

INSTALLATION, OPERATION, AND MAINTENANCE MANUAL

Launcher LCH-AC943 A/C Service Machine



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INTRODUCTION

OUTLINE

Thank you for your purchase of this A/C Service Machine.

This guide is compiled in order to supply owners (and users) of this machine, with basic instructions required for correct use.

Read this guide carefully before using the machine and follow the instructions given by this guide carefully to grant the machine a correct function, efficiency and a long service life.

INTENDED USE: This A/C Machine has been designed and manufactured specially for collecting of the A/C recovery, recycling, recharging and other functions



Any other use is to be considered incorrect and unreasonable. Canada Auto Solutions will not hold responsibility for any damage caused from using of this tire changer for purposes other than those specified in this manual and therefore inappropriate, incorrect and unreasonable.

PLEASE TAKE NOTE OF THE FOLLOWING SAFETY PRECAUTIONS

- The machine is designed to be used and repaired by qualified personnel only
- The machine is designed for use in recovering the R143a refrigerant fluid used in the air-conditioning (A/C) system 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, as this may lead to malfunction or permanent damage to the machine.
- Keep away from moving parts and rotating elements such as cooling fans, alternators and heating components to avoid injuries.
- Wear protective clothing gloves and goggles.
- For automotive A/C maintenance, the operator must be fully familiar with the automotive A/C system and operation of this 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. Never have the machine in an upside-down position.
- Do not touch the machine's higher voltage power supply section, and do not proceed with maintenance procedures when the power is on.
- Follow the manual's procedures whenever possible, otherwise contact Canada Auto Solutions when there is doubt regarding any maintenance or operation procedures.

FEATURES

- Fully automatic, easy to operate.
- Using large-size glass tube with LED backlighting, can effectively observe the entire cleaning process.
- Vertically installing the HP & LP gauges let the operator be able to observe the pressure parameters timely even in the car.
- Unique design of the pipeline to achieve the high recycling rate with gas or liquid type.
- Concise operating interface.
- Designed with large size LCD.
- Machine equipped with database for information storage.
- Program & database may be updated upon owner's request.
- Equipped with printer.

SPECIFICATIONS

Working Conditions:

- Ambient Temperature: 0-50°C
- Relative Humidity: < 85%

Voltage Input: 220v±10%, 50/60HZ
110v±10%, 60HZ

Compressor: 12.2cm³

Vacuum Pump: 7.2m³/h, 10Pa

Load cell for tank: ±10g

Load cell for oil bottle: ±5g

Tank: 12L

Oil bottle: 250ml, double

LCD display: 240 x 128 cm

Working pressure: max. 20 bar

HP gauge: -1bar / 3.5MPa

LP gauge: -1bar / 1.5MPa

P gauge: -1bar / 3.5MPa

Backlighting: LED

FUNCTIONS

PRIMARY FUNCTIONS

- A. Automatic recovering/recycling
- B. Automatic/manual used oil drain
- C. Automatic vacuum
- D. Automatic/manual new oil injection
- E. Automatic recharging with load cell
- F. Auto-mode
- G. Database

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

OPERATIONS

PARTS & DESCRIPTIONS



FIRST USE

Step 1: Unscrew the electronic scale support screw before using the equipment.


Unscrew the
support screw.



From the back.

Step 2: Please supply about 4kg refrigerants into the tank of the equipment to ensure that all function can be run normally. (Refer to “Refrigerant Supply” section)

Step 3: Please read this manual carefully prior to operating the A/C Service machine.

PREPARATIONS BEFORE OPERATION

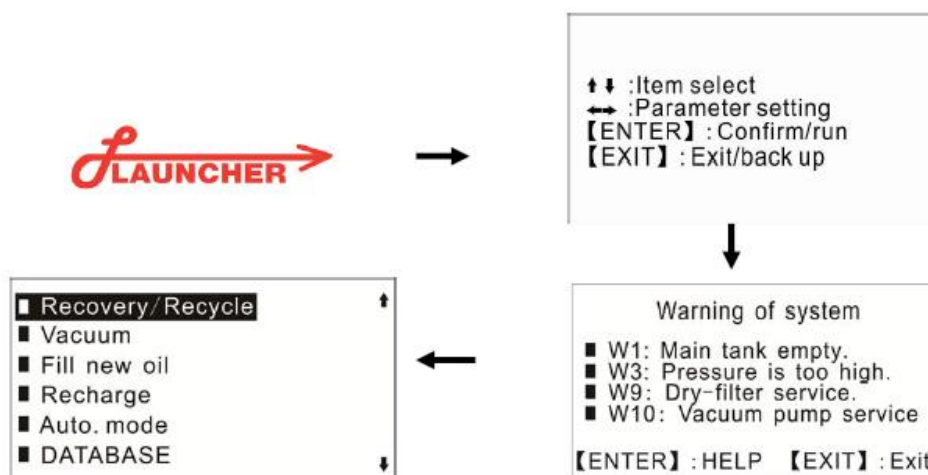
Step 1: Check if the machine has enough refrigerant in the tank. Volume should be 2-3kg.

Step 2: Empty the used oil bottle.

Step 3: Check the automotive A/C system. If there has been any leakage, it must be repaired prior to use to avoid refrigerant leaks during the recovering process.

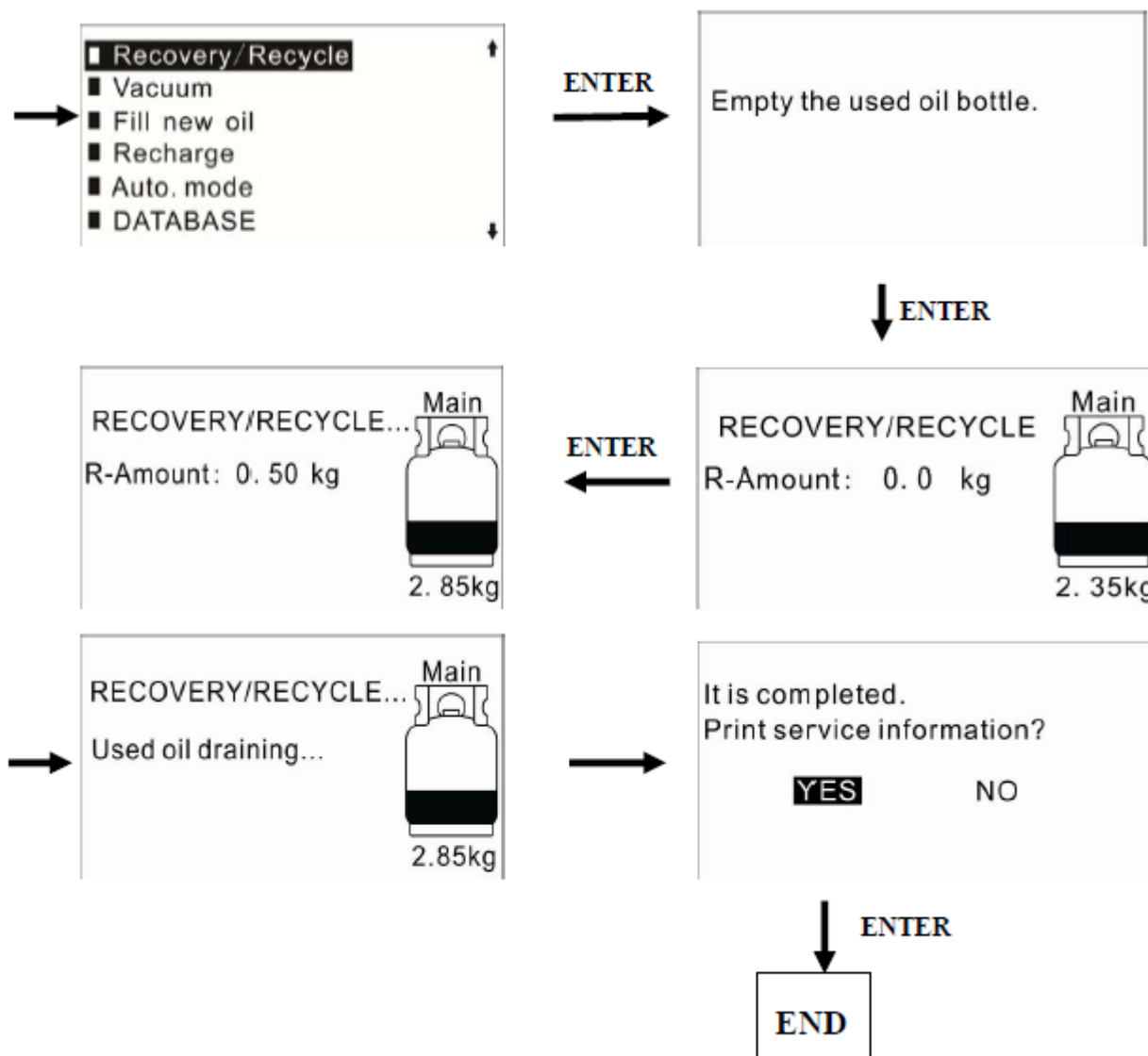
Step 4: Check if the automotive A/C can run normally.

POWER ON



RECOVERY/RECYCLING

- A. This function will recover the refrigerant remaining in the A/C system.
 B. Operations:



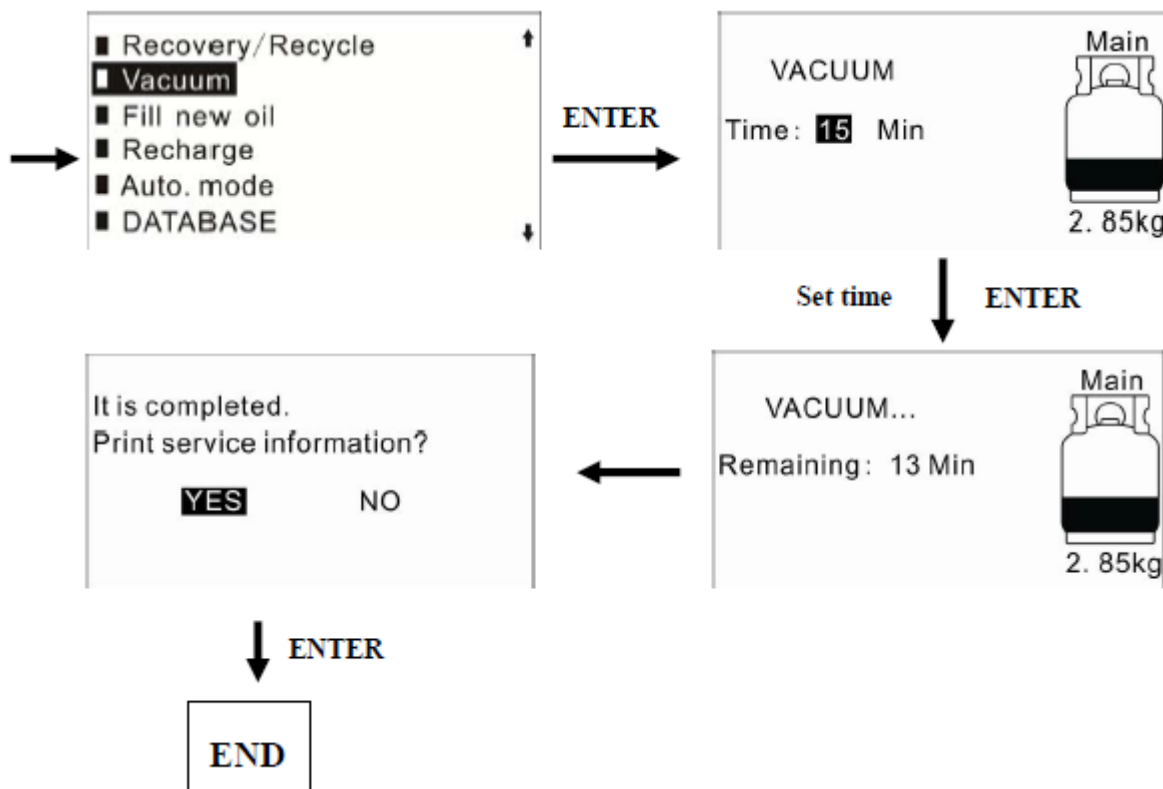
- C. If machine displays code: F00- during this process, please deal with it according to the information provided after said code.

Notice: The used oil can be drained out automatically or manually.

Note: Pressing “↑” and “↓” key in the recovery function will purify the non-condensable gas automatically.

VACUUM

- A. This function will clean the water vapor out from the A/C system.
- B. It should take 15 minutes for the air-conditioning only with front wind and 20 minutes for the front and rear wind.
- C. Operations:



- D. If code F00- is displayed during the process, please deal with it according to the information provided after said code.

NEW OIL ADDING

- A. Pour new oil into the new oil bottle.
Note: Add new oil more than 20ml than the used oil drained out to avoid entry of oil into the A/C system.
Warning: Please don't press on the switch of the new oil bottle anytime when the automotive A/C system is not in vacuum state, as it increases the risk of the bottle exploding in the machine.

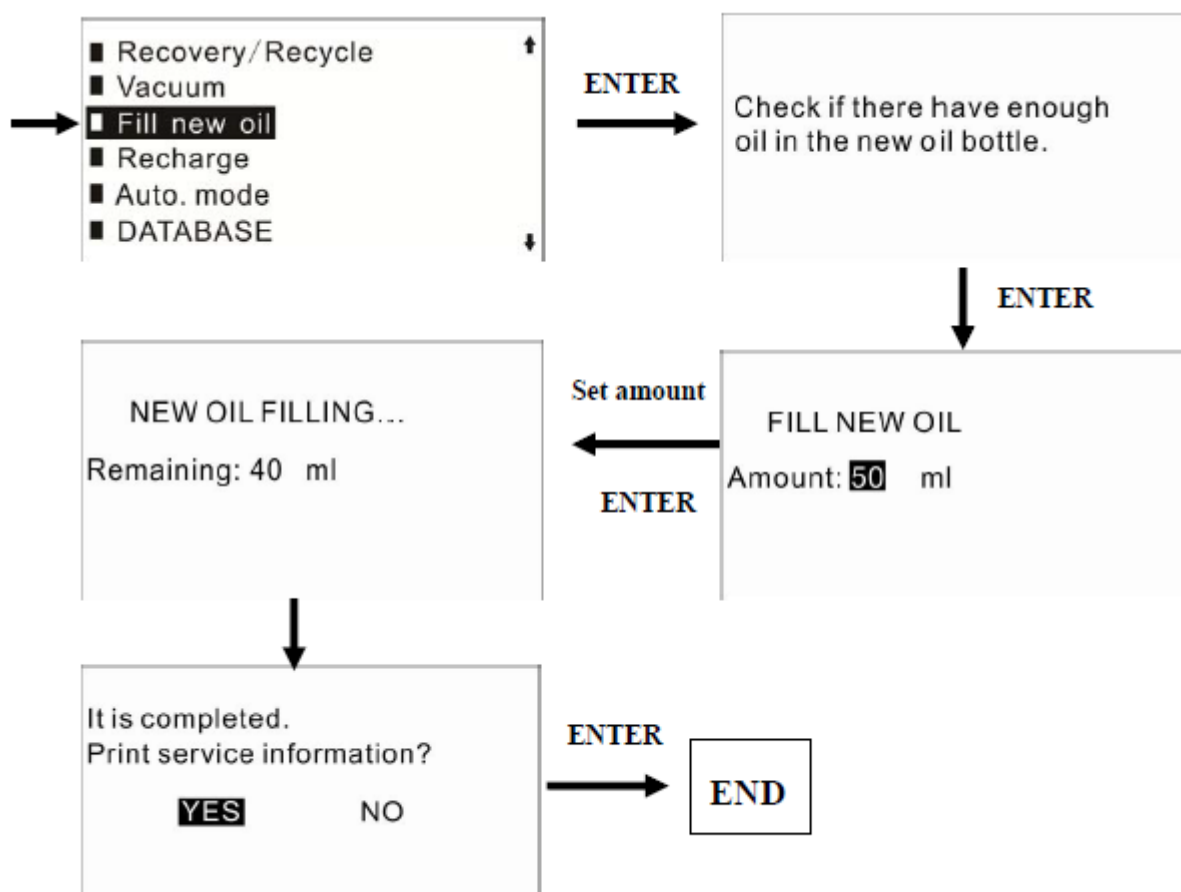
B. Method 1: Manual Operation

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



C. Method 2: Automatic Operation

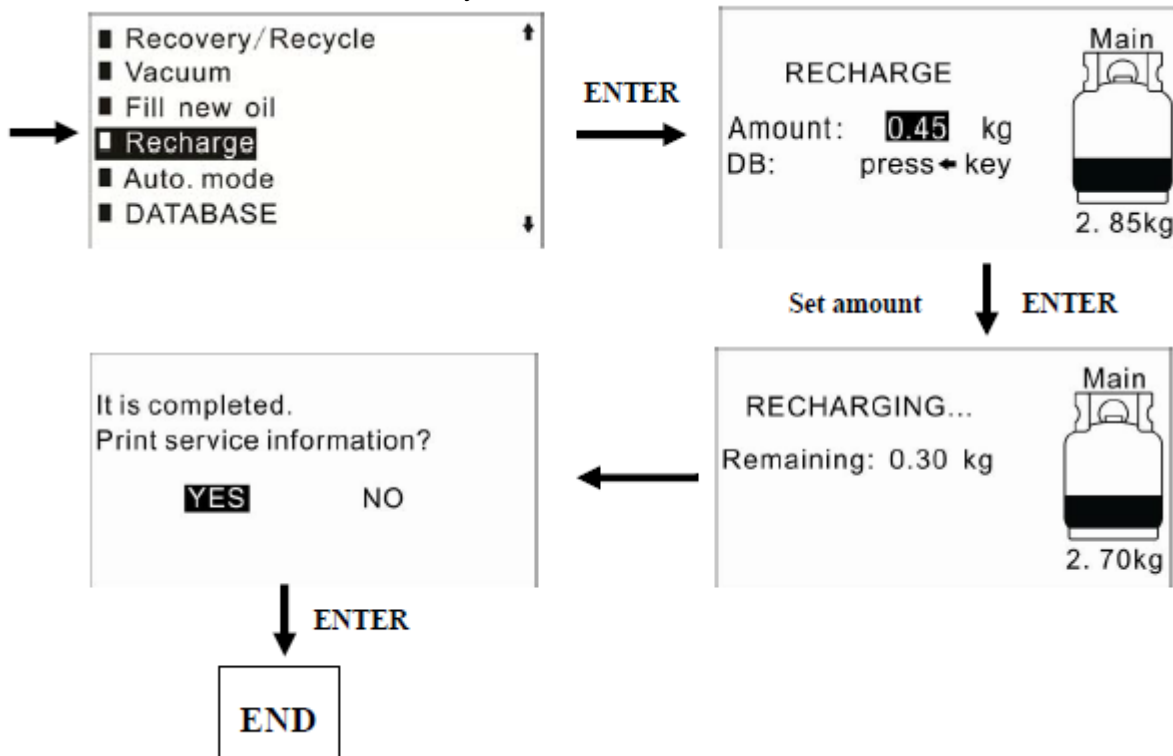
After vacuum, operate by following:



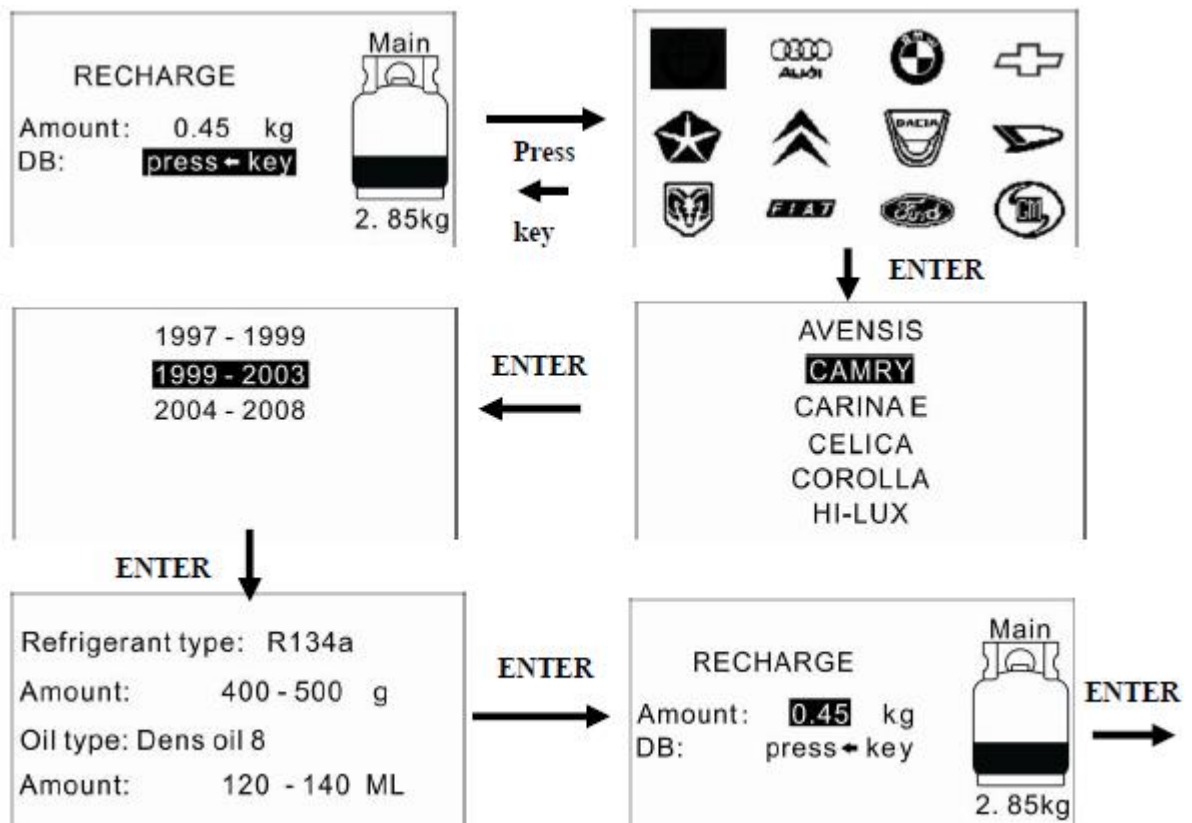
RECHARGING

A. The recharging amount setting:

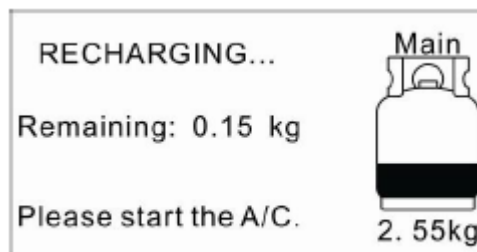
Method 1: Set the amount directly



Method 2: Set the amount using the machine's database



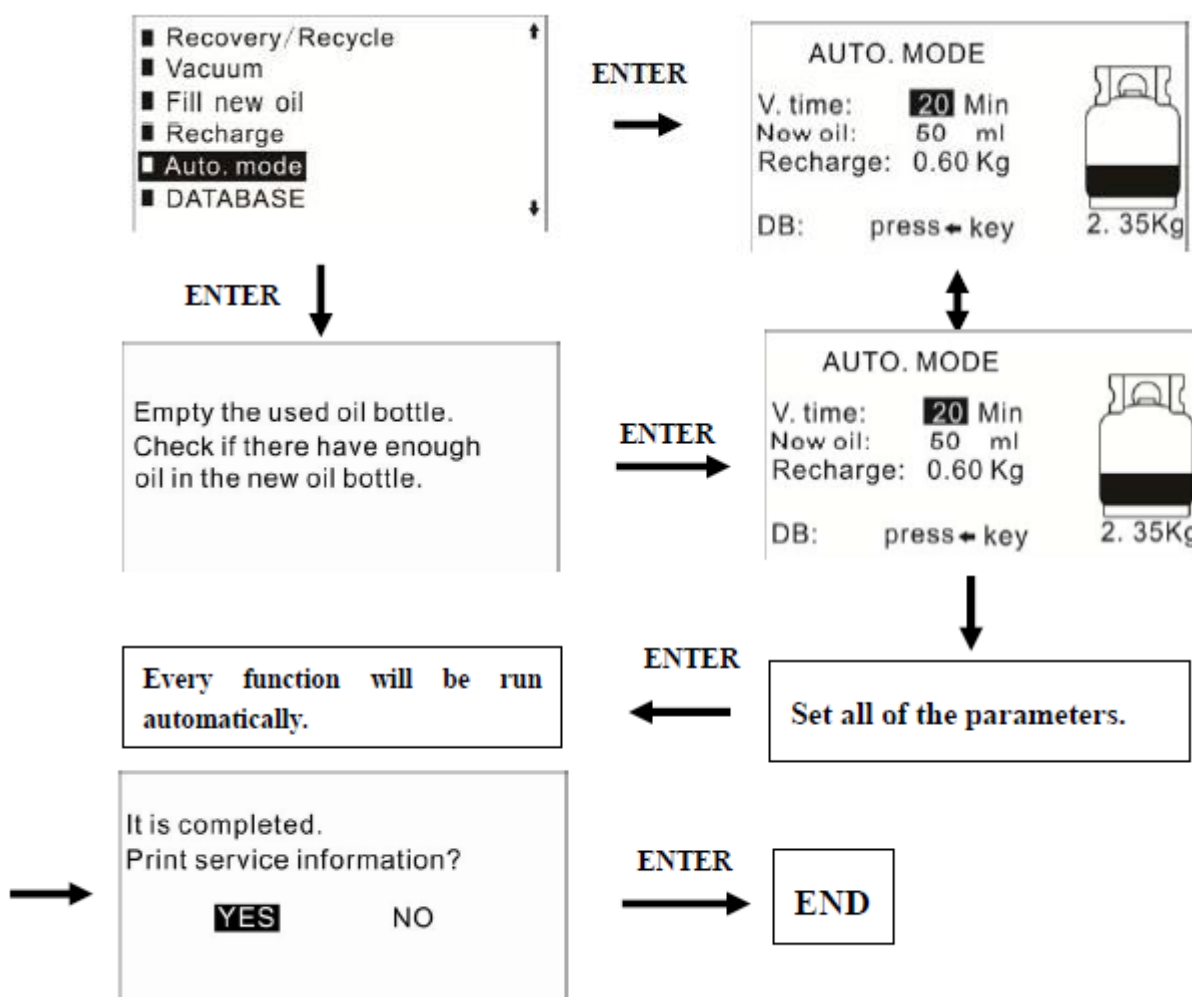
Note: In the recharging process, if the menu is displayed as the following:



This means that you need to turn on the car A/C to complete the recharging process. Later you should supply new refrigerant into the tank.

AUTO MODE

- A. Under this mode, all of the functions can be run automatically after setting the parameters.
- B. Before running, you must drain out the used oil entirely and fill enough new oil into the new bottle.
- C. Operations:

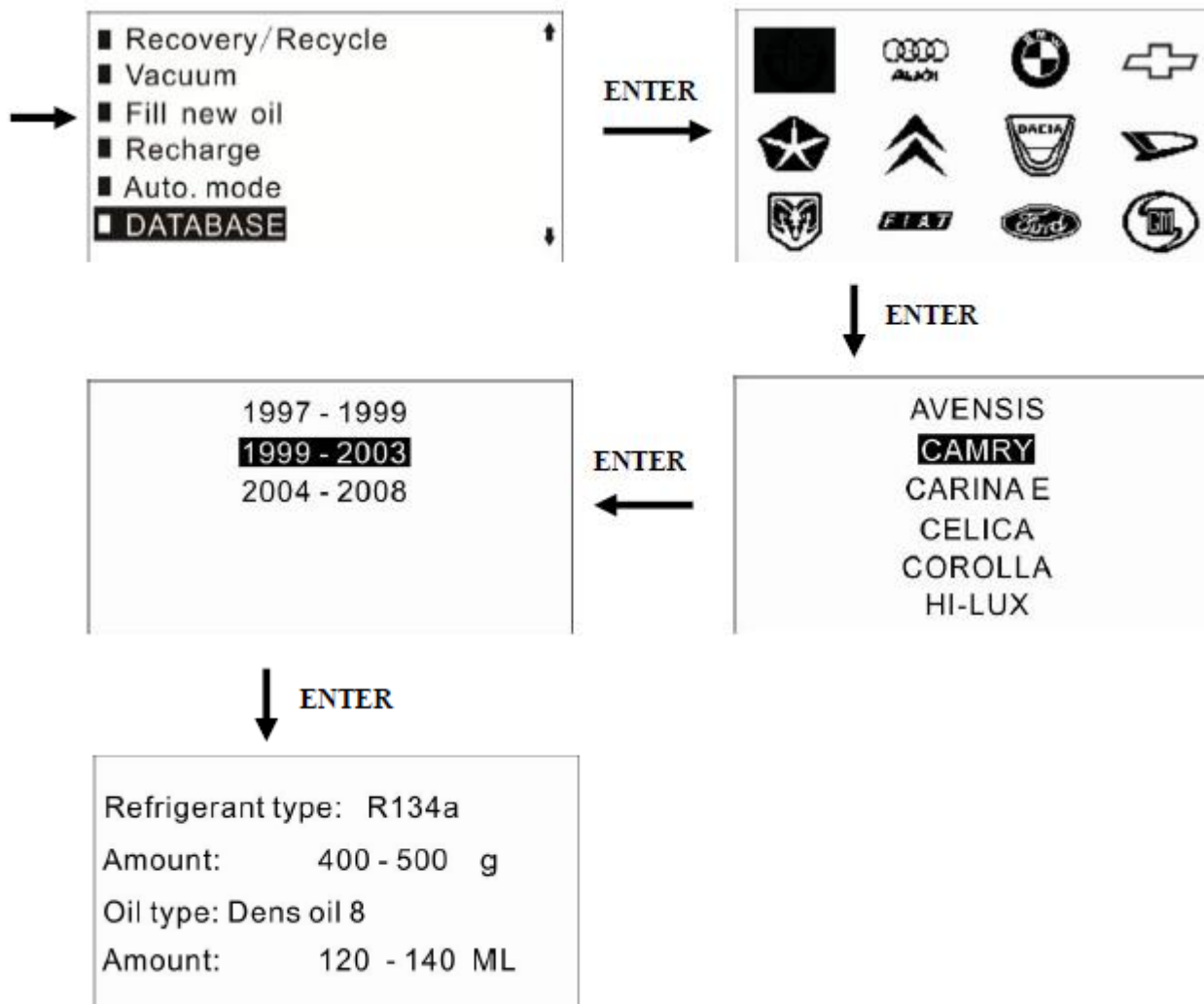


D. If code F00- is displayed during the process, please deal with it according to the information provided after said code.

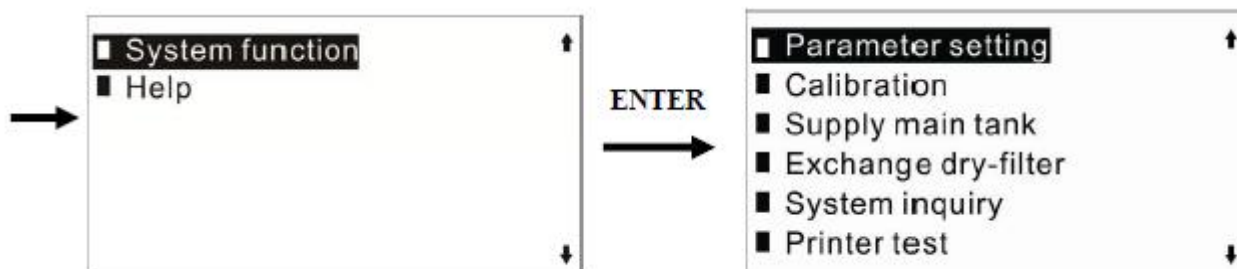
DATABASE

A. This function allows you to read the refrigerant type, the refrigerant oil type and their relevant filling amounts for the vehicle.

B. Operations:



SUBSIDIARY FUNCTIONS



1.1 USAGE OF AUXILLARY PORT

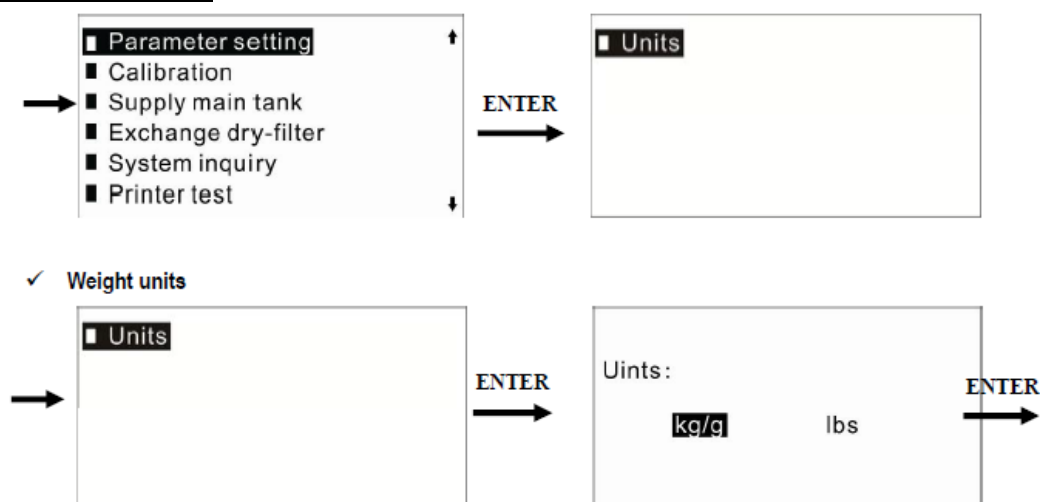
LEAK CHECKING BY N₂

- Remove the cap of the auxiliary port after the equipment stops working entirely.
- Connect the N₂ to the auxiliary port.
Note: The connector to the auxiliary port must be with thimble. Do not open the valve of the N₂ during this process.
- Adjust the N₂ pressure to a suitable value and open the valve of N₂. When the pressure is stable, please close the valve of N₂. Normally the pressure is adjusted to about 12-15 bar.
- Check if there has been any leakage in the A/C system. After checking, please press the needle in the auxiliary port to relieve the N₂.
- After completion, place the cap back on the auxiliary port.

RECHARGING FROM CANS

- Before vacuum, connect the pipe with the external tank to the auxiliary port.
Note: The connector to the auxiliary port must be with thimble. Do not open the valve of external tank during this process.
- Run vacuum function.
- Open the valve of the external tank to recharge the right amount refrigerant into the A/C system. Then close the valve of the external tank.
- After completion, disconnect the pipes and place the cap back on the auxiliary port.

1.2 PARAMETER SETTING

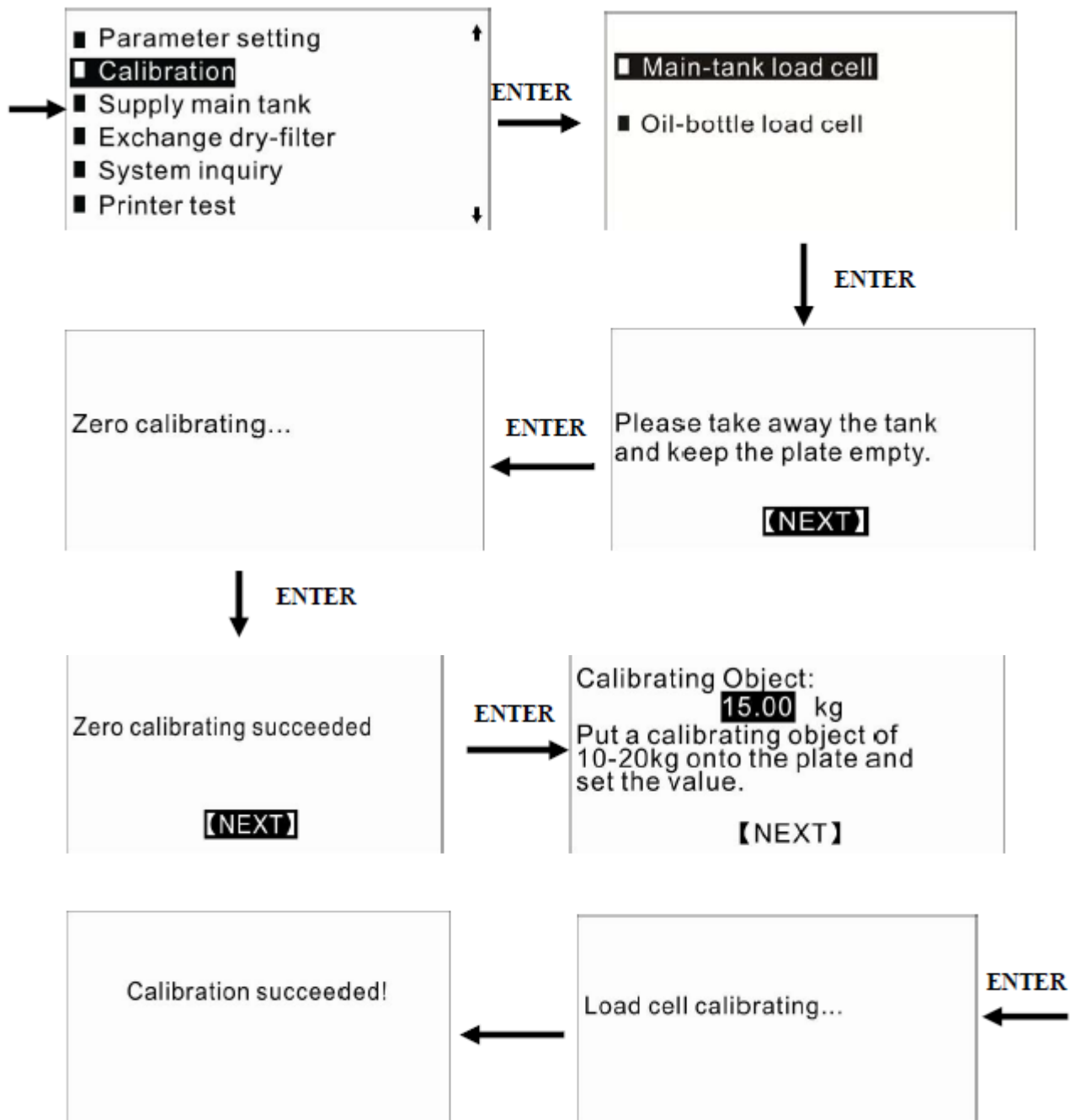


Note: Main Tank: This tank is installed in the machine and is used for the recovery and recharging functions.

1.3 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 for Calibration of Oil Bottle Load Cell are similar to those describe above for the Main Tank.

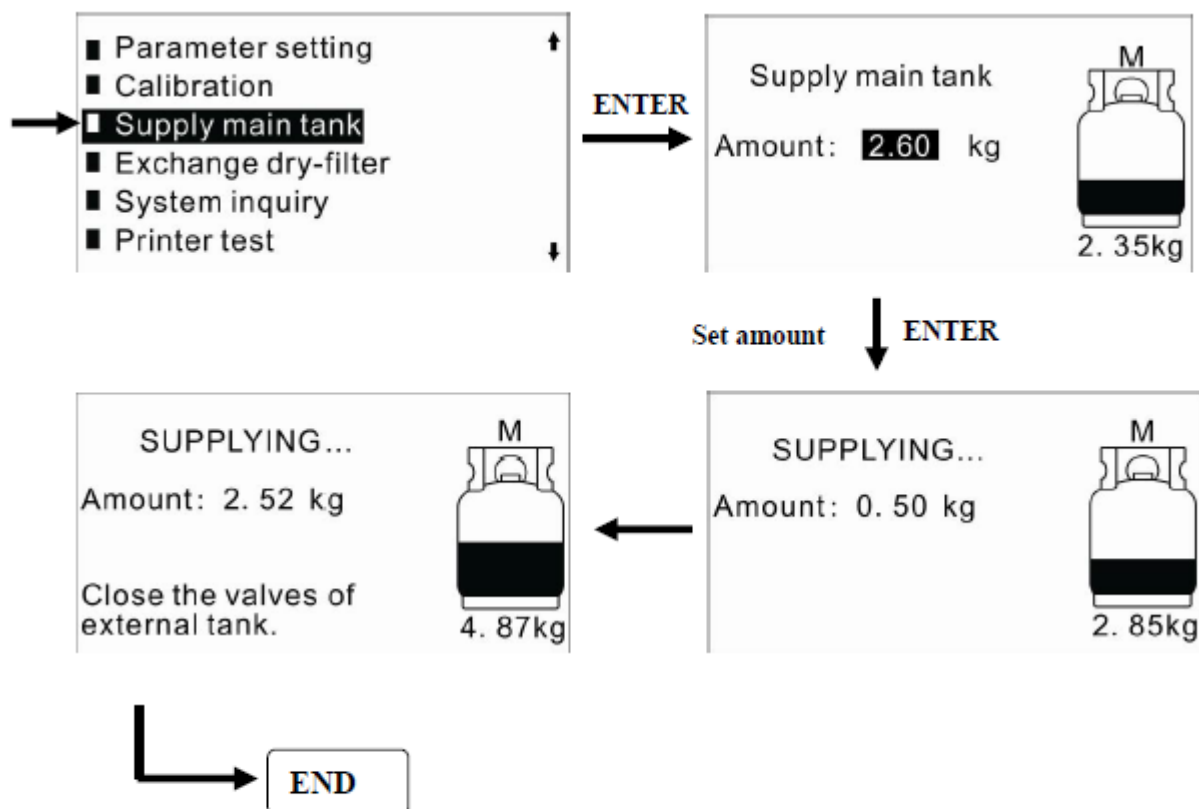
Note: the weight of the Calibrating object should be set to 1kg for the oil bottle.

1.4 REFRIGERANT SUPPLY FOR THE CLEANING TANK (INTERNAL TANK)

- A. Connect the port of fresh refrigerant tank to the HP port of equipment. Block the LP port of equipment with a cap or LP coupler.

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

- B. Operations:



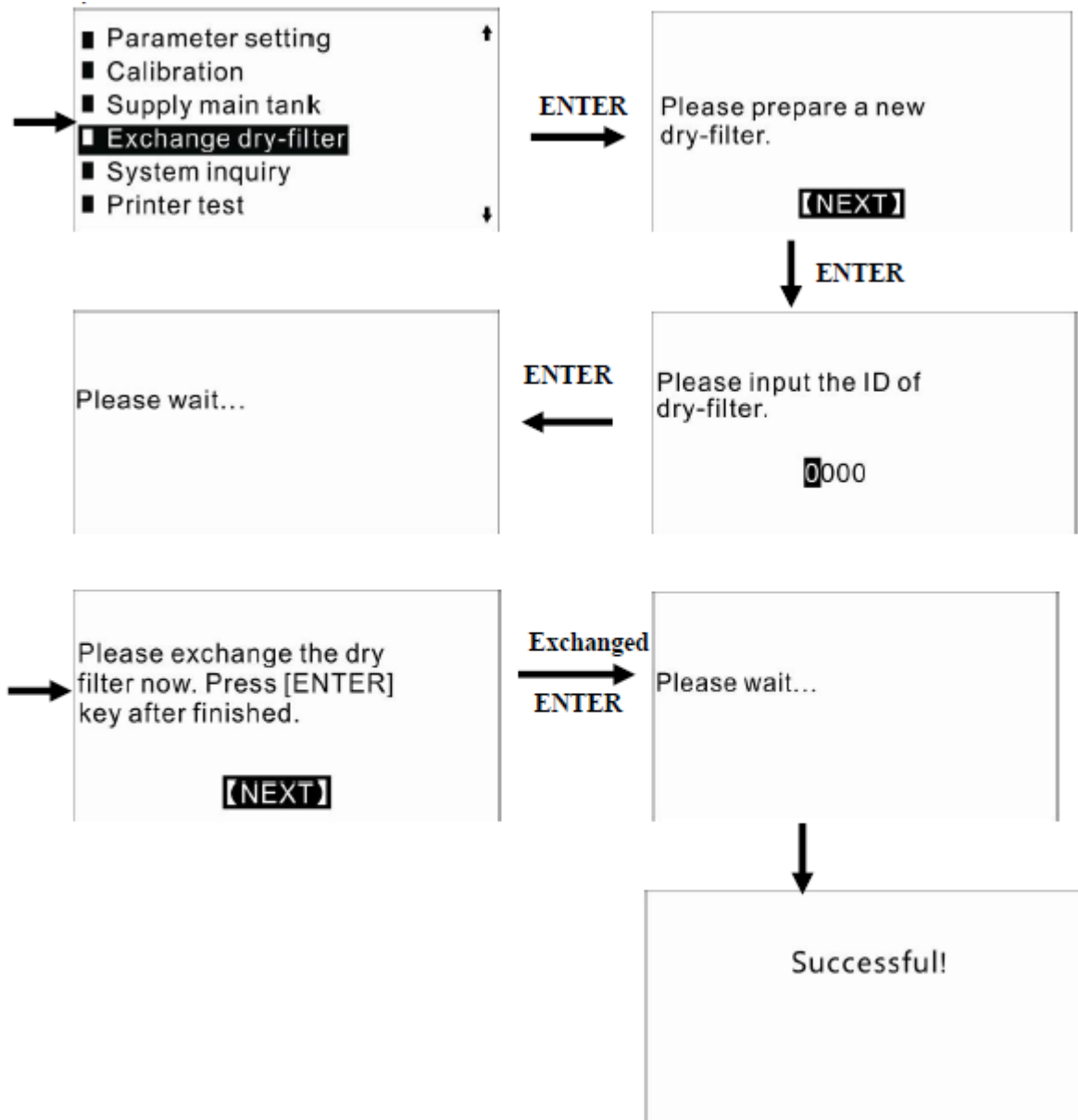
Note:

- Amount of supplying: Set the supplying amount according to the tank. Suggested supplying amount= 4.5-5 kg
- When finished, please close the valve of the refrigerant tank and run the recovery function.

1.5 EXCHANGE DRY FILTER

- A. The dry filter must be exchanged when it reaches the end of its useful life. A message will be displayed on the machine to alert the user to change the dry filter.
- B. If timely exchange of the dry filter is not performed, the machine will not be able to run the recovery and supplying functions as intended.

C. Operations:



Note:

- Please read the ID of the dry filter at the label. Which is the value followed by letters SN.
- Please pay attention to the mounting directions of the dry filter.

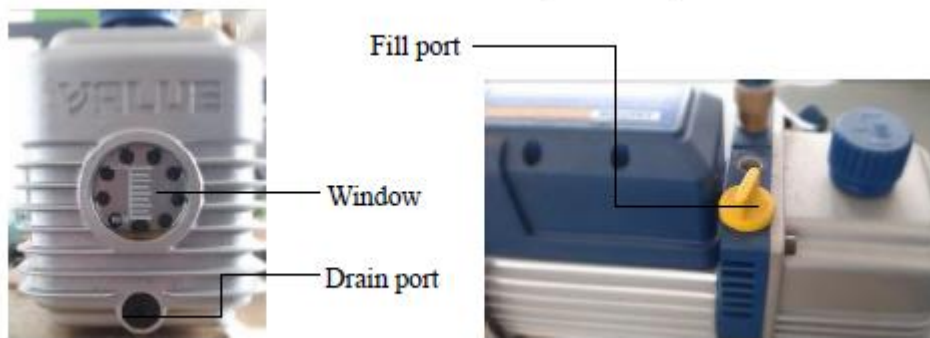
1.6 CHANGE VACUUM PUMP OIL

- When the pump oil has a creamy consistency or the machine displays a maintenance message, the vacuum pump oil must be changed.
- If not changed, the vacuum function will not be able to function as intended.

Steps:

1. Open the back cover.
2. Unscrew the block of the drain port to drain all the old oil. Then re-screw the block to the drain port.
3. Unscrew the cap of the fill port and then fill the vacuum pump with new oil slowly until the oil level reaches

at the center site. Then re-screw the cap to the fill port.



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

4. Close the back cover.

1.7 SYSTEM INQUIRY

Here you can check the working status of the machine.

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

1.8 PRINTER TEST

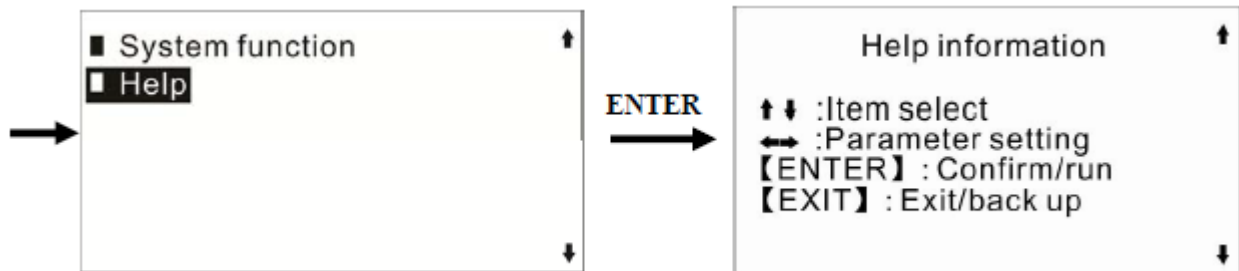
<ul style="list-style-type: none"> ■ Parameter setting ■ Calibration → ■ Supply main tank ■ Exchange dry-filter ■ System inquiry ■ Printer test 	<p>ENTER</p>	<p>Please check if the test page is correct.</p>
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1.9 EQUIPMENT INFO

<ul style="list-style-type: none"> ■ Equipment info 	<p>ENTER</p>	<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>	SN:	30500010113	Software:	V1.0	PCA:	V2.0	Pantent:	Z201220209364.7		Z201220209373.6	SHENZHEN ANYCAR TECH CO.,LTD	
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	Z201220209373.6													
SHENZHEN ANYCAR TECH CO.,LTD														

HELP

Here you can check all the help message.



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