Here is a list of what you need:

1- 3/16” x 1/4" adapter fitting for the high side service port. Ebay or Ackits.com

1- Vacuum pump.

1- Side can tap tool, Ackits.com or ebay

1- Manifold gauge set. Mine has 134a connectors and it has 1/4" hose ends, so I can remove the 134a connectors and use the hoses directly on the 1/4" connectors on the FC

1-` Multi-pack of **R152a** Refrigerant. Did I mention it was cheap??? Need at least 2x 10oz cans.

If your A/C has never worked for you, replace the receiver/drier. You will hate life if you don't. Take your old part with you to the parts store and make sure it is right. If your bracket is welded on to the body of the drier, you must have a replacement that is welded if you have the clamp on type, it must be clamp on.

Also, the drier should come with two new o-rings. Use them.

http://www.autozone.com/autozone/cat...&parentId=63-0

http://www.autozone.com/autozone/par...ier&store=1516

The R12 OEM drier is not made to tolerate synthetic oils which you will need to use with **R152a**. LIFE WILL SUCK if you ignore this warning.

Add Ester Oil Only!

No PAG – None, never on any system that has had R12 & mineral oil in it.

http://www.oreillyauto.com/site/c/de...word=ester+oil

Add about 3 oz of oil to the drier before you put the drier on the car. Lube the o-rings with ester before you assemble.

IF you have removed the compressor, turn it upside down to dump all the mineral oil out. Rotate the shaft both directions to get every possible drop of mineral oil out of the compressor.

Add a couple of oz of ester oil to the compressor on the bench. Rotate the shaft 15-20 times, then dump the oil with the compressor upside down. This is to flush out as much mineral oil as possible. Now add 80cc of ester to the compressor and remount the compressor in engine bay. **(Note: FSM Spec = 60~100cc system oil capacity for ND compressor; I added 80cc to compressor, and the remaining 20cc to the new receiver/dryer,)** This step will assure the longest life of your system. I did this in 2005 on my vert. I have had ZERO trouble with my A/C since then.

Don't attempt to replace any orings unless you have the specific joint apart for another reason. The old orings will not leak if the joints haven't been taken apart! The hoses do not need replaced (unless they have leak). Dont make this process any more difficult than you must.

^I ignored the highlighted advice – if you're doing this because your old compressor failed, it is best practice to take the entire system apart and properly pressure flush ALL the reused components (Condenser, Evap. Core, hard lines & hoses) and use NEW O-rings on reassembly. You don't want to risk bits of old dead compressor killing your new AC system! Also, the old O-rings are not designed to be compatible with R134 or R152A; a new O-ring kit will use HBNR O-rings which ARE compatible. Don't forget to lube O-rings with Ester oil during assembly.

Pull a vacuum:

Since you have just replaced the drier we assume the system is empty.

Attach the high side adapter on the high side service port near the receiver/dryer.

Attach the red hose to the high side adapter.

Attach the blue hose to low side service fitting on the evaporator pipe near the firewall.

Attach the yellow hose to the Vacuum pump.

Check that both needles on the manifold gauge point to exactly -0- psi with the valves open and the hoses open also. If they do not, unscrew the clear covers and use a small screwdriver to zero both gauges.

Turn on the pump and open BOTH valves on the manifold gauge.

Let the vacuum develop. It must reach 30" on the gauge.

When the vacuum reaches 30", let the pump run for another 10 min, then close both gauge handles, shut off the pump and wait. The vacuum should hold at the exact level for 15-30 min without moving. If it doesn't run again for another 20 minutes & Try again. If it holds, move on.

If it doesn't hold vacuum – you have a leak. Find leak, fix it and repeat!

Since your Vacuum held...

With both valves still shut, turn off the vacuum pump and remove the yellow hose.

Attach the side tap to the hose and puncture the can. Aim this away from your eyes, wear eye protection, etc.

BLEED THE YELLOW HOSE!

At this point, the yellow hose is half filled with air and half with R152a. We cannot have that air in the system. It is non-condensable and will cause all kinds of problems. Air is the system from sloppy or ignorant charging is probably the #1 problem with DIY A/C work.

Very slightly unscrew the manifold end of the yellow hose. Some gas will start to bleed out. You WILL be able to tell when the R152a gets there-it will be cold. Tighten the hose.

You are now ready to charge!

Open the Blue Low Side valve.

Keep the red high side valve CLOSED after you vacuum. *When you are charging you are never going to open the valve on the RED-High side!*

With the can tap on the bottom of the can you will get liquid into the system. This is what we want initially. The combination of the vacuum and the liquid will allow most of the first can to enter the system.

Start the car, turn on the air conditioning system. We want re-circulation button on. We want low fan. We want the temperature all the way down.

Put a thermometer into the center vent. Temperatures should begin to drop.

The rest of the first can will be drawn into the system. High pressures will be in the 150 range, low pressures will likely be in the 20-30 range. The compressor may cycle on and off periodically.

This is a good sign.

Full Charge

When the first can is completely sucked into the car, you will be able to tell. The can will have attained ambient temperature and will have no cold spots.

The compressor should be cycling. Off at about 22 psi and back on at about 40-45psi. ***Try to catch the pressure at that low pressure, then close the blue Low Side valve.***

Remove the first can from the side-tap. Tap another can. If you do this with no delay, there is no need to re-bleed the hose.

Open the valve and allow the entire second can to enter the system. You may have to have a helper hold the engine speed in the 2000-2500 rpm range.

You should only add gas, not liquid with the second can. As you do this, the can will get very cold and the gas flow will slow. Use a pitcher of hot water to add heat and keep the refrigerant flowing.

When the second can is in the system, you will be fully charged with R152a. A full charge is around 20-22 oz. This is because of molecular weights being different.

You should be able to get 40* air at the center vent at low fan speeds at idle. At 2500 rpm, you should be able to get 40-45*air at the center vent. All temps measure with air on recirculate.

Unhook carefully.

Wait until the pressure is at its lowest, then remove the low side hose. I use two hands. One hand keeps the hose pressed and sealed against the fitting while the other hand unscrews the threads. When it is completely unscrewed, remove the hose. Put on a service cap! This is very important. Most of these old valves leak a bit. You can fight it and try to find a new valve, or you can put on a cap and seal it up.

Turn off the car, let it cool down before you remove the high-side hose. Spray some cool water on the condenser. Your pressure should be down in the 75psi range before you attempt to remove the high side hose.

Keep the pressure with one hand, unscrew with the other. You are going to get some liquid refrigerant spray out. You can get localized frostbite if you are not careful...

Goggles, eye protection etc!

Put a cap on the high pressure adapter. If you only have one car, leave the adapter on the connector and put a 1/4 cap on the adapter. They are easy to find. 3/16 caps are hard to find in a store, but are easy to find in the salvage yard. Most 84-93 cars in the salvage yard had a 3/16" adapter. Half of those will still be in place.

Check for leaks

Check for leaks with a spray bottle of soapy water. 3 ~ 4 oz. of Dawn dish soap in 16 oz. sprayer filled with water will give you an easy way. Spray all the connections that you had apart. If you have leaks, there will be voluminous bubble production. If you used the correct new o-rings on the drier, and anywhere else you opened up a connection, you should be in fine shape.