



OUR PRODUCTS DEVELOP TOMORROW'S TECHNOLOGIES™

# Service Manual

## ExploraVac MAX Chamber Door Adjustment



## SAFETY



- Read this manual, all associated equipment manuals, and any Safety Data Sheets before installing, operating, or servicing this equipment. Failure to follow the warnings and instructions may result in injury or equipment damage.



- Keep this manual in a safe location for future reference.
- This equipment should only be installed and operated by qualified personnel, wearing appropriate protective equipment including gloves and eye protection.

## INTRODUCTION

Ideal Vacuum Exploravac MAX chambers are adjusted and leak tested prior to shipment. The chamber door may occasionally require minor servicing to ensure proper sealing and functionality.

This service manual provides step-by-step instructions for the proper adjustment and alignment of the ExploraVac MAX door hinges and latch.

### NOTE

It is easier to make adjustments with two people.

There are two adjustments that may be needed:

- 1. Door Alignment.** The chamber door could become misaligned (sag). This could be due to vibration the ExploraVac experiences in transport or fasteners loosening over time. This may cause the latch not to function properly. The door alignment must be adjusted before gapping the O-ring seal.
- 2. Door Seal Gap.** The door hinges and latch may need to be readjusted occasionally to ensure a good vacuum seal around the chamber door. The seal may develop a small leak due to physical damage or permanent deformation by extended use or temperature. If the door O-ring is replaced, the door must be checked and re-gapping may be necessary.

## TOOLS AND SUPPLIES NEEDED

### Tools Required

Gloves and safety glasses
3/32", 3/16" and 5/16" hex wrenches
#2 Phillips screwdriver
Small piece of paper (used as a thickness gauge) or flashlight
Wood or plastic wedge or small inflatable airbag



Inflatable airbag

ExploraVac MAX door O-ring replacement seals are available. Part Number P1012689. Please contact us to order, or if you need assistance at [techsupport@idealvac.com](mailto:techsupport@idealvac.com) or by phone at (505) 872-0037, weekdays, from 8am-5pm, Mountain Time.

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## ADJUST THE DOOR ALIGNMENT

### STEP 1



Use a #2 Phillips screwdriver to remove the ExploraVac MAX laser cut hinge trim piece (8 screws).

Put the trim piece and screws in a safe place for reinstallation later.

#### Adjust the door alignment if:

- The latch does not positively catch or lock when the door is closed.
- The door does not properly seal on the latch side.



### STEP 2

With the door open slightly, check the vertical alignment of the latch tooth with the door catch.

The tooth should be centered on the door catch.

If the latch tooth is centered, skip to Step 7.



### STEP 3

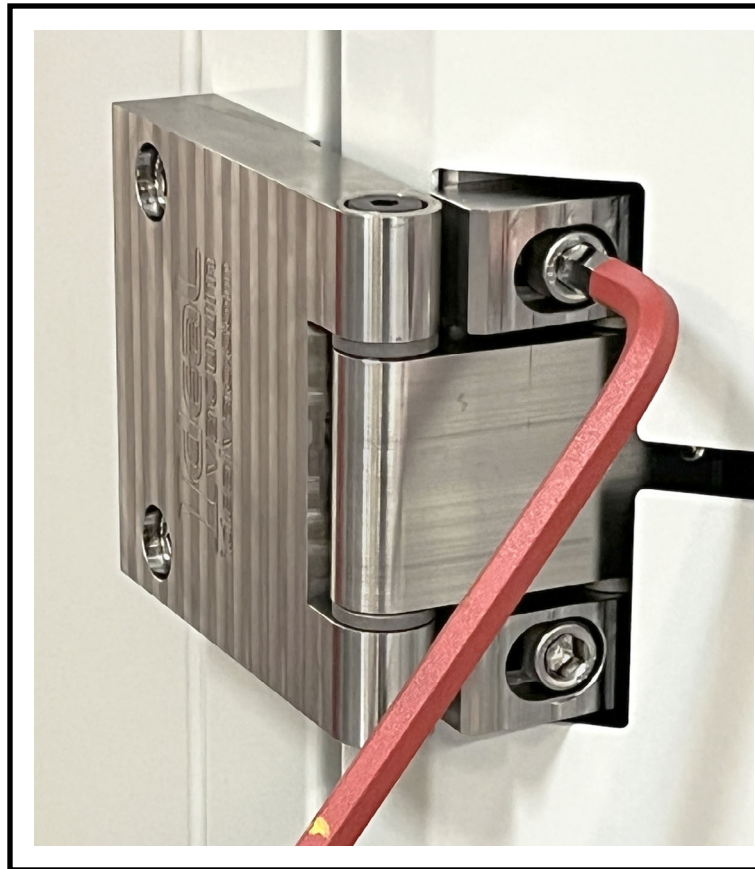
If the latch tooth is not aligned/centered with the door catch, use a shim or an airbag to hold the door in place.

Here we use an airbag.



### STEP 4

Use a 5/16" hex wrench to loosen the lower screw of the top hinge 1 full turn.



## STEP 5

Loosen the upper screw of the lower hinge 1 full turn.



## STEP 6

Loosen the lower screw of the lower hinge 1 full turn.

Raise the right side of the door so that the latch tooth is raised about 1/4" above center.

While holding the door in position, tighten the lower screw of the lower hinge.

Remove the shims or airbag.

The weight of the door will drop the latch tooth to the centered position.

Repeat this procedure as necessary to center the latch tooth.

Retighten all 4 hinge face bolts.

## ADJUST THE DOOR SEAL GAP

### STEP 7



Try the door latch.

The door should latch and there should be no daylight between the chamber door and the chamber O-ring on the latch side.

**Note:** Place a flashlight or other light source inside the chamber directed towards the door opening. It is then easy to see if there is a gap.

If there is no gap, skip to Step 9.



### STEP 8

Get the 5/16" and 3/32" hex wrenches.

If there is a gap, use a 5/16" hex wrench to tighten the big socket head door catch screw. This tightens the door and closes the gap.

**Note:** This is a fine adjustment. Turn the screw 1/8 turn at a time and recheck the gap. Repeat as necessary.

To improve latching, use a 3/32" hex wrench to tighten or loosen the small set screw. It rotates the catch horizontally towards or away from the chamber. Adjust until the latching feels good.

**Note:** This is also a fine adjustment. Turn the screw 1/8 turn at a time and recheck the latch feel. Repeat as necessary.



## STEP 9

With a small piece of paper, on the hinge side of the door, check the gap between the door and O-ring seal.

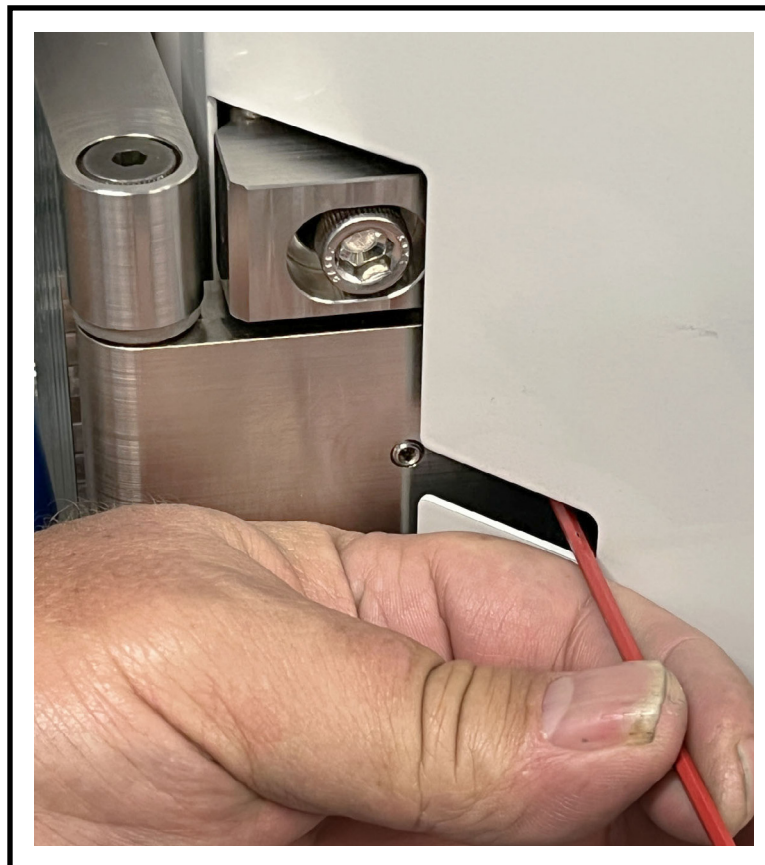
Do this above and below both hinges and in between the hinges.

If the paper slides through in any area, there is a gap and the door is not tight enough.

If the paper does not slide through, there is no gap.

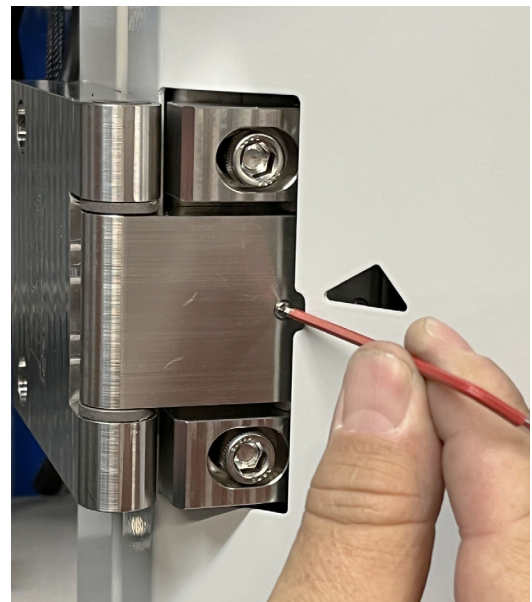
If there is no gap and the door is tight and feels “spongy” upon closing, the door is too tight.

**Note:** Place a flashlight or other light source inside the chamber directed towards the hinges. It is then easy to see if there is a gap.



## STEP 10

Use a 3/32” hex wrench to loosen the four small set screws on the hinge faces (2 on each hinge). Loosen each by 1 full turn.





## STEP 11

With the paper inserted in the gap, tighten the OUTSIDE lower hinge set screw until the paper is barely captured between the door and O-ring.

Tighten the bottom OUTSIDE hinge set screw an additional 1/4 turn.

Repeat on the upper hinge set screw.

**Note:** The OUTSIDE hinge set screw sets the amount of pressure the door exerts on the O-ring seal (i.e., how much the O-ring is compressed).



## STEP 12

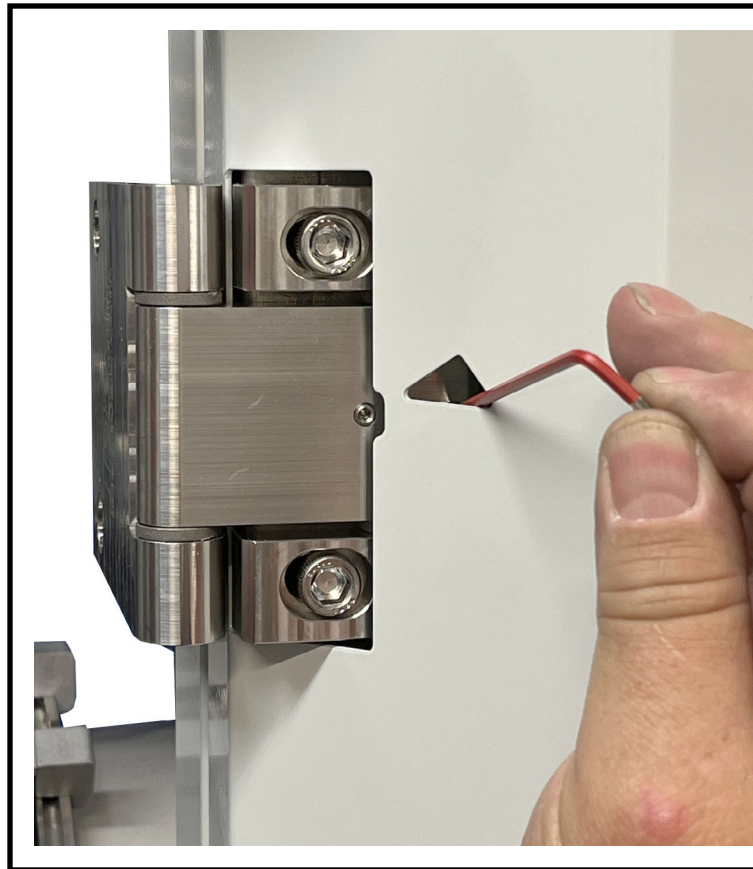
Open the door and remove the paper.

Check the gap all along the hinge side.

Check the door latch for smooth operation.

If the latch does not close nicely, or the door feels “spongy”, the hinges may need to be loosened slightly or the door catch may need to be adjusted slightly.





## STEP 13

With the chamber door closed and latched, tighten both of the INSIDE hinge set screws until they make contact with the door plate.

Then, tighten each INSIDE hinge set screw an additional 1/8 turn.

**Note:** The INSIDE set screw locks the hinge in place. If overtightened, this set screw will decrease the door's pressure on the O-ring and impair the door's ability to make a good vacuum seal.



## STEP 14

Recheck the door operation.

Get the ExploraVac MAX laser cut hinge trim piece and the 8 screws.

Use a #2 Phillips screwdriver to replace the trim piece.

Door alignment and gap procedure is complete.



**Ideal Vacuum Products, LLC.  
5910 Midway Park Blvd NE  
Albuquerque, NM 87109**

**Phone: (505) 872-0037**

**Fax: (505) 872-9001**

**Web: [idealtvac.com](http://idealtvac.com)**

