



R-12 and R134a A/C Servicing Tips

It's that time of year again. Time for warmer weather and increased A/C service. Here are some A/C servicing tips to use along with the info in S/Ms and S/Bs.

- When you replace components, cap the A/C lines and fittings to prevent moisture and contamination from entering the system; *leaving lines open is a major cause of compressor failure*. If you come across a vehicle that's had its A/C lines open for an extended time, evacuate the system, replace the receiver-dryer, then evacuate the system for 30 minutes.
- Don't use the sight glass as an indication of low charge; use the info in S/B 96-004, *Air Conditioning System Performance Test*.
- Always use an approved charging station to ensure the correct amount of refrigerant. Don't just add extra refrigerant to "top-off" the system.
- Don't charge the system with liquid refrigerant while the compressor is running; this can damage the reed valves inside the compressor.
- Don't run the A/C if the system is low on refrigerant; this will affect the distribution of refrigerant oil and may cause compressor failure.
- New compressors contain enough refrigerant oil for the entire A/C system; so when you replace a compressor, you'll have to remove some oil because there's already oil in the system. Refer to *A/C Service Tips and Precautions* in Section 22 of the appropriate S/M for the amount of oil to remove.
- If you replace any A/C components other than the compressor, you'll need to add extra amounts of refrigerant oil. Refer to *A/C Service Tips and Precautions* in section 22 of the appropriate S/M for the oil amounts.
- Insufficient refrigerant oil in the A/C system can cause compressor failure. And too much oil can degrade the system's cooling ability.
- Inspect the O-rings while the line fittings are disconnected, and replace any that are damaged.
- Before you reconnect fittings, place a drop of refrigerant oil on the O-rings. Any type of refrigerant oil is OK to use, as long as it's clean.



Checking for an Evaporator Leak

There's good news and bad news on evaporator leaks. The good news is that they're not very common, since most refrigerant leaks originate from the condenser or other A/C components. (In fact, the majority of evaporators returned under warranty are actually OK.) The bad news is that it's easy to think the evaporator is leaking because moisture and other contaminants circulating in the evaporator case and the air vents cause *most* A/C leak detectors to give you a false signal when you stick them in an air vent.

If you think you have an evaporator leak, your best bet is to use a heated-diode leak detector such as the Yokogawa #H10N or the Kent Moore #J39400. These units are expensive, but they're more accurate than most other leak detectors on the market.

To find an evaporator leak with a heated-diode leak detector, attach an extension to the probe (an optional part for the two detectors mentioned above) and insert the extension into the center air vent. Then turn on the ignition, and quickly cycle the fan motor switch on and off several times. If you detect a refrigerant leak while performing this test, it's safe to assume you have an evaporator leak.

An evaporator shouldn't be replaced unless a leak is indicated by a heated-diode tester or the leak is visually identified. *Remember, eliminate all other leak possibilities before you suspect the evaporator.*

NOTE: There's a good article on A/C leak detection tips in the September '95 issue of S/N.



SLX Shift-On-The-Fly Know-How

- Do you know how "shift on the fly" works?
- At what speed can you shift from 2WD to 4WD?
- What's a triple-cone synchro?

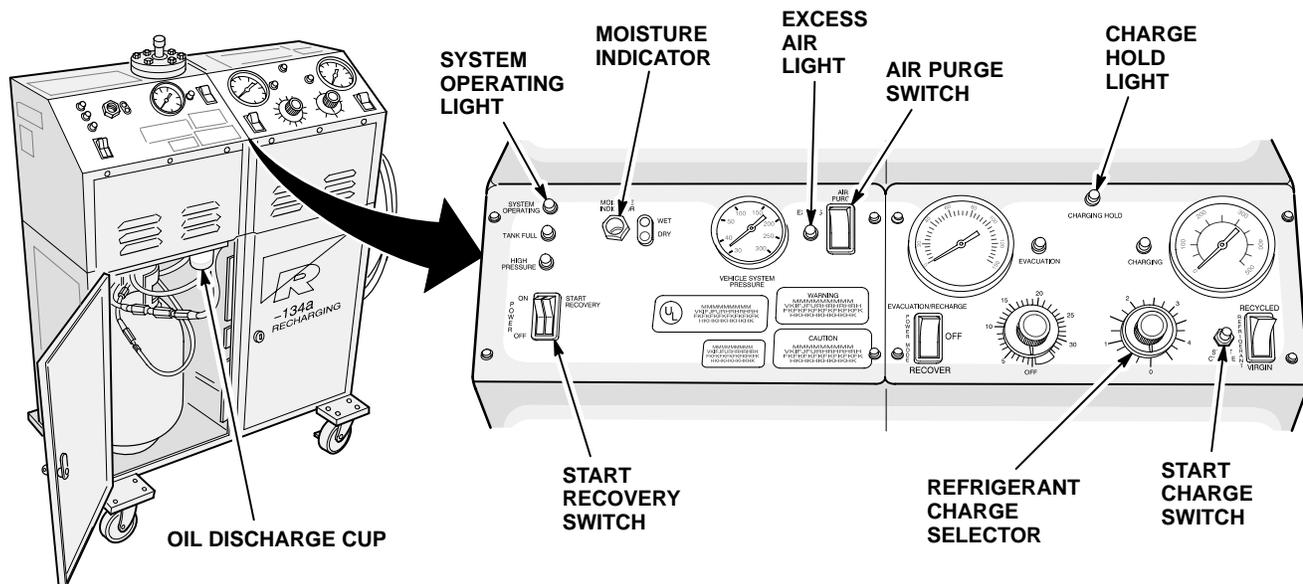
All of these questions, plus some interesting A/T facts, are answered in part two of the three part '96 SLX New Model Introduction Video.

By the way, shifting an SLX from 2WD to 4WD should be done at speeds below 60 mph. For answers to the other questions, watch the video. It's time well-spent.



Know Your “White Industries” A/C Unit

To help you get the best performance from your White Industries R-134a Refrigerant Recovery-Recycling-Charging unit (model #01090, gray cabinet), read the information in the White Operator’s Manual, and follow these important recovery, evacuation, and charging tips:



NOTE: Keep high-side and low-side hoses connected during recovery, evacuation, and charging procedures.

Refrigerant Recovery

- Before you begin, drain the recovery-recycling oil discharge cup on the unit. (The cup is inside the left cabinet, on the top right side.) This allows you to get an accurate measurement of the oil needed after the unit has finished recovering the refrigerant.
- After you recover the refrigerant but *before* you evacuate the system, wait at least 2-1/2 minutes after the SYSTEM OPERATING light goes off. This allows all the oil to purge, looks at any vehicle residual pressure, and prevents pressure buildup in the unit, which could lead to premature filter contamination and compressor failure.
- During refrigerant recovery, if the unit stops working and the EXCESS AIR light comes on, push the AIR PURGE switch to relieve pressure in the recycle tank. After the light goes off, push the START RECOVERY switch to continue the recovery process.
- Replace the filter core after 20 hours of recovery time or when the MOISTURE INDICATOR stays yellow. For filter core replacement, refer to the Operator’s Manual. If you need additional filter cores, order them from White Industries at (800) 633-2827.

System Evacuation

- Evacuate the A/C system for at least 30 minutes. To help determine moisture levels in the system, you may also want to use an electronic thermistor vacuum gauge; they’re commercially available.
- Change the vacuum pump oil in the unit after 25 evacuations, or after you’ve evacuated a system that was exposed to air for more than 24 hours. Refer to the Operator’s Manual for vacuum pump oil changing instructions.

System Charging

If the CHARGE HOLD light comes on while charging, or if the REFRIGERANT CHARGE selector stops moving, you need to switch or replace the refrigerant tank; it’s probably empty. *Don’t hold down the START CHARGE switch.* Holding it down moves the REFRIGERANT CHARGE selector, but it doesn’t put refrigerant into the system.

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