>R-22*</b> Model Year: 1995 - 1998	1
B	Valve plate and valve changeout	H3-41 and H3-45 coaches using <b>R134A</b> Model Year: 1995 – 1998 See the compressor's serial number applications inside	16
C	Installation of a thermostat allowing compressor use below exterior freezing point	H3-41, H3-45 and VIP-45 vehicles with <b>R134A</b> and <b>R-22</b> , Model Year: 1995 - 1998	19
D	Low pressure unloader switch addition on HVAC system compressor for low pressure operation	H3 Series coaches with <b>R134A</b> and <b>R-22</b> , Model Year: 1997- 1998	21

\*Type of refrigerant.

**Note:** Because of the complexity of the modifications to perform, do not hesitate to go to your nearest authorized Carrier Service Warranty Center. Refer to the attached list of locations.

**PART A: INSTALLATION OF LIQUID SOLENOID VALVE**

**APPLICATION**

Model	VIN
H3-41 and H3-45 coaches with <b>R134A</b> and <b>R22</b> Model Year: 1995 - 1998	From 2P9H33417S1001058 up to 2PCH33492W1012457 incl.

## DESCRIPTION

On the above-mentioned vehicles, it is necessary to install a liquid solenoid valve on the filter dryer entrance. This modification is needed in order to prevent liquid state refrigerant from entering the stopped compressor.

**Note:** If this liquid solenoid valve has already been installed on your vehicle, please don't consider the following procedure and go to Part B, page 16.

## MATERIAL

Identify your vehicle's group number:

Group #	V.I.N.
1	From 2P9H33417S1001058 up to 2PCH33414I1011607 incl.
2	From 2PCH33499T1011608 up to 2PCH33498V1011778 incl.
3	From 2PCH3349XV1011779 up to 2PCH33417V1011961 incl.
4	From 2PCH33419V1011962 up to 2PCH33492W1012457 incl.

**Note :** Material can be obtained through regular channels.

Parts to order for group 1 vehicle owners:

Part Number	Description	Qty
950262	Filter dryer	1
453146	Liquid solenoid valve assembly	1
213752	Bracket	1
506466	Foam tape	1
452383	New hose	1
064933	Cable	1
064934	Cable	1
062490	Shrinking tube	1

Parts to order for group 2 vehicle owners:

Part Number	Description	Qty
950262	Filter dryer	1
453146	Liquid solenoid valve assembly	1
213752	Bracket	1
506466	Foam tape	1
064933	Cable	1
064934	Cable	1
062490	Shrinking tube	1

Parts to order for group 3 and 4 vehicle owners:

Part Number	Description	Qty
950262	Filter dryer	1

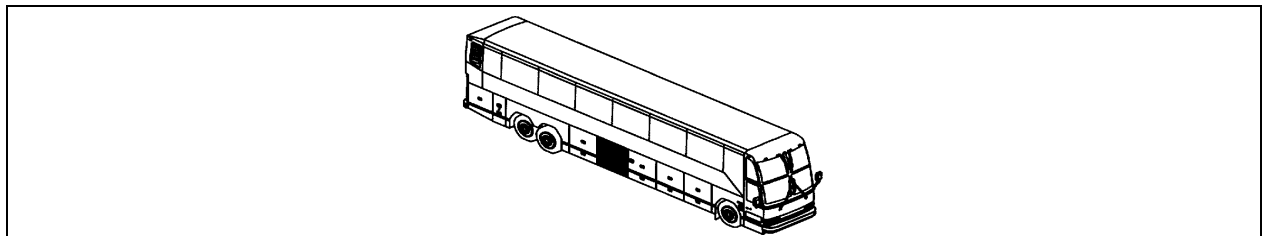
453146	Liquid solenoid valve assembly	1
213752	Bracket	1
506466	Foam tape	1
064931	Cable	1
064932	Cable	1
504273	Cable tie	2
500638	Screw	2
561707	R38 Relay	1
062490	Shrinking tube	1

## PROCEDURE

**Warning :** Park vehicle safely, apply parking brake, stop engine and set battery master switch(es) to the OFF position prior to working on the vehicle.

### For vehicles from S1058 to T1607 (GROUP 1):

1. Open the condenser compartment (see figure 1);
2. Prior to solenoid valve installation, store refrigerant in the receiver tank or remove the refrigerant from the entire system. For further details, refer to your vehicle Maintenance Manual, section 22;
3. Remove existing filter dryer and its hoses (see shadowed parts on figure 2). Replace these parts with new hose #452383. Connect the new hose to the receiver tank exit and to the SUB IN connection located on the compartment door. Figure 5 shadowed hose presents this modification result;



**Figure 1:** Typical location of condenser compartment.

4. Remove existing filter dryer support;
5. Install bracket #213752 on the left-hand side of the compartment. As shown on figure 4, the bracket should be welded on the metallic structure at 24 inches (613 mm) below the veneer top of the compartment. It is recommended to use a semi-automatic electric arc welding in accordance with the following specifications:

### STAINLESS STEEL - STAINLESS STEEL WELDING

**Caution:** Make sure the electronic control module (ECM) and the battery terminals have been disconnected before welding.

**Note:** Welding must be done only by a qualified and experienced person.

- GMAW (Gas Metal-Arc Welding) process;
- welding wire conforms to AWS (American Welding Standards) A5.9 specifications;
- 308L type welding wire with 0.035" diameter (0,9 mm);
- voltage: 18 volts to 22 volts;
- current: 50 amperes to 200 amperes;

- shielding gas: T90-H (90% helium, 7,5% argon, 2,5% CO<sup>2</sup>).

If necessary, with lots of precaution to avoid perforate material, it is possible, but not recommended, to use a conventional electric arc welding machine, in accordance with the following specifications:

- SMAW (Shield Metal-Arc Welding) process;
- welding rod conforms to AWS (American Welding Standards) A5.9 specifications;
- 308L-16 type welding rod with 3/32" diameter (2,4 mm);
- current: flat - 40 amperes to 70 amperes  
up - 35 amperes to 50 amperes

6. Disconnect hoses 1 to 3 of figure 2. Remove and discard the moisture indicator assembly shown on figure 2, item 4;

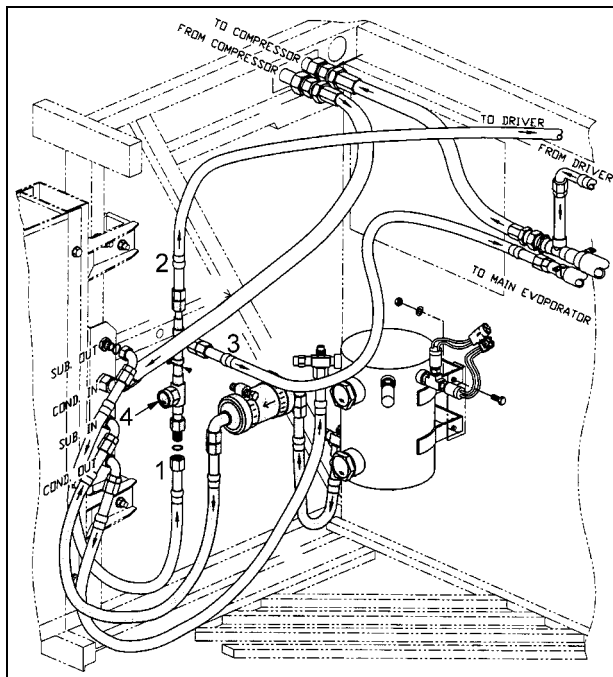
**Note:** Since the subassembly lower part interferes with receiver tank, turn the pipe 90° downwards as shown on figure 3, item 1.

7. Install new assembly shown on figure 3 to hoses 1 to 3 of figure 2;

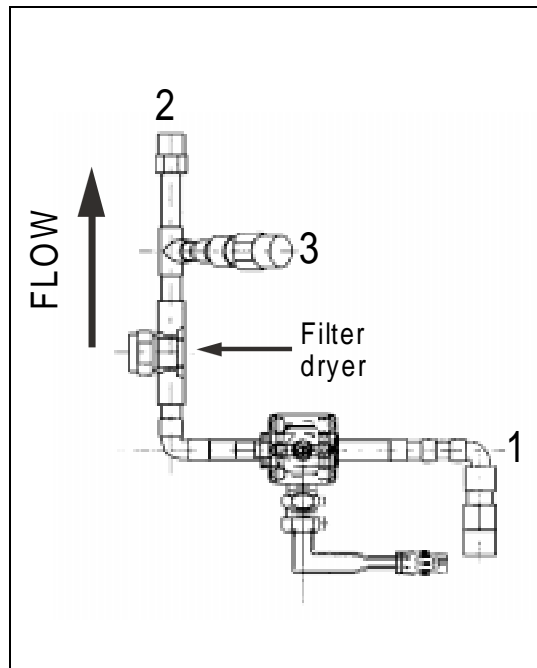
8. Connect filter dryer on the new liquid solenoid valve assembly. The result of these steps is presented on figure 5;

9. Affix foam tape #506466 on the bracket, in order to reduce vibrations;

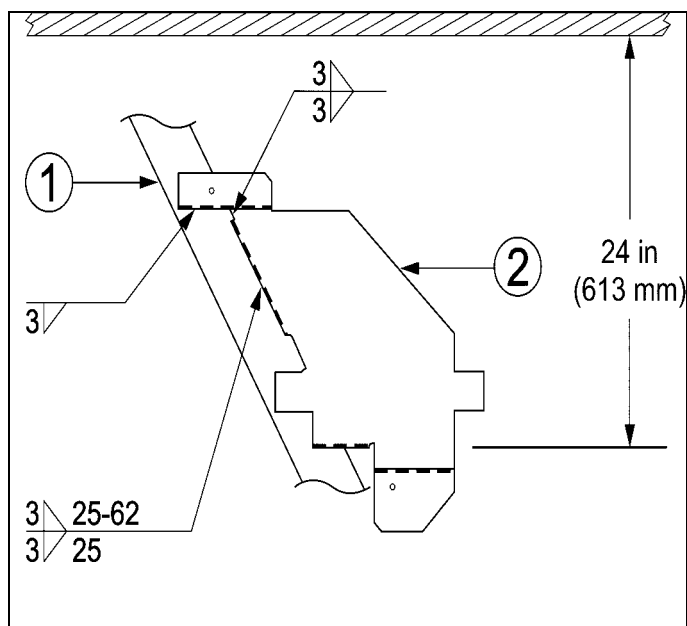
10. Now that the liquid solenoid valve new assembly has been properly installed, go to the section called **Liquid Solenoid Valve Electrical Connection** that applies to your vehicle serial number (page 9).



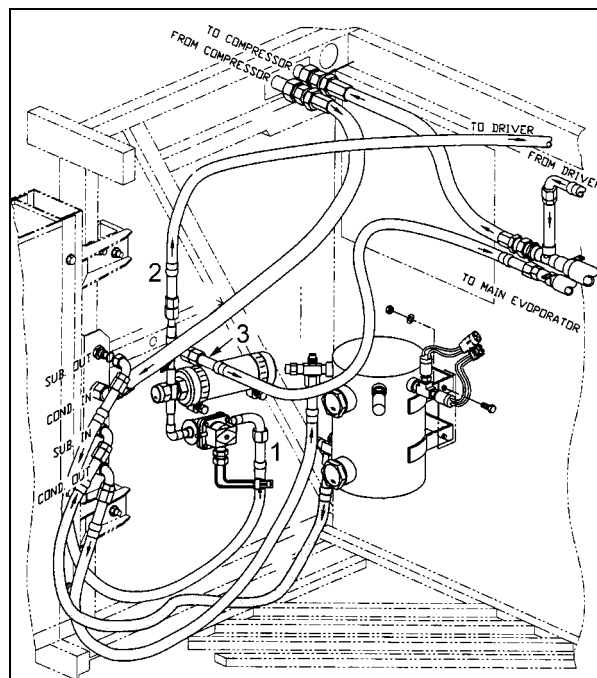
**Figure 2:** Shaded parts: existing filter dryer and hoses to be removed and discarded. **Items 1 to 3 :** hoses to be fixed on the new filter dryer assembly; **Item 4:** moisture indicator assembly to discard



**Figure 3:** Front view of the liquid solenoid valve new assembly.



**Figure 4:** (1) Condenser compartment's metallic structure; (2) New bracket fixed at 24 in (613 mm) below compartment's veneer top.



**Figure 5:** Final aspect of the assembly. New hose #452383 (in gray).

### For vehicles included in between T 1608 and V1961 (GROUPS 2 AND 3):

1. Open the condenser compartment (see figure 1);
2. Prior to solenoid valve installation, store refrigerant in the receiver tank or remove the refrigerant from the entire system. For further details, refer to your vehicle Maintenance Manual, section 22;
3. Remove existing filter dryer and disconnect hoses 1, 2 and 3 shown on figure 6;
4. The new bracket installation may be performed either by welding it to the compartment's metallic structure or by riveting on the existing bracket a portion of the new one. Choose one of the following methods:

**METHOD 1:** Remove existing filter bracket located on the left-hand side of the compartment. Replace it with new bracket #213752. As shown on figure 4, the bracket should be welded on the metallic structure of the compartment, at 24 in (613 mm) below the veneer top. Refer to figure 4 for welding details. It is recommended to use a semi-automatic electric arc welding in accordance with the following specifications:

#### STAINLESS STEEL - STAINLESS STEEL WELDING

**Caution:** Make sure the electronic control module (ECM) and the battery terminals have been disconnected before welding.

**Note:** Welding must be done only by a qualified and experienced person.

- GMAW (Gas Metal-Arc Welding) process;
- welding wire conforms to AWS (American Welding Standards) A5.9 specifications;
- 308L type welding wire with 0.035" diameter (0,9 mm);
- voltage: 18 volts to 22 volts;

- current: 50 amperes to 200 amperes;
- shielding gas: T90-H (90% helium, 7,5% argon, 2,5% CO<sup>2</sup>).

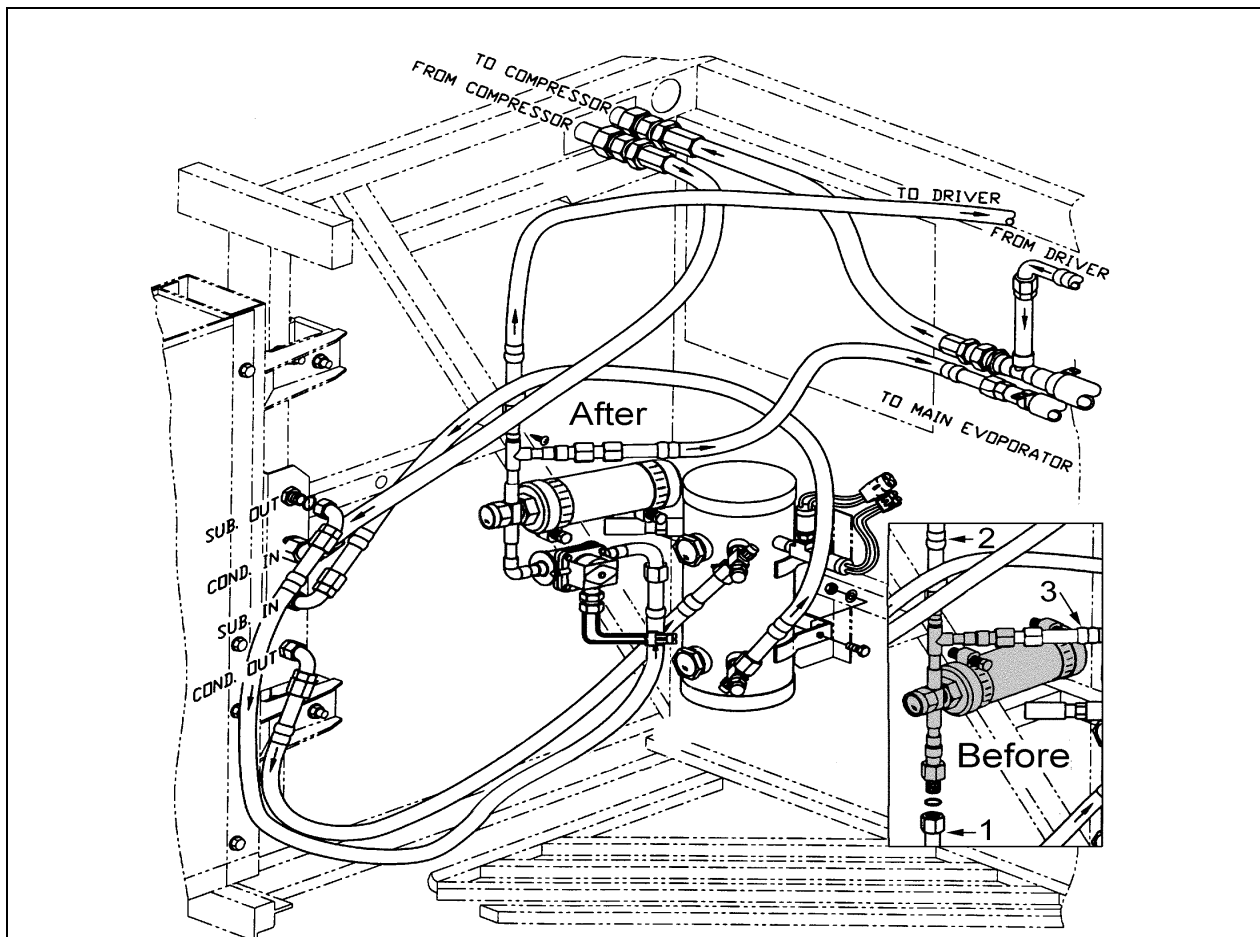
If necessary, with lots of precaution to avoid perforate material, it is possible, but not recommended, to use a conventional electric arc welding machine, in accordance with the following specifications:

- SMAW (Shield Metal-Arc Welding) process;
- welding rod conforms to AWS (American Welding Standards) A5.9 specifications;
- 308L-16 type welding rod with 3/32" diameter (2,4 mm);
- current: flat - 40 amperes to 70 amperes  
up - 35 amperes to 50 amperes.

**METHOD 2:** Using a bandsaw, cut the new bracket on figure 7 dotted lines. Keep the portion shown on figure 8. Rivet this bracket portion on the existing bracket, as presented on figure 9.

**Note :** *Since the subassembly lower part interferes with receiver tank, turn the pipe 90° downwards as shown on figure 3, item 1.*

5. Connect filter dryer on the new liquid solenoid valve assembly as presented on figure 3. The result of these steps is presented on figure 6;
6. Affix foam tape #506466 on the bracket, in order to reduce vibrations;
7. Now that the liquid solenoid valve new assembly has been properly installed, go to the section called **Liquid Solenoid Valve Electrical Connection** that applies to your vehicle's serial number (page 9 or page 11).



**Figure 6:** Before and after the installation of the new solenoid valve assembly.

## For vehicles included in between V1962 and W2457 (GROUP 4):

1. Open the condenser compartment (see figure 1);
2. Prior to solenoid valve installation, store refrigerant in the receiver tank or remove the refrigerant from the entire system. For further details, refer to your vehicle Maintenance Manual, section 22;
3. Remove existing filter dryer and disconnect hoses 1, 2 and 3 shown on figure 10;
4. The new bracket installation may be performed either by welding it to the compartment metallic structure or by riveting on the existing bracket a portion of the new one. Choose one of the following methods:

**METHOD 1:** Remove existing filter bracket located on the left-hand side of the compartment. Replace it with new bracket #213752. As shown on figure 4, the bracket should be welded on the metallic structure of the compartment, at 24 in (613 mm) below the veneer top. Refer to figure 4 for welding details. It is recommended to use a semi-automatic electric arc welding in accordance with the following specifications:

### STAINLESS STEEL - STAINLESS STEEL WELDING

**Caution:** Make sure the electronic control module (ECM) and the battery terminals have been disconnected before welding.

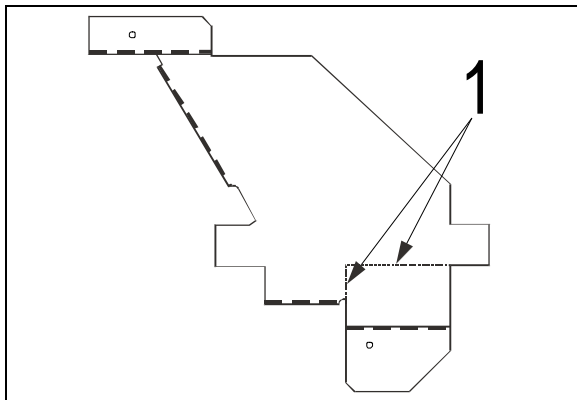
**Note:** Welding must be done only by a qualified and experienced person.

- GMAW (Gas Metal-Arc Welding) process;
- welding wire conforms to AWS (American Welding Standards) A5.9 specifications;
- 308L type welding wire with 0.035" diameter (0,9 mm);
- voltage: 18 volts to 22 volts;
- current: 50 amperes to 200 amperes;
- shielding gas: T90-H (90% helium, 7,5% argon, 2,5% CO<sup>2</sup>).

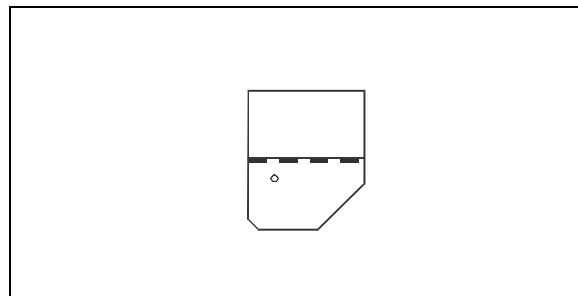
If necessary, with lots of precaution to avoid perforate material, it is possible, but not recommended, to use a conventional electric arc welding machine, in accordance with the following specifications:

- SMAW (Shield Metal-Arc Welding) process;
- welding rod conforms to AWS (American Welding Standards) A5.9 specifications;
- 308L-16 type welding rod with 3/32" diameter (2,4 mm);
- current: flat - 40 amperes to 70 amperes  
up - 35 amperes to 50 amperes

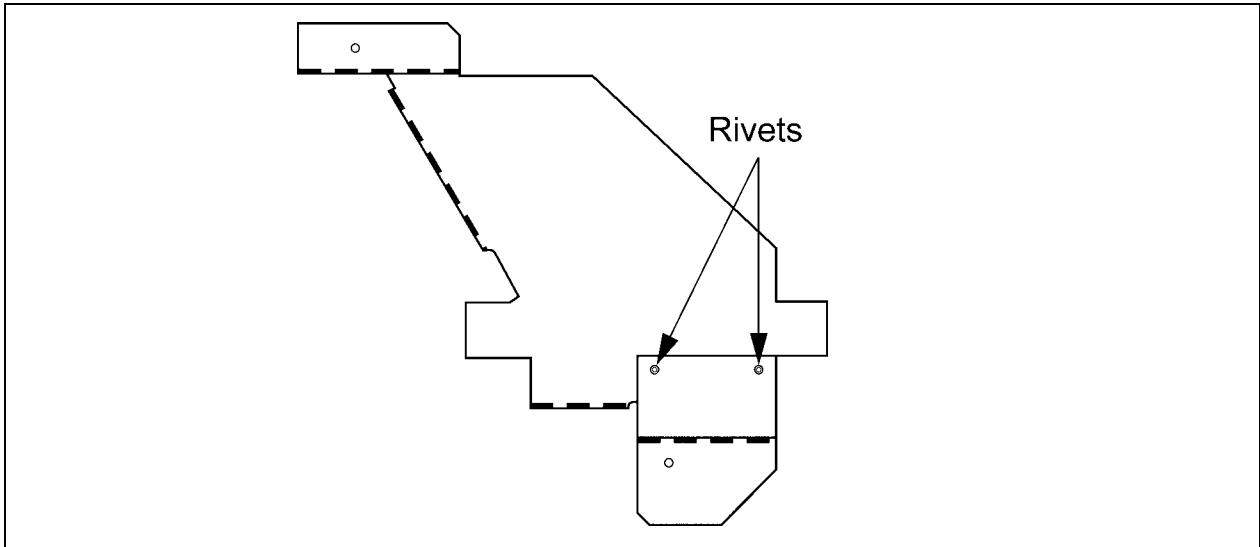
**METHOD 2:** Using a bandsaw, cut the new bracket on figure 7 dotted lines. Keep the portion shown on figure 8. Rivet this bracket portion on the existing bracket, as presented on figure 9.



**Figure 7:** Front view of the new bracket. (1) Bandsaw pattern.

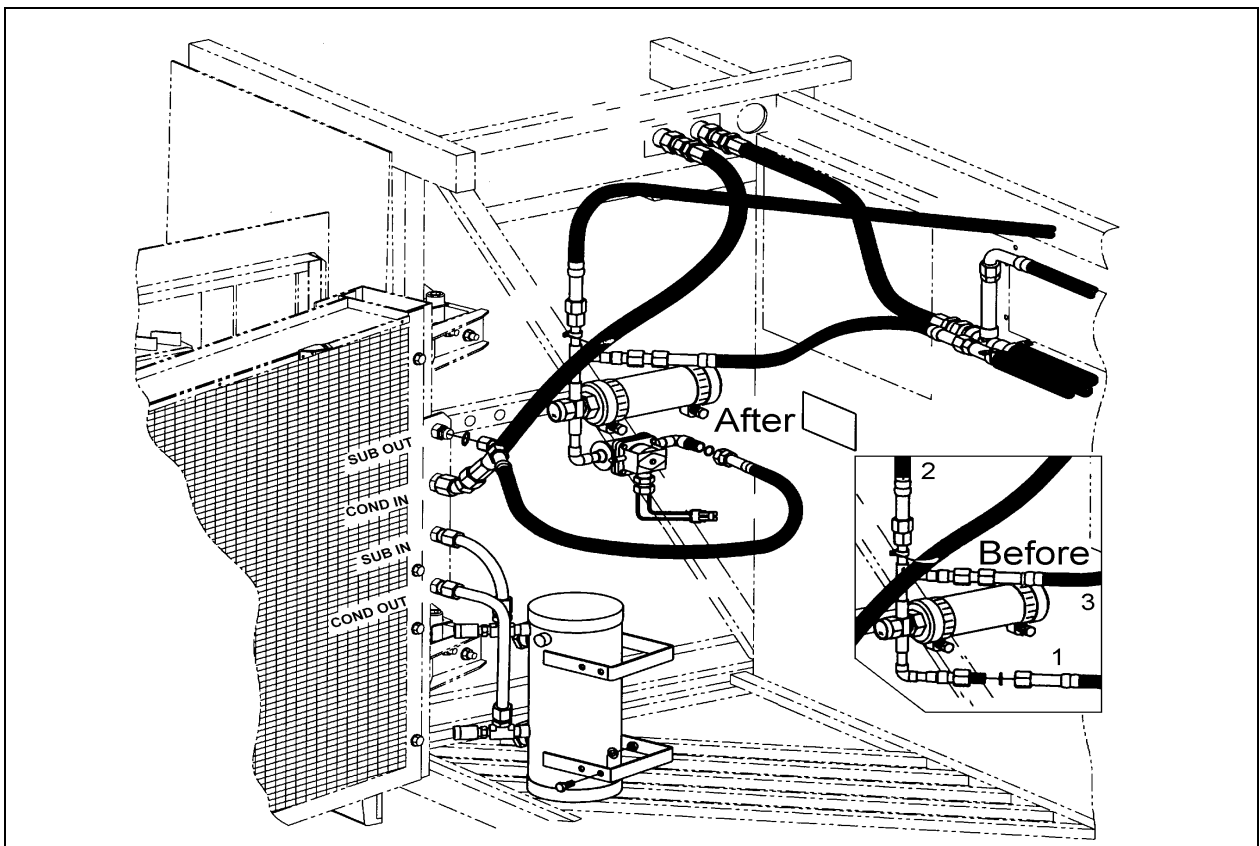


**Figure 8:** New bracket's portion to be kept.



**Figure 9:** Shadowed portion to be riveted on the existing bracket.

5. Affix foam tape #506466 on the bracket, in order to reduce vibrations in between bracket and dryer filter;
6. Fix filter dryer assembly. Make sure the proper connections are made. Refer to figure 10 for further details;
7. Go to page 11, 13 or 15 for details about liquid solenoid valve electrical connection.



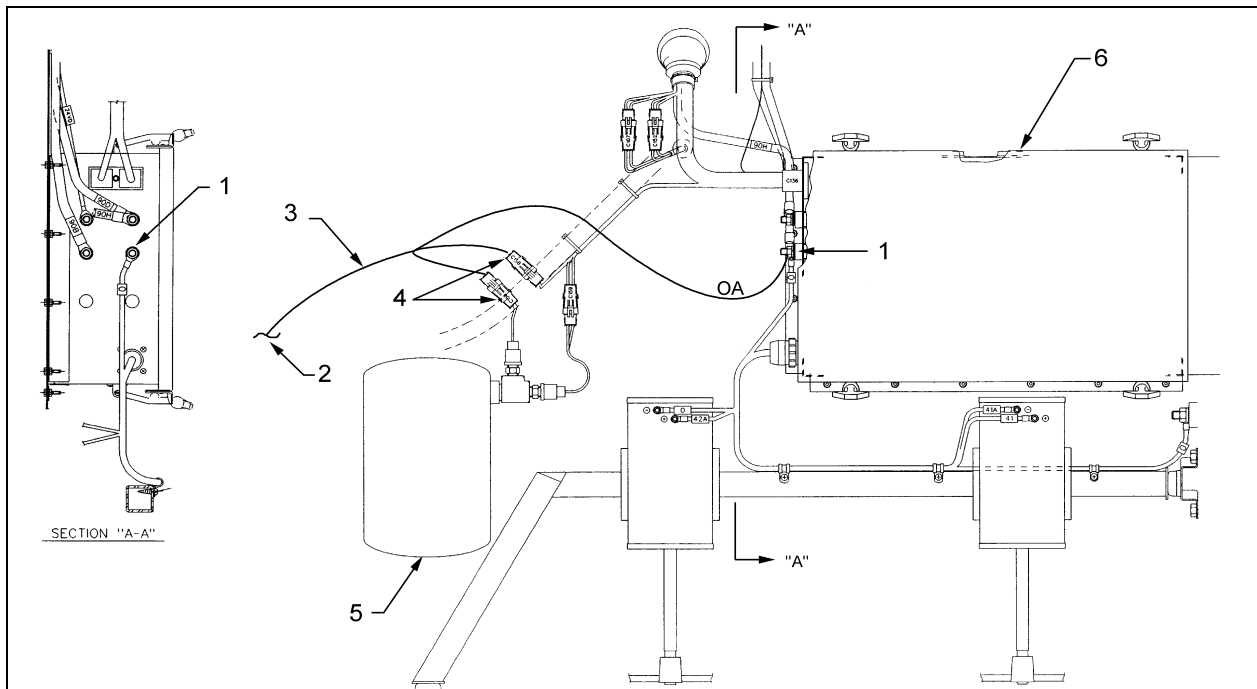
**Figure 10:** Condenser compartment. Before and after the installation of the new solenoid valve assembly.



# LIQUID SOLENOID VALVE ELECTRICAL CONNECTION

## For vehicles from S1058 to V1778 included (GROUPS 1 AND 2):

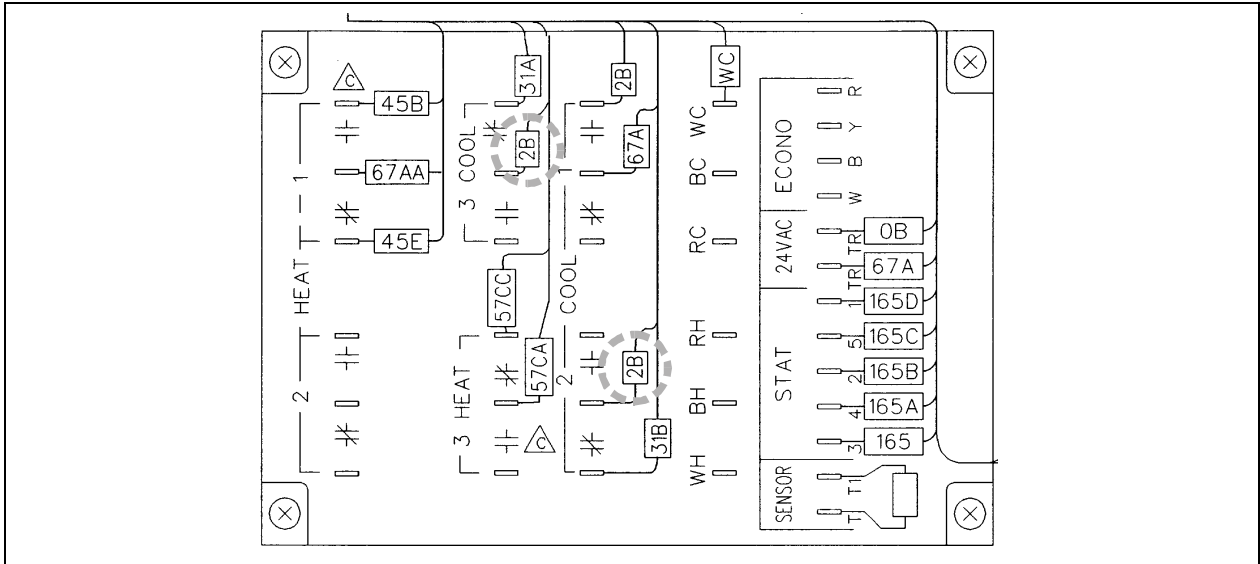
1. Open the condenser compartment (see figure 1);
2. Locate C158 connectors and the receiver tank (items 4 and 5 on figure 11);
3. Unplug C158 connectors and plug on each of them the connectors pertaining to #064934 cable (item 3 on figure 11);
4. Connect OA terminal to the ground located above two circuit breakers, on the left side of the A/C junction box (see sectional view A-A on figure 11);
5. Connect terminal #2 of figure 11 to the liquid solenoid valve connector;



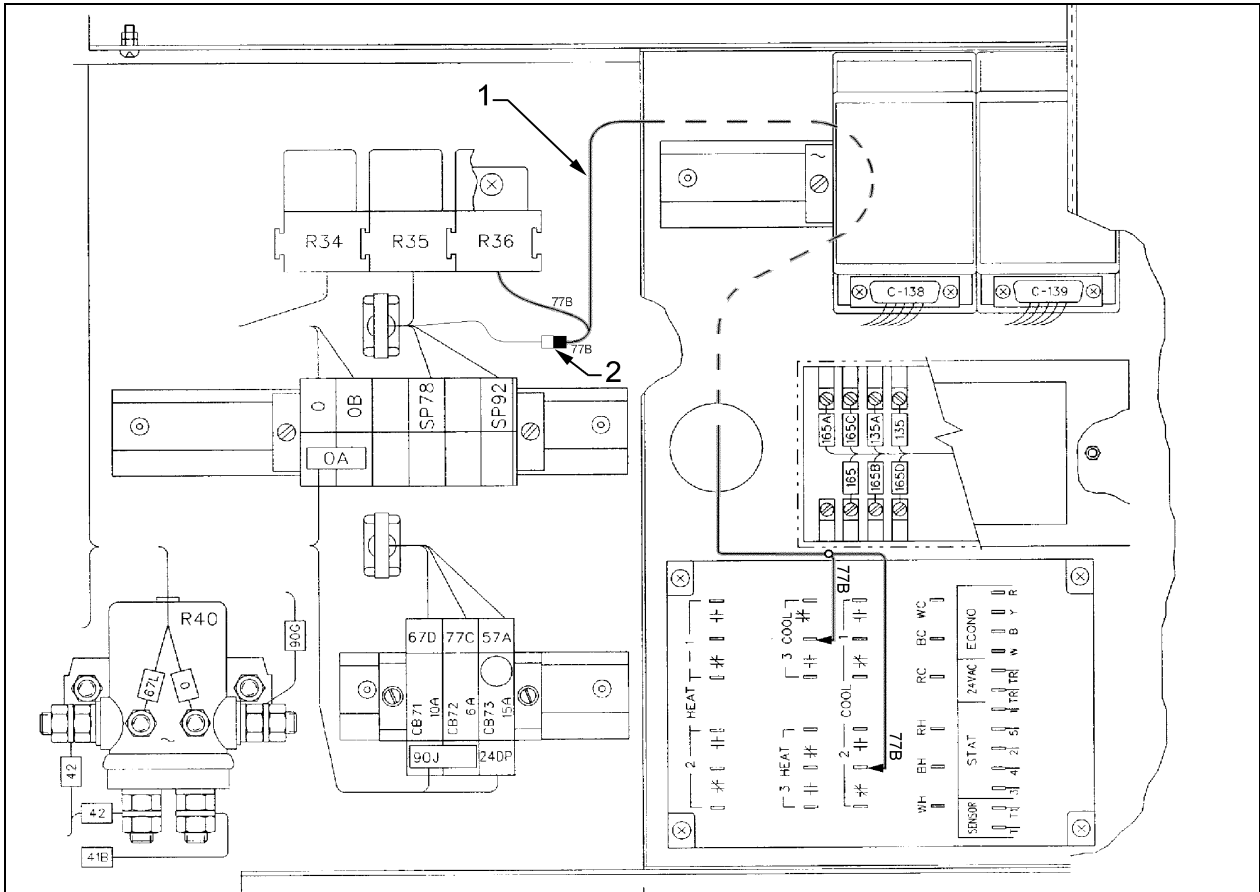
**Figure 11:** Condenser compartment: (1) Ground; (2) Wire going to solenoid valve; (3) #064934 Cable; (4) C158 Connectors; (5) Receiver Tank; (6) A/C Junction Box.

6. Locate the A/C junction box in the condenser compartment (see item 6 on figure 11) and remove the lid;
7. Remove and isolate the two 2B wires from Cool 2 and Cool 3 commons (see figure 12) of the A/C control panel;
8. Remove 77B wire from terminal 87 of R36 relay. Isolate with a heat shrinking tube (item 2, figure 13) and connect to 064933 cable (item 1, figure 13);
9. Connect 77B wire of 064933 cable into terminal 87 of R36 relay (see figure 13);
10. Connect the other terminals to Cool 2 and Cool 3 commons on the A/C Control panel as shown on figure 13;

11. It is suggested to perform the whole Warranty Bulletin before refilling the A/C system with refrigerant. Refer to your vehicle's Maintenance Manual to obtain more information about the solenoid valve Manual Bypass ( section 22, paragraph 10.6.2);
12. Refer to page 15 to know the Warranty reimbursement conditions.



**Figure 12:** Location of the two wire 2B on Cool 2 and Cool 3 commons on the A/C control panel.



**Figure 13:** Wiring connection final aspect in the A/C junction box. (1) 064933 Cable; (2) Heat shrinking tube.

# LIQUID SOLENOID VALVE ELECTRICAL CONNECTION

For vehicles from V1779 to W2457 (GROUPS 3 and 4):

## A. For vehicles from V1779 to W2203:

**Warning:** Before proceeding with the following steps, it is necessary to have performed the Warranty Bulletin 98-07, "Use of thermostat to cancel all A/C module functions".

1. Open the rear electrical compartment (figure 14) and locate the A/C junction panel on the front wall of the compartment;

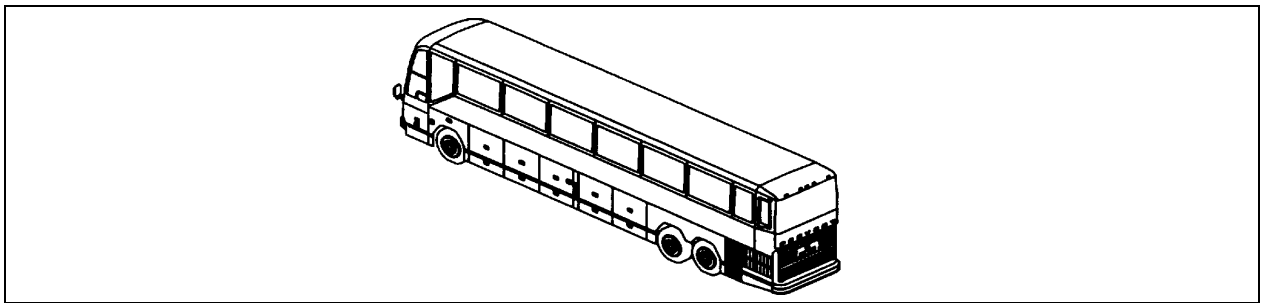


Figure 14: Rear electrical compartment.

2. Cut 67A and 67M wires coming from thermostat, as shown on figure 15, item 1. Unplug and discard the two C139 connectors located on the A/C module and on the vehicle's wiring (item 2, figure 15) ;

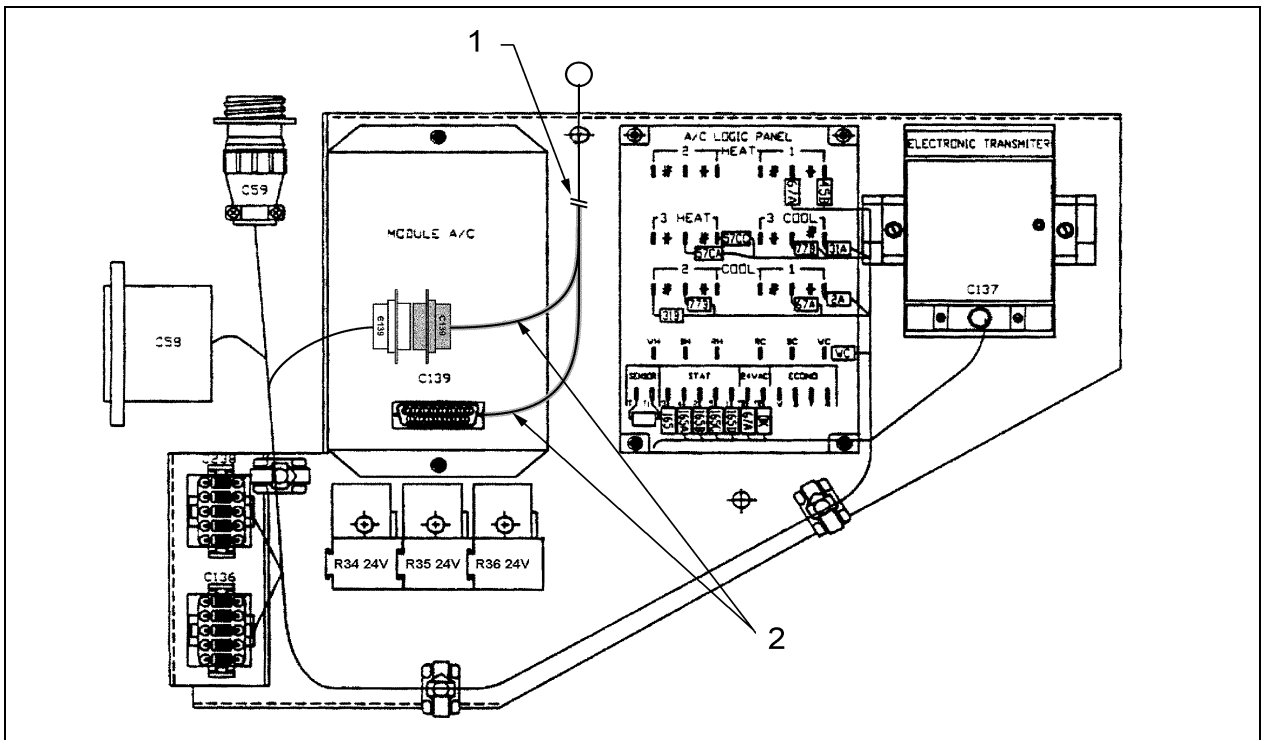
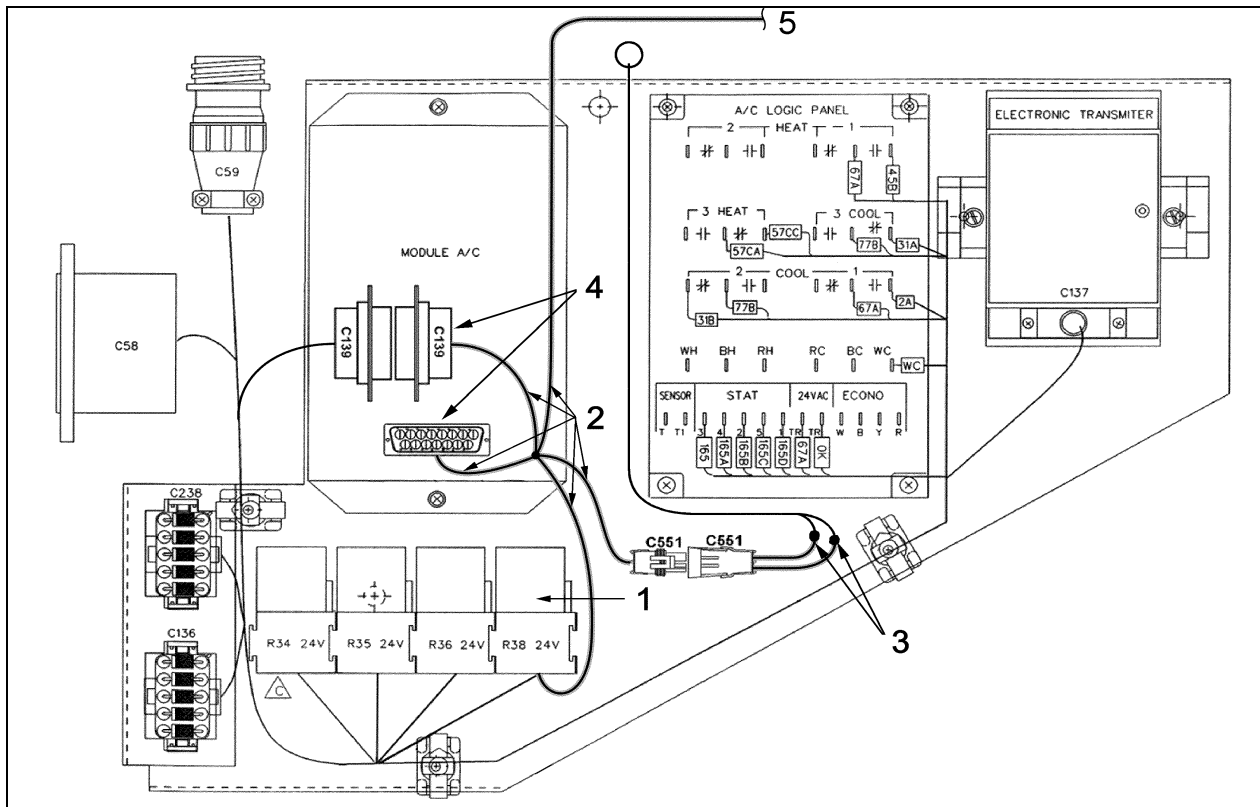


Figure 15: Rear electrical compartment. (1) Cable to cut coming from thermostat ; (2) Two C139 connectors to unplug and discard.

3. Fix new R38 relay base on the A/C junction panel, next to R36 relay. This base belongs to 064931 cable (item 2, figure 16);
4. Fix R38 relay on its base (item 1, figure 16);
5. Replace the connectors removed on step 2 with 064931 cable's proper connectors (item 4, figure 16). Use cable ties to secure the connection and avoid any vibration effect;
6. Locate C551 connector of 064931 cable. Cut this connector's jumper and weld each wire coming from the thermostat (67A and 67M) to both jumper wires (item 3, figure 16);
7. Identify spare wire SP92 located near C52 connector in the rear electrical compartment. Crimp and heat 2B wire (item 5, figure 16) with SP92 wire;

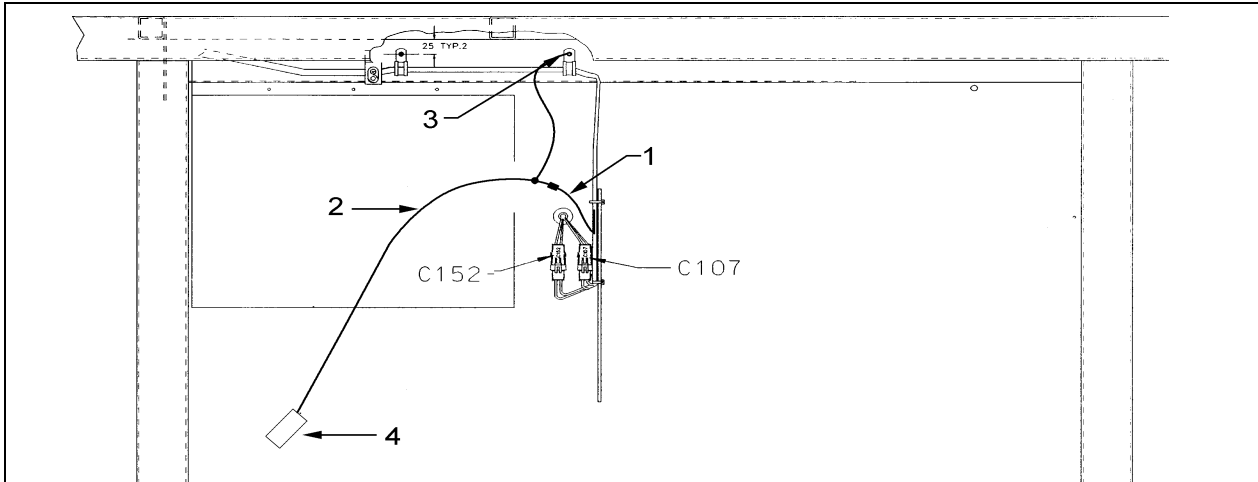


**Figure 16 :** Rear electrical compartment. (1) R38 Relay; (2) 064931 Cable; (3) Welding; (4) C139 Connectors; (5) 2B wire.

8. Open the condenser compartment (figure 1);
9. Plug 2B wire of 064932 cable on SP92 (item 1, figure 17) then crimp and heat;
10. Connect 0A terminal of 064932 cable on a stud as shown on figure 17, item 3;

**Caution:** Be sure not to drill through the metal compartment wall while connecting 0A terminal since the fuel tank is located behind.

11. Plug C95 connector (item 4, figure 17) of 064932 cable on the liquid solenoid valve connector;
12. It is suggested to perform the whole Warranty Bulletin before refilling the A/C system with refrigerant. Refer to your vehicle's Maintenance Manual to obtain more information about the solenoid valve Manual Bypass ( section 22, paragraph 10.6.2);
13. Refer to page 15 to know the Warranty reimbursement conditions.

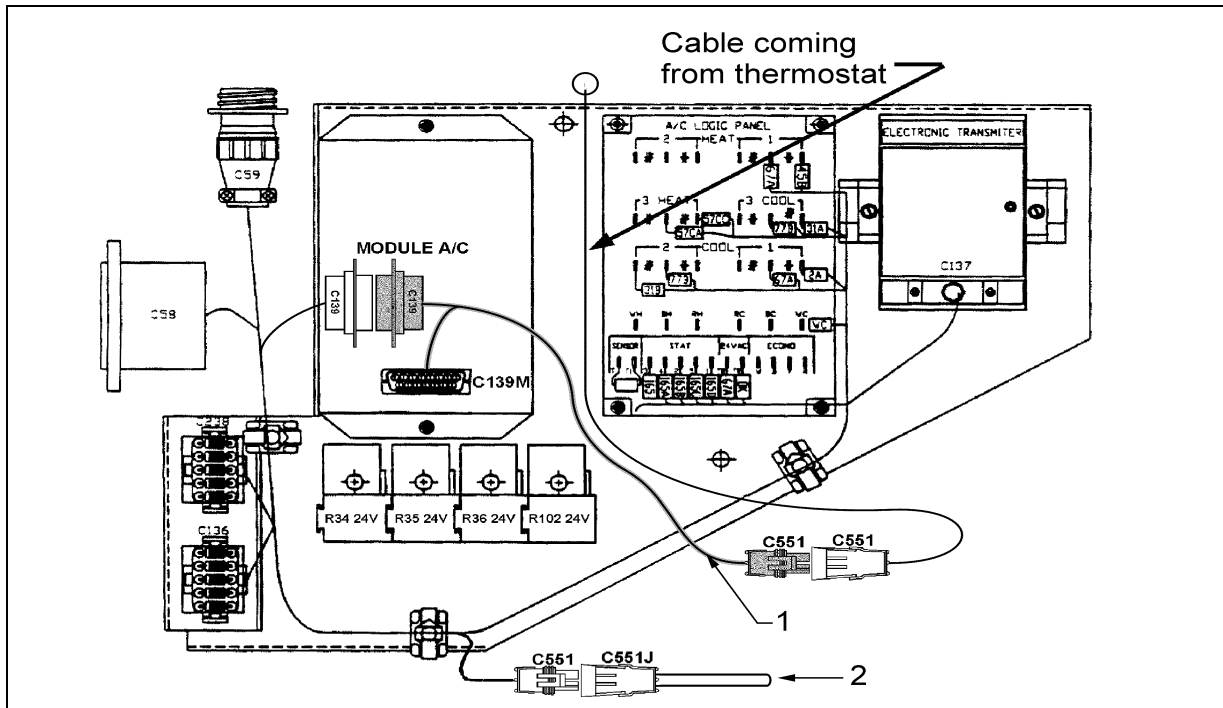


**Figure 17:** Condenser compartment final aspect: (1) SP92 wire; (2) 064932 cable; (3) Ground OA; (4) C95 Connector.

### B. For vehicles from W2204 to W2284:

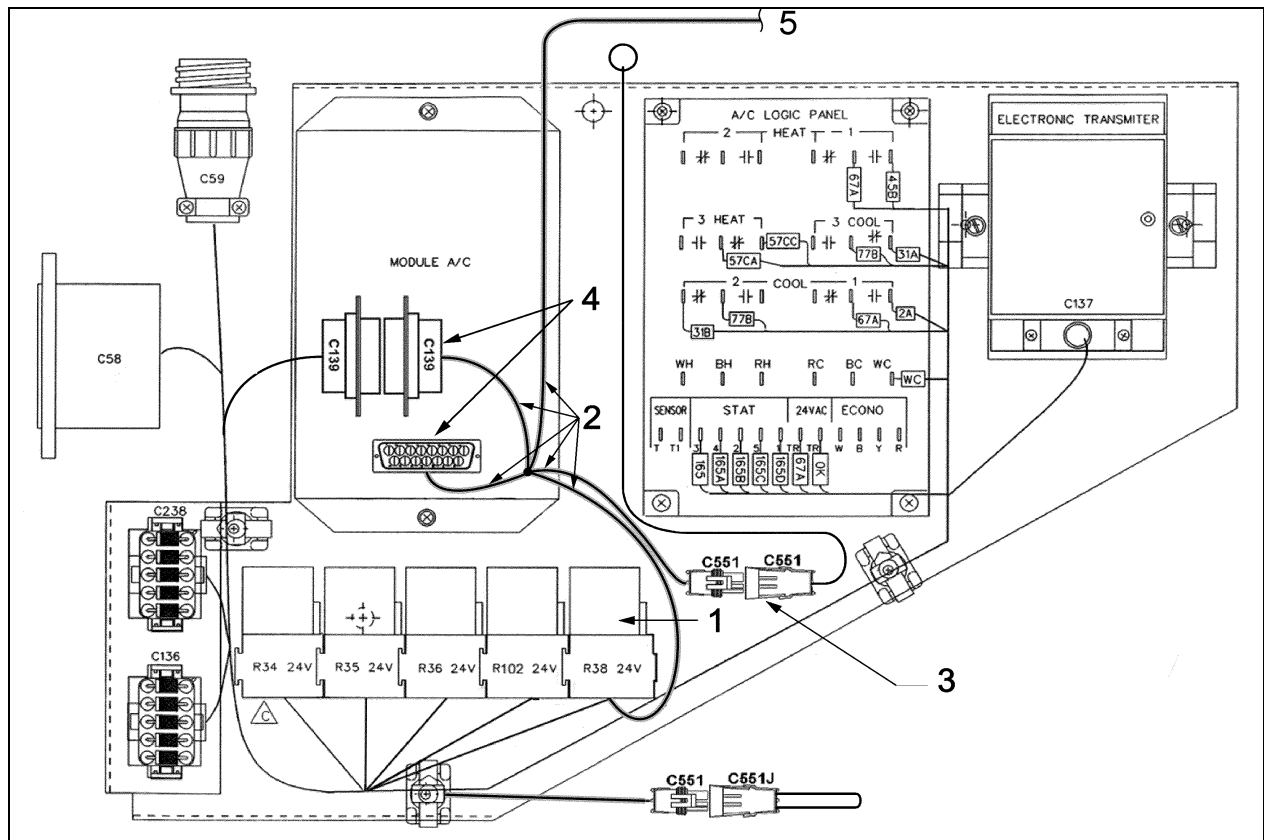
**Note:** Before proceeding to the following steps, it is necessary to have performed the Warranty Bulletin 98-07, "Use of thermostat to cancel all A/C module functions".

1. Open the rear electrical compartment (figure 14) and locate the A/C junction panel on the front wall of the compartment;
2. Remove and discard existing cable including C151, C139 and C139M connectors, as shown on figure 18, item 1. Leave C551J connector in place (item 2, figure 18) by cutting the cable tie;



**Figure 18 :** Rear electrical compartment. (1) Cable to remove linking C551, C139 and C139M connectors ; (2) C551J connector to leave in place.

3. Fix new R38 relay base on the A/C junction panel, next to R102 relay for instance. This base belongs to cable 064931 (item 2, figure 19);
4. Fix R38 relay on its base (item 1, figure 19);
5. Remove and discard C551 jumper of 062931 cable. Plug C551 connector belonging to 064931 cable on the C551 connector coming from the thermostat (77A and 77HA wires are coming from thermostat), as shown on figure 19, item 3 ;
6. Plug both C139 connectors pertaining to 064931 cable on the A/C module and on the vehicle's wiring (item 4, figure 19). Use cable ties to secure the connections;
7. Plug 2B cable (item 5, figure 19) on SP92 spare wire. SP92 is located near C52 connector in the rear electrical compartment;



**Figure 19:** Rear electrical compartment. (1) R38 relay; (2) 064931 cable; (3) C551 connector; (4) C139 connectors; (5) 2B cable.

8. Open the condenser compartment;
9. Plug 2B wire (item 1, figure 17) of 064932 cable on SP92 then crimp and heat;
10. Connect 0A terminal of cable 064932 on a stud as shown on figure 17, item 3;

**Caution:** Be sure not to drill through the metal compartment wall while connecting 0A terminal since the fuel tank is located behind.

11. Plug C95 connector (item 4, figure 17) of 064932 cable on the liquid solenoid valve connector;
12. It is suggested to perform the whole Warranty Bulletin before refilling the A/C system with refrigerant. Refer to your vehicle's Maintenance Manual to obtain more information about the solenoid valve Manual Bypass ( section 22, paragraph 10.6.2);
13. Refer to page 15 to know the Warranty reimbursement conditions.

### C. For vehicles from W2285 to W2457:

1. Open the rear electrical compartment (figure 14) and locate R36 relay on the front wall of the compartment;
2. Fix new R38 relay base next to R36 relay. This base belongs to cable 064931 (item 2, figure 20);
3. Unplug C139 connector and connect it to 064931 cable's connector. Use 2 cable ties to secure the connection (item 3, figure 20);
4. Plug 064931 cable's proper terminal to the C139 connector located on the A/C module;
5. Identify spare wire SP92 located near C52 connector in the rear electrical compartment. Crimp and heat 2B wire (item 4, figure 20) with SP92 wire;
6. Open the condenser compartment (figure 1);
7. Plug 2B wire (item 1, figure 17) of 064932 cable on SP92 wire then crimp and heat;
8. Connect 0A terminal of 064932 cable on a stud as shown on figure 17, item 3;

**Caution:** Be sure not to drill through the metal compartment wall while connecting 0A terminal since the fuel tank is located behind.

9. Plug C95 connector (item 4, figure 17) of 064932 cable on the liquid solenoid valve connector;
10. It is suggested to perform the whole Warranty Bulletin before refilling the A/C system with refrigerant. Refer to your vehicle's Maintenance Manual to obtain more information about the solenoid valve Manual Bypass ( section 22, paragraph 10.6.2);

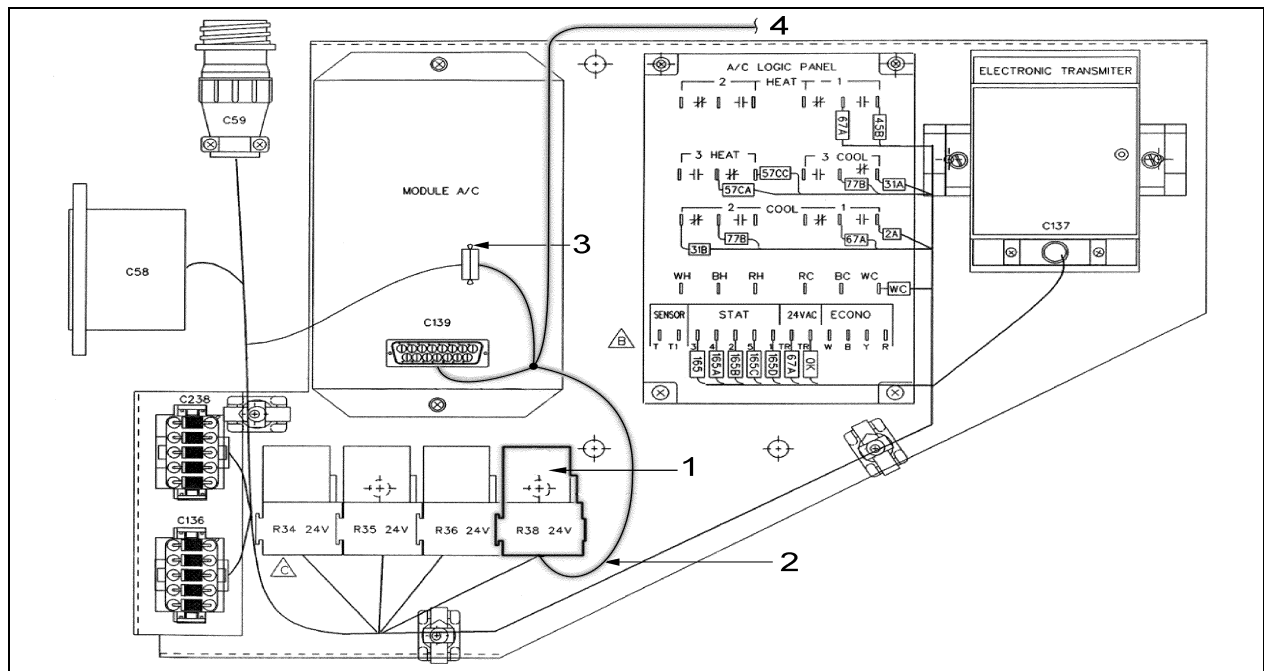


Figure 20: Rear electrical compartment: (1) New R38 relay; (2) 064931 cable; (3) Tie wrap; (4) 2B wire.

## WARRANTY

This modification is covered by Prévost Car's normal warranty. We will reimburse you the parts and two hours (2.0) of labor upon receipt of parts and a completed A.F.A. form on which you must specify as per "Warranty Bulletin 98-33, Part A".

## PART B: VALVE PLATE AND VALVE CHANGEOUT

### APPLICATION

If your vehicle meet the following three necessary conditions, the present part applies to your vehicle. If not, please go to part C, page 19.

#### Necessary condition 1:

Model	VIN
H3-41 and H3-45 coaches Model Year: 1995 - 1998	From 2P9H33417S1001058 up to 2PCH33496W1012457 incl.



#### Necessary condition 2:

To have a Carrier compressor using R134A refrigerant.

#### Necessary condition 3:

To have a new Carrier compressor whose serial number precedes 1198JXXXXX\* or to have a rebuilt Carrier compressor whose serial number precedes 0398MAXXXX\*. Rebuilt compressors are easily recognized by the “M” and “A” letters.

*\*Refer to figure 21 to know the compressor's serial number location.*

**Note:** Compressors you might have in inventory are included in this modification if they meet the necessary condition 3.

### DESCRIPTION

On the above-mentioned vehicles, the valve plates and valves of the air conditioning compressor need to be changed

**WARNING:** The serial number of your Carrier compressor is needed to obtain the reimbursement stated in the Warranty, page 19.

### MATERIAL

Order the following kit:

Kit	Description
950310	Compressor three head parts.

**Note:** Material can be obtained through regular channels.

### PROCEDURE

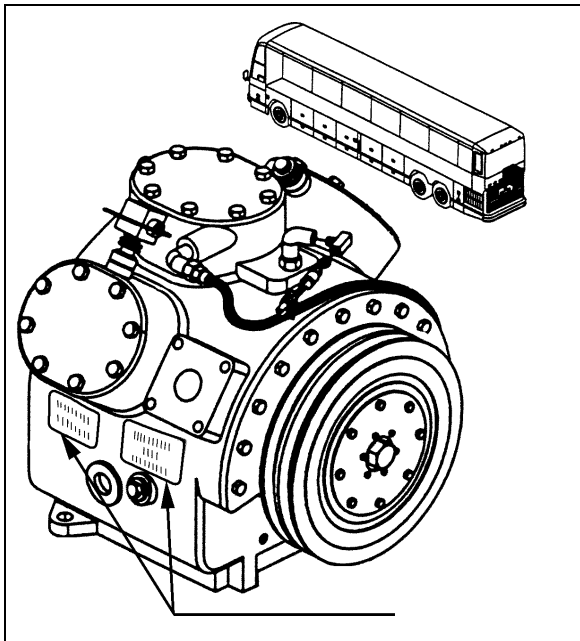
**Warning:** Park vehicle safely, apply parking brake, stop engine and set battery master switch(es) to the OFF position prior to working on the vehicle.



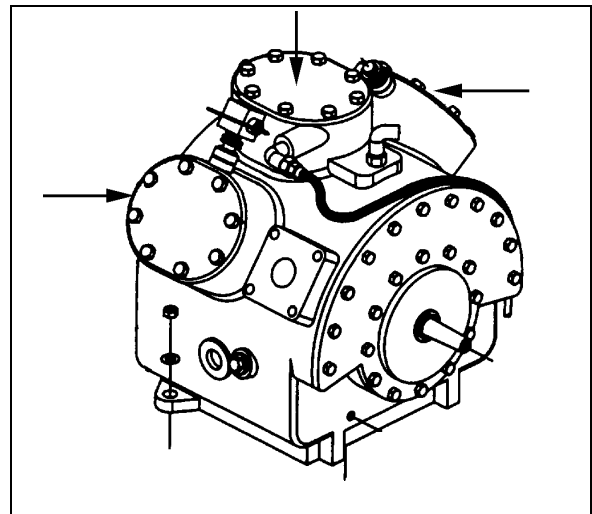
1. If PART A of the present bulletin has been performed, the refrigerant has already been removed so go to step 2. If not, it is necessary to first remove the compressor internal pressure. This can be done by frontseating the discharge and suction service valves and reclaiming refrigerant contained in the compressor, until zero PSIG pressure is maintained. Refer to your vehicle Maintenance Manual, section 22 for further details.

**Note:** If it is not possible to jump the low pressure switch for the low side pump down, the remaining refrigerant may have to be reclaimed, once the compressor has been isolated.

2. Clean the surface of the three compressor heads and surrounding area of all dirt, to avoid contaminating the compressor interior when the heads and valve plates are removed (see figure 22).



**Figure 21:** Rear engine compartment. Compressor's serial number location.



**Figure 22:** Compressor three heads.

**Note:** Unless otherwise stated, the numbers used in the following text refer to figure 23.

3. Using a 9/16 wrench or socket, loosen the head capscrews (4) a few turns, using a criss-cross pattern. If the head (2) is stuck, tap it lightly with a wooden or lead mallet to free it. Do not remove screws until the head has been unseated from the cylinder deck of compressor, and any pressure that may be contained inside the head has been relieved.

**Warning:** Do not unscrew capscrews all the way before breaking seal. Entrapped pressure could result in injury.

4. If the valve plate (8) did not come loose from the cylinder deck during cylinder head removal, the following procedure should be used:

- Free the valve plates (8) from the cylinder deck by using the discharge valve capscrews, without washers, as jackscrews through the outermost tapped holes in the valve plate after the valve stops (6) and valves (7) have been removed. Remove the valve plate gasket (9).

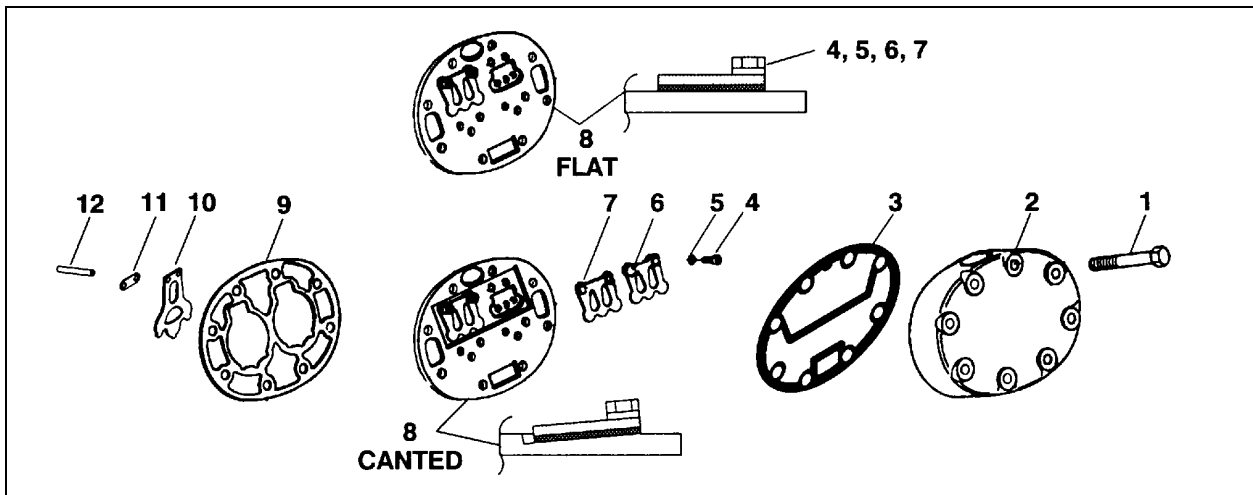
**Caution:** Be certain to account for all suction valve springs and dowel pins so that they are not lost inside the compressor body.

5. Install the new suction valves (10) and valve plates (8). The side heads should have 4 dowel pins for positioning of the suction valves. Place the new suction valve springs on dowel pins and springs, with the springs bowing upward (see figure 24). Place a new gasket (9) and valve plate (8) onto the cylinder deck over the suction valves (10) and aligned with dowels pins (12).

**Caution:** Ensure that the suction valves remain centered on dowel pins when positioning valve plates. The center valve plate should be installed in the same manner, but it should be noted that there are 5 dowel pins on cylinder deck and there is no check valve on the center valve plate.

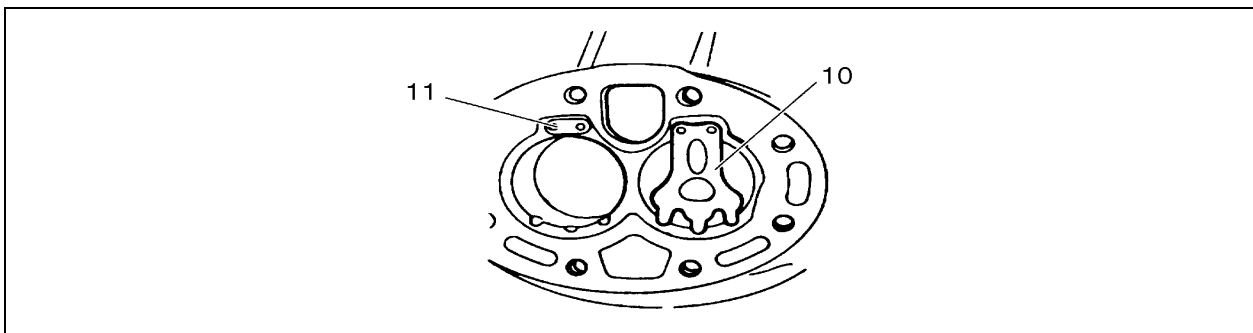
6. Once the valve plates (8) are in place, position the new head gaskets (3) and heads (2) onto valve plates (8) and install the capscrews (1). Using a criss-cross pattern, tighten the head bolts from the center to outside of each head. The final torque value for bolts is 40 to 50 ft-lb. This torque should be obtained by stepping up the value in two separate sequences. (Example: 25 ft-lb the first sequence, then 40-50 ft-lb on the second sequence).

**Note:** The side head gaskets are different from the center head gaskets and can be distinguished by a small hole at top center, which is necessary for the unloaders.



**Figure 23:** (1) Capscrew; (2) Cylinder head; (3) Cylinder Head Gasket; (4) Capscrew; (5) Lockwasher; (6) Discharge Valve Stop; (7) Discharge Valve; (8) Valve Plate; (9) Valve Plate Gasket; (10) Suction Valve; (11) Position Spring; (12) Dowel Pin.

**Note:** As shown on figure 23, some compressors use only canted valve plates.



**Figure 24:** Suction Valve (10) and Position Spring (11).

7. Evacuate the compressor to 1000 Microns and verify the vacuum holds for ten minutes, with no more than a 500 Microns rise in that period.

8. Fill the compressor according to your Maintenance Manual, section 22.

9. Run system at fast idle for twenty minutes to verify proper compressor operation.

10. Superheated adjustment should be checked and adjusted to 14 °F for R-134A and 16 °F for R-22 systems. Refer to your vehicle Maintenance Manual, section 22-10.8 under "Superheat Adjustment".

## WARRANTY

This modification is covered by Prévost Car's normal warranty. We will reimburse you the parts and two hours (2.0) of labor upon receipt of the **serial number of your Carrier compressor** and a completed A.F.A. form on which you must specify as per "Warranty Bulletin 98-33, Part B".

### Parts disposition :

- Discard according to applicable environmental regulations (Municipal/State[Prov.]/ Federal)
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## PART C: INSTALLATION OF A THERMOSTAT ALLOWING COMPRESSOR USE BELOW EXTERIOR FREEZING POINT

### APPLICATION

Model	VIN	
H3-41, H3-45 and VIP-45 vehicles Model Year: 1995 - 1998	From 2P9H33495S1001128 up to 2PCV33494W1012284 incl.	

### DESCRIPTION :

On the above-mentioned vehicles, it is suggested to change the A/C compressor thermostat.

This modification is advised to allow compressor use below exterior freezing point. Order assembly #064982 to increase your compressor's reliability at low temperatures.

### MATERIAL

Assembly No.	Description	Qty
064982	Thermostat	1

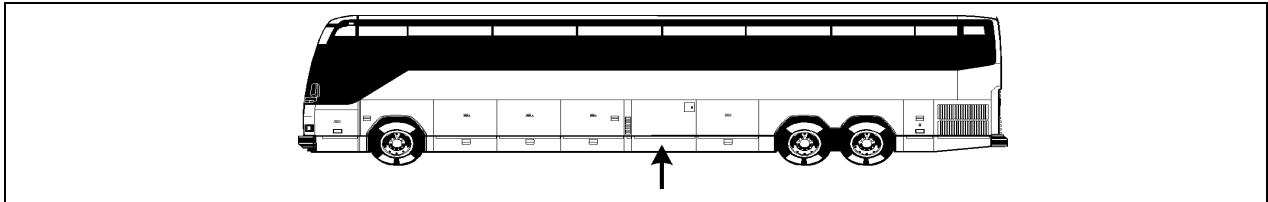
**Note :** Material can be obtained through regular channels.

### PROCEDURE

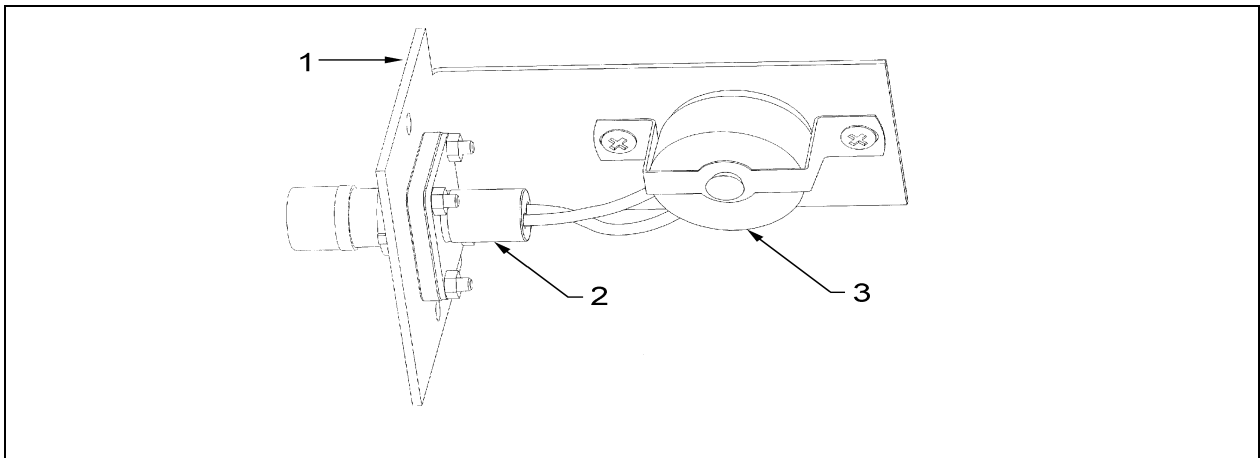
**Warning:** Park vehicle safely, apply parking brake, stop engine and set battery master switch(es) to the OFF position prior to working on the vehicle.

1. Open the HVAC compartment door (refer to figure 25);
2. On the left-hand side of the compartment, locate the thermostat on the air intake duct. If there is no such thermostat, refer to Warranty Bulletin 98-07;

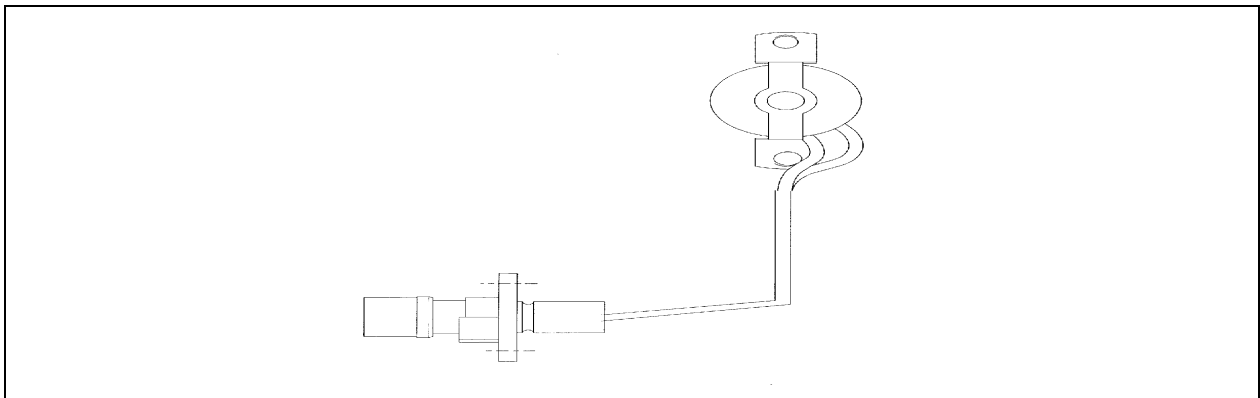
3. Unplug C550 connector;
4. Unscrew the thermostat support (item 1, figure 26) and remove the connector (item 2, figure 26) and the thermostat (item 3, figure 26) ;
5. Install new thermostat assembly (figure 27);
6. Fix the thermostat support on the air intake duct;
7. Plug C550 connector.



**Figure 25:** Typical location of HVAC compartment.



**Figure 26:** (1) Thermostat support; (2) Connector to remove; (3) Thermostat to remove.



**Figure 27:** New thermostat assembly.



## WARRANTY

This modification is covered by Prévost Car's normal warranty. We will reimburse you the parts and 15 minutes (0.25 hr) of labor upon receipt of the parts and a completed A.F.A. form on which you must specify as per "Warranty Bulletin 98-33, Part C".

## PART D: LOW PRESSURE UNLOADER SWITCH ADDITION ON HVAC SYSTEM COMPRESSOR FOR LOW PRESSURE OPERATION

*This part restates Maintenance Information 98-01.*

### APPLICATION:

Model	VIN
H3 Series coaches with <b><u>R-22</u></b> * Model Year: 1997- 1998	 Du 2PCH3349XV1011779 up to 2PCH33491W1012353 incl.
H3 Series coaches with <b><u>R134A</u></b> * Model Year: 1997- 1998	 Du 2PCH3349XV1011779 up to 2PCH33499W1012388 incl.

\* Type of refrigerant.

### DESCRIPTION

The addition of the above-mentioned switch enables the compressor to partially unload its cylinders, in case of a gas pressure drop caused for instance by a low temperature or a sudden engine revolution raise. It reduces the compressor stop-and-start cycles and extend the compressor life expectancy.

### MATERIAL

Part No.	Description	Qty
064699	Pressure switch with adapters and wiring harness. For using with <b><u>R22</u></b> type freon gas (Instruction sheets included)	1
064698	Pressure switch with adapters and wiring harness. For using with <b><u>R134A</u></b> type freon gas (Instruction sheets included)	1

**Note:** Material can be obtained through regular channels.

### WARRANTY

This modification is covered by Prévost Car's normal warranty. We will reimburse you the parts and two hours (2.0 hr) of labor upon receipt of a completed A.F.A. form on which you must specify as per "Warranty Bulletin 98-33, Part D".

#### Parts disposition:

- Discard according to applicable environmental regulations (Municipal/State[Prov.]/ Federal)