

A/C System Maintenance Centre



Safety

- The machine is designed to be used and repaired by qualified personnel only.
- The machine designed for use in recovering the R134a refrigerant fluid used in the air-conditioning (A/C) systems of motor vehicles. Fill the A/C system with the quantity of refrigerant recommended by the manufacturer.
- Check the vehicle use and maintenance manual for the type of refrigerant fluid used by the A/C system. Do not mix different type of refrigerant otherwise can easily lead to malfunction of the machine.
- Keep away from moving parts and rotating elements such as cooling fans, alternators and heating components, etc to avoid harm.
- Wear protective clothing gloves and goggles.
- As automotive air conditioning pipe flushing, the operator must be fully familiar with automotive air conditioning system and operation of the machine. Check whenever the engine is turned off that the ignition key is turned to the full OFF position!
- Do not expose the machine to direct sunlight or rain. Use only in well-ventilated work areas.
- Never exceed 30 ° tilt in transit process upside down is strictly prohibited.
- Do not touch the machine high voltage power supply section, and do not maintain the machine as power on.
- Care of the manual.

CONTENTS

1、 Introduction.....	1
1) Outline	1
2) Features	1
3) Specifications	1
2、 Functions	2
1) Primary functions	2
2) Subsidiary functions	2
3. Operation	3
1) Parts descriptions.....	3
2) First use	4
3) Preparations before Operation	4
4) Power On	5
5) Flushing & Recovery	5
6) Recovery/Recycling.....	6
7) Vacuum	7
8) New oil adding.....	8
9) Recharging	9
10) Auto. Mode	10
11) Database	11
12) Subsidiary functions	12
A- Usage of the Auxiliary Port.....	12
B- Parameter setting	13
C- Calibration of load cell	14
D- Refrigerant supply for the cleaning tank (internal tank)	15
E-Exchange dry filter	15
F-Change vacuum pump oil	16
G-System inquiry	17
H-Printer Test.....	17
I-Equipment info.....	17
J-Exchange auxiliary tank (external tank)	18
13) Help	18

1、Introduction

1) Outline

A/C system maintenance equipment is with the latest design technique which uses the best control principle and the manufacturing process.

A/C System Maintenance Centre is intelligent equipment collecting of the A/C flushing, recovery, recycling, recharging and other functions in one. It's with the beautiful shape, humanized operation interface, and advanced manufacturing processes to make the A/C maintenance professional and simple.

2) Features

- A、 Fully automatic, easy to operate.
- B、 Internal pipeline of A/C system flushing, effectively cleared the internal greasy and fouling, to restore the A/C system performance.
- C、 With forward flushing, reverse flushing, and pulse flushing functions, which greatly improve the cleaning effect.
- D、 Using large-size glass tube with LED backlighting, can effectively observe the entire cleaning process.
- E、 Vertically installing the HP & LP gauges let the operator be able to observe the pressure parameters timely even in the car.
- F、 Unique design of the pipeline to achieve the high recycling rate no matter with the gas or the liquid.
- G、 Easy to operate with the concise operating interface.
- H、 Designed with large size LCD.
- I、 Database.
- J、 Program and database can be updated.
- K、 With printer.
- L、 Designed with auxiliary load cell for recharging by the external refrigerant tank.

3) Specifications

- A、 Working conditions:
Ambient temperature: 0~50°C
Relative humidity: <85%
- B、 Voltage input: ☐ AC220V±10%~50/60Hz ☐ AC110V±10%~60Hz
- C、 Compressor: 12.12cm³
- D、 Vacuum pump: 7.2m³/h, 10Pa
- E、 Load cell for tank: ±10g
- F、 Auxiliary load cell: ±10g
- G、 Load cell for oil bottle: ±5g
- H、 Tank: 12L
- I、 Oil bottle: 260ml,double
- J、 LCD display: 240*128

K、 Working pressure: max. 17.5bar

L、 HP gauge: -1bar~3.5MPa

M、 LP gauge: -1bar~1.5MPa

N、 Backlighting: LED

2、 Functions

1) Primary functions

A、 Automatic flushing

B、 Automatic recovering/recycling

C、 Automatic/manual used oil drain

D、 Automatic vacuum

E、 Automatic/manual new oil injection

F、 Automatic recharging with load cell

G、 Automatic recharging via the secondary recharging tank (800A)

H、 Auto mode

I、 Database

2) Subsidiary functions

A、 Parameter setting

B、 Supply refrigerant

C、 Electric scale calibration

D、 Maintenance procedures (dry-filter exchange, vacuum pump maintenance)

E、 Printer checking

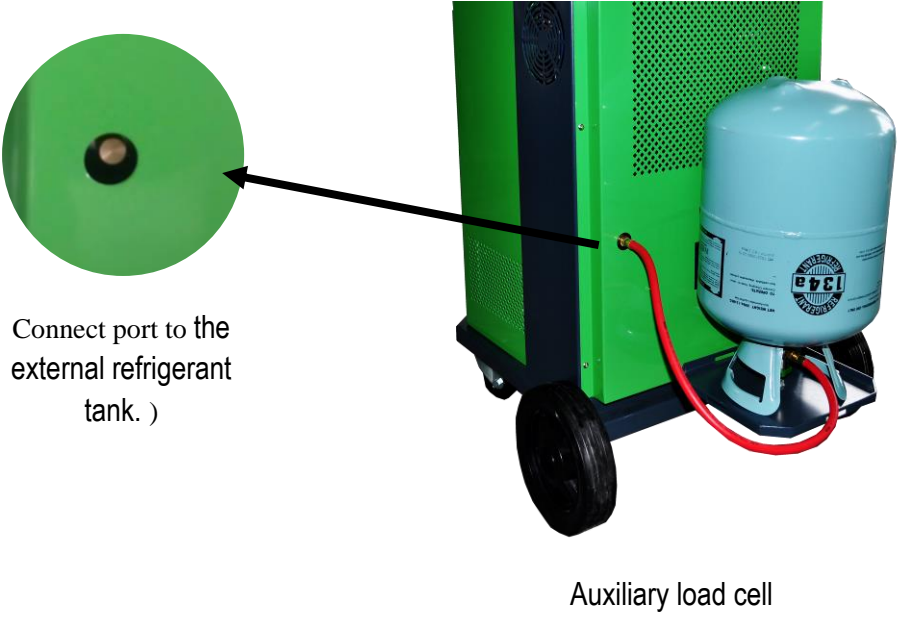
F、 System inquiry

G、 Equipment info

H、 Help

3. Operation

1) Parts descriptions



2) First use

- A、 Unscrew the electronic scale support screw before using the equipment.



From the back.

- B、 Please supply about 4 kg refrigerants into the tank of equipment so that all of the functions can be run normally. Please refer to the chapter of “**Refrigerant supply**”.
- C、 Fix the refrigerant tank (Recharging tank) on the load cell.



1st Connect the Recharging Tank port of the machine and the port of the refrigerant tank with the recharging refrigerant hose.

2nd Open the valve of the refrigerant tank and place it upside down on the load cell pan.

3rd Fix it with the accessories.

Note: If you don't need to use the auxiliary load cell, please fix it as factory setting.

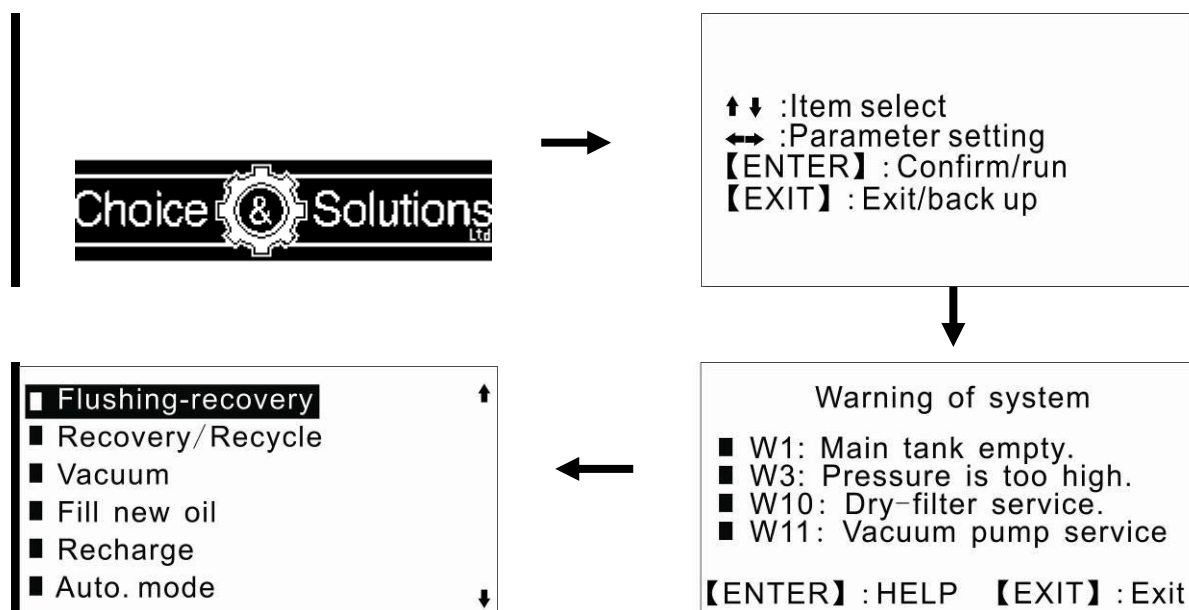
Warning: Do not step on the auxiliary load cell!

- D、 Please read this user manual carefully before operating.

3) Preparations before Operation

- A、 To check if there is enough refrigerant in the tank. The volume should be 4~6 kg.
- B、 Empty the used oil bottle.
- C、 Check the automotive A/C system. If there is any leakage, it must be repaired firstly to avoid refrigerant leak during flushing process.
- D、 Check if the automotive air-conditioning can run normally.

4) Power On



Note: the descriptions for keys just be shown 5 times.

5) Flushing & Recovery

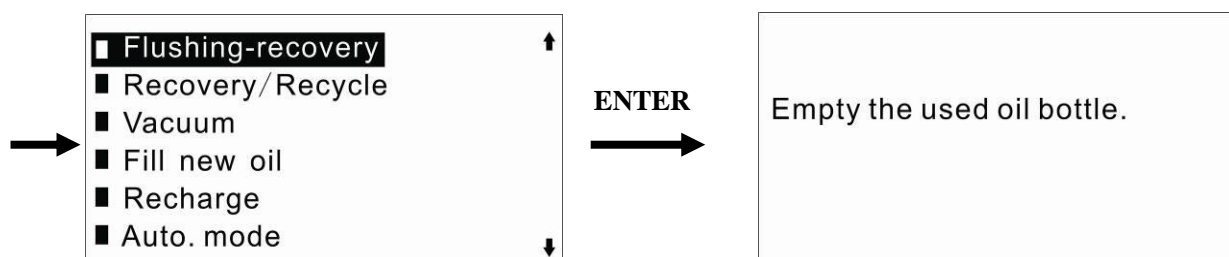
- A、 By this function, it will be able to clean out the refrigerant oil and oil sludge to exchange the refrigerant entirely to improve the performance of compressor. And also it will recover the refrigerant remained in the A/C system.
- B、 Before flushing the pipeline of automotive A/C system, please turn on A/C system and run it for 5 to 10 minutes. And set it as the lowest temperature and medium wind.
- C、 Turn off the automotive air conditioning.

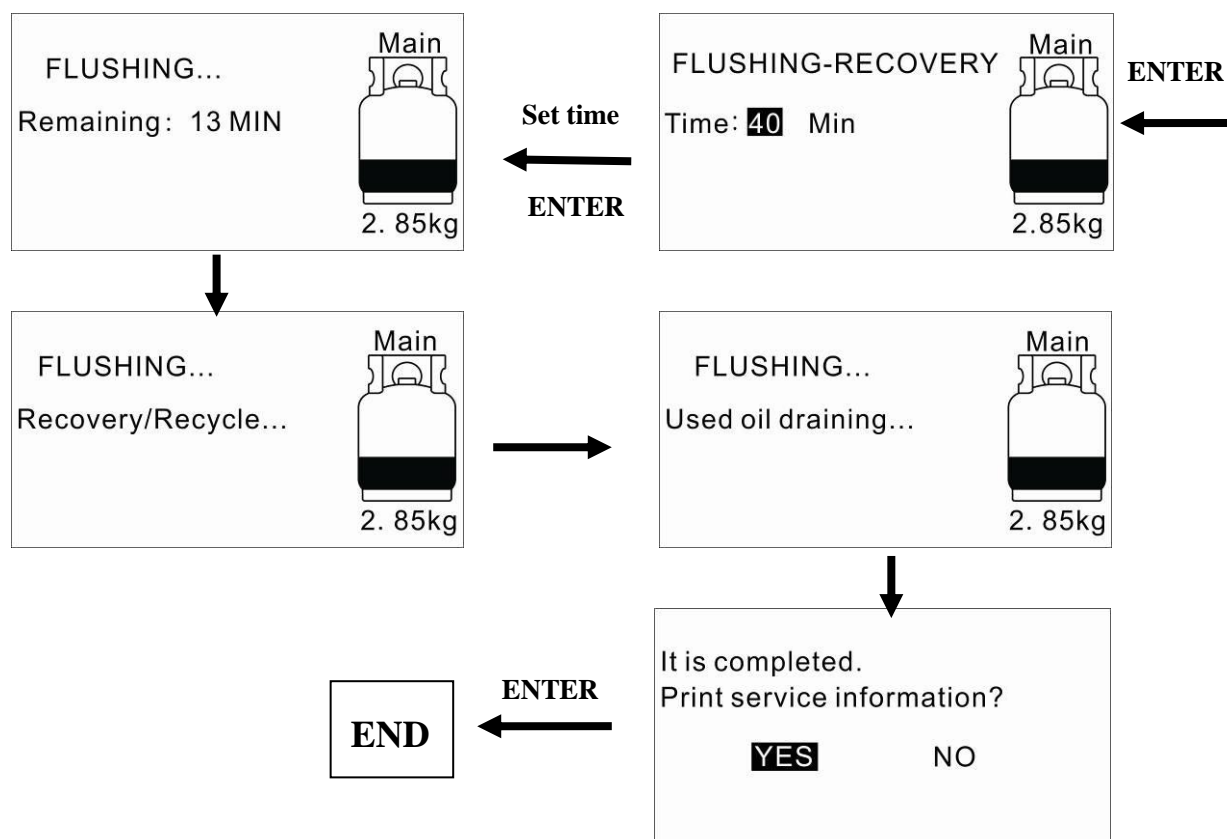
Warning: do not start the air conditioning during the flushing process! Otherwise, it easily causes damages to the air-conditioning and risk of accident!

- D、 In order to achieve good flushing performance, the flushing time should be more than 30 minutes. Normally, the flushing time is about 30min for air conditioning with front wind and about 45 minutes for air conditioning with front and rear wind.

Note: The flushing time does not include the time of recovery process. Once the flushing is finished, the machine will run the recovery function automatically.

- E、 Operations:

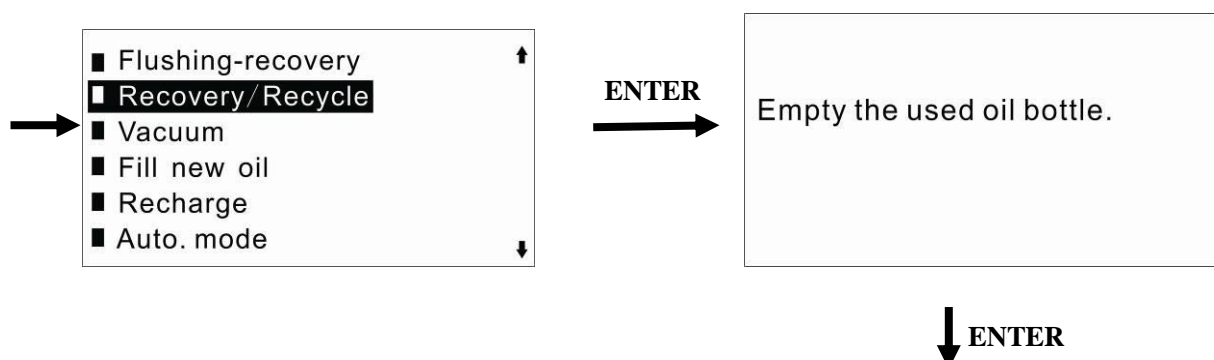


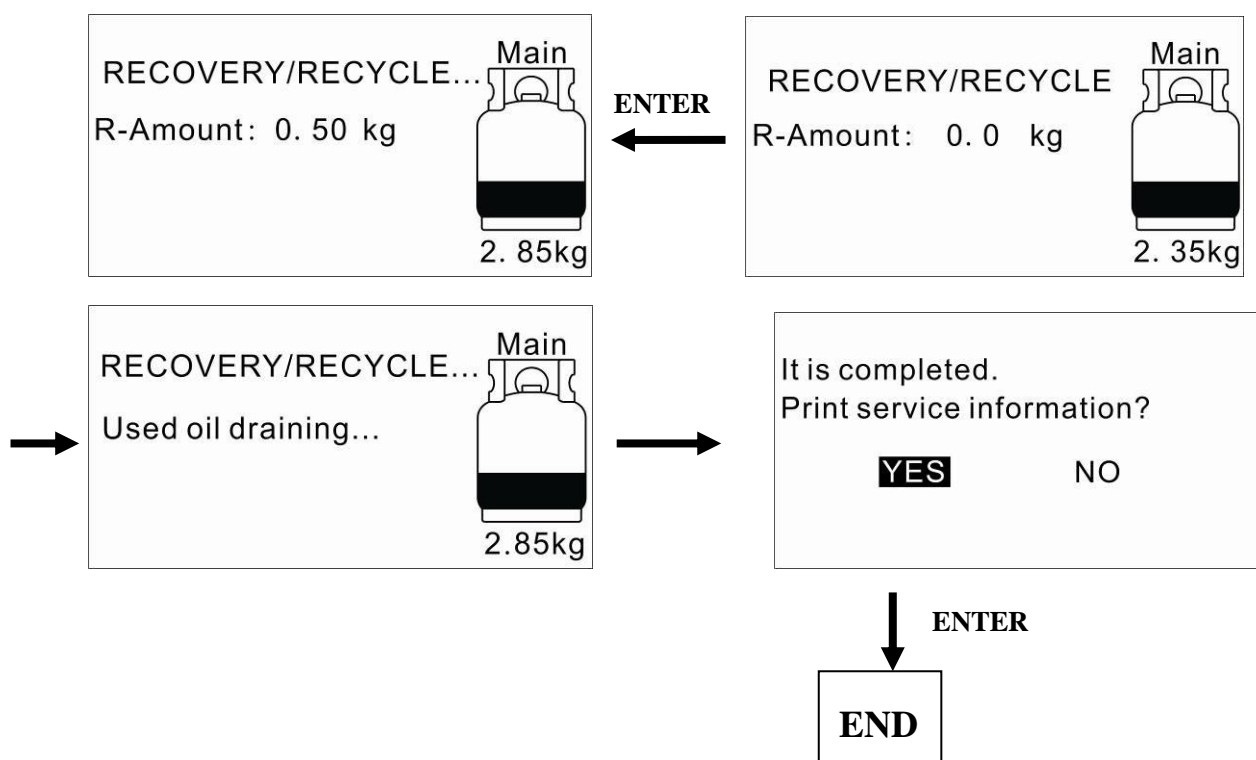


- F、 If it displays code as F00- or stop running automatically during the process, please follow the coming instructions that shows in the display.
- G、 **Notice: it's normal that if there is working sound of the solenoid valve during the working process. please do not stop it. During automatic oil draining process, if it stops, you can drain oil manually by oil draining switch.**

6) Recovery/Recycling

- A、 By this function, it will recover the refrigerant remained in the A/C system.
- B、 Operations:





H、 If it displays code as F00- or stop running automatically during the process, please follow the coming instructions that shows in the display.

C、 **Notice:** During automatic oil draining process, if it stops, you can drain oil manually by oil draining switch.

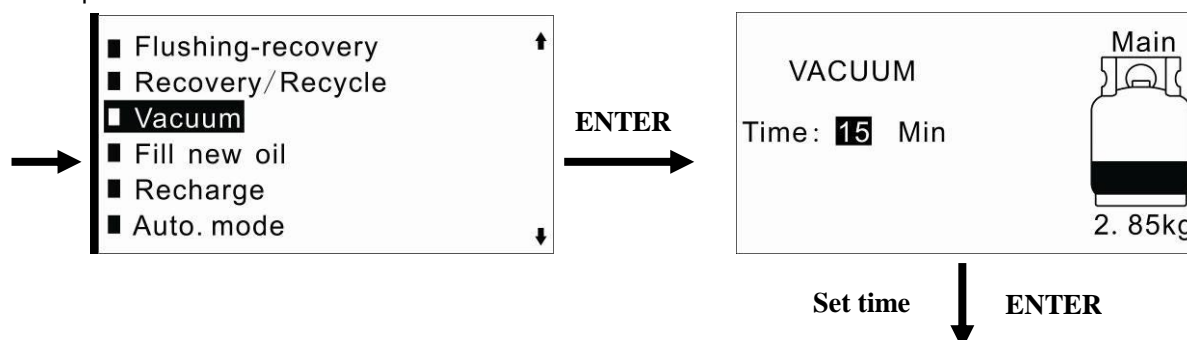
Remark: under recovery function, if you press “↑” and “↓” buttons at the same time, the equipment will release the air in the tank.

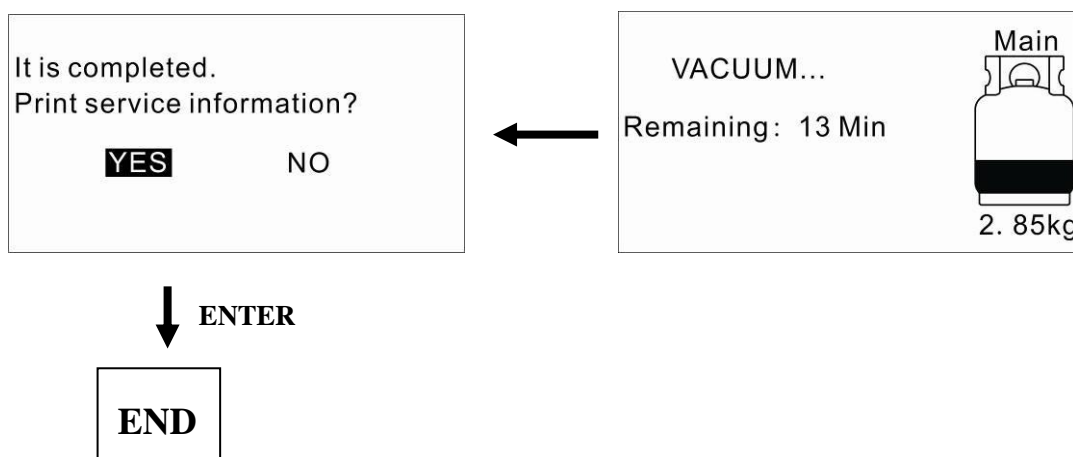
7) Vacuum

A、 By this function, it will clean the water vapor out from the A/C system.

B、 Normally it needs at least 15 minutes for vacuuming the water vapor from the air conditioning when it is with front wind and at least 20 minutes for when it is with front and rear wind.

C、 Operations:





I、 If it displays code as F00-, please follow the coming instructions that shows in the display.

8) New oil adding

A、 Adding new oil into the new oil bottle.

Note: add 20ml more new oil than the used oil drained out. During the adding process, the oil level can't be lower than the straw mouth in the oil bottle to avoid air getting into the air conditioning system.

Warning: please do not press the switch of the new oil bottle anytime when the automotive air conditioning system is not in vacuum state, otherwise it has the risks of oil blowing out and explosion of the bottle!

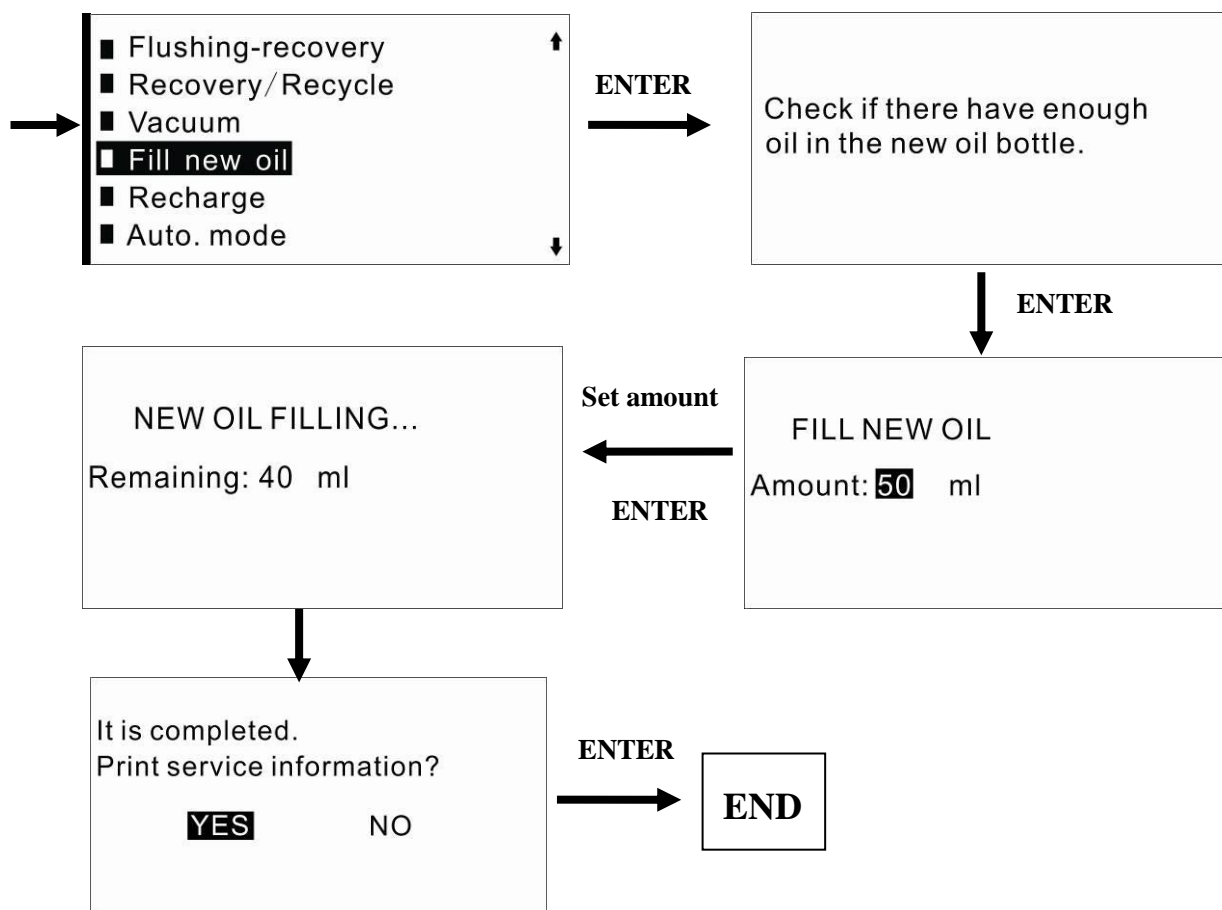
B、 Method 1: Control by manual.

After vacuum, press the switch of the new oil bottle intermittently to control the volume of new oil adding.

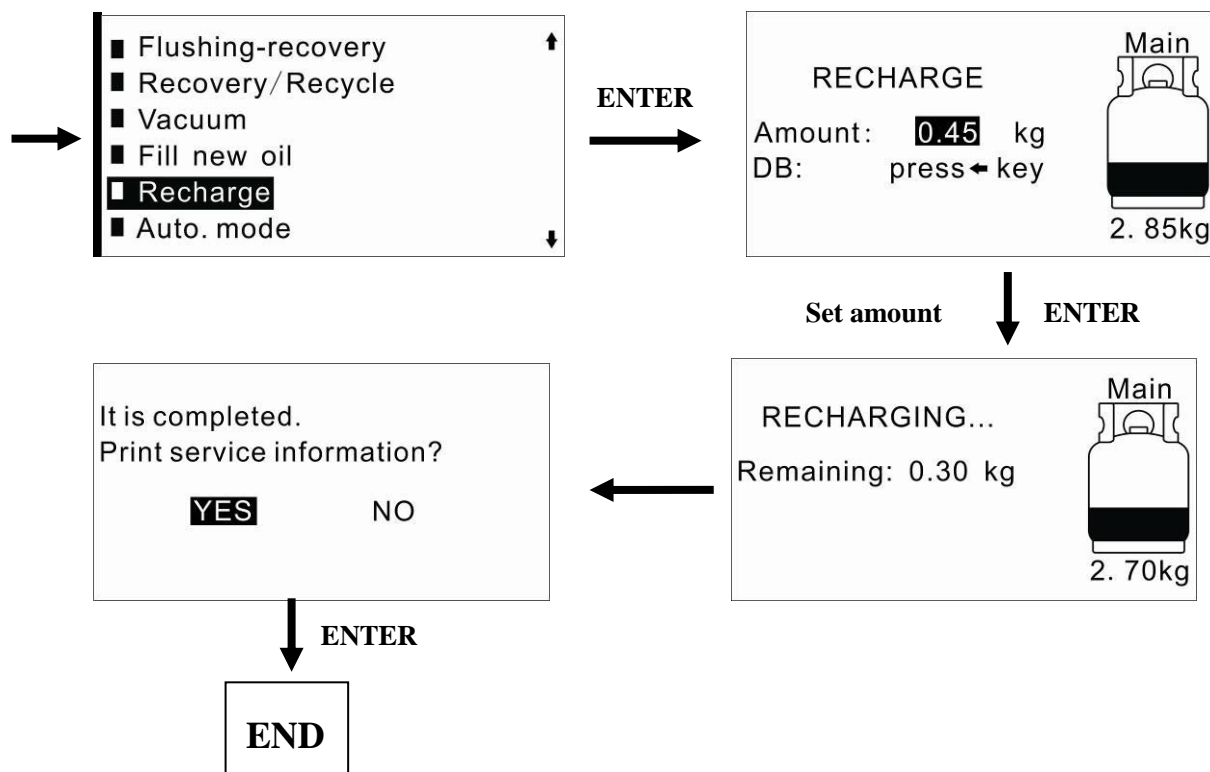


C、 Method2: Control automatically.

After vacuum, operate by following.



9) Recharging



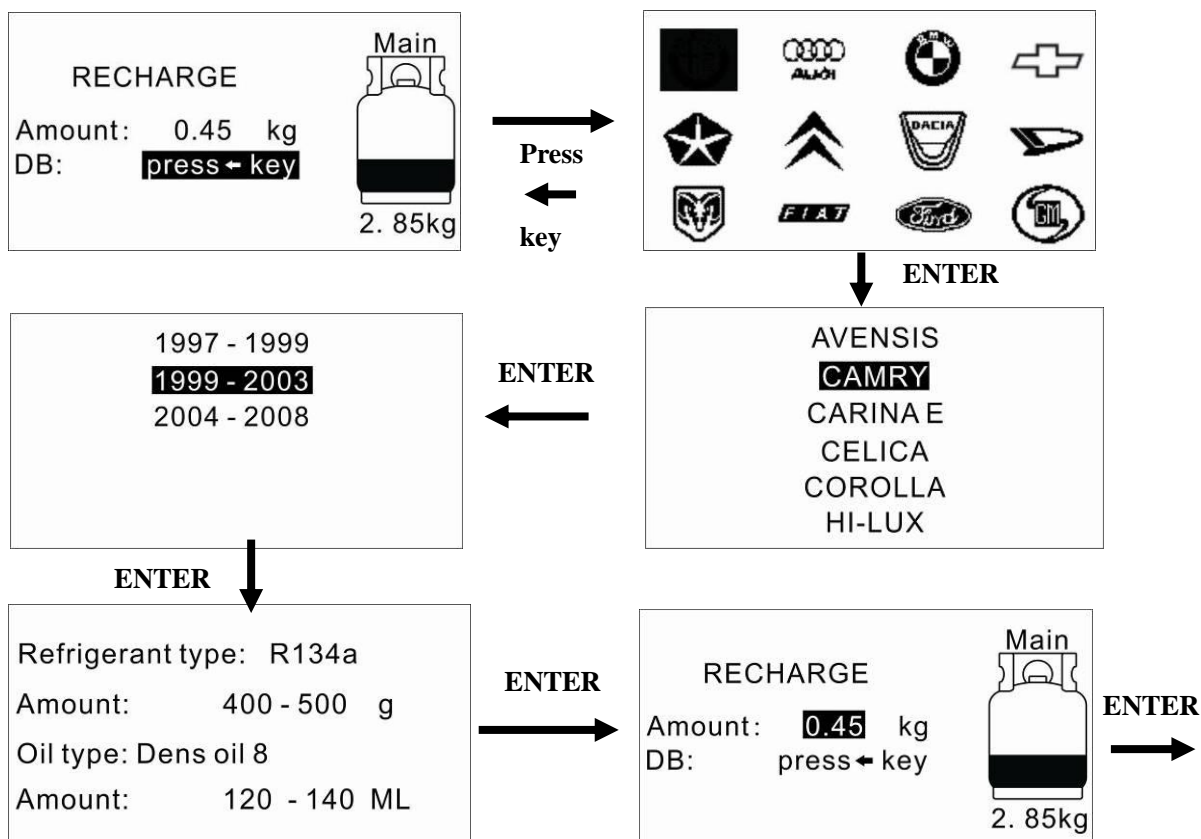
Remark: After vacuum, the machine recharges 130g more refrigerant to the car for the first time

automatically (this amount of refrigerant is about the amount that remaining in the refrigerant hose), if there is refrigerant in the car already, when it recharges, it doesn't recharge this extra 130g.

A、 The recharging amount setting:

Method 1: Set the amount you want directly by pressing the parameter setting buttons.

Method 2: Set the amount by the database. Steps as following:



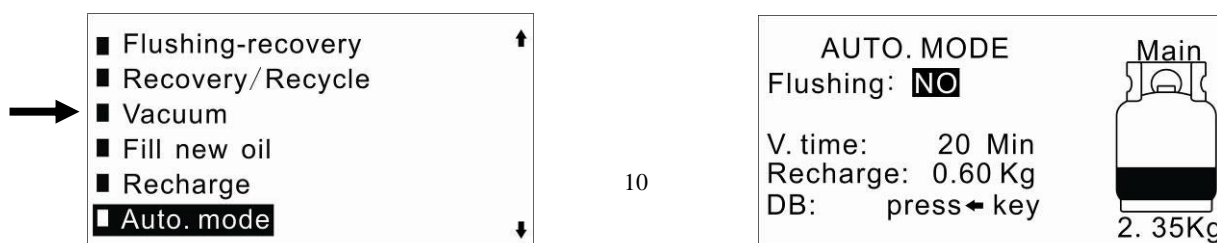
B、 **Note:** In the recharging process, if shows this menu, it means that there isn't enough refrigerant in the machine which lead to discontinuance recharge because of pressure difference, then you need to turn on the car air-conditioning to complete the recharging process.

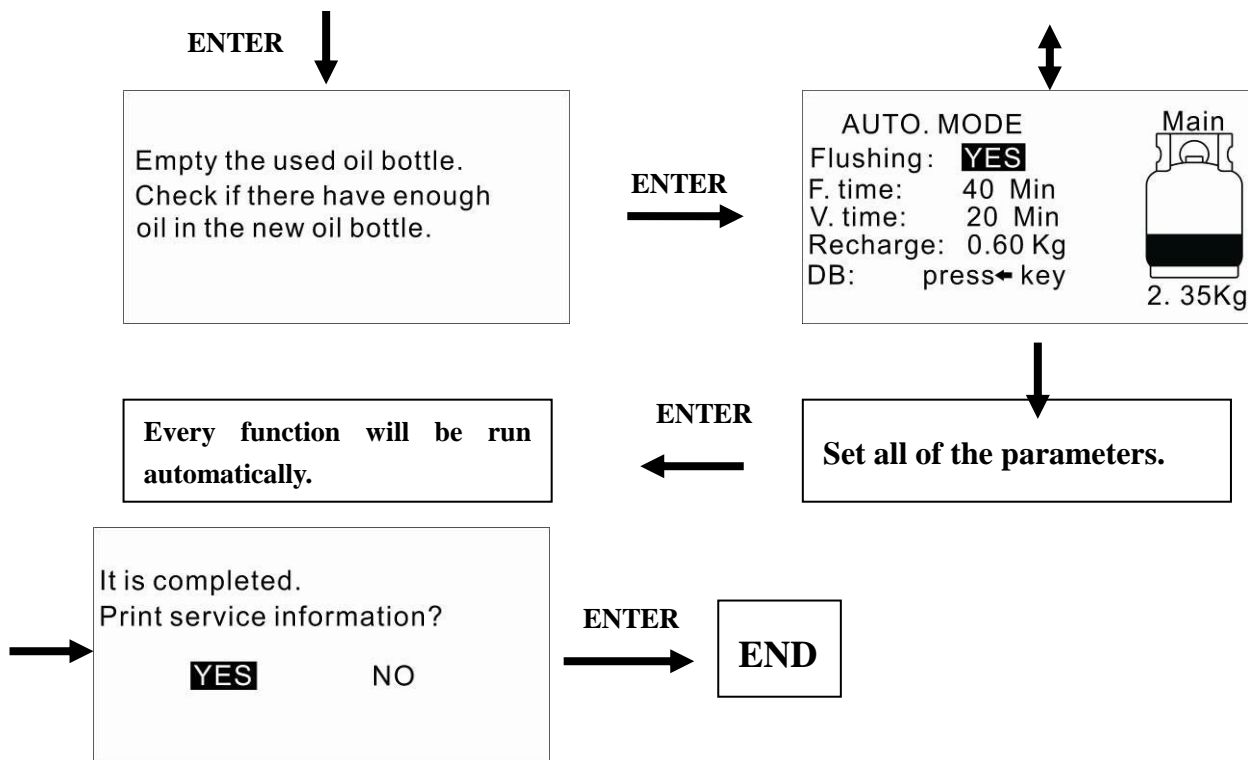
10) Auto. Mode

A、 Under this mode, all of the functions can be ran full automatically after setting the parameters.

B、 Before running, must drain out the used oil entirely and fill enough new oil into the new bottle, and recharging tank should have enough refrigerant..

C、 Operations:



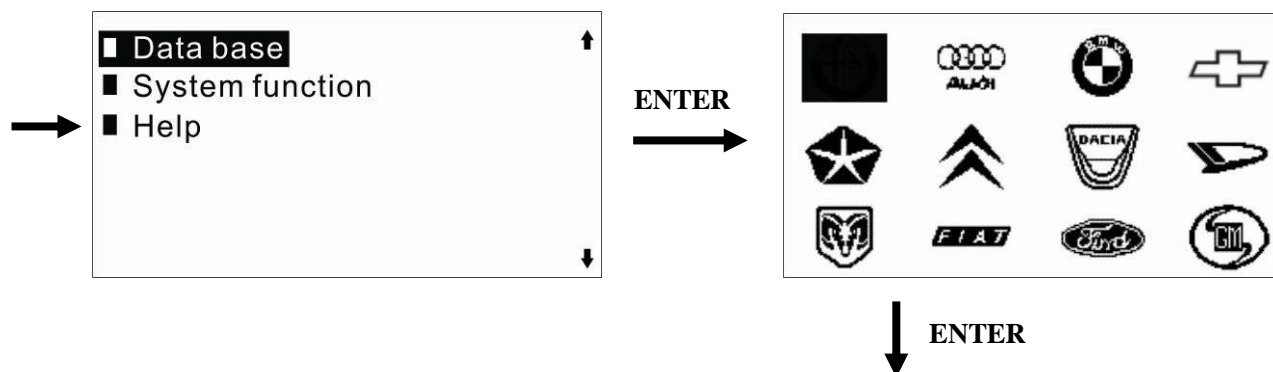


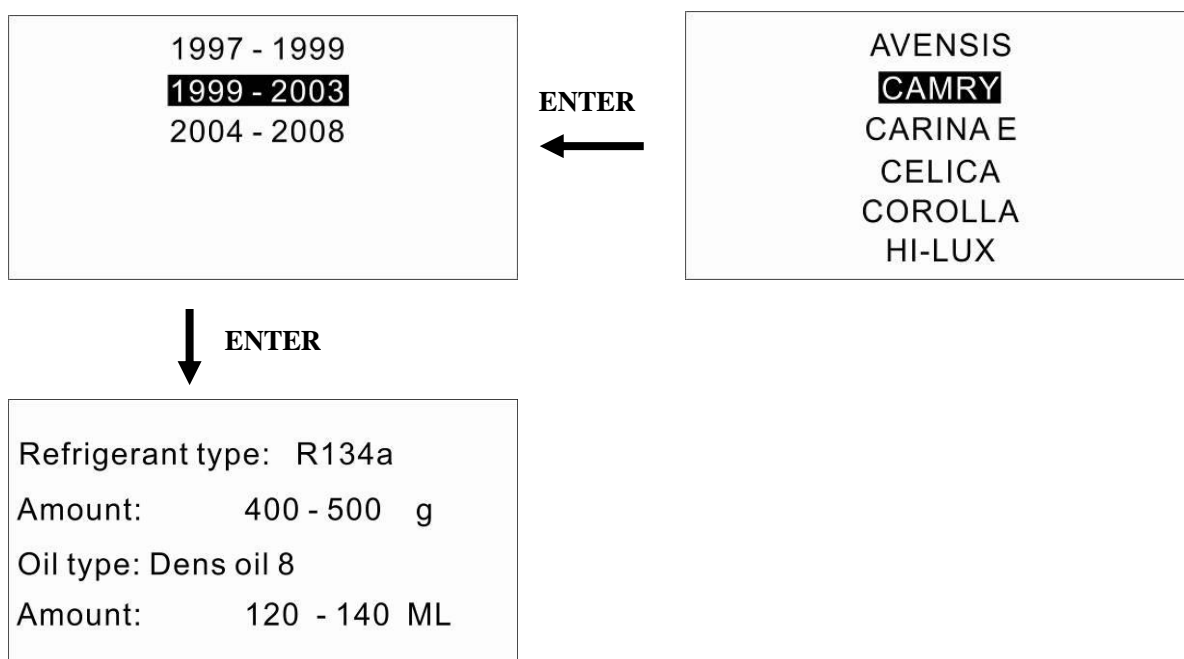
J、 If it displays code as F00- or stop running automatically during the process, please follow the coming instructions that shows in the display.

11) Database

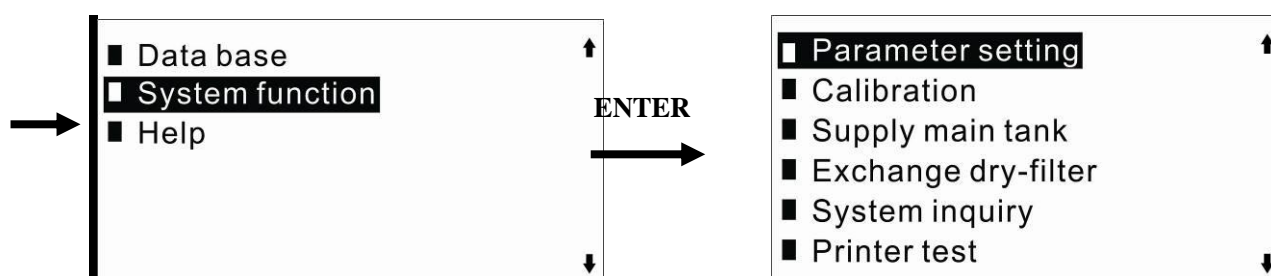
A、 Here you can read the refrigerant type and filling amount and the refrigerant oil type and filling amount for different cars.

B、 Operations:





12) Subsidiary functions



A- Usage of the Auxiliary Port

✓ Leak checking by N₂

- Remove the cap of auxiliary port **after the equipment finishes recovering entirely.**
- Connect the N₂ to the auxiliary port.

Note: **the connecting end to the auxiliary port must be with thimble. Do not open the valve of N₂ during this process.**

- Adjust the N₂ pressure to a suitable value and open the valve of N₂. **When the pressure in the air conditioning system is up to leak checking level,** please close the valve of N₂. Normally, the pressure is adjusted to about 12~15bar.
- Check if there has any leakage in the A/C system. After checking, please press the needle in the auxiliary port to relive the N₂.
- After finished, put the cap on to the auxiliary port.

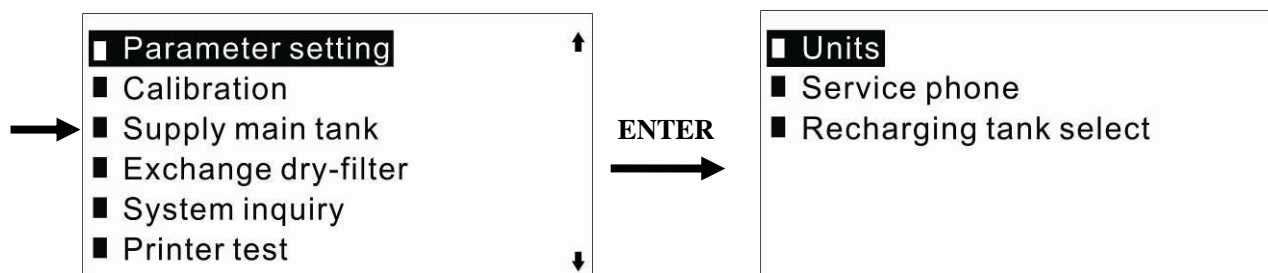
✓ Recharging from cans

- Before vacuum, connect the pipe that comes with the external tank to the auxiliary port.

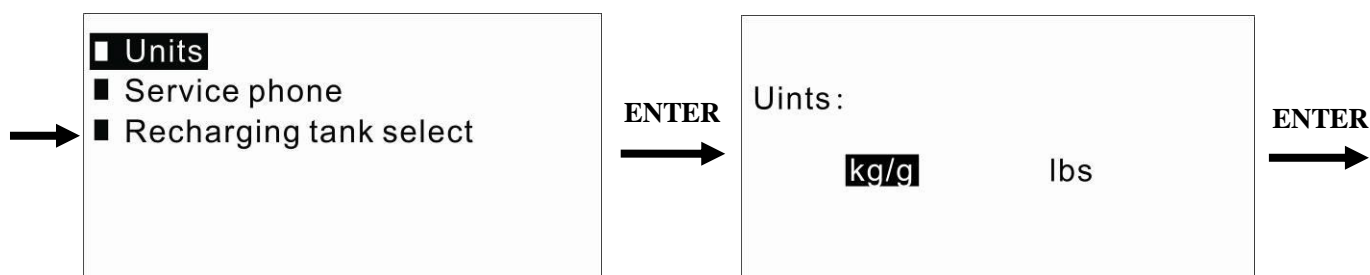
Note: the connecting end to the auxiliary port must be with thimble. Do not open the valve of external tank during this process.

- b) Keep the valve closed of external tank and run vacuum function.
- c) Open the valve of external tank to recharge the right amount refrigerant into A/C system. And then close the valve of external tank.
- d) After finished, disconnect the pipes and put cap back on to the auxiliary port.

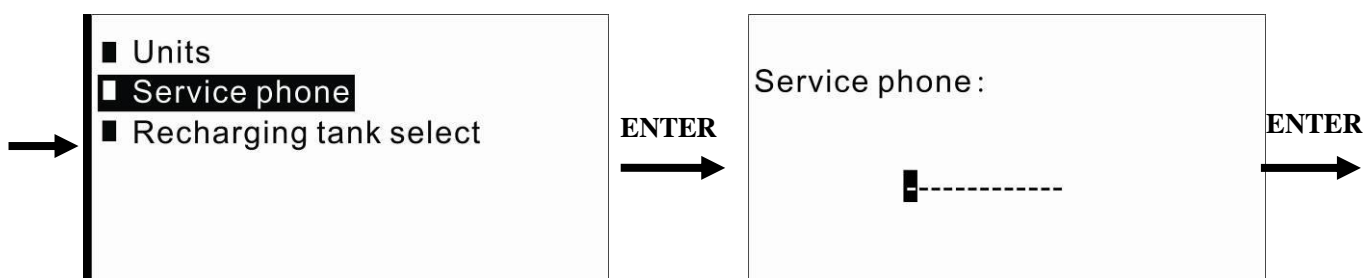
B- Parameter setting



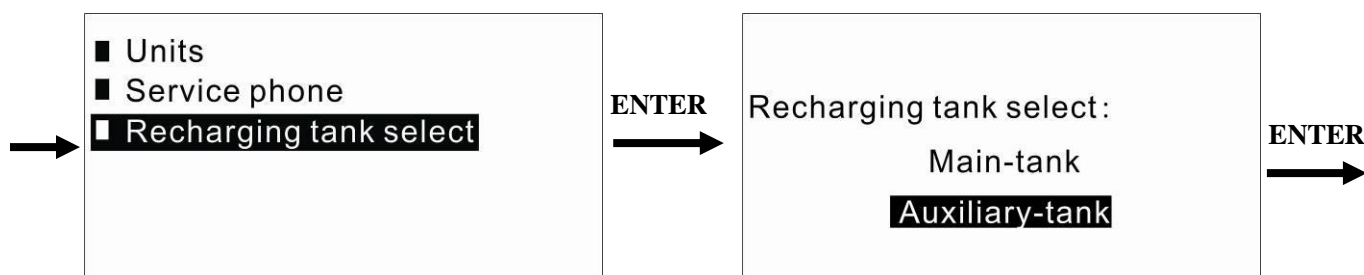
✓ Weight units



✓ Service Telephone Number



✓ Recharging Tank



Note:

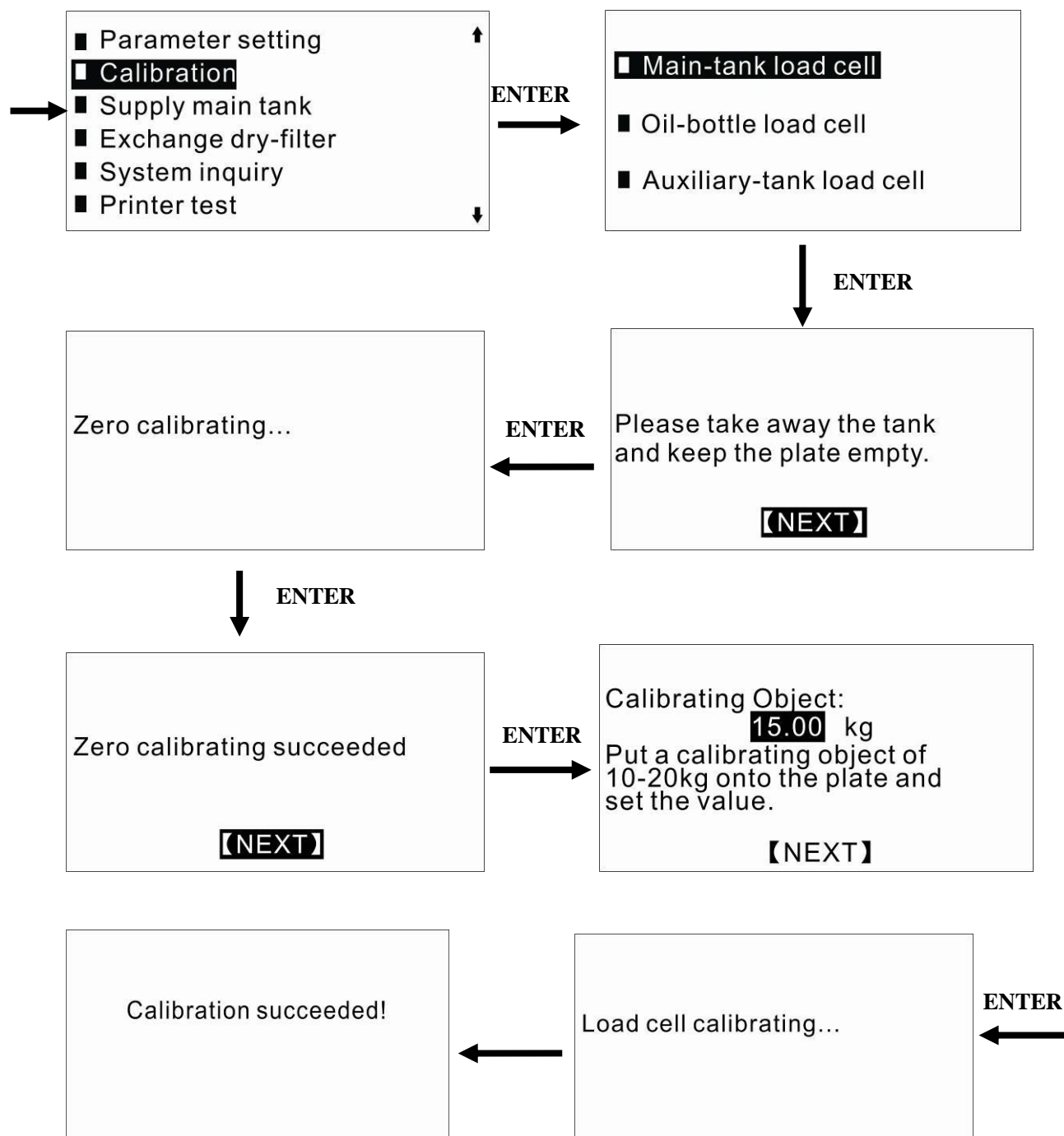
Main Tank: the tank is installed in the machine which is used for the flushing, recovery, recharging functions.

Auxiliary Tank: the refrigerant tank is installed by user which is just used for the recharging.

C- Calibration of load cell

When the load cell is not precise, it needs to be calibrated.

✓ Calibration of main tank load cell



✓ Calibration of oil bottle load cell

The steps are similar to above. And it shall use the 1kg weight.

✓ Calibration of auxiliary tank load cell

The steps are same to above

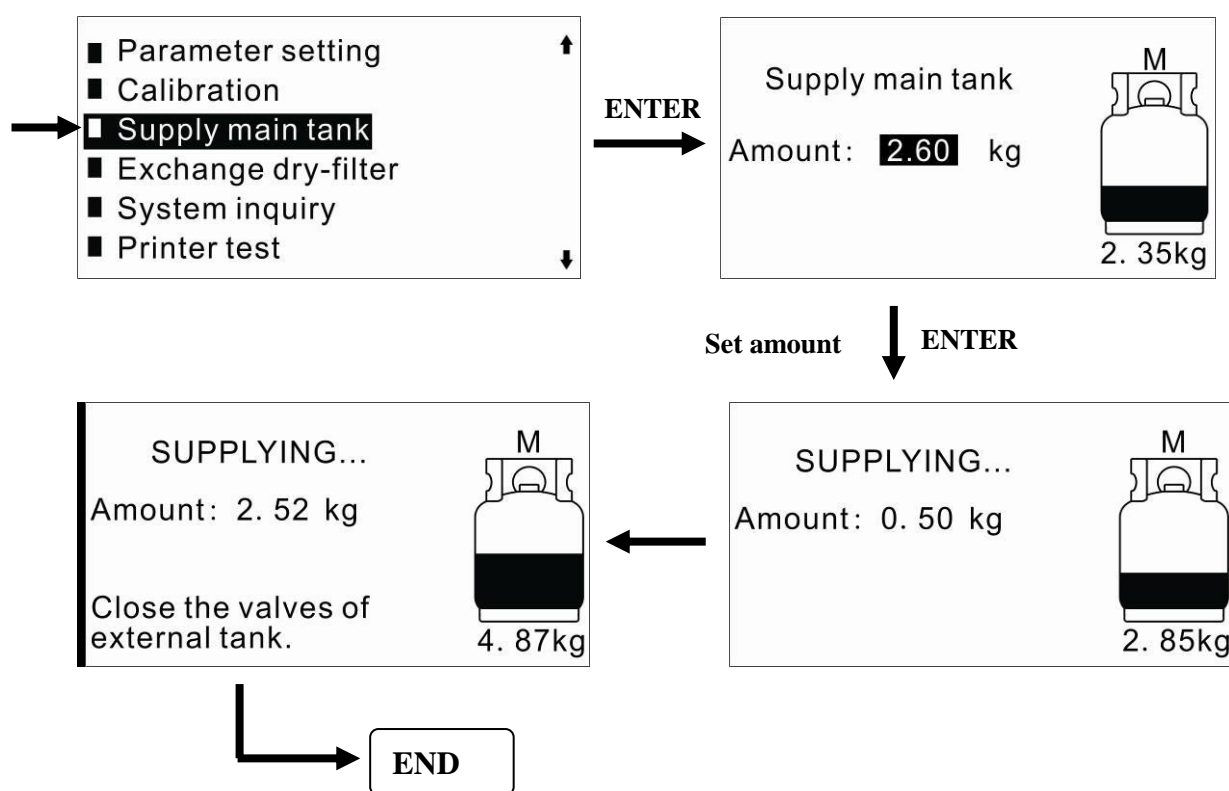
Note: if there is unsuccessful calibration, please follow the instructions that pops out and check.

D- Supply refrigerant to the cleaning tank (internal tank)

- A、 If the refrigerant amount in the cleaning tank is less than 4kg, the flushing function will not run until you supply enough of the refrigerant to the cleaning tank.
- B、 **Connect the fresh refrigerant tank to the LP port of equipment by the connection hose, block the HP port of equipment with a cap or HP coupler.**

Note: it should connect to the liquid port of fresh refrigerant tank. If has no liquid port, please invert the fresh refrigerant tank.

C、 Operations:

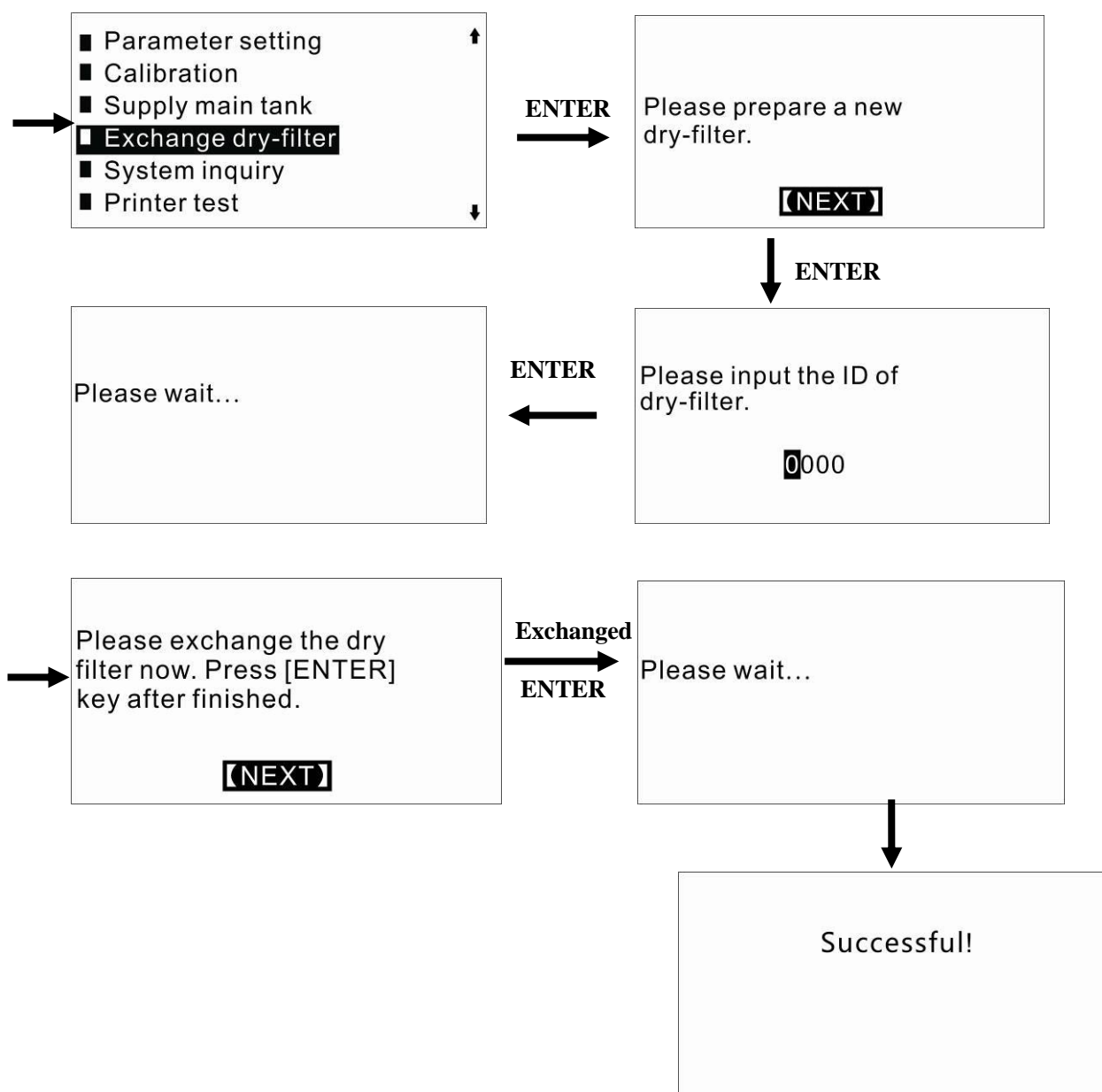


Note:

- ✓ Amount of supplying: Setting the supplying amount according to the remaining fresh refrigerant in the tank of the machine. Suggestion: supplying amount = (4.5~5)-amount remained.
- ✓ When finished, please close the valve of the refrigerant tank and run the recovery function.

E-Exchange dry filter

- A、 The dry filter must be exchange when it reaches the life time, the machine will give a message.
- B、 If you do not exchange the dry-filter timely, it will not be able to run the recovery, flushing and supplying functions.
- C、 Operations:

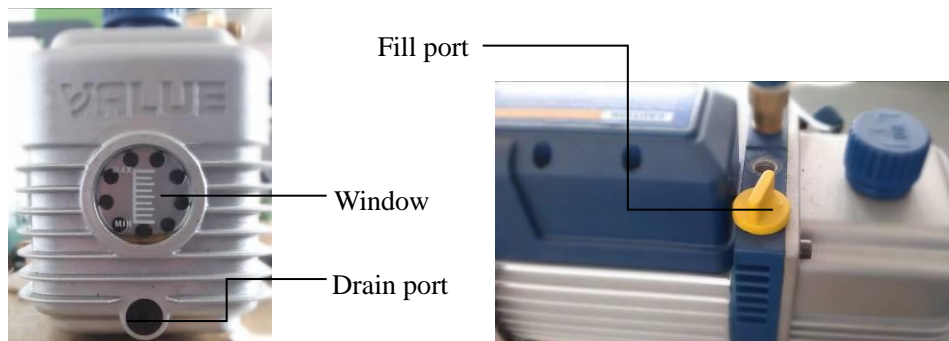


Note:

- ✓ Please read the ID of the dry-filter at the label which is the last 4 digital of the SN.
- ✓ Please mind the direction when you install the dry-filter.

F-Change vacuum pump oil

- A、 When the pump oil became creamy or the unit displays maintenance message, the vacuum pump oil must be changed.
- B、 If the pump oil is not changed timely , the vacuum function will not be able to run.
- C、 Exchange Steps:
 - Step1: open the back cover.
 - Step2: Unscrew the block of the drain port to drain the old oil out entirely. Then put the block back on to the drain port.
 - Step3: Unscrew the cap of the filling port and then fill the new oil slowly into the vacuum pump until the oil level reach at the center site. Then put the cap back on to the filling port.



Note: the new vacuum pump oil cannot be filled too much into the vacuum pump otherwise it will spray out when working.

Step4: Put the cover back on.

G-System inquiry

Here you can check the working status of the machine.

<div style="border: 1px solid black; padding: 5px;"> <ul style="list-style-type: none"> ■ Parameter setting ■ Calibration → ■ Supply main tank ■ Exchange dry-filter ■ System inquiry ■ Printer test </div>	<p>ENTER</p> <p>→</p>	<div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;">Running status</p> <table border="0"> <tr> <td>Compressor:</td> <td style="background-color: black; color: white; padding: 2px 10px;">10</td> <td>h</td> </tr> <tr> <td>V-pump total:</td> <td>20</td> <td>h</td> </tr> <tr> <td>V-pump cycle:</td> <td>10</td> <td>h</td> </tr> <tr> <td>Dry-filter:</td> <td>10</td> <td>kg</td> </tr> <tr> <td>Machine total:</td> <td>26</td> <td>times</td> </tr> </table> </div>	Compressor:	10	h	V-pump total:	20	h	V-pump cycle:	10	h	Dry-filter:	10	kg	Machine total:	26	times
Compressor:	10	h															
V-pump total:	20	h															
V-pump cycle:	10	h															
Dry-filter:	10	kg															
Machine total:	26	times															

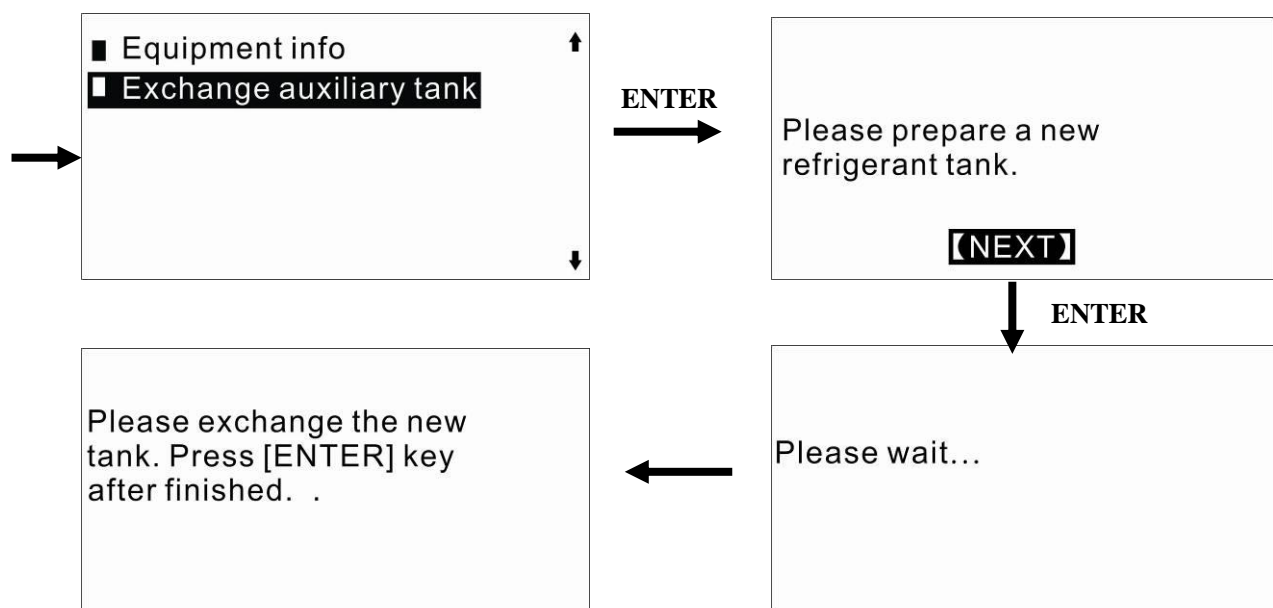
H-Printer Test

<div style="border: 1px solid black; padding: 5px;"> <ul style="list-style-type: none"> ■ Parameter setting ■ Calibration → ■ Supply main tank ■ Exchange dry-filter ■ System inquiry ■ Printer test </div>	<p>ENTER</p> <p>→</p>	<div style="border: 1px solid black; padding: 10px; min-height: 100px;"> <p>Please check if the test page is correct.</p> </div>
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I-Equipment info

<div style="border: 1px solid black; padding: 5px;"> <ul style="list-style-type: none"> ■ Equipment info ■ Exchange auxiliary tank </div>	<p>ENTER</p> <p>→</p>	<div style="border: 1px solid black; padding: 5px;"> <table border="0"> <tr> <td>SN:</td> <td>30500010113</td> </tr> <tr> <td>Software:</td> <td>V1.0</td> </tr> <tr> <td>PCA:</td> <td>V2.0</td> </tr> <tr> <td>Pantent:</td> <td>Z201220209364.7</td> </tr> <tr> <td></td> <td>Z201220209373.6</td> </tr> <tr> <td colspan="2">SHENZHEN ANYCAR TECH CO.,LTD</td> </tr> </table> </div>	SN:	30500010113	Software:	V1.0	PCA:	V2.0	Pantent:	Z201220209364.7		Z201220209373.6	SHENZHEN ANYCAR TECH CO.,LTD	
SN:	30500010113													
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	Z201220209373.6													
SHENZHEN ANYCAR TECH CO.,LTD														

J-Exchange auxiliary tank (external tank)

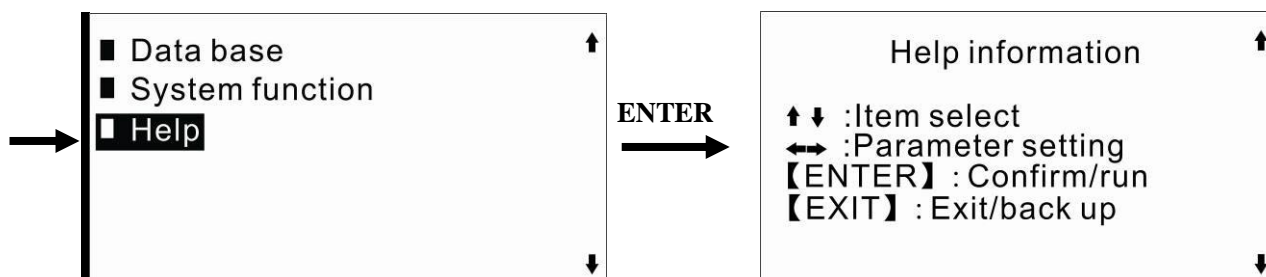


There has no enough volume to recovery refrigerant of the external tank.

If it shows the message as the left displays, it means that there is enough refrigerant in the external fresh refrigerant tank or there is too much refrigerant in the cleaning tank that it doesn't have enough space to charge more refrigerant. Now this function can't be run.

13) Help

Here you can check all of the help messages.



By press **↑** **↓** keys to change the page and press **EXIT** key to exit.