

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 document 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 your original SW, SWHP, PS, or Pre-2022 LS System.

| PRE-2022 Systems                                                                                                                                                                               | 2022-Present Systems | Current Compressor |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|
| SW20HP, PS10                                                                                                                                                                                   | PS10                 | T33 (RP33) ⅓ HP    |
| SW40HP, PS20, LS40                                                                                                                                                                             | PS20                 | T50 (RP50) ½ HP    |
| PS30, PS40, PS80, LS60                                                                                                                                                                         | PS40, LS80           | T75 (RP75) ¾ HP    |
| N/A                                                                                                                                                                                            | PS60, LS120          | T100 (RP100) 1 HP  |
| *If you purchased a <b>G25</b> or <b>G50</b> compressor from our remaining inventory or from another vendor, click <a href="#">HERE</a> for manifold orientation and setup on your compressor. |                      |                    |

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**, customers may need to purchase a **Compressor with Manifold Assembly Kit**. [Section 1](#) covers manifold assembly and air filter orientation on current Airmax compressor models. [Section 2](#) covers Airmax aeration cooling fan replacement. **LS80 and LS120 systems are not covered in this document since manifold assemblies are not compressor-mounted on current LS systems.**

#### TOOLS NEEDED:

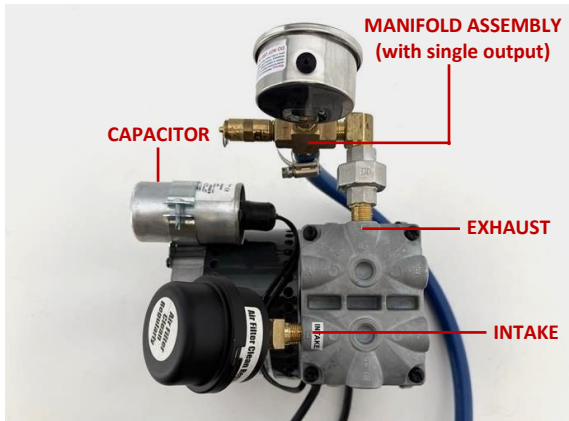
- 5/32" Allen Wrench
- 1/4" Drive Torque Wrench with 5/32" Allen bit
- 5/16" Nut Driver or Wrench (for worm-drive hose clamps)
- T25 Torx Head Wrench
- 5/8" Open-End Wrench
- 9/16" Open-End Wrench
- 18mm Open-End Wrench OR Adjustable-End Wrench
- 30mm Open-End Wrench OR Adjustable-End Wrench
- Pipe Thread Sealant
- Anti-Seize
- Sharpie Marker or Tape

**Note: A new Compressor with Manifold Assembly Kit is required for all Pre-2022 systems; manifold assemblies that preceded the 2022 Airmax aeration updates will not mount to the current compressors.**

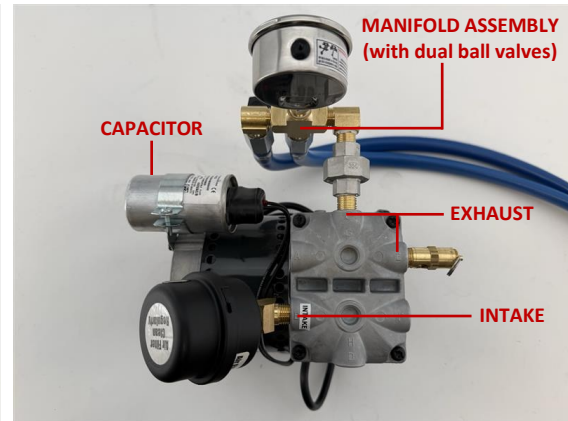
### I. INSTALLING A MANIFOLD ASSEMBLY ON A NEW COMPRESSOR (2022-2026 SYSTEMS)

1. First, **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.**

2. **If the intake and exhaust stickers are missing from your compressor**, identify the intake and exhaust 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.
3. **Manifold Assembly & Air Filter Assembly Orientation:** Refer to the images that apply to your compressor for proper orientation of components **in relation to the capacitor**, as system set-ups may differ depending on when your original system was purchased.
  - a. **T33 Compressors** require the single plate and double plate regulators (manifold assemblies) to be **side-mounted** unlike the previous G25 ¼ HP compressor.



PS10 – T33 (RP33)

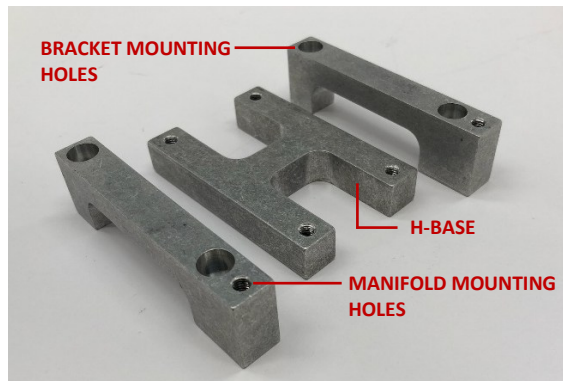


SW20HP – T33 (RP33)

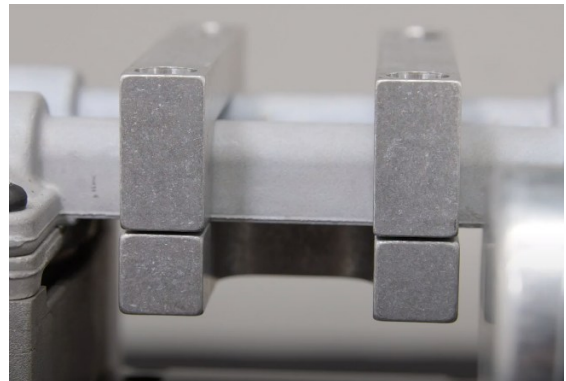
- i. First, separate the union fitting by loosening the stainless-steel nut.
- ii. Apply a small amount of pipe thread sealant to the brass nipple on the male thread side of the union.
- iii. Thread the brass nipple/male union into the exhaust port on the head cover plate. The exhaust port is on the same side as the capacitor. Tighten the nipple using an 18mm open-end wrench.
- iv. Install the blue manifold hose on the brass barb fitting on the manifold tee. Secure with the supplied hose clamp using a 5/16" nut driver or wrench. **For SW20HP models, install TWO hoses & hose clamps to the barbed fittings at the end of each ball valve.**
- v. Connect the manifold assembly to the male union fitting on the compressor and tighten with a 30mm open-end wrench.
- vi. To install the air filter assembly, first apply pipe thread sealant to the male threads of the brass 45, then thread the fitting into the intake port on the head cover plate. Tighten using an 18mm open-end wrench. Be sure to orient the brass 45 so that the opening faces up.
- vii. Apply pipe thread sealant to the male threads of the air filter canister, then thread the air filter into the brass 45. Tighten using 5/8" open-end wrench.
- viii. **For SW20 HP models**, use a ¼" Allen wrench to remove the galvanized plug from the second exhaust port on the back side of the compressor head cover. Then, add pipe thread sealant to the pressure relief valve and thread it into the port. Tighten using a 9/16 " open-end wrench.

**NOTE: Refer to the appropriate orientation above for your system before reinstalling in the Airmax aeration cabinet.**

- b. **T50, 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.**
- Apply a small amount of anti-seize to the threads of all 6 screws supplied with the manifold mounting bracket.
  - To install the mounting bracket, slip the H-Base (**Fig 1**) under the valve plate, then secure each top bracket using the FOUR 1" (T50 & T75 models) or FOUR 1 1/4" (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 3/4" screws provided (**47-50 in lbs**).  
**NOTE: T50 & T75 compressors** must have the manifold mounting holes positioned on the side of the compressor **WITHOUT** the capacitor.  
**T100 compressors** must have the manifold mounting holes positioned on the side **WITH** the capacitor.

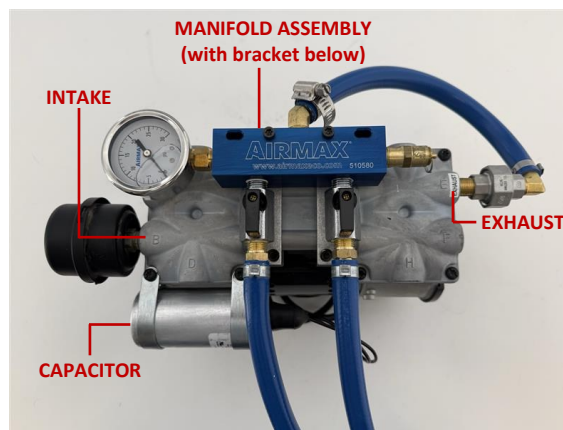


**FIGURE 1**

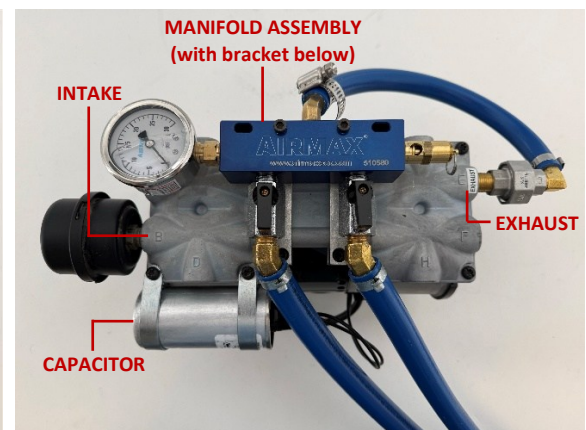


**FIGURE 2**

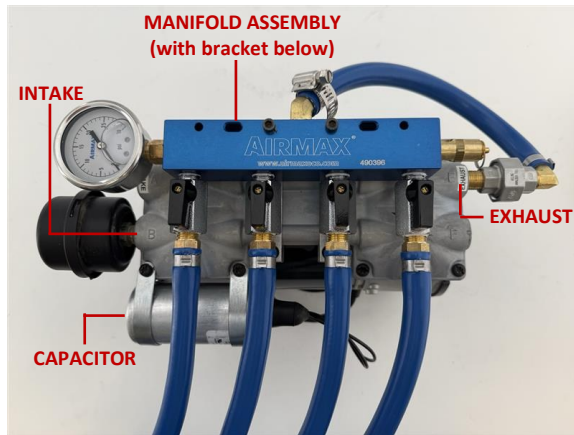
- Next, refer to the appropriate image below and place the manifold assembly on the compressor based on the proper orientation for your system. Insert the TWO mounting screws in the holes closest to the center of the blue manifold and thread them into the mounting bracket by hand. Tighten to **47-50 in. lbs.** using a 5/32" Allen bit and torque wrench.



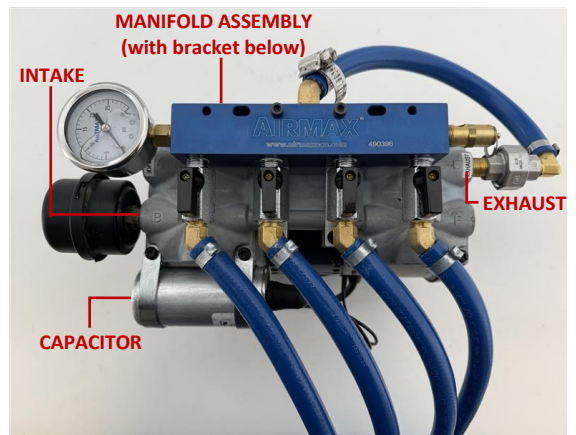
**PS20 – T50 (RP50)**



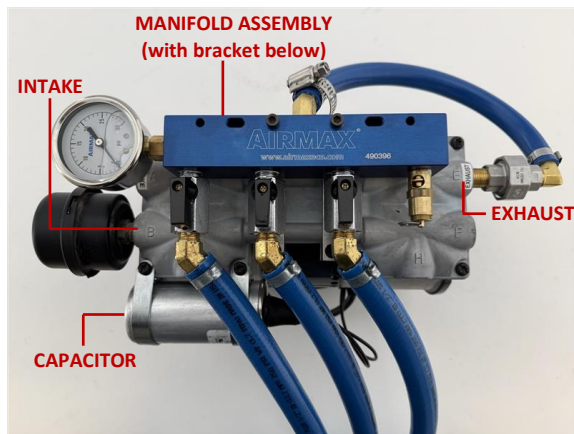
**LS40 – T50 (RP50)**



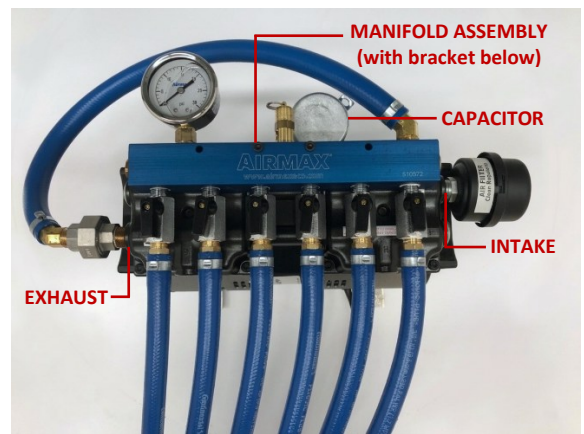
SW40HP – T50 (RP50) & PS40 – T75 (RP75)



PS80 – T75 (RP75)



LS60 – T75 (RP75)



PS60 – T100 (RP100)

- iii. Disconnect the two halves of the union fitting by loosening the stainless-steel nut, then set the blue flex tube with elbow and union nut aside. Add pipe thread sealant to the brass nipple attached to the male side of the union and thread it into the exhaust port. Tighten using an 18mm open-end wrench
- iv. Attach the flex tube assembly to the union fitting on the compressor and hand tighten the union nut. Then, slide a hose clamp on the other end of the blue flex tube and attach it to the brass barb fitting on the back side of the airflow manifold. Secure with at 5/16" nut driver or wrench.
- v. Tighten the union nut with a 30mm open-end wrench.
- vi. Add pipe thread sealant to the threads on the air filter canister and thread the air filter canister into the intake port on the compressor. Secure with a 5/8" open-end wrench.

**NOTE: Refer to the appropriate orientation above for your system to before reinstalling in the Airmax aeration cabinet.**

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). **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.**
5. Reinstall the compressor in the aeration cabinet.

## II. INSTALLING A REPLACEMENT COOLING FAN

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*.