



# **How to Change High-Pressure Seals on Flow Style Intensifier Without Replacing Bronze Backups Using Kit #11467**

This guide will walk you through performing a standard High-Pressure seal change on a Flow Style Intensifier and reusing bronze backups with kit #11467

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## INTRODUCTION

Hypertherm is in no way affiliated with the above mentioned manufacturer.



### TOOLS:

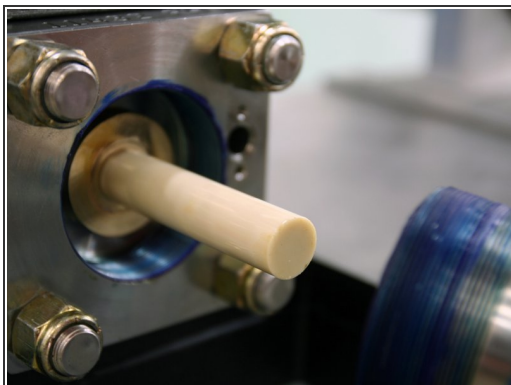
- High-Pressure Seal Installation Tool Kit #12387 (1)
- Rubber Mallet (1)



### PARTS:

- High-Pressure Seal Kit #11467 (1)
- High-pressure Cylinders, 60K #11117 (1)
- Back-up Seal Sleeve #11365 (1)
- Blue Goop #11111 (1)
- Isopropyl Alcohol (1)

## Step 1 — How to Change High-Pressure Seals on Flow Style Intensifier Without Replacing Bronze Backups Using Kit #11467



- Remove the [high-pressure cylinder\(s\)](#) from the pump.
- Put the cylinder on the [Seal Guide tool](#)
- Put the small (stepped) end of the installation tool into the top of the high pressure cylinder.

## Step 2



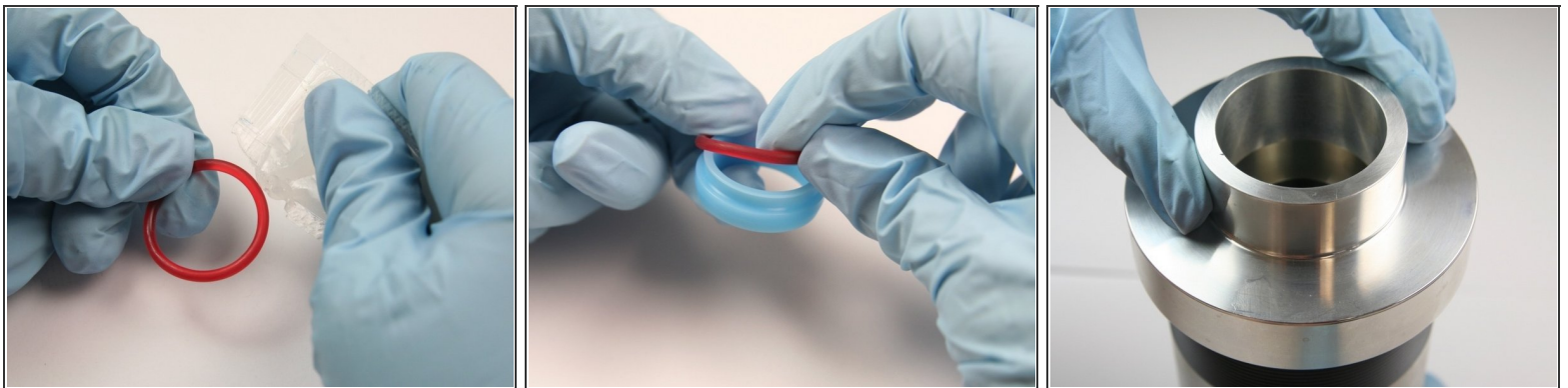
- Use a rubber mallet to push the internal back-up seal sleeve through the high-pressure cylinder forcing the seal and the hoop out of the other end of the high pressure cylinder.
  - Do not remove the sleeve from the high-pressure cylinder.
- Turn the high-pressure cylinder over so the dynamic end is facing up.
- Put the non-stepped end of the installation tool in the dynamic side of the high-pressure cylinder, push the other seal out by tapping with a rubber mallet.

### Step 3



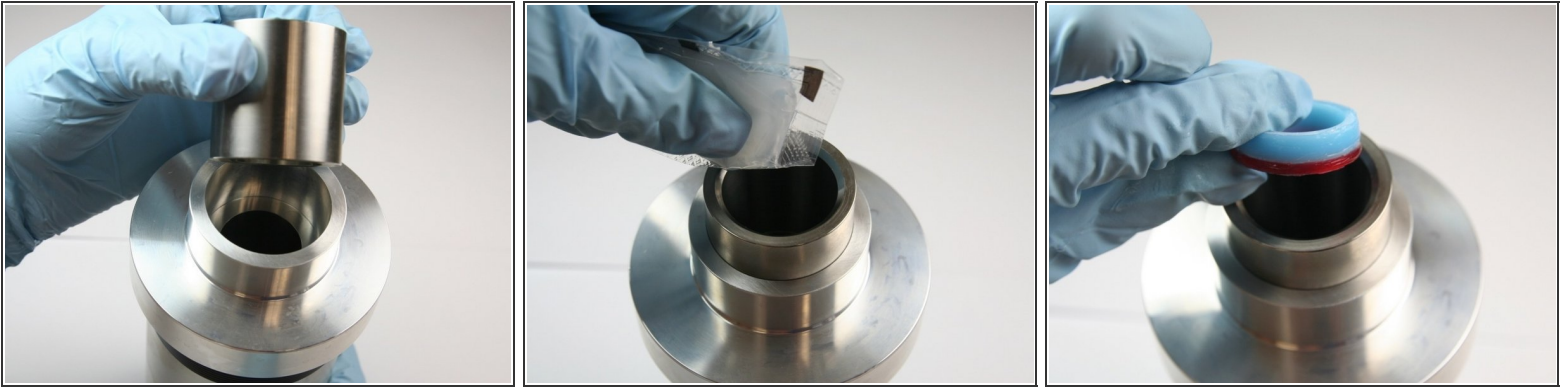
- Clean the high-pressure cylinder thoroughly after polishing.
- Visually inspect the high-pressure cylinder bore at both ends.
- If the inside bore finish is blemished, use Scotch Brite in both ends of the high-pressure cylinder to smooth out the blemishes by rolling back and forth.

### Step 4



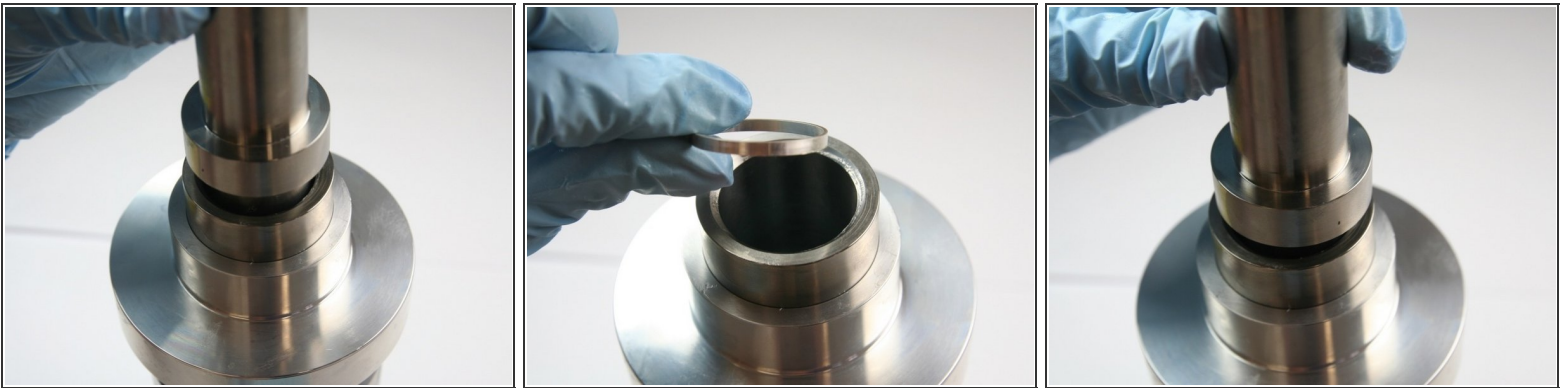
- Apply a [high vacuum grease](#) to the O-rings.
- Put the O-rings onto the high-pressure seals.
  - Be sure not to twist the O-rings when installing onto the high-pressure seals.
- Thread the seal guide tool onto the static end of the high-pressure cylinder.
  - It is helpful to begin with the flat end of the high-pressure cylinder side up.

## Step 5



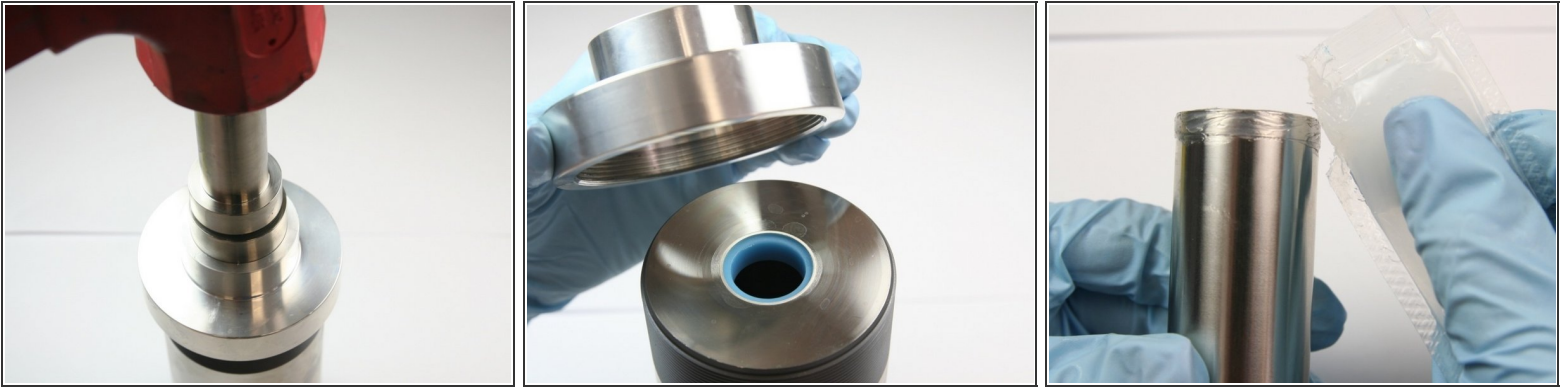
- Put the installation sleeve into the sleeve guide with the larger ID (tapered) end up.
- Lubricate the ID of the Installation sleeve with a high vacuum grease
- Put the high-pressure seal into the sleeve with the O-ring side down.

## Step 6



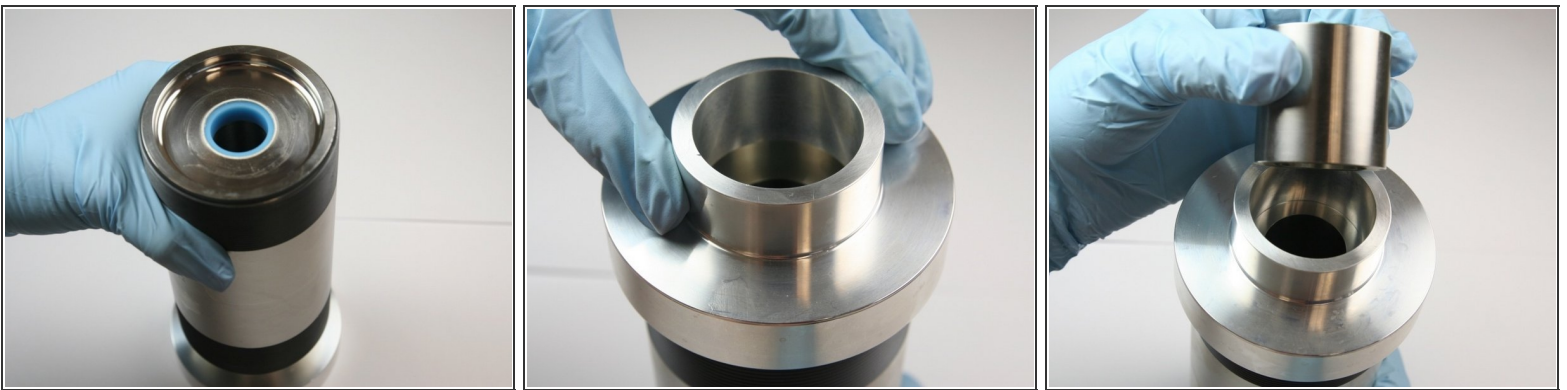
- Use the blunt (non-stepped) end of the installation tool to hand press the high pressure seal into the the high-pressure cylinder.
- Put the hoop into the sleeve with the sharp (tapered) end first.
- Push the hoop down into the sleeve with the blunt end of the installation tool.

## Step 7



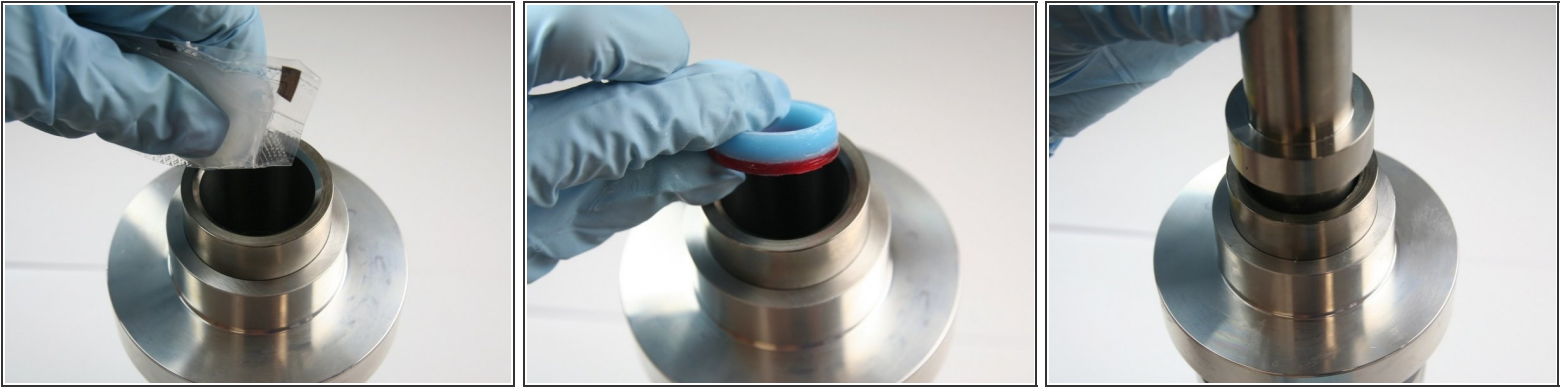
- Secure hoop in place by tapping installation tool in with a rubber mallet until tool bottoms on high-pressure cylinder face
- Remove seal guide tools from top of high-pressure cylinder (static side)
- Apply a light coat of high vacuum grease to both ends of back-up seal sleeve

## Step 8



- Put the sleeve into the open end of the high-pressure cylinder and repeat the seal installation process.
- Thread the seal guide tool onto the dynamic side of the high-pressure cylinder.
- Put the sleeve into the seal guide tool with the tapered end side facing up.

## Step 9



- Apply a high vacuum grease to the ID of the sleeve.
- Put the high-pressure seal assembly into the sleeve with the o-ring first.
- Use the blunt (non-stepped) end of the installation tool to hand press the high-pressure seal into the high-pressure cylinder.

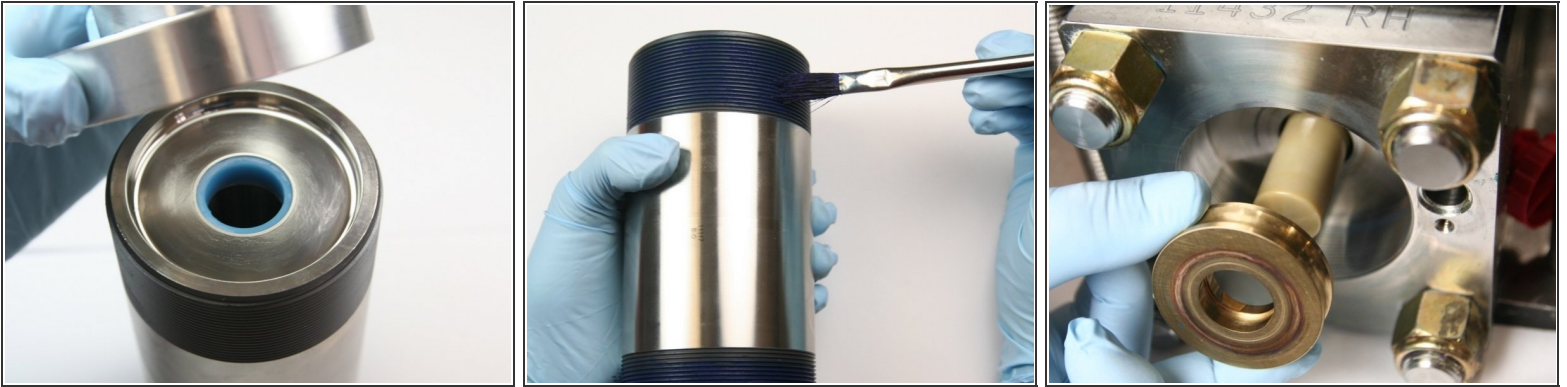
## Step 10



- Put the hoop into the sleeve with the sharp (tapered) end first.
- Push the hoop down into the sleeve with the blunt end of the installation tool.
- Secure the hoop in place by tapping the installation tool in with a rubber mallet until the tool bottoms out on the high-pressure cylinder face.

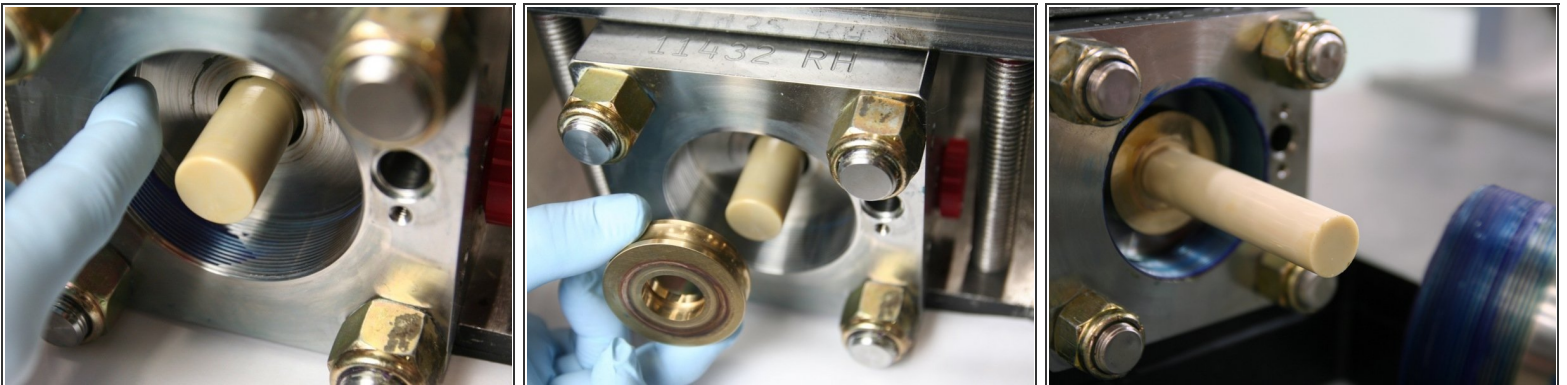


## Step 11



- Remove the seal guide tools from the dynamic side of the high-pressure cylinder.
- Apply blue goop to both threads of the high-pressure cylinder.
- Remove the old [bronze back-up ring](#) from the plunger.

## Step 12



- Apply [Blue Goop](#) to the inside threads of the intensifier.
- Flip over the bronze back-up and slide back onto the plunger.
- Put the high-pressure cylinder on the plunger with the dynamic side first.