A/C Service Station

Operating Instructions

Model: AC616H

 Please Read the Manual Carefully before Operation

Description: Recover, recycle, and recharge machine for use with R134a equipped air conditioning systems.

Product Information
Record the serial number and year of manufacture of this unit for future reference. Refer to the product identification label on the unit for information. Serial Number: _____ Year of Manufacture: _____

DISCLAIMER: Information, illustrations, and specifications contained in this manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without obligation to notify any person or organization of such revisions or changes. Further, producer shall not be liable for errors contained herein or for incidental or consequential damages (including lost profits) in connection with the furnishing, performance, or use of this material. If necessary, obtain additional health and safety information from the appropriate government agencies, and the vehicle, refrigerant, and lubricant manufacturers.

Terms of Service and Quality Assurance:

Thank you for choosing our products.

- This product warranty period of one year, during the warranty period, non-artificially damaged product quality problems, dealers or manufacturers to provide free maintenance accessories, by dealers or manufacturers designated maintenance personnel to carry out free maintenance.
- After the end of the one-year warranty period, the product quality problem needs to pay the spare parts cost and the maintenance cost.
- Machine accessories that need to be repaired or replaced must contact the local dealer or manufacturer to confirm and provide valid certificates so that the machine problem can be solved in a timely manner.
- We have a perfect quality service system to ensure that the quality of machine products is reasonably solved.

There is no Warranty under the Following Circumstances:

- ✓ Damage to machinery or accessories due to abnormal operation.
- ✓ Accidental damage to transport or warehousing and transshipment of machinery or accessories.
- ✓ Damage or other loss caused by changing the machine or using the machine for other purposes is not covered by the product warranty.

Contents

Important Safety Information's

This equipment is designed to be operated by qualified and trained personnel. Which should have enough knowledge of air conditioning repair & maintenance, refrigeration and electronics w/high pressure.It should only be operated after reading and understanding the safety warnings and operating procedures in this instruction manual and the vehicle's service manual.

When using tool, basic safety precautions should always be followed to reduce the risk of personal injury and damage to equipment.

The unit is extremely simple and reliable in selecting and performing all its functions.Therefore, the user is not exposed to any risk, if the general safety guidelines reported below are followed, in association with proper use and maintenance of the unit (improper use and maintenance will reduce the safety of the unit).

1. Checking the unit POE oil always before operation.Avoid working process without enough oil or with bad quality oil.
2. The refrigerant tank must be only filled to 80% of maximum effective capacity in order to avoid the serious accident caused by the additional pressure arising from enviromental factors.
3. Keep all soft tubes/hoses away from hot parts and rotating elements, such as: cooling fans, radiators and etc.
4. Always checking the vacuum oil pump, run/work without oil is strictlly prohibited.
5. Checking power switch under normal working condition or not. The machine must be well connected with earth and installed against electric leakage to avoid high voltage hurt.
6. Do operate under the instruction to avoid refrigeration from polluted.
7. Polluted refrigeration is avoided from adding into the automobile A/C system.
8. Do avoid too high pressure of refrigerant tank caused by too much refrigeration or too high environmental temperature, which will cause damage of the tank and compressor.
9. Make sure to place the vehicle's in "PARK"(if automatic) or "NEUTRAL" (if manual). Then, set the emergency parking brake and block the tires with chocks.
10. Warning: The warnings, cautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be under-stood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.
11. This unit is an advanced electromechanical product including precision control components. Never allow operator to make disassembly and service.

Warnings

Allow Only Qualified Personnel to Operate the Unit. Before operating the unit, read and follow the instructions and warnings in this manual. The operator must be familiar with air conditioning and refrigeration systems, refrigerants, and the dangers of pressurized components. If the operator cannot read this manual, operating instructions and safety precautions must be read and discussed in the operator's native language.

Pressurized Tank Contains Liquid Refrigerant. Do not overfill the internal storage vessel, because overfilling may cause explosion and personal injury or death. Do not recover refrigerants into nonrefillable containers; use only local government authorized refillable containers.

Hoses May Contain Liquid Refrigerant under Pressure. Handle refrigerant with care as serious injury may occur. Wear protective equipment, including safety goggles,rubber gloves.

Do not Breathe Refrigerant and Lubricant Vapor or Mist. Exposure may cause personal injury, especially to the eyes, nose, throat, and lungs. Use the unit in locations with mechanical ventilation that provides at least four air changes per hour. If accidental system discharge occurs, ventilate the work area before resuming service.

Do not Use an Extension Cord. An extension cord may overheat and cause fire. If you must use an extension cord, use the shortest possible cord with a minimum size of 14 AWG.

To Reduce the Risk of Fire, do not use the unit in the vicinity of spilled or open containers of gasoline or other flammable substances.

Do not Use Compressed Air to Pressure Test or Leak Test the Unit or Vehicle Air

Conditioning System. Some mixtures of air and R-134a refrigerant are combustible at elevated pressures. These mixtures are potentially dangerous and may result in fire or explosion causing personal injury or property damage.

to prevent cross-contamination, **Use this Unit with R-134a Refrigerant Only.** The unit is designed to recover, recycle, and recharge only R-134a refrigerant. Do not attempt to adapt the unit for another refrigerant. Do not mix refrigerant types through a system or in the same container; mixing of refrigerants will cause severe damage to the unit and the vehicle air conditioning system.

High Voltage Electricity inside the Unit Has a Risk of Electrical Shock. Exposure may cause personal injury. Disconnect the power before servicing the unit.

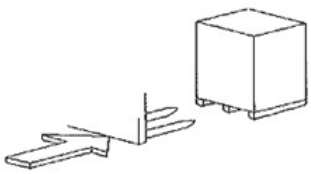
Horizontal Hold. During operation, the device must be on a level, flat surface so that the messurement can be made correctly.

Protect the device against rain Do not expose this machine to direct sunlight or rain. Used in a well ventilated area.

Transport and Packing

1. No pressure in the working tank and system after packing.
2. Storage and transport must refer to the marks on the box. Avoid rain,and notice the placed direction.

3. Use a forklift to transport goods. Avoid violent transport.



4. Make sure the product and acessary in box should be complete and identicaln whit the part list, if not please contact with the local distributor in time.
5. The proper disposal of the packaging is the reponsibility of the customer.
6. Recommended service life of 6 years for machinery.
7. Disposal of machine scrapping according to local policies, laws and regulations.

Accessories

Check the accessories according to the packing list. If any missing parts or damaged parts found, please contact the dealer in time.

Pic	Name	Qty
	Manual	1 set
	2.5m HP and LP Hoses	1 set
	HP and LP quick Coupler	1 set
	Big Castor	2 pc
	Wheel Axle	2 pc
	E-shaped Snap Ring	2 pc
	Casters with Brakes	2 pc
	Nuts and Gaskets	2 set
	Nuts and hook	1 set

Technical Data

Parameter	Value
Power Supply:	AC 220V 50Hz 1PH
Work Temperature:	5 ~ 50℃
Vacuum Generated Speed:	60L/min.
Compressor Power:	1/3HP
Refrigerant Recovery:	R134a
Accuracy of Electronic Scale:	±5g
Max. Weight of the Electronic Scale:	60kg
Capacity of Refrigerant Tank:	10kg
Recovery Speed:	180~350g/min.
Refilling Speed:	800~1500g/min.
Max. Pressure for HP:	34 Bar
Max. Pressure for LP:	34 Bar
Max. Pressure for TP:	25 Bar
Max. Working Pressure:	17.5 Bar

N.W/G.W:	73/78.3kg
Packing size:	590×560×1110mm

Product Description

Function Features

1. Testing air-conditioning system.
2. Recover the waste R134a refrigerant from vehicle A/C system.
3. Electronically gauge amount of refrigerant recovered from air-conditioning system.
4. Vacuum the vehicle A/C system and leakage test.
5. Recycle the wasted refrigerant with the professional oil-water separation system.
6. Refrigerant and frozen oil recharge for the vehicle A/C system.
7. LCD screen, clear control panel and humanized notice.

Appearance Description

1 LP Gauge: Show the low side pressure of the a/c

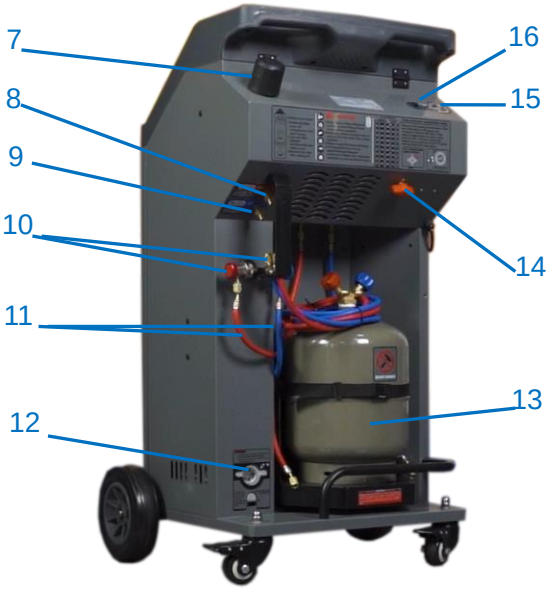
2 Tank Pressure Gauge: Show the tank R134a pressure gauge

3 New Oil Bottle: to store the new cooling oil

4 Waste Oil Bottle: to store the waste cooling oil

5 LCD display: to display the operating information

6 HP gauge: Show the high side pressure of the a/c



7 Vacuum pump oil mist filter（Vacuum oil inlet）

8 HP connector

9 LP connector

10 Quick connector

11 Refrigerant pipe

12 Oil level window: to observe the pump oil level

13 Refrigerant tank

14 Hand valve: non-condensable gas discharge valve in refrigerant tank

15 Power Swtich

16 Fuse

Control Panel

recovery shortcut key, activates the recovery sequence.

Charge shortcut key, charges the vehicle A/C system with a programmed amount of refrigerant.

Vacuum shortcut key, activates the vacuum sequence, followed by a leakage test.

To start a procedure or enter the next screen.

Stop or back to previous screen.

New oil filling button, decimal point input button.

Arrow keys are Used for scrolling through menu items.

number key to input number.

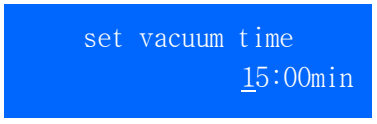
Shortcut Key

A. Press the 

key to enter into the recover function

B. Press the 

key to enter into the vacuum function



C. Press the 

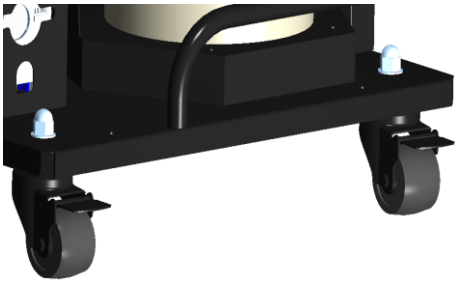
key to enter into the recharge function

Prepare for the First Time to Use

Equipment Installation

1. Unpack and check accessories for completeness or damage.
2. Install the castor.

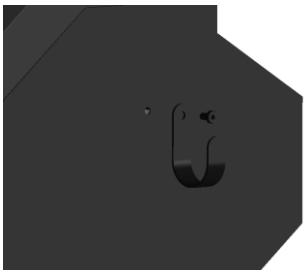
A.


B.


C.


D.


3. Install the refrigerant pipe hook.

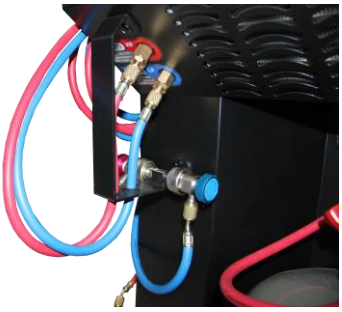
A.


B.


4. Install refrigerant tube and quick connector.

A.

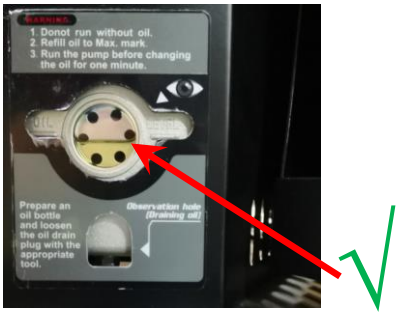
B.



C.

5. Check the vacuum pump oil.

A.



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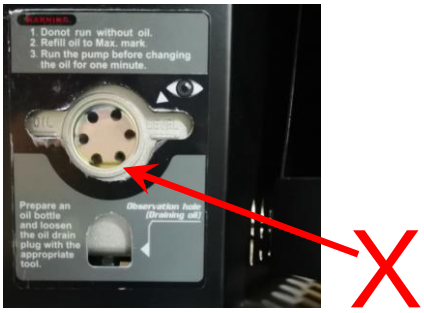
B.



X

C.

X

6. Install the refrigerant tank.

A.

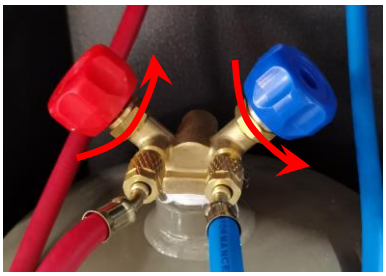
Protection Bracket

Note: This bracket must be removed before the machine can be used ! ! !

B.

C.

D.



Open the two hand valves counterclockwise.

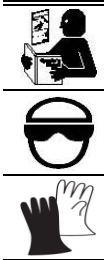
E.

Protection Screw

Note: These screws must be removed before the machine can be used ! !

F.

Fill Refrigerant into the Working Tank.



Warning: To prevent personal injury while working with refrigerant, read and follow the instructions and warnings in this manual, and wear protective equipment such as goggles and gloves.

Refrigerant tank fitted on a platform is evacuated during the production process.

Warning: When the new machine is used for the first time, more than 3kg of new refrigerant must be added to the refrigerant tank of the machine to ensure the normal filling function of the machine.

A.

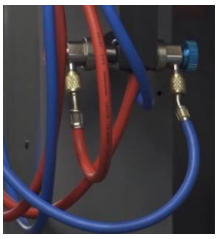
Refrigerant :

R134a is correct !!!

Others is wrong !!!

R134a weigth ＞ 5 kg

B.



C.

D.

E.

F.

Do not open the hand valve ! ! !

G.

AC 220V 50Hz 1 phase

H.

Press **ON/OFF**

I.

MENU Recover	Press **2**
MENU Vacuum	Press **Enter**
set vacuum time 15:00min	Press **0 0 1 0**
set vacuum time 00:10min	Press **Enter**
vacuum... 00:05min	Waiting . . . . .
Vacuum complete!	
Leakage test... Pls record data!	

Record the position of the needle of the LP pressure gauge and observe whether there is leakage.

J.

If the leakage detection, the needle does not return to zero, indicating that there is no leakage, you can carry out the following operation, otherwise, there is leakage, need to exclude leakage after subsequent operations.

K. 2 minutes later

test end!
compare data!

Press **Esc**

L.

MENU
Recover

Waiting . . . . . .

M.

Open the hand valve

N.

MENU
Recover

Press **Enter**

tank134a 0.000Kg
set qty 9.950Kg

Press **3**

134atank 0.000Kg
set qty 3.000Kg

Press **Enter**

Recovering.....
Recovered0.035Kg

Waiting . . . . . .

Recovering.....
Recovered3.00Kg

Recover nofinish
Pls recover...

Waiting . . . . . .

O.

Close the hand valve.

P.

Recover nofinish
Pls recover...

Press **Esc**

MENU
Recover

Press **Enter**

tank134a 3.000Kg
set qty 6.950Kg

Press **Enter**

Recovering.....
Recovered0.035Kg

Waiting . . . . . .

Q.

R.

Recover finish!
Recovered 0.190Kg

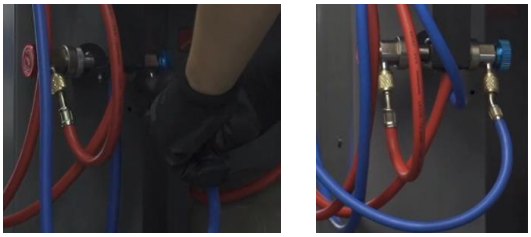
Waste oil drain
Waiting 60s……

Press **Esc**

MENU
Recover

S.

T.



U. The new refrigerant filling operation is complete and the machine can be used normally.

Fill new coolant oil

Note:

Refrigerated oil model and add amount, in the car engine location to find, or query the car maintenance information, or consult the car manufacturer .

A.

B.

C.

D.

E.

New oil level:

≥100ml is correct

＜100ml is wrong

=250ml is best

Operation Instructions

The connection of the machine to the car

Warning: To prevent personal injury while working with refrigerant, read and follow the instructions and warnings in this manual, and wear protective equipment such as goggles and gloves.

Note:

- In order to recover the refrigerant of the automobile air conditioning system more quickly and thoroughly, the automobile air conditioning should run for 10~15 minutes first, and then turn off the air conditioning , and then connect with the machine.
- Check whether the refrigerant in the automobile air conditioner is R134a refrigerant. This equipment is only applicable to the automobile air conditioner with R134a refrigerant.

- Before connecting the quick couplers, clean the a/c ports of any foreign material.

A.

Close quick connector counterclockwise.

B.

If the high/low pressure port is dirty, it must be cleaned up, otherwise it will leak when connected to the quick connector.

C.

Open quick connector clockwise.

Recover refrigerant from a Vehicle

Warning: To prevent personal injury while working with refrigerant, read and follow the instructions and warnings in this manual, and wear protective equipment such as goggles and gloves.

A. Check and record the waste oil level in the waste oil bottle.

Waste oil level:
≤200ml is correct

＞250ml is wrong

Empty is best

B.

MENU Recover

Press **Enter**

tank134a 3.190Kg set qty 6.760Kg

Press **Enter**

Recovering..... Recovered0.035Kg

Waiting . . . . . .

C.

D.

Recover finish! Recovered 0.600Kg

Waste oil drain Waiting 60s·····

Waiting . . . . . .

Oil drain completed!

E.

Note:

Record the waste oil level in the waste oil bottle.

The oil discharged is only a small amount of dissolved in the refrigerant to be decomposed out of the oil, the oil discharged by different vehicles is not the same, some car air conditioning is only a little bit discharged.

F.

Oil drain completed!

Press **Esc**

MENU Recover

G. The refrigerant recovery operation is complete.

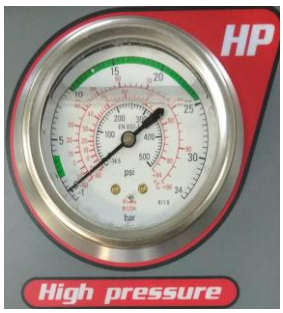
Evacuate the A/C System & leakage test

Warning: To prevent personal injury while working with refrigerant, read and follow the instructions and warnings in this manual, and wear protective equipment such as goggles and gloves.

Note:

Before vacuumizing, there must be no refrigerant in the air conditioner system.

A. Check HP and LP pressure gauge



B.

MENU Recover

Press **2**

MENU
Vacuum

Press **Enter**

set vacuum time
15:00min

Press **Enter**

Vacuum...
01:45min

Waiting . . . . . .

Vacuum complete!

Leakage test...
Pls record data!

Record the position of the needle of the LP pressure gauge and observe whether there is leakage.

C. 

If the leakage detection, the needle does not return to zero, indicating that there is no leakage, you can carry out the following operation, otherwise, there is leakage, need to exclude leakage after subsequent operations.

D. Leakage test...
Pls record data!

2 minutes later

test end!
compare data!

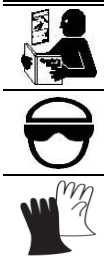
Press add oil to recharge
oil compare data!

Waiting . . . . . .

Warning:Do not press any key to prepare for refueling operation！！！

E. Vacuumizing is complete.

Oil injection



Warning: To prevent personal injury while working with refrigerant, read and follow the instructions and warnings in this manual, and wear protective equipment such as goggles and gloves.

Important:

The refueling function cannot be called out separately. Refueling can only be performed when the interface displays the refueling interface after vacuumizing!!!

The unit requires that the air conditioning system has previously been evacuated to a maximum vacuum before this function can be carried out.

Oil injection can only be done after vacuumization, and the air-conditioning system is not leaking.

A. Check HP and LP pressure gauge

B. Check the oil level of the new oil bottle. The oil level must be greater than 100ml.

C. Query the amount of waste oil discharged during refrigerant recovery recorded before as a reference for new oil filling amount. Generally, the new oil is 15ml more than the old oil.

D. When the vacuum leakage detection is completed, the following interface appears

Press add oil to recharge
oil compare data!

Press **./Add oil** and hold on , Start filling new oil

Release **./Add oil** ， New fuel filling stopped.

E. In order to make the filling amount of new oil more accurate, it is necessary to press the refueling button and observe the new oil level at the same time, and release the add oil in time when the required oil amount is reached. It is usually more accurate to fill the tank several times.

F. Oil injection is complete.

Refrigerant Recharge for Vehicle A/C System

Warning: To prevent personal injury while working with refrigerant, read and

follow the instructions and warnings in this manual, and wear protective equipment such as goggles and gloves.

Important:

The unit requires that the air conditioning system has previously been evacuated to a maximum vacuum before this function can be carried out.

Recharge can only be done after vacuumization, and the air-conditioning system is not leaking.

The car air conditioner must be turned off when refrigerant recharge.

A. Check HP and LP pressure gauge

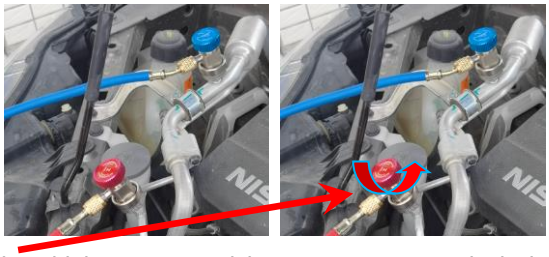
B.

MENU Recover	Press **2 or 8**
MENU Recharge	Press **Enter**
134atank 3.790kg Set qty 0.000kg	Press **0 . 6**

Note: The refrigerant type and standard filling amount are generally located in the engine of the car. If you cannot find it, consult the vehicle maintenance information or consult with the automobile manufacturer.

134atank 3.790kg Set qty 0.600kg	Press **Enter**
charging.... 0.385kg	Waiting . . . . .
charging.... 0.600kg	
Recharge end! Fill qty 1.000kg	
Remove HP hose Run car A/C...	Waiting . . . . .

C.



Close high pressure quick connector counterclockwise.

D.

Start the car engine, turn on the car air conditioner, and set the temperature to the lowest.

E. After about 2 minutes,

Remove HP hose Run car A/C...	Press **Esc**
MENU Recover	

F.

Turn off the car air conditioning, turn off the engine.

G.

H. Refrigerant filling completed.

Operation abnormal display and handling methods

Abnormal display and solution in recovering

Warning that the collection amount is too large

A.

```
tank134a 3.190Kg
set qty  6.760Kg
```

set qty ≤ 6.760 kg

If set qty ＞ 6.760kg

```
tank134a 3.190Kg
set qty  7.800Kg
```

Press **Enter**

```
Set qty over
Max 6.760kg
```

Press **Enter**

Re-input the amount of recycling, less than the value after Max, the machine can resume normal recycling work.

Warning that collection did not complete

A.

If the car air conditioner has 600G refrigerant.

B.

```
tank134a 3.190Kg
set qty  6.760Kg
```

Press 0.2

```
tank134a 3.190Kg
set qty  0.200Kg
```

Press **Enter**

```
Recovering.....
Recovered0.035Kg
```

.....

```
Recovering.....
Recovered0.200Kg
```

```
Recover nofinish
Pls recover...
```

Press **Enter**

C. Return to the main menu, reset the recycling amount to greater than 600G, and the machine resumes normal recycling.

Important:

Generally, the amount of refrigerant collected does not need to be changed. The default value can be used to recycle all refrigerant in the automobile air conditioner .

Filter dryer replacement warning

A.

```
Recov over 98kg
Replace filter
```

Press **Enter**

B. The machine continues to recycle. After recycling, replace the filter dryer and reset the filter dryer time.

High pressure alarm

A.

```
Pressure high!
Release pressure
```

B.

Measure the temperature of the refrigerant tank with a thermometer. (Thermometer prepared by customer)

C.

Observe TP pressure

D.

R134a≈R1234yf

Ambient temperature		Pressure value	
°C	°F	Bar	Psi
6	43	2.6	38
8	46	2.9	42
10	50	3.1	45
12	54	3.4	50
14	57	3.7	54
16	61	4	58
18	64	4.4	63
20	68	4.7	68
22	72	5.1	74
24	75	5.5	79
26	79	5.8	85
28	82	6.3	91
30	86	6.7	97
34	93	7.6	110
38	100	8.6	125
42	108	9.7	141
46	115	10.9	158
50	122	12.2	176

Refer to this standard temperature pressure gauge,

a) if TP pressure value is higher than the standard temperature pressure, open the exhaust hand valve, discharge non-condensing gas.

When the TP pressure is lower than 12Bar, the machine can resume normal operation.

b) If TP pressure value is lower than the standard temperature pressure, it is necessary to wait for the machine to cool down before operation.

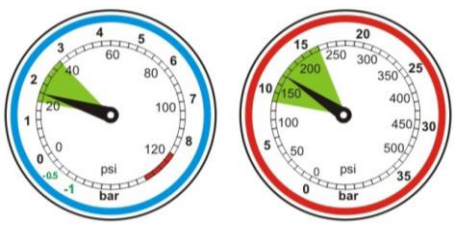
Abnormal display and solution in vacuuming

The machine does not perform the vacuumizing procedure

A.

```
R134a in car
Recover first
```

B.



If there is pressure in the HP and LP tables, it indicates that there is refrigerant in the air conditioner. Recycle the refrigerant to zero pressure before vacuumizing.

C.

```
R134a in car
Recover first
```

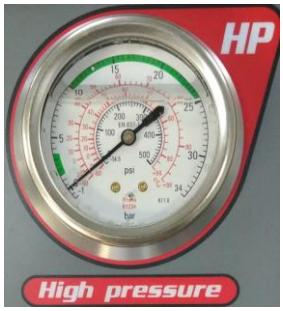
Press 


```
tank134a 3.145kg
set qty  6.805kg
```

Press **Enter**

```
Recovering.....
Recovered0.035Kg
```

Waiting . . . . . .



D. After recycling is complete and the air conditioner has no refrigerant, the vacuuming function can be restored to normal use.

Vacuum pump oil replacement warning

A.

```
Pump run 15hour
Pls change oil
```

Press **Enter**

B. The machine continues vacuuming. After vacuuming, replace the vacuum pump oil and reset the vacuum pump time.

Maintenance

Replace the dry filter

Warning: To prevent personal injury while working with refrigerant, read and follow the instructions and warnings in this manual, and wear protective equipment such as goggles and gloves.

Warning:

High-pressure refrigerant may exist in the filter dryer and pipe system. Wear protective equipment and exercise caution when operating the filter dryer to ensure personal safety.

A.

```
Recov over 98kg
Replace filter
```

If the above interface appears on the display screen, it is necessary to replace the dryer filter inside the machine. If the machine is recovering normally, replace

the filter dryer after the machine is recovering and discharging oil.

B. Recov over 98kg
Replace filter
Press **Enter**

C. Waiting . . . . . .

D. Oil drain completed!
Press **Esc**

E. MENU
Recover

F. Turn off the power switch of the machine.

G. 

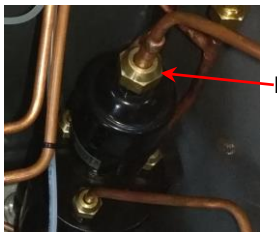
Pry the nine plugs out.

H. 

I. Unscrew 9 screws and open the top cover.

J. 

Open the cover and insert the support plate into the side wall of the chassis. If you need to open a larger Angle, remove the filter from the back of the machine.

K. 

Hold the filter dryer in place with one wrench and slowly unscrew the valve nut with the other wrench to remove the copper pipe from the filter dryer.

L. 

The new filter dryer must have the same specifications and size as the old filter dryer.

M.  

Install the new filter dryer into the machine, and note that the arrow of the filter direction is up.

N. Install the cover and turn on the power switch.

O. MENU
Recover
Press **8**

MENU
setting
Press **Enter**

setting
password:****
Press **8 8 8 8**

setting
clear filter
Press **Enter**

filtered R134a
98.00kg
Press **0 0 0 0**

filtered R134a
00.00kg
Press **Enter**

P. The filter dryer has been replaced.

Change Vacuum Pump Oil

Warning: To prevent personal injury while working with refrigerant, read and follow the instructions and warnings in this manual, and wear protective equipment such as goggles and gloves.

In order to make the vacuum pump work better, the machine will remind the operator to replace the vacuum pump after the vacuum pump works for 10 hours. When the vacuum pump oil is found to be dirty through the vacuum pump oil window, the

vacuum pump can be replaced in advance.

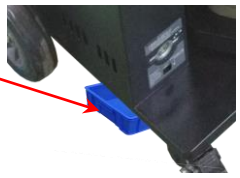
A.

Pump run 15hour
Pls change oil

When the screen displays the top interface, press **Enter** to let the machine automatically complete the vacuumizing operation, and then replace the vacuum pump oil.

B. About 500ml oil receiving box (user-provided)

Plug the oil receiving box under the vacuum pump drain port.



C.

Unscrew the drain screw with a wrench to drain the old vacuum pump oil.

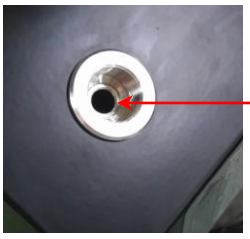
drain screw

D. After the old vacuum pump is drained, screw the drain screw back to the drain port.

E.

Turn the upper cover, filter element and lower cover of the filter down, respectively.

F.



Add oil port

Pour the new pump oil into the vacuum pump from the filter fixed hole. (Please use 100# vacuum pump oil)

G.

Oil level OK

The oil is too much !!!

H. Vacuum pump oil to the appropriate position, the filter back to the refueling port.

I. Turn on the power switch and enter the system setting.

J.

MENU Recover	Press **8**
MENU setting	Press **Enter**
setting password:****	Press **8 8 8 8**
setting clear filter	Press **2** or **8**
setting clear vacuum	Press **Enter**
total vac time: 15.00h	Press **0 0 0 0**
total vac time: 00.00h	Press **Enter**

K. The vacuum pump oil replacement operation has been completed.

Calibrate the refrigerant scale

Warning: To prevent personal injury while working with refrigerant, read and follow the instructions and warnings in this manual, and wear protective equipment such as goggles and gloves.

Any time you doubt the R134a scale's accuracy, you may do a calibrition as followed steps.

A.

Prepare a 5kg weight, or other standard weight, which must be the standard weight, the calibration procedure will use this standard weight as the reference, if the standard weight is not accurate, the machine will display the wrong weight !!!

B.

Loosen the belt on the refrigerant cylinder then remove the refrigerant tank from scale plate(no need to dismantle the two hose fixed on the tank) and make sure there is nothing on the scale plate.

C.

MENU Recover	Press **8**
MENU setting	Press **Enter**
setting password:****	Press **8 8 8 8**
setting clear filter	Press **2** or **8**
setting calibration	Press **Enter**
NO-load:00832 weights:02.000kg	Press **Enter**
NO-load:00832 weights:02.000kg	Press **0 5**
NO-load:00832 weights:05.000kg	Waiting . . . . .

Weights = standard weight

D.

put the weight (which whight equqals you input value) on the scale plate

E.

NO-load:00832 weights:05.000kg	Press **Enter**
On load:04655 weights:05.000kg	Press **Enter**
setting calibration	Press **Esc**
MENU Recover	

F.

Remove the weight from the scale plate and the electronic scale calibration operation is completed.

Warning:

After the calibration operation of electronic scale, it is necessary to remove tank weight operation before the machine can restore the normal display of refrigerant weight.

Clear R134a tank

Warning: To prevent personal injury while working with refrigerant, read and follow the instructions and warnings in this manual, and wear protective equipment such as goggles and gloves.

Warning:

Electronic scale calibration must be performed before clear R134a tank operation.

After calibration, the equipment has two operations

to remove tank weight, one is no refrigerant in the refrigerant tank, the other is refrigerant in the refrigerant tank.

When there is no refrigerant in the refrigerant tank, follow the following steps to remove tank weight operation.

A. Verify that the electronic scale calibration is performed and completed successfully.

B. 

Put the refrigerant back on the scale and tie the straps.

Note: The can must be empty, without refrigerant ! ! !

C.

MENU Recover	Press **8**
MENU setting	Press **Enter**
setting password:****	Press **8 8 8 8**
setting clear filter	Press **2** or **8**
setting clear tank	Press **Enter**
G-W: 6.100kg Tank: 0.000kg	Press **Enter**
G-W : 6.100kg Tank : 6.100kg	Press **Esc**
setting clear tank	Press **Esc**
MENU Recover	

D. The tank weight removal operation has been completed.

When there is refrigerant in the refrigerant tank, follow the following steps to remove tank weight operation.

A. Verify that the electronic scale calibration is performed and completed successfully.

B. 

Prepare an electronic scale and a standard weight, such as a 2000g weight. Prepare a carton or bag.

C. 

Verify that the electronic scale is accurate with the weight.

D. 

Place any item in the box so that its weight is equal to 6100g.

E. 

Place the 6100G box on the scale plate.

F.

MENU Recover	Press **8**
MENU setting	Press **Enter**
setting password:****	Press **8 8 8 8**
setting clear filter	Press **2** or **8**
setting clear tank	Press **Enter**

G-W:	6.100kg
Tank:	0.000kg

Press **Enter**

G-W :	6.100kg
Tank :	6.100kg

Press **Esc**

setting
clear tank

Press **Esc**

MENU
Recover

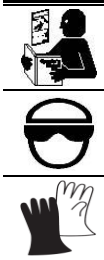
G.

Remove the box from the scale and place the refrigerant tank on the scale in place.

H. The tank weight removal operation has been completed.

Note: After the tank weight is cleared, the weight displayed is the refrigerant weight !

Replace the vacuum pump oil mist separator



Warning: To prevent personal injury while working with refrigerant, read and follow the instructions and warnings in this manual, and wear protective equipment such as goggles and gloves.

The vacuum pump oil mist filter is mounted on the rear of the equipment, It is recommended that to replace the vacuum pump oil mist filter every half a year.

A.

Hold the lower cover of filter, turn the upper cover counterclockwise about 1cm, pull out the upper cover.

B.

Turn the filter element counterclockwise to remove the filter element.

C.

D.

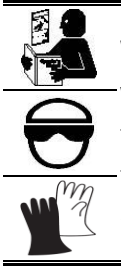
Turn the filter element clockwise to install the filter element.

E.

Install the top cover by turning the top cover clockwise

F. Filter replacement completed.

Cylinder Air Purge



Warning: To prevent personal injury while working with refrigerant, read and follow the instructions and warnings in this manual, and wear protective equipment such as goggles and gloves.

Note:

It is recommended to check whether there is non-condensable gas in the refrigerant tank before using the machine for the first time every day. If so, discharge non-condensable gas as follows.

A.

Check and record refrigerant tank pressure.

B.

Measure the temperature of the refrigerant tank with a thermometer. (Thermometer prepared by customer)

C.

R134a≈R1234yf

Ambient temperature		Pressure value	
°C	°F	Bar	Psi
6	43	2.6	38
8	46	2.9	42
10	50	3.1	45
12	54	3.4	50
14	57	3.7	54
16	61	4	58
18	64	4.4	63
20	68	4.7	68
22	72	5.1	74
24	75	5.5	79
26	79	5.8	85
28	82	6.3	91
30	86	6.7	97
34	93	7.6	110
38	100	8.6	125
42	108	9.7	141
46	115	10.9	158
50	122	12.2	176

Refer to this standard temperature pressure gauge,

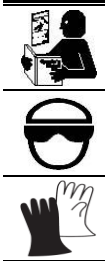
If TP pressure value is higher than the standard temperature pressure, open the exhaust hand valve, discharge non-condensing gas.

Note：

When discharging non-condensible gas, TP pressure gauge should be observed at all times, and the hand valve should be closed in time when the standard pressure value corresponding to the temperature is reached.

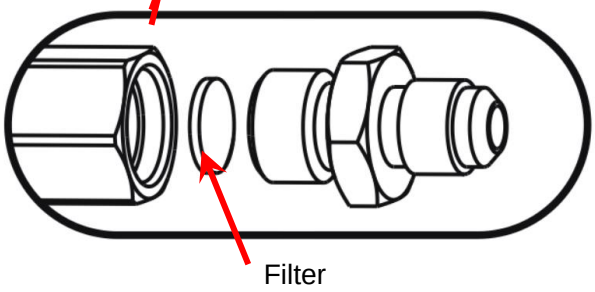
D. Exhaust gas discharge operation completed.

Clean the filter regularly



Warning: To prevent personal injury while working with refrigerant, read and follow the instructions and warnings in this manual, and wear protective equipment such as goggles and gloves.

Clean the filter of high and low pressure port regularly. When the recovery is slow or unable to recover, first check whether the high and low pressure filter is blocked, and clean the filter in time.



Trouble Shooting

	Fault	Cause	Remedy
1	LCD can not light	1.1. no power	- check the power supply
		1.2. power connector fech away	- connect well
		1.3. fuse melt	- replace a new one
		1.4. cpu board or LCD wrong	- replace a new one
2	Cant display the refrigerant weight	2.1. scale protection bolt has not remove	- take off the protection bolt
		2.2. sensor connector fetch away	- connect well
		2.3. sensor fault	- replace a new one
		2.4. cpu board fault	- replace a new one
3	Cant perform recovery	3.1. solenoid valve not work	- check the relative relay
			- change the solenoid valve
		3.2. expansion valve jam	- reversed flush
			- ice jam, 30min later recovery again
		3.3. compressor no power	- check the relative relay
		3.4. compressor fault	- replace a new one
4	No oil drain	4.1. solenoid valve not work	- check the relative relay
5	Cant vacuumize	5.1. solenoid valve not work	- check the relative relay
			- replace a new one
		5.2. pump can not work	- check the relative relay
			- replace a new vacuum pump
			-change the pump oil
6	No display	6.1. power connector fech away	- connect well
		6.2. transformer fault	- change a new one
		6.3. cant see any character	- adjusting the potentiometer of cpu board
7	Cant charge refrigerant	7.1. refrigerant not enough	-Fill refrigerant into refrigerant tank
		7.2. weight scale fault	- change a scale
		7.3. solenoid valve not work	- check the relative relay
			- replace a new solenoid valve
8	Too much noise	8.1. Vacuum Pump lack oil	- add enough pump oil
		8.2. Pump screws loose	- tighten the screws
		8.3. dirty in solenoid valve	- change a new solenoid valve
		8.4. Fan blade touched rear cover	- check and repair