

PX-200 HIGH EFFICIENCY CENTRIFUGAL BLOWERS



SERVICE & MAINTENANCE MANUAL



***ITW* Air Management**

10125 Carver Road, Cincinnati, OH 45242
1-513-891-7474 | techsupport@paxtonproducts.com
www.paxtonproducts.com

PLEASE READ THIS MANUAL BEFORE SERVICING YOUR BLOWER

SAFETY PRECAUTIONS

Safety First! When installing, operating, or servicing the equipment, always use proper safety procedures in accordance with Federal, State and Local laws and regulations. To avoid injury to yourself, others, or damage to the equipment, adhere to the following safety practices.

- **Always use qualified personnel and electricians** for installation, maintenance and servicing of all Paxton blowers and motors. Electrical connections, servicing and maintenance should be performed only by properly trained, certified and licensed electricians. Operating a blower without proper grounding could result in personal injury or death.
- **Always disconnect the electrical power** at the circuit breaker or fuse box, before working on the motor and/or blower assembly. Take special precautions to ensure that the **power cannot be turned "ON"** while you are working on the motor and/or blower assembly. Observe proper lockout/tagout procedures.
- **Always wear safety glasses** while working on any Paxton blower assembly. Per OSHA regulations, always wear hearing protection when working near operating blowers.
- **Do not operate** the motor/blower assembly without the belt guard properly installed, or with the blower inlet **unprotected** by a filter element assembly.
- **Do not operate** the motor/blower assembly with the discharge outlet open. Always connect the outlet to the system piping or Paxton control valves. Failure to operate blowers under a working load could result in high current draw, damaging the motor and electrical systems.
- **Always** keep hands, tools, long hair, loose clothing, neckties, jewelry or similar loose items away from all moving or rotating parts.
- **Use caution** around all water-cooled units; the blower head assemblies operate at high temperatures, causing the outer surfaces to be dangerous to the touch.
- **Always** install motor current protectors (for 3-phase units), circuit breakers or fuses for line protection. Devices should be sized per motor nameplate data.

WELCOME TO PAXTON PRODUCTS!

Paxton Products has been manufacturing high efficiency centrifugal blowers for over 70 years. A Paxton Air System delivers superior drying and blow off performance while conserving energy by coupling high-efficiency centrifugal blowers with Paxton's custom-engineered air delivery devices.

To ensure peak performance and maintain the warranty for your Paxton Air System, please read and follow all service and maintenance guidelines, using genuine Paxton components.

MAINTENANCE GUIDELINES

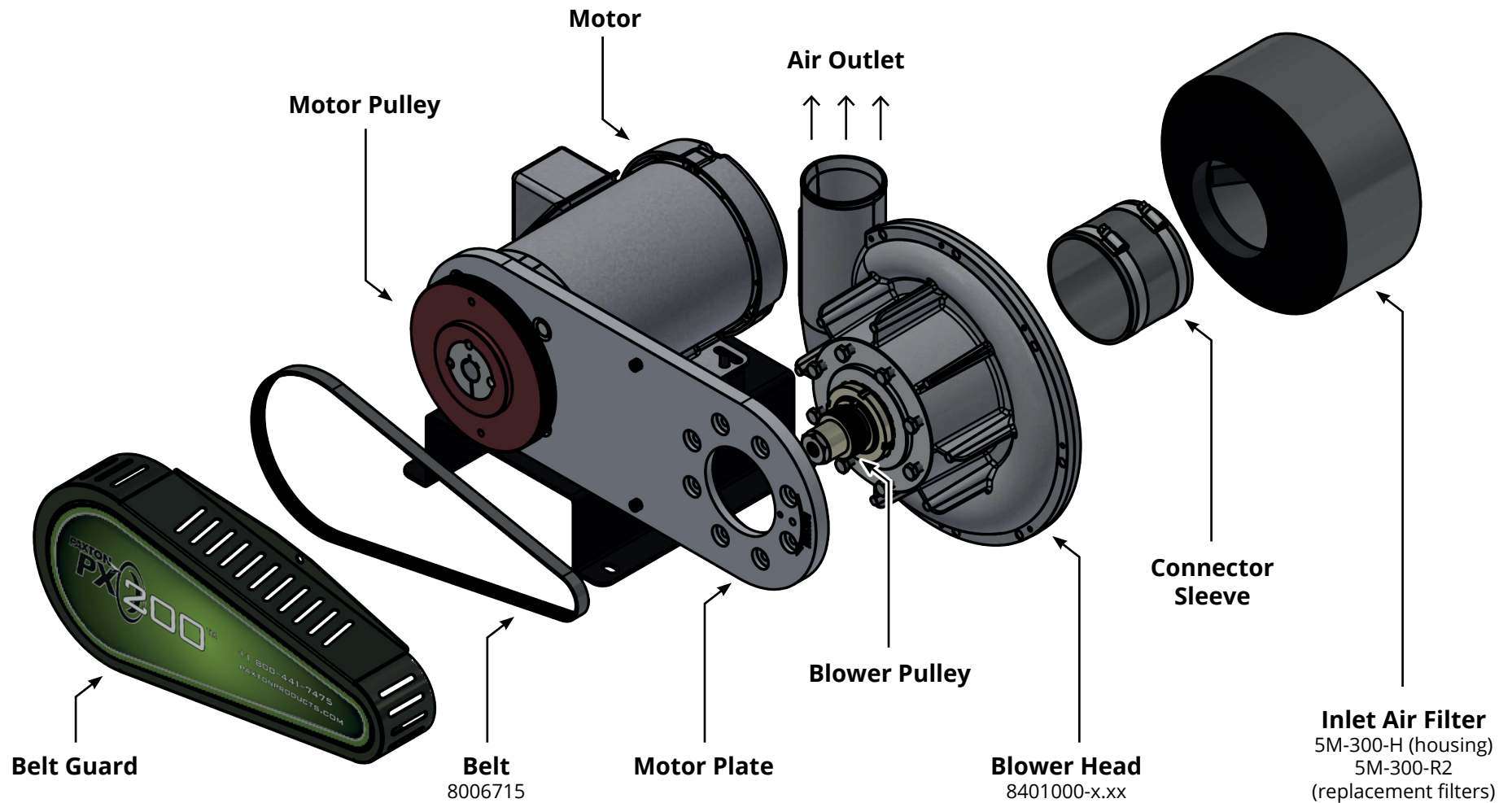
In order to maintain the blower warranty, it is necessary to use genuine Paxton replacement parts replaced at the minimum frequency prescribed below.

Paxton Part	1 or 2 shifts/day operation	3 shifts/day operation
Belts	12 months	6 months or 4000 hours
Filters	Filters must be changed as often as needed to maintain blower or system performance as measured by increased pressure drop across the filter. The filter must be changed if the pressure drop exceeds 10" of water column. Filter change frequency will vary widely based on environmental and atmospheric conditions. Minimum recommended filter change frequency is every 12 months for 1 or 2 shift/day operation; and every 6 months for 3 shift/day operation.	

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PX-200 BLOWER, EXPLODED VIEW



GETTING TO KNOW YOUR BLOWER

A blower is a popular method for pumping air for industrial applications. Blowers use centrifugal force to aid the pumping. Your new Paxton high efficiency centrifugal blower consists of the following key components:

1. Motor

2. Belt Drive Assembly

- a. Motor Plate
- b. Motor Pulley
- c. Blower Pulley
- d. Belt
- e. Belt Guard

3. Blower Head

- a. Bearing carrier with ABEC-7 bearings
- b. Scroll
- c. Impeller (inside the scroll)

4. Inlet Air Filter

HOW THE BLOWER WORKS

An electric motor spins at about 3500 rpm, and through the blower's belt and pulley system, it causes the impeller to spin at 12,000–18,000 rpm. Room air is drawn into the blower through the inlet air filter. The inlet air comes into contact with the spinning impeller, accelerating the air. The accelerated air exits the blower at high velocity and pressures of 30–80 inches of water (75–200 mbar). The accelerated air is discharged into the piping system as it travels to the air delivery devices.



The blower must not be used without an inlet air filter, as the incursion of dust or dirt into the blower will damage the impeller and void the warranty.

STARTING AND STOPPING

Blower performance over the long term is maximized by minimizing starts and stops. If your application requires frequent starts and stops, the installation of a variable frequency drive (preferred) or soft start system is highly recommended to reduce the initial start up torque. This is particularly critical for larger horsepower models.



Do not start and stop the blower more than 6 cycles per hour, without the use of a variable frequency drive.

BLOWER OPERATION

1. After ensuring correct motor shaft rotation and connecting the air delivery devices, your new Paxton blower is now ready to use.
2. Switch the power “ON” to the blower unit and let it run while you measure the blower’s voltage and amperage rating and compare to the values listed on the motor nameplate. Measure amperage and voltage on L1, L2 and L3 to ground using a Clamp Meter.



Do not operate the blower if it exceeds the voltage or current ratings on the motor nameplate. Call Paxton Technical Support at 1-800-441-7475.



If wired improperly and running backwards, the amp draw of the motor will be $\frac{1}{2}$ to $\frac{3}{4}$ of the nameplate amp draw, and the blower performance will be about 50% of normal.

3. The blower will achieve steady state operation in 30–60 minutes.

To ensure peak performance of your Paxton Air System, please read and follow all service and maintenance procedures carefully, as defined in the Service and Maintenance Manual available online at:

www.paxtonproducts.com/products/centrifugalblowers/pxseries

BELT REPLACEMENT

TOOLS NEEDED FOR INSTALLATION

- Phillips head screwdriver

1. Disconnect power to blower.



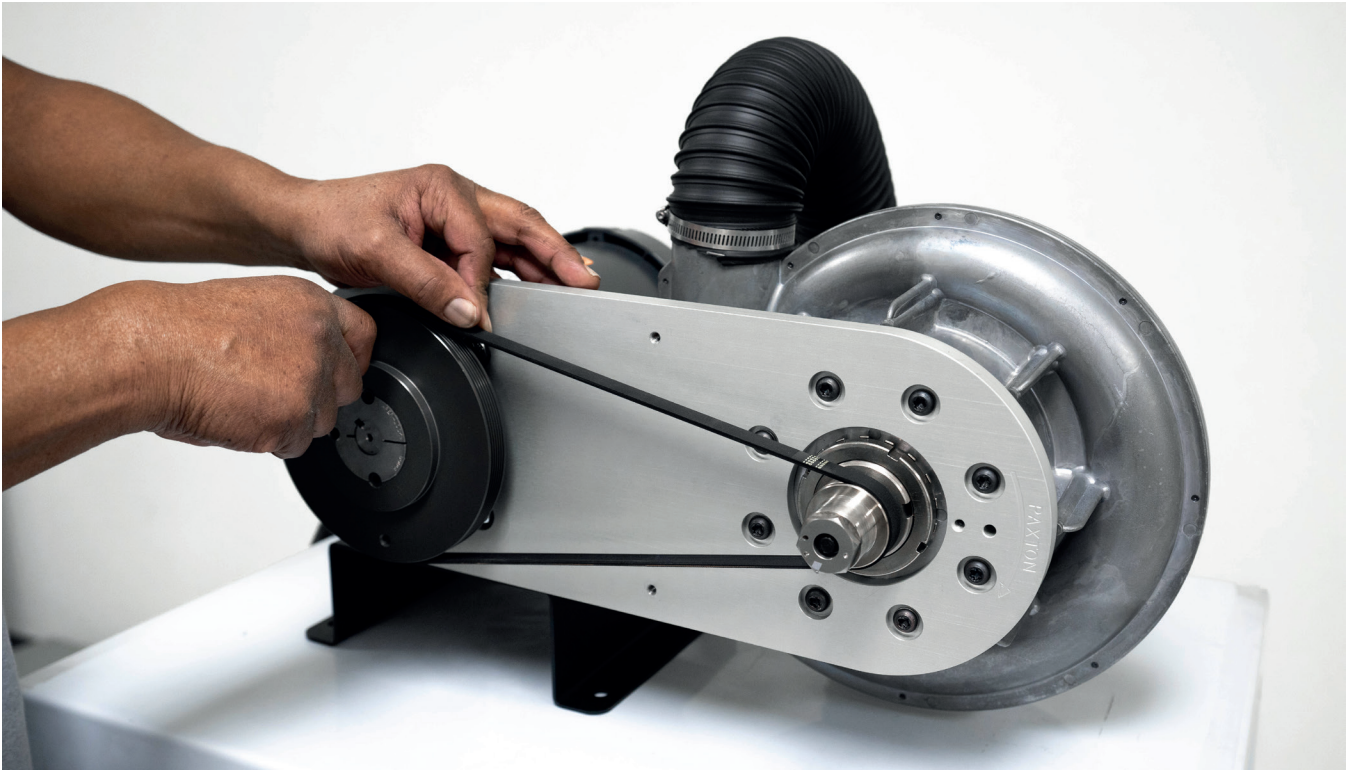
Follow proper lockout/tagout procedures to ensure that the power cannot be turned on while you are working on the blower.



2. Remove belt guard by loosening the 2 screws using Phillips screw driver. Place belt guard aside.
3. Insert the belt tool (provided by Paxton) into the open hole on the motor pulley. Screw in and hand tighten.



4. Using belt tool, turn motor pulley counterclockwise while simultaneously slipping belt off blower pulley. Set belt aside.



5. Take a new belt from the bag and position it so that the wording is left to right.



6. Wrap the belt around the blower pulley first, then around motor pulley, then turn the belt tool counterclockwise to move the belt fully onto the motor pulley.



7. Ensure belt grooves are centered and aligned on both the motor and blower pulleys.



8. Replace belt guard.



Belts are not resistant to ozone. Exposure to ozone will cause pre-mature belt failure. If ozone is present in the atmosphere, Paxton recommends that the blower be relocated to an area not contaminated with ozone.

FILTER REPLACEMENT

TOOLS NEEDED FOR INSTALLATION

- None

1. Disconnect power to blower.



Follow proper lockout/tagout procedures to ensure that the power cannot be turned on while you are working on the blower.

2. Remove wing nut and plastic washer.





3. Remove old filter and discard.



4. Take new filter and install.

BLOWER HEAD REPLACEMENT

TOOLS NEEDED FOR INSTALLATION

- Nut driver
- Phillips head
- 1/2" torque wrench
- Belt tool
- 1/2" socket

1. Disconnect power to blower.



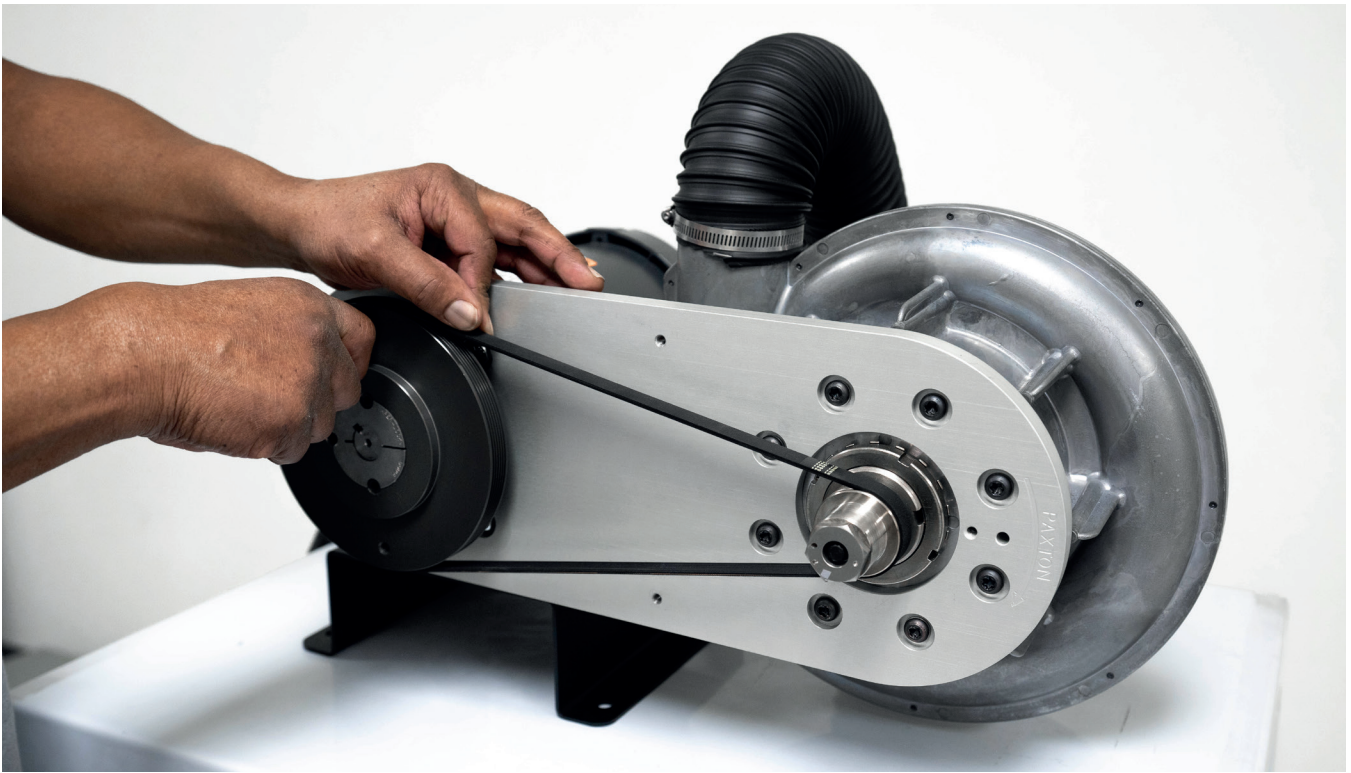
Follow proper lockout/tagout procedures to ensure that the power cannot be turned on while you are working on the blower.



2. Remove belt guard by loosening two screws using the Phillips head screwdriver. Place belt guard aside.



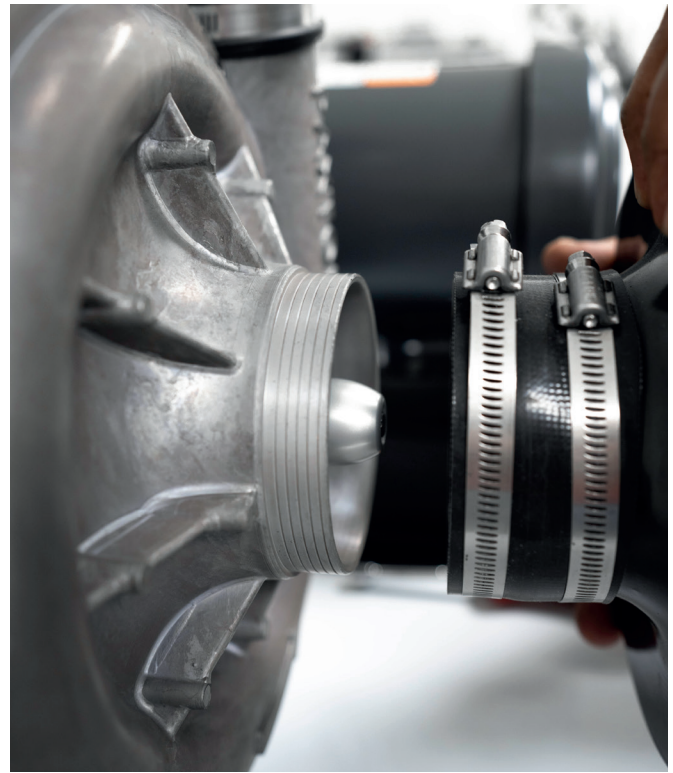
3. Insert the belt tool (provided by Paxton) into the open hole on the motor pulley. Screw in and hand tighten.



4. Using belt tool, turn motor pulley counterclockwise while simultaneously slipping belt off blower pulley. Set belt aside.



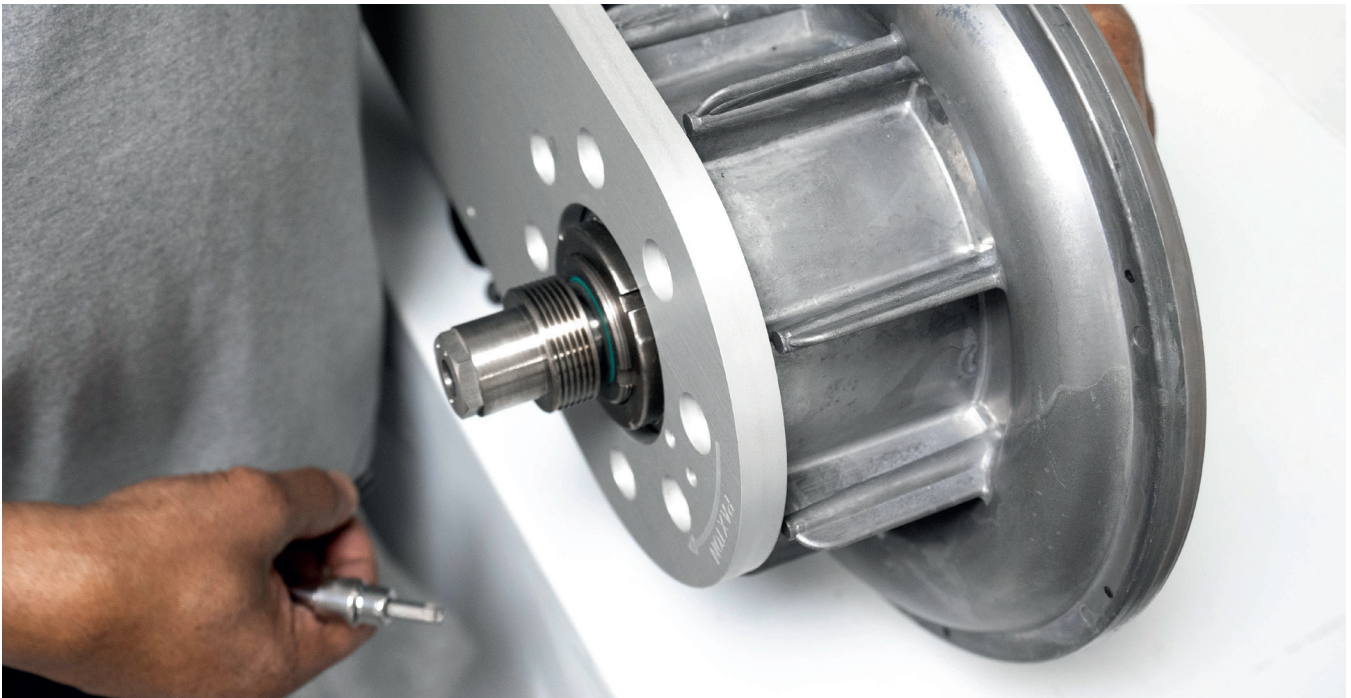
5. Remove connection to air delivery devices.



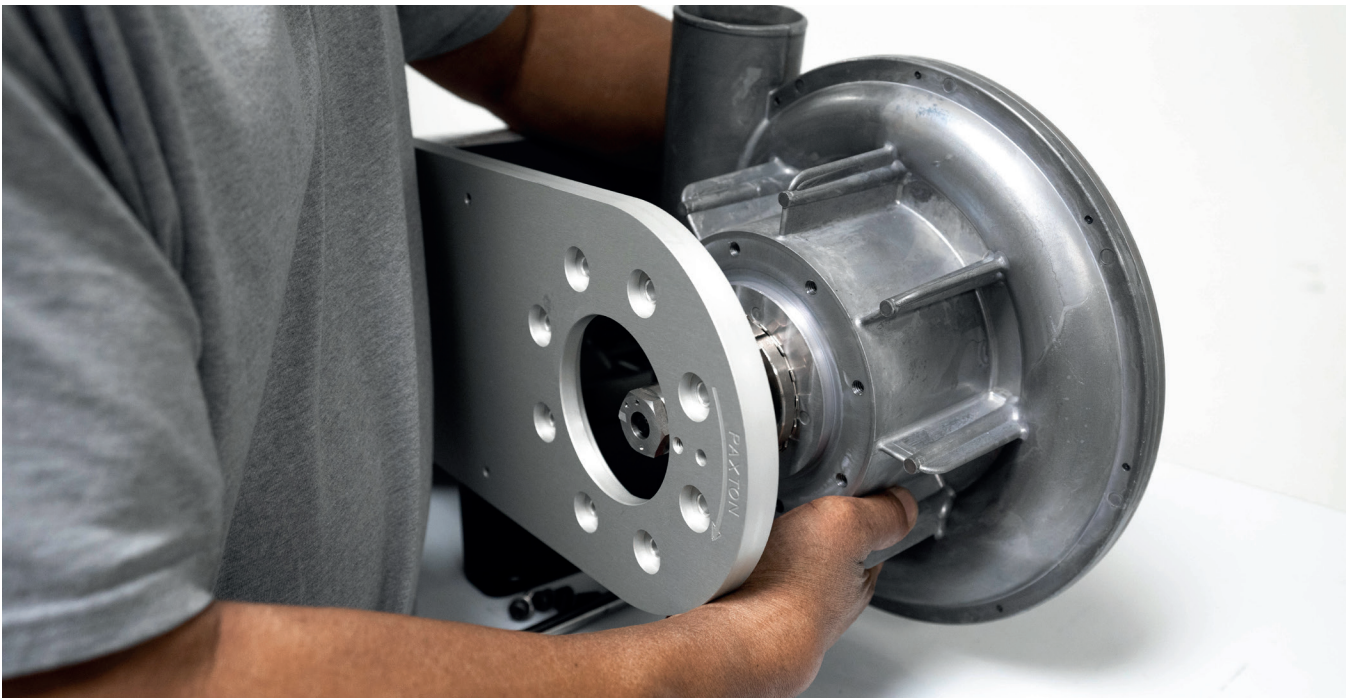
6. Remove the filter by unscrewing the wing nut. Slide filter and housing off blower head. Place aside.



7. Using 1/2" socket, loosen eight bolts around the blower pulley that hold the blower head in place.



8. Steady the blower head with one hand while removing bolts.



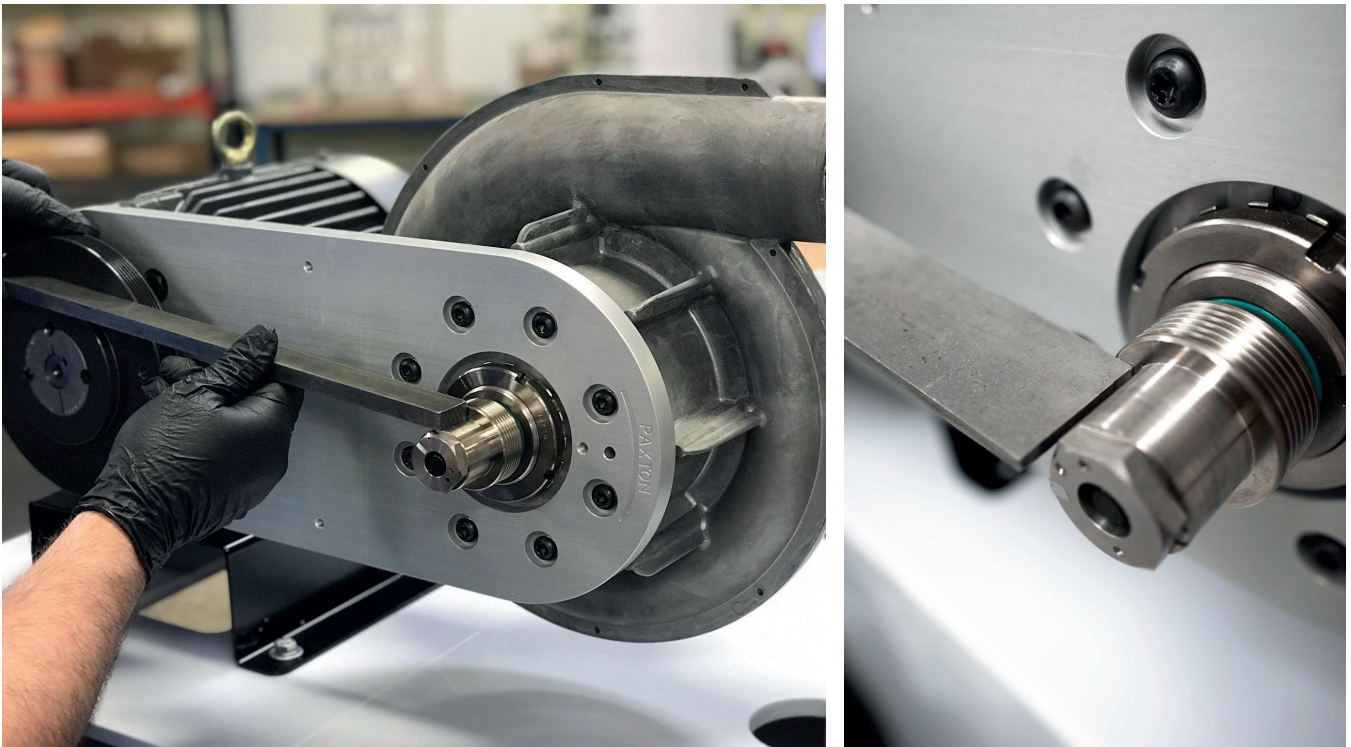
9. Remove new blower head from shipping box. Slide blower pulley in through mounting plate to result in blower on one side of plate and pulley on opposite side. Align blower head with 8 bolts. Ensure proper alignment of outlet for existing air delivery device connections.



Be very careful not to damage the blower pulley during unpacking or installation.



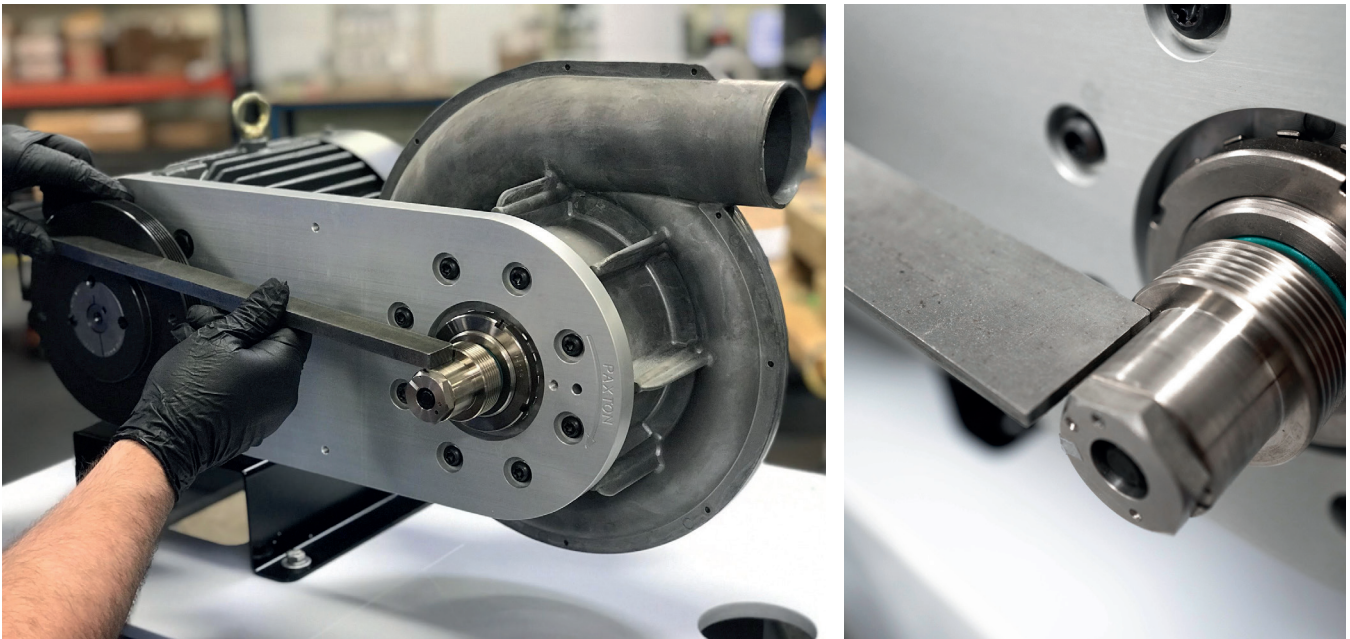
10. Reinstall eight bolts and finger tighten, supporting the blower head on the other side of the plate.



11. Check pulley alignment by using a straight edge to ensure motor pulley and blower pulley are flush to ± 0.02 ".



12. If not aligned, the motor pulley can be adjusted using a 7/16" hex wrench and the belt installation tool. Loosen both bolts, then remove one of the two bolts on motor pulley. The belt installation tool can be used to hold the motor pulley while loosening the bolt.



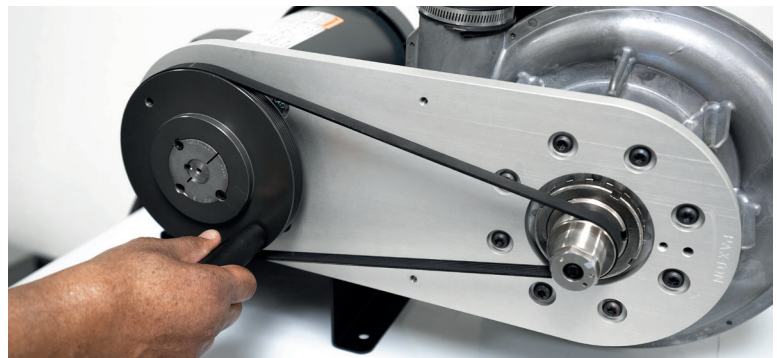
13. Using the removed bolt, put into the hole at 90° and tighten. When tightening the bolt into this third hole, the motor pulley will loosen so that it can be slid in or out on the shaft to cause alignment. The motor pulley should be aligned to the blower pulley.
14. Once aligned with straight edge, back the bolt out from the third hole in the motor pulley and put back into the first hole. Torque, to 24 ft-lbs (32 Nm), then recheck alignment again. Repeat adjustment if needed.



15. Tighten blower head bolts to 15-ft-lbs (20 Nm) of torque.



Be careful not to damage the blower pulley while tightening bolts.



16. Reinstall belt by reinserting the belt tool, then wrapping the belt around the blower pulley first, then the top of the motor pulley, then turning the belt tool counterclockwise to move the belt into place. Ensure that the wording is readable left to right on the upper surface of the belt, and the grooves are properly aligned in both the motor pulley and the blower pulley.



17. Replace belt guard.



18. Reinstall filter and housing.



19. Reinstall connection to air delivery devices.

PARTS LIST

Type	Description	Part #
Blower Head*	Blower head assembly with 1.50 pulley	8401000-1.50
	Blower head assembly with 1.81 pulley	8401000-1.81
Belt	Belt, 16 groove, 460 long Poly-rib Composite Construction	8006715
	Belt (5 pack), 16 groove, 460 long Poly-rib Composite Construction	8006715-5
Filters	Filter Elements (2 pack), 5 micron 300 cfm maximum flow	5M-300-R2
	Filter Silencer with Housing and Clamps 5 micron, 300 cfm maximum flow	5M-300-H

* Blower pulley size is dependent on the flow and pressure of the blower. The serial number is needed to determine the lowest blower head assembly.

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