

#83856 AIR COMPRESSOR INSTRUCTION MANUAL

CAUTION!
Do not run
air compressor
without first
adding oil
to crankcase.
(See page 2)



LIMITED WARRANTY

Micro-Mark guarantees this product to be free of manufacturing defects for a period of 90 days from date of shipment, regardless of the amount of time the product has been used and/or stored. The product, or parts thereof, will be repaired or replaced (at our option) and shipped back to you free of charge if the following conditions have been met:

- the product is shipped back to us within the warranty period,
- incoming transportation charges have been pre-paid,
- proof of purchase has been provided, and
- our Service Department determines that the problem was caused by a defect in material and/or workmanship.

Please return to **Micro-Mark Product Service Department** at the address provided on the last page of this manual, with a note explaining the problem.

For products returned after the warranty period, our regular repair charges shall apply. Please include your telephone number so we may advise you of the repair estimate. Any product returned to the purchaser without repair work being performed shall be shipped C.O.D. for the return transportation charges.

This warranty does not cover damages resulting from improper assembly, adjustment or maintenance, accident, alterations, normal wear, abuse or misuse, and does not apply where products are used commercially. The warranty shall also not apply when the product has been used for purposes beyond those for which it was designed or unreasonable for its size.

Micro-Mark makes no other warranty of any kind whatever, expressed or implied, and all implied warranties of merchantability and fitness for a particular purpose which exceed the above mentioned obligation are hereby disclaimed by Micro-Mark and excluded from this warranty.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state. The obligation of the warrantor is solely to repair or replace the products. The warrantor is not liable for any incidental or consequential damages due to such defect. Some states do not allow the exclusion or limitations of incidental or consequential damages, so the above limitations or exclusion may not apply to you.

IMPORTANT SAFETY INSTRUCTIONS AND GUIDELINES

Save these instructions

Improper operation or maintenance of this product could result in serious injury and/or property damage. Read and understand all of the warnings and safety instructions provided before using this equipment.

CAUTION The air compressor should be operated on a dedicated 10-amp circuit. If the circuit does not have 10 free amps available, a larger circuit must be used. Always use more air hose before utilizing extension cords. Low voltage could cause damage to the motor.

RISK OF MOVING PARTS If the air compressor is in operation, all guards and covers should be attached or installed correctly. If any guard or cover has been damaged, do not operate the equipment until the proper personnel have correctly repaired the equipment. The power cord should be free of any moving parts, twisting and/or crimping while in use and while in storage.

RISK OF BURNS There are surfaces on your air compressor that while in operation and thereafter can cause serious burns if touched. The equipment should be allowed to cool before any maintenance is attempted. Items such as the compressor pump and the outlet tube are normally hot during and after operation.

RISK OF FALLING Operation of the air compressor should always be in a position that is stable. Never use the air compressor on a rooftop or elevated position that could allow the unit to fall or be tipped over. Use additional air hose for elevated jobs.

RISK FROM FLYING OBJECTS Always wear approved safety glasses with side shields when the air compressor is in use. Turn off the air compressor and drain the air tank before performing any type of maintenance or disassembly of the hoses or fittings. Never point any nozzle or sprayer toward any part of the body or at other people or animals.

RISK TO BREATHING Avoid using the air compressor in confined areas. Always have adequate space (12") on all sides of the air compressor. Also keep children, pets, and others out of the area of operation. This air compressor does not provide breathable air for anyone or any auxiliary breathing device. Spray in an area away from the air compressor so that intake air will not damage the air compressor filter.

RISK OF ELECTRICAL SHOCK Never use the air compressor in the rain or wet conditions. Any electrical issues or repairs should be performed by authorized personnel, such as an electrician, and should comply with all national and local electrical codes. The air compressor should also have the proper three prong grounding plug, correct voltage, and adequate fuse protection.

RISK OF EXPLOSION OR FIRE Never operate the compressor near combustible materials, gasoline or solvent vapors. If spraying flammable materials, locate the air compressor at least 150 feet away from the spray area. Never operate the air compressor in a confined area.

RISK OF BURSTING Always drain the air compressor tank daily or after each use. If the tank develops a leak, replace the air compressor. Never use the air compressor after a leak has been found or try to make any modifications to the tank. Never modify the air compressor's factory settings which control the tank pressure or any other function.

PARTS & FEATURES

Drain Valve: Used to drain condensation from the air tank. Located at bottom of tank.

Motor Thermal Overload: The motor has an automatic thermal overload protector. If the motor overheats, this protector will shut off the motor. The motor must be allowed 30 minutes to cool before restarting.

Pressure Switch: This controls the power to the motor and also the cut-in/cut-out pressure settings. This switch serves as the Auto-On/Off positions for the unit.

Air Intake Filter: Provides clean air to the pump and must always be kept free of debris. Check often.

Air Compressor Pump: Oil lubricated direct driven pump that compresses air, which is distributed to the tank.

Check Valve: When the pump is not in operation, the valve closes to retain air pressure inside the tank.

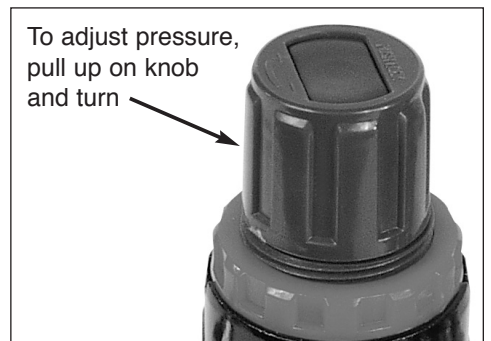
Pressure Relief Valve: The pressure relief valve located on the side of the pressure switch is designed to automatically release compressed air when the air compressor reaches cut-out pressure. The release air should only escape momentarily and the valve should then close.

Tank Safety Valve: Used to allow excess tank pressure to escape into the atmosphere. This valve should only open when the tank pressure is above the maximum rated pressure.

Outlet Pressure Gauge: Indicates the outgoing air pressure to the tool and is controlled by the regulator.

Tank Pressure Gauge: Indicates the reserve air pressure in the tank.

Regulator: The regulator controls the air pressure coming from the air tank. To increase the pressure, turn the knob clockwise and to decrease the pressure turn knob counterclockwise.

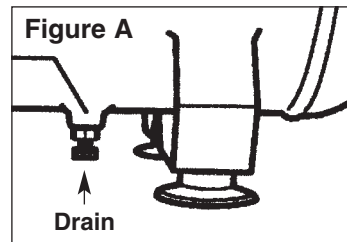


INSTALLATION & ASSEMBLY

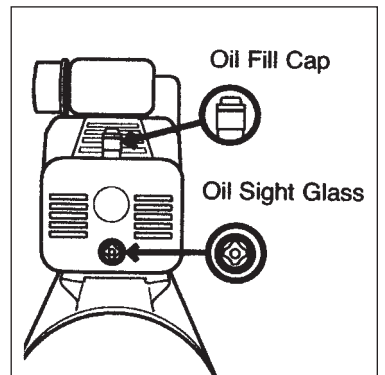
WARNING! The air compressor should be turned off and unplugged from the power source before any maintenance is performed. Also bleed the air from the tank and allow the unit time to cool. Personal injuries could occur from moving parts, electrical sources, compressed air or hot surfaces.

CAUTION! Do not attempt to start the air compressor without first adding oil to the crankcase. Serious damage can result unless filled with oil. The pump is shipped without oil from the factory. Please add oil included with the unit. Only use non-detergent oils since multi-viscosity motor oils leave carbon deposits on pump components thus reducing performance and compressor life.

WARNING! Drain the tank (see Figure A) to release all tank air pressure before removing the oil fill cap. Be sure the air vent in the oil fill cap (see Figure B) is free from debris. If air vent is blocked, pressure can build in crankcase causing damage to the compressor and possible personal injury.



Lubrication and Oil Remove the oil fill cap by turning it counterclockwise by hand. Fill the compressor pump with the air compressor oil included or an equivalent oil such as SAE-30 non-detergent (API CG/CD Heavy Duty) oil at slow intervals until the oil reaches the center of the red circle in the sight glass (see Figure B). Use SAE-10 during extreme winter conditions.



INSTALLATION & ASSEMBLY *continued*

Location of the Air Compressor The air compressor should always be located in a clean, dry, and well-ventilated environment. The unit should have, at minimum, 12" of space on each side. The air filter intake should be free of any debris or obstructions. Check the air filter to be sure it is clean and in working order.

Grounding Instructions This product should be grounded. In the event of an electrical short circuit, grounding reduces the risk of electric shock by providing an escape wire for the electric current. This product is equipped with a cord having a grounding wire with an appropriate grounding plug. The plug must be plugged into an outlet that is properly installed and grounded in accordance with all local codes and ordinances. Check with a qualified electrician or service personnel if these instructions are not completely understood or if in doubt as to whether the tool is properly grounded.

WARNING! Improper installation of the grounding plug will result in a risk of electric shock. If repair or replacement of the cord or plug is necessary, do not connect the grounding wire to either flat blade terminal. The wire with insulation having an outer surface that is green with or without yellow stripes is the grounding wire. Check with a

qualified electrician or serviceman if the grounding instructions are not completely understood, or if in doubt as to whether the product is properly grounded. Do not modify the plug provided; if it will not fit the outlet, have the proper outlet installed by a qualified electrician. This product is for use on a circuit having a nominal rating of 110 volts AC and is factory-equipped with a specific electric cord and plug to permit connection to a proper electric circuit. Make sure that the product is connected to an outlet having the same configuration as the plug. No adapter should be used with this product. If the product must be reconnected for use on a different type of electric circuit, qualified service personnel should make the reconnection.

Extension Cords Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating.

Break in Procedures No break in procedure is required by the user. This product is factory tested to ensure proper operation and performance. Compressor must always be turned ON or OFF using pressure switch. Never turn machine OFF or ON using power source.

OPERATING PROCEDURES

Start-Up Procedure

1. Set the Auto-On/Off button to the Off position (press down).
2. Check the air compressor visually for any damage or obstruction.
3. Close the drain valve.
4. Check the oil level of the pump.
5. Connect the air hose to the quick connect socket on the regulator assembly by inserting the quick connect plug on the air hose into the quick connect socket. The quick connect socket collar will snap forward and lock the plug into place providing an airtight seal between the socket and plug. (To release the air hose push the collar back on the quick connect socket.)
6. Plug the power cord into the proper receptacle.
7. Lift the Auto-On/Off button to the On-Auto position. The compressor will start and build air pressure in the tank to cut-out pressure and then shut off automatically.
8. Adjust the regulator to a PSI setting that is needed for your application and be sure it is within the safety standards required to perform the task. If using a pneumatic tool, the manufacturer should have recommendations in the manual for the particular tool for the PSI settings.
9. The air compressor is now ready for use.

Shut-Down Procedure

1. Press the Auto-On/Off button to the Off position.
2. Unplug the power cord from the receptacle.
3. Set the outlet pressure to zero on the regulator.
4. Remove any air tools or accessories.
5. Open the drain valve allowing air to bleed from the tank. After all of the air has bled from the tank, close the drain valve to prevent debris buildup in the valve.

CAUTION! When draining the tank, always use ear and eye protection. Drain the tank in a suitable location; condensation will be present in most cases of draining.

WARNING! Water that remains in the tank during storage will corrode and weaken the air tank, which could cause the tank to rupture. To avoid serious injury, be sure to drain the tank after each use or daily.

MAINTENANCE

NOTE: Qualified service personnel should perform any service procedure not covered in the maintenance schedule below.

Items to Check/Change	Before Each Use or Daily	After First 10 Hours	Every 100 Hours
Check Tank Safety Valve	✓		
Overall Unit Visual Check	✓		
Check Oil Level	✓		
Change Oil		✓	✓
Check Air Filter	✓		

CAUTION! To ensure efficient operation and longer life of the air compressor unit, a routine maintenance schedule should be followed. The following schedule is geared toward a consumer whose compressor is used in a normal working environment on a daily basis. If necessary, the schedule should be modified to suit the condition under which your compressor is used. The modifications will depend upon the hours of operation and the work environment.

Oil Changing

For changing the pump oil, be sure to do the following:

1. Turn the unit off and unplug the power cord from the socket.
2. Allow the compressor time to cool if it has been in operation.
3. Open the drain valve to bleed all air from the tank.
4. Close the drain valve.
5. Remove the oil fill cap on the pump.
6. Remove the sight glass with a box end wrench or socket. Drain the oil into a suitable container and dispose of properly. The compressor may need to be tipped slightly toward the drain to allow all of the oil to drain out.
7. Re-attach the sight glass. Note: Do not overtighten the sight glass when re-assembling. Be sure the gasket is between the sight glass and the pump crankcase.
8. Refill the compressor pump with air compressor oil such as SAE-30 non-detergent (API CG/CD Heavy Duty) oil at slow intervals until the oil reaches the center of the red circle in the sight glass. Use an SAE-10 during extreme winter conditions.

STORAGE

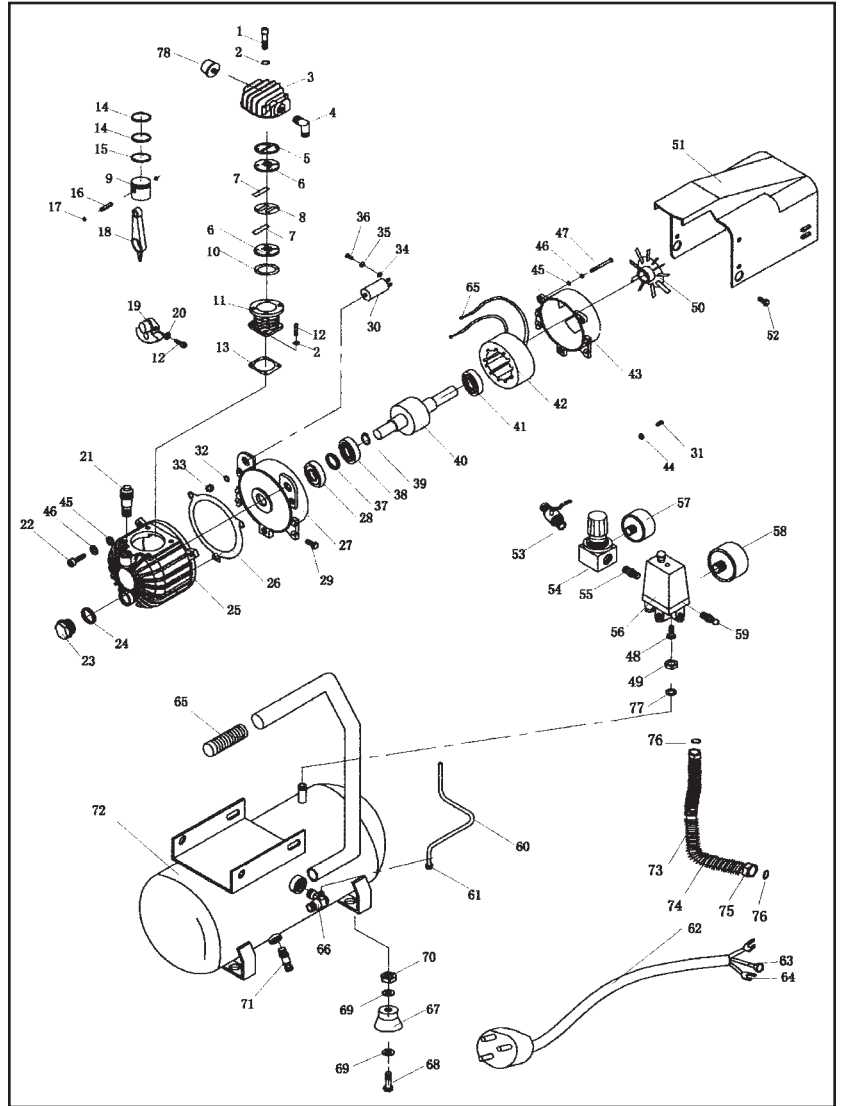
To store the air compressor, do the following:

1. Turn the unit off and unplug the power cord from the receptacle.
2. Remove all air hoses, accessories, and air tools from the air compressor.
3. Perform the daily maintenance schedule.
4. Open the drain valve to bleed all air from the tank.
5. Close the drain valve.
6. Store the air compressor in a clean and dry location.

TROUBLESHOOTING GUIDE

Problems	Possible Correction
Air leaks at the check valve or at the pressure relief valve	A defective check valve results in a constant air leak at the pressure release valve when there is pressure in the tank and the compressor is shut off. Drain the tank, then remove and clean or replace the check valve.
Air leaks between head and cylinder	Be sure of proper torque on head bolts. If leak remains, contact a service technician.
Air leak from safety valve	Operate the safety valve manually by pulling on the ring. If the valve continues to leak when in the closed position, it should be replaced.
Pressure reading on the regulated pressure gauge drops when an accessory is used	If there is an excessive amount of pressure drop when the accessory is used, replace the regulator. NOTE: Adjust the regulated pressure under flow conditions (while accessory is being used). It is normal for the gauge to show minimal pressure loss during initial use of the tool.
Excessive tank pressure	Move the Auto-On/Off lever to the Off position. If the unit doesn't shut off, unplug it from the power source and contact a service technician.
Motor will not start	Make sure power cord is plugged in and the switch is on. Inspect for the proper size fuse in your circuit box. If the fuse was tripped reset it and restart the unit. If repeated tripping occurs, replace the check valve or contact your service technician.
Excessive moisture in the discharge air	Remove the water in the tank by draining after each use. High humidity environments will cause excessive condensation. Utilize water filters on your air line. NOTE: Water condensation is not caused by compressor malfunction. Be sure the compressor's air output is greater than the air tool's air consumption rate.
Air leaks from the tank body or tank welds	Never drill into, weld, or otherwise modify the air tank or it will weaken. The tank can rupture or explode. Compressor cannot be repaired. Discontinue use of the air compressor.

PARTS DIAGRAM



PARTS LIST

NO.	SPECIFICATION	QTY.	NO.	SPECIFICATION	QTY.	NO.	SPECIFICATION	QTY.
1	BOLT M6X30	4	27	BRACKET	1	53	QUICK CONNECT	1
2	SPRING WASHER 6	8	28	OIL SEAL	1	54	REGULATOR	1
3	CYLINDER HEAD	1	29	BOLT M5X12	10	55	CONNECT	1
4	EHAUST ELBOW	1	30	CAPACITOR	1	56	PRESSURE SWITCH	1
5	CYLINDER HEAD VALVE	1	31	SCREW M4X10	1	57	PRESSURE GAUGE	1
6	VALVE PLATE	2	32	LOCK GASKET	1	58	PRESSURE GAUGE	1
7	VALVE	2	33	NUT M8	1	59	SAFETY VALVE	1
8	VALVE WASHER	1	34	WASHER 3	2	60	TUBE	1
9	PISTON	1	35	SPRING WASHER 3	2	61	NUT	1
10	WASHER LOWER	1	36	SCREW M3X6	2	62	POWER CORD	1
11	CYLINDER	1	37	WASHER 203	1	63	CABLE CONNECTOR	1
12	BOLT M6X20	5	38	BEARING 203	1	64	CABLE CONNECTOR	2
13	WASHER LOWER	1	39	CIRCLIP	1	65	GRIP HANDLE	1
14	COMPRESSION RING	1	40	ROTOR	1	66	CHECK VALVE	1
15	OIL RING	1	41	BEARING	1	67	CUSHION FOOT	4
16	PISTON PIN	1	42	STATOR	1	68	BOLT M5X15	4
17	CIRCLIP	2	43	BRACHET	1	69	WASHER 5	8
18	ROD CONNECT	1	44	GASKET	1	70	NUT	4
19	CRANK SHAFT	1	45	WASHER 5	10	71	DRAIN VALVE	1
20	NUT M6	1	46	SPRING WASHER 5	6	72	TANK	1
21	OIL FILL CAP	1	47	BOLT M5X155	3	73	TUBE	1
22	BOLT M5X20	3	48	CONNECT	1	74	FIN TUBING	1
23	OIL SIGHT GAUGE	1	49	NUT	1	75	NUT G3/8	2
24	SEAL OIL SIGHT GAUGE	1	50	FAN	1	76	WASHER 10	2
25	CRANKCASE	1	51	SHROUD	1	77	WASHER	1
26	CRANKCASE VALVE	1	52	BOLT M5X15	8	78	AIR FILTER KIT	1

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