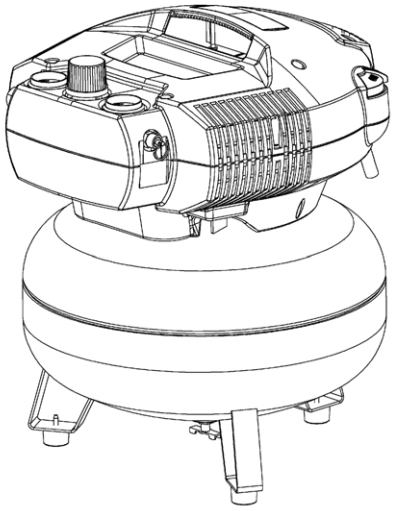
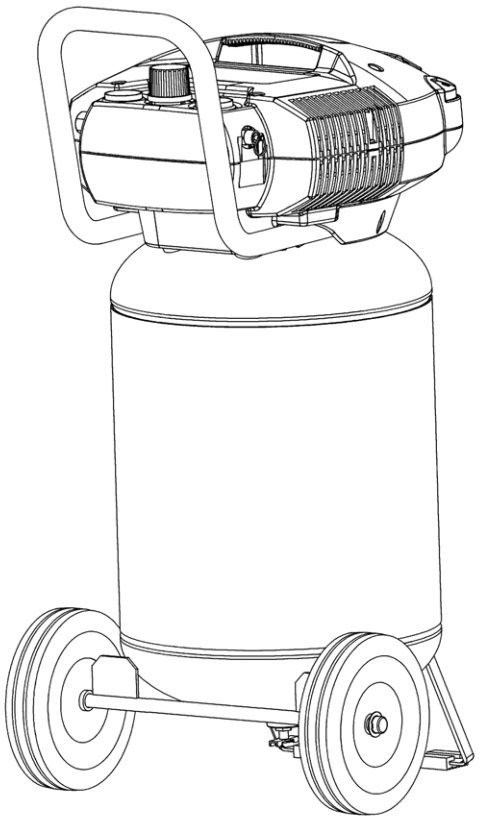
Operator Manual

200-2277

Revision D

Oil-less, Single Stage, Direct Drive, Electric Air Compressors





⚠ **WARNING:** Read and understand all safety precautions in this manual before operating. Failure to comply with instructions in this manual could result in personal injury, property damage, and/or voiding of your warranty. Coleman Powermate Compressors **WILL NOT** be liable for any damage because of failure to follow these instructions.

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SAFETY GUIDELINES

The following information relates to protecting YOUR SAFETY and PREVENTING EQUIPMENT PROBLEMS. To help you recognize this information, we use the following symbols. Please read the manual and pay attention to these sections.

⚠ **DANGER: – A POTENTIAL HAZARD THAT WILL CAUSE SERIOUS INJURY OR LOSS OF LIFE.**

⚠ **WARNING: – A POTENTIAL HAZARD THAT COULD CAUSE SERIOUS INJURY OR LOSS OF LIFE.**

⚠ **CAUTION: – A POTENTIAL HAZARD THAT MAY CAUSE MODERATE INJURY OR DAMAGE TO EQUIPMENT.**

⚠ WARNING

1.   **RISK OF FIRE OR EXPLOSION.** Never spray flammable liquids in a confined area. It is normal for the motor and pressure switch to produce sparks while operating. If sparks come into contact with vapors from gasoline or other solvents, they may ignite, causing fire or explosion. Always operate the compressor in a well–ventilated area. Do not smoke while spraying. Do not spray where sparks or flame are present. Keep compressor as far from spray area as possible.

2.  **RISK OF BURSTING.** Rust can weaken the tank. Drain the condensed water from the tank after each use to reduce rusting. If a leak is detected in the tank, replace the tank immediately. Do not weld, drill or modify the air tank of this compressor. Welding or modifications on the air compressor tank can severely impair tank strength and cause an extremely hazardous condition. Welding or modifying the tank in any manner will void the warranty.

3.  **RISK OF ELECTRICAL SHOCK.** A licensed electrician in accordance with all local and national codes must install all wiring. Never use an electric air compressor outdoors when it is raining or on a wet surface, as it may cause an electric shock.

4.  **RISK OF INJURY.** This unit starts automatically. ALWAYS shut off the compressor, remove the plug from the outlet, and bleed all pressure from the system before servicing the compressor, and when the compressor is not in use. Do not operate the unit with the shroud removed. Serious injury could occur from contact with moving parts.

5.  **RISK OF BURSTING.** Check the manufacturer's maximum pressure rating for air tools and accessories. Compressor outlet pressure must be regulated so as to never exceed the maximum pressure rating of the tool. Relieve all pressure through the hose before attaching or removing accessories.

6.  **RISK OF BURNS.** High temperatures are generated by the pump and manifold. To prevent burns or other injuries, DO NOT touch the pump, manifold or transfer tube while the pump is running. Allow them to cool before handling or servicing. Keep children away from the compressor at all times.

7.  **RISK TO BREATHING.** Be certain to read all labels when you are spraying paints or toxic materials, and follow the safety instructions. Use a respirator mask if there is a chance of inhaling anything you are spraying. Read all instructions and be sure that your respirator mask will protect you.

8.  **RISK OF EYE INJURY.** Always wear ANSI Z87.1 approved safety goggles when using an air compressor. Never point any nozzle or sprayer toward a person or any part of the body. Equipment can cause serious injury if the spray penetrates the skin.

9.  **RISK OF BURSTING.** Do not adjust the pressure switch or relief valve for any reason. Doing so voids all warranties. They have been preset at the factory for the maximum pressure of this unit. Personal injury and/or property damage may result if the pressure switch or the relief valve are tampered with.

10.  **RISK OF BURSTING.** Do not use plastic or pvc pipe for compressed air. Use only galvanized steel pipe and fittings for compressed air distribution lines.

11.  **RISK TO HEARING.** Always wear hearing protection when using an air compressor. Failure to do so may result in hearing loss.

12.  **RISK TO BREATHING.** Never directly inhale the compressed air produced by a compressor. It is not suitable for breathing purposes.

13.  The power cord on this product contains lead, a chemical known to the State of California to cause cancer, and birth defects or other reproductive harm. ***Wash hands after handling.***

⚠ CAUTION

1. Drain the moisture from the tank on a daily basis. A clean, dry tank will help prevent corrosion.
2. Pull the pressure relief valve ring daily to ensure that the valve is functioning properly, and to clear the valve of any possible obstructions.
3. To provide proper ventilation for cooling, the compressor must be kept a minimum of 12 inches (31 cm) from the nearest wall, in a well–ventilated area.
4. Fasten the compressor down securely if transporting is necessary. Pressure must be released from the tank before transporting.
5. Protect the air hose and electric cord from damage and puncture. Inspect them weekly for weak or worn spots, and replace if necessary.
6. To reduce the risk of electric shock, do not expose to rain. Store indoors.
7. Never operate the compressor if the power cord or plug are damaged. Take the equipment to the nearest Authorized Service Center , and a specialist technician will replace it.

OVERVIEW

BASIC AIR COMPRESSOR COMPONENTS

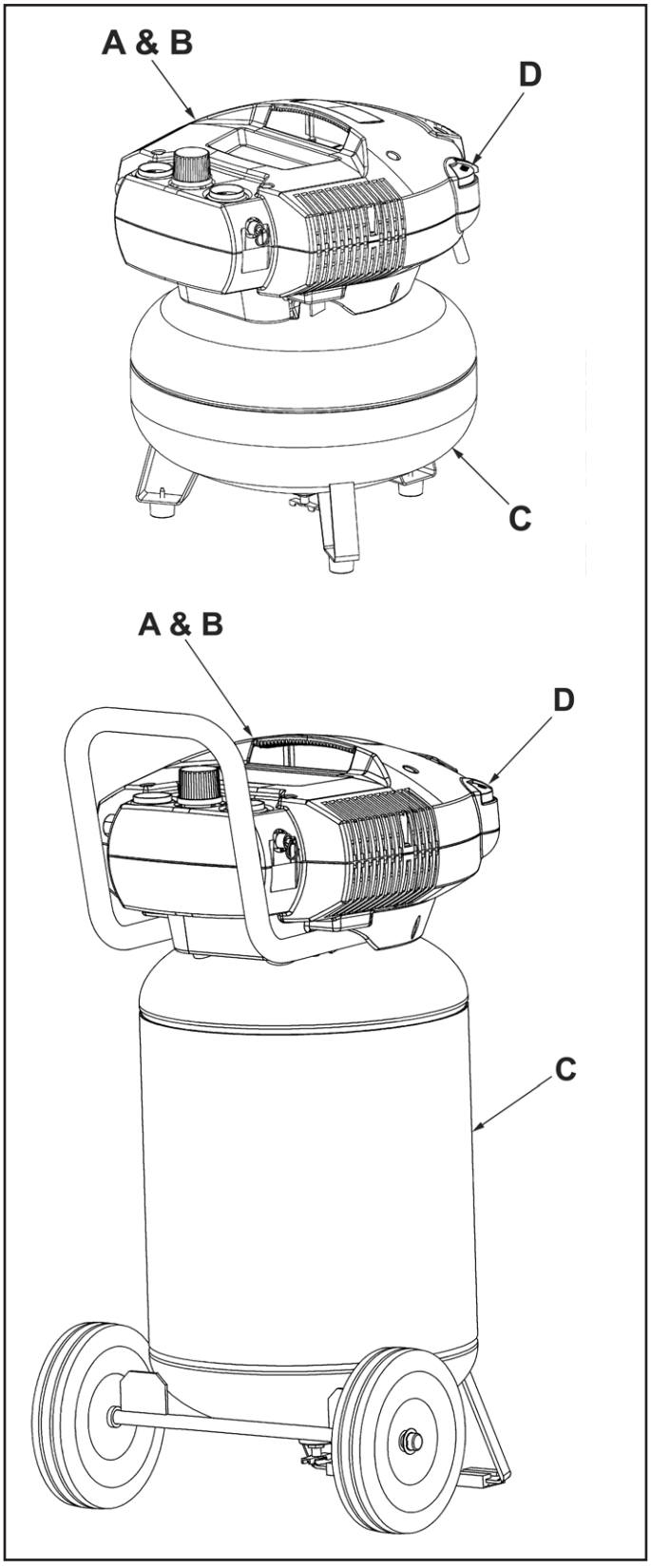
Oil-less air compressors are factory lubricated for life and do not require any oil.

The basic components of the air compressor are the electric motor, pump, pressure switch, and tank.
The electric motor (see **A**) powers the pump. The electric motor is equipped with an overload protector and an automatic reset. If the motor becomes overheated, the overload protector will shut it down to prevent damage to the motor. When the motor sufficiently cools, it will automatically restart.

The **pump** (see **B**) compresses the air and discharges it into the tank.

The **tank** (see **C**) stores the compressed air.

The **pressure switch** (see **D**) shuts down the motor and relieves air pressure in the pump and transfer tube when the air pressure in the tank reaches the kick–out pressure. As compressed air is used and the pressure level in the tank drops to the kick–in pressure, the pressure switch restarts the motor automatically, without warning, and the pump resumes compressing air.



ASSEMBLY / ASSEMBLAGE

ASSEMBLING THE COMPRESSOR

1. Unpack the air compressor. Inspect the unit for damage. If the unit has been damaged in transit, contact the carrier and complete a damage claim. Do this immediately because there are time limitations to damage claims.

   The carton should contain:
   - air compressor
   - operator and parts manuals

2. Check the compressor's serial label to ensure that you have received the model ordered, and that it has the required pressure rating for its intended use.

3. Locate the compressor according to the following guidelines:

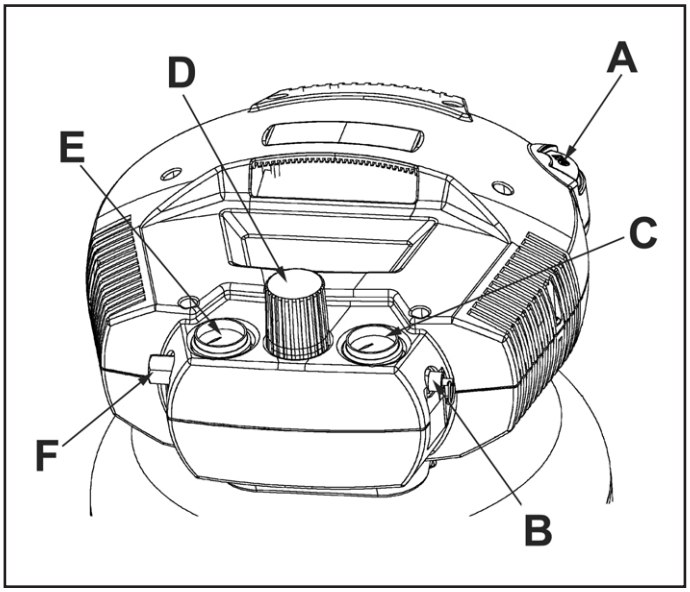
   a. Position the compressor near a grounded electrical outlet (see GROUNDING INSTRUCTIONS, page 9).
   b. The compressor must be at least 12 inches (31 cm) from any wall or obstruction, in a clean, well-ventilated area, to ensure sufficient air flow and cooling.
   c. In cold climates, store portable compressors in a heated building when not in use. This will reduce problems with motor starting and freezing of water condensation.

⚠ **CAUTION: The shipping pallet is not designed as a base for an operating compressor.**

   d. Remove the compressor from the shipping pallet or carton and place it on the floor or a hard, level surface. The compressor must be level to ensure proper drainage of the moisture in the tank.

4. Connect an air hose (not included) to the compressor hose outlet.

COMPRESSOR CONTROLS



PRESSURE switch (see **A**)
This switch turns on the compressor. It is operated manually, but when in the ON position, it allows the compressor to start up or shut down automatically, without warning, upon air demand. ALWAYS set this switch to OFF when the compressor is not being used, and before unplugging the compressor.

Pressure Relief Valve (see **B**)
If the pressure switch does *not* shut down the motor when pressure reaches the preset level, this valve will pop open automatically to prevent over pressurization. To operate manually, pull the ring on the valve to relieve air pressure in the tank.

Tank Pressure Gauge (see **C**)
This gauge measures the pressure level of the air stored in the tank. It is not adjustable by the operator, and does *not* indicate line pressure.

Air Pressure Regulator (see **D**)
This air pressure regulator enables you to adjust line pressure to the tool you are using.

WARNING: Never exceed the maximum working pressure of the tool.
Turn the knob clockwise to increase pressure, and counterclockwise to decrease pressure.

Regulated pressure gauge (see **E**)
This gauge measures the regulated outlet pressure.

Air line outlet (see **F**)
Connect 1/4” NPT air hose to this outlet.

ELECTRICAL POWER REQUIREMENTS

ELECTRICAL WIRING

Refer to the air compressor's serial label for the unit's voltage and amperage requirements.

Use a dedicated circuit

For best performance and reliable starting, the air compressor must be plugged into a dedicated circuit, as close as possible to the fusebox or circuit breaker. The compressor will use the full capacity of a typical 15 amp household circuit. If any other electrical devices are drawing from the compressor's circuit, the compressor may fail to start. Low voltage or an overloaded circuit can result in sluggish starting that causes the motor overload protection system or circuit breaker to trip, especially in cold conditions.

NOTE: A circuit breaker is recommended. If the air compressor is connected to a circuit protected by a fuse, use dual element time delay fuses (Buss Fusetron type "T" only).

EXTENSION CORDS

NOTE: Avoid use of extension cords.

For optimum performance, plug the compressor power cord directly into a grounded wall socket. Do not use an extension cord unless absolutely necessary. Instead, use a longer air hose to reach the area where the air is needed.

If use of an extension cord cannot be avoided, the cord should be no longer than 100 feet and be a minimum wire size of 12 gauge (AWG). Do not use a 16 or 14 gauge extension cord.

Use only a 3-wire extension cord that has a 3-blade grounding plug, and a 3-slot receptacle that will accept the plug on the product. Make sure your extension cord is in good condition. An undersized cord will cause a drop in line voltage, resulting in loss of power and overheating. The smaller the gauge number, the heavier the cord.

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 ordinance.

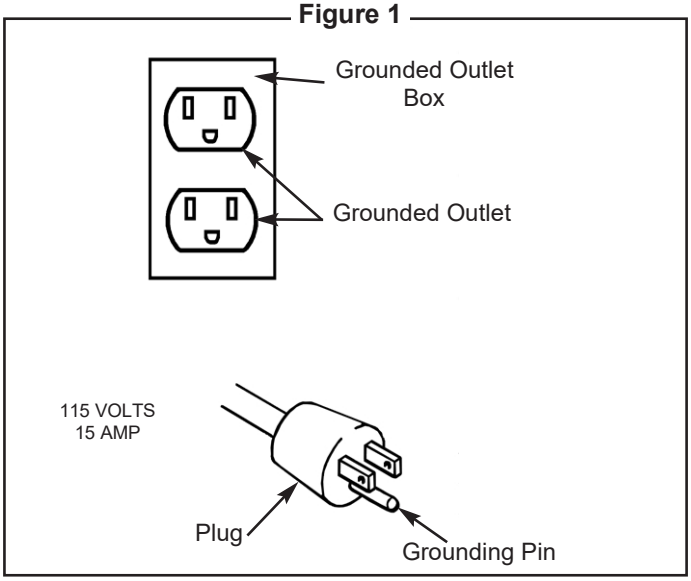
⚠ **DANGER** Improper installation of the grounding plug can result in a risk of electric shock. If repair or replacement of the cord or plug is necessary, do not connect the grounding wire to either flat blade terminal. The wire insulation having an outer surface that is green with or without yellow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

This product is for use on a nominal 115 volt circuit. A cord with a grounding plug, as shown here, shall be used.

Make sure that the product is connected to an outlet having the same configuration as the plug (see **Figure 1**). No adapter should be used with this product.

Check with a licensed electrician 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 licensed electrician.

Figure 1



BREAK-IN OF THE PUMP

BREAK-IN OF THE PUMP

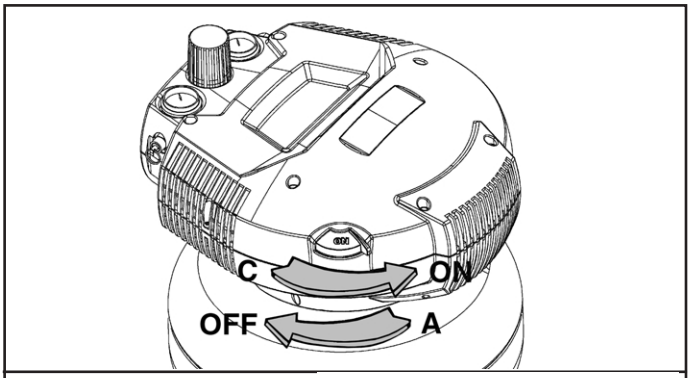
1. Turn the pressure switch to the OFF position (see **A**).
2. Open the petcock (see **B**). Turn in the counterclockwise direction.
3. Plug in the power cord.
4. Turn the pressure switch to the ON position (see **C**). The compressor will start. Allow the compressor to run for 15 minutes, to break in the internal parts.

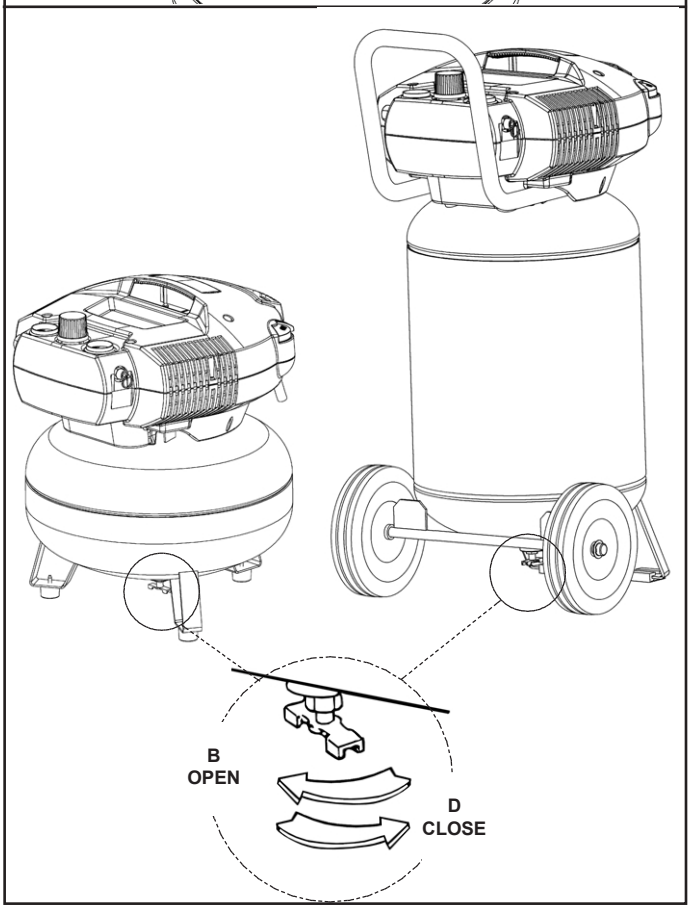
NOTE: After about 15 minutes, If the unit does not operate properly, SHUT DOWN IMMEDIATELY, and contact Product Service.

5. After about 15 minutes, turn the pressure switch to the OFF position.
6. Close the petcock (see **D**). Turn in the clockwise direction.
7. Turn the pressure switch to the ON position. The compressor will start and fill the tank to the kick-out pressure and stop.

NOTE: As compressed air is used, the pressure switch will restart the motor automatically.

NOTE: During the initial break-in cycle, there will be a slight electrical smell as the motor brushes seat. This is normal for universal motors and will last for about 5 minutes.





OPERATING INSTRUCTIONS

DAILY STARTUP

1. Turn the pressure switch to the OFF position (see **A**).
2. Close the tank petcock (see **D**). Turn in the clockwise direction.
3. Plug in the power cord.

⚠ WARNING: High temperatures are generated by the electric motor and the pump. To prevent burns or other injuries, DO NOT touch the compressor while it is running. Allow it to cool before handling or servicing. Keep children away from the compressor at all times.

4. Turn the pressure switch to the ON position (see **C**).

⚠ WARNING: When adjusting from a higher to a lower pressure, turn the knob counterclockwise past the desired setting, then turn clockwise to reach the desired pressure. Do not exceed operating pressure of the tool or accessory being used.

5. Adjust the regulator to the working pressure of the tool.

SHUTDOWN

1. Turn the pressure switch to the OFF position (see **A**).
2. Unplug the power cord.
3. Reduce pressure in the tank through the outlet hose. You can also pull the relief valve ring (see **E**) and keep it open to relieve pressure in the tank.

⚠ CAUTION: Escaping air and moisture can propel debris that may cause eye injury. Wear safety goggles when opening petcock.

4. Tip the compressor (if necessary for your model) so the petcock is at the bottom of the tank(s). Then open the petcock (see **B**) to allow moisture to drain from the tank.

MAINTENANCE

MAINTENANCE

WARNING: To avoid personal injury, always shut off and unplug the compressor and relieve all air pressure from the system before performing any service on the air compressor.

Regular maintenance will ensure trouble free operation. Your electric powered air compressor represents high quality engineering and construction; however, even high quality machinery requires periodic maintenance. The items listed below should be inspected on a regular basis.

DRAINING THE TANK

WARNING: Condensation will accumulate in the tank. To prevent corrosion of the tank from the inside, this moisture must be drained at the end of every workday. Be sure to wear protective eyewear. Relieve the air pressure in the system and open the petcock on the bottom of the tank to drain (See B and D) on pages 11, 12 and 13.

NOTE: In cold climates, drain the tank after each use to reduce problems with freezing of water condensation.

CHECKING THE RELIEF VALVE

Pull the relief valve daily to ensure that it is operating properly and to clear the valve of any possible obstructions.

TESTING FOR LEAKS

Check that all connections are tight. A small leak in any of the hoses or pipe connections will substantially reduce the performance of your air compressor. If you suspect a leak, spray a small amount of soapy water around the area of the suspected leak with a spray bottle. If bubbles appear, repair or replace the faulty component. Do not overtighten any connections.

STORAGE

Before storing the compressor for a prolonged period, use an air blow gun to clean all dust and debris from the compressor. Disconnect the power cord and coil it up. Pull the pressure relief valve to release all pressure from the tank. Drain all moisture from the tank. Cover the entire unit to protect it from moisture and dust.

SERVICE INTERVAL

Perform the following maintenance at the intervals indicated below.

Operate the pressure relief valve . . . . . .Daily
Drain tank . . . . . .Daily

TROUBLESHOOTING CHART

Note: Troubleshooting problems may have similar causes and solutions.

PROBLEM	POSSIBLE CAUSE	SOLUTION
Low pressure or not enough air or Compressor does not stop	Tank petcock is open	Close petcock
	Prolonged excessive use of air	Decrease amount of air used.
	Compressor not large enough	Check air requirement of accessory. If it is higher than CFM and pressure supplied by compressor, you need a larger compressor. Most accessories are rated at 25% of actual CFM while running continuously.
	Restricted check valve	Remove and clean or replace.
	Hole in air hose	Check and replace if necessary.
	Tank leaks	⚠ **WARNING:** Immediately replace tank. DO NOT attempt to repair.
	Blown seals	Replace any faulty seals.
	Valve leaks	Replace worn parts and reassemble with new seals.
Excessive starting and stopping, while not in use	Fittings leak	Check fittings with soapy water. Tighten or reseal leaking fittings. DO NOT OVERTIGHTEN.
		Replace worn parts and reassemble with new seals.
		Replace any faulty seals.
Air leaks from regulator, or regulator does not regulate pressure	Dirty or damaged regulator internal parts.	Replace regulator or internal parts.
Regulated pressure gauge reading drops when air accessory is being used	This is normal	If pressure drops too low, adjust regulator while accessory is used.
	Compressor not large enough	Check air requirement of accessory. If it is higher than CFM and pressure supplied by compressor, you need a larger compressor. Most accessories are rated at 25% of actual CFM while running continuously.
Circuit breaker trips (fuse blows) too often	Low voltage	Furnish adequate power. If using extension cord, try without.
	Excessive wire length	Consult electrician.
	Restricted air passages	Contact authorized service center.
	Back pressure in pump head	Replace check valve, pressure switch bleeder valve.
Overheating	Poor ventilation	Relocate compressor to an area with cool, dry and well-circulated air.
	Dirty cooling surfaces	Clean all cooling surfaces of pump and motor thoroughly.
	Leaking valve	Replace worn parts and reassemble with new seals.
Motor stalls	Low voltage	Furnish adequate power.
	Defective pressure switch bleeder valve	Replace pressure switch bleeder valve.

TROUBLESHOOTING CHART

Note: Troubleshooting problems may have similar causes and solutions.

PROBLEM	POSSIBLE CAUSE	SOLUTION
Pressure relief valve opens	Tank pressure exceeded normal operating pressure	Contact authorized service center.
	Pressure switch stuck	Contact authorized service center.
Motor will not run	Tank pressure exceeds preset pressure switch limit	Motor will start automatically when tank pressure drops below kick-in pressure of pressure tank.
	Motor overload protection has tripped	Let motor cool off and overload switch will automatically reset. This may take several minutes.
	Fuse blown or circuit breaker tripped	• Replace blown fuse or reset circuit breaker. Do not use fuse or circuit breaker with higher rating than specified for your branch circuit.
		• Check for proper fuse; “Fusetron” type T is acceptable.
		• Check for low voltage and proper extension cord size.
		• Disconnect other applications from circuit. Operate compressor on a dedicated circuit.
	Check valve stuck open	Remove and clean or replace.
	Pressure bleeder valve on pressure switch has not unloaded head pressure	Bleed line by moving pressure switch lever to OFF Position before restarting. If bleeder valve does not open, replace bleeder valve.
	Wrong wire gauge in extension cord	Check for proper gauge and extension cord length.
	Loose electrical connections	Contact authorized service center.
	Paint spray on internal motor parts	Have checked at service center. Do not operate compressor in the paint spray area
	Possible defective motor	Have checked at service center.

GLOSSARY OF TERMS

CFM
Cubic feet per minute; a unit of measure of air flow.

PSI
Pounds per square inch; a unit of measure of air pressure.

Kick-in pressure
Factory set low pressure point that starts the compressor to repressurize the tank to a higher pressure.

Kick-out pressure
Factory set high pressure point that stops the compressor from increasing the pressure in the tank above a certain level.

Well-ventilated
A means of providing fresh air in exchange for dangerous exhaust or vapors.

Dedicated circuit
An electrical circuit reserved for the exclusive use of the air compressor.

ASME
American Society of Mechanical Engineers.
Indicates that the components are manufactured, tested and inspected to the specifications set by ASME.

CSA
Canadian Standards Association
Indicates that the products that have this marking have been manufactured, tested and inspected to standards that are set by CSA.

C US **Canadian Standards Association (USA)**
Indicates that the products that have this marking have been manufactured, tested and inspected to standards that are set by CSA. These products also conform to U.L. standard 1450.