A5400HP

AUTOMOTIVE AIR CONDITIONER

REFRIGERANT HANDLING SYSTEM

OPERATION MANUAL

1. Cautions：

Wear the glove and eye protection glass to protect the skin and eyes from refrigerant. Operating near the fire and spark is prohibited. Don't expose this device into sunshine or rain. Avoid to contact with corrosive liquid and gas. Keep good ventilation of workshop.

2. Notation：

△ Read the manual carefully before using this device.

△ Only for R134a. Check the refrigerant type before operation.

△ The real working capacity of refrigerant cylinder should be 80% of its efficient capacity, to avoid the serious accident result from high pressure.

△ Don't put the hose near rotation and heating automobile parts such as electronic fan and radiator.

△ Check the vacuum pump oil level in fixed period.

△ The start times of recovering process should be less than 10 in one hour otherwise the compressor will be damaged.

△ Don't let the child and people of insufficient mental development close with this device when it is running.

△ Only for expert professional.

△ Don't disassemble device without permission of manufacture.

△ Don't put this device upside down.

△ The refilling process would not work if the refrigerant in cylinder less than 1Kg.

△ The working voltage is 220V, NEVER USE 380V voltage

3. Technical parameter：

Refrigerant type： R134a

Work temperature: -10—50℃

Power supply： AC 220V/50Hz

Digital weight scale precision： 1 gram

Speed of vacuumizing： 10.8M3/Hour

Refrigerant cylinder capacity： 15Kgs

Speed of recovering： 400g/min

Speed of refilling： 800g/min

Net weight： 100Kg

Size (mm)： 800*600*1380mm

Packing size (mm): 850*700*1500mm

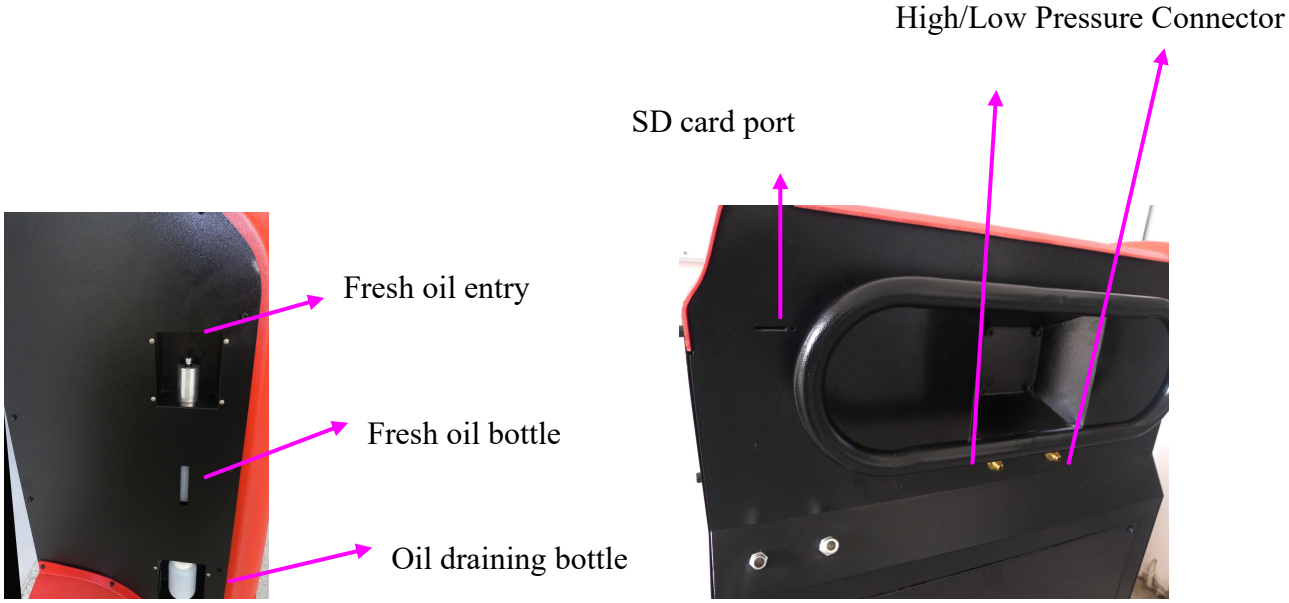
4. Device description：

JLM540 is applied to R134a refrigerant handling. It can do the job of recovery, Vacuum, Leakage hunting, refilling and oil draining. Database for popular automobiles are available from this system. And also the operation result can be printed by the built-in printer.

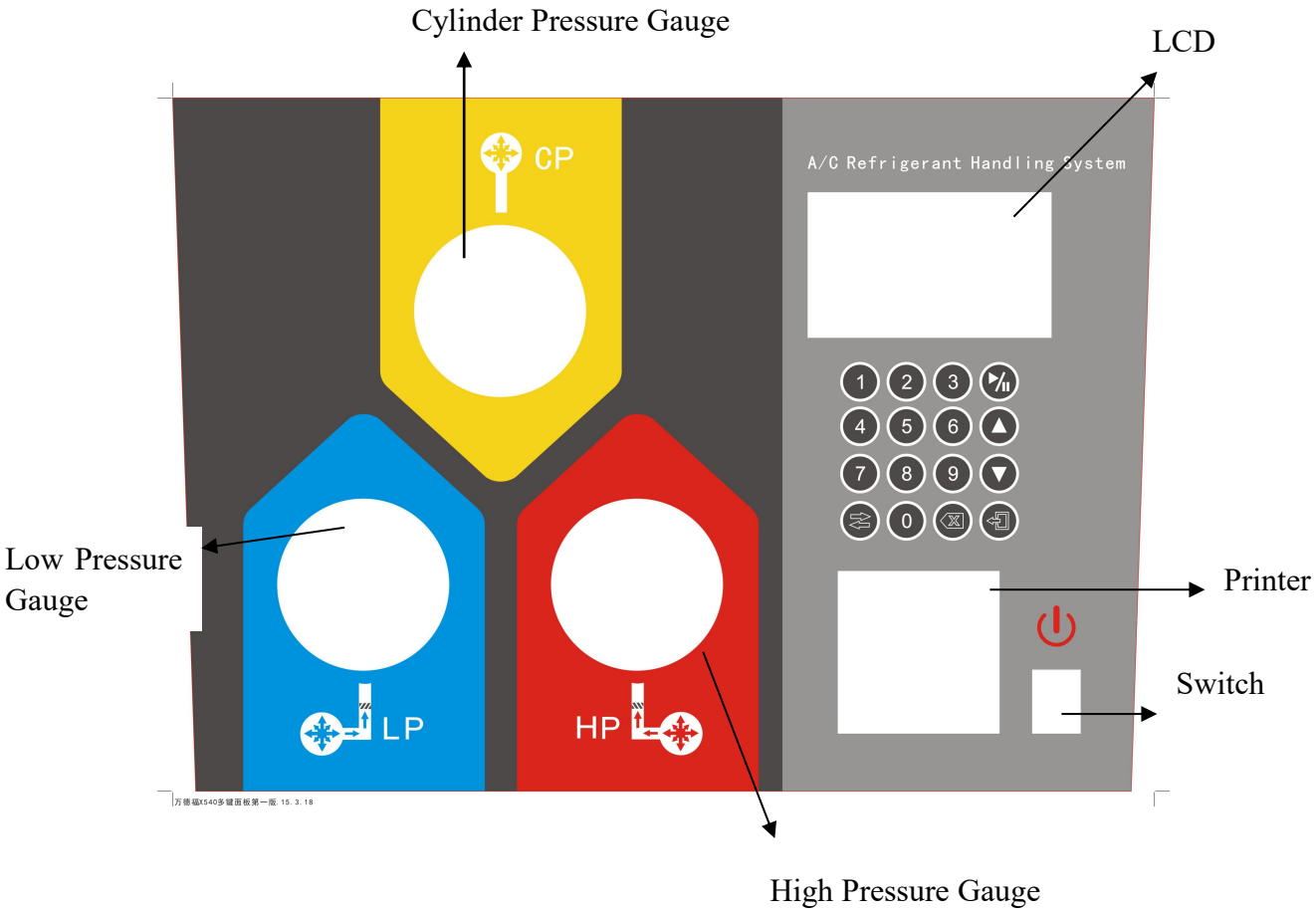
4.1 Functions

1) **Recovery:** Recover the refrigerant from the A/C system and do refreshing before restore it into the cylinder, so it will avoid refrigerant contamination.
2) **Vacuumizing:** Vacuumize the A/C system, exhaust the moisture and air inside.
3) **Refilling:** Refill the refrigerant from the cylinder into the A/C system accurately.
4) **Oil refilling:** Renew the lubricant in the A/C system
5) **Oil draining:** automatically drain all the residual oil and purify that separated from the refrigerant during recovery.

4.2 Appearance



4.3 Control Panel

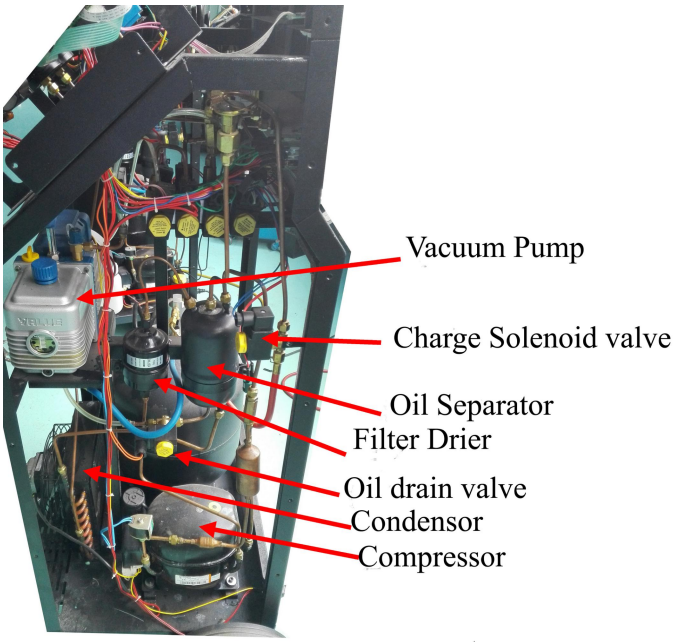


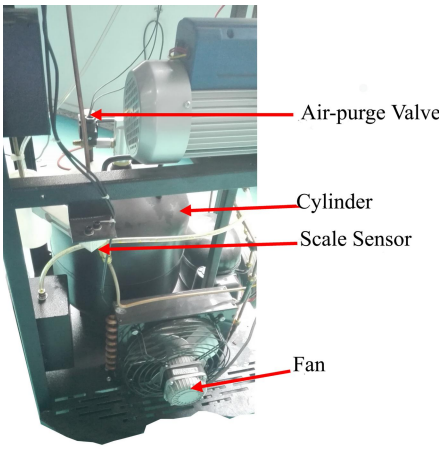
4.4 Map of the key pad

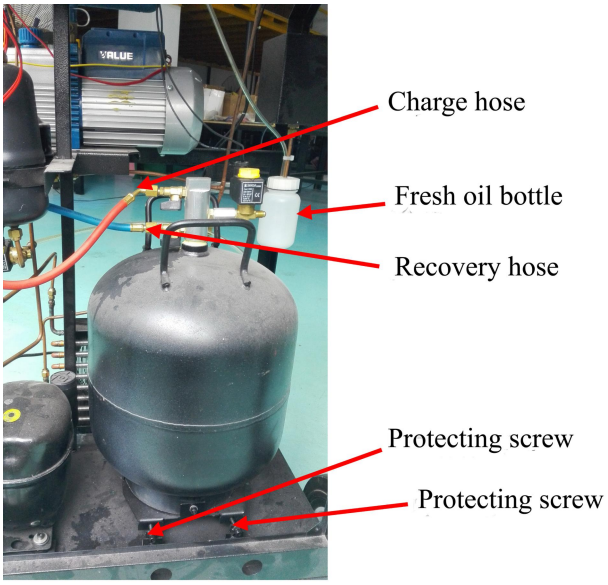
1		**Exit**
2		**Increase**
3		**Decrease**
4		**Enter**
5		**Start on**
6		**Left or right**
7		**Delete**
8	 ……	**Value keys**

4.5 Interior Structure and preparation before use.

4.5.1 Interior Structure





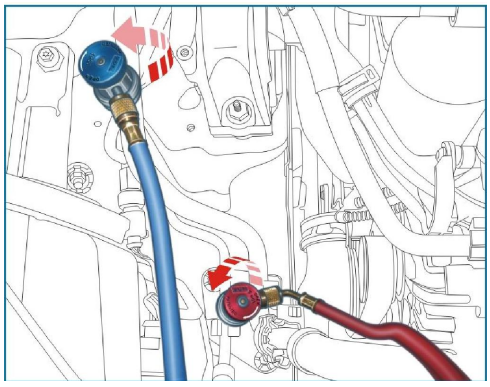


4.5.2 Preparation before use

There are two holes at the back of the machine. And we need to use a tool to loose the **hex(agonal) screw. Please see the picture in the right.**

4.5.3 Refill (please refer to 5.1 on how to operate).

4.5.4 Connect the machine to the car A/C system (Red hose to HP sides, blue hose to LP sides.

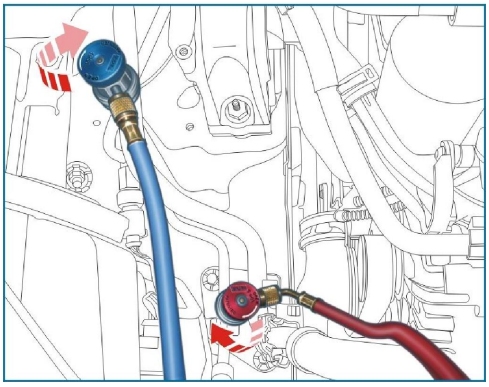


5. Manual Operation

5.1 Refill : to recover gas (R134a refrigerant) into the machine

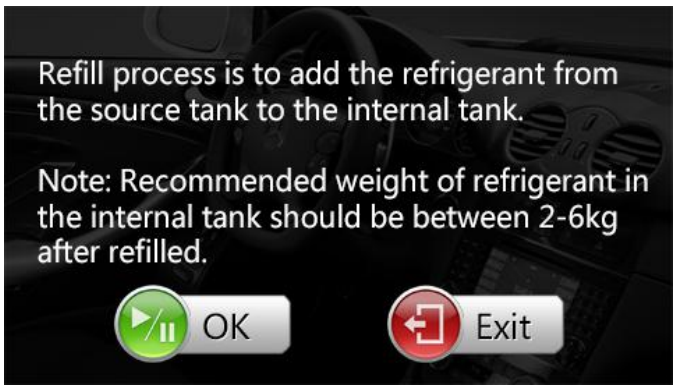
There is no gas inside a new machine. And **before we run the machine, we need to refill 2~6KG gas into the machine**. If you will recover a lot of gas from the car, you can refill less. Here is the picture shows how to refill the gas from an outside tank.

1) Connect red hose to the HP terminal and blue hose to LP terminal of JLM540, connect up another side with red and blue quick adaptors and close off these two adaptors at the same time. Then connect these adaptors to the A/C system, LP and HP side separately. Turn on the adaptors.

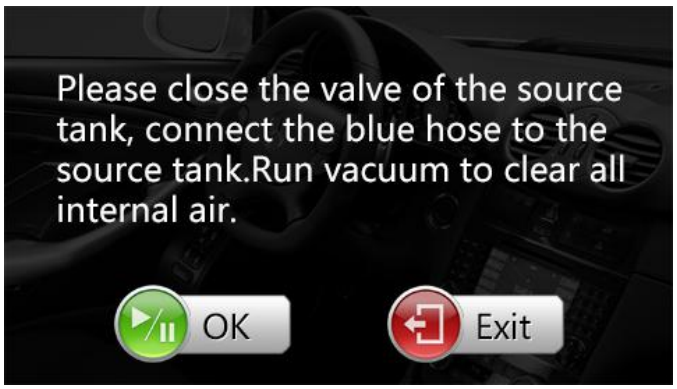


2) Up-plug to 220V/50HZ power and switch on. Message reads:

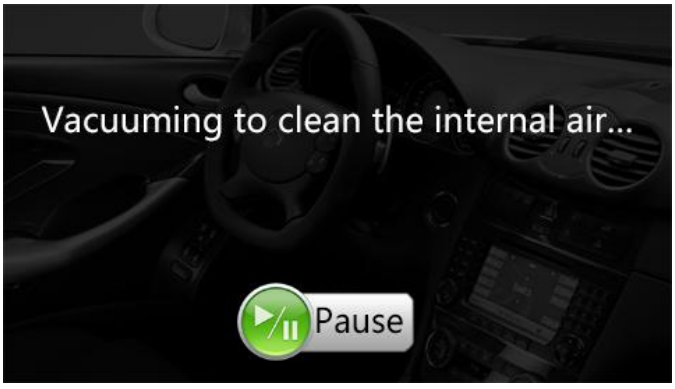
3) Press  to next step, LCD reads as below. Follow the instructions on LCD.



4) Press  enter to next step

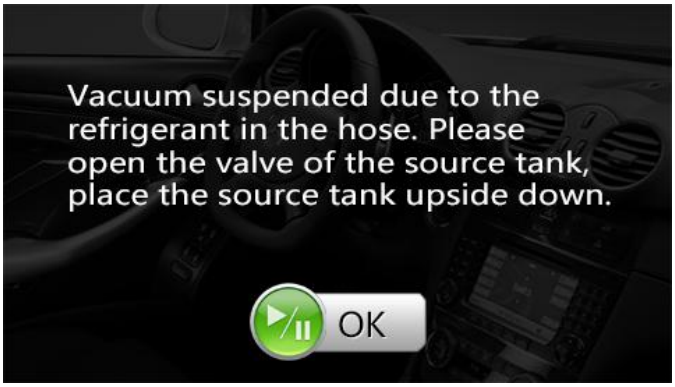


5) Press  enter to next step. If you don’t pause, it will go ahead

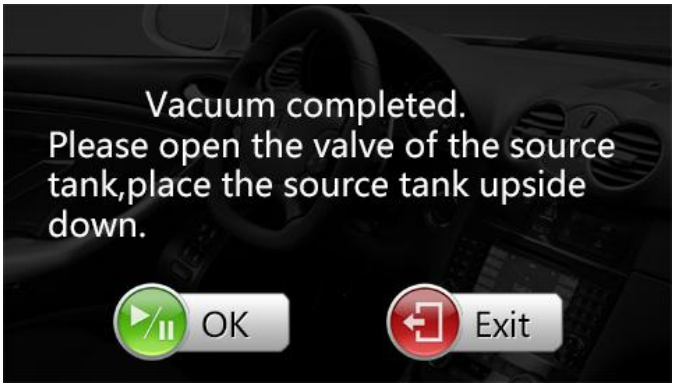


If there is refrigerant inside the hose, vacuum process will be stopped automatically.

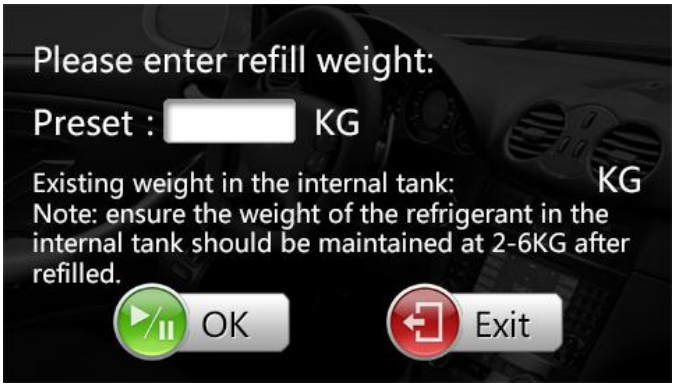
Please follow the instructions on LCD



6) When vacuum being completed. LCD reads as below. Please follow the instruction, and press  to go ahead.

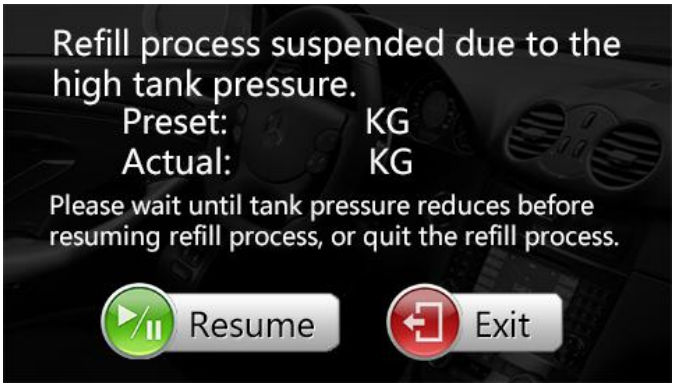


7) Set the value below, and press  to go ahead.



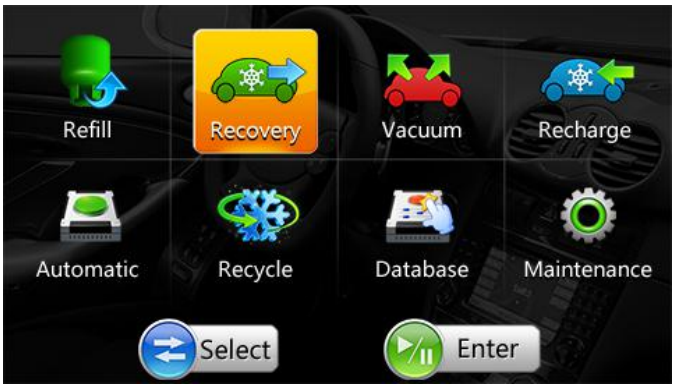
8) When refill running, LCD displays:

If the machine cylinder at high pressure, or no gas pressure at outside tank, it warns. Please follow instructions:

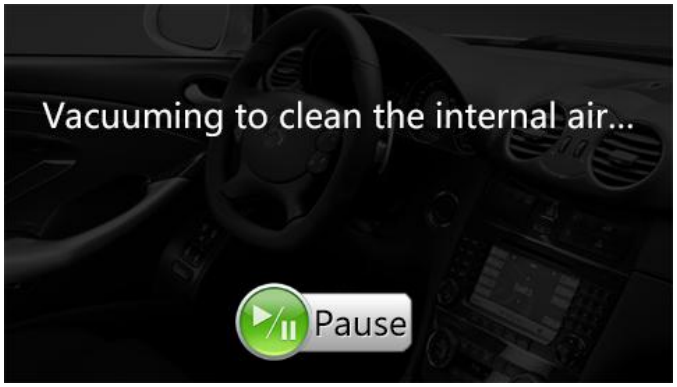


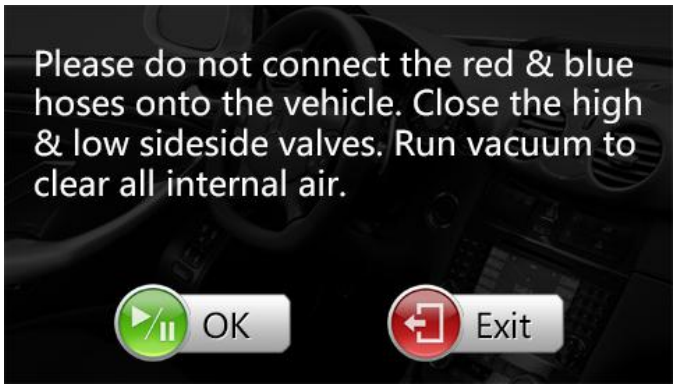
9) When refill process being completed. LCD reads:

5.2 **Recovery :** Means to recover the gas from the car, follow instruction on LCD. Before recovery, you will be asked to do vacuum first. LCD will display in turn:




Recovery process is to collect the vehicle' s refrigerant to internal tank after being purified
OK
Exit


Vacuuming to clean the internal air...
Pause

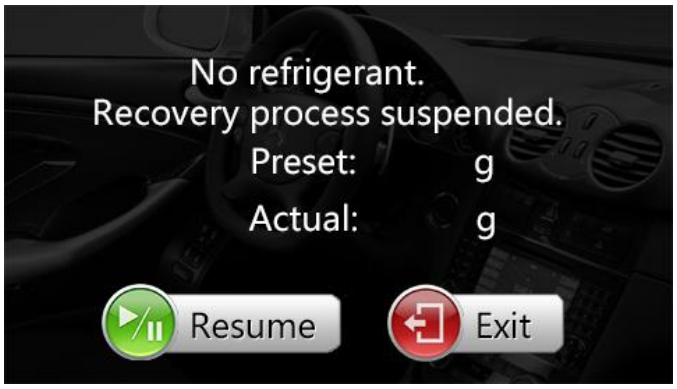

Please do not connect the red & blue hoses onto the vehicle. Close the high & low sideside valves. Run vacuum to clear all internal air.
OK
Exit


Vacuum completed.
Please connect the red & blue hoses onto the vehicle, open the high & low side valves.
OK
Exit

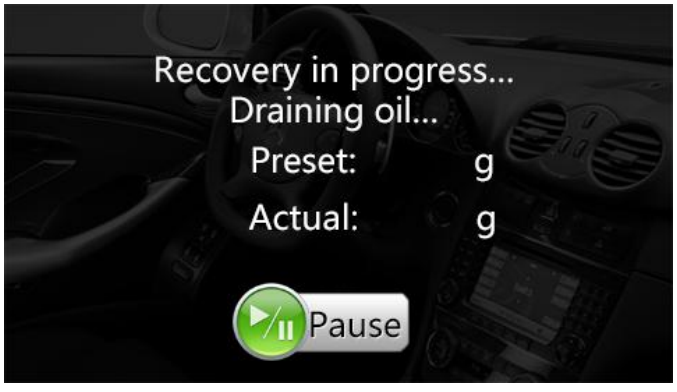
When LCD display following message, please set the recovery amount:

If the inside tank is full or in high pressure, recovery process will be stopped.

If there is little refrigerant inside the car A/C system, recovery process will be stopped.



And here is the surface of draining oil after recovery:



Remark:

1) When the HP hose and LP hose pressure is below 0.15MPA, the system will refuse to execute the command of recovery. And it will indicate that “NO REFRIGERANT IN HOSE”.

2) When the total recovery amount comes to 200KG, system will suggest replacing the filter drier. Users should re-set the recovery amount to be “zero” when they have changed a new one.

3) During the recovery, the system can stop automatically when cylinder pressure (CP pressure) is high to 1.75MPA. We need to wait until pressure coming down.

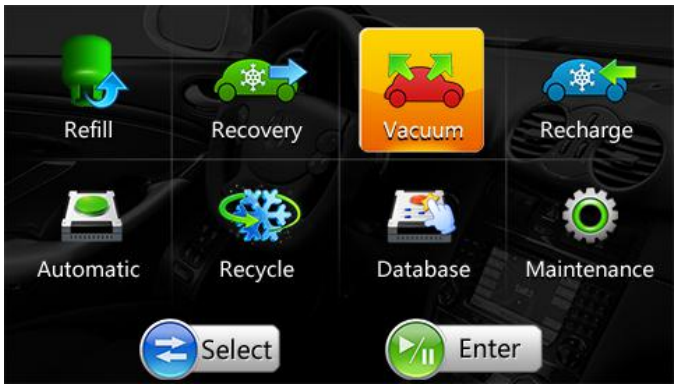
4) The capacity of the cylinder is 15KGS. When there is no space any more, the system will refuse to recover.

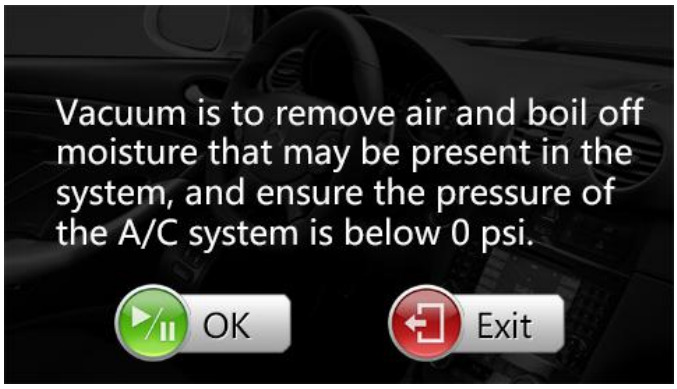
5) Long time working can cause high temperature inside the equipment, and may cause the problem of failing to restore the refrigerant in the cylinder. In this case, please wait 15 minutes before you re-start recovery program.

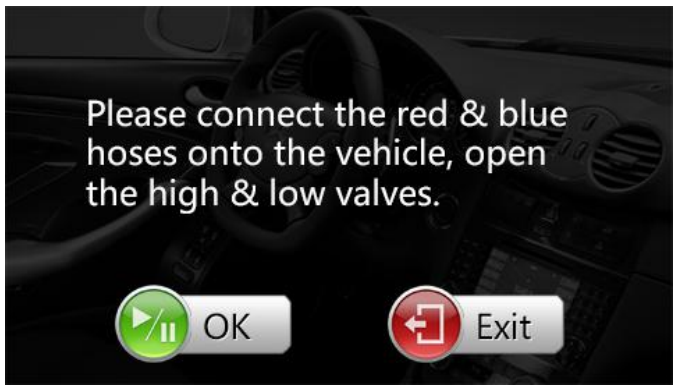
5.3 Vaccum

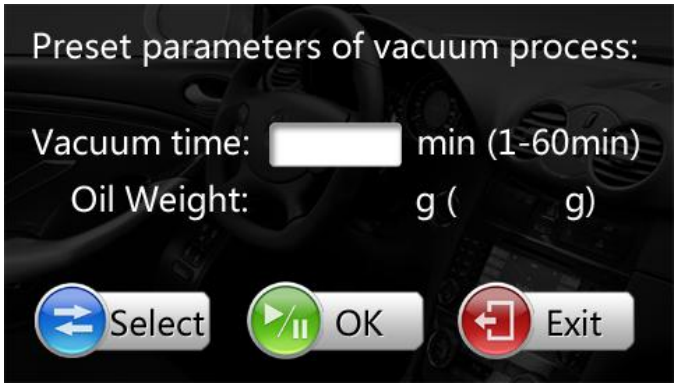
Normally, vacuum needs to be executed before refilling or recharging.

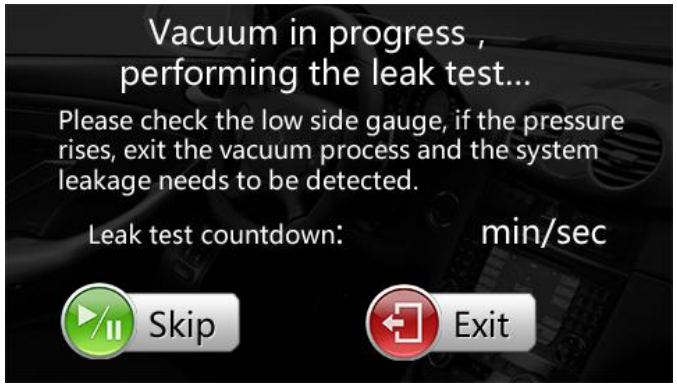
After choosing this function, just follow in information on LCD.



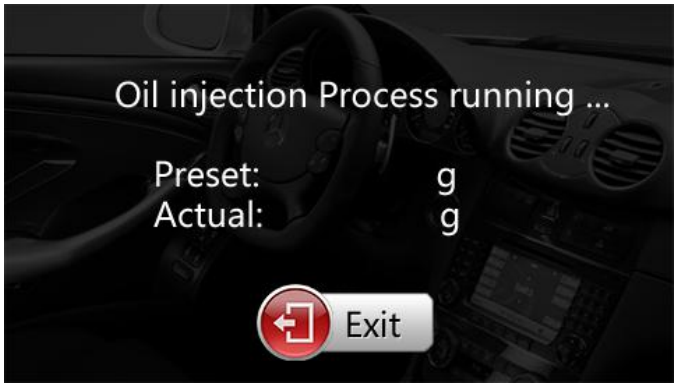




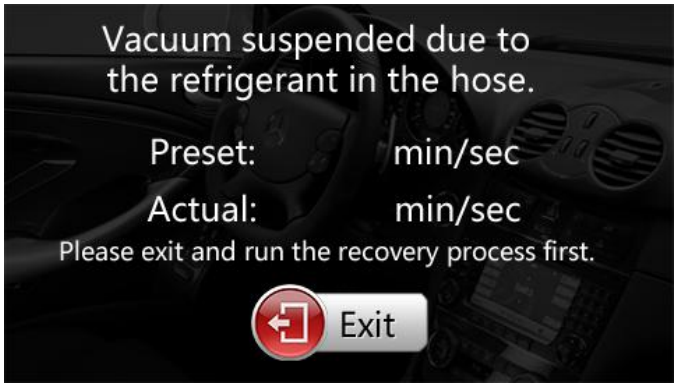




When we are sure there is no leak, choose “SKIP”. And then go to next step for oil injection:



If the vacuum process failed, it will display below message. Please follow instruction to exit.

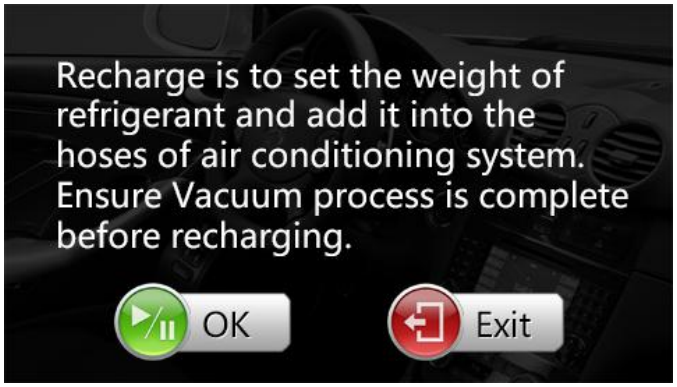


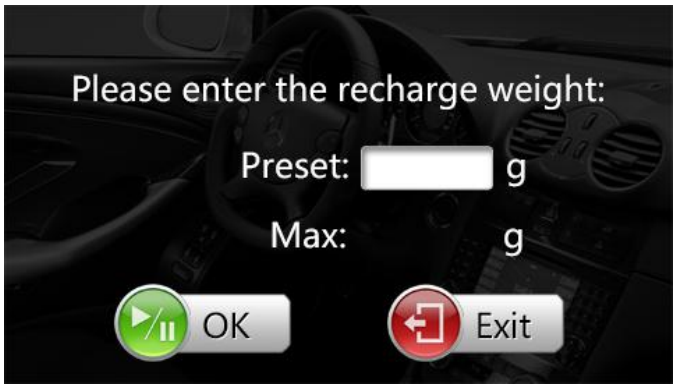
If vacuum is completed successfully, it will display:

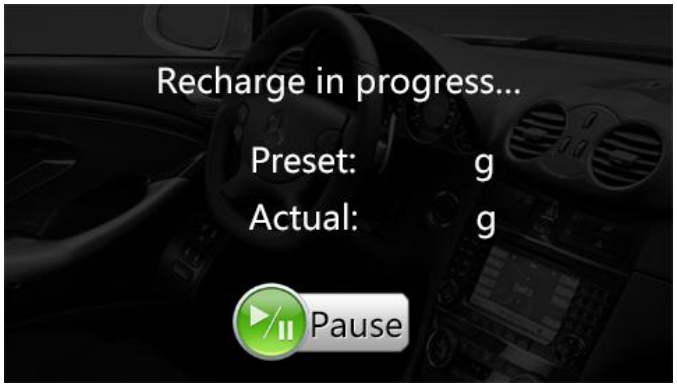
5.4 Recharge

Remark: Refrigerant must be more than 1KG for starting the recharge program. Otherwise, it cannot work. When the charging speed is too slow, the system will suggest to "Switch on A/C".

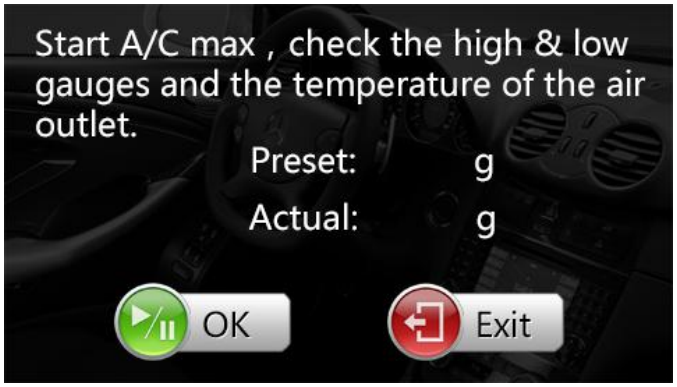
1) Connect the HP hose (red) and LP hose (blue) to the corresponding side in the A/C system



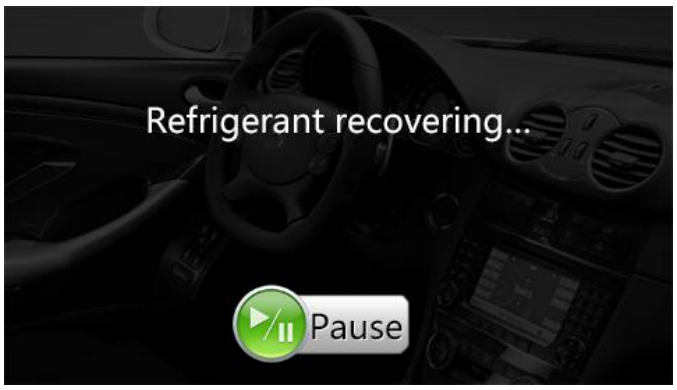


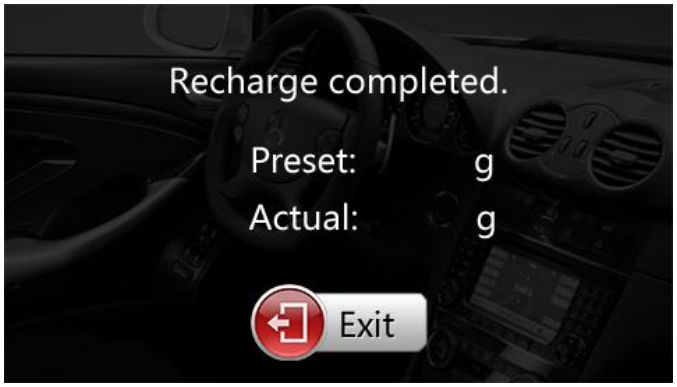


When recharge process completed, it reads as following, and please follow the message.

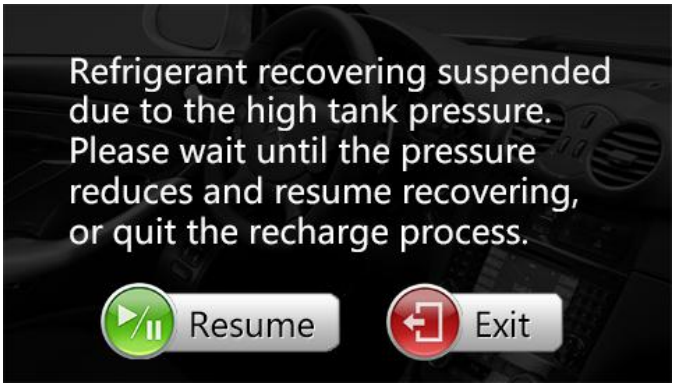


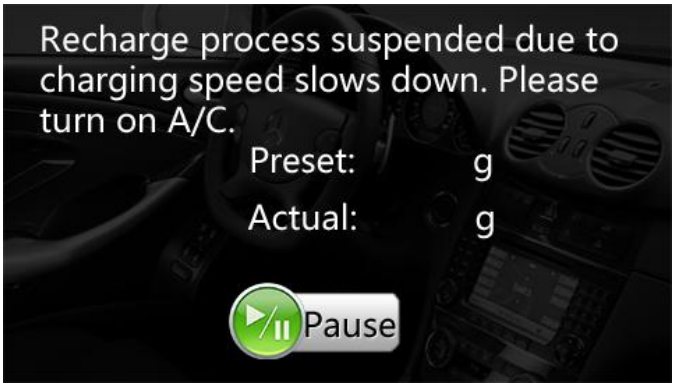
And below message means it is recovering gas residue from hoses.



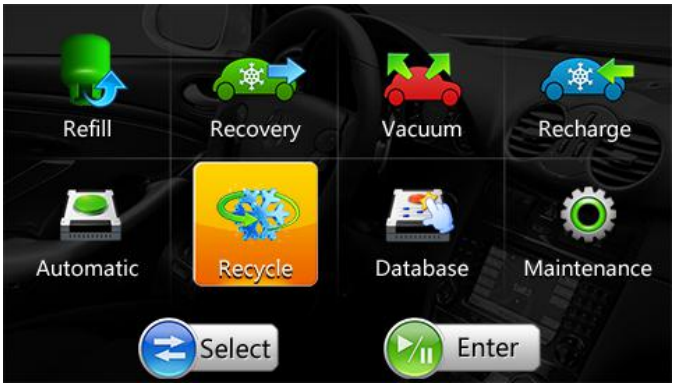


If the LCD prompts out below warnings, please follow the instruction to operate:


Refrigerant recovering suspended due to the high tank pressure. Please wait until the pressure reduces and resume recovering, or quit the recharge process.
Resume
Exit

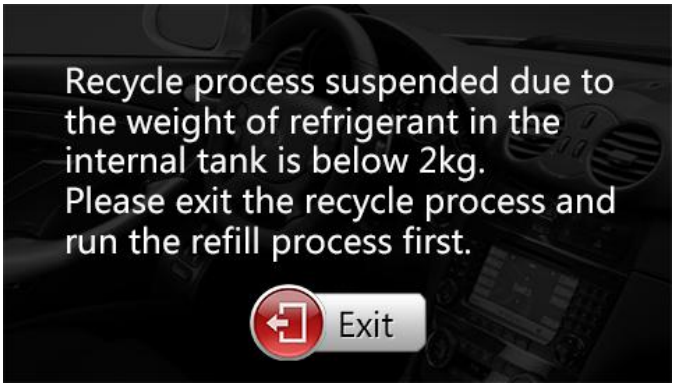

Recharge process suspended due to charging speed slows down. Please turn on A/C.
Preset: g
Actual: g
Pause

5.5 Recycle


Refill
Recovery
Vacuum
Recharge
Automatic
Recycle
Database
Maintenance
Select
Enter


Recycling is to purify the refrigerant in the internal tank through filters and separator.
OK
Exit

When the refrigerant being less than 2KG, it warns as below:

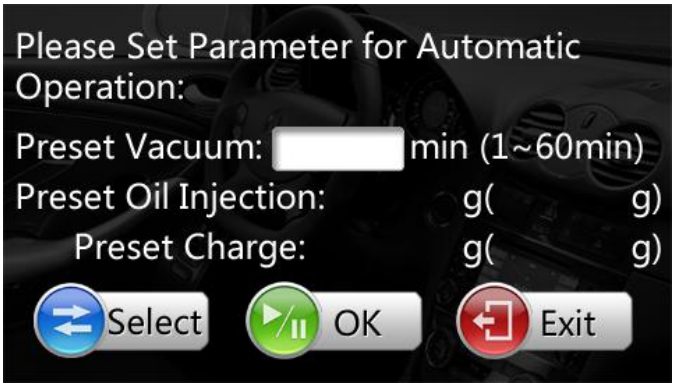


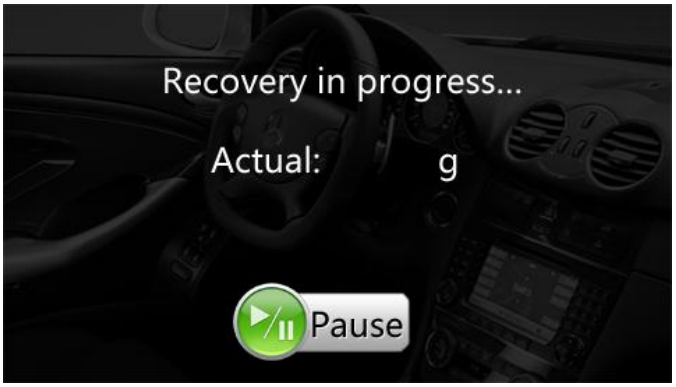
6. Automatic Operation

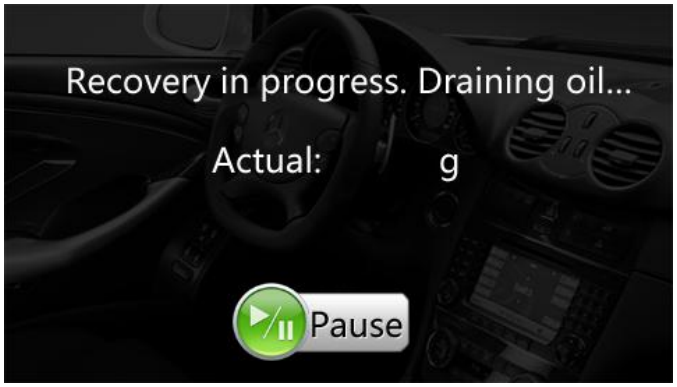
The main functions involves vacuum & charge, recovery, The automatic operation step is basically the same as manual operation.

6.1 Recovery + Vacuum + Recharge

When we see the following message, please set the value:



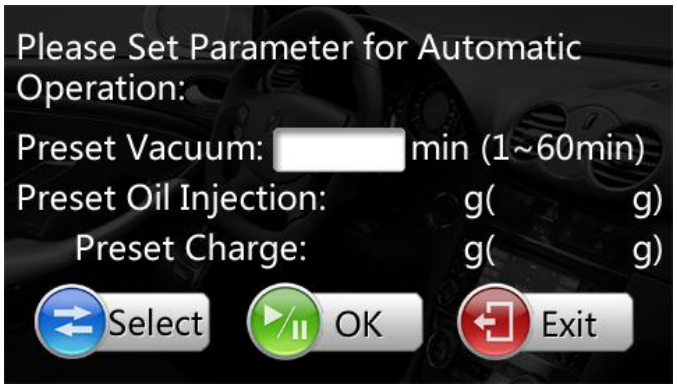




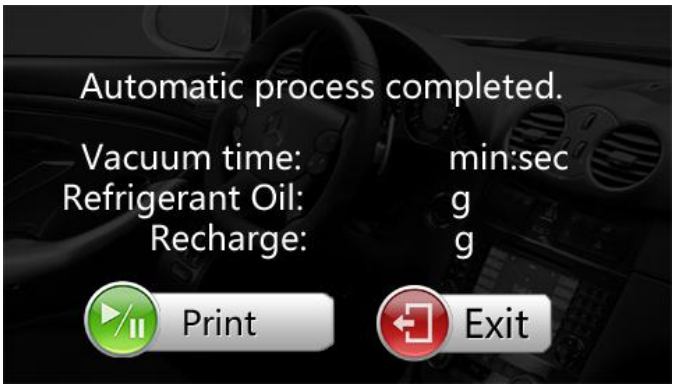
When recovery completed and oil drained, it will vacuum before recharging:

When vacuum completed, it charges automatically:

6.2 Vacuum + Recharge

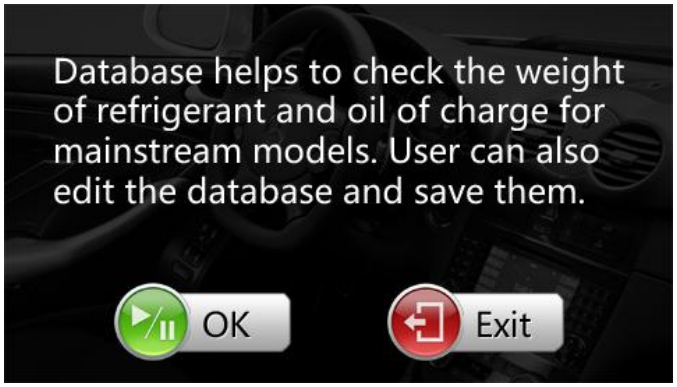


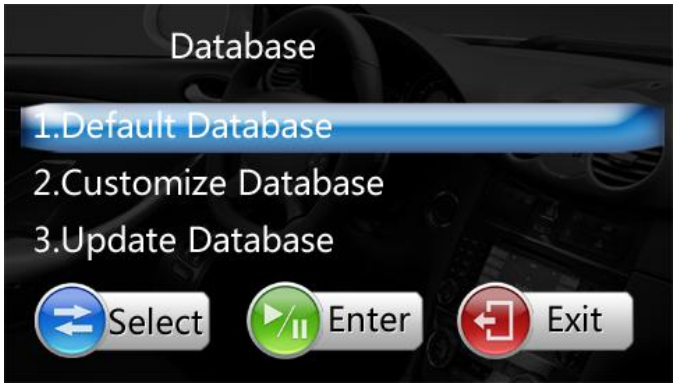

Charge in progress...
Preset: g
Actual: g
Pause


Automatic process completed.
Vacuum time: min:sec
Refrigerant Oil: g
Recharge: g
Print
Exit

7. DATABASE

7.1 Default Database





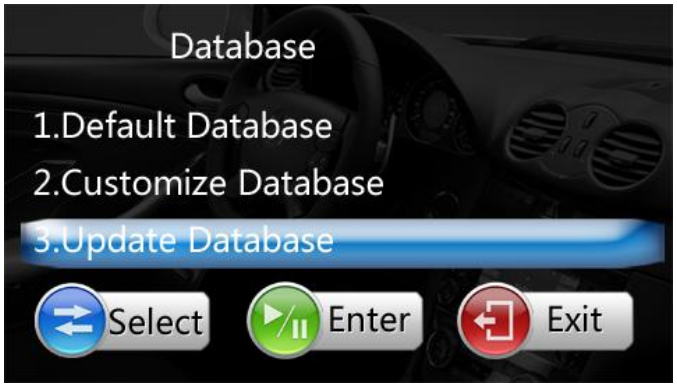
Select the brand and car model and then it will show the data.

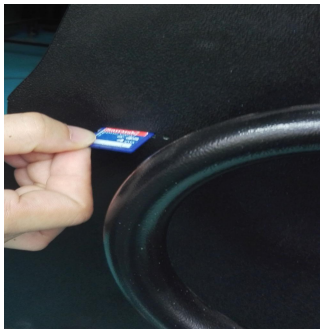
7.2 Customized Database

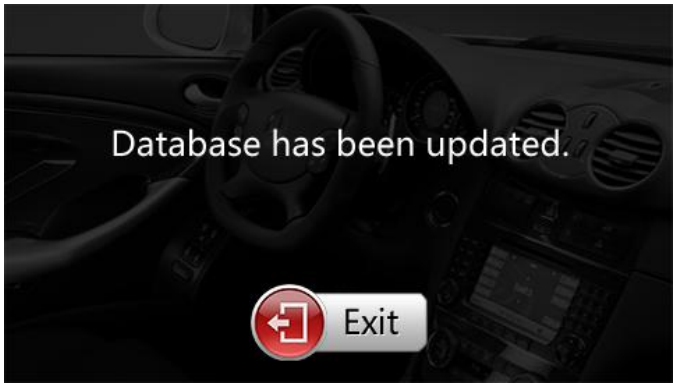
Choose this menu, you can find your own database, if you have updated the car models by a SD card.

7.3 Update Database

Insert your SD card to the back of machine, and confirm to “Update Database”, it will renew your “customized database”





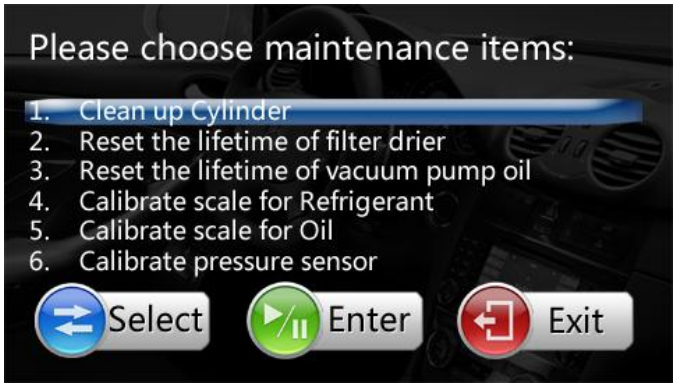


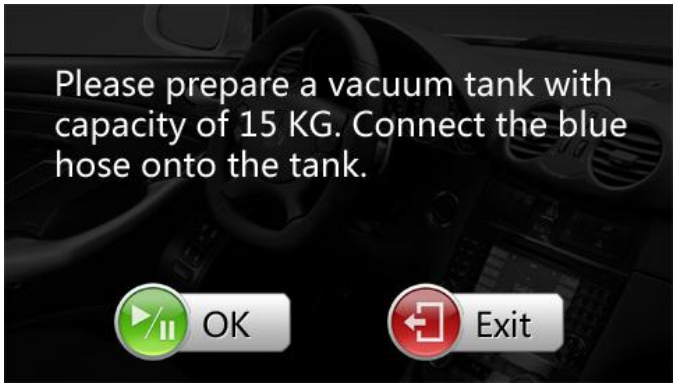
Remark: The database file should be saved as a “CVS” file in SD card. Otherwise, there will be error message on LCD.

8. Maintenance.

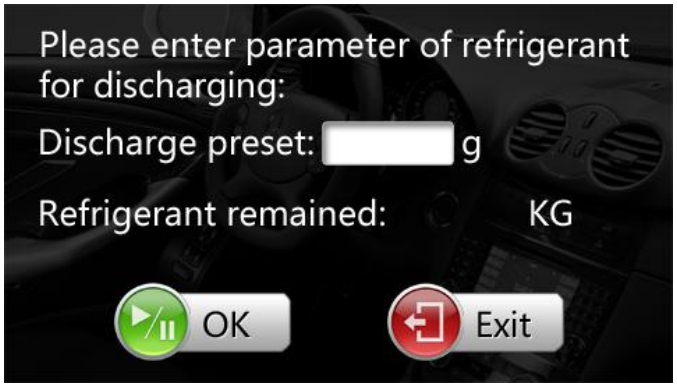
8.1 Clean up cylinder

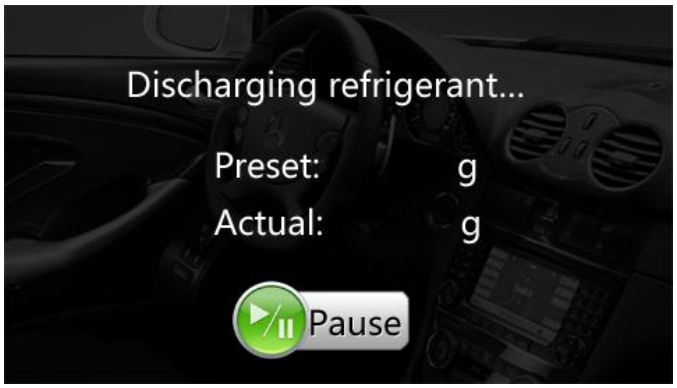
8.2 f





Follow above instruction and go to next step:





8.2 Other maintenance : follow up instructions on LCD.