

## Vacuumize and Coolant refill instruction for electric A/C

Application range: For R134a, R410a, R407c.

Process:

1, prepare necessary tools, make sure all materials and tools are prepared.

Material: coolant.

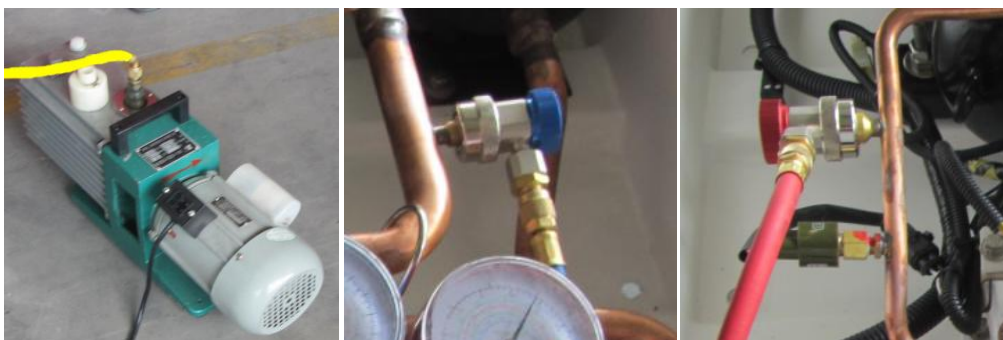
Tools: Platform scale 1 set

Manifold pressure meter 1 group

Vacuum pump 1 set

2, Vacuumize the whole system.

2.1 Connect the yellow soft hose of manifold to the vacuum pump, and connect the blue (low pressure) soft hose to Low pressure hose repairing valve or Low pressure repair valve on the compressor (Mark: S or SUC), then connect the red (high pressure) soft hose to high pressure hose repairing valve or High pressure repair valve on the compressor (Mark: D or DIS).

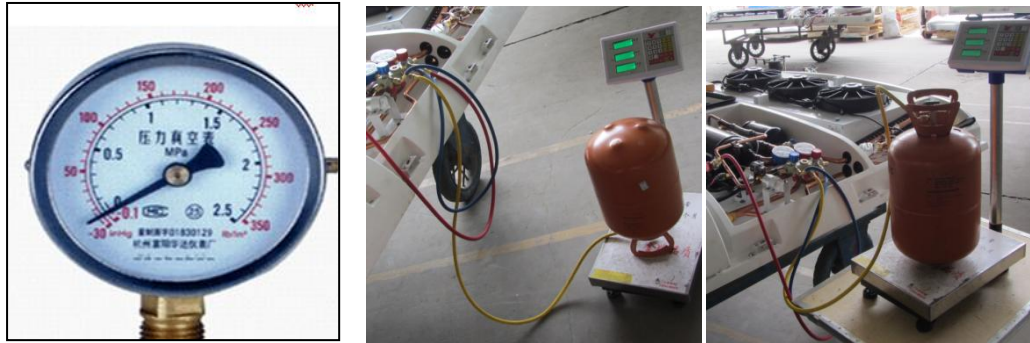


(Yellow hose to vacuum pump) (LP blue to LP valve) (HP red to HP valve)

2.2 Make sure all parts are well connected, turn on the manifold manual

valve (both high and low pressure), and activate the vacuum pump.

2.3 Vacuum till negative pressure value on the low pressure meter reaches 99.8Kpa, and keep at least 30 minutes.



(To fill liquid coolant to system) (To fill air coolant to system)

- 1, Make sure connection is tight, no leakage.
- 2, evacuate air before filling.
- 3, When filling, can't unfasten LP hand valve, can't turn on A/C

- 1, Make sure connection is tight, no leakage.
- 2, evacuate air of the hose before refilling

2.4 Close the high pressure hand valve, low pressure side needle rises not exceeding 3.4KPa in 5-8 minutes.

2.4.1 If needle rise meets the requirement, then first turn off high/low pressure valve, close vacuum pump, now you can inject coolant to system, please follow step 3.

2.4.2 If needle rise does not meet requirement, you can inject a little coolant at the low pressure end, when pressure goes to 49KPa, use soap water and electric leak detector to find the leakage and fix it.

2.4.3 Make evacuation (vacuum) again, and time more than 60 min,

because water flow and evaporation takes time. When evacuation is done, turn off H/L pressure manual valve, then turn off vacuum pump, follow step 3 to refill coolant.

3. Coolant refill: (Make sure the coolant type according to A/C name plate or compressor nameplate)

3.1 Fill coolant into system

3.1.1 Remove the yellow hose of the pressure meter from vacuum pump, connect to the nozzle of the coolant tank which is placed on the platform scale (the tank must be up-side-down!!). Make sure connection is tight.

3.1.2 Loose tank valve, unfasten the yellow soft hose nut on the pressure meter till coolant leaks about 5 seconds then fasten the nut.

3.1.3 Loose high pressure hand valve of the pressure meter, inject coolant into system. Turn off high pressure hand valve when reaching set amount, turn off coolant tank valve. For R134A, R410A, R404A, if failed to inject till set amount, (note the difference value) and follow step 3.2. For R407C, please follow step 3.3.

**Warning:** Don't unfasten the low pressure hand valve when filling coolant (To prevent liquid shock) .

**Warning:** Don't turn on the A/C, to prevent coolant flow back to tank, very dangerous!

**Warning:** To protect compressor, can't start up compressor more than 10 times per hour, and wait at least 2 minutes between every start up.

Safety:

- 1, Put on protection gloves for hands safety.
- 2, Before open/close nozzles or valve, secure the connection is tight.
- 3, Keep floor clean.

### 3.2, R134A, R410A, R404A air status coolant refilling.



(air status coolant refilling)

3.2.1 Lay the coolant tank upright on the platform scale, notice the nozzle connection is tight.

3.2.2 Activate A/C system to Max cooling level.

3.2.3 Open the LP manual valve, coolant is sucked into system till set amount, then shut the LP manual valve, look from the sight glass, make sure no bubble in system, if bubble exists, go on injecting coolant till it stabilizes and no more bubble is there.

### 3.3 Supplement of R407C liquid coolant. (coolant tank up side down)



3.3.1 Lay the coolant tank **up side down** on the platform scale, notice the nozzle connection is tight.

3.3.2 Activate A/C system to Max cooling level.

3.3.3 Open LP hand valve a little bit, make coolant sucked in to system slowly, liquid flow less than 50g/min till set amount, then turn off LP valve, the coolant supplement is done.

**Notice:** R407C supplement can be done in strict conformity with set amount, and in liquid condition, can't use sight glass to judge inject amount.

**Warning:** Don't unfasten the low pressure hand valve when filling coolant (To prevent liquid shock) .

**Warning:** Don't turn on the A/C, to prevent coolant flow back to tank, very dangerous!

**Warning:** To protect compressor, can't start up compressor more than 10 times per hour, and wait at least 2 minutes between every start up.

Safety:

- 1, Put on protection gloves for hands safety.
- 2, Before open/close nozzles or valve, secure the connection is tight.
- 3, Keep floor clean.