



# TEXAS EQUIPMENT

## AC Service Machine INSTALLATION GUIDE

### United States

17779 Main Street Suite C  
Irvine, CA 92614 USA  
Tel: +1(949) 333-3800  
Fax: +1(949) 333-3804

### United Arab Emirates

P.O. Box 121971 Saif Zone A2-032  
Sharjah, UAE  
Tel: +971 (06) 552 98 60  
Fax: +971 (06) 552 98 61

### Egypt

9A Al-Mothalath  
End of Mostafa El-Nahas Street  
Nasr City, Cairo 11528 Egypt  
Tel: +2019 550 0001  
Fax: +2022 472 4346



**Model  
ACM1LSF**

---

# Contents

<b>1 About this operating manual</b> .....	2
1.1 Kernel hotline. ....	2
1.2 Explanation of symbols in this operating manual .....	3
<b>2 Scope of delivery</b> .....	4
<b>3 Safety.</b> .....	5
3.1 General safety instructions. ....	6
3.2 Warnings on the Air-Con Service Station .....	7
3.3 Safety devices. ....	7
<b>4 Proper use.</b> .....	7
<b>5 Overview of the Air-Con Service Station</b> .....	8
<b>6 First start up</b> .....	10
6.1 Setting up and switch up .....	10
6.2 Putting in the containers for oil. ....	10
6.3 Filling up the internal refrigerant container. ....	11
<b>7 Operation</b> .....	12
7.1 Recovery. ....	13
7.2 Vacuum. ....	14
7.3 Purge .....	15
7.4 Oil injection .....	16
7.5 Recharge. ....	16
<b>8. Service tasks</b> .....	17
8.1 Inner tank refill .....	18
8.2 Language select .....	18
8.3 Zero balance .....	18
8.4 vacuum pump oil .....	19
8.5 Changing the internal filter .....	20
8.6 Hose compensation .....	21
8.7 Pressure rise wait .....	21
8.8 Other service .....	21
8.9 Cleaning and maintenance .....	21
<b>9. Disposal.</b> .....	22
9.1 Disposing of used fluids .....	22
9.2 Disposing of packaging material .....	22
9.3 Scrapping old unit. ....	22
<b>10 Trouble shooting.</b> .....	23
<b>11 Technical data</b> .....	24
<b>12 Spare Part list</b> .....	24

---

# 1 About this operating manual

This operating manual describes the Kernel Air-Con Service Station

This manual is for those who perform maintenance on vehicle air conditioning system and have the expertise required to do so.

This manual contains all the instructions necessary for safe and effective operation of the air Conditioning service Station. Read this operating manual carefully before putting the device into operation for the first time.

Also note the following:


- The operator should comply with the laws about the service of vehicle air-conditioning by the local government
- The operator should be familiar with basic technical information of vehicle air- conditioning
- Instructions from the refrigerant manufacturer
- Instructions from the car manufacturer
- Any special instructions on servicing vehicle air conditioning systems which apply at your company

Keep this operating manual in the compartment of Air-Con Service Station, so that any information you need is always at hand.

## 1.1 Kernel hotline

If you need more information on the Air-Con Service Station that is not contained in this manual, call the Kernel Hotline:

## 1.2 Explanation of symbols in this operating manual

Format	Meaning	Example
<b>KEY</b>	Designations used on the device	Press 
<b>„BOLD”</b>	Display messages	<b>„LANGUAGE”</b>
<ul style="list-style-type: none"> <li>■ Text</li> <li>■ Text</li> </ul>	List in any order	<ul style="list-style-type: none"> <li>■ Pressure monitor</li> <li>■ Pressure relief valves</li> </ul>
<ol style="list-style-type: none"> <li>1. Text</li> <li>2. Text</li> <li>3. Text</li> </ol>	Actions to be carried out in the order shown	<ol style="list-style-type: none"> <li>1. Connect the device.</li> <li>2. Switch on the device.</li> <li>3. Press the selection button.</li> </ol>
Text (1)	Part numbers	Use the keypad (7) to enter the data.
Text (A)	Part designations which refer to the diagrams shown in the section describing the work	Remove the filter cartridge (E) on the left side.



Risk of damage to the machine or other material damage

---



Special information on using the device effectively

---

---

## 2 Scope of delivery

The Air-Con Service Station and its accessories are carefully checked before shipping.

After delivery, check that all the parts listed below are present and undamaged

If any part is missing or damaged, notify the company responsible for transport immediately

<b>K11</b>
AirCon Service Station
Service hoses with coupling for HP/LP connection
Container for air conditioning compressor oil (PAG oil)
Container for used oil
Operating manual
Power cord

---

## 3 Safety

### 3.1 General safety instructions



Read this operating manual carefully before starting up the Air-Con Service Station for the first time

Also note the following:

- The operator should comply with the laws about the service of vehicle air- conditioning by the local government
- The operator should be familiar with technical information of vehicle air-conditioning
- Information from the refrigerant manufacturer
- Any special instructions on servicing vehicle air conditioning systems which apply at your company

Only use the device for its intended purpose.

Only use R134a refrigerant .If other refrigerants are mixed in, it can damage the Air-Con Service Station and the vehicle air condition system.

Only use the performance of a POLYOL ester type refrigerator oil used with the R134a(PAG oil).If other oil are mixed in, it can damage the vehicle air condition system

Wear personal safety equipment (goggles and gloves) and avoid touching refrigerant, as this can cause frostbite.

Do not inhale refrigerant vapour. Although the vapour is non-toxic, it displaces the oxygen you need to frostbite.

Do not make modifications to the Air-Con Service Station.

Each time you start up the device or top up the Air-Con Service Station, first check whether the device and all the service hoses are undamaged and that all valves are closed.

Do not start up the Air-Con Service Station if it is damaged.

Only used approved refrigerant bottles with safety valves to refill the Air-Con Service Station.

Drain the service hoses before you release connections.

---

Do not operate the Air-Con Service Station in areas where there is a risk of explosions (for example battery charging rooms or spraying booths).

Always use the main switch of the Air-Con Service Station to switch it on and off. Do not leave the device unattended when it is switched on.

Before you shut down the Air-Con Service Station, make sure that the selected program has ended and that all valves are shut. Otherwise refrigerant can leak.

Do not pump compressed air in the refrigerant lines of Air-Con Service Station or the vehicle air-conditioning system. A mixture of compressed air and refrigerant can be flammable or explosive.

---

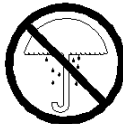
### 3.2 Warnings on the Air-Con Service Station



Be careful



Observe the operating manual.



Protect the device against rain



Wear gloves when handling refrigerants.



Wear goggles when handling refrigerants.



Horizontal hold



Care for fire

---

### 3.3 Safety devices

- Pressure monitor: switch the compressor off if the normal operating pressure is exceeded.
- Tank with pressure relief function: additional safety mechanism to protect lines or vessels from bursting if the pressure continues to rise despite the action of the pressure monitor.

## 4 Proper use

The Air-Con Service Station is intended for performing maintenance on vehicle air-conditioning systems. The device is designed for commercial use.

The Air-Con Service Station may be operated by persons who have the expertise required for servicing air-conditioning systems.

This Air-Con Service Station may only be used to service vehicle air-conditioning systems in which R134a refrigerant is used.



Kernel International assumes no liability for damage resulting from the following:

- Use for purposes other than those described in the operating manual.
  - Alterations to the Air-Con Service Station made without the explicit permission of Kernel international.
  - Damage to the device resulting from external influences.
  - Incorrect operation
-



## 5 Overview of the Air-Con Service Station



- (1) Pressure gauge for HP
- (2) Pressure gauge for LP
- (3) LCD display
- (4) Pressure gauge for Tank
- (5) Keypad

- (6) New oil bottle
- (7) Used oil bottle
- (8) power
- (9) service hose

---

## USER COMMUNICATION INTERFACE:



Recovery key : to suct the A/C refrigerant into the inner cylinder



Vacuum key : to extract gases from A/C system



Purge key : to release gases from inner cylinder



Recharge key : to refill refrigerant into A/C system.



Pag oil key : to inject new oil into A/C system.



Function key : it allows to start the other service operation and use the Air-Con Service Station's database.



Selection keys: to select the service items or adjust the number inputted.



Start key : it allows to start the execution of any working operation.



Stop key : it allows to return to the original menu or stop the execution of any working operation.



Information key : Decide and prompt Some functions and operations

---

## 6 First start-up

### 6.1 Setting up and switching on



**Power supply must be firmly grounded**

---

1. Drive the Air-Con Service Station to the workplace and lock the front wheels.



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

---

2. Connect the Air-Con Service Station to the mains.
3. To switch it on, the Air-Con Service Station switches to standby mode:

KERNEL AIRCON SERVICE STATION Refrigerant     **.** KG
--

“Refrigerant     \*\*.\*\* KG” describes the quantity of refrigerant hold in inner tank

### 6.2 Putting in the containers for oil

Unscrew the PAG oil bottle, put about 150ml new oil into the bottle and screw it back to the device.

---

## 6.3 Filling up the internal refrigerant container

When the Air-Con Service Station is started for the first time, the internal refrigerant container must be filled with at least 6000g from an external refrigerant bottle.

---

**INFO**

---




Also note the instructions on the refrigerant bottle.

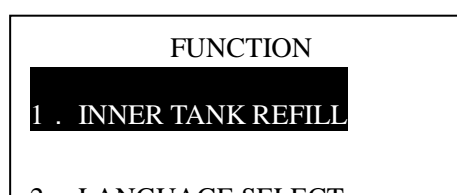
---

The current refrigerant quantity are shown in the standby mode.

There are three different types of external refrigerant bottle available:


- Refrigerant bottles without a rising pipe: These refrigerant bottles have one connection. When filling the Air-Con Service Station the connection piece must be on the bottom (turn the bottle upside down).
- Refrigerant bottles with rising pipe: These refrigerant bottles have one connection. When filling the Air-Con Service Station the connection piece must be on the bottom (place bottle upright)
- Refrigerant bottles with rising pipe: These refrigerant bottles have two connections. To top up the Air-Con Service Station, use the connection marked with L (= liquid). When filling the Air-Con Service Station, the connection must be at the top (place the bottle upright).

1. In standby mode, press  key, use the  or  key to activate the fields you want (dark fields are activated), select "INTERNAL TANK REFILL"



- 
2. Press  to confirm. Follow the instructions in the display.



INNER TANK REFILL  
CONNECT THE LP HOSE TO  
THE SOURCE TANK, OPEN THE  
VALVE UP\_SIDE DOWN IT .

3. Press  to confirm. The quantity of refrigerant in the internal container is shown.

REFILL  
RUNNING            \*\* : \*\*  
RECOVERED        \*\*\*\*\*G

4. The filling will stop automatic when the quantity of refrigerant is 7KG

INNER TANK REFILL  
FINISHED!  
PRESS START TO CONFIRM

5. Close the valve, press  to confirm. Press  key, start to recovery operation! the device will recover the refrigerant in the hose. If you do not recycle the refrigerant in the hose, it will be cause refrigerant leakage when you release connections, as this can cause frostbite.

6. Disconnect the service hoses from the external refrigerant bottle.  
.The device now is ready for operation.

---

# 7 Operation



---


When the air-conditioning is serviced, the engine and the air-conditioning must be switched off.

---

## 7.1 Recovery

1. First fit the connections of the Air-Con Service Station to the vehicle air conditioning system and open them.

2. Check for the high and low pressure gauges. If the pressure is equal to zero or lower, it shows that no refrigerant leaves in the air-conditioning system, you can select other selections directly. If the pressure is higher

than zero, press  key, the device will start to recover recycling operation.

RECOVERY	
RUNNING	** : **
RECOVERED	**:**KG


3. When the device recovery process is over, it will discharge used PAG oil automatically.

RECOVERY	
FINISHED!	
RECOVERED	**:**KG
DRAINING OIL	


---

4. About 5 seconds later, oil draining finished.



RECOVERY FINISHED!  
PRESS STAR TO CONFIRM!

5. Press  key to stop the buzzer, then recovery process finished!

## 7.2 Vacuum

1. After recovery you had better to wait for about 1 minute, if the A/C system raise continue to recovery, if the A/C system pressure didn't rises above zero, press  key, the device enter vacuum process.


VACUUM  
DEFAULT            \*\* : \*\*

2. Use  or  to set the vacuum time (suggest 10 minutes).

3. Press , the device will start vacuum operation.

VACUUM  
RUNNING            \*\* : \*\*

3. The device will be finished automatically after expiry of the vacuum time,

press  return to the standby mode.


---

VACUUM FINISHED

PRESS START TO CONFIRM!



4. wait about five minutes .and check the low pressure gauge indicator, if the pressure is raising, you need confirm whether the air-conditioning's leakage. If leakage, you should repair it. If not, continue the next process.

### 7.3 Oil injection


1. Check the new oil bottle, make sure that the PAG oil leaves more than 50ml.Press  key to enter oil injection process.

OIL INJECTION

PLEASE LONG\_PRESS O

2. All ready, long press  key until the new oil decreased to the right value .Press  key back to the standby mode, continue the next process.

### 7.4 Recharge

1. Press  key to enter recharge process.





RECHARGE

DEFAULT           \*\*\*\*G


PRESS F KEY TO USE

DATABASE!



- 
2. Press  or  key to enter the refrigerant filling quantity. Either use the value shown on the filling quantities sticker in the vehicle and enter it using the keypad and the cursor keys, or press  key use the Air-Con Service Station's database.
3. All ready, press  to confirm, the device will start to recharge the air-conditioning.

RECHARGE  
RUNNING                    \*\*:.\*\*  
THERE       \*\*\*\*g    LEFT!

4. The process will be finished when the quantity is decreased to zero .Press  to go to standby mode.

RECHARGE FINISHED!  
  
PRESS START TO CONFIRM!

5. Screw the valve caps of the air-conditioning system back on the connections. And empty the service hoses by recovery operation. The device is then ready for further use.

---

## 7.5 Purge

---




---

The purge is designed to purge mixed gases such as air present in the inner tank. It is harmful for the system when the pressure in the tank exceed. The unit must purge when it is turned on.

---

1. In stand by mode, press  key to enter purge mode


PURGE  
PLEASE LONG\_PRESS P KEY

2. Press  key, the display will show the temperature and the relative pressure of refrigerant in the tank.

Hints:

THE TEMP IS \*\*. \*°C

REFRIERANT PURSSURE


3. Check the tank pressure gauge. If the pressure is no higher than display value, it means that no mixed gases in the tank, you can return to the standby mode and select the other operations directly. If the pressure is higher than display value, long-press  key, the device will start to release the gases, until the tank pressure come to the relative valve.



---

## 8 Service tasks

Other service are included this items as:

- “1.INNER TANK REFILL
- 2.LANGUAGE SELECT
- 3.ZERO BALANCE
- 4.VACUUM PUMP OIL
- 5.FILTER DRIVER
- 6.HOSE COMPENSATION
- 7.PRESSURE RISE WAIT
- 8.OTHER SERVICE.”

If you want come to these items , please press  key and use

 or  to select and enter it.

### 8.1 Inner tank refill

Refer to 6.3

### 8.2 Language select

You can select Chinese or English according to custom.

### 8.3 Zero balance

---

#### INFO

In order to make sure the refrigerant quantities correctly, the zero point of the scales must be checked regularly and reset if necessary.


Resetting is necessary:

- If the quantity deviates by more than 10g from the target value
  - If the Air-Con Service Station has been shaken, for example during transport on bumpy roads
  - Every four to six weeks
-

- 
1. In standby mode, press  key ,to use the  or  key to select **“ZERO BALANCE”**

ZERO BALANCE

PRESS      OK      WHEN

2. Unscrew the tank and remove it from the scale plate. Make sure that there is nothing on, press  key .  
Once you have set the zero point, the standby mode appears again.
3. place back the tank on the scale plate and screw it.

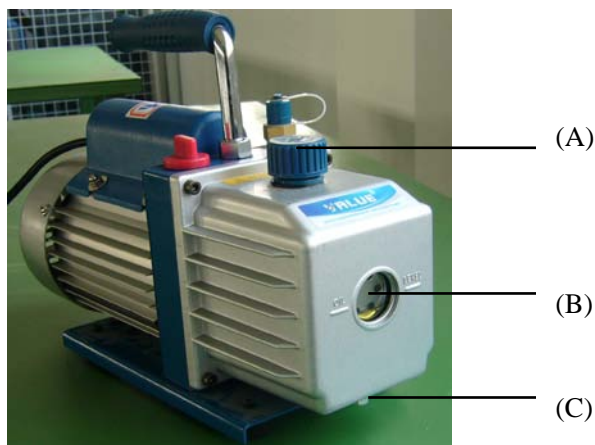
## 8.4 vacuum pump oil






Switch off the Air-Con Service Station and unplug it from the power supply before opening the housing.

---

Before changing the oil, let the vacuum pump run for about 10 minutes (manually using the menu).



1. Take off the front cover. Place a vessel with capacity of at least 1/2 litre under the Air-Con Service Station. The used oil in the vacuum pump would flow through the outlet in the base of the device.




- 
2. Unscrew the oil filler plug (A).
  3. To drain the oil, unscrew the oil drain plug (C).
  4. Once the oil has been completely drained from the pump housing, screw the oil drain plug (C) back in.
  5. Feed up new oil into the vacuum pump , until the oil level is at the middle of the sight glass (B) and screw the oil filler plug (A) back.
  6. Put back the front cover and reconnect the power plug.
  7. In function mode, to use the  or  key to select “**VACUUM PUMP OIL**” , press  to reset the count

## 8.5 Changing the internal filter



Switch off the device before opening it and pull out the mains plug.

---

1. Take off the front panel, Remove the filter cartridge on the left side and replace it with a new one. When inserting a new filter cartridge, observe the flow direction (FLOW arrow must point downwards).
2. conform that the new filter drier is well fixed.
3. Put the front panel back on and reconnect the power plug.
4. In function mode, to use the  or  key to select “**FILTER DRIER**” press  key to reset the count

---

## 8.6 Hose compensation

You can service yourself by inputting a new quantity of refrigerant as a compensation when the recharging occurs.

note: we strongly claim to use the default number of compensation

## 8.7 Pressure rise wait

Setting the waiting time that the refrigerant evaporate in the A/C system,during the recovery operation phase.

## 8.8 Other service

This operations are need password , if you want to use this you can call the hotline to ask for the password.

## 8.9 Cleaning and maintenance

- Clean the exterior of the device with a damp cloth as required. If necessary, use a little washing-up liquid. Do not use solvents or scouring agents.
- Regularly check the service hoses and adapters for damage. Do not start up the Air-Con Service Station if it is damaged.

---

## 9. Disposal

### 9.1 Disposing of used fluids



Used oil is hazardous waste. Do not mix used oil with other fluids. Keep used oil in suitable containers prior to disposal.

---


### 9.2 Disposing of packaging material

- The cardboard packaging material should be disposed of with other waste paper.
- Plastic packaging material should be added to other recyclable waste.

### 9.3 Scrapping the old unit

- If you wish to scrap the Air-Con Service Station, first completely drain it of all liquids and dispose of them in an environmentally responsible manner.
- Take the old device to your nearest recycling centre

## 10 Trouble shooting

Fault	Cause	Remedy
The display shows „ <b>WARNING!</b> <b>CODE :W16</b> <b>NOT ENOUGH PRESSURE TO RECOVERY!</b> .”	This message is normal, during the recovery process.	Press  to continue other operations. If you make sure that there is no refrigerant in A/C system.
The display shows „ <b>WARNING!</b> <b>CODE:02</b> <b>INNER TANK FILLED.</b> .”	The inner tank is full of refrigerant.	Drain the internal refrigerant container in the proper manner.
The display shows „ <b>WARNING!</b> <b>CODE:W01</b> <b>TANK PRESSURE IS TOO HIGHT</b> ”	This message is normal during the recovery process.	Stop and wait for the tank cooling down. And release some gases if necessary.
The display shows „ <b>WARNING!</b> <b>CODE:W08</b> <b>REFRIGERANT IS NOT ENOUGH.</b> .”	Message during the recharge. The quantity of refrigerant is less than 2KG	Refill the refrigerant into the internal tank.
The display shows „ <b>WARNING!</b> <b>CODE:W03</b> <b>PRESSURE IN SYSTEM RECOVERY START.</b> .”	Message during the vacuum. It means that there has refrigerant in the A/C system.	Recovery the refrigerant first.



## 11 Technical data

Dimensions (width x height x depth)	600 mm x 1150 mm x 700 mm
Weight	80 kg
Power supply	220 V- 50 Hz
Refrigerant	R134a
Vacuum pump	1L /MIN
Compressor	3/8 P
Drier filter output	150 kg
Filling cylinder accumulator capacity	80 kg
LCD back-lit display	192*64
Manometers	80mm
Tank manometers	40mm
Scale resolution	1g
Service hose	2.5m

## 12 Spare part list

NO.	Parts	Specification
1	Vacuum pump	VE115
2	Vacuum pump oil	330ml
3	Filter drier	302
4	Service hose for high pressure side(red)	2.5m
5	Service hose for low pressure side(blue)	2.5m
6	Oil bottle	250ml
7	Hermetic compressor	QD-10
8	High pressure gauge	80mm
9	Low pressure gauge	80mm
	Tank pressure gauge	40mm
10	Service coupling for low pressure	QC-ML
11	Service coupling for high pressure	QC-MH
12	Solenoid valve	SV1.6B
13	Liquid hose(red)	0.3m
14	Vapor hose (blue)	0.3m