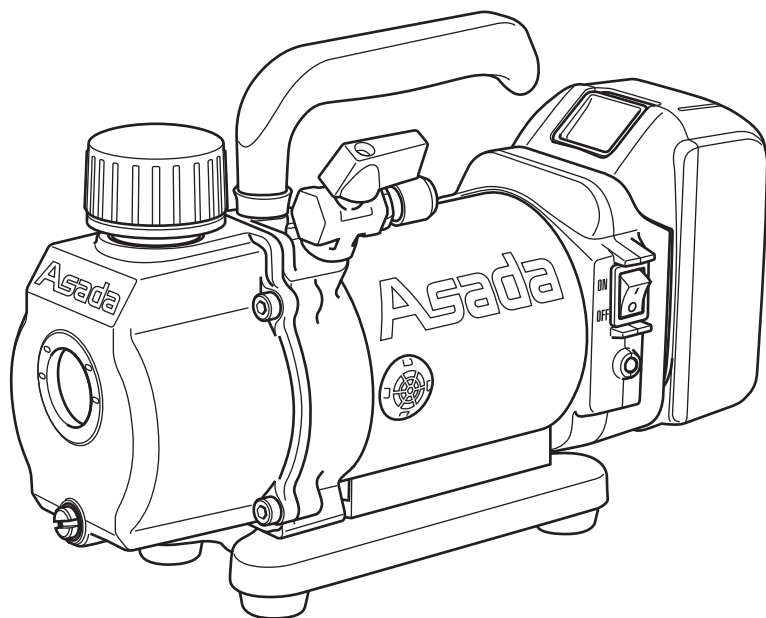


Asada

AIR CONDITIONING TOOL

CORDLESS VACUUM PUMP 1.5CFM

INSTRUCTION MANUAL



[Read through this manual carefully before using the pump.]

CORDLESS VACUUM PUMP 1.5CFM

SAFETY PRECAUTIONS

Thank you for choosing our Cordless Vacuum Pump.

- This instruction manual must be retained by the user of this pump.
- Read this instruction manual carefully and completely before use and thoroughly understand the usage, capacity, cautions and maintenance for correct operation.
- Handle the pump properly to make full use of its functions for safe work.
- After reading the instructions, save this manual so that you can read it when necessary.
- Use the pump for the intended application only. It will do a better job and be safer at the rate for which it was designed.
- Upon receiving the pump, check the following.
 - Check that the pump is built conforming to the specifications stated in your order.
 - Check the overall pump for any damage or deformation caused in transit due to accidents or other reasons.
 - Check that all items and accessories delivered.

In case any discrepancy is found, immediately report the fact to the shop you purchased or our sale office. (The contents of this manual are subject to change without prior notice.)

CLASSIFICATION OF CAUTIONS

Precautionary signs are classified into the following 2 levels.



Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. CAUTION It may also be used to alert against unsafe practices.

Even though the matter with CAUTION indication, it may lead to serious result in some situation. Make sure to keep each matter which is for safety.

CORDLESS VACUUM PUMP 1.5CFM

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CORDLESS VACUUM PUMP 1.5CFM

CAUTION IN USE

- Basic cautions to use the pump safely are listed in this section.
- The detailed cautions in operation are described in each chapter.

WARNING

- ◆ **Only qualified persons are allowed to disassemble the pump.**
- ◆ **Do not modify the pump.**
It may lead to mechanical failure or accident.
- ◆ **Do not put a finger or a stock to the turning part of motor.**
It may lead to accident or injury.
- ◆ **Do not touch the pump part during or soon after operation.**
The pump part becomes hot and it may lead to burn injury.
- ◆ **Wear protective glasses and gloves during operation.**
- ◆ **Avoid contact with refrigerant, blindness and injuries may result to operator.**
- ◆ **The power source should be AC220-240V.**
If the power source is not correct, it may lead to heating, smoking or fire.
See the specification in this instruction manual.
- ◆ **Do not operate the pump in rain or with wet hands.**
Operation in rain or with wet hands may lead to electric shock.
- ◆ **Always ground the pump.**
If the pump is not grounded, it may lead to electric shock or mechanical failure.
- ◆ **Always inspect the power plug and plug in securely.**
A dirty plug and incomplete connection may lead to electric shock or fire.

CORDLESS VACUUM PUMP 1.5CFM

WARNING

- ◆ **Do not use the power cord concurrently with other electrical equipments and avoid overload connection.**
- ◆ **Do not pull the power cord to disconnect from the outlet.**
It may lead to electric shock, fire or injury.
- ◆ **Do not use the pump in an area where gasoline, thinner or any other combustible gas may exist.**
It may lead to explosion or fire as the pump has sparks in starting or during operation.
- ◆ **When unattended, blackout or servicing, switch off and unplug the pump.**
The pump will start suddenly and it may lead to accident.
- ◆ **The pump should be used in a well-ventilated area especially in a small space.**
Otherwise an accidental lack of oxygen or poisoning may happen.
- ◆ **Use or store the pump on a horizontal position.**
The oil may leak and it may lead to accident.
- ◆ **Be careful about oil leakage. Make sure no vacuum pump oil leaks.**
Failure to do so may result in fire.
- ◆ **Always switch off the pump before installing of the battery cartridge.**
Installing of the battery cartridge when pump switches on, it may lead to accident.
- ◆ **Recharge only with the charger specified by the manufacturer.**
A charger that is suitable for one type of battery cartridge may create a risk of fire when used with another battery cartridge.
- ◆ **Use the pump only with specifically designated battery cartridges.**
Use of any other battery cartridge may create a risk of injury and fire.

CORDLESS VACUUM PUMP 1.5CFM

WARNING

- ◆ **When battery cartridge is not in use, keep it away from other metal objects.**
Shorting the battery terminals together may cause burns or a fire.
Always put battery cover on battery cartridge after removed it from tool or charger.
- ◆ **Under abusive conditions, liquid may be ejected from the cartridge; avoid contact.**
If contact accidentally occurs, flush with water.
If liquid contacts eyes, additionally seek medical help.
Liquid ejected from the battery may cause irritation or burns.
- ◆ **Do not disassemble, repair and alter a pump, a charger, a battery cartridge.**
It may lead to generation of heat and abnormal working, and may lead to injury.
- ◆ **Ask for repairs, if something is wrong such as body is abnormally hot.**
- ◆ **Do not alter a pump as this is adapted for relevant safety standard.**

Other safety cautions

Check the damage on a pump

- ◆ **Before operation, check damage on a battery cartridge and other parts.**
Check if pump works correctly and perform prescribed function.
If something is wrong, do not use a pump and ask for repairs.
- ◆ **Stop operation immediately when a pump works not correctly or gets damage.**
Operation under abnormal condition may lead to smoke, fire, electric shock and injury.

(Example)
 - Power cord or plug is abnormally hot.
 - Power cord has deep scratch and is deformed.
 - Sometime does not turn on the electricity, if move a power cord.
 - Smell burnt.
 - Feel electricity.
- ◆ **In case something is wrong such as a pump does not start by turning on switch, remove a battery cartridge immediately, ask for repairs.**

CORDLESS VACUUM PUMP 1.5CFM

WARNING

- ◆ **Use only the accessories or attachments given in this manual and our catalogs.**
Otherwise it will lead to accident or mechanical failure.
- ◆ **Do not use a battery cartridge which operating time has become excessively shorter.**
- ◆ **Do not throw a used battery cartridge away as general garbage.**
Battery cartridge will short in garbage can and it may lead to fire and smoke.
- ◆ **Do not charge in an area where gasoline, thinner or any other combustible gas may exist.**
It may lead to explosion and fire.
- ◆ **Do not do following things. These may lead to fire.**
 - Do not charge a battery cartridge on papers such as carton box, fabric, carpet, vinyl etc.
 - Do not cover windhole of charger during charging.
Also do not insert metal objects and flammable into windhole.
 - Do not charge a battery cartridge where there is much dust.
- ◆ **A charger has a charging terminal in a battery cartridge installing part. Foreign substances such as metal objects and water should be away from charger.**
It may lead to smoke, fire and explosion.
- ◆ **Do not use a charger other than charging.**
- ◆ **Immediately disconnect the plug and stop the charging if something is wrong with a battery cartridge or charger.**
Otherwise it may lead to smoke, fire and explosion.
- ◆ **Do not throw a battery cartridge in fire and heat.**
It may lead to fire and explosion.
- ◆ **Do not drive a nail into a battery cartridge and shock, disassemble and alter a battery cartridge.**
It may lead to generation of heat, fire and explosion.

CORDLESS VACUUM PUMP 1.5CFM

WARNING

- ◆ Do not store the pump and battery cartridge in locations where the temperature may reach or exceed 50°C (122°F).
- ◆ The pump is stored in indoor ambient temperature 5°C ~ 40°C .
- ◆ Use charger under the condition of normal rated power.
Do not use transformer, DC power and engine generator.
It may lead to generation of abnormal hot and fire.
- ◆ Do not charge a battery cartridge where ambient temperature is lower than 10°C or higher than 40°C .
It may lead to explosion and fire.
- ◆ Charge a battery cartridge in a well-ventilated area.
Do not cover a battery cartridge and charger with fabric.
It may lead to explosion and fire.
- ◆ When not in use, disconnect the charger plug from power outlet.
It may lead to explosion and fire.
- ◆ Always drain your vacuum pump of all fluids before shipping to prevent the damage of the container.
- ◆ Always cover the intake port with cap to keep any dust from entering the pump.

CORDLESS VACUUM PUMP 1.5CFM

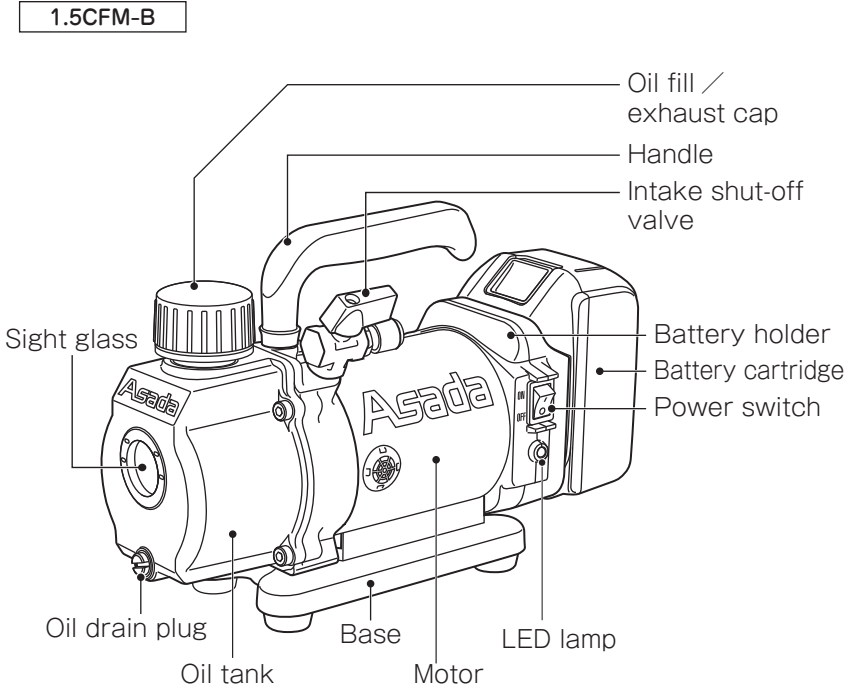
CAUTION

- ◆ **An extension cord used should be a length of 30m or less when its diameter is 2.0mm .**
An unsuitable extension cord (too thin or too long) may lead to starting failure or fire.
- ◆ **Do not let visitors touch the pump.**
The pump should be used by a person who reads through the instruction manual and understands it completely.
- ◆ **Do not use the pump for purposes other than the original intent.**
This pump is designed to evacuate refrigeration and air conditioning equipment and recovery vessels. Doing so may result in accidents.
- ◆ **Do not use the pump when the result is unpredictable.**
- ◆ **Do not overload the pump.**
It will lead to mechanical failure or accident.
- ◆ **Keep your work bench and area tidy and well lit.**
Bad working conditions invite accidents.
- ◆ **Do not operate the pump when you cannot concentrate on your work due to fatigue, drinking, medication and so on.**
- ◆ **When not in use, the pump should be stored in dry and high or locked-up place - out of reach of children.**
- ◆ **Use only the accessories or attachments given in this manual and our catalogs.**
Otherwise it will lead to accident or mechanical failure.
- ◆ **If you have dropped or hit the pump accidentally, carefully check for damage, crack or deformation.**
- ◆ **Always check for deformation, corrosion and so on in each part of the pump.**
- ◆ **Immediately stop the pump if something is wrong with the pump (unusual smell, vibration, sound) and refer to “ MAINTENANCE & INSPECTION”.**
Do not disassemble the pump without reason and ask for repairs.
Contact our authorized distributors for repairs.

CORDLESS VACUUM PUMP 1.5CFM

COMPONENTS OF THE MACHINE

Main Parts



CORDLESS VACUUM PUMP 1.5CFM

Specification

Item	Cordless vacuum pump 1.5CFM-B	Pump speed	3,850min ⁻¹
Code No.	VP152	Motor	DC18V (Lithium battery)
Pump	Single stage rotary pump	Oil capacity	100~130ml
Free air displacement	50 L/min	Intake	5/16" flare male
Ultimate vacuum	20Pa abs. (150micron)	Weight	2.9kg (with battery 3.6kg)

Battery cartridge (capacity)	BL1860B (6.0 Ah) BL1850 / BL1850B (5.0 Ah) BL1840 / BL1840B (4.0 Ah) BL1830 / BL1830B (3.0 Ah)
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- Due to our continuing program of research and development, the specifications herein are subject to change without notice.
- Specifications and battery cartridge may differ from country to country.

Vacuum pump for air evacuation of closed systems.
(air conditioners, tanks, etc).

This equipment is specially designed for HVAC&R systems.

The single stage of these pumps make it feasible to achieve the final vacuum level requested.

Big sight glass and low oil level design avoids running without oil and ensures reliable usage.

Besides, the check valve avoids any oil mixture due to the backflow after a power interruption or any other process interruption.

■ Symbols

The following show the symbols used for the equipment.
Be sure that you understand their meaning before use.



Warning: hot surface!

Do not touch around this symbol.

Touching the surface may cause burns or injuries.



Only for EU countries

Do not dispose of electric equipment or battery pack together with household waste material!

In observance of the European Directives, on Waste Electric and Electronic Equipment and Batteries and Accumulators and Waste Batteries and Accumulators and their implementation in accordance with national laws, electric equipment and batteries and battery pack(s) that have reached the end of their life must be collected separately and returned to an environmentally compatible recycling facility.

CORDLESS VACUUM PUMP 1.5CFM

Standard Accessories

Item	Code No.	Model
		1.5CFM-BL 220V Standard
Vacuum pump oil 150ml	VP005	○
Battery charger DC18RC 220V	VP056	○
18VBattery cartridge BL1850B	VP061	○
Battery cover	VP041	○
Adapter for different diameter 5/16"(femaie)×1/4"(male)	Y06114K	○
Instruction manual	IM0373	○
Carrying case	VP007	○

Optional Accessories

Item	Code No.	
Vacuum pump oil 400ml	VP006	—
Carrying case	VP007	—
Ball valve S with vacuum gauge	VP051	—
5/16"charging hose with ball valve	A1154	—
Battery charger DC18RC	220V-240V	VP053 China
	220V-240V	VP054 Hong kong, Singapore, Malaysia
	110V	VP055 Taiwan
	220V-240V	VP056 Vietnam, India,Thailand, Indonesia, Philippines, Chile, Peru
	220V	VP057 Korea
	100V-120V	VP058 Mexico, Colombia, Panama
18VBattery BL1850B	100V-240V	VP059 Brazil
		VP060 China
		VP049 Hong kong, Singapore, Malaysia, Vietnam, India, Thailand, Indonesia, Brazil, Chile, Peru
		VP048 Taiwan
		VP061 Korea
		VP062 Mexico, Colombia, Panama

CORDLESS VACUUM PUMP 1.5CFM

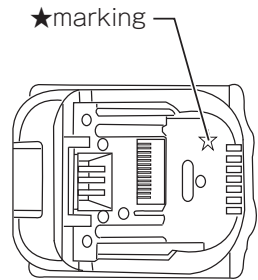
OPERATION BATTERY CARTRIDGE AND CHARGER

Battery Protection System

The pump is equipped with a battery protection system. This system automatically cuts off power to the motor to extend battery life. The pump will automatically stop during operation if the pump and/or battery are placed under one of the following conditions.

■ Battery cartridge with a star marking

- The pump is operated in a manner that causes it to draw an abnormally high current. In this situation, turn the pump off and stop the application that caused the pump to become overloaded. Then turn the pump on to restart.
- Motor will stop automatically if a battery cartridge gets high temperature. Motor keeps stopping even turn on the switch. In this situation, stop using the battery cartridge and remove it and cool down or charge it.
- The remaining battery capacity is too low and the tool will not operate. In this situation, remove and recharge the battery cartridge.



■ Battery cartridge without a star marking

- The pump is operated in a manner that causes it to draw an abnormally high current. In this situation, turn the pump off and stop the application that caused the pump to become overloaded. Then turn the pump on to restart.
- The remaining battery capacity is too low and the pump will not operate. In this situation, remove and recharge the battery cartridge.

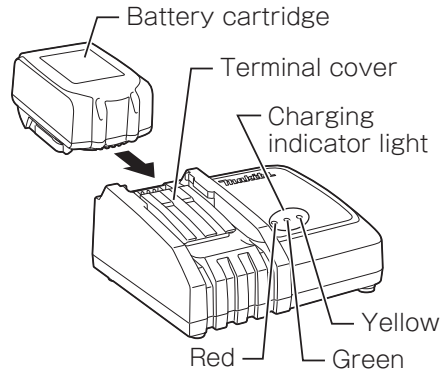
■ Battery cartridge

- When a pump is shipped, sometimes battery protection system works due to a battery cartridge is charged fully. (A pump may work if turn on switch.) Before use a tool, charge a battery cartridge correctly with charger.
- When not in use, put a battery cover on battery cartridge. It protects a battery cartridge from water and dust.

CORDLESS VACUUM PUMP 1.5CFM

Charging Battery Cartridge

- ① Plug the battery charger into the proper AC voltage source. Charge light will flash in green repeatedly.
- ② Insert the battery cartridge into charger until it stops adjusting to the guide of charger. Terminal cover of charger can be opened with inserting and closed with pulling out the battery cartridge.

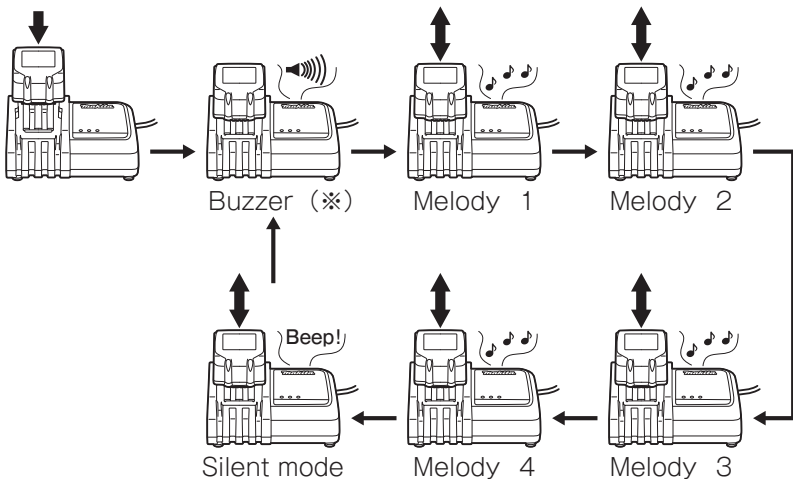


- ③ When finish of charge, the charging light will change from red one to green one and the melody sound and buzzer sound (a long beep) comes out to notify completion of charge. Battery cartridge will be cooled down if it is kept installing. Charging time varies by temperature (10°C~40°C) that battery cartridge si charged at and conditions of the battery cartridge, such as battery cartridge which is new or has not been used for a long period of time.
- ④ If the battery cartridge is not used immediately after charged, cool down should be done. Cool down takes approx. one hour.
- ⑤ After charging, remove the battery cartridge from the charger and unplug the charger from the power source.

CORDLESS VACUUM PUMP 1.5CFM

Changing Melody Of Completed Charging

- ① Inserting the battery cartridge into charger brings out last preset brief melody (※) sound of completed charging.
- ② Removing and re-inserting it within five seconds after this action makes the melody sound change.
- ③ Every time removing and re-inserting it within another five seconds after this, the melody sound changes in order. When the desired melody sound comes out, leave the battery cartridge being inserted and the charge will begin. When a "short beep" mode is selected, no completed charging signals comes out. (Silent Mode)
- ④ With finish of charge, the green light remains lit with the red light going out and the melody sound preset at the insertion of the battery cartridge or buzzer sound (a loong beep) comes out to notify completion of charge. (In selected silent mode, no sound comes out.)
- ⑤ Preset melody sound remains stored even the charger is unplugged.




















(※) When a pump is shipped, buzzer has been set.

CORDLESS VACUUM PUMP 1.5CFM




Charging Indication Lamps

The detail of charging indicator lamps is as follow:







(Lamp indication and detail in normal charging)

Indicator lamps	 Blinking  Lighted	Details
  		Before charging / one green lamp blinking After installation of battery cartridge
  		Cooling / one red lamp blinking Battery cartridge is high temperature After cool down, charging starts automatically
  		Charging / one red lamp lighted Battery capacity : 0% to 80%
  		Charging / one red and green lamp lighted Battery capacity: 80% to 100%
  		Charged / one green lamp lighted Alarm buzzer sounds or sound melody

(Lamp indication and detail in auto maintenance)

  		Auto maintenance / one yellow lamp lighted Charging time will be longer to prevent battery life decline
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(Lamp indication and detail in abnormal condition)

  		Impossible to charge / one red and one green lamp blinking by turns & alarm buzzer Expiry of battery life or dust clogging
  		Cooling system is something wrong / one yellow lamp blinking Break of cooling fan or not enough cooling



RED



GREEN



YELLOW

CORDLESS VACUUM PUMP 1.5CFM

Caution In Use

- The charger is for charging Makita-battery cartridge. Never use it for other purpose or for other manufacturer's batteries.
- Sometimes red light lights up when charge the battery immediately after use and put in direct sunshine for long time. In this case, start charging after cool down the battery with cooling fan of charger.
- If the charging light flashes alternately in green and red color, charging is not possible. The terminals on the charger or battery cartridge are clogged with dust or battery cartridge is worn out.
- Charging battery cartridge without break will make charging time longer.
- Conditioning charge will change the charging time depending on ambient temperature and battery condition.
- In following case, charger or battery cartridge may get damage. Ask for repairs of either of charger and battery.
 - Green light does not blink after installing plug of charger into proper power outlet.
 - Red light does not blink or light up after installing battery cartridge.
 - The battery is not charged in more than one hour after start charging with led light lights up.

Cooling System

- This charger is equipped with cooling fan for heated battery in order to enable to prove its own performance. Sound of cooling air comes out during cooling, which means no trouble on charger.
- Yellow light will flash for warning in the following cases.
 - Trouble on cooling fan
 - Incomplete cool down of battery, such as being clogged with dustThe battery can be charged in spite of the yellow warning light. But the charging time will be longer than usual in this case.
- The cooling system is in order although no sound of cooling fan comes out, if the yellow warning light will not flash.
- Always keep clean the vent on charger and battery for cooling.
- The products should be sent to repair or maintenance, if the yellow warning light will frequently flash.

CORDLESS VACUUM PUMP 1.5CFM

Conditioning Charge

- Conditioning charge can extend the batter life by automatically searching the optimum charging condition for the batteries in every situation.
- The battery employed in the following conditions repeatedly requires "conditioning charge" to prevent fast wear out. In that case yellow light lights up.
 1. Recharge of battery with its high temperature
 2. Recharge of battery with its low temperature
 3. Recharge of full charged battery
 4. Over-discharging of battery (continue to discharge battery in spite of power down.)

To Maintain Battery Life

- Charge the battery cartridge when cannot get enough power from a pump.
- Do not recharge full charged battery cartridge.
- Charge the battery under the condition of ambient temperature is 10°C~40°C .
- Cool down and charging by installing the battery into charger, which gets hot immediately after use is recommended.
- In case of battery is not in use for long time(more than 6 months), storing charged battery is recommended.

Inspection, Repair, Storage Of Charger

- Regular inspection is recommended in order to keep good performance. Ask shops you purchased or our sale office for checking and repair.
- Storage charger away from following area,
 - Area childer can easily reach
 - Area temperature and humidity change suddenly
 - Humid area
 - Area with direct sunlight
 - Area with volatile substance

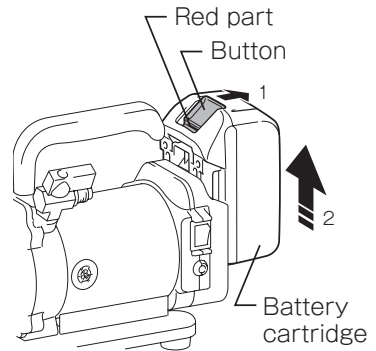
CORDLESS VACUUM PUMP 1.5CFM

Installing Or Removing Battery Cartridge

WARNING

Always install the battery cartridge fully until the red indicator cannot be seen. If not, it may accidentally fall out of the pump, causing injury to you or someone around you.

- ① To remove the battery cartridge, slide it from the pump while sliding the button on the front of the cartridge.
- ② To install the battery cartridge, align the tongue on the battery cartridge with the groove in the housing and slip it into place. Insert it all the way until it locks in place with a little click. If you can see the red indicator on the upper side of the button, it is not locked completely.



CORDLESS VACUUM PUMP 1.5CFM

OPERATION

The pump does not contain oil when newly purchased. Refer to "Adding oil" and add oil.

WARNING

Operating the pump in the condition without oil added will damage the pump. In addition, the oil tank will become hot and may result in burns or other accidents.

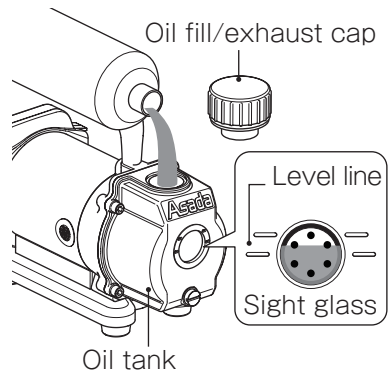
Adding Oil

- ① Remove the oil fill/exhaust cap and add the supplied oil via the filler port.

Note: Always use genuine oil to maintain pump performance

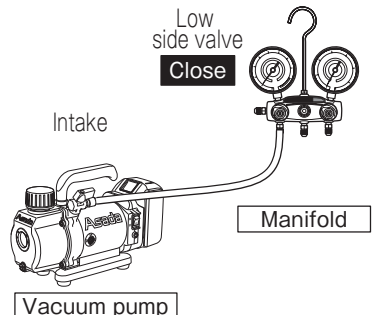
- ② Add oil until the oil level is between the upper and lower level lines of the sight glass.

Note: The oil level is important. Operating the pump under the condition with oil level not between the upper and lower level lines may result malfunction.



Checking Performance

- ① Connect the low side valve of the manifold and the intake port of the pump with a charging hose.
- ② Close the low side valve of the manifold.
- ③ Open the intake shut-off valve.
- ④ Open the inlet valve.
- ⑤ Turn the pump on. If the pressure of the manifold indicates a vacuum of -0.09 to -0.1 MPa within 30 seconds, the pump is operating properly.
- ⑥ Turn the pump off.

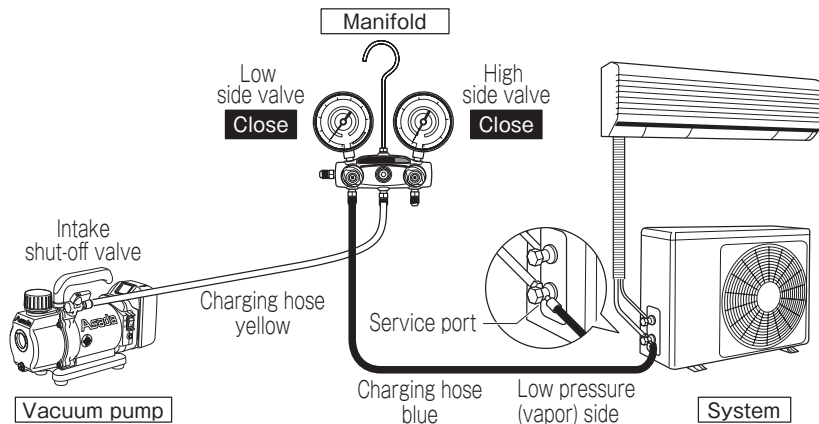


CORDLESS VACUUM PUMP 1.5CFM

Operation (evacuation work)

- ① Connect the pump, manifold and outdoor unit with hoses.

Note: When the outdoor unit service port size is 1/4", use the supplied different diameter adapter.



- ② Check that the high side and low side valves of the manifold are closed.
- ③ Install the battery cartridge to the pump. (See “Installing or removing battery cartridge” for the installation method.)
- ④ Turn the pump on. The LED lamp (green) lights up.
Note: The motor may not operate when it is cold. (5°C or less)
In these cases, bring the pump indoors and allow it to warm up.
- ⑤ Open the intake shut-off valve of the pump and the low side valve of the manifold.

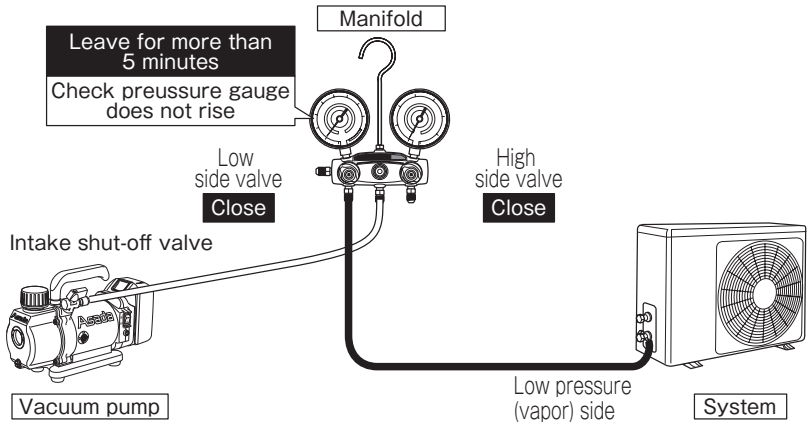
⚠ WARNING

The pump becomes hot during operation and immediately after stopping. Do not touch the pump while it is hot. Doing so may result in burns or other accidents.

- ⑥ When the specified degree of vacuum (refer to the manual provided by the air conditioner manufacturer) is reached, close the low side valve of the manifold.
- ⑦ Close the intake shut-off valve and turn the pump off.

CORDLESS VACUUM PUMP 1.5CFM

- ⑧ Leave the pump and manifold for 5 minutes or more. If the pressure of the manifold does not rise, there are no leaks.



- ⑨ After operation, remove the battery and put battery cover.

Exchanging Battery Cartridge

When the battery remaining capacity becomes lamp goes out and at the same time a long alarm beep start sounding. About two minutes later the motor stop. And then alarm beep changes into a repeated short-time interval beeping which notifies the motor stop and 30 seconds later the beeping stops.

However do not wait until the motor stop (or alarm beep changes to a short-time beeping), and instead close the inlet valve of the tool and the low pressure side valve of manifold.

Check that the pump is turned off, remove the battery, and charge it or replace it with a spare battery.

Operation Times (guideline)

Battery	Operation times
BL1860B	75 min
BL1850 / BL1850B	50 min
BL1840 / BL1840B	40 min
BL1830 / BL1830B	30 min

After finishing work, remove the battery and attach the supplied cover.

Note: When transporting, operating and storing the tool, never place it on its side or upside down. This may cause oil leakage from the oil fill/exhaust cap.

CORDLESS VACUUM PUMP 1.5CFM

MAINTENANCE & INSPECTION

- Inspect and clean regularly as instructed below and perform correction or replacement timely.

⚠ WARNING

Always be sure that the pump is switched off and the battery cartridge is removed before attempting to perform inspection or maintenance.

Stop the pump:

To make pump life longer and smooth start-up, these procedures to shut off pump should be followed.

1. Close the manifold valve between the pump and the system.
2. Remove the hose from the pump inlet.

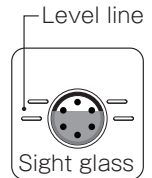
Cover the inlet port opening to prevent any contamination or foreign particles from entering the port.

Checking The Oil

- Always check the oil level and condition (deterioration, etc.) before using the pump.

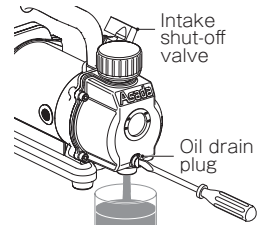
NOTE: Add oil until the oil level is between the upper and lower level lines of the sight glass.

- Change oil every 20 hours operation.
- Change oil after every operation when the pump is used for an old system.
- Use Asada genuine oil for best performance.



Replacing The Oil

- ① Open the intake shut-off valve.
- ② Operate the tool for 1 or 2 minutes to warm up the oil.
- ③ Turn the pump off.
- ④ Remove the drain plug and drain the oil.
- ⑤ Refer to "Adding oil" and add new oil.
 - ※ Dispose of old oil in accordance with local regulations.



⚠ CAUTION

- ◆ It is recommended to change the oil after 20 hours of usage to protect pump components from contaminants pulled into the pump.
- ◆ When vacuuming on old refrigeration systems, change the oil after every usage.

CORDLESS VACUUM PUMP 1.5CFM

MAINTENANCE & INSPECTION

Vacuum pump oil:

The condition and type of oil used in any high performance vacuum pump are extremely important in determining the ultimate attainable vacuum. It is recommended to use the High Performance Vacuum Pump Oil, which is specifically blended to maintain maximum viscosity at normal temperatures and to improve start up under cold weather.

Cleaning The Pump

- ① When the oil is extremely dirty, replace the oil and then operate the pump for 3 to 5 minutes.
- ② Drain the oil and add new oil.
- ③ If the drained oil is still dirty, repeat this cleaning process two or three times.

Trouble Shooting

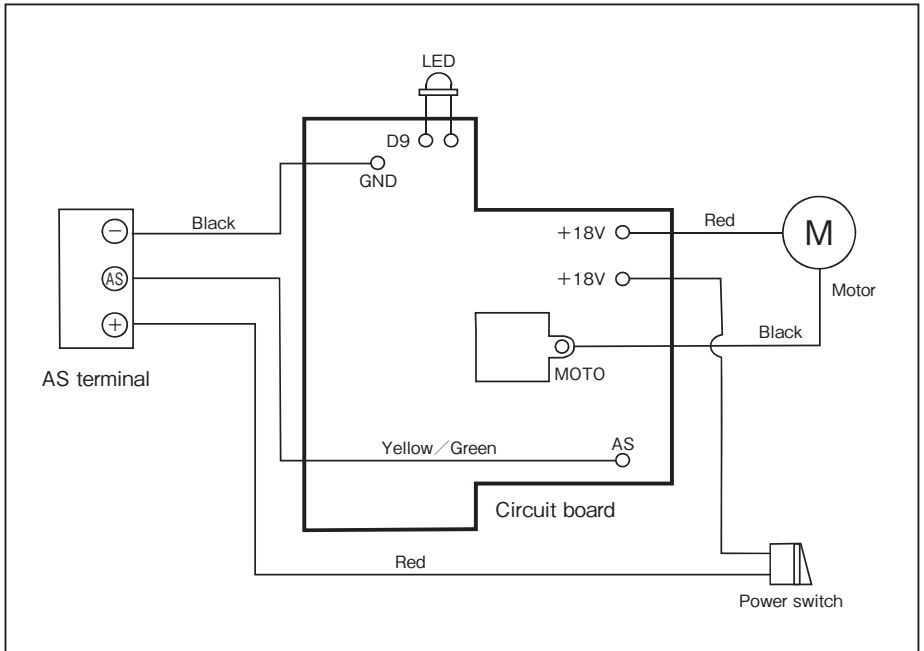
Condition	Possible Cause	Solution
The pump will not start.	<ol style="list-style-type: none">1. The battery is not set properly.2. The ambient temperature is too low.3. Poor wiring connection.4. The pump is locked.5. Motor failure.	<ol style="list-style-type: none">1. Set the battery properly2. Warm up the pump in doors.3. Repair.4. Repair.5. Repair.
The pump will not enough vacuum.	<ol style="list-style-type: none">1. Leaking from the system.2. Insufficient oil.3. Dirty oil.4. Pump parts are worn out.5. Damaged fittings, gaskets and seal.6. Motor failure.	<ol style="list-style-type: none">1. Repair the system.2. Refill or change oil.3. Clean reservoir and change oil.4. Repair.5. Repair.6. Repair.
Oil leakage.	<ol style="list-style-type: none">1. Damaged gaskets and shaft seals2. Damaged O-ring of oil drain plug.3. Oil drain plug is loose.	<ol style="list-style-type: none">1. Repair.2. Replace O-ring.3. Tighten Oil drain plug.
Abnormal noise.	<ol style="list-style-type: none">1. Motor failure.2. Bearing failure.3. Loose bolts.4. Pump failure.5. Air is sucked.	<ol style="list-style-type: none">1. Repair.2. Repair.3. Tighten bolts.4. Repair.5. Tighten caps and connections. Replace gaskets and O-rings. Replace fittings or re-seal them.

Remark: If these procedures do not solve the problem, contact with authorized distributor.

CORDLESS VACUUM PUMP 1.5CFM

TECHNICAL INFORMATION

Electrical Wiring Diagram



CE Declaration Of Conformity

We, acting in sole responsibility, declare that this product complies with the regulation of the directives 2006/42/EC, 2014/30/EU, 2011/65/EU.

For additional information, please contact us or one of the subsidiary companies.

CORDLESS VACUUM PUMP 1.5CFM

Attestation of Conformity

No. E8A 16 06 16624

Holder of Certificate : Asada Corporation
3-60 Kamiida Nishi-machi, Kita-Ku Nagoya
462-8551 JAPAN

Name of Object : Vacuum Pump

Model(s) : 1.5CFM-B

Description of Object : Rated voltage : 18V/DC
Protection class : III

Tested according to : EN 55014-1:2006/A2:2011
EN 55014-2:1997/A2:2008

This Attestation of Conformity is issued on a voluntary basis according to the Directive 2014/30/EU relating to electromagnetic compatibility. It confirms that the listed apparatus complies with all essential requirements of the directive and is based on the technical specifications applicable at the time of issuance. It refers only to the particular sample submitted for testing and certification. See also notes overleaf.

Test report no.: 4852016229500

Date,



After preparation of the necessary technical documentation as well as the EU declaration of conformity the required CE marking can be affixed on the product. That declaration of conformity is issued under the sole responsibility of the manufacturer.

Other relevant EU-directives have to be observed.

CORDLESS VACUUM PUMP 1.5CFM

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