

Part #: HT-1

1965-82  
**CORVETTE**

# O-RING CONVERSION FRONT CALIPER REBUILDING TUTORIAL

O-RING CONVERSION / CALIPER REBUILDING TUTORIAL

CSSB: Corvette Stainless Steel Brakes, Inc. | [www.cssbinc.com](http://www.cssbinc.com) | email: [sales@cssbinc.com](mailto:sales@cssbinc.com)

# Choosing a Brake Caliper Rebuild Kit

## Standard Lip Seals vs. O-Ring Seals

Lip seal design seals are used on 1965-1982 Corvette calipers and can suffer from an inherent problem called "Reverse Air Oscillation". GM quit using lip seal calipers because of this in 1982. These issues would occur when your Corvette would sit for a period of time and it would leak brake fluid. Furthermore, when lip seals are used on a Corvette with warped or out of spec rotors and or spindles, loose bearings or a Corvette that is driven hard; they can actually suck air into the caliper fluid area causing a loss of brake pedal! O-Ring seals virtually eliminate all of these lip seal problems. If GM doesn't use lip seal calipers anymore why are you? Order one of our O-Ring Brake Caliper Conversion Kits below and put all those potential caliper problems behind you.



## Did you know?

9 out of 10 calipers are already sleeved? That means you don't need to bore out 90% the caliper cores you have sitting in your shop and insert stainless steel sleeves, that's already done! Simply disassemble your cores, clean and paint the ones that are sleeved; then purchase our O-Ring Conversion Kits below and start making more money today. Also by purchasing these kits, you are helping save planet earths precious fuel resources and reducing carbon emissions by not shipping boxes of heavy calipers to your caliper supplier. Go green today!



### CORVETTE CALIPER CASTING NUMBERS

1967-72  
Front 5452270 5452273  
Rear 5452281 5452284

1965-66 1st Design  
Front 5465954 5465952  
Rear 5465902 5465905

1973-82  
Front 5473795 5473796  
Rear 5473806 5473807

**O - R I N G   C O N V E R S I O N   /   C A L I P E R   R E B U I L D I N G   T U T O R I A L**

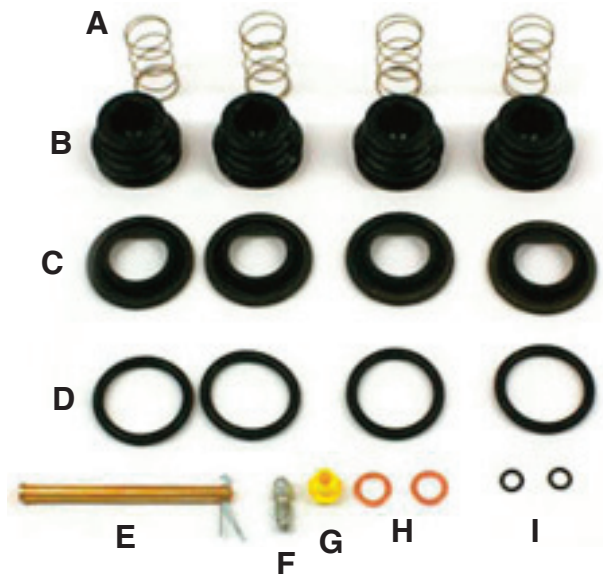
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# Contents of this Kit

Part #: HT-1

## Deluxe Front O-Ring Caliper Conversion Kit

Each of our Deluxe Front O-Ring Caliper Conversion Kits contains all the necessary parts to completely rebuild and upgrade one set (driver and passenger) of 1965-82 Corvette factory brake calipers.



- A (4) Stainless Steel Springs
- B (4) O-Ring Pistons
- C (4) Pistons Dust Boots
- D (4) Piston O-Rings
- E (1) Pad Pin with Cotter Pin
- F (1) Bleeder Screw
- G Inlet Plug
- H (2) Copper Brake Hose Washer
- I (2) Caliper Half O-Rings



PIPE OR PVC



HAMMER



13/16" SOCKET & RATCHET

## Materials Needed



FLAT HEAD SCREWDRIVER



SMALL BRUSH

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# INSTRUCTIONS

STEP  
**1**

Remove the caliper from the car, squeeze the pistons inward to remove excess brake fluid from within the caliper. Please dispose of the brake fluid by taking it to your local recycling station.

STEP  
**2**



Place the caliper in a vise to hold it steady. Using a flat bladed screw driver, push the tip under the metal ring of the dust boot as shown. Gently rotate or pry the screw driver, this will pop the dust boot from its position. Do NOT let the tip of the screw driver go into the cylinder wall area, it will damage and scratch the cylinder wall. Keep the tip just under the dust boot's metal ring!

STEP  
**3**



The caliper piston usually pops right out after step 2. Sometimes pulling up by hand is needed. If the pistons are stuck; Put the flat bladed screw driver into the dust boot groove on the piston and work the piston outward. Be careful not the scratch the cylinder wall. Do steps 2 & 3 to all 4 pistons.

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STEP

4

[cssbinc.com](http://cssbinc.com)



Remove the bleeder valve being careful not to break the bleeder off at the casting. If in doubt, use a hammer to tap the bleeder inward, this will loosen the bleeder from the threads. "Tap" Not Hammer! Then try to loosen again with the socket or closed end wrench. DO NOT use an open end wrench. If you absolutely have to use vise grips because a wrench or socket will not grip the bleeder valve, USE Flat Jaw Vise Grip Brand only. The most common bleeder wrench size is 5/16". IF you snap the bleeder off , THE PARTY IS OVER! DO NOT use an EZ Out, it won't work. Call a machine shop.



## NOTE!

### FOR STICKY BLEEDERS

- **TAP** with a hammer if in doubt. **DO NOT HAMMER** it!
- **DO NOT** use an open end wrench!

STEP 5



While the caliper is in a vise, use a 13/16" 1/2" drive socket with breaker bar to remove the 2 bridge bolts.



STEP 6

After unbolting the 2 halves, wash the caliper halves with soap similar to Simple Green. If the soap is too harsh, the paint may lift or stain the Stainless steel sleeves in the bores. Rinse good! Using Hot water will give better results.

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STEP 7



After washing, blow all passage ways clear while blowing the caliper halves dry with compressed air. Remember to USE SAFETY GLASSES! You would be surprised how much stuff can fly out to of the passage ways.



STEP 8

Next up is painting. If you want to show off your hard work, take the time. Remember, DO NOT PAINT inside the bores, bleeder valve holes or the mating surfaces of the 2 caliper halves.

STEP 9



After the paint dries, take time to inspect the bores for imperfections and scratches. Also, use a flash light to check to see that the passage ways are clear. Look for the obvious, like cracks around the bleeder valve area.

STEP 10



Piston to Wall Clearance is very important. Using a micrometer & I.D. Snap gauge or feeler gauges check these measurements: .0045" to .010" piston wall clearance. Take several measurements to get an average. If the clearance does not fall between these sizes, the caliper is not rebuildable.

STEP 11



Use a small brush coated with brake fluid to lube the O-ring seal and it's groove on the piston. Then install the o-ring on the piston.

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**STEP 12**



Using both hands, rotate the o-ring on the piston to make sure it is seated and not twisted.

**STEP 13**

Now, lubricate the bores with the brake fluid.



**STEP 14**



Install the springs on the bottom of each piston.

**STEP 15**



This step should be done in a vise for first Timers! Easily push the piston into the bore. Yes, it will go right in!

**STEP 16**

First Timers, Use a vise!  
After pushing the piston into the bore, have the dust boot handy and place the boot over the piston and into the top groove on the piston.



**STEP 17**



Do not get Scared! If you do not have a piece of metal similar to this, Use a piece of PVC.

# STEP 18



First timers USE A Vise to hold the caliper half.! Place your tool over the top of the metal ring of the dust boot and hold the dust boot down with one hand and use a hammer to knock the boot into place. Knock! DO not Hammer. You only get a few knocks. If you mess up and the boot will not stay in place, flip the boot over and try again.

# STEP 19



After installing all of the 4 pistons, place the caliper half o-ring into the cavity of the outboard caliper half as it sits in a vise.

# STEP 20



After installing the caliper half o-ring(s), place the inboard half onto the outboard half and install the 2 bridge bolts, using a 13/16" socket, torque the bridge bolts to 120- 140 ft lbs.

# STEP 21



First timers USE A Vise to hold the caliper half.! Place your tool over the top of the metal ring of the dust boot and hold the dust boot down with one hand and use a hammer to knock the boot into place. Knock! DO not Hammer. You only get a few knocks. If you mess up and the boot will not stay in place, flip the boot over and try again.

# FINISHED!

# STEP 22

Do not forget to use a new inlet copper washer when installing the new brake hose. 2 Washers are suggested. Torque brake hose to caliper to 22 ft lbs. When installing the front caliper on the vehicle, torque the 2 mounting bolts to 60-90 ft lbs.



# Notes

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