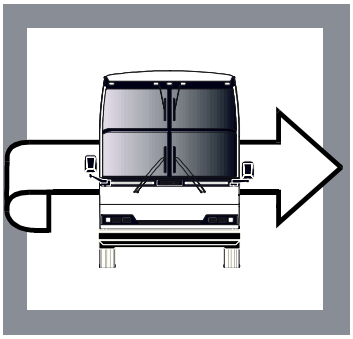
BACK



PREVOST

WARRANTY BULLETIN

Wb99-01

ENREGISTRÉ - REGISTERED
ISO 9001 & ISO 14001
PREVOST

DATE : January 1999	**SECTION : 22 - HVAC**
EXPIRATION: January 2000	
SUBJECT : CONDENSER FAN INSTALLATION	

APPLICATION

Model	VIN 
XL-45 Coaches Model Year : 1995 - 1999	From 2P9L33490S1001497 up to 2PCL33498V1026274 incl. except 2PCL33494V1026238

DESCRIPTION

On the above-mentioned vehicles, it is necessary to change the condenser fans in order to improve the reliability of the system.

Note: *If you do not have the expertise to perform the present Warranty Bulletin, do not hesitate to go to your nearest Prevost Service Center.*

MATERIAL

Order kit #453273 that includes the following parts:

Part No.	Description	Qty
213950	Reinforcement	1
213948	Bottom panel	1
213442	Support	1
213244	Support	1
213243	Support	1
220977	Angular bracket	1
450970	Support for hose	2
453048	Hose assembly	1
453083	Hose connecting filter dryer to receiver tank	1
507169	O-ring	4
504021	Hose clamp	4
590284	Evacuation nozzle	4
500972	Washer	6
5001087	#10 x ½ Screw	7
560872	Retaining clamp for cable	4
372612	Axial Fan	2

Part No.	Description	Qty
453066	Decal	1
452069	Key	2
502528	M8- 1.25 x 20 Hexagonal head screw	8
502744	M8 – 1,25 Nut	8
500441	Washer	8
502568	M6-1 x 20 Screw	4
500468	Washer	4
562579	Motor	2
504025	Retaining clip for filter dryer	2
950262	Filter dryer	1
064383	Cable	1
452898	Support for fan	1
510342	Shock absorber cap	4
381785P	A/C junction box	1
500641	#8 x ¾ Screw	5
402792	Decal « Danger, shut down A/C before servicing »	1
561569	Hose clamp	5
500603	10-24 x 2 hexagonal head screw	5
500767	10-24 Nut	5
504379	Pop rivet 3/16 x ¼	29
5001137	Nut	5
452918	Receiver tank support	1
502617	M10-1,5 nyrt Nut	7
500446	Washer	8
5001331	M10 – 1,5 x 200 Hexagonal head screw	1
452929	Wire netting protector	1
452011	Plastic protector	2
283482	Spacer	4

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 condenser compartment (figure 1).

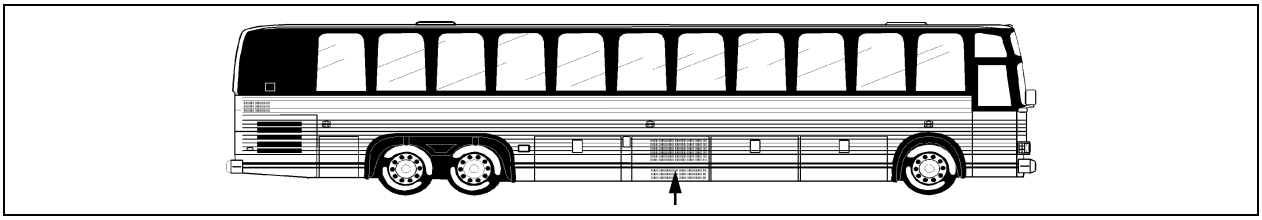


Figure 1: Typical location of the condenser compartment.

2. Empty the refrigerant from the system according to the section 22 of your Maintenance Manual.
3. Remove and discard the filter dryer. Discard also the hose connected in between the filter dryer and the receiver tank.
4. Remove the door block installed on the compartment floor.

5. Temporarily remove the receiver tank from the vehicle. Discard the hose connecting the receiver tank and the door of the condenser compartment.
6. Disconnect the battery terminals, the Electronic Control Module (ECM) of the motor, the Electronic Control Units of the transmission and the ABS brakes, if applicable.
7. Remove the section of the condenser compartment containing the four fan motors (figure 2).

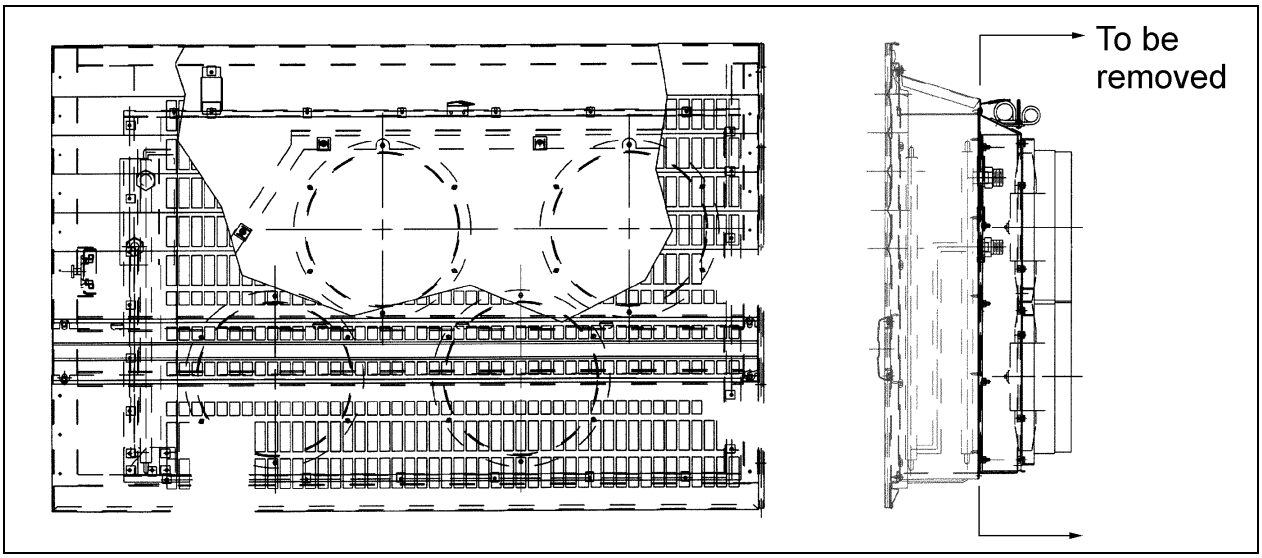


Figure 2: Condenser compartment door. Section to remove.

8. Cut the wire harness coming out of the A/C junction box (the wires are SP62, SP63, 57, 45E and 45A). Disconnect the three ground wires (OA, OB and O). Remove the A/C junction box.
9. Lift vehicle according to the Maintenance Manual, section 18, paragraph 28,2.
10. Remove the finned floor of the condenser compartment (figure 3). Using a circular saw cut the welding and the angular brackets located on every corner.

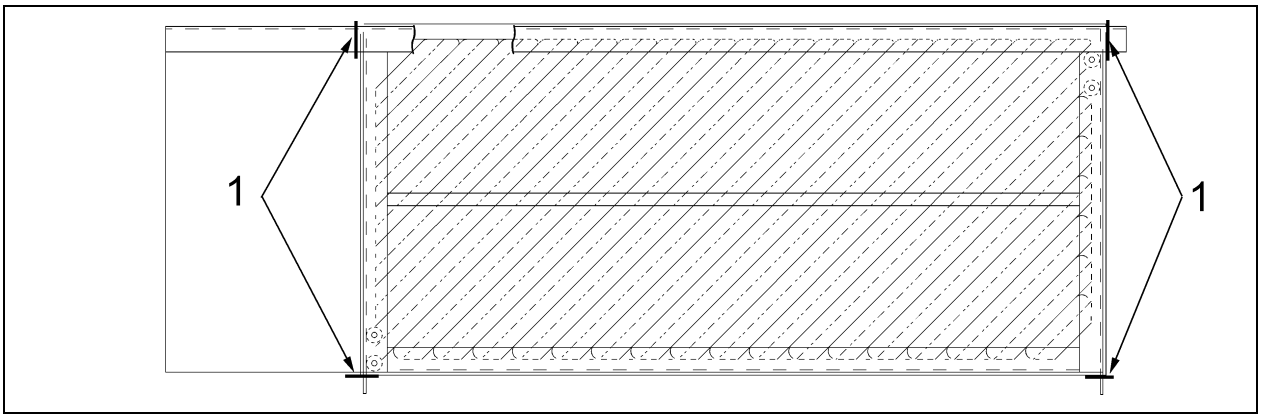


Figure 3: Finned floor to remove. **(1)** Angular brackets to cut.

11. Temporarily install #213442 support (figure 4) underneath the vehicle. This support should lie against the front wall of the condenser compartment. Cut the length excess of the support's rear end. The support might interfere with the compartment floor. Use the support as a template to cut the extra metal of the floor.
12. Remove #213442 support and cut the extra metal.

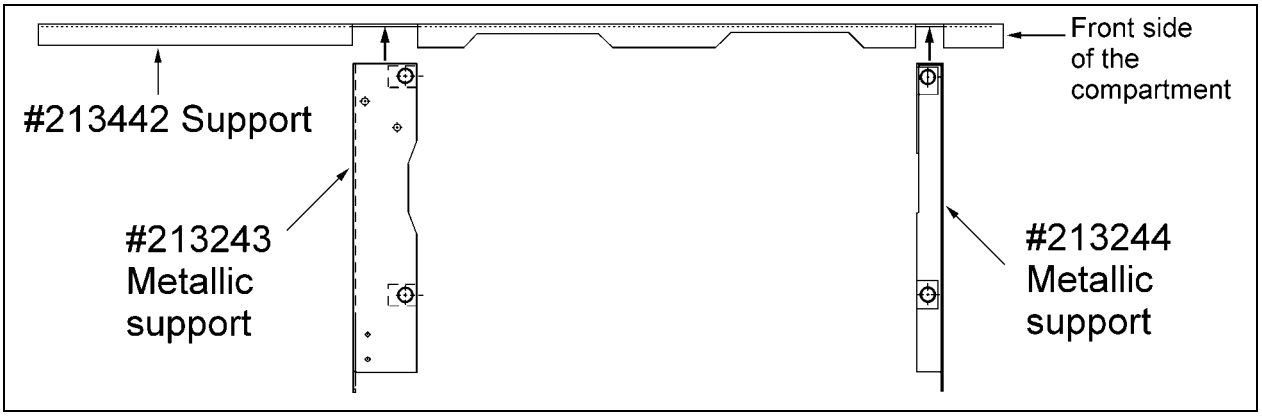


Figure 4: Top view of support assembly.

13. Relocate #213442 support and weld it according to the following procedure:

STEEL - 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^2).

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

14. Add #213950 reinforcement underneath the vehicle. This reinforcement is used as a joint in between the rear part of the #213442 support and the existing support. Weld.
15. Install #213243 support underneath the vehicle. This support fits together with #233442 as shown on figure 4. Weld.
16. Install #213244 support underneath the vehicle. This support fits together with #233442 as shown on figure 4. Weld.
17. Clean the perimeter of the floor opening using Sika 205 then install #213948 bottom panel (figure 6) over. Ensure the holes of the panel fit with the holes of the welded supports underneath (#213442, #213243 and #213244).
18. Fix each corner of #213948 bottom panel using #504379 rivets then rivet the entire circumference proceeding from the back to the front and from the outside to the inside of the compartment.
19. Install #220977 support (figure 5) underneath the vehicle. Ensure the support holes are lined up with the bottom panel ones' (figure 6, item 6). Weld.

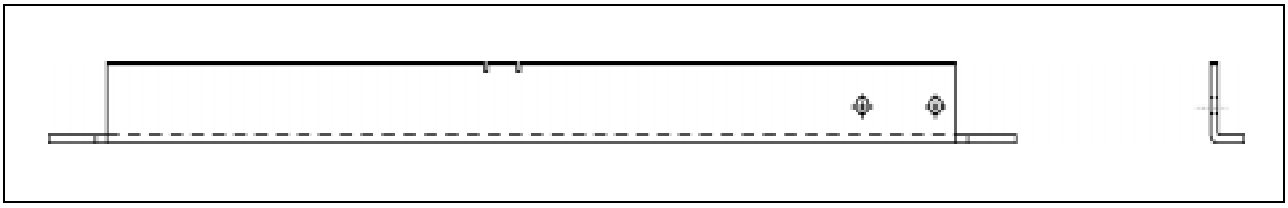


Figure 5: #220977 Support.

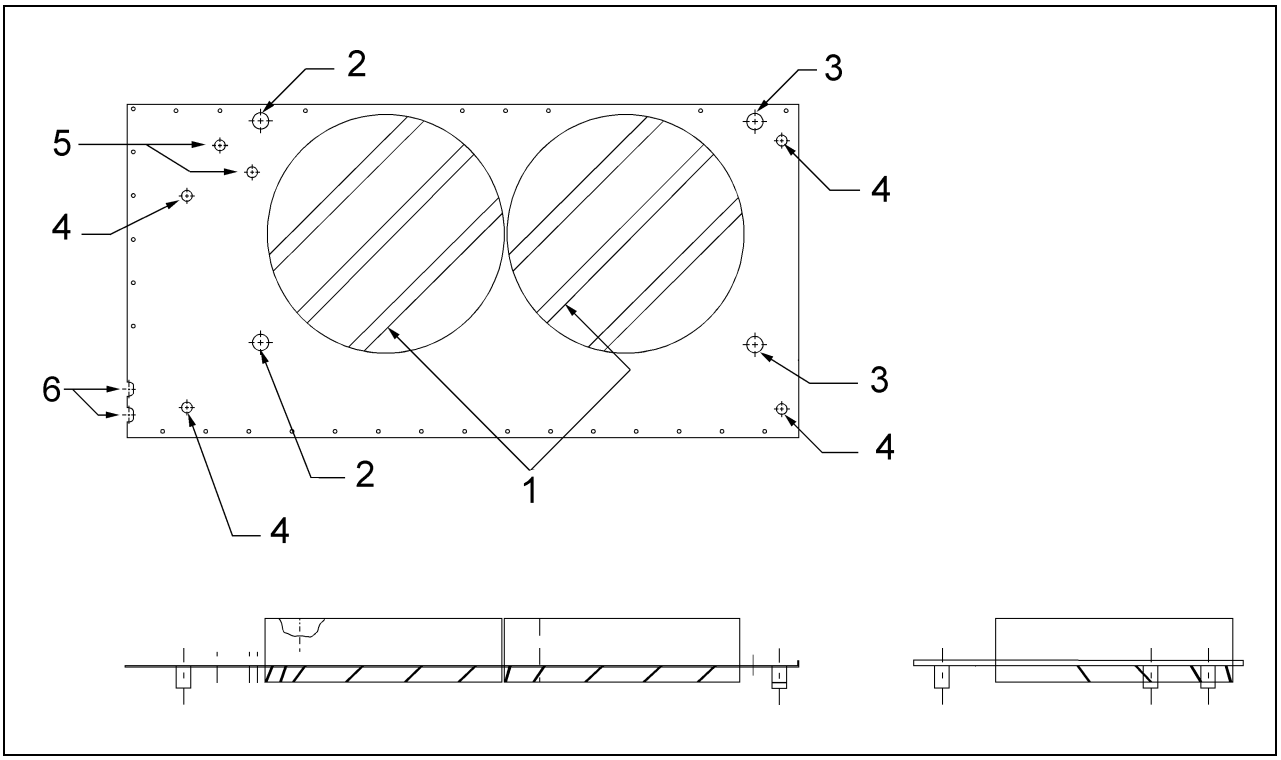


Figure 6: #213948 Bottom panel. **(1)** Cylindrical housing of fans; **(2)** Clearance holes for #213243 support; **(3)** Clearance holes for #213244 holes; **(4)** Evacuation hoses; **(5)** Clearance holes for the support of the receiver tank; **(6)** Holes that have to be aligned with those of #220977 reinforcement.

20. Apply Sika 221 all around the welded supports and the bottom panel.
21. Fasten the four #590284 evacuation hoses in the openings under the bottom panel (figure 6, item 4) using #504021 hose clamps.
22. Install #510342 shock absorber caps above holes 2 and 3 of figure 6. Add #500446 washers and install #452898 fan support (figure 7) above them. Secure using #502617 hardware.
23. Install both fans on motors using #452069 keys. As shown on figure 9, a 1.1 in (28 mm) gap must separate the motor from the fan.
24. Install the fan-motor assemblies in their cylindrical housings (figure 6, item 1) then fasten the motors to their vertical bases (figure 7, item 1). If necessary, use #283482 spacers with their washers, screws and nuts (#500441, #502528, #502744) to align the fans in their housings.

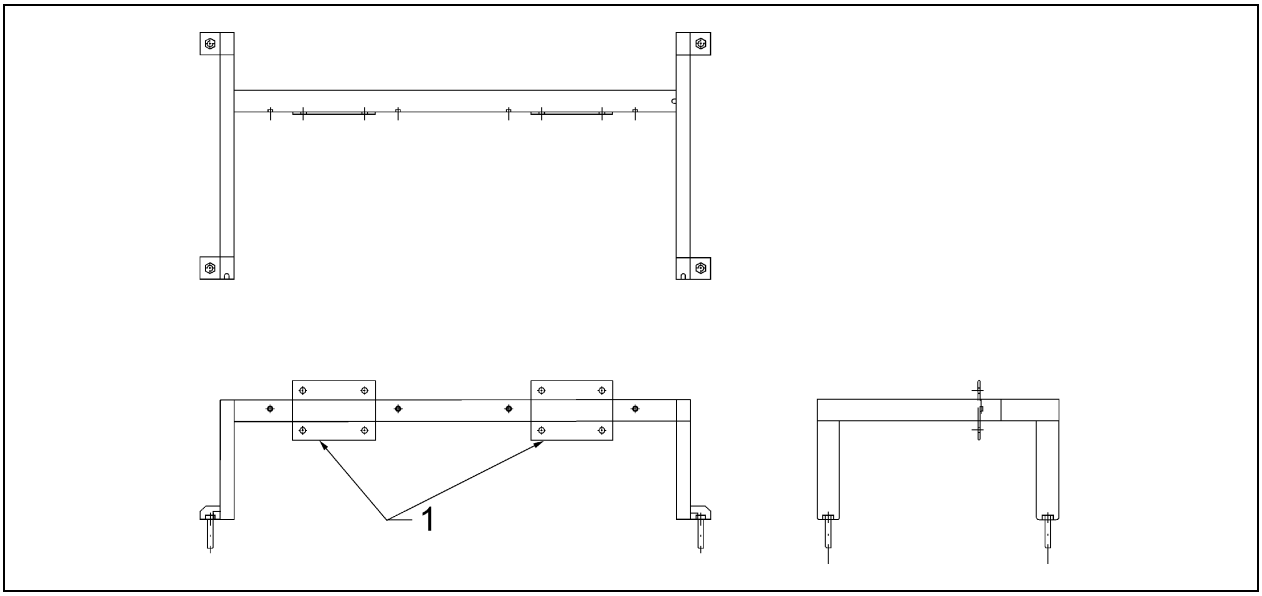


Figure 7: #452898 support of the fans. **(1)** Vertical bases for motors.

25. Install #452918 support of the receiver tank (figure 8) in both holes of the bottom panel (figure 6, item 5). Secure with #502617, #500446 and #5001331 hardware.
26. Bolt the receiver tank (figure 9, item 1) on its support. Use #502617 and #500446 hardware.
27. Use two #504025 retaining clips (figure 9, item 2) to fix the filter dryer to its support.
28. Link the filter dryer to the lower connection of the receiver tank using #453083 hose. Note that the 45° elbow goes on the side of the filter dryer. Put one #507169 o-ring at each end.
29. Fix #450970 bracket on top of the compartment door. Secure with #5001087 screws and #500972 washers.

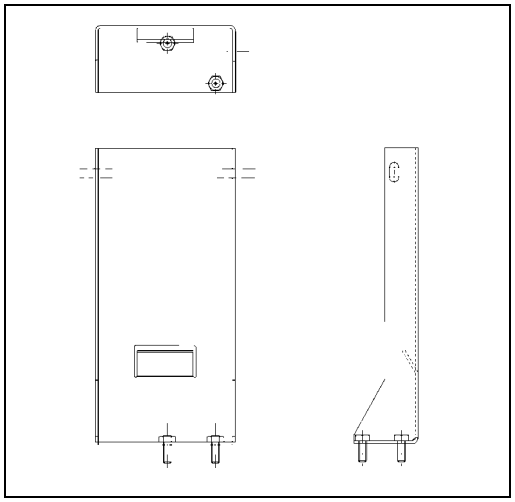
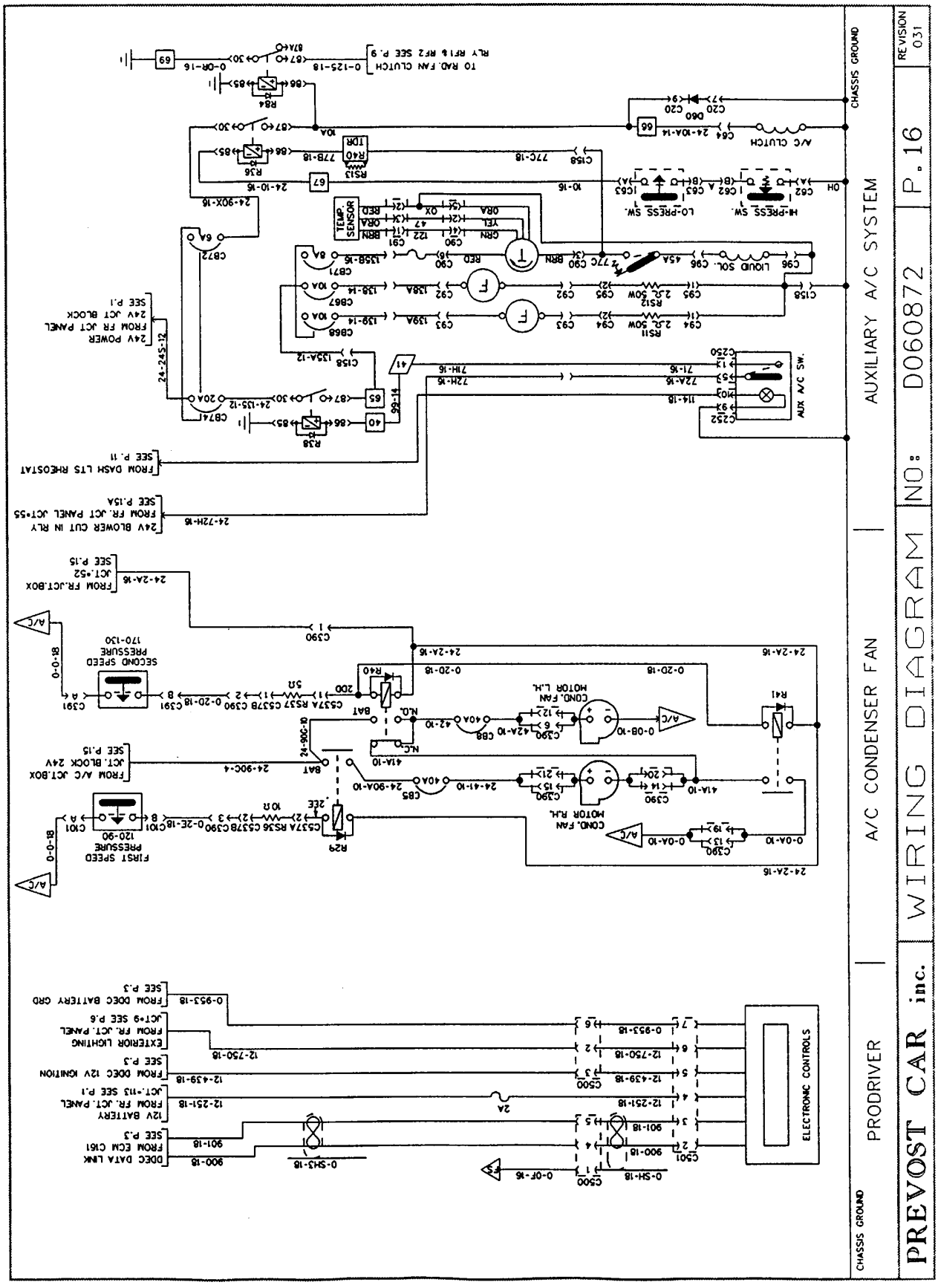


Figure 8: Support of the receiver tank.

30. Connect #453048 hose. The end with a 45° angle goes on the compartment door. The fitting on the receiver tank must have a 10° angle using the horizontal as a reference. Connect the other end of the #453048 hose on the receiver tank, above the pressure switches. Put a #507169 o-ring at each end. Use #560872, #561569, #500603 and #500767 hardware. Fix both hoses on the door, using #504021 hose clamps.
31. Install the new A/C junction box (#381785P) as shown on figure 9. Install also the box of the CB5 and CB9 circuit breakers on the front wall of the compartment.

CAUTION: *The fuel tank is aligned with the A/C junction box, behind the condenser compartment. Make sure not to drill through this wall.*

32. Remove 3 cm of sheath off the five wires cut in step 8. Remove also 3 cm of sheath off the five wires of the new A/C junction box. As shown on figure 9, twist wires together and weld (the wires are SP62, SP63, 57, 45E and 45A). Cover the connection with a heat shrink tube then heat. Plug the three ground wires (OA, OB and O).


PREVOST CAR inc.
PRODRIVER
A/C CONDENSER FAN
AUXILIARY A/C SYSTEM
WIRING DIAGRAM
NO. D060872
P. 16
REVISION 031
CHASSIS GROUND
ELECTRONIC CONTROLS
A/C CLUTCH
LIQUID SOL.
AUX A/C SW.
HI-PRESS SW.
LO-PRESS SW.
TEMP. SENSOR
COND. FAN MOTOR R.H.
COND. FAN MOTOR L.H.
FIRST SPEED PRESSURE
SECOND SPEED PRESSURE
TO RAD. FAN CLUTCH
RLY RF1 & RF2 SEE P. 9
FROM DASH LTS RHEOSTAT SEE P. 11
24V BLOWER CUT IN RLY FROM FR. JCT PANEL JCT•55 SEE P.15A
FROM FR.JCT.BOX JCT.•52 SEE P.15
FROM A/C JCT.BOX JCT. BLOCK 24V SEE P.15
24V POWER FROM FR JCT PANEL 24V JCT BLOCK SEE P.1
DDEC DATA LINK FROM ECM C161 SEE P.3
12V BATTERY FROM FR. JCT. PANEL JCT.•113 SEE P.1
FROM DDEC 12V IGNITION SEE P.3
EXTERIOR LIGHTING FROM FR. JCT. PANEL JCT•9 SEE P.6
FROM DDEC BATTERY GRD SEE P.3

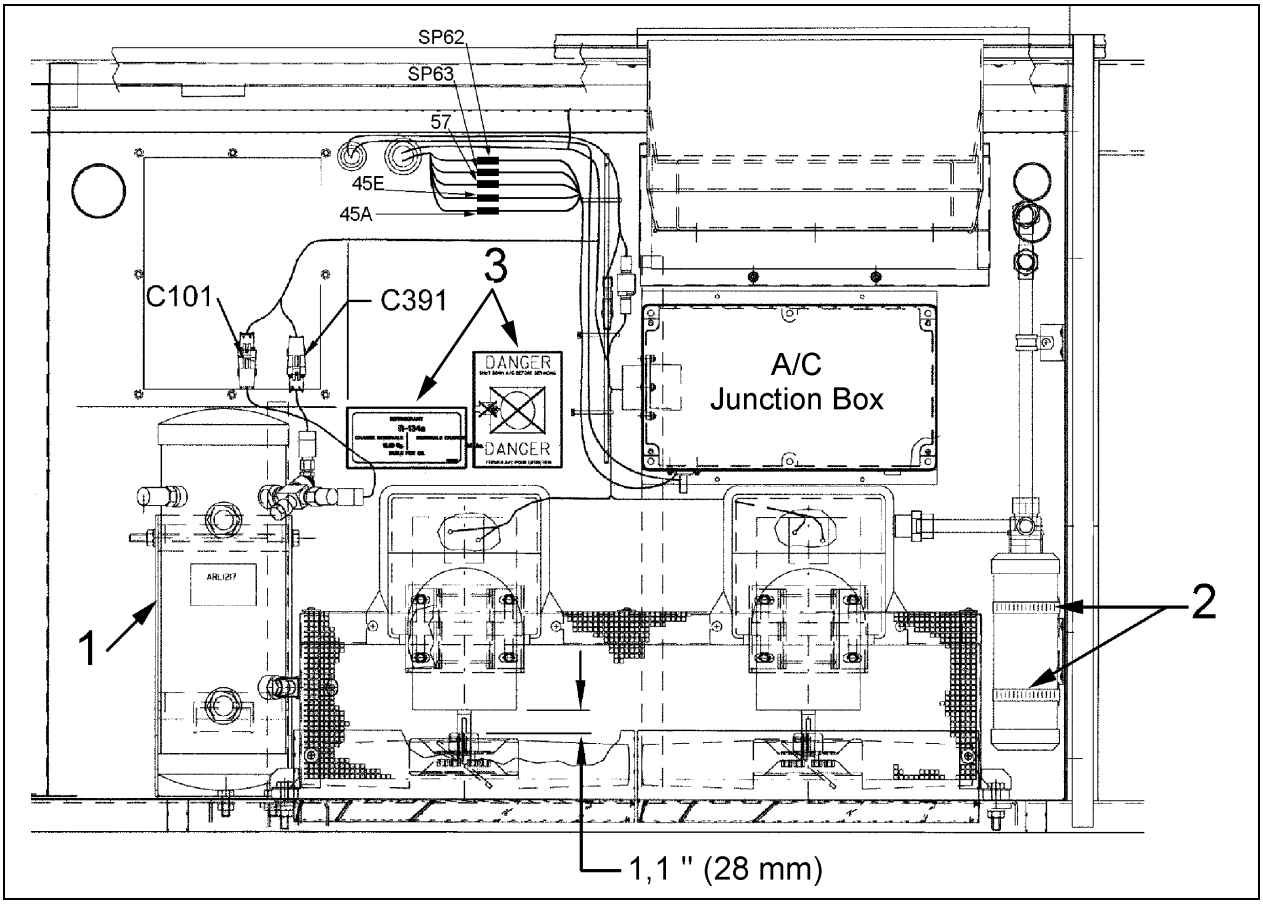


Figure 9: Interior of the condenser compartment, after the modifications. **(1)** Receiver tank; **(2)** #504025 Retaining clips for filter dryer; **(3)** #402792 and #453066 Decals.

33. As shown on figure 9, plug the C101 and C391 connectors of the receiver tank to those of the A/C junction box.
34. Connect the motor terminals.
35. Install #452011 plastic protectors over the motors using hardware #502568 and #500468, then install #452929 wire netting protector above the assembly, with #5001137 and #500641 parts.
36. Stick #453066 and #402792 decals as shown on figure 9, item 3.
37. Refill and check the A/C system according to your Maintenance Manual, section 22 (Charging System).

WARRANTY

This modification is covered by Prévost Car's normal warranty. Prévost Car recommends you have these modifications performed at one of our Service Centers. However should you prefer to carry out these modifications yourself, we will reimburse you the parts only upon receipt of a completed A.F.A. form on which you must specify as per ''Warranty Bulletin 99-01''. Please contact the Service Manager of your region for further details.

Parts disposition:

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