

MCI 9, 96A & 102 RE-2 Auxiliary Installation

Look over all components in order to familiarize yourself with the complete system. The compressor mounts over the gear-box between radiators, driven by the pulley supplied which is bolted to the back of the gear-box pulley. The evaporator is located inside the rear cap installed from inside coach, with condenser mounted in the right-hand access door at right rear of coach. All hoses etc. are supplied made to fit.



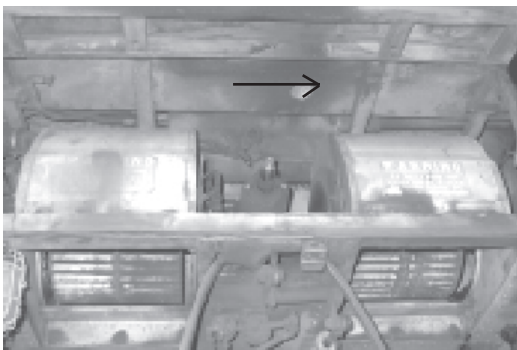
MOUNTING COMPRESSOR:

Remove upper cooling gear pulley, **clean threads and back side of pulley** and bolt on compressor drive pulley, using spacer as supplied. **Check carefully to see that it runs true**, sometimes moving 180 degrees will center it up. **Check gear box seal** while there, replace if necessary.



Next remove front 2 studs in top of gear box (Snap-on makes a great stud remover socket!), bolt compressor mount to top of gear box using only grade 8 bolts. Note: Grade 8 bolts have 5 marks on head, do not use grade 5 (grade 5=3marks) or below for this location. Locate mount and shim with washers to level mount on gearbox. Grind end of front studs to clear pulley, and check for interference before tightening pulley back on shaft. Spin and check pulley, gear box & belt assy. before reinstalling engine driven belt. **NOTE: Pressure to belt tensioner air cylinder for main belt is usually sufficient, but may have to raised slightly to maintain proper belt tension after installing auxiliary AC.**

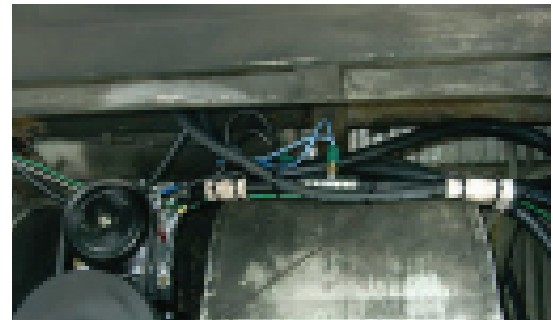
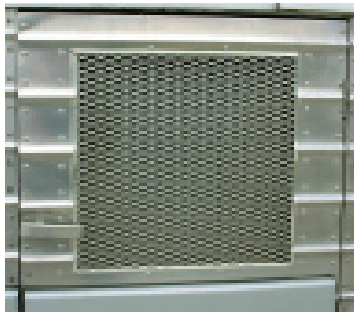
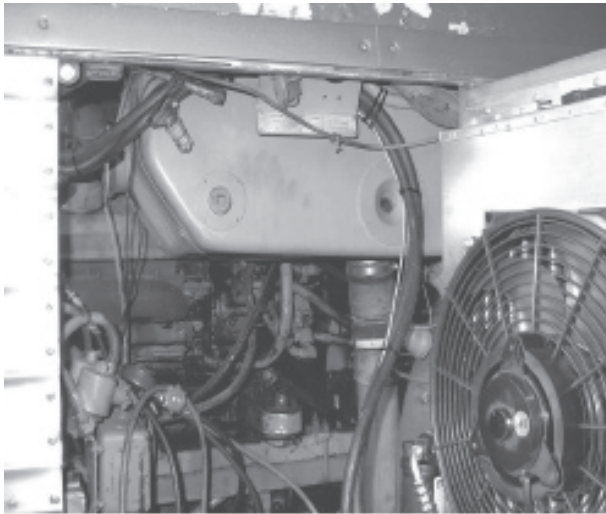
Drill 2 1/2" hole overhead, just right of center of gear-box into rear area of coach for hoses etc. A carbide-tipped hole-saw is necessary; a hard-ware store quality saw will not cut the stainless steel. You need a 2 1/2", plus a 1" for hoses, and electrical conduit access. Drill 2 1/2" hole between right blower housing and radiator for condenser, liquid hose and electrical line to condenser, a 1" holes left of left blower housing for hoses toward electrical "J" box.



MOUNTING CONDENSER: A plasma cutter makes a neat job of cutting the right-hand access door for the condenser coil, it might be worth it to drive to a sheet-metal shop if your shop doesn't have one, a "dziz" wheel works too, just make it neat, as large as practical, some models can be larger than others, file rough edges, put door-edge molding around edges, then pop-rivet screen in place using backing strips and reinforcements as necessary. Caution technicians and operators not to bump hoses, fittings etc. in their every-day access for dumping toilet etc. *Unit will not fit in coach with auxiliary toilet holding tank, please call for information on relocating condenser.

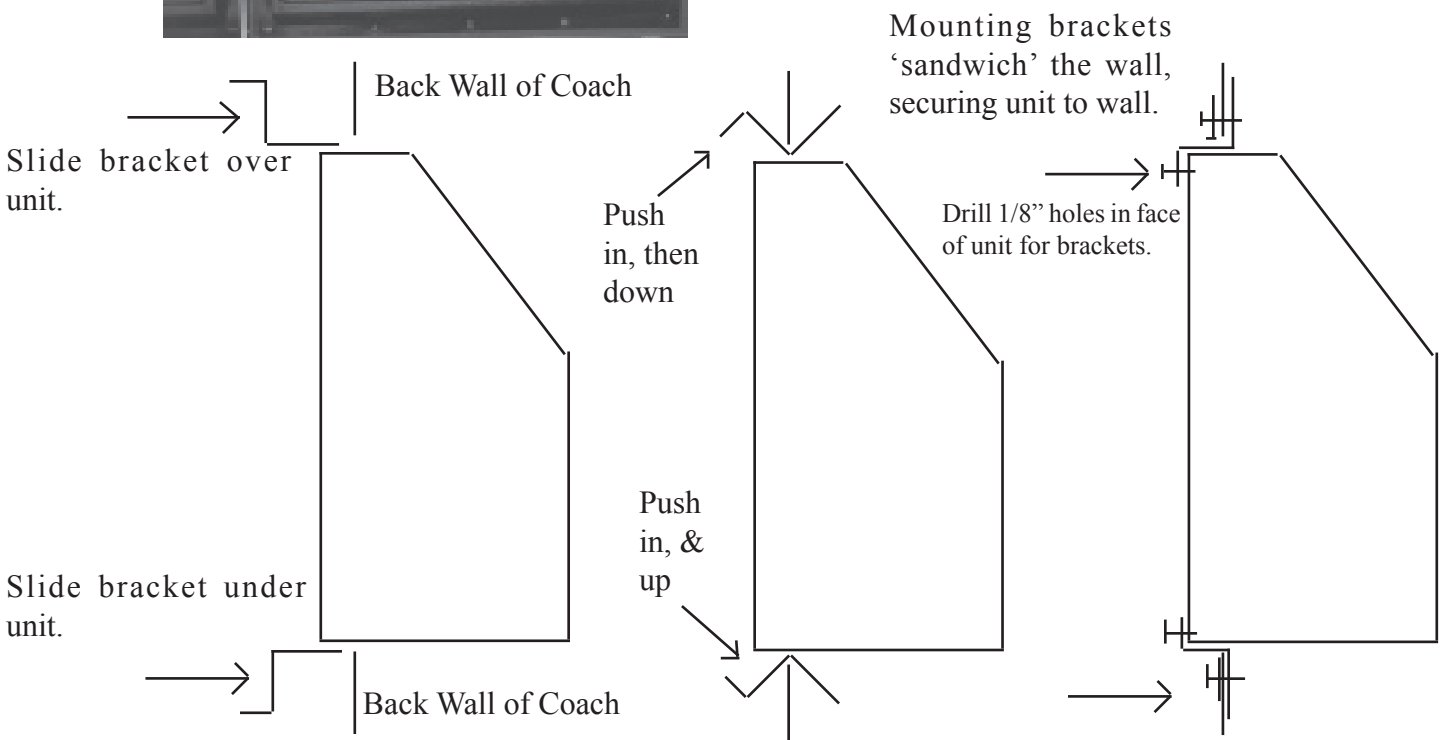
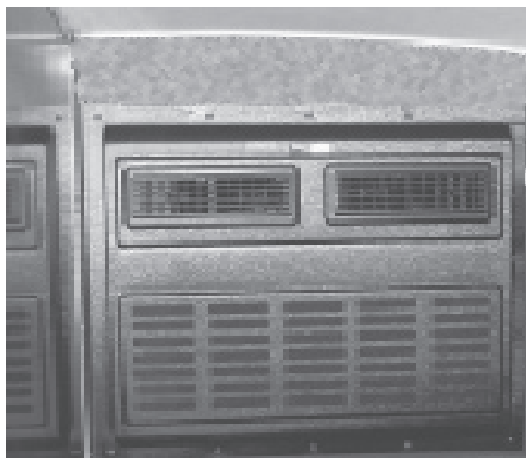
After hoses are installed, tie hoses up very carefully so that opening and closing door lets them swing in a natural manner so that they will not kink or pull on fittings. **THIS IS IMPORTANT!**

If condenser and hoses are not installed properly, over time the fittings will be broken, losing refrigerant and causing unit to stop cooling. Check and double-check before calling it done!



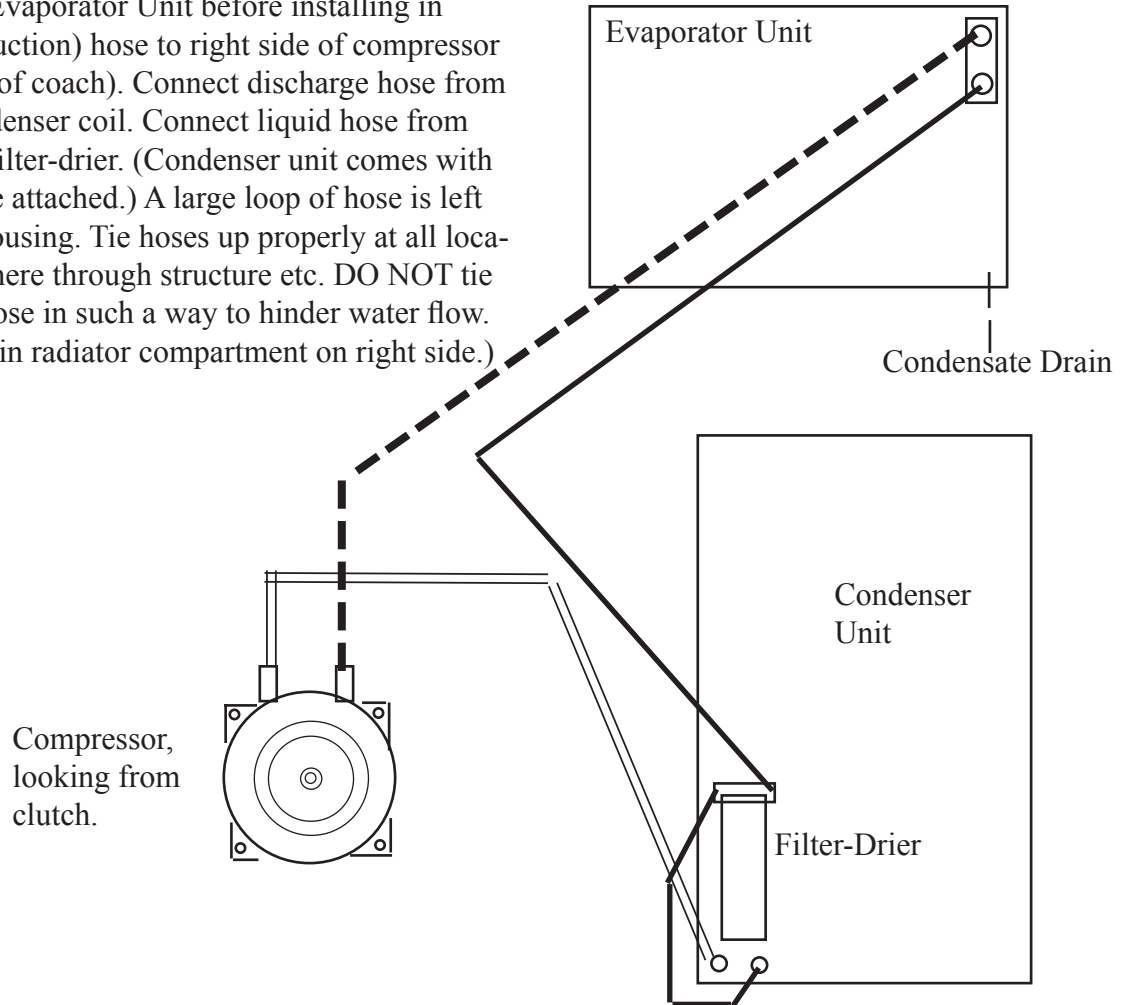
MOUNING EVAPORATOR UNIT:

Saw opening 24 1/4" wide by 18 1/4" tall, beginning 1 1/4" from restroom wall, 3 1/4" above crease in fiberglass panel just above top of rear seats. Location is important since unit is designed to fit the shape of the rear of the coach. On 96A models only, engine air intake chamber must be notched out approx. 1 1/2" x 3" tall for unit to clear. Be sure to seal up properly before continuing. A "ziz" wheel or jig saw can be used. Vacuum dust before continuing. Always wear proper mask, face and body protection for job. Connect hoses to unit with all hoses and conduits properly protected from chafing. Use extra care for condensate drain hose to prevent kinking or stopping water flow. Remove insulation from behind wall in the area where the mounting brackets fit. Place unit in wall, place "Z" mounting brackets under and over unit, pull 90 degrees so that lip is behind panel, then place mating bracket and drill 3/16" hole through fiberglass panel but NOT through metal bracket behind, then install screws. A third shorter bracket fits on ride side of unit also for stiffness. Carefully locate and drill holes for molded face plate.



HOSE CONNECTIONS:

Connect Hoses to Evaporator Unit before installing in wall, then larger (suction) hose to right side of compressor (looking from rear of coach). Connect discharge hose from compressor to condenser coil. Connect liquid hose from evaporator unit to filter-drier. (Condenser unit comes with filter-drier and hose attached.) A large loop of hose is left on top of blower housing. Tie hoses up properly at all locations, especially where through structure etc. **DO NOT** tie condensate drain hose in such a way to hinder water flow. (We allow to drain in radiator compartment on right side.)

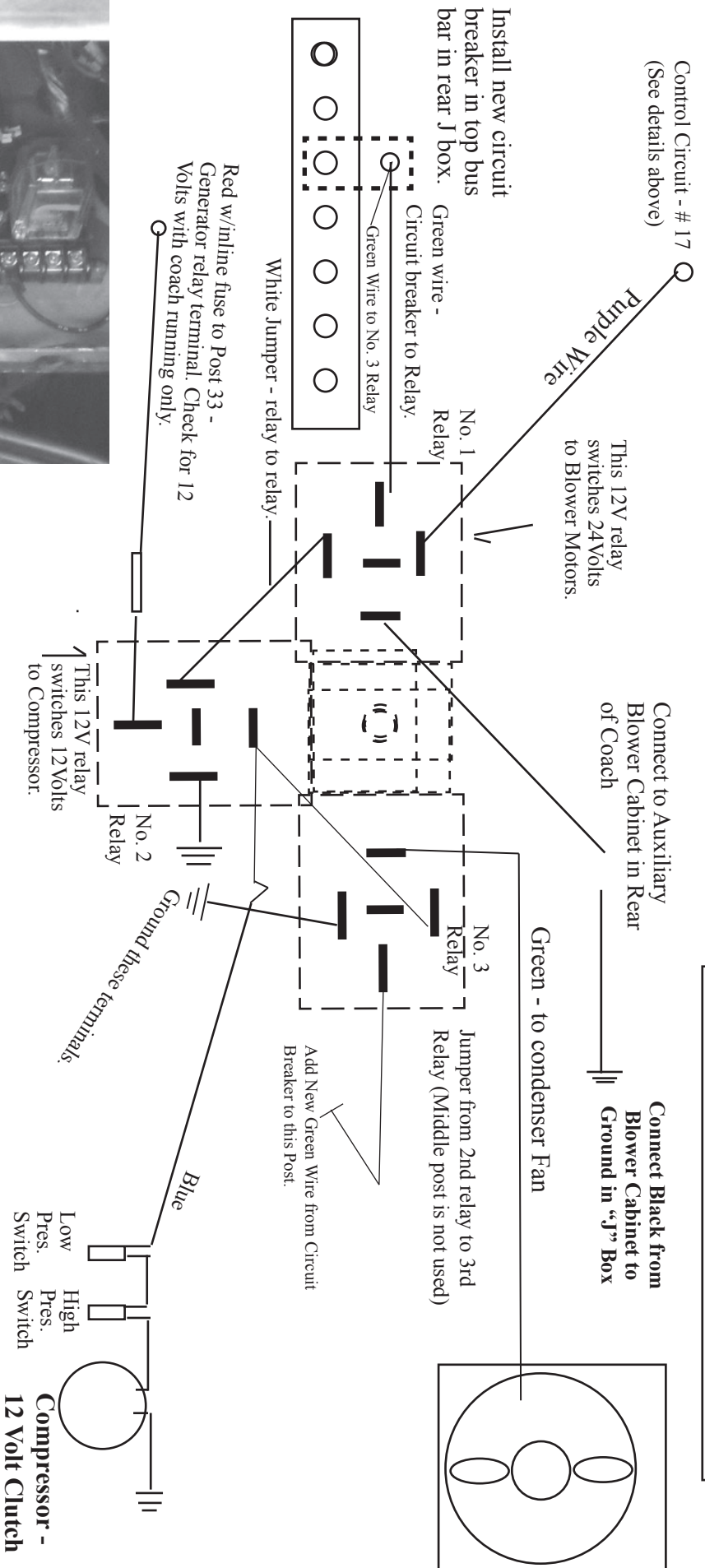
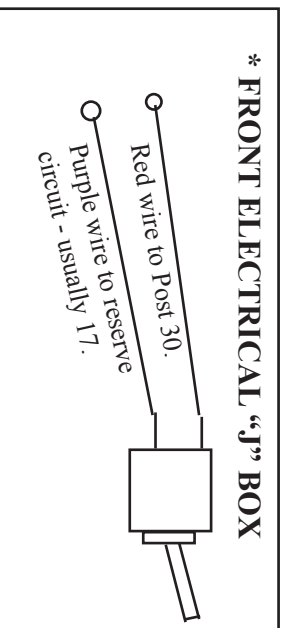


EVACUATION AND CHARGING:

After all connections are made, check for leaks carefully then vacuum unit completely with a good deep-vacuum pump. **Charge with 2 lbs., 2 oz. R134A Refrigerant.** At this point sight-glass on filter-drier may **NOT** be completely clear of bubbles. **DO NOT** add more refrigerant. R-134A will overcharge very easily if all bubbles are out of glass. Suction will drop rapidly as coach cools, sometimes running under 20 lbs. Head pressure will be as low as 140-150 on cool days, to as much as 200-210 on extra hot days. **DO NOT** attempt to charge unit by pressure; charge only by correct volume as stated, referring to sight glass for double-check. Unit is charged with correct amount of oil, do not add more to system unless oil is lost, if so replace with equal amount of PAG oil.

MCI AUXILIARY ELECTRICAL-RE-2

Locate an unused circuit in front and rear junction boxes. Usually 17 front to 17 rear. If only one wire is found on post, circuit is unused. Other choices are: 48 front to 11 rear, 29 front to 43 rear. Refer to coach manual for other choices or call Welch Industries. Mount switch in convenient location on front dash panel. Connect control switch as shown. **Note:** Condenser & Blower Motors are **24Volts**, Compressor & Relays (2-in series) shown below are **12Volt**.



Note: There is a BLUE wire and a GREEN wire in a plastic tube. Run it from the "J" box on left, with green wire to condenser, blue wire goes to compressor switches, blue wires are spliced IN the "J" box.

MCI AUXILIARY Electrical - Using 3-12 v relays. For older coaches with 2 relays, add 3rd relay, move condenser fan wire from No. 1 relay to No. 3 relay. Disconnect leads marked thermostat and wire direct to compressor circuit from No. 3 relay.

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