

RX-7 AIR CONDITIONER INSTALLATION INSTRUCTION

1. Remove battery terminals, and remove battery.
2. Remove shroud top cover in front of radiator. (6 bolts) (See Photo 1)
3. Install MZ-97-A-1 compressor mount to engine using (2) $\frac{3}{8}$ " mount spacers at the 2 front holes, between the mount and engine. Use (2) 10mm x 1.25mm x 30mm bolts with 10mm lock washers. Use a 10mm x 1.25mm x 20mm bolt with $\frac{3}{8}$ " lock washer in top rear hole of mount. Use a 12mm x 1.5mm hex nut with $\frac{1}{2}$ " lock washer on the stud. Tighten all bolts uniformly and securely. (See Diagram 1)

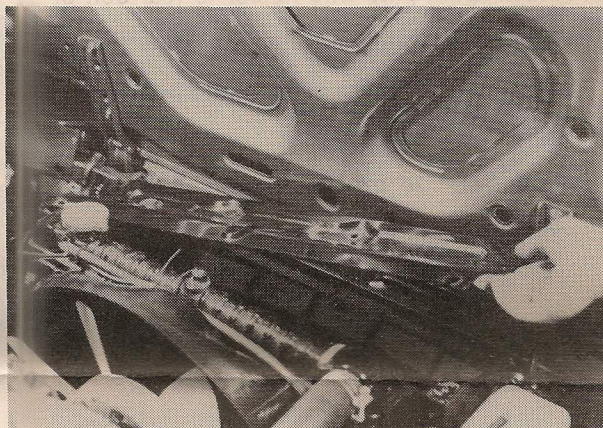


Photo 1

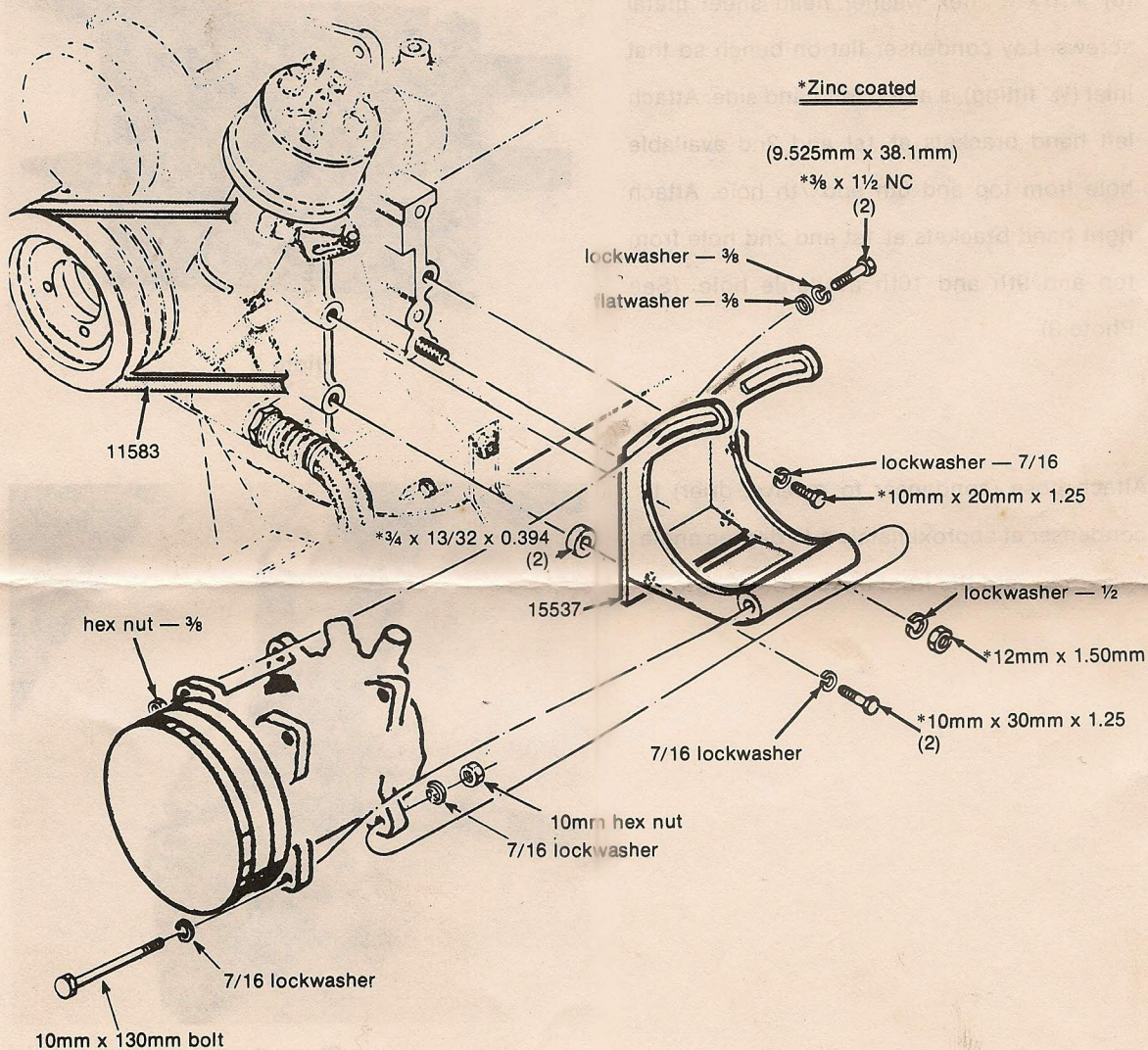


Diagram 1

4. Install compressor on mount, using $\frac{3}{8}$ " x 5" NC bolt with lock washer and nut in bottom of mount. (Bolt should be installed from front side of engine.) Locate compressor hose fittings so they are pointing upward. Do Not Tighten at this point. Install drive belt around crank shaft pulley and compressor clutch. Use (2) $\frac{3}{8}$ " x $1\frac{1}{2}$ " NC bolts with lock washers flat washers and nuts in top slots of mount. **Note:** A correct water pump pulley position is necessary for air conditioner compressor belt installation on engine pulley. Rotate water pump pulley as necessary. (See Diagram 1)
5. Attach spark plug wire holder to rear bolt of compressor bracket adjusting arms (**Note:** Make sure wires are clipped into holder securely.) (See Photo 2)
6. Adjust belt to proper tension and tighten compressor mounting bolts.

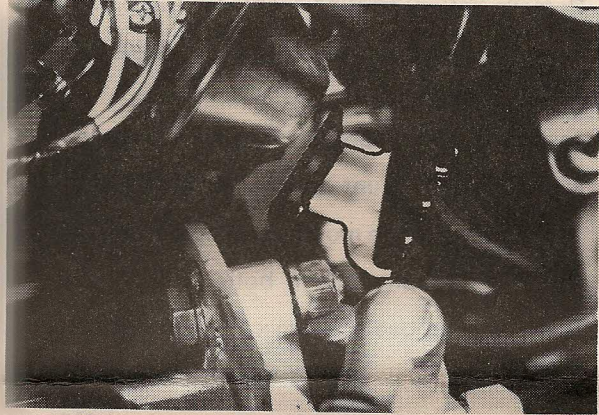


Photo 2

7. Attach mounting brackets to condenser using (8) #10 x $\frac{1}{2}$ " hex washer head sheet metal screws. Lay condenser flat on bench so that inlet ($\frac{1}{2}$ " fitting) is at top left hand side. Attach left hand brackets at 1st and 2nd available hole from top and 6th and 7th hole. Attach right hand brackets at 1st and 2nd hole from top and 9th and 10th available hole. (See Photo 3)

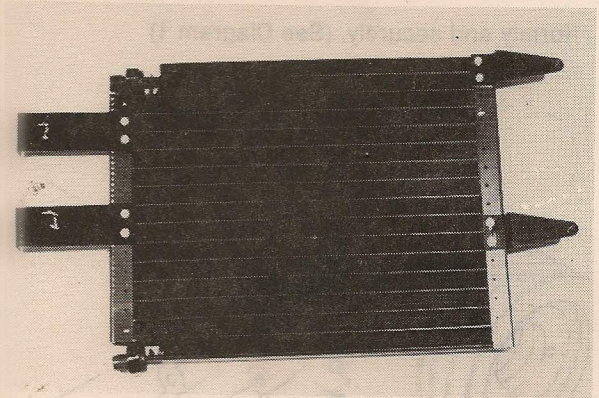


Photo 3

8. Attach hose (condenser to receiver-drier) to condenser at approximately a 45 degree angle upward toward the front of car. (See Photo 4)

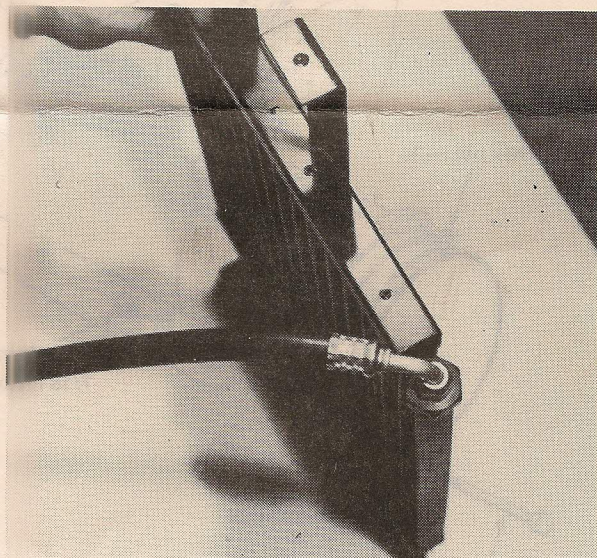


Photo 4

9. Install condenser in front of radiator. Lower the right hand bottom condenser bracket into the cowl opening first, then work the condenser down into position. Insert the 2 studs on condenser bracket (passenger side) through holes provided in the cowl and secure with flat washers and $\frac{1}{4}$ " kepnuts. (See Photo 5)

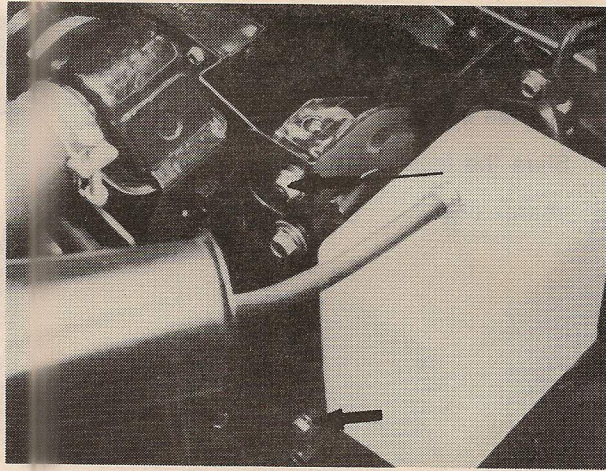


Photo 5

- Align the condenser brackets on driver's side with holes provided in cowl. Secure with (2) $\frac{1}{4}$ " bolts and flat washers. (See Photo 6)

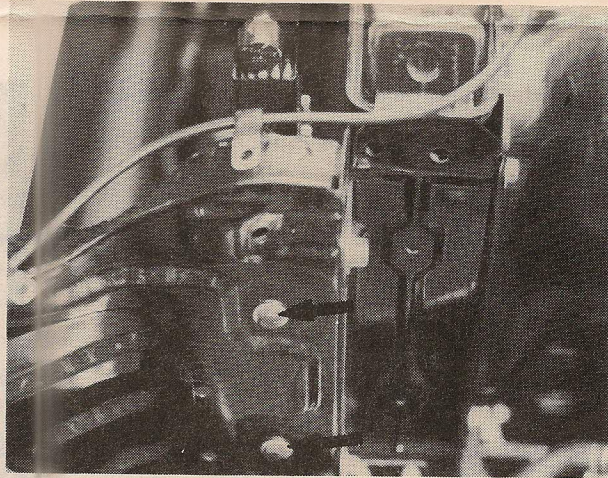


Photo 6

10. Install the receiver-drier to the receiver-drier bracket using 2 bands and 2 #10-32 x $\frac{1}{2}$ " philips head screws with kepnuts. Align the receiver fittings as shown. (See Photo 7)
11. Apply refrigeration oil to the fitting and loosely attach the liquid line from condenser to inlet fitting on receiver-drier.

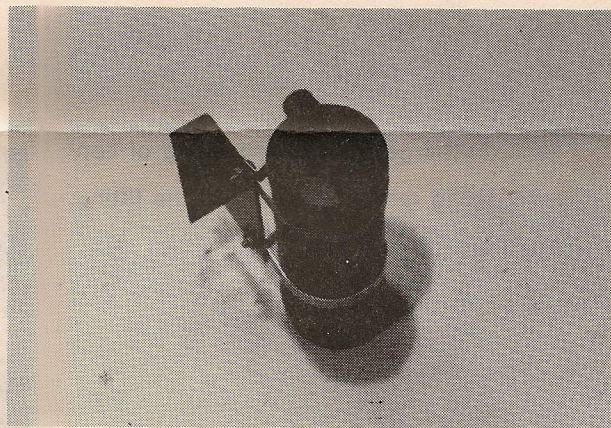


Photo 7

12. Install receiver-drier and bracket to radiator cowling using (2) 1/4" kepnuts. (See Photo 8)
Tighten the liquid line fitting at this time.
13. Slide the foam hose protector onto the discharge line.

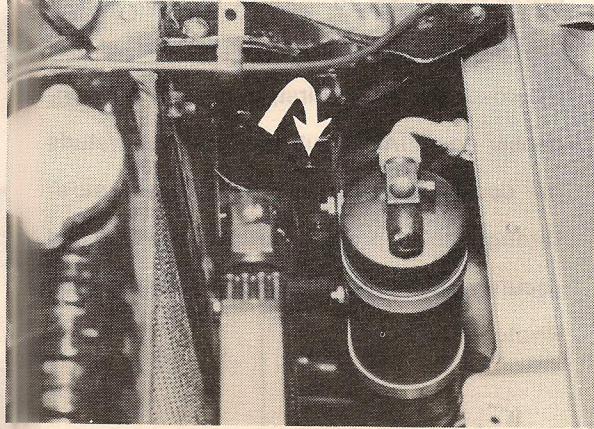


Photo 8

14. Route discharge line through hole provided in radiator cowling (hole is located on driver's side and is nearest to radiator.) Slide foam hose protector into hole around hose. (See Photo 9)

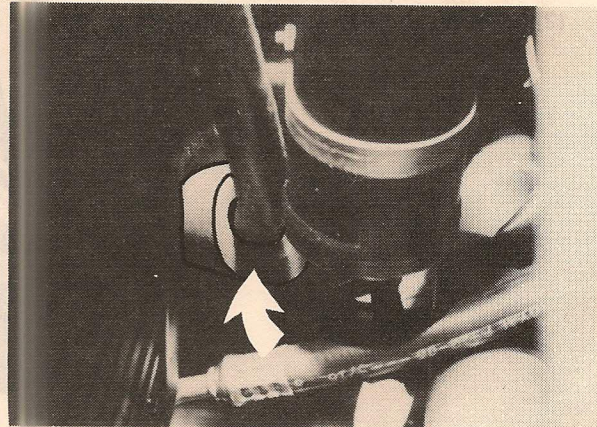


Photo 9

Attach discharge hose to top fitting of condenser using refrigeration oil on the fitting. (See Photo 10)

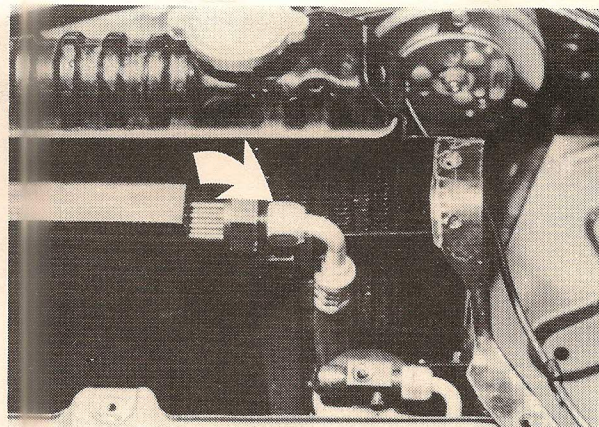


Photo 10

15. Install #8 hose clamp around discharge line and attach to stand off bracket using #10-32 x 1/2" phillips head machine screw and kepnut. (See Photo 11). Insert screw through bracket side and attach nut to clamp side.

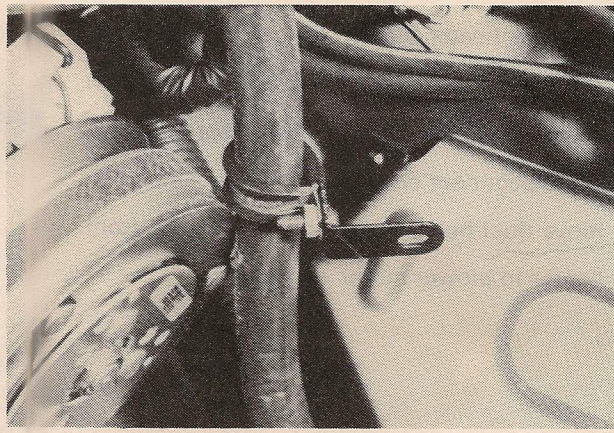


Photo 11

Remove the bolt in the frame next to battery box. Slide clamp down hose and align hole in bracket with hole in frame. Reinstall 6mm bolt. (See Photo 12) (Be sure hose is routed underneath car harness)

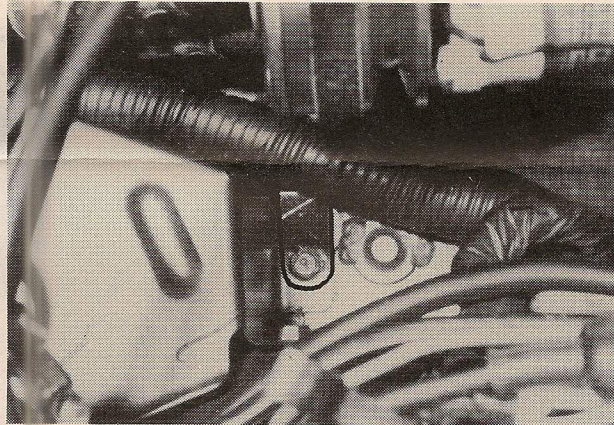


Photo 12

Slide an additional hose protector over discharge hose and attach the discharge hose to compressor. Position the hose protector between the compressor and the car body. (See Photo 13)

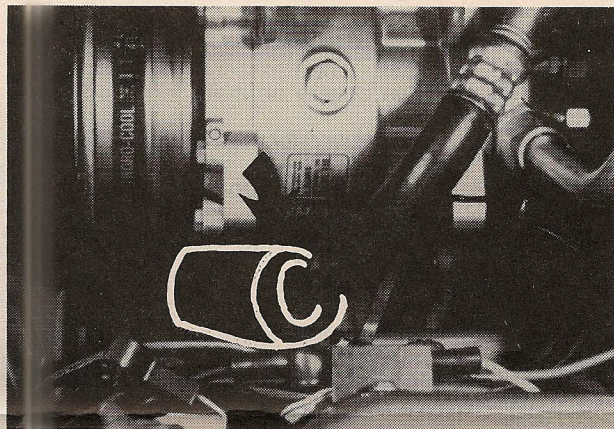


Photo 13

16. Remove glove box and glove box door by removing the three nuts under the glove box door, the screw from the door support arm, screws from each corner of the glove box, and the two screws from the latch striker. **Caution:** Use care when removing the glove box not to interfere with the fresh-recirculate cable which is routed above glove box.

17. Remove heater blower motor, (3) 6mm nuts. (1) located on firewall (See Photo 14), (2) on upper instrument panel. (See Photo 15) (Do not disconnect coupler or boden cable.) Remove duct held in place by plastic pins from heater to blower motor and discard.

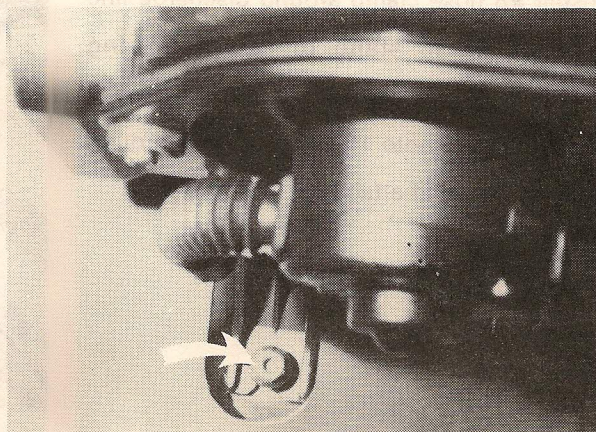


Photo 14

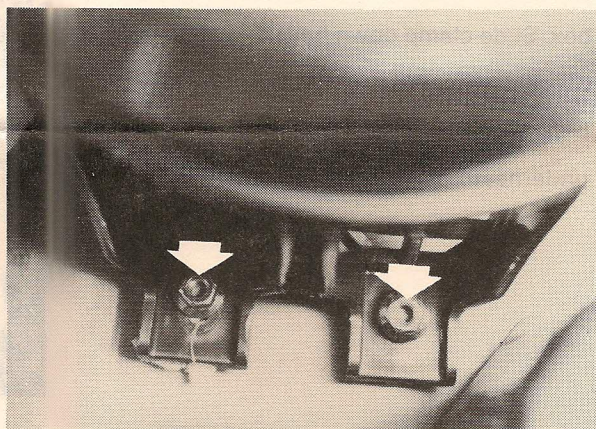


Photo 15

18. Remove protective covers on male terminals at back of heater blower located next to the resistor block connector. Plug the white 2 wire plastic short connector furnished, into the terminals. (See Photo 16) **(CAUTION: Do Not Omit This Operation)**
19. Reinstall blower motor using original mounting nuts.

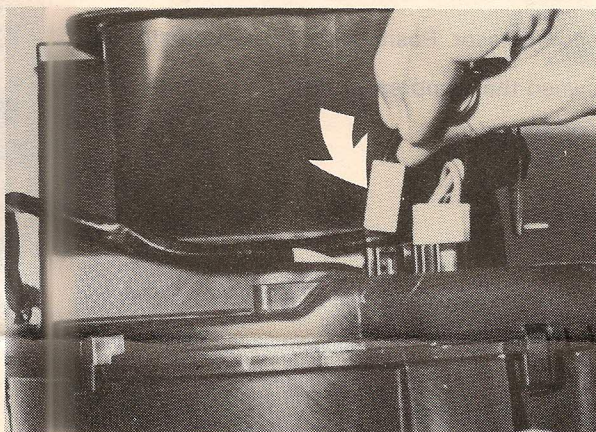


Photo 16

20. Locate knock outs (perforated holes on firewall insulation) for Freon hoses, evaporator Mtg. points, wire harness and drain hose. (See Photo 17) Remove rubber grommets on engine side of firewall.

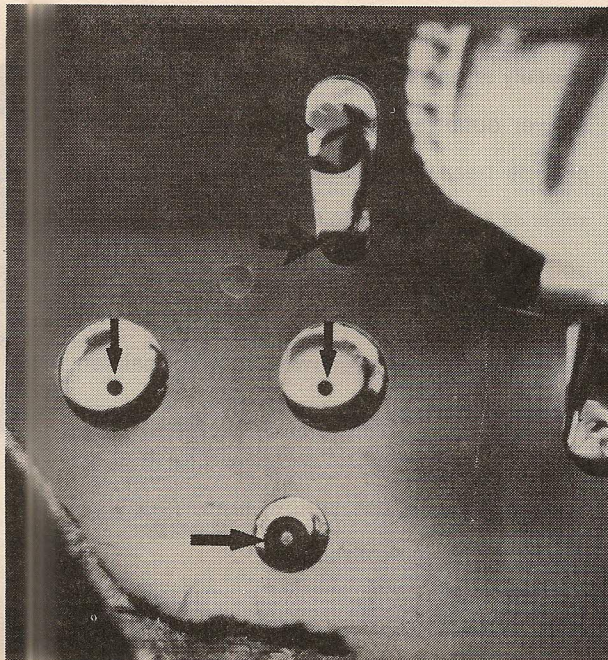


Photo 17

21. Temporarily attach micro switch to right hand side of heater behind defroster hose using (2) #10 x 1/2 tapping screws. (See Photo 18) Connect yellow female spade terminal of the air conditioner wiring harness to the bottom spade connector of micro switch, and attach green female spade connector to the end connector on the micro switch.

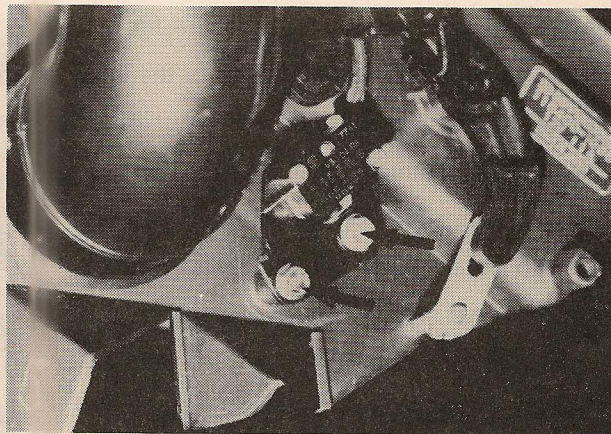


Photo 18

22. Adjusting Procedure for Micro Switch

- a. If heater control lever is moved between max and bi-level the micro switch is not actuated.
- b. When lever is moved from bi-level to heat, micro switch is actuated. This should be confirmed by listening for a click of the switch. (See Photo 19)
- c. Switch is adjusted by sliding the switch bracket at the slotted hole.
- d. Tighten the switch bracket to heater mounting screws after adjustments have been correctly made.

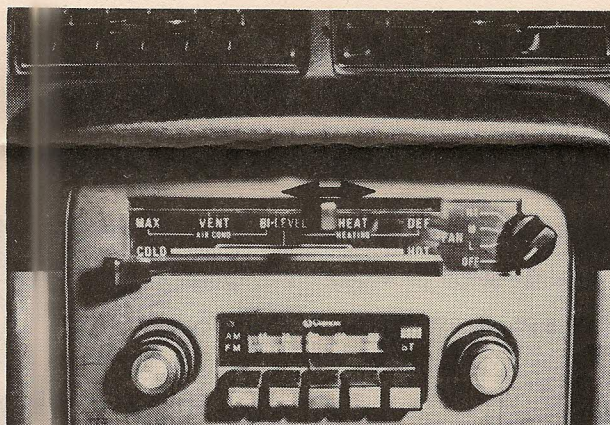


Photo 19

CAUTION: IMPROPER MICRO SWITCH ADJUSTMENT WILL RESULT IN THE COMPRESSOR RUNNING DURING THE HEAT AND DEFROST MODES AND IMPAIR DEFROSTING EFFICIENCY.

23. Loosely attach the metal seal plates to heater blower outlet and heater inlet with #10 x 3/4" phillips head sheet metal screws. Slide the seals as far as possible on the collar of heater and blower. (See Photo 20)

24. Route the blue and yellow wiring harness terminals from evaporator, through the hole provided in firewall. Extend the wiring through firewall only to the yellow tape. (approximately 2") (See Photo 20)

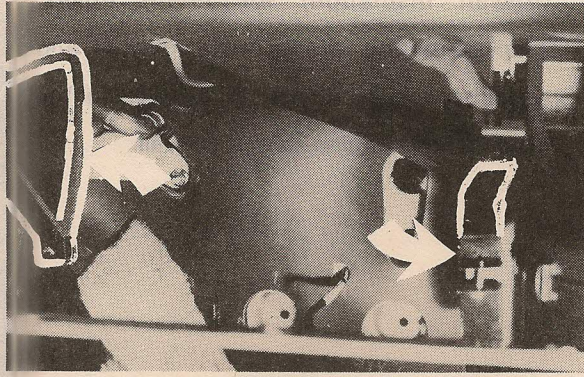


Photo 20

25. Align the evaporator lines with the firewall holes by reaching across the top of the unit, while supporting the unit with your other hand. Push the metal lines of the evaporator ass'y through the holes provided in firewall. Position the top evaporator case mounting bracket over stud on upper dash panel, and secure with 6mm nut and lock washer. (See Photo 21.) Attach lower case mounting brackets (2 each) to firewall with 6mm nuts, and flat washers.



Photo 21

26. Slide seals from heater inlet and blower outlet against stops provided on evaporator ass'y. (See Photo 22) Tighten screws securely.

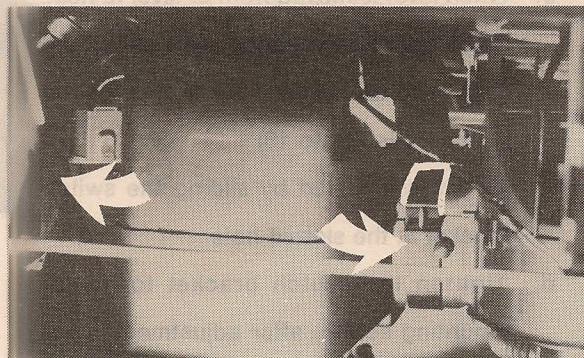


Photo 22

27. Connect green wire with female bullet terminal from air conditioner wire harness to blue with green stripe wire on heater blower motor. Connect blue air conditioner wire with male bullet terminal to blue with green stripe wire on heater blower motor. (See Photo 23)

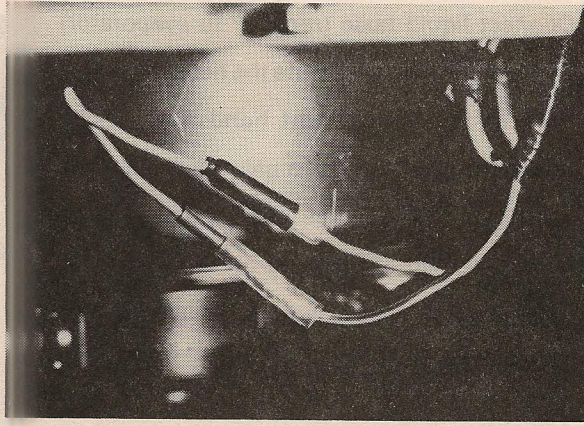


Photo 23

28. Install relay as shown in photo using original screw. If there is a relay already mounted at this location, remove the relay and reverse it so that the OEM relay tucks under mounting bracket and install the relay furnished at same mounting location. (See Photo 24)

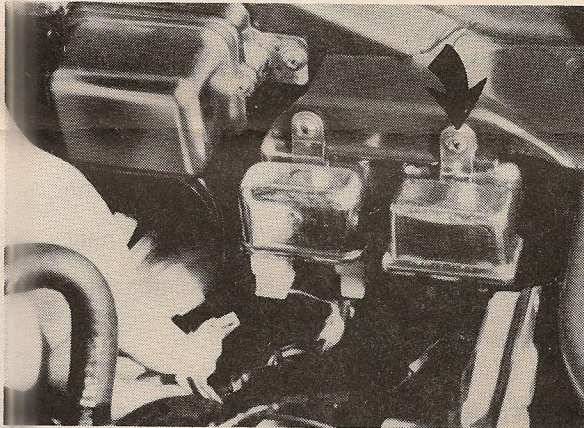


Photo 24

29. Route the yellow and blue wires from relay along firewall and connect to yellow and blue wires from evaporator wire harness. Use 2 tie wraps to attach the wiring to the hood release cable and 1 tie wrap to attach the wiring harness to the power brake vacuum line. (See Photo 25)

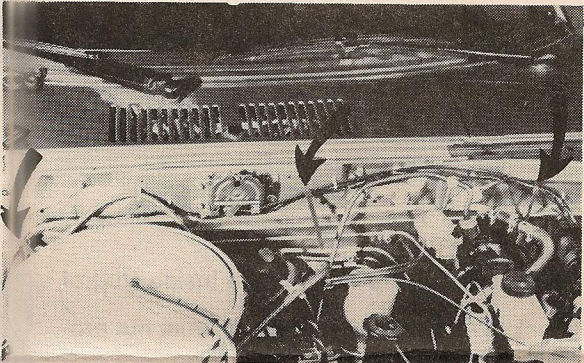


Photo 25

30. Connect the white coupler from relay to the OEM coupler of car. Wires of the OEM coupler are colored black with white stripe, and blue with red stripe. (See Photo 26)
31. Loop the clutch lead wire through the open hole on compressor body to prevent wire contacting pulley, and connect the black wire from relay to the compressor clutch wire.

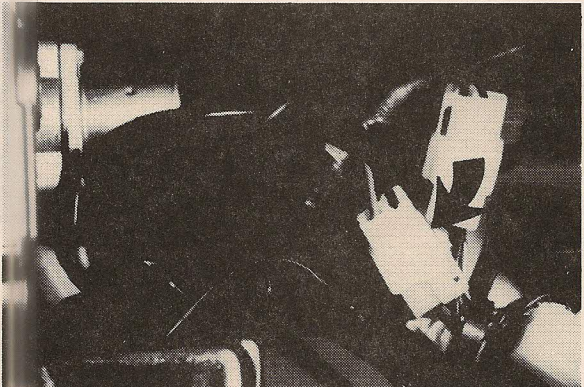


Photo 26

32. Connect liquid hose (receiver to evaporator) to the receiver-drier. Route the hose through a hole in the upper right hand side of the radiator cowling. Install a grommet where the hose goes through the cowling. Clamp the hose to the lip of the front body panel using OEM hole provided, and a #6 clamp and #10-32 machine screw with nut. (See Photo 27)

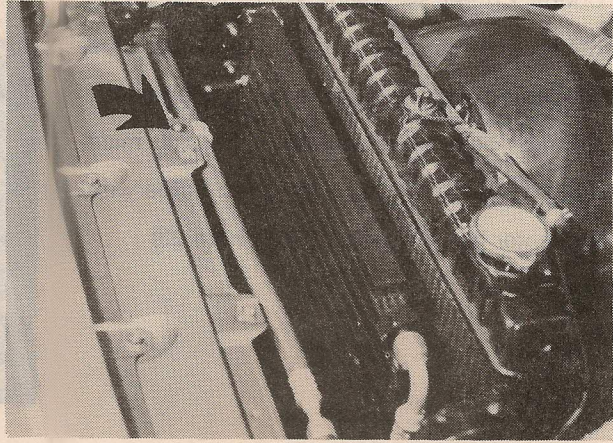


Photo 27

Drill a $\frac{1}{8}$ " diameter hole and clamp the hose to the raised portion of wheel well near the bottom right hand corner of radiator overflow tank. (See Photo 28)

(CAUTION: Liquid line must clear headlight door operating mechanism by at least 2".)

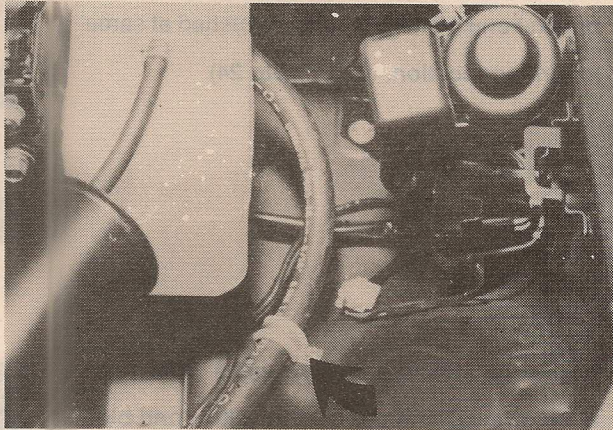


Photo 28

Clamp the hose to the forward inside stud of shock tower with #6 clamp and 8mm nut provided. Connect the hose to the fitting from evaporator at the firewall. (See Photo 29)

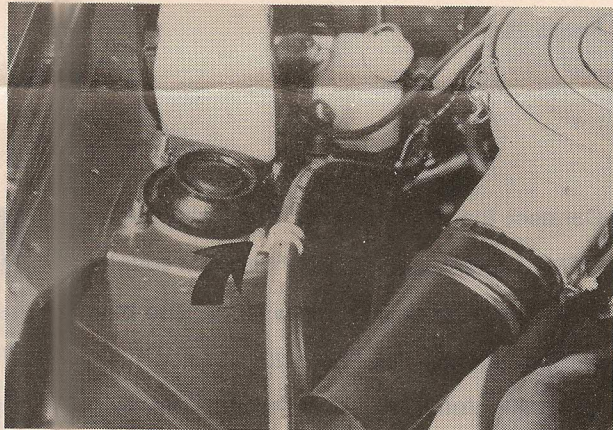


Photo 29

33. Connect the 110 degree fitting of suction hose to the evaporator and route along firewall. Remove plastic clip holding sub-zero fluid hose and install #10 hose clamp to hole just above previous location of plastic clip, with #10 x 1/2" hex washer head sheet metal screw. Install foam rubber hose protector on hose at this time and slide protector toward hose clamp so that it protects hose from hood latch. Attach the hose stand off bracket at two holes provided at the left of the hood latch using (2) #10 x 1/2" hex washer head sheet metal screws. Clamp hose to the end of stand off bracket with #10-32 machine screw and nut provided. (Route the 45° degree fitting of suction hose under the hot start assist cable to compressor and secure. (See Photo 30 and 31)

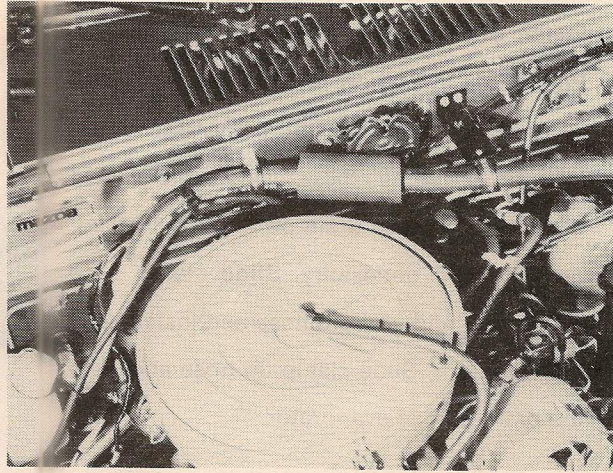


Photo 30

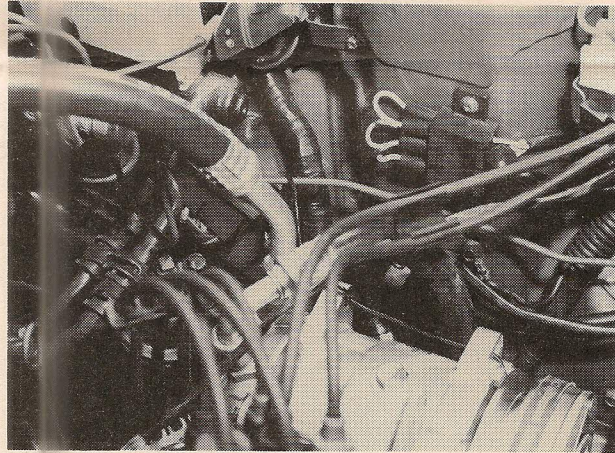


Photo 31

34. Install rubber grommets around the refrigerant lines coming out of firewall.
35. Reinstall the shroud top cover in front of radiator using the original screws. Properly mount the coolant level sensor clips on the two left bolts. (See Photo 32)
36. Reinstall the battery and connect the cables.
37. Cut a hole in the carpet inside the vehicle at drain tube hole location.

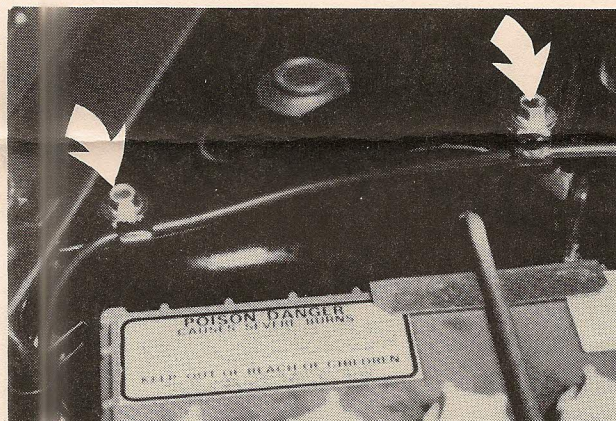


Photo 32

38. Install drain hose grommet in the firewall. Push 90 degree elbow through grommet from engine room side. (See Photo 33) Attach drain hose to 90 degree elbow inside vehicle. Hold drain hose next to drain port and cut off excess hose if necessary. Slide clamp onto evaporator end of drain hose and install hose to evaporator. Slide clamp up hose and onto the drain port of evaporator.



Photo 33

39. Turn on air conditioner blower and check air seals around evaporator inlet and outlet for air leaks. If any leakage is found, adjust seal plates to eliminate air leakage.
40. Move mode control lever to fresh position and check that fresh/recirculate door (in blower housing) is pressed against the blower inlet grill. Move lever to recirculate and see that fresh/recirculate door is moved away from blower inlet grill.
41. Reinstall glove box using the original screws.

RX7 AIR CONDITIONER CIRCUIT

