

IMPORTANT: TO AVOID CONTAMINATION

IMPORTANT INFORMATION

Before beginning the installation of the A/C unit, the installer must be aware of the following important points:

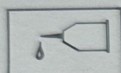
- The "left" side of the vehicle is the driver's side and the "right" side is the passenger's side.
- Symbol Mark - the following symbols are used to indicate the type of service operations to be performed:



- Block group number.



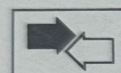
- Order of installation by step number per block group.
NOTE: Please follow strictly.



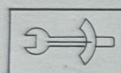
- Lubricate all fittings and O-rings with refrigerant oil before connecting them.
CAUTION: Use only refrigerant oil!



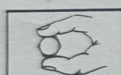
- When tightening or loosening line fittings, use two wrenches for equalized support.



- All A/C wires and hoses must be routed properly in order to avoid interference with surrounding parts.



- All fittings and connections must be tightened to the correct torque specifications.
- All parts mounted on the engine must be secured with the proper bolts and tightened to the correct torque specifications.



- Temporarily hand tighten.

O.E.M.

- Original Equipment from Manufacturer

3. A/C Torque Specifications:

Fittings	Torque (Ft. Lbs.)	Bolts	
Evaporator Inlet	12	Compressor Mount Bolts	4.4 Kgm (32 Ft. Lbs.)
Evaporator Outlet	24	Compressor Adjusting Bracket Bolts	4.4 Kgm (32 Ft. Lbs.)
Block Fitting Bolt	27 ~ 29	Air Pump to Upper Compressor	
Condenser Inlet	17	Bracket bolts (Calif. Only)	2.2 Kgm (16 Ft. Lbs.)
Condenser Outlet	12	Air Pump Adjusting Bracket to	
Receiver/Drier (Inlet/Outlet)	12	Air Pump Bolts (Calif. Oly)	2.2 Kgm (16 Ft. Lbs.)

- Do not remove the protective caps from the fittings until they are to be connected.
 - Follow the refrigerant manufacturer's recommendations for handling of R-12 containers.

WARNING: When working with refrigerant (R-12), extreme caution must be exercised. Always wear eye and skin protection. Make sure all necessary safety procedures have been carried out. Failure to do so could result in serious injury.

SCREW CHART



#10 x 1/2
HEX

5

6

8

10

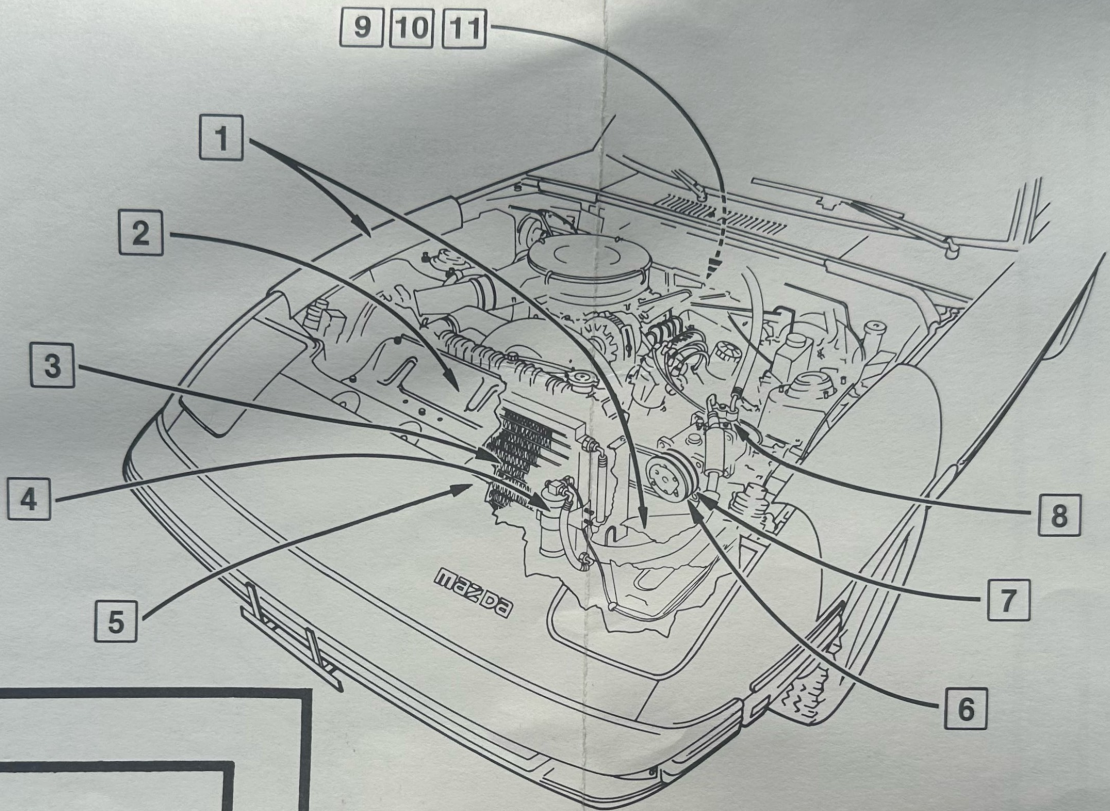
BOLT DIAM. - MILLIMETERS

BOLT LENGTH RULER

55 45 35 25 15
50 40 30 20 10



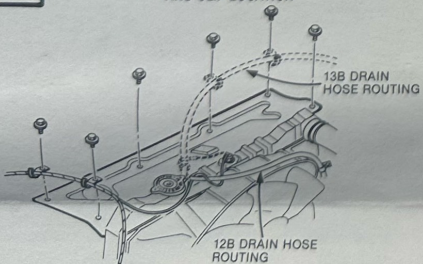
OVERALL VIEW AND LOCATION OF STEPS 1 THROUGH 11



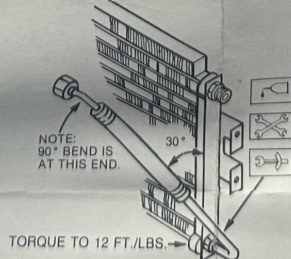
1 1 STEP
ENGINE COMPARTMENT

Install protective fender covers. Remove battery from vehicle. Remove plastic tray.

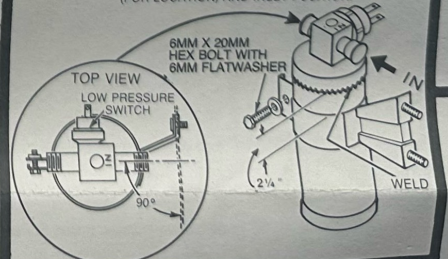
2 1 STEP **⚠** REMOVE SHROUD TOP COVER (6 BOLTS)
NOTE ROUTING OF OVERFLOW HOSE AND CLIP LOCATION



3 1 STEP **⚠** ATTACH SHORT LIQUID HOSE TO CONDENSER OUTLET.



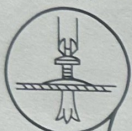
4 1 STEP **⚠** INSTALL REC./DRYER TO BRACKET
NOTE DISTANCE BETWEEN WELD AND BRACKET (FOR LOCATION) AND INLET POSITION.



5

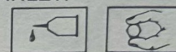
STEPS 1 THRU 7

1 13B ONLY REMOVE AIR BREATHER DUCT BY REMOVING (1) PLASTIC SCREW AND (1) 6MM BOLT



2 INSTALL CONDENSER USING (3) 6MM x 20MM BOLTS WITH (3) 6MM FLATWASHERS AND (1) 6MM FLANGE NUT WITH (1) 6MM FLATWASHER

3 INSERT DISCHARGE SIDE OF THE HOSE ASSEMBLY UNDER BATTERY TRAY, THEN THROUGH HOLE IN COWLING (NEXT TO MAIN CAR HARNESS) AND LOOSELY CONNECT IT TO CONDENSER INLET.



7 TIGHTEN FITTING (DISCHARGE HOSE) TO CONDENSER INLET FITTING TORQUE TO 17 FT. LBS. NOTE: SEE CAUTIONS BELOW BEFORE TIGHTENING



DISCHARGE HOSE

NOTE: BE SURE PLASTIC HOSE PROTECTOR IS POSITIONED UNDER EDGE OF BATTERY TRAY.

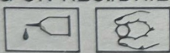
BATTERY TRAY

5 INSTALL REC./DRIER BRACKET TO RADIATOR COWLING USING (2) 6MM FLANGE NUTS.

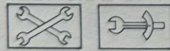
CAUTION: (13B ONLY) BE SURE DISCHARGE HOSE DOES NOT TOUCH OIL COOLER

CAUTION: BE SURE DISCHARGE HOSE DOES NOT TOUCH REC./DRIER BRACKET OR REC./DRIER FITTING

4 OIL COOLER FOR 13B ONLY LOOSELY ATTACH THE LIQUID HOSE FROM CONDENSER TO THE INLET (IN) FITTING ON REC./DRIER.



6 TIGHTEN FITTING (LIQUID HOSE) ON INLET SIDE OF REC./DRIER



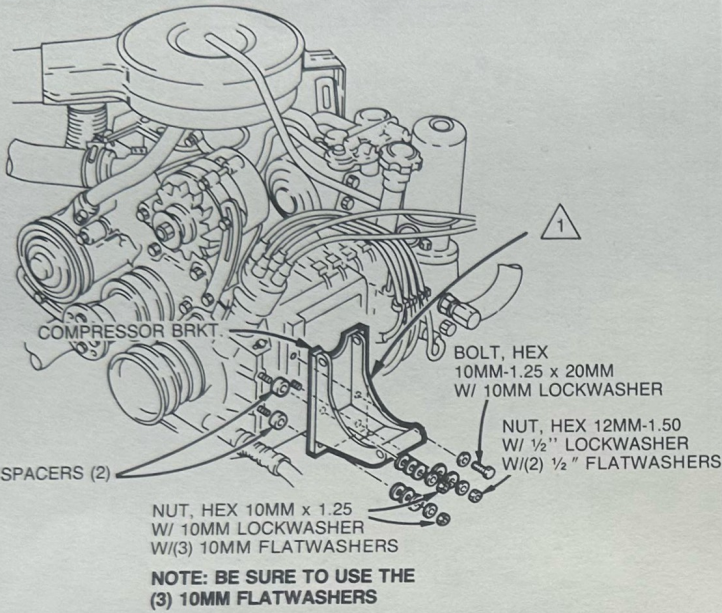
TORQUE TO 12 FT./LBS.

RADIATOR
CONDENSER

COWLING

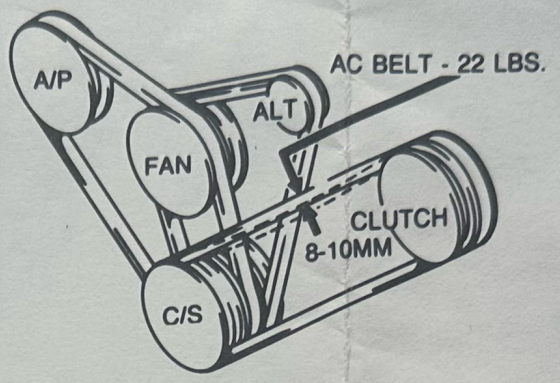
6

- 1 Install compressor bracket to engine.
- 2 Install compressor to bracket.

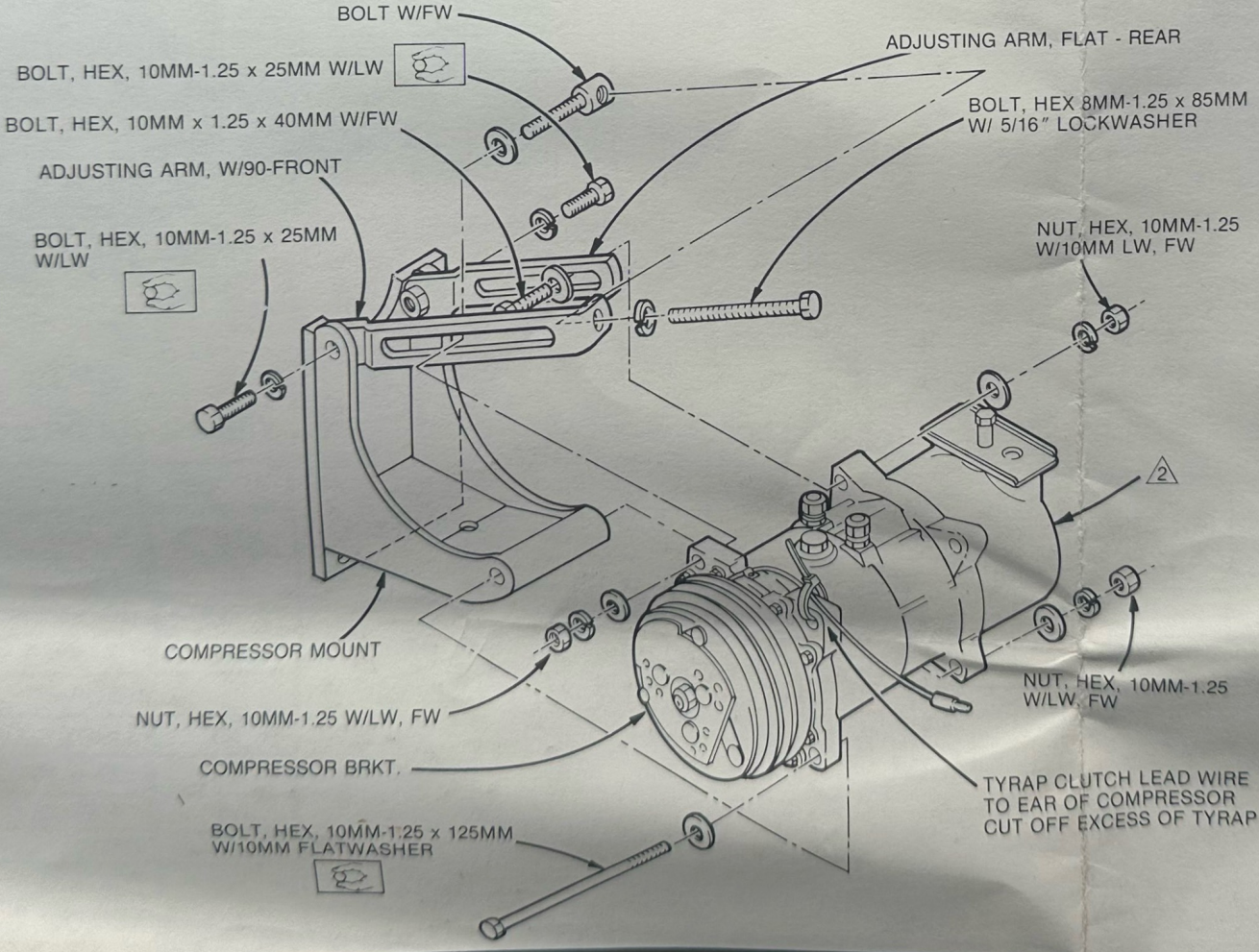


7

Install drive belt and adjust, then tighten all hand tightened bolts securely.



Adjust drive belt to have 5/16 to 3/8" (8-10mm) deflection when center span is pushed with force of approx. 22 lbs. (10 kg).



1 SLOWLY REMOVE BLIND PLATE AND DISCARD PLATE, SPACER AND "O" RINGS. RETAIN BOLT.

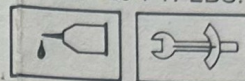
4 INSTALL HOSE CLAMP TO HOSE CLAMP BRACKET USING (1) 6MM x 16MM BOLT AND (1) 6MM FLATWASHER

DO NOT PUT OIL IN THE HOLE

"O" RINGS

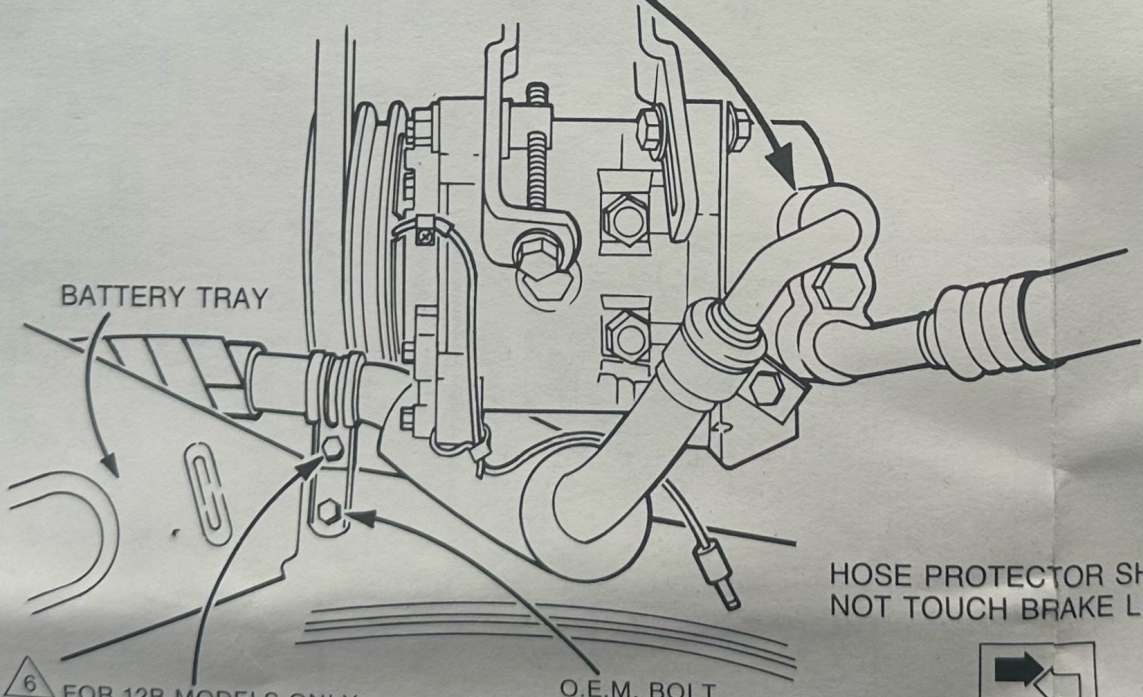
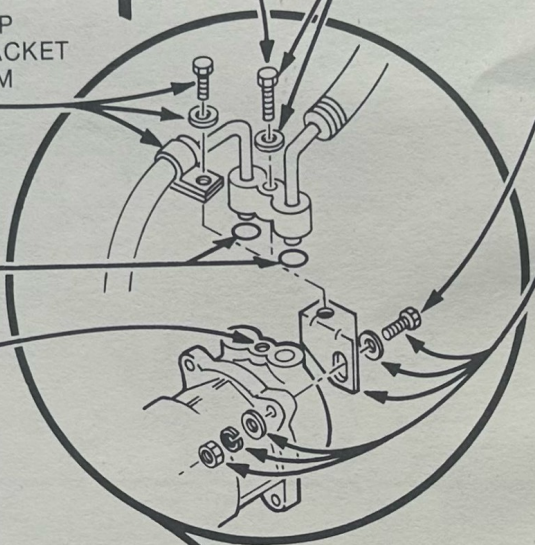
RETAIN

2 INSTALL HOSE ASSEMBLY
NOTE:
USE ORIGINAL BOLT AND 10MM (.708 O.D.) FLATWASHER AND NEW "O" RINGS.
TORQUE TO 27-29 FT. LBS.



5 TIGHTEN THE 10MM x 30MM BOLT.
NOTE: BE CAREFUL NOT TO DAMAGE THE BRAKE LINES WHILE TIGHTENING.

3 LOOSELY INSTALL HOSE CLAMP BRACKET TO COMPRESSOR EAR USING (1) 10MM x 30MM BOLT, (2) 10MM FLATWASHER, (1) 10MM LOCKWASHER AND (1) 10MM NUT.



BATTERY TRAY

O.E.M. BOLT

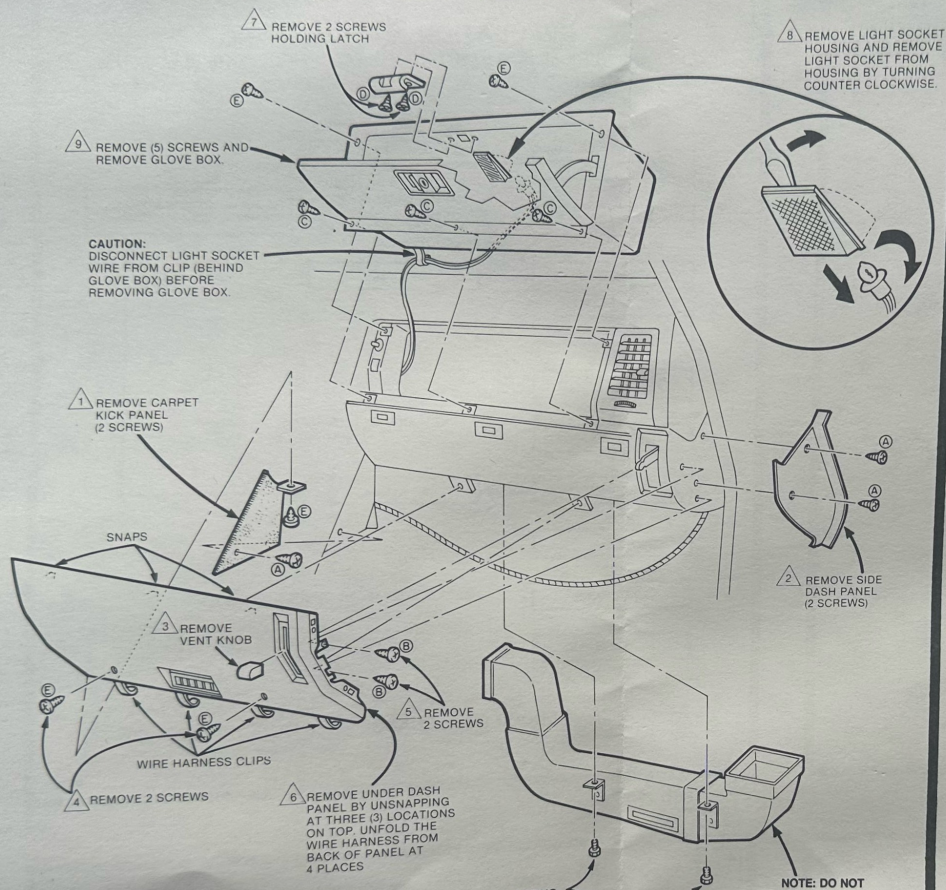
HOSE PROTECTOR SHOULD NOT TOUCH BRAKE LINE



6 FOR 12B MODELS ONLY REMOVE O.E.M. BOLT SECURING BATTERY TRAY AND USE IT TO INSTALL HOSE CLAMP BRACKET. USE (1) 6MM x 16MM BOLT WITH (1) 6MM FLATWASHER TO SECURE HOSE CLAMP

NOTE: HOSE CLAMP BRACKET IS NOT USED ON 13B MODELS, SO DISCARD HOSE CLAMP BRACKET, (1) 6MM x 16MM BOLT, AND (1) 6MM FLATWASHER.

9 STEPS 1 THRU 10 PASSENGER COMPARTMENT

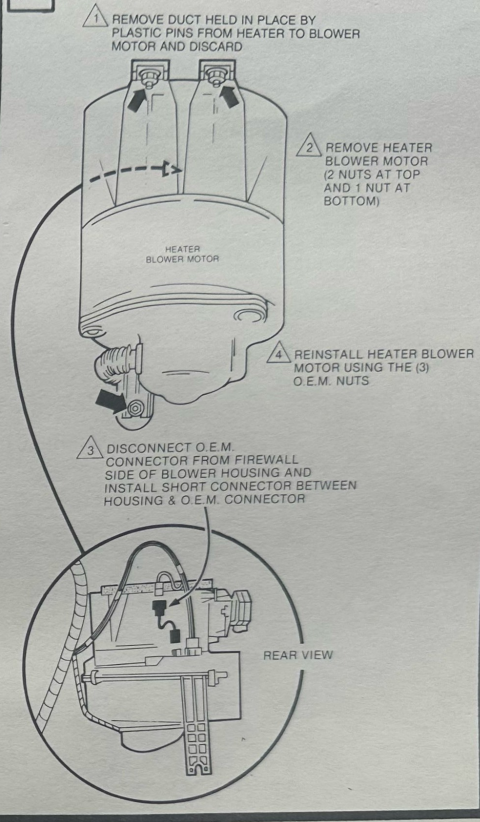


REFERENCE CHART FOR O.E.M. SCREW LOCATION

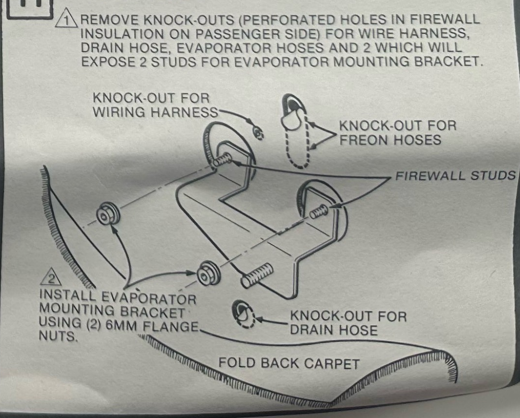
ILLUSTRATION	LOCATION CODE	SCREW LENGTH	SCREW COLOR
	A	12MM	BLACK
	B	12MM	YELLOW
	C	16MM	BLACK
	D	20MM	BLACK
	E	16MM	BLACK

NOTE: SEE LETTER NEXT TO SCREW AND CROSS REFERENCE TO CHART ABOVE FOR PROPER SCREW LOCATION DURING REINSTALLATION OF GLOVE BOX ASSEMBLY IN BLOCK GROUP #15.

10 STEPS 1 THRU 4

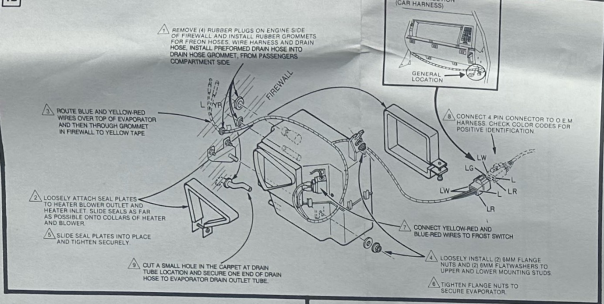


11 STEPS 1 AND 2

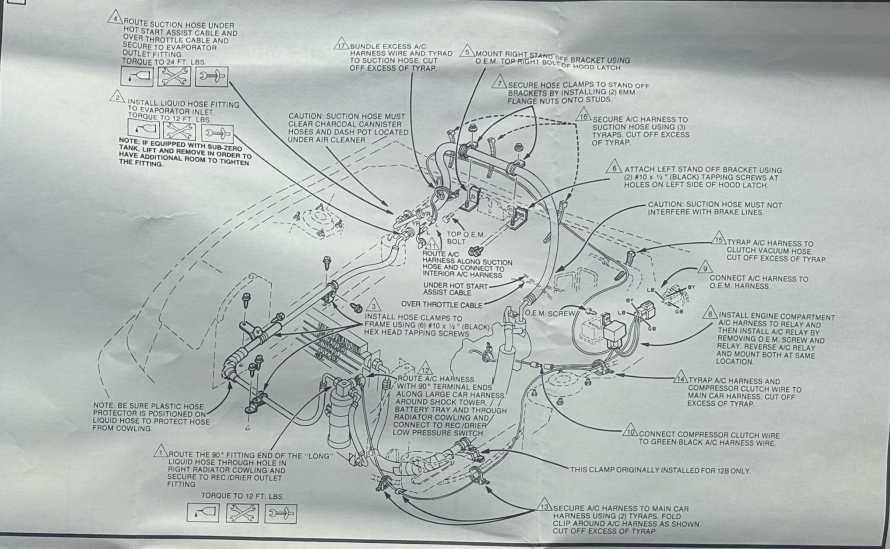


AIR CONDITIONER INSTALLATION INSTRUCTIONS FOR RX-7 (Page 2)

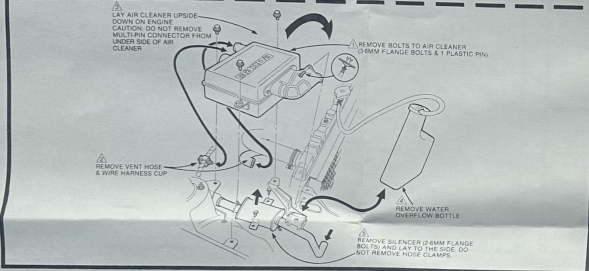
12 STEPS 1 THRU 8



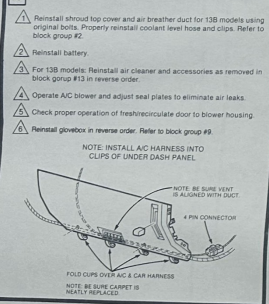
14 STEPS 1 THRU 17



SPECIAL INSTRUCTIONS FOR 13B MODELS ONLY

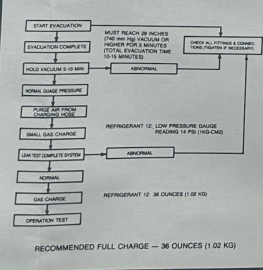


15 STEPS 1 THRU 6

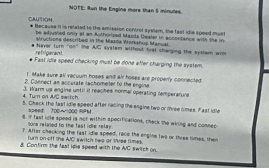


EVACUATION AND CHARGING

PREPARE VEHICLE FOR STARTING. FOLLOW PROCEDURE BELOW. USE REFRIGERANT 12 ONLY.



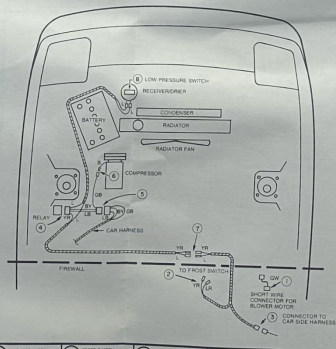
FAST IDLE SPEED CHECKING



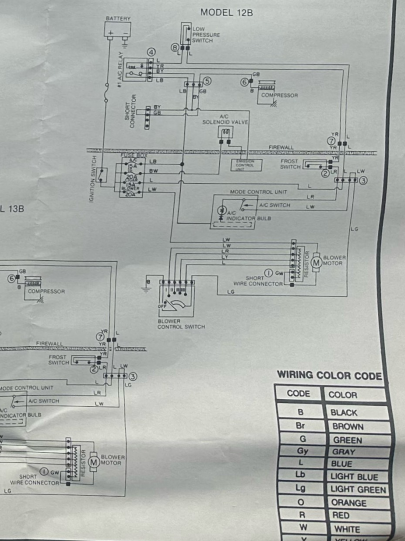
Air conditioner information label and warranty registration must be filled out completely. This is critical.

Make sure there is no trash left inside vehicle. Wipe off any surface that might have been made dirty or oily. Remove and discard any plastic hose fitting protector cap that might have fallen in engine compartment or any foreign material that might hinder the quality or performance of the vehicle.

WIRING DIAGRAM



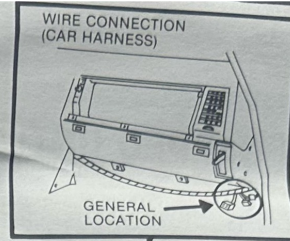
1984 RX7 AIR CONDITIONER CIRCUIT



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STEPS 1 THRU 9

REMOVE (4) RUBBER PLUGS ON ENGINE SIDE OF FIREWALL AND INSTALL RUBBER GROMMETS FOR FREON HOSES, WIRE HARNESS AND DRAIN HOSE. INSTALL PREFORMED DRAIN HOSE INTO DRAIN HOSE GROMMET, FROM PASSENGERS COMPARTMENT SIDE



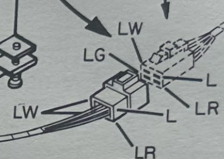
ROUTE BLUE AND YELLOW-RED WIRES OVER TOP OF EVAPORATOR AND THEN THROUGH GROMMET IN FIREWALL TO YELLOW TAPE

LOOSELY ATTACH SEAL PLATES TO HEATER BLOWER OUTLET AND HEATER INLET. SLIDE SEALS AS FAR AS POSSIBLE ONTO COLLARS OF HEATER AND BLOWER.

SLIDE SEAL PLATES INTO PLACE AND TIGHTEN SECURELY.

CUT A SMALL HOLE IN THE CARPET AT DRAIN TUBE LOCATION AND SECURE ONE END OF DRAIN HOSE TO EVAPORATOR DRAIN OUTLET TUBE.

CONNECT 4 PIN CONNECTOR TO O.E.M. HARNESS. CHECK COLOR CODES FOR POSITIVE IDENTIFICATION.



CONNECT YELLOW-RED AND BLUE-RED WIRES TO FROST SWITCH

LOOSELY INSTALL (2) 6MM FLANGE NUTS AND (2) 6MM FLATWASHERS TO UPPER AND LOWER MOUNTING STUDS.

TIGHTEN FLANGE NUTS TO SECURE EVAPORATOR.

13

STEPS 1 THRU 5

SPECIAL INSTRUCTIONS FOR 13B MODELS ONLY

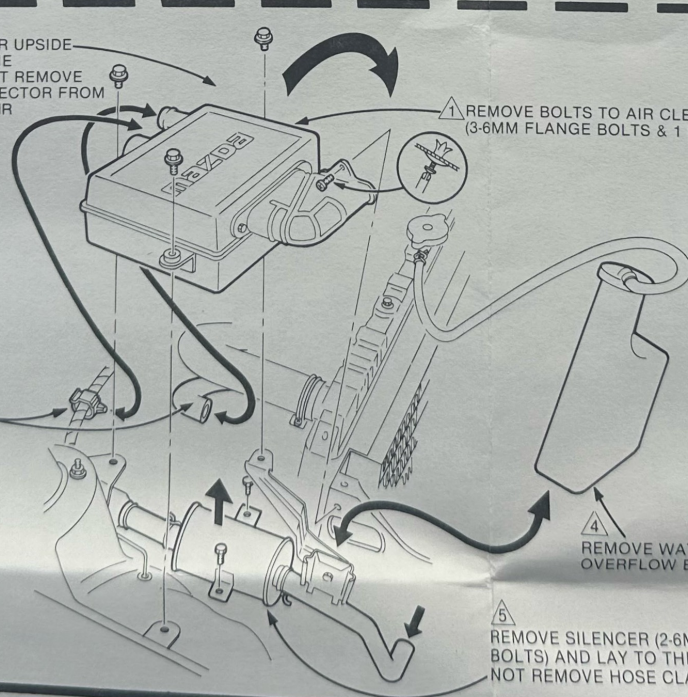
LAY AIR CLEANER UPSIDE DOWN ON ENGINE CAUTION: DO NOT REMOVE MULTI-PIN CONNECTOR FROM UNDER SIDE OF AIR CLEANER

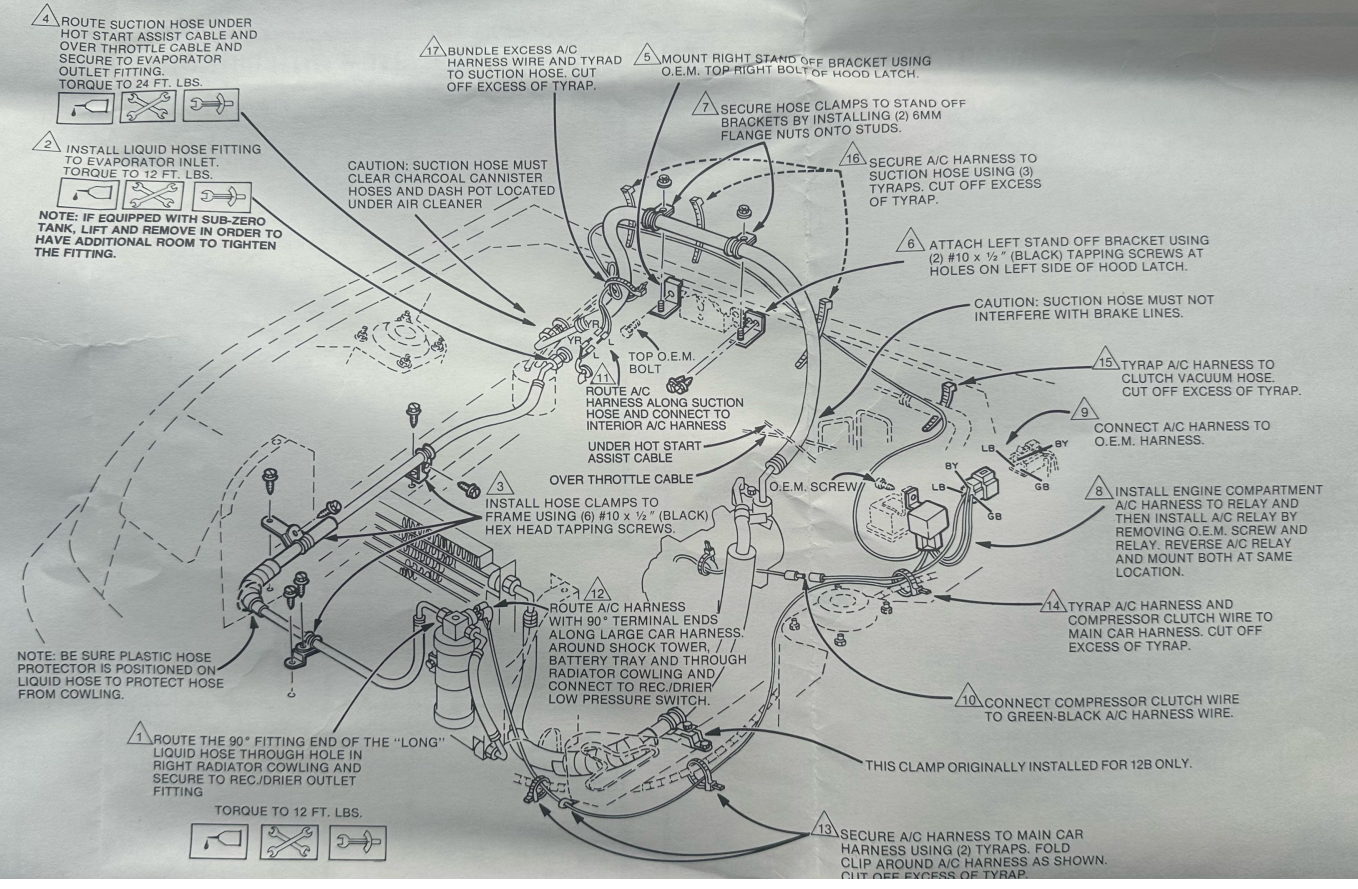
REMOVE BOLTS TO AIR CLEANER (3-6MM FLANGE BOLTS & 1 PLASTIC PIN)

REMOVE VENT HOSE & WIRE HARNESS CUP

REMOVE WATER OVERFLOW BOTTLE

REMOVE SILENCER (2-6MM FLANGE BOLTS) AND LAY TO THE SIDE. DO NOT REMOVE HOSE CLAMPS.

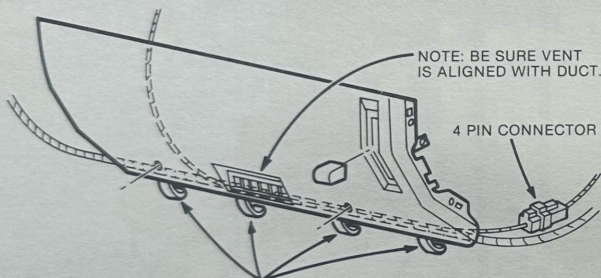




15 STEPS 1 THRU 6

- 1 Reinstall shroud top cover and air breather duct for 13B models using original bolts. Properly reinstall coolant level hose and clips. Refer to block group #2.
- 2 Reinstall battery.
- 3 For 13B models: Reinstall air cleaner and accessories as removed in block group #13 in reverse order.
- 4 Operate A/C blower and adjust seal plates to eliminate air leaks.
- 5 Check proper operation of fresh/recirculate door to blower housing.
- 6 Reinstall glovebox in reverse order. Refer to block group #9.

NOTE: INSTALL A/C HARNESS INTO CLIPS OF UNDER DASH PANEL



FOLD CUPS OVER A/C & CAR HARNESS

NOTE: BE SURE CARPET IS NEATLY REPLACED.

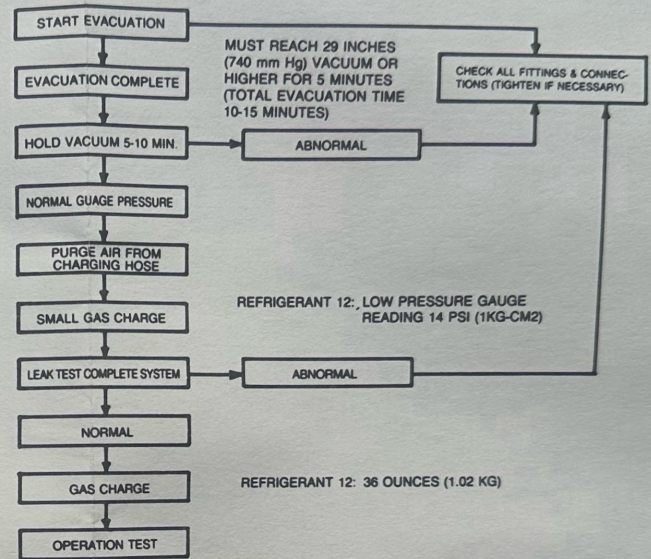
NOTE: BE SURE VENT IS ALIGNED WITH DUCT.

4 PIN CONNECTOR

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EVACUATION AND CHARGING

PREPARE VEHICLE FOR STARTING. FOLLOW PROCEDURE BELOW, USE REFRIGERANT 12 ONLY.



RECOMMENDED FULL CHARGE — 36 OUNCES (1.02 KG)

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FAST IDLE SPEED CHECKING

NOTE: Run the Engine more than 5 minutes.

CAUTION:

- Because it is related to the emission control system, the fast idle speed must be adjusted only at an Authorized Mazda Dealer in accordance with the instructions described in the Mazda Workshop Manual.
- Never turn "on" the A/C system without first charging the system with refrigerant.
- Fast idle speed checking must be done after charging the system.

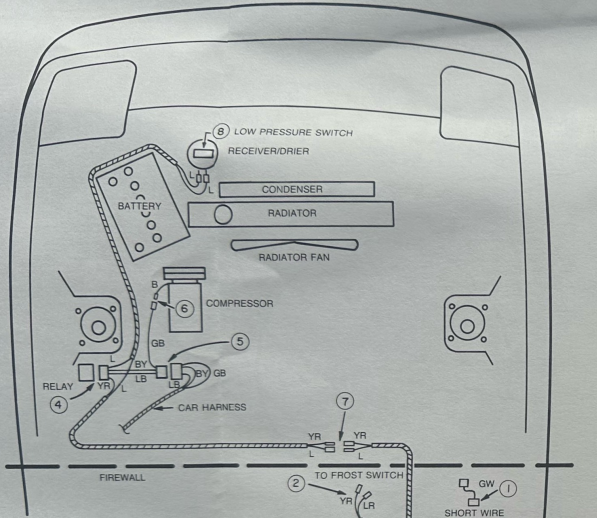
1. Make sure all vacuum hoses and air hoses are properly connected.
2. Connect an accurate tachometer to the engine.
3. Warm up engine until it reaches normal operating temperature.
4. Turn on A/C switch.
5. Check the fast idle speed after racing the engine two or three times. Fast idle speed: 700~1000 RPM.
6. If fast idle speed is not within specifications, check the wiring and connectors related to the fast idle relay.
7. After checking the fast idle speed, race the engine two or three times, then turn on-off the A/C switch two or three times.
8. Confirm the fast idle speed with the A/C switch on.

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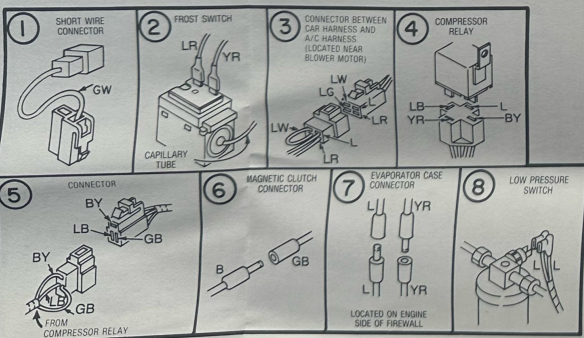
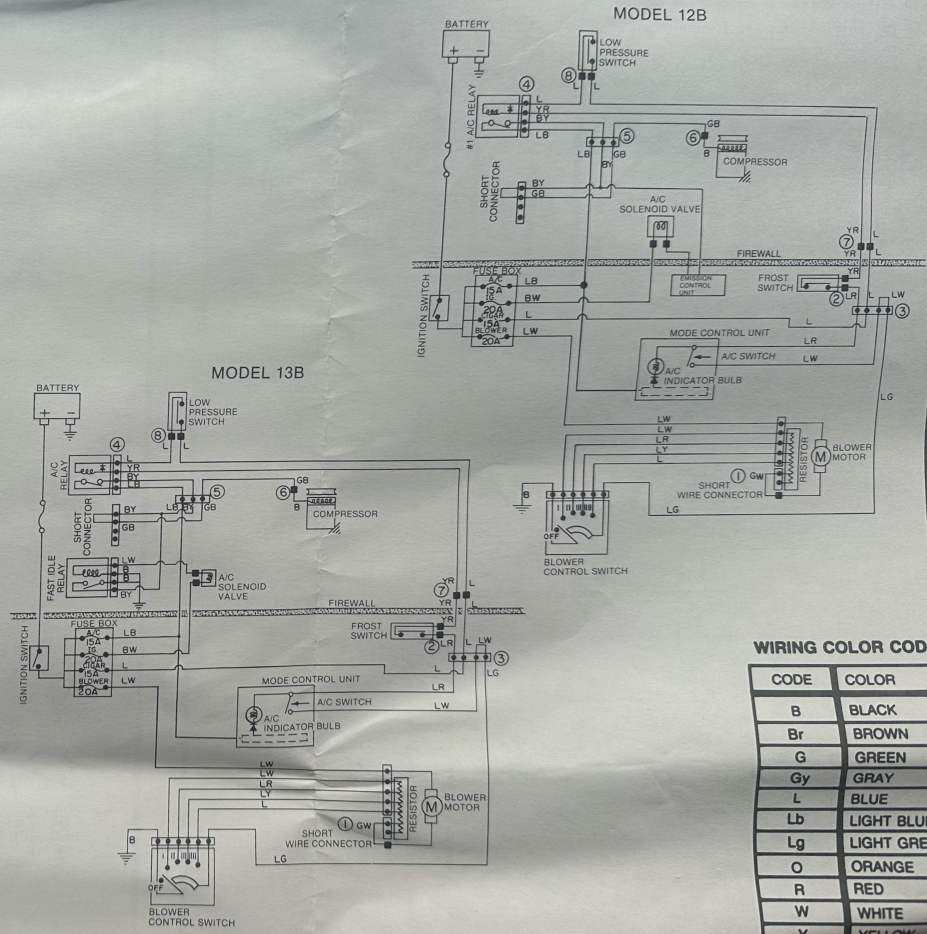
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Make sure there is no trash left inside vehicle. Wipe off any surface that might have been made dirty or oily. Remove and discard any plastic hose fitting protector cap that might have fallen in engine compartment or any foreign material that might hinder the quality or performance of the vehicle.

WIRING DIAGRAM



1984 RX7 AIR CONDITIONER CIRCUIT



WIRING COLOR CODE

CODE	COLOR
B	BLACK
Br	BROWN
G	GREEN
Gy	GRAY
L	BLUE
Lb	LIGHT BLUE
Lg	LIGHT GREEN
O	ORANGE
R	RED
W	WHITE
Y	YELLOW