REFRIGERANT (From August, 2004)

551JA–01

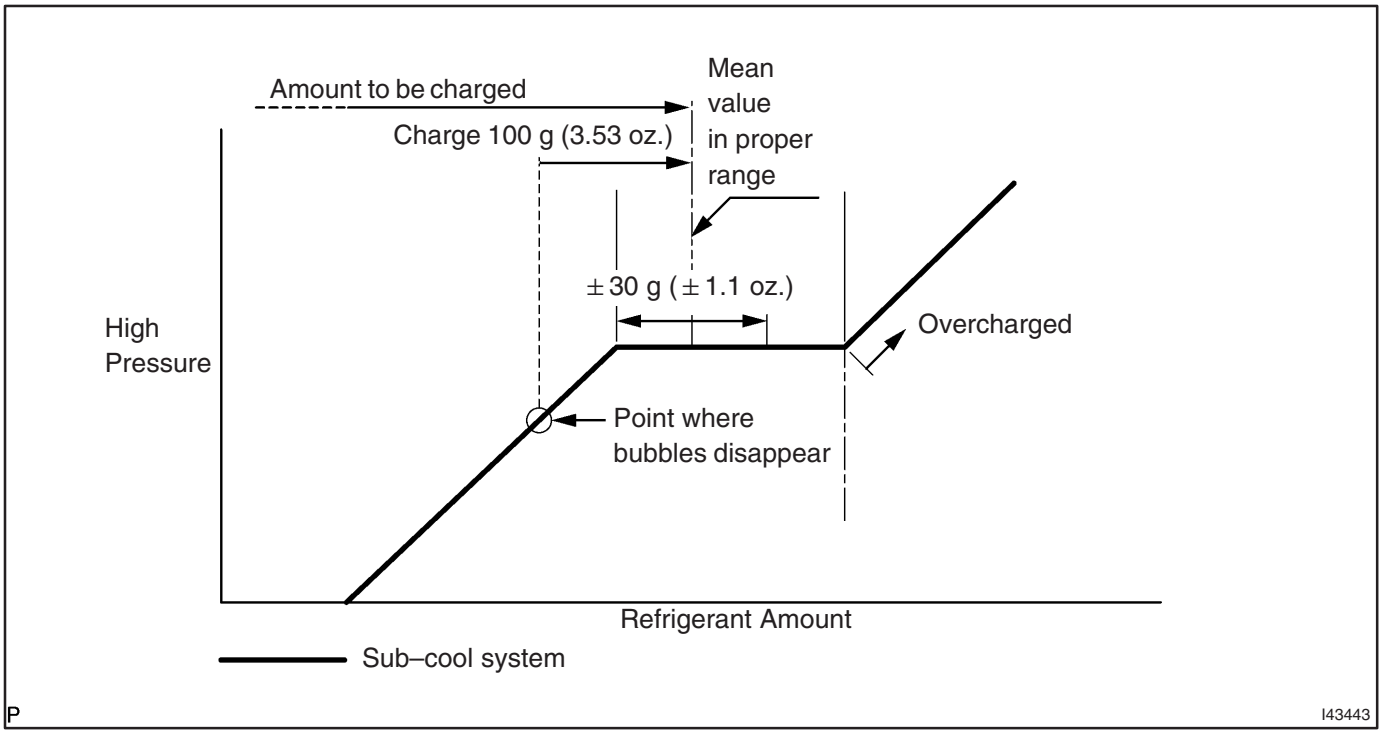
REPLACEMENT

1. DISCHARGE REFRIGERANT FROM REFRIGERATION SYSTEM

(a) Start up the engine.
(b) Turn the A/C switch and blower speed control switch on.
(c) Operate the cooler compressor at an engine rpm of approximately 1,000 for 5 to 6 minutes to circulate the refrigerant and collect compressor oil remaining in each component into the cooler compressor as much as possible.
(d) Stop the engine.
(e) Using SST, let the refrigerant gas out.
SST 07110–58060 (07117–58080, 07117–58090, 07117–78050, 07117–88060, 07117–88070, 07117–88080)

2. CHARGE REFRIGERANT

(a) Perform vacuum purging using a vacuum pump.
(b) Charge refrigerant HFC–134a (R134a).
Standard:
Single A/C: 600 ± 30 g (21.16 ± 1.06 oz.)
Single A/C With Cool box: 700 ± 30 g (24.69 ± 1.06 oz.)
Dual A/C: 750 ± 30 g (26.5 ± 1.06 oz.)
Dual A/C With Cool box: 850 ± 30 g (30.0 ± 1.06 oz.)
SST 07110–58060 (07117–58060, 07117–58070, 07117–58080, 07117–58090, 07117–78050, 07117–88060, 07117–88070, 07117–88080)



NOTICE:

- **Do not operate the cooler compressor before charging refrigerant as the cooler compressor doesn't work properly without any refrigerant, which causes the compressor to overheat.**
- **Approximately 100 g (3.53 oz.) of refrigerant may need to be charged after bubbles disappear. The refrigerant amount should be checked by quantity, and not with the sight glass.**

HINT:

Prepare a service can to recharge the refrigerant if using the refrigerant gas collected with the freon collection/recycling device because the collective rate of the device is approximately 90%.

3. WARM UP ENGINE

(a) Warm up the engine at less than 2,000 rpm for 2 minutes or more after charging refrigerant.

NOTICE:

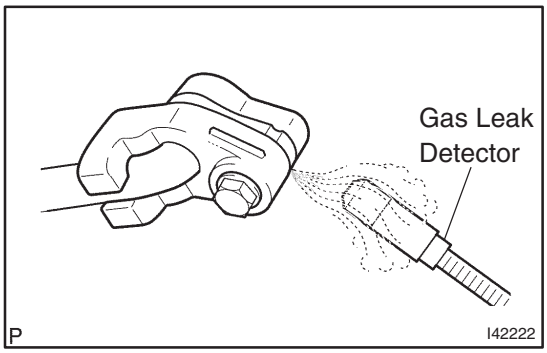
Be sure to warm up the compressor when turning the A/C switch on after removing and installing the cooler refrigerant lines (including the compressor), to prevent damage to the compressor.

4. CHECK FOR LEAKAGE OF REFRIGERANT

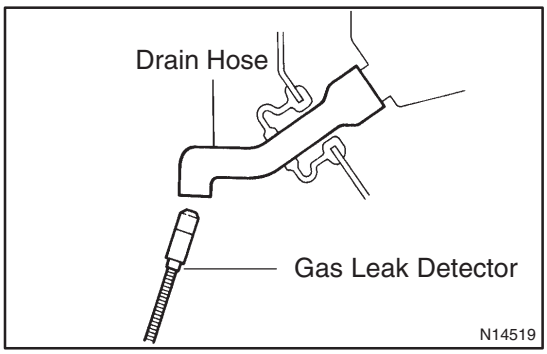
(a) After recharging the refrigerant gas, inspect leakage of refrigerant gas using a halogen leak detector.

(b) Perform in these conditions:

- Stop the engine.
- Secure good ventilation (if the gas leak detector may react to volatile gases which are not refrigerant, such as evaporated gasoline and exhaust gas).
- Repeat the test 2 or 3 times.
- Make sure that there is some refrigerant remaining in the refrigeration system.
  When compressor is off: approx. 392 to 588 kPa (4 to 6 kgf/cm^2, 57 to 85 psi)



(c) Using a gas leak detector, check for leakage of the refrigerant line.



(d) Bring the gas leak detector close to the drain hose with the detector's power off.

HINT:

- After the blower motor has stopped, leave the cooling unit for more than 15 minutes.
- Bring the gas leak detector sensor under the drain hose.
- When bringing the gas leak detector close to the drain hose, make sure that the gas leak detector does not react to the volatile gases.

If such reaction is unavoidable, the vehicle must be lifted up.

(e) If a gas leak is not detected on the drain hose, remove the blower motor control from the cooling unit. Insert the gas leak detector sensor into the unit and perform the test.

(f) Disconnect the pressure switch connector and leave it for approximately 20 minutes. Bring the gas leak detector close to the pressure switch and perform the test.