

# AIRMAX Rocking Piston Compressor Replacement

## Compressor Options, Manifold Assembly Installation, and Cooling Fan Replacement

Aeration compressors, like most types of mechanical equipment, have a limited life span due to harsh environments and 24 hour-a-day operation. While regularly scheduled filter changes and maintenance kit installations will increase the life of a compressor, replacement may be necessary even after years of successful operation. This Tech Bulletin highlights the latest compressor options available as well as tips for reassembly. [CLICK HERE](#) to access the supplemental video link for more detailed information regarding airflow manifold removal and reinstallation.

### CHOOSING THE RIGHT COMPRESSOR

Even though compressor models have changed over the years, Airmax makes it easy to find a suitable replacement compressor for your existing system. Use the table below to determine the appropriate replacement, based on SW, SWHP, PS, and LS Systems.

PRE-2022 Systems	Current Systems	Compressor
SW20HP, PS10	PS10	G25 (RP25 87R) ¼ HP
SW40HP, PS20, PS30*, LS40*	PS20	G50 (RP50 87R) ½ HP
PS40, PS80, LS60	PS40, LS80	T75 (RP75) ¾ HP
N/A	PS60, LS120	T100 (RP100) 1 HP

\* Upgrade to the **T75 (RP75) ¾ HP with Manifold Assembly** to gain 1 CFM for an additional \$0.08 per day in operating costs

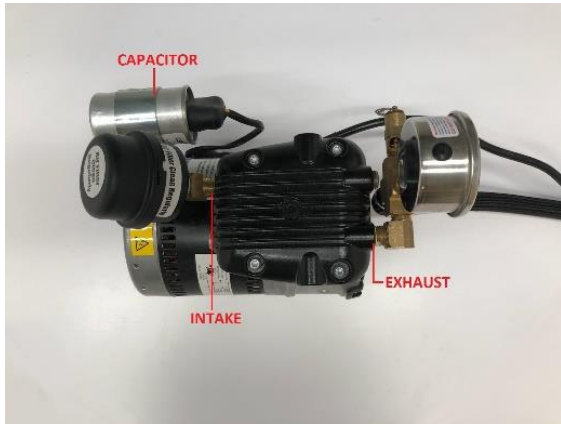
Customers may choose to re-use their existing manifold when replacing with the same compressor model as the original; however, **if moving to a newer compressor model** regardless of whether moving to a higher horsepower, customers will need to purchase a **Compressor with Manifold Assembly Kit**. [Section 1](#) covers manifold assembly and air filter orientation when re-using the existing airflow manifold (Pre-2022), and [Section 2](#) covers the same procedures for the installation of **Compressor with Manifold Assembly Kits**. Cooling Fan replacement is covered in the final section of this bulletin.

### TOOLS NEEDED:

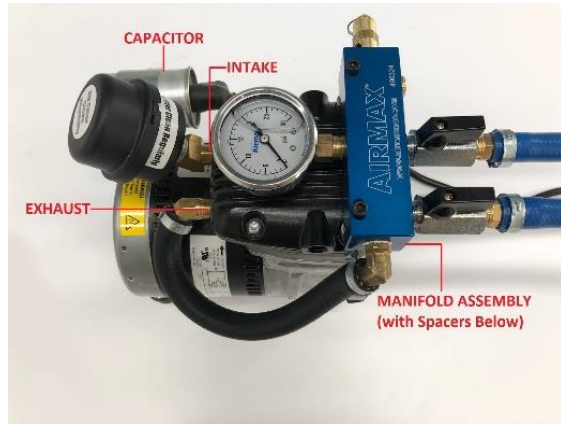
- 5/32" Allen Wrench
- 1/4" Drive Torque Wrench with 5/32" Allen bit
- T25 Torx Head Wrench
- 5/8" Open-End Wrench
- 2 Crescent/Adjustable-End Wrenches
- Oetiker Clamp Tool or End-Cutting Pliers (for use with single-pinch hose clamps)
- Pipe Thread Sealant
- Anti-Seize
- Sharpie Marker or Tape

### INSTALLING AN EXISTING MANIFOLD ASSEMBLY ON A NEW COMPRESSOR (PRE-2022 SYSTEMS)

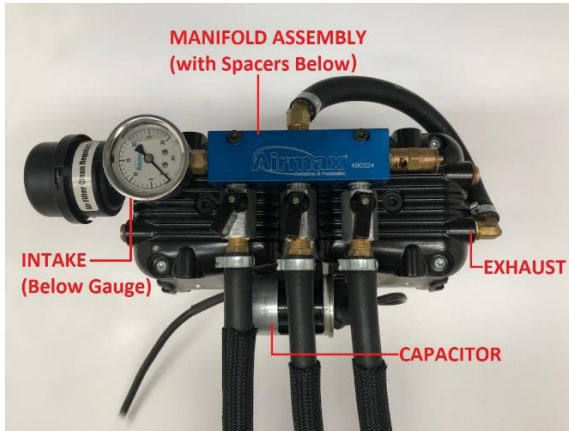
1. If possible, take a photo of your existing compressor and manifold assembly before removal to use as a reference during reassembly.
2. **Remove** the *manifold mounting screws, aluminum spacers, brass elbow w/ manifold flex tube, and air filter canister* from your existing compressor. **NOTE:** PS10 systems do not utilize manifold mounting screws and spacers.
3. **Identify the intake and exhaust** ports on your new compressor by plugging it in briefly and holding a piece of paper over each port on the heads; label the intake and exhaust ports with a piece of tape and marker.
4. **Manifold Assembly & Air Filter Assembly Orientation:** Refer to the images on the following pages for proper orientation of components **in relation to the capacitor** location on the compressor, as system set-ups may differ. **NOTE:** Compressors using the blue *Airmax airflow manifolds* require removal of 2 head screws before reassembly



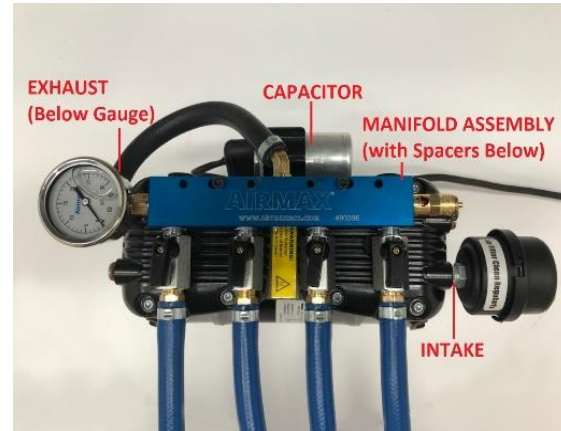
PS10 – G25 (RP25 87R)



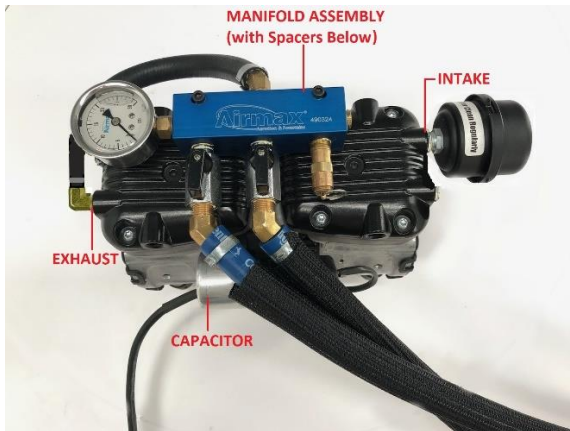
SW20HP – G25 (RP25 87R)



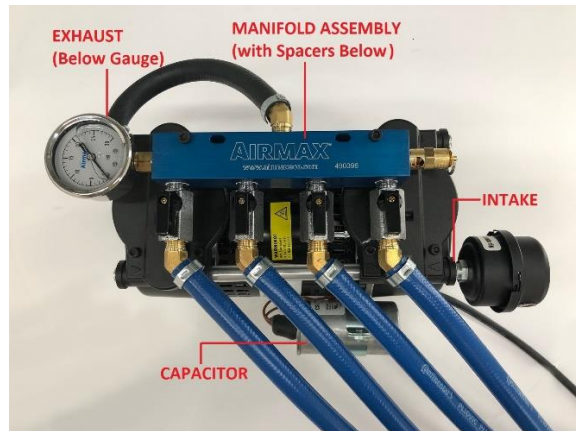
PS20 & PS30 – G50 (RP50 87R)



SW40HP - G50 (RP50 87R)



LS40 – G50 (RP50 87R)



PS40 & PS80 – G75 (RP75 72R)

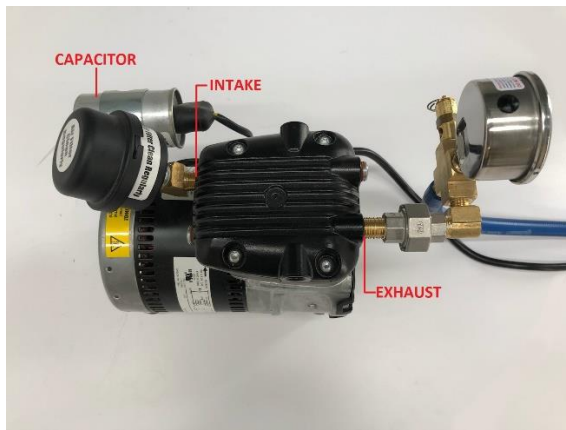


LS60 – G75 (RP75 72R)

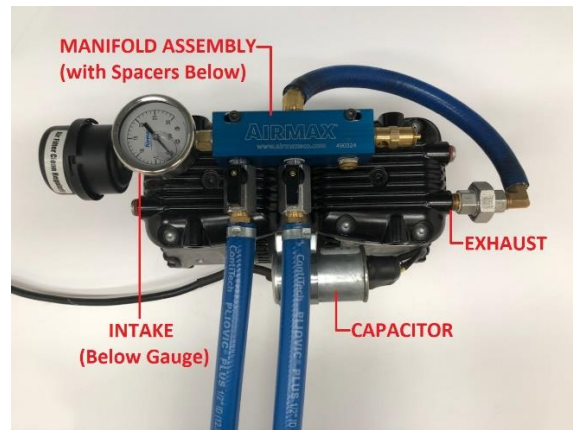
5. Use thread sealant on all intake and exhaust fittings. Ensure all connections and hose clamps are secure to avoid air loss, then start up the compressor and check to see that you have suction at the air filter inlet port as well as proper exhaust airflow at the manifold flex tube(s). **Incorrect installation will result in exhaust airflow at the filter canister and intake airflow (suction) on the manifold flex tubes. Improper reassembly can lead to catastrophic failure of the compressor.**
6. Reinstall the compressor in the aeration cabinet.

### **INSTALLING A NEW MANIFOLD ASSEMBLY ON A NEW COMPRESSOR (CURRENT)**

1. **Identify the intake and exhaust** ports by plugging in the compressor briefly and holding a piece of paper over each port on the heads; label the intake and exhaust sides with a piece of tape and marker. T75 and T100 Compressors have the intake and exhaust ports pre-labeled.
2. **Manifold Assembly & Air Filter Assembly Orientation:** Refer to the images below for proper orientation of components **in relation to the capacitor** location on the compressor, as system set-ups differ.
  - a. **G25 and G50 Compressors** using the blue Airmax airflow manifolds require removal of 2 head screws before reassembly

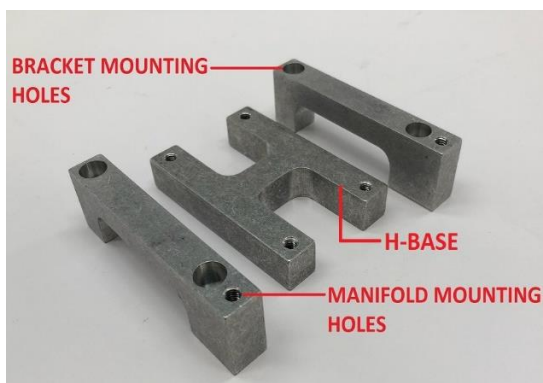


**PS10 – G25 (RP25 87R)**

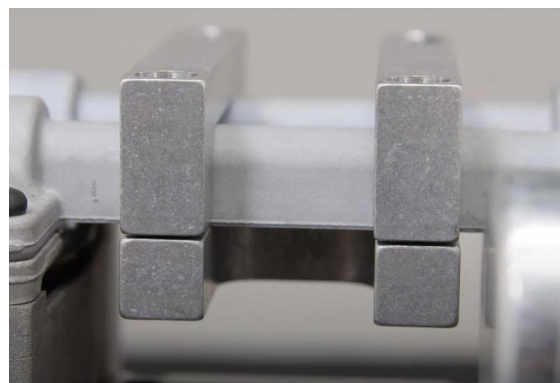


**PS20 – G50 (RP50 87R)**

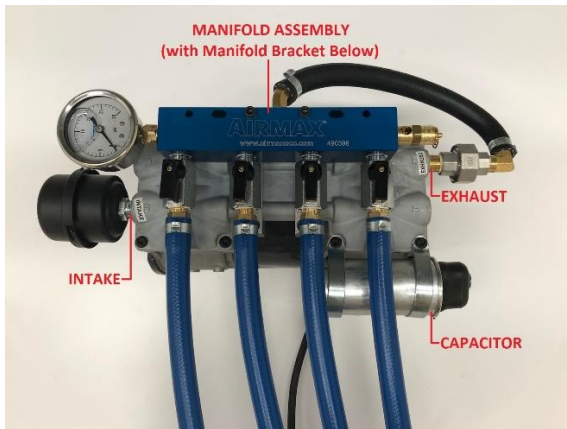
- b. **T75 and T100 Compressors** must have the manifold mounting brackets installed prior to attaching the manifold assembly. Airflow manifolds do not sit directly on the compressor and do not require spacers.
  - i. To install the mounting bracket, slip the H-Base (**Fig 1**) under the valve plate, then secure each top bracket using the FOUR 1" (T75 models) or FOUR 1 ¼" (T100 models) Allen head screws provided, making sure to tighten in an alternating pattern so that the bracket sits evenly (**47-50 in lbs**). The top brackets will not seat on the H-Base when fully secured (**Fig 2**). The furthest outside holes are for securing the manifold assembly using the TWO 1 ¾" screws provided (**47-50 in lbs**).



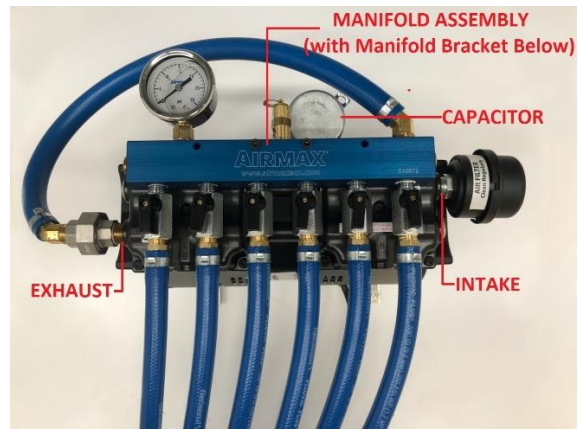
**FIGURE 1**



**FIGURE 2**



PS40 – T75 (RP75)



PS60 – T100 (RP100)

3. Install manifold assembly components and the air filter assembly. Use thread sealant on intake and exhaust fittings.
4. Ensure all connections and hose clamps are secure to avoid air loss, then start up the compressor and check to see that you have suction at the air filter inlet port as well as proper exhaust airflow at the manifold flex tube(s).
5. Reinstall the compressor in the aeration cabinet

### CABINET COOLING FAN REPLACEMENT

Airmax recommends installing a new cabinet cooling fan when replacing a compressor that is outside the original warranty period. Cooling fans have a 5 – 7 year life expectancy, yet the one-year manufacturer’s warranty on a replacement compressor would be voided should a fan failure cause an eventual compressor failure. Therefore, replacing the cabinet cooling fan(s) at the same time as the compressor will ensure that both are fully covered under the one-year replacement warranty.

#### 1. **Standard or Large COMPOSITE Cabinet Fan Installation**

##### **Tools Needed:**

- 11/32” Wrench
- #2 Phillips Screwdriver
- #2 Flat Screwdriver

- a. **Unplug** the cabinet power cord from the main power supply.
- b. **Remove** the four stainless steel thru-bolts holding the fan and finger guards in place. Tip the cabinet on its side to support the fan while removing the last bolt.
- c. Next, **remove** the ground screw and ground wire.
- d. Disconnect the two-blade wire harness from the fan body. **In most instances, the fan cord will be re-used unless there is damage to the original cord.**
- e. **Install** the new fan following **Steps b – d** in reverse order. Ensure that the fan is oriented so that it is blowing air out of the cabinet; this can be verified by making sure that the sticker in the center of the fan is facing out.

#### 2. **LS METAL Cabinet Fan Installation**

##### **Tools Needed:**

- 8mm Wrench
- #2 Phillips Screwdriver
- #2 Flat Screwdriver

- a. Unplug the cabinet power cord from the main power supply OR turn the external shut-off switch to the OFF position.
- b. **Open** the lid and **remove** the filter media pad from the gravity filter chamber.
- c. **Unplug** the fan from the cabinet receptacle.
- d. Use an 8mm wrench to **remove** the finger guard from fan body inside the cabinet. Note the position of the finger guard and screws in relation to the fan; you will want to make sure that you follow the same positioning when reinstalling (we recommend taking a photo).
- e. **Remove** the four fan screws from inside the filter chamber, again noting the position of the two finger guard mounting holes. Be sure to support the fan when removing the last two screws.
- f. **Reinstall** the new fan with two screws inside the filter chamber and tighten securely, then install the two remaining screws along with the finger guard.
- g. Make sure that the sticker in the center of the fan is facing the compressor; this will ensure that the fan draws in outside air and moves air toward the louvers on the back and side walls.
- h. **Install** the interior finger guard making sure the position of the two mounting screws is correct (refer to your photo if one was taken before removal).
- i. **Repeat** for the second side if replacing both fans.
- j. **Airmax** recommends plugging fans into opposite receptacles so that each receptacle has one fan and one compressor plugged into it.

[CLICK HERE](#) to view our Airmax video tutorial on **Rocking Piston Compressor Replacement**, or for more information on Airmax training opportunities and resources, please contact your Airmax sales representative.

Please contact **Airmax Technical Support at 866-424-7629** or feel free to email us at [contactus@airmaxeco.com](mailto:contactus@airmaxeco.com) should you have any questions regarding *Airmax Replacement Compressors and Accessories*.