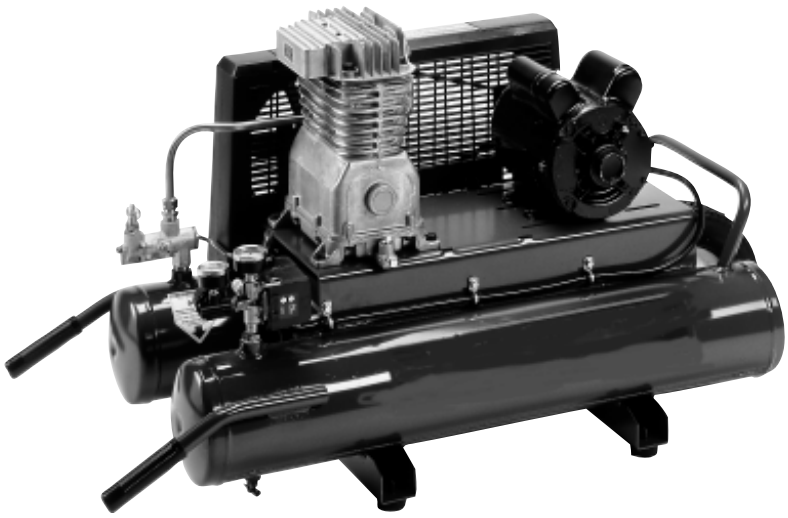
DeVILBISS AIR POWER COMPANY

GENERAL MANUAL FOR

Oil-Lubricated Single Stage Electric Motor Powered Air Compressor



⚠ WARNING Read Owner's Manual. Do not operate equipment until you have read Owners Manual for Safety, Operation, and Maintenance Instructions.

⚠ CAUTION
COMPRESSOR OIL MUST BE ADDED BEFORE USE.

213 Industrial Drive • Jackson, TN 38301-9615

MG3-OLPORTWB 8/17/99

TABLE OF CONTENTS

SAFETY GUIDELINES - DEFINITIONS

This manual contains information that is important for you to know and understand. This information relates to protecting **YOUR SAFETY** and **PREVENTING EQUIPMENT PROBLEMS**. To help you recognize this information, we use the symbols to the right. Please read the manual and pay attention to these sections.

⚠DANGER

DANGER indicates an imminently hazardous situation which, if not avoided, will result in **death or serious injury**.

⚠CAUTION

CAUTION indicates a potentially hazardous situation which, if not avoided, **may** result in **minor or moderate injury**.

⚠WARNING

WARNING indicates a potentially hazardous situation which, if not avoided, **could** result in **death of serious injury**.

CAUTION

CAUTION used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, **may** result in **property damage**.

Call our ***Toll Free Number 1-800-888-2468, Ext 2, then 1,*** to obtain the location of the nearest Authorized Service Center for ordering repair parts and for warranty repairs.

When ordering repair parts from your local Authorized Service Center, always give the following information:

- Model number of your compressor
- Part number and description of the item you wish to purchase

Retain Original Sales Receipt as Proof of Purchase for Warranty Repair Work.

LIMITED WARRANTY
ONE YEAR FROM DATE OF PURCHASE

*All merchandise manufactured by DeVilbiss Air Power Company/ExCell Manufacturing is warranted to be free of defects in workmanship and material which occur during the first year from the date of purchase by the original purchaser (initial user). Products covered under this warranty include: air compressors, *air tools, accessories, service parts, pressure washers, and generators used in consumer applications (i.e., personal residential household usage only).*

*Air compressors, *air tools, accessories, service parts, pressure washers, and generators used in commercial applications (income producing) are covered by a 90 day warranty.*

DeVilbiss Air Power/ExCell Manufacturing will repair or replace, at DeVilbiss/ExCell's option, products or components which have failed within the warranty period. Repair or replacement, and service calls on 60 and 80 gallon air compressors, will be handled by Authorized Warranty Service Centers and will be scheduled and serviced according to the normal work flow and business hours at the service center location, and depending on the availability of replacement parts.

All decisions of DeVilbiss Air Power Company/ExCell Manufacturing with regard to this policy shall be final.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

RESPONSIBILITY OF ORIGINAL PURCHASER (Initial User):

- ❑ Retain original cash register sales receipt as proof of purchase for warranty work.
- ❑ Use reasonable care in the operation and maintenance of the product as described in the Owners Manual(s).
- ❑ Deliver or ship the product to the nearest DeVilbiss Air Power/ExCell Manufacturing Authorized Warranty Service Center. Freight costs, if any, must be paid by the purchaser.
- ❑ Air compressors with 60 and 80 gallon tanks only will be inspected at the site of installation. Contact the nearest Authorized Warranty Service Center, that provides on-site service calls, for service call arrangement.
- ❑ If the purchaser does not receive satisfactory results from the Authorized Warranty Service Center, the purchaser should contact DeVilbiss Air Power Company/ExCell Manufacturing.

THIS WARRANTY DOES NOT COVER:

- ❑ Merchandise sold as reconditioned, floor models and/or display models. Any damaged or incomplete equipment sold "as is".
- ❑ Merchandise used as "rental" equipment.
- ❑ Merchandise that has become inoperative because of ordinary wear, misuse, freeze damage, use of improper chemicals, negligence, accident, improper and/or unauthorized repair or alterations including failure to operate the product in accordance with the instructions provided in the Owners Manual(s) supplied with the product.
  Air Tools: O-Rings and driver blades are considered ordinary wear parts, therefore, they are warranted for a period of 45 days from the date of purchase.
- ❑ An air compressor that pumps air more than 50% during a one hour period is considered misuse because the air compressor is undersized for the required air demand. Maximum compressor pumping time per hour is 30 minutes.
- ❑ Merchandise sold by DeVilbiss Air Power/ExCell Manufacturing which has been manufactured by and identified as the product of another company. The product manufacturer's warranty will apply.
- ❑ Repair and transportation costs of merchandise determined not to be defective.
- ❑ Cost associated with assembly, required oil, adjustments or other installation and start-up cost.
- ❑ **ANY INCIDENTAL, INDIRECT OR CONSEQUENTIAL LOSS, DAMAGE, OR EXPENSE THAT MAY RESULT FROM ANY DEFECT, FAILURE OR MALFUNCTION OF THE PRODUCT.** Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.
- ❑ **IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED TO ONE YEAR FROM THE DATE OF ORIGINAL PURCHASE.** Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you.

DeVILBISS AIR POWER COMPANY
213 Industrial Drive • Jackson, TN 38301-9615
Telephone: 1-800-888-2468
FAX: 1-800-888-9036

Form: SP-100-F - 10/28/97

IMPORTANT SAFETY INSTRUCTIONS

SAVE THESE INSTRUCTIONS

⚠WARNING

IMPROPER OPERATION OR MAINTENANCE OF THIS PRODUCT COULD RESULT IN SERIOUS INJURY AND PROPERTY DAMAGE. READ AND UNDERSTAND ALL WARNINGS AND OPERATING INSTRUCTIONS BEFORE USING THIS EQUIPMENT.

HAZARD

RISK OF EXPLOSION OR FIRE

WHAT CAN HAPPEN	HOW TO PREVENT IT
IT IS NORMAL FOR ELECTRICAL CONTACTS WITHIN THE MOTOR AND PRESSURE SWITCH **TO SPARK.**	ALWAYS **OPERATE THE COMPRESSOR IN A** WELL VENTILATED **AREA FREE OF COMBUSTIBLE MATERIALS, GASOLINE OR SOLVENT VAPORS.**
IF ELECTRICAL **SPARKS** FROM COMPRESSOR **COME INTO CONTACT WITH FLAMMABLE VAPORS, THEY MAY IGNITE, CAUSING FIRE OR EXPLOSION.**	IF SPRAYING FLAMMABLE MATERIALS, **LOCATE COMPRESSOR AT LEAST 20 FEET AWAY FROM SPRAY AREA.** AN ADDITIONAL LENGTH OF HOSE MAY BE REQUIRED.
	STORE FLAMMABLE MATERIALS IN A SECURE LOCATION AWAY FROM COMPRESSOR.
RESTRICTING ANY OF THE **COMPRESSOR VENTILATION OPENINGS WILL CAUSE SERIOUS OVERHEATING AND COULD CAUSE FIRE.**	**NEVER PLACE OBJECTS AGAINST OR ON TOP OF COMPRESSOR. OPERATE COMPRESSOR** IN AN OPEN AREA AT LEAST **12 INCHES AWAY FROM** ANY WALL OR **OBSTRUCTION** THAT WOULD RESTRICT THE FLOW OF FRESH AIR TO THE VENTILATION OPENINGS.
COMBUSTIBLE MATERIALS WHICH COME INTO CONTACT WITH HOT ENGINE PARTS CAN BECOME IGNITED.	**ADD FUEL OUTDOORS** IN A WELL VENTILATED AREA. MAKE SURE THERE ARE NO SOURCES OF IGNITION, SUCH AS CIGARETTES NEAR REFUELING LOCATION.
	OPERATE COMPRESSOR IN A CLEAN, DRY, WELL VENTILATED AREA A MINIMUM OF FOUR FEET FROM ANY BUILDING, OBJECT OR WALL. **DO NOT OPERATE UNIT INDOORS OR IN ANY CONFINED AREA.**
UNATTENDED OPERATION OF THIS PRODUCT COULD RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE.	**ALWAYS REMAIN IN ATTENDANCE WITH THE PRODUCT WHEN IT IS OPERATING.**

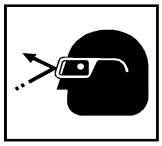
RISK OF BURSTING

AIR TANK: **THE FOLLOWING CONDITIONS COULD** LEAD TO A WEAKENING OF THE TANK, AND **RESULT IN A VIOLENT TANK EXPLOSION AND COULD CAUSE PROPERTY DAMAGE OR SERIOUS INJURY.**

WHAT CAN HAPPEN	HOW TO PREVENT IT
1. **FAILURE TO PROPERLY DRAIN** CONDENSED **WATER FROM THE TANK,** CAUSING RUST AND THINNING OF THE STEEL TANK.	**DRAIN TANK DAILY OR AFTER EACH USE.** IF TANK DEVELOPS A LEAK, REPLACE IT IMMEDIATELY WITH A NEW TANK OR REPLACE THE ENTIRE COMPESSOR.
2. **MODIFICATIONS** OR ATTEMPTED REPAIRS **TO THE TANK.**	**NEVER** DRILL INTO, WELD, OR **MAKE ANY MODIFICATIONS TO THE TANK** OR ITS ATTACHMENTS.
3. UNAUTHORIZED **MODIFICATIONS TO THE UNLOADER VALVE, SAFETY VALVE, OR** ANY **OTHER COMPONENTS WHICH CONTROL** TANK **PRESSURE.**	THE TANK IS DESIGNED TO WITHSTAND SPECIFIC OPERATING PRESSURES. **NEVER MAKE ADJUSTMENTS OR PARTS SUBSTITUTIONS TO ALTER THE FACTORY SET OPERATING PRESSURES.**
4. **EXCESSIVE VIBRATION CAN WEAKEN THE AIR TANK AND CAUSE RUPTURE OR EXPLOSION. EXCESSIVE VIBRATION WILL OCCUR IF THE COMPRESSOR IS NOT PROPERLY MOUNTED** OR IF THE ENGINE OPERATES ABOVE RECOMMENDED RPM.	**DO NOT REMOVE THE STIFFENER BAR** CONNECTING THE COMPRESSOR PUMP TO THE ENGINE, EXCEPT TO ADJUST BELT TENSION, THEN SECURELY TIGHTEN THE STIFFNER BAR NUTS. **THIS BAR CONTROLS OUTFIT VIBRATION.**
ATTACHMENTS & ACCESSORIES:	
EXCEEDING THE PRESSURE RATING OF AIR TOOLS, SPRAY GUNS, AIR OPERATED ACCESSORIES, TIRES AND OTHER INFLATABLES **CAN CAUSE THEM TO EXPLODE** OR FLY APART, AND COULD RESULT IN SERIOUS INJURY.	FOR ESSENTIAL CONTROL OF AIR PRESSURE, YOU MUST **INSTALL A PRESSURE REGULATOR AND PRESSURE GAUGE TO THE AIR OUTLET** OF YOUR COMPRESSOR. FOLLOW THE EQUIPMENT MANUFACTURERS RECOMMENDATION AND NEVER EXCEED THE MAXIMUM ALLOWABLE PRESSURE RATING OF ATTACHMENTS. **NEVER USE COMPRESSOR TO INFLATE SMALL LOW-PRESSURE OBJECTS SUCH AS CHILDREN'S TOYS, FOOTBALLS, BASKETBALLS. ETC.**

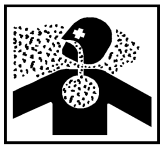
HAZARD

RISK FROM FLYING OBJECTS



WHAT CAN HAPPEN	HOW TO PREVENT IT
THE **COMPRESSED AIR** STREAM **CAN CAUSE SOFT TISSUE DAMAGE** TO EXPOSED SKIN **AND CAN PROPEL** DIRT, CHIPS, **LOOSE PARTICLES** AND SMALL OBJECTS AT **HIGH SPEED**, RESULTING IN PROPERTY DAMAGE OR PERSONAL INJURY.	**ALWAYS WEAR ANSI Z87.1 APPROVED SAFETY GLASSES WITH SIDE SHIELDS WHEN USING THE COMPRESSOR.** **NEVER POINT ANY NOZZLE OR SPRAYER TOWARD ANY PART OF THE BODY OR AT OTHER PEOPLE OR ANIMALS.** ALWAYS **TURN THE COMPRESSOR OFF AND BLEED PRESSURE** FROM THE AIR HOSE AND TANK **BEFORE** ATTEMPTING MAINTENANCE, **ATTACHING TOOLS** OR ACCESSORIES.

RISK TO BREATHING



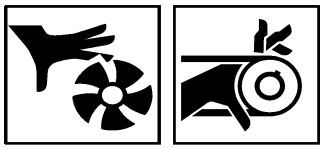
WHAT CAN HAPPEN	HOW TO PREVENT IT
THE **COMPRESSED AIR** FROM YOUR COMPRESSOR **IS NOT SAFE FOR BREATHING!** THE AIR STREAM MAY CONTAIN CARBON MONOXIDE, TOXIC VAPORS OR SOLID PARTICLES FROM THE TANK.	ALWAYS **OPERATE AIR COMPRESSOR OUTSIDE IN A CLEAN, WELL VENTILATED AREA.** AVOID ENCLOSED AREAS SUCH AS GARAGES, BASEMENTS, STORAGE SHEDS, WHICH LACK A STEADY EXCHANGE OF AIR. KEEP CHILDREN, PETS AND OTHERS AWAY FROM AREA OF OPERATION. **NEVER INHALE AIR FROM THE COMPRESSOR** EITHER DIRECTLY OR FROM A BREATHING DEVICE CONNECTED TO THE COMPRESSOR.
SPRAYED MATERIALS SUCH AS PAINT, PAINT SOLVENTS, PAINT REMOVER, INSECTICIDES, WEED KILLERS, CONTAIN HARMFUL VAPORS AND POISONS.	**WORK IN AN AREA WITH GOOD CROSS-VENTILATION.** READ AND **FOLLOW THE SAFETY INSTRUCTIONS** PROVIDED ON THE LABEL OR SAFETY DATA SHEETS **FOR THE MATERIAL YOU ARE SPRAYING. USE A NIOSH/MSHA APPROVED RESPIRATOR** DESIGNED FOR USE WITH YOUR SPECIFIC APPLICATION.

RISK OF ELECTRICAL SHOCK

WHAT CAN HAPPEN	HOW TO PREVENT IT
YOUR **AIR COMPRESSOR IS POWERED BY ELECTRICITY.** LIKE ANY OTHER ELECTRICALLY POWERED DEVICE, **IF IT IS NOT USED PROPERLY IT MAY CAUSE ELECTRIC SHOCK.**	NEVER OPERATE THE COMPRESSOR OUTDOORS WHEN IT IS RAINING OR IN WET CONDITIONS. **NEVER OPERATE COMPRESSOR WITH COVER** COMPONENTS **REMOVED** OR DAMAGED.
REPAIRS ATTEMPTED BY UNQUALIFIED PERSONNEL CAN RESULT IN SERIOUS INJURY OR DEATH BY ELECTROCUTION.	ANY **ELECTRICAL WIRING OR REPAIRS** REQUIRED ON THIS PRODUCT **SHOULD BE PERFORMED BY AUTHORIZED SERVICE CENTER PERSONNEL** IN ACCORDANCE WITH NATIONAL AND LOCAL ELECTRICAL CODES.
ELECTRICAL GROUNDING: **FAILURE TO PROVIDE ADEQUATE GROUNDING TO THIS PRODUCT COULD RESULT IN SERIOUS INJURY OR DEATH FROM ELECTROCUTION.** SEE GROUNDING INSTRUCTIONS.	**MAKE CERTAIN THAT** THE **ELECTRICAL CIRCUIT** TO WHICH THE COMPRESSOR IS CONNECTED **PROVIDES PROPER ELECTRICAL GROUNDING, CORRECT VOLTAGE AND ADEQUATE FUSE PROTECTION.**

HAZARD

RISK FROM MOVING PARTS



WHAT CAN HAPPEN	HOW TO PREVENT IT
THE **ENGINE CAN START ACCIDENTALLY** IF THE FLYWHEEL IS TURNED BY HAND OR MOVED BY PULLING ON THE STARTER ROPE.	ALWAYS **DISCONNECT THE SPARK PLUG AND BLEED PRESSURE FROM THE TANK BEFORE PERFORMING MAINTENANCE.**
MOVING PARTS SUCH AS THE PULLEY, FLYWHEEL AND BELT **CAN CAUSE SERIOUS INJURY** IF THEY COME INTO CONTACT WITH YOU OR YOUR CLOTHING.	**NEVER OPERATE** THE **COMPRESSOR WITH GUARDS** OR COVERS WHICH ARE DAMAGED OR REMOVED.
ATTEMPTING TO OPERATE COMPRESSOR **WITH DAMAGED OR MISSING PARTS OR ATTEMPTING TO REPAIR COMPRESSOR WITH PROTECTIVE SHROUDS REMOVED CAN EXPOSE YOU TO MOVING PARTS** AND CAN **RESULT IN SERIOUS INJURY.**	ANY **REPAIRS** REQUIRED ON THIS **PRODUCT SHOULD BE PERFORMED BY AUTHORIZED SERVICE CENTER PERSONNEL.**

RISK OF BURNS

WHAT CAN HAPPEN	HOW TO PREVENT IT
TOUCHING EXPOSED METAL SUCH AS THE COMPRESSOR HEAD OR OUTLET TUBES **OR CONTACT WITH HOT ENGINE PARTS,** SUCH AS THE MUFFLER, **CAN RESULT IN SERIOUS BURNS.**	**NEVER TOUCH ANY EXPOSED METAL PARTS ON ENGINE OR COMPRESSOR** DURING OR IMMEDIATELY AFTER OPERATION. **ENGINE AND COMPRESSOR WILL REMAIN HOT** FOR SEVERAL MINUTES AFTER OPERATION.
THE GASOLINE ENGINE, THE ENGINE MUFFLER, THE COMPRESSOR HEAD AND TUBING BECOME VERY HOT DURING OPERATION.	DO NOT REACH AROUND PROTECTIVE SHROUDS OR ATTEMPT MAINTENANCE UNTIL UNIT HAS BEEN ALLOWED TO COOL.

RISK OF FALLING

WHAT CAN HAPPEN	HOW TO PREVENT IT
A PORTABLE **COMPRESSOR CAN FALL** FROM A TABLE, WORKBENCH OR ROOF **CAUSING DAMAGE TO THE COMPRESSOR AND COULD RESULT IN SERIOUS INJURY OR DEATH TO THE OPERATOR.**	ALWAYS **OPERATE COMPRESSOR IN A STABLE SECURE POSITION** TO PREVENT ACCIDENTAL MOVEMENT OF THE UNIT. **NEVER OPERATE COMPRESSOR ON A ROOF OR OTHER ELEVATED POSITION. USE ADDITIONAL AIR HOSE TO REACH HIGH LOCATIONS.**

RISK OF PROPERTY DAMAGE WHEN TRANSPORTING COMPRESSOR

(Fire, Inhalation, Damage to Vehicle Surfaces)

WHAT CAN HAPPEN	HOW TO PREVENT IT
FUEL OR OIL CAN LEAK OR SPILL AND COULD RESULT IN FIRE OR BREATHING HAZARD, SERIOUS INJURY OR DEATH CAN RESULT. FUEL OR OIL LEAKS WILL DAMAGE CARPET, PAINT OR OTHER SURFACES IN VEHICLES OR TRAILERS.	IF COMPRESSOR IS EQUIPPED WITH A FUEL SHUT-OFF VALVE, **TURN THE VALVE TO THE OFF POSITION BEFORE TRANSPORTING TO AVOID FUEL LEAKS.** IF COMPRESSOR IS NOT EQUIPPED WITH A FUEL SHUT-OFF VALVE, **DRAIN THE FUEL FROM TANK BEFORE TRANSPORTING**. TRANSPORT FUEL ONLY IN AN OSHA APPROVED CONTAINER. ALWAYS PLACE COMPRESSOR ON A PROTECTIVE MAT WHEN TRANSPORTING TO PROTECT AGAINST DAMAGE TO VEHICLE FROM LEAKS. REMOVE COMPRESSOR FROM VEHICLE IMMEDIATELY UPON ARRIVAL AT YOUR DESTINATION.

GENERAL INFORMATION

You have purchased an air compressor unit consisting of an aluminum 2 cylinder, single-stage air compressor pump (with cast iron sleeves), an air tank, wheel, handles, associated controls and gauges.

Your air compressor can be used for operating paint spray guns, air tools, caulking guns, grease guns, air brushes, sandblasters, inflating tires and plastic toys, spraying weed killers, insecticides, etc. An air pressure regulator is supplied for these applications.

An air line filter is usually required for removal of moisture and oil vapor in compressed air when a paint spray gun is used.

An in-line lubricator is usually required for air tools to prolong tool life.

Separate air filters which combine the functions of air regulation and/or moisture and dirt removal should be used where applicable.

ON-RECEIPT INSPECTION

Each air compressor unit is carefully tested and checked before shipment. Damage may result from improper handling during transit and cause problems in compressor operation.

Immediately upon receipt of your air compressor, check for both concealed and visible damages to avoid expenses being incurred to correct such problems.

This should be done regardless of any visible signs of damage to the shipping container. If this product was shipped directly to you, report any damage to the carrier and arrange for inspection of goods immediately.

For the location or a listing of the nearest DeVilbiss Air Power Authorized Warranty Service Center, call our toll free number at **1-800-888-2468, Ext.2 then 1.**

DUTY CYCLE

All DeVilbiss Air Power manufactured air compressors should be operated on not more than a 50% duty cycle. This means an air compressor that pumps air more than 50% of one hour, is considered misuse because the air compressor is undersized for the required air demand. Maximum compressor pumping time per hour is 30 minutes.

GLOSSARY

CFM: Cubic feet per minute.

SCFM: Standard cubic feet per minute; a unit of measure of air delivery.

PSIG: Pounds per square inch gauge; a unit of measure of pressure.

ASME: American Society of Mechanical Engineers; made, tested, inspected and registered to meet the standards of ASME.

U.L. Listed: Products with the U.L. mark are listed by Underwriters Laboratories, Inc. (U.L.). Samples of these products have been evaluated by U.L. and meet the applicable U.L. Standards of Safety.

California Code: Unit may comply with California Code 462 (L) (2)/(M) (2). Specification/model label is on the side of the tank on units that comply with California Code.

Cut-In Pressure: While the motor is off, air tank pressure drops as you continue to use your accessory or air tool. When tank pressure drops to a certain low level the motor will restart automatically. The low pressure at which the motor automatically re-starts is called “cut-in pressure.”

Cut-Out Pressure: When you turn on your air compressor and it begins to run, air pressure in the air tank begins to build. It builds to a certain high pressure before the motor automatically shuts off - protecting your air tank from pressure higher than its capacity. The high pressure at which the motor shuts off is called “cut-out pressure.”

DESCRIPTION OF OPERATION

Drain Valve: A drain valve is located at the base of each air tank and is used to drain condensation from each tank at the end of each use.

Motor Thermal Overload Protector: The electric motor has an automatic thermal overload protector. If the motor overheats for any reason, the thermal overload protector will shut off the motor. The motor must be allowed time to cool before it restarts itself.

OFF/ON-AUTO Switch (Pressure Switch): Turn this switch to the **"ON-AUTO"** position to provide automatic operation of the pressure switch and **"OFF"** to remove power at the end of each use. The pressure switch automatically starts the motor when the air tank pressure drops below the factory set “cut-in” pressure. It stops the motor when the air tank pressure reaches the factory set “cut-out” pressure.

Air Intake Filter: This filter is designed to clean air coming into the compressor pump. This filter must be kept clean and the ventilation openings kept free from obstructions. See "Maintenance" section.

DESCRIPTION OF OPERATION (cont'd)

Air Compressor Pump: To compress air, the piston moves up and down in the cylinder. On the downstroke, air is drawn in through the air intake valves. The exhaust valve remains closed. On the upstroke of the piston, air is compressed. The intake valves close and compressed air is forced out through the exhaust valve, outlet tube and check valve into the air tank. Working air is not available until the air compressor has raised the air tank pressure above that required at the air outlet.

Check Valve: When the air compressor is operating, the check valve is "open", allowing compressed air to enter the air tank. When the air compressor reaches "cut-out" pressure, the check valve "closes", allowing air pressure to remain inside the air tank.

Pressure Release Valve: The pressure release valve located on the side of the pressure switch, is designed to automatically release compressed air from the compressor head and the outlet tube when the air compressor reaches "cut-out" pressure or is shut off. If the air is not released, the motor will try to start, but will be unable to. The pressure release valve allows the motor to restart freely. When the motor stops running, air will be heard escaping from the valve for a few seconds. No air should be heard leaking when the motor is running, or heard continuously leaking after the unit reaches cut-out pressure.

Unloader Valve: All models are continuously running units controlled by tank pressure. When the maximum tank pressure is obtained, the unloader valve will exhaust the compressed air to the atmosphere (blow-off). When the tank pressure drops to a pre-determined point, the unloader valve closes and causes the tank pressure to increase.

Safety Valve: If the pressure switch does not shut off the air compressor at its cut-out pressure setting, the safety valve will protect against excessive high pressure by "popping out" at its factory set pressure (slightly higher than the pressure switch cut-out setting).

Outlet Pressure Gauge: The outlet pressure gauge indicates the air pressure available at the outlet side of the regulator. This pressure is controlled by the pressure regulator and is always less than or equal to the tank pressure.

Tank Pressure Gauge: The tank pressure gauge indicates the air pressure in the air tank.

Pressure Regulator: The air pressure coming out of the air tank for operating the air tools is controlled by the pressure regulator knob. Turn the knob clockwise to increase pressure and counterclockwise to decrease pressure. To avoid minor readjustment after making a change in pressure setting, always approach the desired pressure from a lower pressure. When reducing from a higher to a lower setting, first reduce to some pressure less than that desired, then bring the pressure up to the desired pressure. Depending on the air requirements of each particular accessory, the outlet regulated air pressure may have to be adjusted while you are operating the accessory.

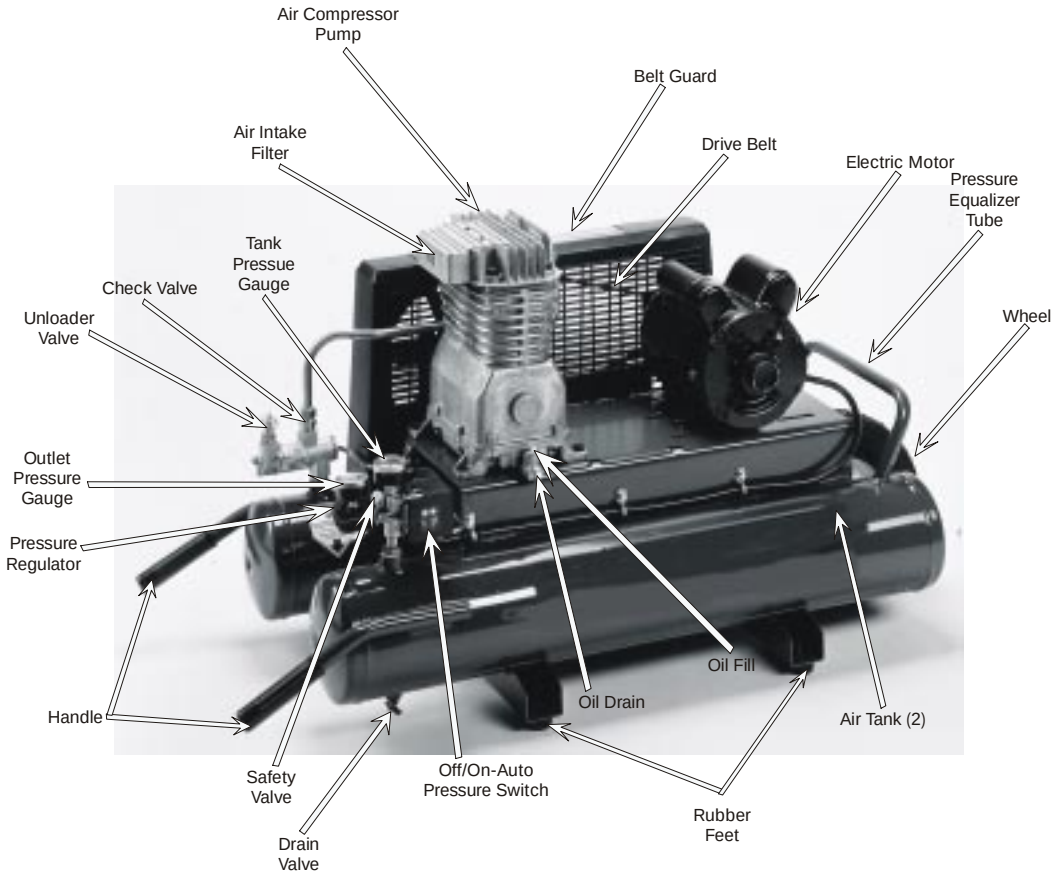


Figure 1 — Electric Motor Powered Air Compressor Wheelbarrow Style

ASSEMBLY INSTRUCTIONS

Items Needed for Assembly

- A 1/2” socket or open-end wrench to remove the four bolts securing the compressor to the wooden shipping skid.
- A 3/8” socket or open-end wrench for installing the hard rubber feet on the compressor’s legs.
- A pair of pliers to bend the cotter pin ends used to retain the axle of the wheel on the compressor tanks.

Unpacking Unit and Installing Wheel

1. Unpack the unit from the carton and remove the plastic bag(s) containing wheel, axle, cotter pins, and other hardware.
2. Inspect unit for damage and missing parts.
3. Insert the axle through the wheel hub, then position the ends of the axle into the axle holding cups at the front of the twin air tanks (The motor end is the front.)
4. Install cotter pins into the holes in the axle holding cups, then use a pair of pliers to bend the cotter pin ends to retain the axle in the axle holding cups.
5. Using a 1/2” socket or open-end wrench, remove the bolts holding the unit to the wooden shipping skid, then lift the unit by the handles and wheel it off the skid.
6. Place the flat side of one of the rubber feet against the underside of one of the unit’s legs, then insert a 1/4”-20 bolt through the hole in the rubber foot and tighten the bolt using a 3/8” socket or open-end wrench. Repeat for the remaining three rubber feet.

⚠WARNING

WHEEL AND HANDLES DO NOT PROVIDE ADEQUATE CLEARANCE, STABILITY, OR SUPPORT FOR PULLING THE UNIT UP AND DOWN STAIRS OR STEPS. THE UNIT MUST BE LIFTED OR PUSHED UP A RAMP.

INSTALLATION

Operating Location of the Air Compressor

The air compressor must be operated in a clean, dry, and well-ventilated area. The air compressor’s crankcase and head are designed with cooling fins to provide proper cooling. The fan blades of the air compressor, the flywheel, must be kept clear of obstructions that could interfere with the flow of air through the air intake filter.

Do not install the air compressor in a location where heat is excessive. If the humidity in the operating area is high, an air filter can be installed on the air outlet adapter to remove excessive moisture. This type air filter is not provided with this air compressor and must be purchased separately. Closely follow the instructions packaged with the filter for proper installation.

If the air compressor is to be installed outdoors, be sure there is a minimum of forty-eight (48) inches of clearance on each side of the compressor. There must be a flow of fresh air for proper cooling.

⚠CAUTION

Do not allow the compressor to get wet if it is installed outdoors.

Air Distribution (Piping)

⚠WARNING

PLASTIC OR PVC PIPE IS NOT DESIGNED FOR USE WITH COMPRESSED AIR. REGARDLESS OF ITS INDICATED PRESSURE RATING, PLASTIC PIPE CAN BURST FROM AIR PRESSURE. USE ONLY METAL PIPE FOR AIR DISTRIBUTION.

If a pipe line is necessary, use pipe that is the same size as the air tank outlet. Piping that is too small will restrict the flow of air. If piping is over 100 feet long, use the next larger size. Bury underground lines below the frost line and avoid pockets where condensation can gather and freeze. Apply pressure to lines before underground lines are buried to make sure all pipe joints are free of leaks.

Connect the piping to the 3/8” NPT air outlet opening at the outlet end of the air tank.

GROUNDING INSTRUCTIONS

⚠DANGER

RISK OF ELECTRICAL SHOCK! IN THE EVENT OF A SHORT CIRCUIT, GROUNDING REDUCES THE RISK OF SHOCK BY PROVIDING AN ESCAPE WIRE FOR THE ELECTRIC CURRENT. THIS AIR COMPRESSOR MUST BE PROPERLY GROUNDED.

General Guidelines

The air compressor is equipped with a cord having a grounding wire with an appropriate grounding plug.

The plug must be used with an outlet that has been installed and grounded in accordance with all local electrical codes and ordinances. The outlet must have the same configuration as the plug. See Figure 2. **DO NOT USE AN ADAPTER.**

Inspect the plug and cord before each use. Do not use if there are signs of damage.

GROUNDING INSTRUCTIONS (cont'd)

⚠DANGER

IMPROPER GROUNDING CAN RESULT IN ELECTRICAL SHOCK.

Do not modify the plug that has been provided. If it does not fit the available outlet, the correct outlet should be installed by a qualified electrician.

If repairing or replacing a cord or plug, the grounding wire must be kept separate from the current-carrying wires. Never connect the grounding wire to a flat blade plug terminal. The grounding wire has insulation with an outer surface that is green.

If these grounding instructions are not completely understood or if you are in doubt as to whether the air compressor is properly grounded, have the installation checked by a qualified electrician.

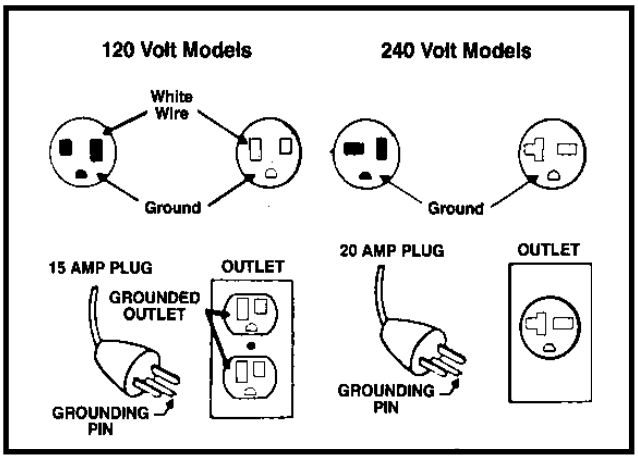


Figure 2 – Plugs and Receptacles

Voltage and Circuit Protection

Refer to your Parts Manual for voltage and circuit protection requirements of your air compressor. Use only a fuse or circuit breaker that is the same rating as the branch circuit the air compressor is operated on. If the air compressor is connected to a circuit protected by fuses, use only dual element time delay fuses, as noted in the Parts Manual.

⚠CAUTION

Certain air compressors can be converted from 120V to 240V operation. When converting an air compressor to 240V operation, the attached three-prong 120V cord assembly must be replaced with a three-pronged 240V cord assembly that can be purchased through an Authorized Warranty Service Center. To locate an Authorized Warranty Service Center nearest you, call us at 1-800-888-2468, Ext. 2 then 1.

Some models have a dual voltage motor. They are wired for 120 Volts/AC but can be converted to 240 Volts/AC operation. Instructions for connecting the motor for operation at 240 Volts/AC can be found printed on the label attached to the side of the motor. If you are in doubt as to how to correctly wire the motor for 240 Volts/AC operation, consult a qualified electrician.

⚠CAUTION

Certain air compressor models can be operated on a 15 amp circuit if:

1. **Voltage supply to circuit is normal.**
2. **Circuit is not used to supply any other electrical needs (lights, appliances, etc.)**
3. **Extension cords comply with specifications in this manual.**
4. **Circuit is equipped with a 15 amp circuit breaker or a 15 amp time delay fuse.**

Extension Cords

To avoid voltage drop and power loss to the motor, and to prevent overheating, use extra air hose instead of an extension cord.

If an extension cord must be used:

- 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 extension cord.
- make sure the extension cord is in good condition.
- the extension cord should be no longer than 50 feet.
- the minimum wire size is 12 gauge (AWG). (Wire size increases as gauge number decreases. 10 AWG and 8 AWG may also be used. DO NOT USE 14 AWG or 16 AWG.)

PREPARATION FOR USE

Air Compressor

⚠CAUTION

<u>Compressor pumps are shipped without oil.</u> A small amount of oil may be present in the pump upon receipt of the air compressor. This is due to testing by the manufacturer and does not mean that the pump contains oil. Do not attempt to operate this air compressor without first adding oil to the pump's crankcase. Serious damage to the pump can result from even limited operation unless it is filled with oil and broken in correctly. Be sure to closely follow the initial preparation for use and start-up procedures.

NOTE

The pump crankcase oil capacity is 16 fluid ounces.

⚠CAUTION

Multi-viscosity motor oils such as 10W-30 should not be used in an air compressor. Multi-viscosity oils leave carbon deposits on critical components, reducing their performance and shortening the air compressor life. Only use oil designated for use in air compressors. Castrol Heavy Duty 30 weight oil may be used if compressor oil is not immediately available .

PREPARATION FOR USE (cont'd)

1. Place air compressor on a level surface.
2. Remove the pump oil fill plug and slowly add compressor oil to the crankcase of the pump until it is even with the top of the oil fill hole (no lower than 3/8" from the top at any time). Fill with oil slowly. If oil is added too quickly, it will overflow and appear to be full.
3. Replace the pump oil fill plug and tighten.

NOTE

Drain and refill the pump crankcase after the first 100 hours of operation.

BREAK-IN PROCEDURES

When Required

Compressor break-in procedures are required:

1. Before the air compressor is used for the first time.
2. When the check valve is replaced.
3. When a complete compressor pump is replaced.

Break-In Procedure

Perform the following procedures to break-in the air compressor:

⚠CAUTION

Serious damage to the compressor pump may result if the following break-in procedures are not closely followed.

1. To prevent pressure from building up in the air tanks during this break-in period, you must open the unit's unloader valve (Refer to Figure 1 for location and Figure 3 for operation). To do this, lift the steel ring on the unloader valve, rotate the ring a quarter turn (90 degrees), then slowly lower the ring so it rests crossways on the slot at the top of the valve, but not in the slot.

⚠CAUTION

The air compressor unit is top heavy. Make sure the unit is in a stable position and will not tip before starting the electric motor.

2. Open the pressure regulator (Refer to Figure 1 for location) by rotating the knob clockwise to its built-in stop.
3. Verify that the "**OFF/ON-AUTO"** lever on the pressure switch is in the **"OFF"** position.
4. Insert the power cord of the electric motor into a 120 VAC, 60 Hertz, single phase, **GROUNDED** outlet.
5. Verify that the steel ring on the unloader valve is pulled up and positioned crosswise to the slot at the top of the unloader valve to prevent tank pressure buildup.
6. Move the **"OFF/ON-AUTO"** lever on the pressure switch to the **"ON-AUTO"** position. The electric motor will start.
7. Run the air compressor for **30 minutes** to seat the rings and lubricate all the internal surfaces. Make sure there is no pressure build up in the tank by observing the reading on the tank pressure gauge.
8. After completing Step 7, lift the steel ring on the unloader valve and rotate it 1/4 turn (90 degrees), allowing the spring tension to pull the ring into the slot at the top of the unloader valve (Refer to Figure 3).

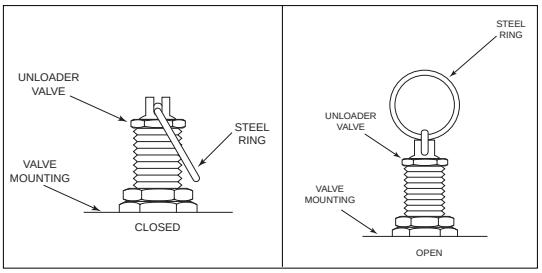


Figure 3 – Unloader Valve Positions

9. Close the pressure regulator (rotate it counter-clockwise) to build pressure in the air tanks.
10. When the air tanks are pressurized, the safety valve will hiss loudly, the tank pressure gauge will indicate the pressure available in the tanks, and the electric motor will stop. The pressurization of the air tanks will be adjusted automatically by the settings of the "cut in" and "cut out" switches, which will start and stop the electric motor as required. When the pressure in the tank drops to the "cut in" value, the electric motor will "cut in" (Start) and operate the compressor to pressurize the tanks. When the pressure in the tank increases to the "cut out" value, the electric motor will "cut out" (Stop).
11. The pressure regulator can now be adjusted to the required pressure for operating your air tools, usually 90 PSIG. Compressed air will be available from the unit's outlet fitting until it is used up or bled off.

OPERATING PROCEDURES

Daily Start-Up Checklist

Before Starting

Perform the following checks before starting the air compressor.

1. Make sure that nothing is blocking the belt guard, air openings, or air filter inlet.
2. Pull the ring on all safety valves to make sure the valves move freely and smoothly.
3. Check the oil level in the pump and add oil if necessary.
4. Clean or blow off fins or any part of the air compressor that collects dust and dirt. The air compressor will run cooler and provide longer service.
5. Before attaching an air hose or accessory, make sure the **"OFF/ON-AUTO"** lever on the pressure switch is in the **"OFF"** position.
6. Close the pressure regulator by turning it counter clockwise.

At Start Up

7. Start the air compressor by moving the "**OFF/ON-AUTO**" lever to the "**ON/AUTO**" position. Allow the unit to pump up to cut-off pressure.

⚠WARNING

TOO MUCH AIR PRESSURE CAUSES A HAZARDOUS RISK OF BURSTING. CLOSELY MONITOR THE AIR PRESSURE GAUGE OF THE TANK SO THE MAXIMUM PRESSURE LIMIT IS NOT EXCEEDED AND MONITOR THE SAFETY VALVE TO ENSURE EXCESS PRESSURE IS DISCHARGED. IF PRESSURE CONTINUES TO BUILD BEYOND SAFE LIMITS, SHUT THE UNIT DOWN IMMEDIATELY AND TROUBLESHOOT THE PROBLEM.

8. Check all fittings and piping for air leaks. Even minor leaks can cause the air compressor to overwork, resulting in premature breakdown or unsatisfactory performance.
9. Check for any unusual vibration and noise.
10. Check for oil leaks and correct any leaks found.
11. Check the pressure ratings of the air tools and accessories being used with this air compressor before attaching, then adjust the pressure regulator gauge for that value.

⚠WARNING

THE AIR COMPRESSOR'S OUTLET PRESSURE MUST NEVER EXCEED THE MAXIMUM PRESSURE RATING OF THE TOOL OR ACCESSORY BEING USED. IF A PRESSURE REGULATOR IS NOT USED, DO NOT USE ACCESSORIES RATED AT LESS THAN 110 PSIG.)

12. Attach air hose and accessory. Your unit is ready for use.

⚠CAUTION

Compressed air from the unit may contain water condensation and oil mist. Do not spray unfiltered air at an item that could be damaged by moisture. Some air operated tools or devices may require filtered air. Read instructions for the air tool or device.

Shutting Down

13. Set the **"OFF/ON-AUTO"** lever to the **"OFF"** position.
14. Remove the air tool or accessory.
15. Open the outlet valve or pressure regulator and allow the air to slowly bleed from the air tank. Close outlet valve when tank pressure is approximately 20 PSIG.

⚠WARNING

DRAIN AIR TANKS DAILY. WATER WILL CONDENSE IN THE AIR TANKS. IF NOT DRAINED, WATER WILL CORRODE AND WEAKEN AIR TANKS CAUSING A RISK OF TANK RUPTURE.

16. With tank pressure at approximately 20 PSIG, open the drain cocks and allow moisture to drain. Turn the drain cock counterclockwise to open.

NOTE

If the drain cock valve is plugged, release all air pressure. The valve can then be removed, cleaned and reinstalled.

17. After the water has been drained, close the drain cocks. The air compressor can now be stored.

MAINTENANCE

⚠DANGER

THE AIR COMPRESSOR CYCLES AUTOMATICALLY WHEN POWER IS ON. DURING MAINTENANCE, YOU COULD BE EXPOSED TO VOLTAGE SOURCES, COMPRESSED AIR OR MOVING PARTS. PERSONAL INJURIES CAN OCCUR. UNPLUG THE UNIT AND BLEED OFF ALL AIR TANK PRESSURE BEFORE DOING ANY MAINTENANCE OR REPAIR. NEVER OPERATE THE UNIT WITH THE BELT GUARD REMOVED.

To ensure efficient operation and longer life of the air compressor, a routine maintenance schedule should be prepared and followed. The following routine maintenance schedule is geared to an air compressor in a normal working environment operating on a daily basis. If necessary, the schedule should be modified to suit the conditions under which your air compressor is used. The modifications will depend upon the hours of operation and the working environment. An air compressor in an extremely dirty and/or hostile environment will require a greater frequency of all maintenance checks. Lubricate compressor motor (if required) according to the motor manufacturer's instructions, which are attached to the motor.

Routine Maintenance Schedule

Before each use:

1. Check oil level. Add if necessary.
2. Drain water from the air tanks, any moisture separators or filters.
3. Manually check all safety valves to make sure they are operating properly.
4. Inspect for oil leaks and repair any leaks found.
5. Inspect air filter, replace if necessary.

Every 40 Hours of Operation:

1. Clean and inspect the air intake filter; replace if necesssary.
2. Inspect condition of drive belt; replace if necessary.

Every 100 Hours of Operation:

1. Drain and refill compressor crankcase with 16 fluid ounces (473.2 ml) of clean compressor oil or Castrol Heavy Duty 30 weight oil.
2. Increase frequency of oil changes if humidity or operating conditions are extreme.

Every 160 Hours of Operation:

1. Check drive belt tension; adjust if necessary. (Refer to "Service Instructions" in this manual.)
2. Inspect air lines and fittings for leaks; correct as necessary.
3. Check the alignment of the motor pulley to the flywheel. If necessary, align to within 1/16" on centerline.

Each Year of Operation or if a Problem is Suspected:
If you have properly serviced your air compressor, oil levels are correct, belts are aligned, and the unit is not functioning properly, check the condition of the air compressor pump intake and exhaust valves. Refer to the "Service Instructions". Replace any valves in the pump that are damaged or worn out.

If you feel your air compressor still does not function properly after checking or replacing the intake and exhaust valves, contact your nearest DeVilbiss Repair Center at **1-800-888-2468, Ext. 2, then 1.**

SERVICE INSTRUCTIONS

Air Compressor Unit

A clean air compressor runs cooler and provides longer service. Clean or blow off fins and any other parts of the air compressor that collect dust or dirt. Do not place tags, containers or other material on or against the ventilation openings in the belt guard. Adequate ventilation is necessary to maintain proper air compressor operating temperature.

Compressor Pump Air Intake Filter - Inspection and Replacement

⚠CAUTION

Keep the air filter clean at all times. Do not operate the air compressor with the air filter removed.

A dirty air filter will not allow the compressor pump to operate at full capacity. Before you use the compressor pump, check the air filter to be sure it is clean and in place.

If it is dirty, replace it with a new filter. On some models,the filter may be removed by using a pair of needle nose pliers or a screwdriver. Pull or pry out the old filter and carefully clean the filter area. Push in the new air filter.

⚠CAUTION

Overfilling with oil will cause premature pump failure. Do not overfill.

Compressor Oil - Checking and Changing

Check oil level in the pump before each use. Remove the oil fill plug. The oil level should be even with the top of the fill hole and must not be lower than 3/8" from the top (6 threads) at any time. It is recommended that the oil be changed after every 100 hours of operation. To drain the oil, remove the oil drain plug and collect the oil in a suitable container. Be sure to replace the plug securely before adding new oil. Use compressor oil or Castrol Heavy Duty 30 weight oil. Crankcase oil capacity is 16 fluid ounces (473.2 ml).

Check Valve - Inspection and Replacement

Remove and inspect the check valve at least once a year or more often if the air compressor is heavily used. Moisture and other contaminants in the hot compressed air will cause an accumulation of a carbon-like residue on the working parts. If the valve has heavy carbon build-up, it should be replaced.

SERVICE INSTRUCTIONS (cont'd)

Use the following procedure to inspect, clean or replace the check valve.

1. Unplug compressor from power source and release air pressure from the air tank.
2. Loosen the top and bottom compressor outlet tube nuts and remove the outlet tube.
3. Unscrew the check valve (turn counterclockwise) using a 7/8" socket or open end wrench.
4. Check that the disc in the check valve moves freely inside the valve and that the spring holds the disc in the upper, closed position. The check valve may be cleaned with a solvent.
5. Apply thread sealant to the check valve threads.
6. Reinstall the check valve (turn clockwise). **Do not overtighten.**
7. Replace the compressor outlet tube and tighten the top and bottom outlet tube nuts.

Safety Valve - Inspection and Replacement

⚠WARNING

IF THE SAFETY VALVE DOES NOT WORK PROPERLY, OVER-PRESSURIZATION MAY OCCUR CAUSING AIR TANK RUPTURE OR EXPLOSION. DAILY PULL THE RING ON THE SAFETY VALVE TO MAKE SURE THAT THE SAFETY VALVE OPERATES FREELY. IF THE VALVE IS STUCK OR DOES NOT OPERATE SMOOTHLY, IT MUST BE REPLACED WITH THE SAME TYPE OF VALVE HAVING AN IDENTICAL PRESSURE RATING.

To Remove Safety Valve:

1. Unplug the air compressor from power source.
2. Open the outlet valve and allow all air to bleed from the tank. Monitor air tank pressure gauge as tank is emptied.
3. When air tanks are empty, loosen nut securing safety valve to manifold.
4. Remove safety valve from manifold.

To Install New Safety Valve:

1. Verify new safety valve is the correct pressure rating for your air compressor.
2. Verify threads for safety valve in manifold are clean.
3. Apply thread sealant to threads of new safety valve.
4. Install new safety valve and hand-tighten.
5. Tighten nut to secure safety valve to manifold. **Do not overtighten**.
6. Perform the **Daily Start Up Checklist.**

Belt - Removal and Installation

Belt Guard - Removal

1. Move the **"OFF/ON-AUTO"** lever to the **"OFF"** position.
2. Unplug the air compressor from power source and release all air tank pressure.
3. On one-piece belt guards, remove the two belt guard screws on the bottom front of the unit.
4. On two-piece belt guards, remove the front of the belt guard by disengaging the snaps. Insert a flat bladed screwdriver at each snap location and pry the belt guard apart.

Belt – Replacement

⚠WARNING

SERIOUS INJURY OR DAMAGE MAY OCCUR IF PARTS OF THE BODY OR LOOSE ITEMS GET CAUGHT IN MOVING PARTS. NEVER OPERATE THE UNIT WITH THE BELT GUARD REMOVED. THE BELT GUARD SHOULD BE REMOVED ONLY WHEN THE AIR COMPRESSOR IS UNPLUGGED.

1. Unplug the air compressor from power source.
2. Remove (one-piece) belt guard, or front of (two-piece) belt guard as previously described.
3. Loosen the four bolts holding the motor to the saddle.
4. Slide the motor toward the pump to remove tension from the belt, then remove the old belt.
5. Install the new belt over the pulleys.

NOTE

The belt must be centered over the grooves on the motor pulley and flywheel.

6. Slide the motor back into its regular position.

Belt Tension – Adjustment

1. Slide the motor back into its regular position on the saddle.
2. To tighten the belt, insert a large screwdriver into the hole in the air compressor saddle located on the belt guard side of the saddle below the motor, and pry the stiffener plate back. Refer to Figure 4.

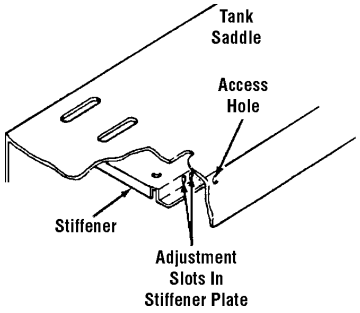


Figure 4 – Belt Adjustment Points

3. Hold belt tension and securely tighten two motor mounting bolts.
4. Measure correct belt tension. Proper tension is achieved when a three (3) pound weight or equivalent finger pressure is applied midway between the motor pulley and compressor fly - wheel causes a 1/4" deflection of the belt. Refer to Figure 5.

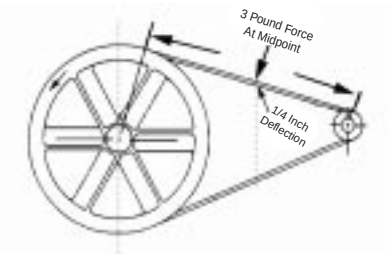


Figure 5 – Correct Belt Tension

5. If belt tension is not correct, readjust as in step 2 of this procedure.
6. When proper belt tension is achieved, tighten the remaining motor mounting bolts.

NOTE

Once the motor pulley has been moved from its factory set location, the grooves of the flywheel and pulley must be aligned to within 1/16" to prevent excessive belt wear. Verify the alignment by performing the following Pulley and Flywheel - Alignment procedure.

Pulley and Flywheel - Alignment

The air compressor flywheel and motor pulley must be in-line (in the same plane) within 1/16" to assure belt retention within flywheel belt grooves. To check alignment, perform the following steps:

1. Unplug air compressor from power source.
2. Remove belt guard
3. Place a straightedge against the outside of the flywheel and the motor drive pulley. Refer to Figure 6 as required.

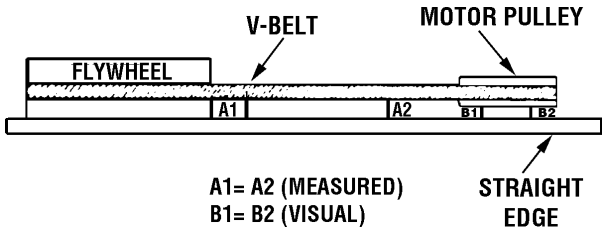


Figure 6 – Pulley and Flywheel Alignment

4. Measure the distance between the edge of the belt and the straightedge at points A1 and A2 in Figure 6. The difference between measurements should be no more than 1/16".
5. If the difference is greater or less than 1/16" loosen the set screw holding the motor drive pulley to the shaft and adjust the pulley's position on the shaft until the A1 and A2 measurements are within 1/16" of each other.
6. Tighten the motor drive pulley setscrew to 70-80 in.-lbs.
7. Visually inspect the motor drive pulley to verify that it is perpendicular to the drive motor shaft. Points B1 and B2 of Figure 6 should appear to be equal. If they are not, loosen the setscrew of the motor drive pulley and equalize B1 and B2, using care not to disturb the belt alignment performed in step 2.
8. Retighten the motor drive pulley setscrew to 70-80 in.-lbs.
9. Reinstall belt guard.

Pressure Switch - Replacement

⚠WARNING

PRESSURE LOADS BEYOND DESIGN LIMITS MAY CAUSE AIR TANK RUPTURE OR EXPLOSION. PRESSURE SWITCH OPERATION IS RELATED TO MOTOR HP, AIR TANK RATING AND SAFETY VALVE SETTING. DO NOT ATTEMPT TO ADJUST, REMOVE OR DEFEAT THE PRESSURE SWITCH, OR CHANGE AND MODIFY ANY PRESSURE CONTROL RELATED DEVICE. IF REPLACEMENT OF PRESSURE SWITCH IS NECESSARY, THE SAME RATED SWITCH MUST BE USED. DO NOT ATTEMPT TO REPLACE THE PRESSURE SWITCH. CONTACT A DEVILBISS AIR POWER AUTHORIZED SERVICE CENTER FOR REPLACEMENT OF THIS SWITCH.

Motor Overload Protector - Reset

The motor has a manual thermal overload protector. If the motor overheats for any reason, the overload protector will shut off the motor. The motor must be allowed to cool down before restarting. First, move the **"OFF/ ON-AUTO"**lever on the pressure switch to the **"OFF"** position. To restart, depress the red **"RESET"** button located on the end of the motor, then move the **"OFF/ ON-AUTO"** switch to the **"ON-AUTO"** position. If motor does not start allow more time for the motor to cool down and try the **"RESET"** button again.

NOTE

If the overload protector shuts the motor off frequently, check for a possible voltage problem. Low voltage can be suspected when:

1. **The motor does not get up to full power or speed.**
2. **Fuses blow out when the motor is started.**
3. **Lights dim when motor is started, and remain dim while it is running.**

If voltages are correct and motor will not start, replace motor.

Servicing Intake and Exhaust Valves

The air compressor's intake and exhaust valves as well as the valve plates and cylinder head will, over a period of time, accumulate a residue of carbon-like material on their surfaces. The material will decrease the efficiency of the pump. These components should be inspected whenever a problem is suspected and they should be cleaned or replaced with new parts. Refer to the Parts Manual if required. Use the following procedure to inspect these components.

1. Unplug the compressor from power source and relieve all air pressure from the air tanks.
2. Disconnect the pressure release and outlet lines from the air compressor.
3. Remove the hardware securing the cylinder head and remove the cylinder head and valve plate.

⚠WARNING

MANY SOLVENTS ARE HIGHLY FLAMMABLE AND A HEALTH HAZARD IF INHALED. ALWAYS OBSERVE THE SOLVENT MANUFACTURER'S SAFETY INSTRUCTIONS AND WARNINGS.

4. Clean carbon deposits in head cavities and valve plates with lacquer thinner or other suitable solvent.
5. Clean the intake and exhaust valves with lacquer thinner or other suitable solvent. Inspect valves; replace if necessary.

NOTE

Do not use gasket cement on any gasket surface as this may clog compressor valve cavities and air flow areas.

6. Reinstall valve plate and use new gaskets.
7. Install the cylinder head. Snug mounting screws and studs tight, then torque to 25 to 30 ft.-lbs. starting at the center and working toward the outside.
8. Reconnect the pressure release and outlet lines to the compressor pump.

STORAGE OF COMPRESSOR UNIT

1. Review the "Operating Procedures" and "Maintenance" section on the preceding pages and perform scheduled maintenance as necessary.

Drain the water from the air tanks.

2. Set the **"OFF/ON-AUTO"** switch to the **"OFF"** position, and unplug the unit.
3. Remove any air tool or accessory.
4. Protect the electrical cord and air hose from damage (such as being stepped on or run over). Wind them loosely around the top of unit.
5. Store the compressor in a clean and dry location.

TROUBLESHOOTING GUIDE

⚠WARNING

PERFORMING REPAIRS MAY EXPOSE VOLTAGE SOURCES, MOVING PARTS OR COMPRESSED AIR SOURCES. PERSONAL INJURY MAY OCCUR. PRIOR TO ATTEMPTING ANY REPAIRS, UNPLUG THE COMPRESSOR AND BLEED OFF ALL TANK AIR PRESSURE.

PROBLEM	CAUSE	CORRECTION
Excessive tank pressure - safety valve pops off.	Pressure switch does not shut off motor when air compressor reaches “cut-out” pressure.	Move the pressure switch "OFF/ON-AUTO" lever to the “OFF” position. If the air compressor doesn’t shut off, replace the pressure switch. If the pressure switch contacts are good, check to see if the pin in the bottom of the pressure release valve is stuck. If it does not move freely, replace the valve.
	Pressure switch “cut-out” too high.	Return the unit to an Authorized Warranty Service Center to check, remove or replace pressure switch.
Air leaks at fittings.	Tube or hose fittings are not tight enough.	Tighten fittings where air can be heard escaping. Check fittings with soapy water solution. **DO NOT OVER-TIGHTEN.** If leak persist, remove fittings and reinstall with thread sealant.
Air leaks at or inside check valve.	Defective or dirty check 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. Remove and clean or replace check valve. **DO NOT OVER-TIGHTEN.**
Air leaks at pressure switch release valve.	Defective pressure switch release valve. Defective check valve.	Remove and replace the release 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. Remove and clean or replace check valve. **DO NOT OVER-TIGHTEN.**
Air leaks in air tank or at air tank welds.	Defective air tank.	Air tank must be replaced. Do not attempt repair of any leaks. **⚠DANGER** **DO NOT DRILL INTO, WELD OR OTHERWISE MODIFY AIR TANK OR IT WILL WEAKEN. THE TANK CAN RUPTURE OR EXPLODE.**
Air leak from safety valve.	Possible defect in safety valve.	Operate safety valve manually by pulling on ring. If valve still leaks, it must be replaced.
Knocking noise	Restricted or defective check valve. Loose pulley. Low oil level. Loose flywheel. Loose pump or motor mounting bolts.	Remove and clean or replace check valve. Retighten pulley set screw. Maintain prescribed oil level. Add oil. Torque bolt 15-20 ft.-lbs. Check bolts. Torque as required (15-20 ft.-lbs.)

TROUBLESHOOTING GUIDE (cont'd)

PROBLEM	CAUSE	CORRECTION
Knocking noise (cont'd)	Loose belt or belt too tight.	Adjust belt tension. Tension belt per instructions under "Belt Tension-Adjustment" section of this manual.
	Carbon build-up.	Remove the head and valve plate. Clean the valve plate and top of the piston. (Be sure carbon does not fall into the cylinder.) Reassemble using new gaskets and torque bolts to 25-30 ft.-lbs.
Motor will not run.	Motor overload protection switch has tripped.	Let the motor cool off and reset switch by pressing the red button located on the end of the motor. If the overload still trips, check for a defective capacitor.
	Possible defective capacitor.	Return to Service Center for inspection or replacement if necessary.
	Possible defective motor.	Have motor checked at a local Authorized Warranty Service Center.
	Tank pressure exceeds pressure switch "cut-in" pressure.	Motor will start automatically when tank pressure drops below "cut-in" pressure of pressure switch.
	Check valve stuck open - fails to relieve head pressure; motor cannot start.	Remove and clean, or replace check valve.
	Loose electrical connections.	Check wiring connection inside pressure switch and motor terminal box area. 1. Check fuse box for blown fuse and replace if necessary. Reset circuit breaker. Do not use a fuse or circuit breaker with higher rating than that specified for your particular branch circuit. 2. Check for proper fuse; only time delayed fuses are acceptable. 3. Check for low voltage conditions. 4. Remove check valve and clean or replace if it is stuck open or closed. 5. Disconnect any other electrical appliances from circuit. The compressor must operate on its own branch circuit. 6. Do not use an extension cord.
	Pressure release valve on pressure switch has not unloaded head pressure.	Bleed line by pushing **"OFF/ON-AUTO"** lever on the pressure switch to the **"OFF"** position and opening the pressure release valve. If the valve still doesn't open, it must be replaced. Have checked at an Authorized Warranty Service Center.
	Paint spray on internal motor parts.	Do not operate the compressor in the spray area. See Flammable Vapor Warning.

TROUBLESHOOTING GUIDE (cont'd)

PROBLEM	CAUSE	CORRECTION
Restricted air intake.	Dirty air filter.	Replace filter.
Air compressor is not supplying enough air to operate accessories.	Prolonged excessive use of air. Air compressor is not large enough for air requirement. Restricted air intake filter. Loose belt. Hole in hose. Check valve restricted. Air leaks.	Decrease amount of air usage. Check the accessory air requirement. If it is higher than the CFM or pressure supplied by your air compressor, you need a larger compressor. Clean or replace air intake filter. Do not operate the compressor in the paint spray area. Adjust belt tension per Belt Tension-Adjustment section of this manual. Check and replace if required. Remove and clean or replace check valve. Tighten fittings per "Air Leaks" section of "Troubleshooting Guide".
Excessive belt wear.	Belt is too loose or tight. Loose pulley. Pulley misalignment.	Adjust belt tension. See "Belt Tension - Adjustment" section in this manual. Check for worn keyway or pulley bore. Also check for bent motor shaft. Replace parts if necessary. Motor pulley and flywheel must be in line within 1/16" per "Pulley and Flywheel - Alignment" section in this manual.
Squealing sound.	Loose belt. There is no oil in the pump.	Adjust belt tension per "Belt Tension-Adjustment" section in this manual. Add oil to top of fill hole in pump.
Pressure reading on the regulated pressure gauge drops when an accessory is used.	It is normal for "some" pressure drop to occur.	If there is an excessive amount of pressure drop when the accessory is used, adjust the regulator. **NOTE** Adjust the regulated pressure under flow conditions, while the accessory is being used.
Regulator knob - continuous air leak. Regulator will not shut off at air outlet.	Dirty or damaged regulator internal parts.	Clean or replace regulator or internal parts.

GENERAL MANUAL FOR

Oil-Lubricated Single Stage Electric Motor Powered Air Compressor

Call our ***Toll Free Number 1-800-888-2468, Ext 2***, then ***1***, to obtain the location of the nearest Authorized Service Center for ordering repair parts and for warranty repairs. ***24 hours a day***, ***7 days a week***.

When ordering repair parts from your local Authorized Service Center, always give the following information:

- Model number of your product
- Part number and description of the item you wish to purchase

WARRANTY

This product is covered by the DeVilbiss one year limited warranty. The warranty can be found in the General Manual or is available upon request.

Attach Sales Receipt Here

Retain Original Sales Receipt as Proof of Purchase for Warranty Repair Work.