

# PROPORTIONAIR

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## QB3 REPAIR GUIDE

*Integrated Volume Booster  
Maintenance Instructions*



*Standard QB3 shown*

### REQUIRED TOOLS:

- 7/64" Allen wrench
- 1/4" Allen wrench
- Lint-free cloth
- Safety glasses

### REMOVING COMPONENTS

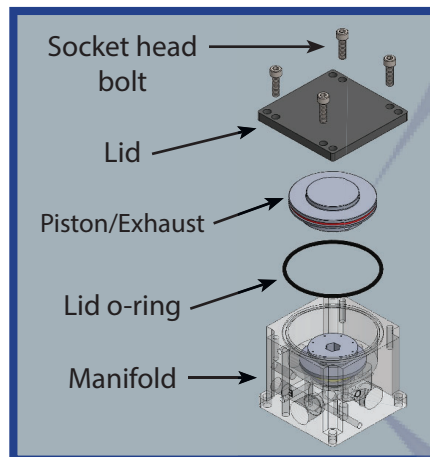
1. Invert QB3 unit to begin component removal.
2. Remove the bottom four socket head bolts with a 7/64" Allen wrench. Remove lid and lid o-ring (**FIG. 1**).
3. Remove piston/exhaust valve. 10 PSI MAX of positive pressure may be applied to output port to help unseat piston (**FIG. 1**).
4. Remove pedestal using 1/4" Allen wrench; now remove inlet valve and inlet spring as well (**FIG. 2**).

### REPLACING COMPONENTS

(see repair kit on reverse)

1. After all parts have been removed from manifold, use a clean, dry, lint-free cloth to clean the area where the piston o-ring makes contact with the inside of the manifold (**FIG. 2**).
2. Install new inlet spring into manifold (**FIG. 2**).
3. Apply grease to the inlet o-ring of the new inlet valve and center inlet valve on top on the inlet spring (**FIG. 2**).

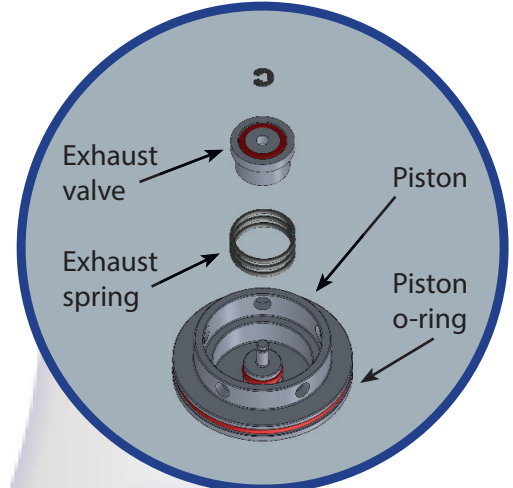
**FIGURE 1**



*Manifold*

4. Place the new pedestal, threads facing down, into the center of the inlet valve and thread it into the manifold until it stops. Use 1/4" Allen wrench to finish tightening (**FIG. 2**).
5. Apply light grease to the area where the piston O-ring makes contact with the inside of the manifold (same area that was cleaned when parts were removed).
6. Apply grease to the lid o-ring that will make contact with the inside of the manifold (**FIG. 2**).

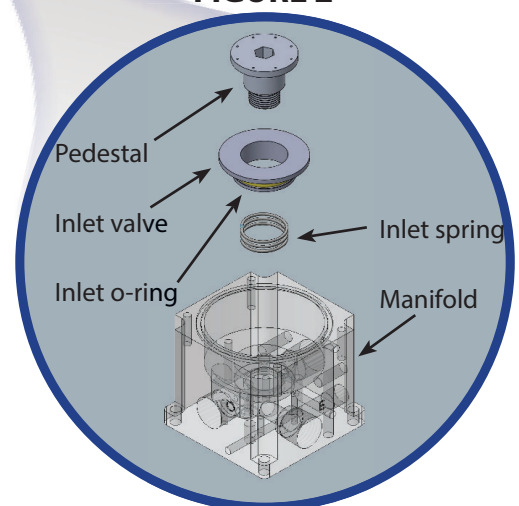
**FIGURE 3**



*Piston internal*

7. Place the piston inside the manifold with exhaust valve facing down toward pedestal (**FIG. 3 & FIG. 1**).
8. Using thumbs, press piston down six times inside manifold.
9. Place lid o-ring in the groove on the bottom of the manifold and ensure it is flat (**FIG. 1**).
10. Align four screw holes on lid with the holes on the manifold. Replace socket head bolts and hand-tighten with the 7/64" Allen wrench (**FIG. 1**).

**FIGURE 2**



*Manifold internal*

## QB3 REPAIR COMPONENTS



Pedestal  
QB3-RK-PEDESTAL



Inlet Valve  
QB3-RK-INLET



Piston  
QB3-RK-PISTON



Complete Repair Kit  
QB3-REPAIRKIT

### ⚠ SAFETY PRECAUTIONS ⚠

Please read all of the following safety precautions before installing or operating any Proportion-Air, Inc. equipment or accessories. To confirm safety, be sure to observe **'ISO 4414: Pneumatic Fluid Power - General rules relating to systems'** and other safety practices.

#### WARNING

Improper operation could result in serious injury to persons or loss of life!

##### 1. PRODUCT COMPATIBILITY

Proportion-Air, Inc. products and accessories are for use in industrial pneumatic applications with compressed air media. The compatibility of the equipment is the responsibility of the end user. Product performance and safety are the responsibility of the person who determined the compatibility of the system. Also, this person is responsible for continuously reviewing the suitability of the products specified for the system, referencing the latest catalog, installation manual, Safety Precautions and all materials related to the product.

##### 2. EMERGENCY SHUTOFF

Proportion-Air, Inc. products cannot be used as an emergency shutoff. A redundant safety system should be installed in the system to prevent serious injury or loss of life.

##### 3. EXPLOSIVE ATMOSPHERES

Products and equipment should not be used where harmful, corrosive or explosive materials or gases are present. Unless certified, Proportion-Air, Inc. products cannot be used with flammable gases or in hazardous environments.

##### 4. AIR QUALITY

Clean, dry air is not required for Proportion-Air, Inc. products. However, a 100 micron particulate filter is recommended to prevent solid contamination from entering the product.

##### 5. TEMPERATURE

Products should be used with a media and ambient environment inside of the specified temperature range of 32°F to 158°F. Consult factory for expanded temperature ranges.

##### 6. OPERATION

Only trained and certified personnel should operate electronic and pneumatic machinery and equipment. Electronics and pneumatics are very dangerous when handled incorrectly. All industry standard safety guidelines should be observed.

##### 7. SERVICE AND MAINTENANCE

Service and maintenance of machinery and equipment should only be handled by trained and experienced operators. Inspection should only be performed after safety has been confirmed. Ensure all supply pressure has been exhausted and residual energy (compressed gas, springs, gravity, etc.) has been released in the entire system prior to removing equipment for service or maintenance.

#### WARNING

Improper operation could result in serious injury to persons or damages to equipment!

##### 1. PNEUMATIC CONNECTION

All pipes, pneumatic hose and tubing should be free of all contamination, debris and chips prior to installation. Flush pipes with compressed air to remove any loose particles.

##### 2. THREAD SEALANT

To prevent product contamination, thread tape is not recommended. Instead, a non-migrating thread sealant is recommended for installation. Apply sealant a couple threads from the end of the pipe thread to prevent contamination.

##### 3. ELECTRICAL CONNECTION

To prevent electronic damage, all electrical specifications should be reviewed and all electrical connections should be verified prior to operation.

#### Exemption from Liability

- Proportion-Air, Inc. is exempted from any damages resulting from any operations not contained within the catalogs and/or instruction manuals and operations outside the range of its product specifications.
- Proportion-Air, Inc. is exempted from any damage or loss whatsoever caused by malfunctions of its products when combined with other devices or software.
- Proportion-Air, Inc. and its employees shall be exempted from any damage or loss resulting from earthquakes, fire, third person actions, accidents, intentional or unintentional operator error, product misapplication or irregular operating conditions.
- Proportion-Air, Inc. and its employees shall be exempted from any damage or loss, either direct or indirect, including consequential damage or loss, claims, proceedings, demands, costs, expenses, judgments, awards, loss of profits or loss of chance and any other liability whatsoever including legal expenses and costs, which may be suffered or incurred, whether in tort (including negligence), contract, breach of statutory duty, equity or otherwise.

#### Warranty

Proportion-Air, Inc. products are warranted to the original purchaser only against defects in material or workmanship for 18 months from the date of manufacture. The extent of Proportion-Air's liability under this warranty is limited to repair or replacement of the defective unit at Proportion-Air's option. Proportion-Air shall have no liability under this warranty where improper installation or filtration occurred.