With the condenser and compressor installed, along with the blower-motor assembly, work can now begin on installing the receiver dryer and the a/c hoses.

Important: Included below are the steps in this automotive procedure as shown in the episode. These steps are general guidelines that are applicable to most vehicles. With any particular vehicle, there may be procedures, specifications, settings, tolerances, components, etc. that are specific to that vehicle. There are also variations according to the type and brand of a/c-kit you select. Always consult your vehicle's service manual when undertaking significant automotive repairs, and read and follow the manufacturer's directions and precautions that come with your kit or replacement parts.

Safety Alert: Always wear eye protection, and follow proper safety precautions, when working with power tools.

Safety Alert: As a standard safety precaution, always disconnect the vehicle's negative battery cable before you begin work on any electrical or mechanical components.

Receiver Dryer and Hoses

- Uncap the evaporator lines and install the expansion valve. This meters the amount of refrigerant that enters the evaporator core. For now, just test-fit the valve. It will need to be installed with O-rings later on.
- Test-fit the receiver-dryer.

Important: The receiver-dryer is a directional device -- with an intake and an outflow connection -- so make sure that you check your instructions and install it in the proper orientation. Also, don't open the receiver dryer until you are ready to connect the associated hoses to it.

- Next, uncap the compressor, and continue test-fitting by connecting the hoses according to the manufacturer's instructions.
- One of the hoses attaches to the suction-side of the compressor, and is routed (in our case) around the battery to the evaporator. A second hose attaches to the other port of the compressor and is routed down to the compressor. The compressor-end of the hose can be left unattached for now.

- Another line goes from the expansion valve to the receiver-dryer. This line is easy to identify since it is the shortest hose in the kit.
- The last hose connected leads from the receiver-dryer to the condenser.
- **Important**: The hoses are connected using O-rings. It's important that the O-rings you use are compatible with the type of refrigerant you will be using in your a/c-system. The same is true of the lubricant that is used in installing the O-rings. Check the manufacturer's instructions to ensure that you are using the proper parts to prevent refrigerant leaks.
- Before making the final two connections to the receiver dryer, the capillary tube of the expansion valve needs to be fastened properly. The coiled portion of this tube rests against the suction line and senses the temperature of the line. This, in turn, controls the opening and closing of the expansion valve.
- Clip the capillary tube into position, and cover it with insulation tape to protect it from the heat of the engine.
- Next, open the receiver-dryer and add some refrigerant-oil to it according to your manufacturer's instructions. For our installation, we added some leak-detection dye as well. Later, the dye will serve to identify and trace any leaks that might occur.
- Make the final two hose connections, securing the hoses onto the receiver dryer.
- With the hoses all connected, some of the parts removed earlier can be installed before adding refrigerant to the system. If you end up having to re-route any parts or wiring harnesses to accommodate the new a/c system, try to stay as close as possible to the original factor routing.
- Re-install the air-cleaner and solenoid.
- Install the compressor belt and tighten down the tensioner.
- Next, a stabilizing bracket is installed to the alternator bracket and the vehicle's engine. This bracket is designed to hold the components steady and prevent rattling.
- Reinstall the fan-blade and the new fan-shroud . These two parts need to be installed at the same time. If the fan wer installed before the shroud, the new shroud wouldn't fit -- and vice versa.

RESOURCES :

The Complete Idiot's Guide to Trouble-Free Car Care
Author: Dan Ramsey
ISBN: 0028635833
Alpha Books

Auto Repair for Dummies

Author: Deanna Sclar
ISBN: 0764550896