



EPEQ® Electrified Power Equipment®
20 CFM DC Electric Air Compressor
Manual No. 090223-OP_r2



USER GUIDE

OPERATION MANUAL AND SERVICE PARTS LIST KEEP THE MANUAL WITH THE VEHICLE

NOTE: Read this manual before installing, operating or servicing this equipment. Failure to comply with the operation and maintenance instructions in this manual will VOID THE EQUIPMENT WARRANTY.

This publication contains the latest information available at the time of preparation. Every effort has been made to ensure accuracy. Vanair®, a Lincoln Electric Company reserves the right to make design change modifications or improvements without prior notification.

Making unauthorized modification to the system components WILL VOID THE WARRANTY! Always contact Vanair® before making any changes to the EPEQ® AIR20 compressor system.

EPEQ® ELECTRIFIED POWER
EQUIPMENT™

EXCLUDES
ELiMENT™ BATTERY

**ALL WARRANTY OR
RETURNS MUST BE
PRE-AUTHORIZED PRIOR
TO PERFORMING
ANY WARRANTY WORK.**

(844) VAN - SERV

SERVICE@VANAIR.COM

PARTS@VANAIR.COM

**10896 W. 300 N.
MICHIGAN CITY, IN 46360**

(800) 526-8817

EPEQ.COM

EFFECTIVE: JULY 1, 2026



VANAIR® VANTAGE WARRANTY

This limited warranty supersedes all previous Vanair® warranties and is exclusive with no other guarantees or warranties expressed or implied.

LIMITED WARRANTY—Subject to the expressed terms and conditions set forth below, Vanair®, a Lincoln Electric Company ("Vanair"), of Michigan City, Indiana (USA), warrants to the original retail purchaser of new Vanair® equipment that such equipment is free from defects in materials and workmanship when shipped by Vanair®.

For warranty claims received by Vanair® within the applicable warranty periods described below, Vanair® will repair or replace any warranted equipment, parts or components that fail due to defects in material or workmanship or refund the purchase price for the equipment, at Vanair's discretion. Vanair® is not responsible for time or labor to gain access to the machine to preform work. **WARRANTY WILL BE VOID IF GENUINE VANAIR® PARTS AND FLUIDS ARE NOT USED.**

Vanair® must be notified in writing within thirty (30) days of any such defect or failure. **All warranty or returns must be pre-authorized in writing prior to performing warranty work.** Call Vanair® for process and forms. Vanair® will provide instructions on the warranty claim procedures to be followed.

Warranty will commence upon receipt of the Warranty Registration Card. If the Warranty Registration Card is not received within six (6) months of shipment from Vanair®, the warranty commencement date shall be thirty (30) days from the date of shipment from Vanair®. Records of warranty adherence are the responsibility of the end user.

1. Inverters: 1 Year Parts / 1 Year Labor
2. Converters: 1 Year Parts / 1 Year Labor
3. Chargers: 1 Year Parts / 1 Year Labor
4. Electric Motors: 1 Year Parts / 1 Year Labor
5. Alternators: 1 Year Parts / 1 Year Labor
6. Compressor Air End:
 - Rotary Screw: Lifetime with Vanair® Authorized Service Kits and Lubricants : 3 Years Labor
 - Reciprocating: 3 Years Parts / 1 Year Labor
7. Hydraulic Pumps/Motors: 2 Years Parts / 1 Year Labor
8. EPEQ® Solar Assist™:
 - Solar Panel: 5 Year Parts / 1 Year Labor
 - Charge Controller: 2 Years Parts / 1 Year Labor
 - Installation Kit: 1 Year Parts / 1 Year Labor
9. 1 Year Parts / 1 Year Labor on the following:
 - All electronics and controls including, but not limited to:
 - (i) I/O Boards
 - (ii) Modules
 - (iii) Panel Boxes
 - (iv) Instrumentation
 - (v) Clutches
 - (vi) Solenoids
 - (vii) Running Gear/Trailers
 - (viii) Cooler Cores and Fans

This Limited Warranty shall not apply to:

1. Consumable components, such as: shaft seals, valves, belts, filters, capacitors, contactors, relays, brushes, wire or parts that fail due to normal wear and use.
2. Items furnished by Vanair®, but manufactured by others, such as engines and trade accessories (these items are covered by the manufacturer's warranty, if any).
3. Equipment that has been modified by any party other than Vanair® or equipment which has not been used and maintained in accordance with Vanair's specifications.

4. Equipment which has been improperly installed and/or improperly operated, based upon Vanair's specifications for the equipment or industry standards.
5. Equipment installed by non-authorized or third party personnel. Vanair® products are intended for purchase and use by commercial/industrial users and persons trained and experienced in the use and maintenance of industrial equipment.

In the event of a warranty claim covered by this Limited Warranty, the exclusive remedies shall be, at Vanair's sole discretion: (i) repair; or (ii) replacement; (iii) where authorized in writing by Vanair® in appropriate cases, the reasonable cost of repair or replacement at an authorized Vanair® service facility; or (iv) payment of (or credit for) the purchase price (less reasonable depreciation based upon actual use) upon return of the equipment at the warranty claimant's risk and expense. Vanair® will pay standard ground freight for any warranty item shipped to and from Vanair® or (Vanair® designated facility) within the first year of the applicable warranty period. Any additional expedited freight cost is the responsibility of the purchaser.

TO THE GREAT EXTENT PERMITTED BY APPLICABLE LAW, THE REMEDIES PROVIDED HEREIN ARE THE SOLE AND EXCLUSIVE REMEDIES APPLICABLE TO THE VANAIR® EQUIPMENT. IN NO EVENT SHALL VANAIR® BECOME LIABLE FOR DIRECT, INDIRECT, SPECIAL, PUNITIVE, INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING LOSS OF PROFIT OR LOST BUSINESS OPPORTUNITY), WHETHER BASED ON CONTRACT, TORT OR ANY OTHER LEGAL THEORY. IN NO EVENT SHALL VANAIR® BECOME OBLIGATED TO PAY MORE ON ANY WARRANTY CLAIM THAN THE PURCHASE PRICE ACTUALLY PAID BY THE ORIGINAL RETAIL PURCHASER.

THIS LIMITED WARRANTY IS MADE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE, OR ANY OTHER WARRANTY OR GUARANTY ARISING BY OPERATION OF LAW. ANY WARRANTY NOT EXPRESSLY PROVIDED HEREIN, IMPLIED WARRANTY, GUARANTY AND ANY REPRESENTATION REGARDING THE PERFORMANCE OF THE EQUIPMENT, AND ANY REMEDY FOR BREACH OF CONTRACT, IN TORT, OR ANY OTHER LEGAL THEORY WHICH, BUT FOR THIS PROVISION, MIGHT ARISE BY IMPLICATION, OPERATION OF LAW, CUSTOM OF TRADE, OR COURSE OF DEALING ARE EXCLUDED AND DISCLAIMED BY VANAIR®.

Some states in the United States of America do not allow limitations of how long an implied warranty lasts, or the exclusion of incidental, indirect, special or consequential damages, and as such, the above limitations and exclusions may not apply to you. This warranty provides specific legal rights. Other rights may be available to you, but may vary from state to state.

In Canada, legislation in some provinces provides for certain additional warranties or remedies other than as stated herein, and to the extent that they may not be saved, the limitations and exclusions set out forth above may not apply. This Limited Warranty provides specific legal rights, and other rights may be available, but may vary from province to province.

VANAIR®
A Lincoln Electric Company

Warranty Claims Procedure

Warrantied Vanair® Parts

Owners of Vanair® equipment must follow this process for repair or replacement of warrantied items. Do not return items without prior authorization from the Vanair® Warranty Administrator.

PROCEDURE: Customers needing assistance in troubleshooting a system and/or returning parts, please follow the steps below.

1. Locate the machine's serial number(s).
2. Make a list of the symptoms/condition/malfunctions noticed along with any applicable temperature and pressure readings, and also the number of operational hours if available.
3. Note that the above information is required on the Return Material Authorization Form; necessary for warranty processing if the warranty claim is deemed valid by the service case review.
4. Contact the Vanair® Service Department by phone (1-844-VANSERV or 1-219-879-5100) to speak with a Service Technician.
5. Vanair® Service will troubleshoot the problem based on the information provided by the customer, and attempt to return the unit to service as quickly as possible.
6. If the unit cannot be returned to service, and Vanair® determines this matter is a warranty issue, the Service Technician will provide a case number for the unit. The Warranty Department will then assign an RMA (Return Material Authorization) number that will provide for the return of the item to Vanair® for analysis and a final determination as to the item's warranty status.

7. Warranty Claims are solicited via a case number provided by the Vanair® Service Department. Blank Warranty Claim forms can be found on the Vanair® website under the Resources section.

All of the field information including the case number, serial number and description of the work performed is required.

IMPORTANT NOTES:

If the part is not returned by the customer to the Vanair® Service Department within 30 days, the RMA becomes void and any claims will be denied.

All labor claims or invoices must be approved by the Vanair® Warranty Administrator prior to starting repair work along with the cost of the repair. All paper work associated with the returned item and warranty repair cost must reference the RMA number issued against the part, and be forwarded to Vanair® within 30 days of the completion of work.

The RMA number must appear on the outside of the package where it can be seen before being returned.

Table of Contents

SECTION 1: SAFETY..... 1
 TABLE 1-A: SAFETY/WARNING SYMBOLS AND MEANINGS.....1
 1.1 SAFETY PRECAUTIONS..... 2

SECTION 2: SPECIFICATIONS..... 3
 2.1 GENERAL INTRODUCTION..... 3
 2.2 PHYSICAL SPECIFICATIONS 3
 2.3 FEATURES 3
 FIGURE 2-1: COMPONENT LOCATIONS..... 3

SECTION 3: INSTALLATION 5
 3.1 INSTALL INSTRUCTIONS..... 5
 FIGURE 3-1: MOUNTING HOLE DIMENSIONS..... 5
 FIGURE 3-2: MOUNTING HOLE DIMENSIONS 5
 FIGURE 3-3: COMMUNICATIONS CONNECTIONS..... 5
 TABLE 3-A: COMMON DUTY CYCLES..... 6
 3.1.1. DUTY CYCLE 6

SECTION 4: OPERATION 7
 4.1 GENERAL INSTRUCTIONS 7
 4.2 PRESSURE SWITCH 7
 4.2.1. ADJUSTING PRESSURE SWITCH..... 7
 FIGURE 4-1: CANOPY AND FINGER GUARDS 8
 FIGURE 4-3: PRESSURE SWITCH (COVER REMOVED) 9
 FIGURE 4-2: PRESSURE SWITCH..... 9

SECTION 5: MAINTENANCE 11

5.1 MAINTENANCE KITS AND PARTS LIST.....11

5.2 MAINTENANCE11

5.2.1. NEW DRIVE BELT BREAK-IN.....11

5.2.2. DAILY MAINTENANCE11

FIGURE 5-1: CANOPY REMOVAL.....12

5.2.3. WEEKLY MAINTENANCE 12

5.2.4. MONTHLY MAINTENANCE 12

5.2.5. 6 MONTH (SEMI-ANNUALLY) MAINTENANCE 13

5.2.6. CHANGING THE OIL..... 13

FIGURE 5-2: EPEQ® AIR20 (CANOPY REMOVED)13

5.2.7. CHECKING/CHANGING THE DRIVE BELTS 14

SECTION 6: TROUBLESHOOTING 15

6.1 COMPRESSOR FAILS TO RUN..... 15

6.2 COMPRESSOR FAILS TO BUILD PRESSURE 15

6.3 EXCESS MOISTURE IN THE COMPRESSED AIR 15

BLANK PAGE

SECTION 1: Safety

Table 1-A: SAFETY/WARNING SYMBOLS AND MEANINGS

	WEAR EYE PROTECTION (Flying debris or other eye hazard may be present)		EXPLOSIVE MATERIAL OR EXPLOSIVE HAZARD (Conditions or materials may exist that can cause explosion)
	WEAR HEARING PROTECTION (Harmful sound volume may be present)		HOT SURFACE WARNING (Surfaces may be hot; use caution, proper protection or allow to cool before handling)
	READ INSTRUCTIONS OR MANUAL		ROTATING OR MOVING PARTS WARNING (Moving/rotating parts present, may cause damage or physical injury)
	DISCONNECT POWER (Disconnect from power to avoid accidental start or avoid electrical current)		HAND ENTANGLEMENT WITH BELT DRIVE WARNING (Belt drive present, use caution to avoid pinch points and personal injury)
	WEAR PROTECTIVE GLOVES (Chemical, thermal or harmful conditions may exist that may be harmful to bare hands)		AUTOMATIC START UP WARNING (Equipment can start up/run automatically without warning)
	DO NOT EXTINGUISH WITH WATER (Water may spread, cause harm or further damage when used on certain types of fires)		BURST/PRESSURE RELEASE WARNING (High pressure condition may exist that can cause equipment to burst or cause bodily injury)
	GENERAL CAUTION OR WARNING (Important information regarding cautions or warnings)		BATTERY CHARGING WARNING (Beware of heat, leaks and harmful gas around certain types of batteries being charged)
	ELECTRICAL SHOCK/ELECTROCUTION HAZARD (Electricity and electrical circuits present that may cause electrical shock or sparking)		FLAMMABLE MATERIAL/FIRE HAZARD WARNING (Conditions and/or materials exist that may be flammable or cause a fire)

1.1 SAFETY PRECAUTIONS



1. This unit is designed for indoor use or within a clean, dry compartment, protected from rain, dust and the elements.



2. Compressor requires adequate clearance for air circulation and cooling. Do not block ventilation openings or cooling fans.



3. Make certain the compressor, all connecting cables and hoses are in good condition and of adequate size to avoid risk of fire and electric shock. Do not use damaged or undersized power cables or wiring.



4. **AVOID INJURY:** When operating machinery, always be aware of moving and rotating parts. Do not operate machinery where fingers, tools, loose clothing, jewelry or long hair can be caught in the equipment.



5. Wear eye protection during use as compressed air can send loose debris flying without notice



6. The EPEQ® AIR20 compressor is equipped with a safety pressure valve which releases excess air pressure in the event of over pressurization



7. **HOT SURFACES:** It is normal for compressors to become hot during use, and can remain hot after being shut off. Wear protective gloves when handling, or avoid touching compressor until after it cools.



8. Unit is capable of producing electrical arcing or sparks. To avoid risk of fire, do not install this equipment in areas in or around combustible liquids, solids, or gas. This includes any space containing combustion engine powered vehicles or machinery, fuel tanks, fuel lines or fittings that are a part of a fuel system.



9. Before doing any cleaning or maintenance, disconnect the EPEQ® AIR20 from DC power to prevent accidental start or electric shock. (Machine can auto-start.)
10. **NOTE: This compressor uses oil during operation. DO NOT use for health applications that supply breathable air.**

SECTION 2: Specifications

2.1 GENERAL INTRODUCTION

EPEQ® AIR20 - 20 CFM Electric Air Compressor:

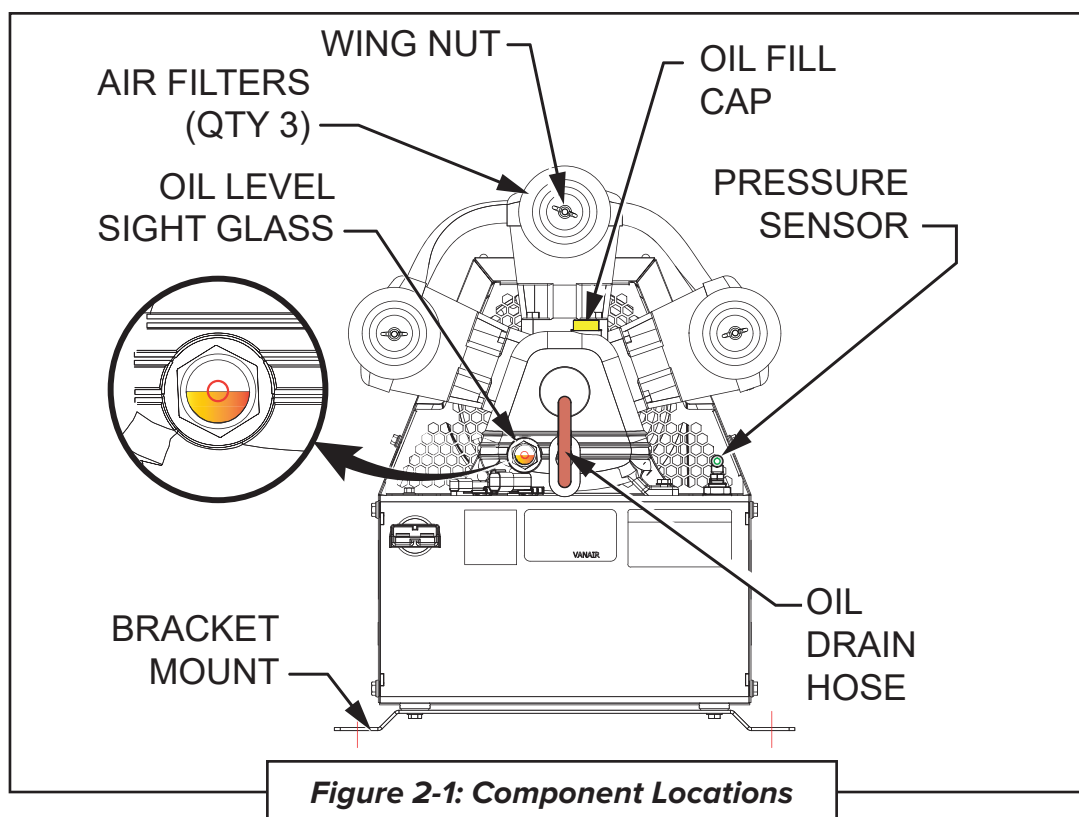
The EPEQ® AIR20 is a reciprocating air compressor and is designed to provide reliable compressed air output from a 48V DC power source. Ideal for intermittent use.

2.2 PHYSICAL SPECIFICATIONS

- **Physical Dimensions:**
24.3" H x 18.2" W x 13.7" D
(617mm x 462mm x 348mm)
- **Weight:** 135 lbs. (61.23 kg)
- **Duty Cycle:** 70% - Intermittent Use
- **Power Input:** 48V DC

2.3 FEATURES

- Runs independently from the vehicle using 48V DC rechargeable power.
- Significantly more quiet than similarly sized compressors that use internal combustion engines.
- Produces no exhaust, and when powered by our 48V DC ELiMENT® LiFePO4 Battery produces no harmful battery gases during normal use, so it can be used indoors without special venting.
- Duty cycle is rated at 70%.



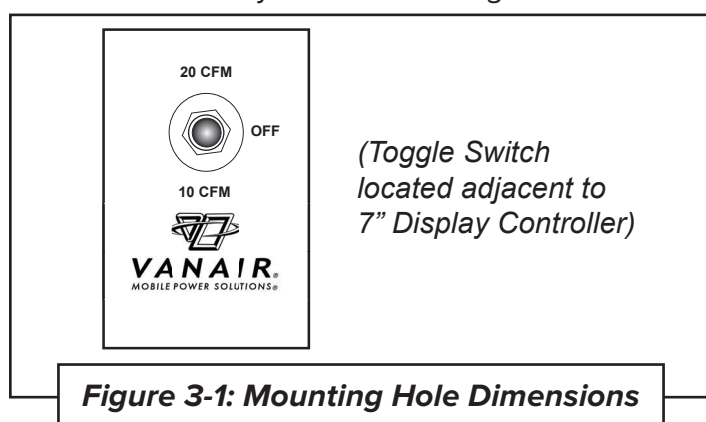
BLANK PAGE

SECTION 3: Installation

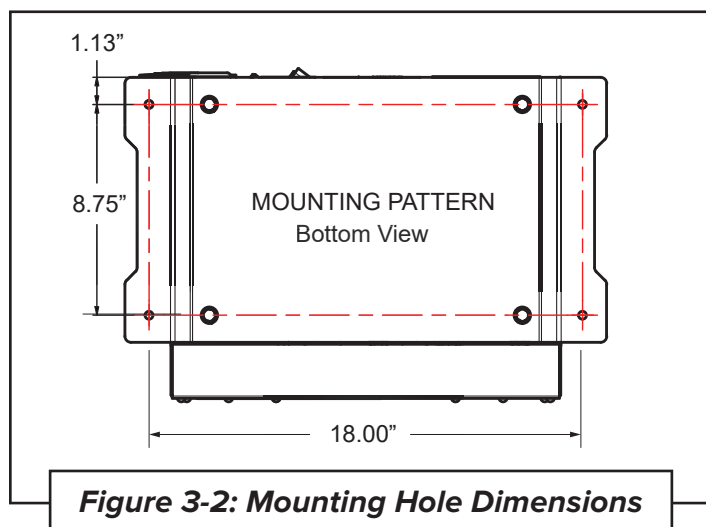
3.1 INSTALL INSTRUCTIONS

NOTE: The EPEQ® AIR20 requires an air receiver tank. (Available separately.)

1. Find a clean, dry, stable and level surface or equipment frame to secure the EPEQ® AIR20 using the bracket mount.
2. Rectangular spacing is 18.00" x 8.75" O.C. (see **Figure 3-1**). Use bolts or screws to fasten the AIR20 securely to the mounting surface.



3. Make sure the compressor is free of any visible damage, broken or loose wires or physical obstructions.
4. The EPEQ® AIR20 Compressor receives power from the ELiMENT® Battery. The power to the motor is controlled by a 3-way toggle switch attached next to the EPEQ® 7" Display Controller (see **Figure 3-2**).



5. The 3-way toggle switch provides three positions to control the compressor's motor.
 - OFF (center position)
 - Low speed: 10 CFM (bottom position)
 - High speed: 20 CFM (top position)
6. The 2-wire connector from the toggle switch connects to the motor speed control plug on top of the EPEQ® AIR20, near the oil level sight glass (see **Figure 3-3**).
7. Move toggle switch to the **OFF** position before connecting signal wire connector.
8. When safe to do so, connect the matching orange Anderson-type connectors between the EPEQ® AIR20 Compressor and the ELiMENT® Battery. Press firmly together to ensure a secure connection.

CAUTION

To avoid damaging the equipment, **DO NOT** attempt to lift or pull the compressor or battery using the signal or power cables.

9. Position the battery and compressor close enough so that the cables are not strained or have undue force exerted on them.
10. If used, connect the CANBUS plug from the system wire harness into the CANBUS connector located on the compressor to enable communication with the ELiMENT® Battery (see **Figure 3-3**).



Figure 3-3: Communications Connections

3.1.1. DUTY CYCLE

This system is rated for a 70% duty cycle (see **Section 2.1**). The duty cycle of your compressor has an effect on how efficient the airflow delivery is. Refer to **Table 3-A** for some common duty cycles and what they mean.

Table 3-A: Common Duty Cycles

50/50	Compressor can be used for up to half of its cycle. Same amount of time at rest, as it does working (e.g. 5 minutes on, 5 minutes off)
60/40	Compressor can be used for up to 60% of its cycle; spends up to 40% of its time resting.
75/25	Compressor can be used for up to 75% of its cycle; spends up to 25% of its time resting.
85/15	Compressor can be used for up to 85% of its cycle; spends up to 15% of its time resting.
100	Compressor does not need to rest. Engine/ motor has a cooling component allowing for constant air delivery.

SECTION 4: Operation

4.1 GENERAL INSTRUCTIONS

1. Always check the oil level prior to each use. Use the sight glass on the compressor located on the lower, front left of the compressor. Running the unit with incorrect oil level can lead to serious damage or failure of the equipment (*see Figure 2-1*).
2. For most accurate oil level reading, place unit on a flat, level surface.
3. Ideal oil level is at the halfway mark, but should be maintained between 1/4 and 3/4 full. (**DO NOT** overfill.)
4. If oil level is below 1/4 full, remove the oil fill cap (*see Figure 2-1*) and carefully add oil until level is at the halfway mark as mentioned in previous section. Always use Vanair® Reciprocating Compressor Oil for the EPEQ® AIR20.
5. Check battery charge level. A fully charged battery works best. If low, charge the battery as needed.
6. Check that all rotating and moving parts, as well as vents are free from obstruction or debris to prevent accidental injury, damage or equipment from overheating.
7. Connect the compressor's orange input power connector into one of the ELiMENT® Battery's orange connectors. (These connectors only fit one way for safety.) Make sure your connection is secure.
8. Power up the EPEQ® AIR20 when ready. The unit produces up to 20 CFM @ 150 PSI. Choose air tools designed to work within these parameters.
9. Built-in sensor and pressure switch cut-in and cut-out are set at the factory.
10. When ready to shut down, set toggle switch to the center (**OFF**) position to power down the unit and disconnect the pneumatic hose.

11. When using a receiver air tank, release air pressure from the tank using the ball valve on the tank until pressure reads less than 10 PSI.
12. Open tank's drain valve to allow any accumulated condensation or moisture to escape. Close drain valve when done.



13. During normal use, air compressors can become hot. Please use caution while unit is hot, and allow the air compressor to cool before handling or wear protective gloves.

4.2 PRESSURE SWITCH

The pressure switch controls the motor during use; starting the motor when the air pressure is at or below the lowest pressure setting (cut-in) and shuts the motor off once the upper air pressure limit has been reached (cut-out). Cut-in and cut-out settings are preset at the factory.

Users should not have to change these settings for normal use. Some adjustments may be needed to re-calibrate the switch, or changes may be required to set new limits to use with a receiver tank rated for a different pressure.

CAUTION

The following procedures should only be done by trained and experienced individuals.

4.2.1. ADJUSTING PRESSURE SWITCH

1. Slowly release air pressure using ball valve of air tank. Wearing eye protection can protect against any flying debris from release of compressed air.
2. With power off, disconnect both electric power and air.
3. Remove all eight (8) screws (4 per side) from both sides and two (2) screws near the top of the canopy and slide cover/safety guard off (*see Figure 4-1*).

ITEM	PART NUMBER	DESCRIPTION	QTY
1	262704	WASHER, NYLON FLAT 1/4	4
2	262943	WASHER, NYLON FLAT 5/16	8
3	284848	BOLT, FLANGE 1/4-20 X 0.63 ZINC	6
4	286250	CANOPY, EPEQ AIR 20CFM	1
5	286257	GUARD, BELT EPEQ AIR 20CFM A	1
6	286258	GUARD, BELT EPEQ AIR 20CFM B	1
7	FA97363	BOLT, FLANGE 5/16-18 X 3/4 SILVER	8

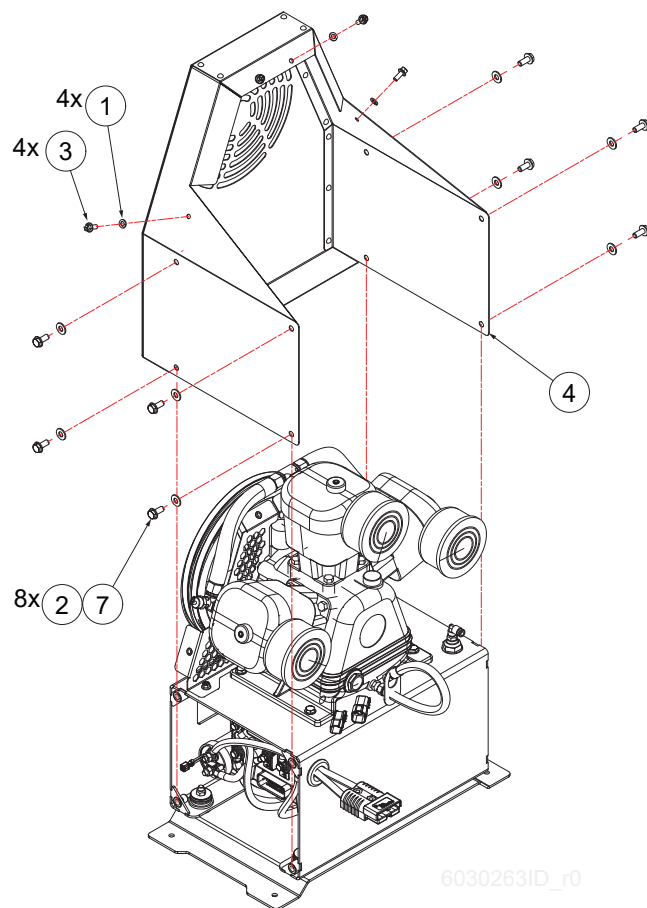
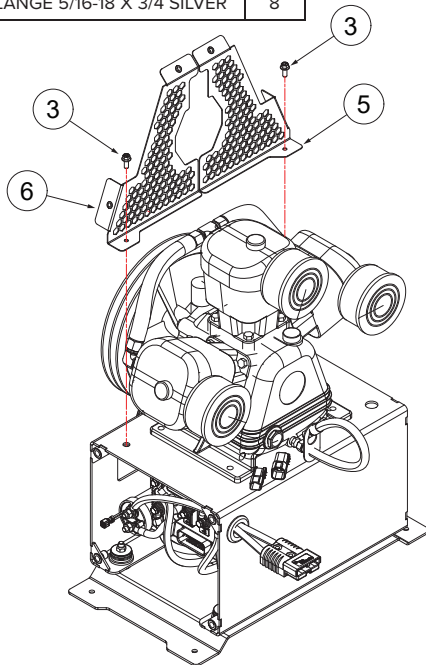


Figure 4-1: Canopy and Finger Guards

4. Locate the pressure switch. The pressure switch is mounted beneath the base on the right hand corner (*see Figure 4-2*).
5. Adjustment screws are now exposed. Follow instructions in **Figure 4-3** to carefully adjust cut-in or cut-out levels.
6. This unit is rated at 20 CFM @ 150 PSI.



7. Cut-out pressure should NEVER be set higher than the pressure rating of the receiver air tank being used. Over-pressurizing a tank may cause the tank to burst! Follow all regulations regarding pressurized tanks to avoid possible serious injury and damage to equipment.



8. **WARNING:** The canopy should be replaced when cycling the compressor.

9. Cycle compressor to verify settings.

(Example: If using a 150 PSI rated tank, the compressor should cut out no higher than 155 PSI.) (Follow specifications of the tank manufacturer.)

If the switch does not shut off compressor motor (cut-out) as expected, slowly release excess pressure using the tank's ball valve and adjust pressure switch to lower cut-out setting.

10. Continue the cycle and checks until the switch is set correctly for the pressure rating of the tank being used.
11. Replace canopy when finished and tighten all canopy screws.

ITEM	PART NUMBER	DESCRIPTION	QTY
1	261310	ELBOW, 90 DEG PUSH ON 1/4T X 1/4P	1
2	274836-004	NIPPLE, PIPE HEX 1/4 X 1/4 STAINLESS STEEL	1
3	CO271659	SWITCH, PRESSURE ADJUSTABLE 50-175 PSI	1
4	F145068	PIPE BRASS, BULKHEAD 1/4 NPT	1

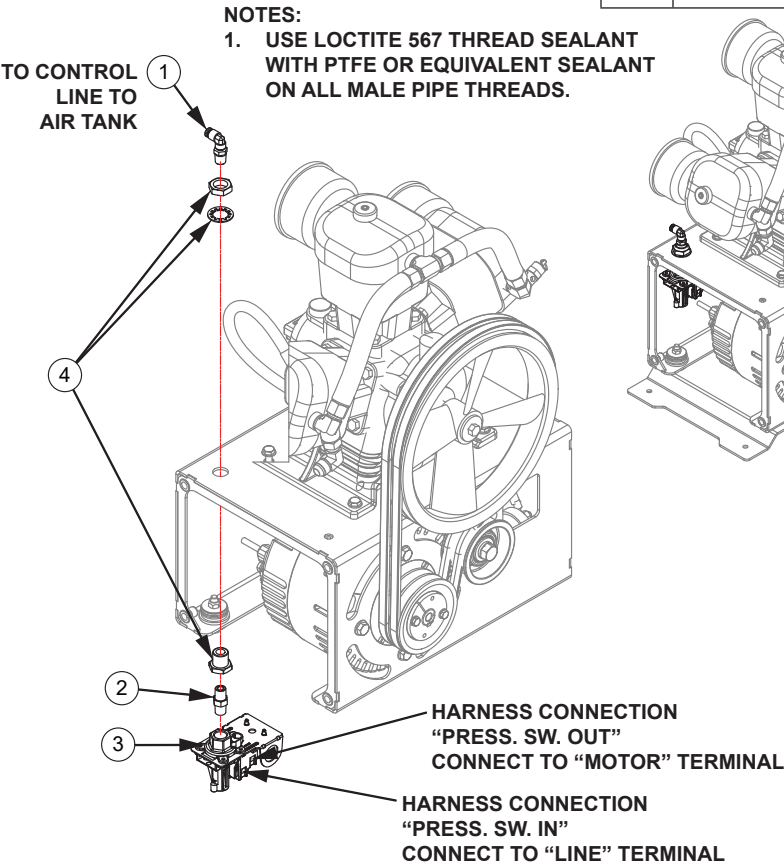


Figure 4-2: Pressure Switch

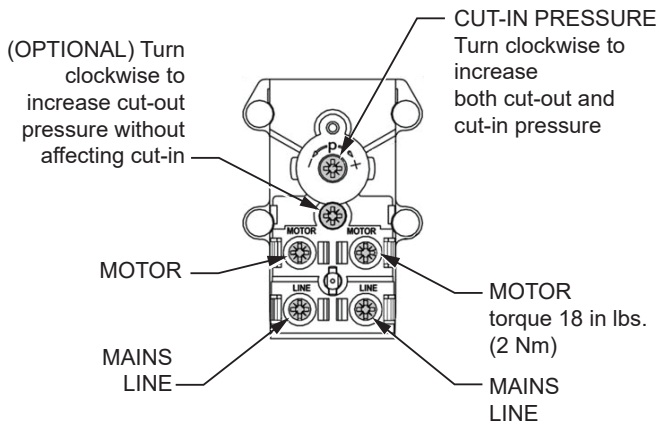


Figure 4-3: Pressure Switch
(Cover Removed)

BLANK PAGE

SECTION 5: Maintenance

5.1 MAINTENANCE KITS AND PARTS LIST

Vanair® offers a convenient maintenance kit for the EPEQ® AIR20, which contains two (2) common replacement items: Replacement air filter elements and Vanair® Reciprocating oil for your EPEQ® AIR20 compressor. Additional oil is available by the quart or gallon.

- Ask for kit part number: KIT1156 (Includes both oil and air filters)
- 1-Gallon Vanair® Reciprocating Compressor Oil part number: 271856-1GAL
- 1-Quart Vanair® Reciprocating Compressor Oil part number: 271856-1QT
- Drive Belt part number: 281908

5.2 MAINTENANCE

Regular maintenance helps ensure your compressor is always operating efficiently and safely. It prolongs the life of your equipment, helps protect your investment by reducing down time, the expense of replacing or repairing equipment and parts, prevent leaks or other issues that can be averted through proper maintenance. It is always better to invest a little time on maintenance than to replace equipment that failed prematurely due to neglect and poor maintenance.

Maintenance records for the EPEQ® AIR20 should be kept. Maintenance records help to maintain ISO 45001 health and safety standards, and helps firms to adhere to OSHA equipment safety standard compliance.

5.2.1. NEW DRIVE BELT BREAK-IN

After the first 10-20 hours of operation (or after installing a new belt), disconnect power to the machine to check the tension of the drive belts, and tighten them if necessary.

5.2.2. DAILY MAINTENANCE

1. **Disconnect power from the compressor and allow compressor to cool if hot.**
2. Wipe down surface with a clean, soft cloth or shop towel after use.
3. **CHECK OIL LEVEL.** On a level surface, visually check the oil level using the oil level sight glass (*see Figure 2-1*). The halfway mark is ideal. **DO NOT operate if oil level is at or below 1/4 or above 3/4 as equipment damage may result.** Add or drain oil as needed.
4. Remove any objects or debris that may interfere with the fan, vents, motor, belts or cooling components.
5. Check unit for sign of air or oil leaks, or any physical damage, including the canopy and finger guards covering the fan and belt.
6. Inspect belts for good condition and tension. Make sure they are not loose, cracked or show adverse wear.
7. Drain Air Tank:
 - Reduce tank pressure to 10 PSI or less using the ball valve on the tank.
 - Open drain valve on the tank to drain moisture after every use.
 - Close the drain valve once tank has been fully drained.

CAUTION

Turn off compressor and inspect unit following any abnormal sounds or unusual performance experienced during use as this may be a sign of other issues. Remember, the compressor will become hot during normal use. Please use caution and allow to cool before handling.

5.2.3. WEEKLY MAINTENANCE

1. In addition to daily maintenance tasks, once per week check the air filters. Clean, or replace them if there is heavy build-up.
2. **CHECK AIR FILTERS.** Remove the wing nuts and remove the three air filter covers. The air filter elements within can be removed by simply pulling them out (see Figure 5-1).
3. Gently tap the filter on a hard, flat surface to dislodge any loose dust and dirt. (**DO NOT** use compressed air to blow out the filters, as this can tear the paper elements.)
4. Check for loose dust, dirt and debris inside the housing. Wipe the three filter housings clean with a clean cloth.
5. To inspect the air filters, hold them up to a light source and look for holes, tears or areas for heavy dirt build-up. Also check the filter's gaskets on the outer edges for signs of damage.

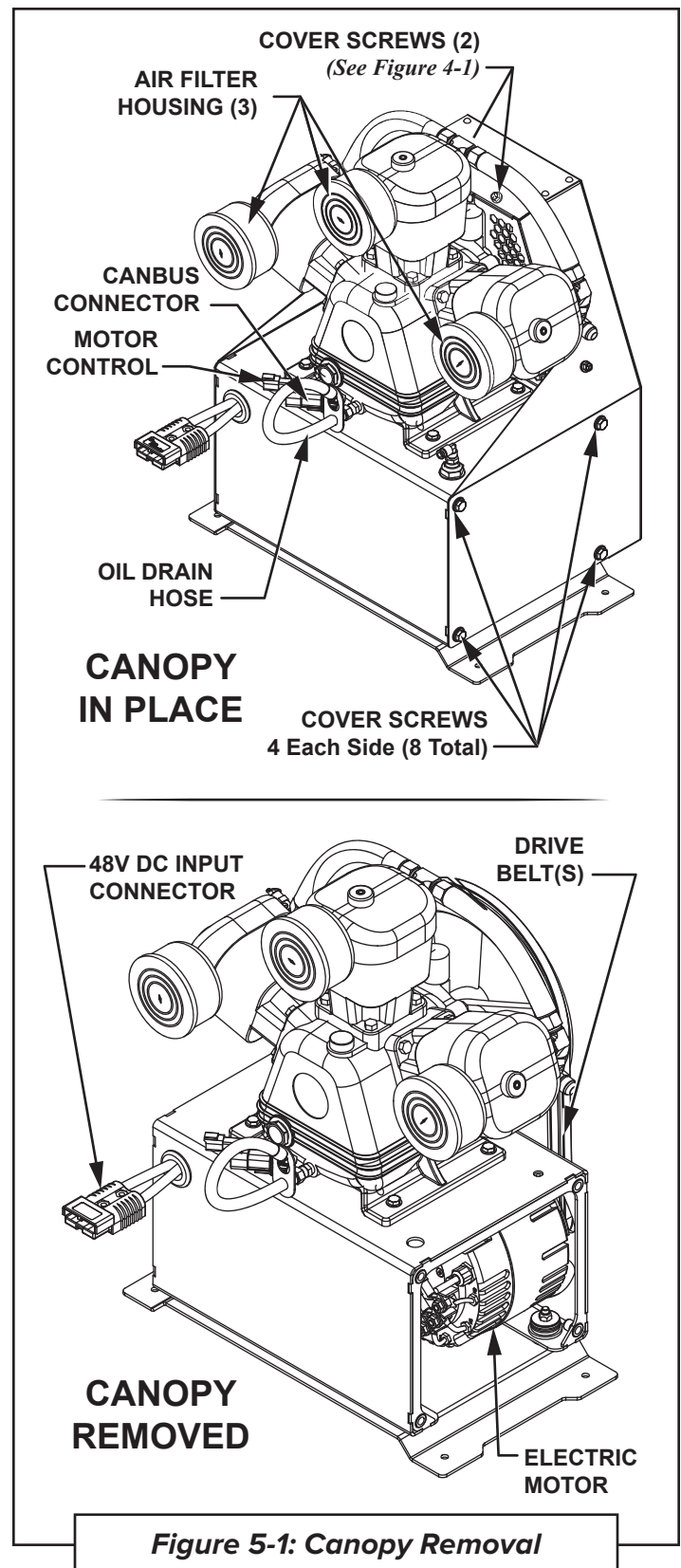
WARNING

Do not hold above your face.

6. Return the cleaned filters to the housings (or replace with new ones as needed), then secure the covers back in place with the wing nuts and tighten using fingers.

5.2.4. MONTHLY MAINTENANCE

1. Inspect belts for wear/damage, replace as needed.
2. Check and tighten any loose nuts or bolts.
3. Inspect all tubes, hoses and connections for rust and leaks. Repair or replace as needed.



5.2.5. 6 MONTH (SEMI-ANNUALLY) MAINTENANCE

1. Check pressure relief valve. It can be easily identified as it is made from brass, and has a pull ring attached (*see Figure 5-2*).
2. The National Board Inspection Code, created by the National Board of Boiler and Pressure Valve Inspectors, recommends testing safety and pressure relief valves (rated between 15 PSI to 400 PSI) once every 6 months.
3. Wear eye protection to protect against any flying debris.
4. To test the pressure relief valve, power up the compressor until it reaches operating pressure.
5. Pull firmly on the ring of the pressure switch until air is released. Air should rapidly escape from the valve.
6. Release the ring, air release should stop, then turn off the compressor.

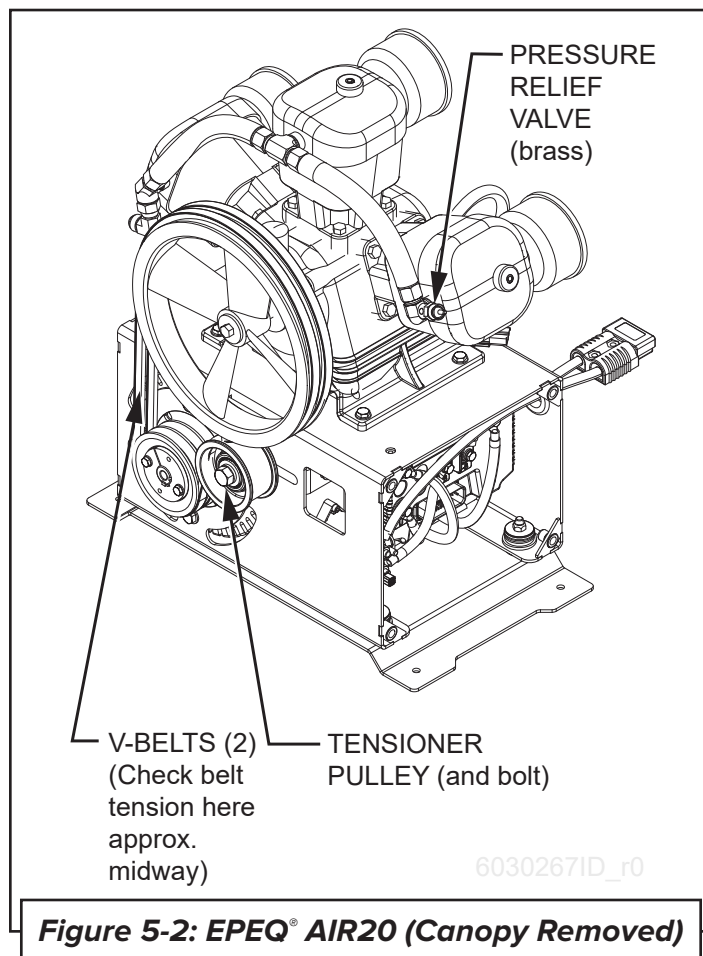


Figure 5-2: EPEQ® AIR20 (Canopy Removed)

7. Turn the compressor back on. The compressor should return to operating pressure without issue.

Call Vanair® customer service with any pressure issues. This could signify other safety concerns. Examples that merit a call include:

- Pressure relief valve does not release air properly during test (when compressor is operating at working pressure).
- Valve is leaking air or chattering and not holding a seal after compressor is restarted.
- Compressor fails to return to pressure after restart.

5.2.6. CHANGING THE OIL

1. Compressor oil for the EPEQ® AIR20 should be changed every 500 hours of operation
2. If the oil is cold, run the compressor for about 2-3 minutes just to warm the compressor oil.
3. Disconnect the EPEQ® AIR20 from battery
4. Carefully remove the oil fill cap from the top. Place a container beneath the drain hose to collect the oil as it drains. (*see Figure 2-1*) The compressor may be hot.
5. Open the drain plug on the hose with a wrench and remove. Oil will begin to run out from the drain opening.
6. Once the used oil fully drains, wipe off any excess oil from the machine, and replace the drain plug using your fingers, and tighten with a wrench.
7. Carefully refill compressor into the fill opening with fresh Vanair® Reciprocating Oil until the oil level reaches the halfway mark on the sight glass and finally, replace the fill cap.
8. Check for leaks.
9. Always discard/recycle used oil in accordance with applicable regulations in your area.

NOTE

If the compressor is used in a highly dusty or dirty environment, it is recommended to check the oil condition and clean the air filters more frequently.

5.2.7. CHECKING/CHANGING THE DRIVE BELTS

1. To properly check the two (2) drive belts, shut off the compressor, then disconnect the air and power.

2. Remove the eight (8) cover screws from the sides, and the two (2) screws near the fan opening and remove the canopy from the EPEQ® AIR20 (*see Figure 5-2*).

3. Examine the belts for any unusual wear, looseness and evidence of slippage.



4. Belts stretch and wear with use, so it is good to check them regularly. (Belt tension on new machines should also be checked after 10-20 hours of use.)

5. If the belt feels loose, it may need to be tightened by adjusting the tensioner pulley (*see Figure 5-2*).

6. Loosen the bolt in the center of the tensioner pulley and slide to the right to loosen and to the left to tighten.

7. Tighten bolt again once proper tension is achieved. Belt tension should be approximately 120 lbs. (533N) or 0.25" - 0.3" deflection.
8. If the belts are damaged, frayed or are broken, they should be replaced.
9. To remove, loosen the bolt on the tensioner pulley (*see Figure 5-2*) and slide the pulley all the way to the right. There should be enough slack to carefully pull one belt off while rotating the fan wheel with your free hand, being careful not to pinch fingers between the wheel and the belt. Repeat for second belt.
10. Once the belt(s) are free, install the new ones by reversing the process. Once both belts are in place, adjust the belt tension once more to proper specs 120 ft-lbs. (162.7 Nm), which is approximately 0.25" - 0.3" deflection, then tighten bolt. New belts may stretch. It is a good idea to check belt tension again after 10-20 hours of use.

SECTION 6: Troubleshooting

6.1 COMPRESSOR FAILS TO RUN

1. Check for secure connection to battery
2. Check battery charge level; recharge as needed
3. Check connection to pressure sensor (*see Figure 3-3*)
4. Check that position of toggle switch is on

6.2 COMPRESSOR FAILS TO BUILD PRESSURE

1. Check for air system leaks
2. Check pressure relief valve and sensor
3. Check that air filters are not dirty or clogged
4. Check for proper tension on belts
5. Battery level low; recharge battery as needed

6.3 EXCESS MOISTURE IN THE COMPRESSED AIR

1. Drain receiver air tank (follow manufacturer's directions)
2. Excess compressor heat, allow unit to cool
3. In the event the compressor is used in sub-freezing weather, be aware that moisture collected in the receiver tank can freeze and prevent draining; bring the tank into a warmer environment so any ice can thaw and be drained normally



VANAIR®

A Lincoln Electric Company

10896 West 300 North • Michigan City, IN 46360

Telephone (toll free): (800) 526-8817

Service (toll free): (844) VAN-SERV (844) 826-7378

Telephone: (219) 879-5100

vanair.com