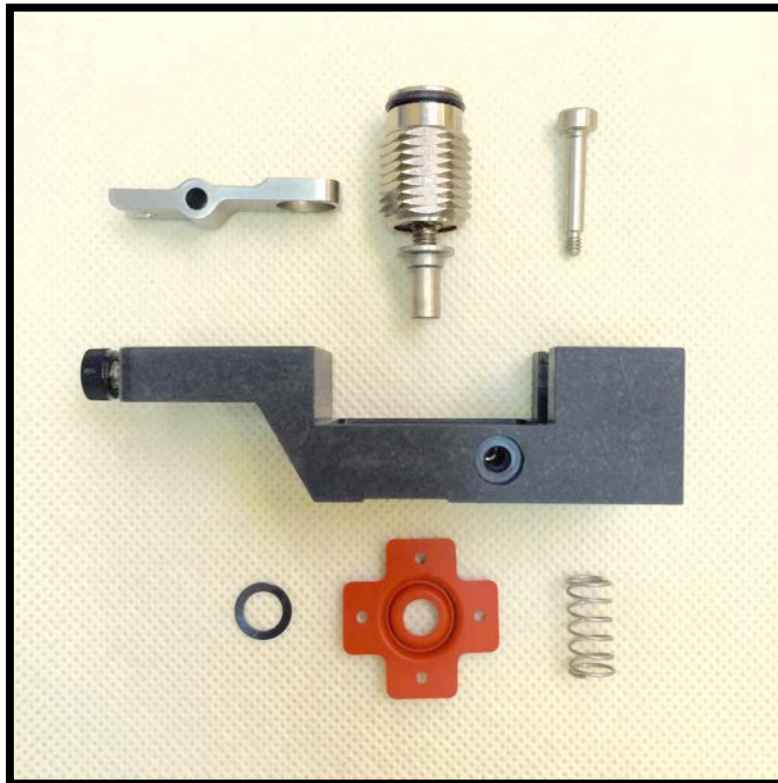


# **GPD Global**®

**Precision Dispensing Systems**



## **Kit Installation Procedure**

**PN 22200624**

for use with

**Heater Seal & Cylinder Assembly, PN 22293287**

and

**NCM5000 Jetting Pumps** (starting with serial no. 738)

*Version 3.0 - Procedure Updated 11/6/2017*





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## Safety Guidelines

The described fluid applicator and controller are resources for use in industrial environments.

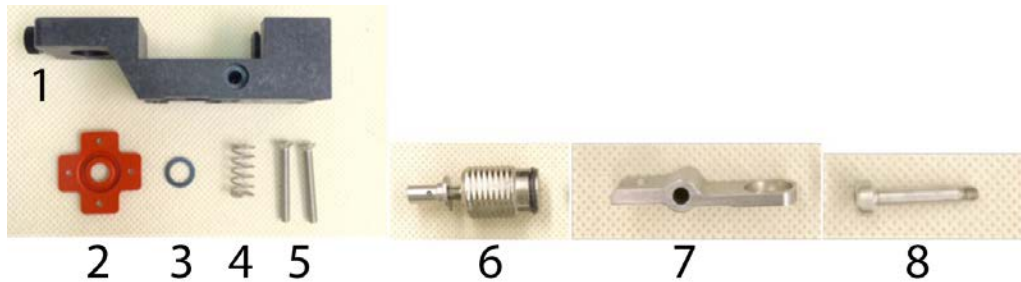
GPD Global products are manufactured according to currently valid engineering standards and are operationally safe. Hazards may arise if handled improperly by unqualified personnel. It is recommended that operating personnel thoroughly review these operating instructions.

	<b>CAUTION!</b>	<b>AVERTISSEMENT!</b>
	<i>The connecting cables may only be removed or attached when the GPD Global controller is not delivering voltage to the Jet. To insure this, turn off the main power switch on the front of the GPD Global controller.</i>	<i>Les câbles de connexion ne peuvent être retirés ou attachés que lorsque que le contrôleur GPD Global ne délivre pas de tension à la valve. Pour cela, éteignez l'interrupteur principal sur la face avant du contrôleur GPD Global.</i>
	<i>Be sure to use only the main input power cord supplied with the unit. The power cord supplied with the unit supports 100/120V in the USA. If you are planning to use the unit in countries using 220/240V, please replace the main power cord with an approved TUV power cord rated for 220/240V. GPD Global can supply the appropriate power cords.</i>	<i>Veillez à n'utiliser que le cordon d'alimentation d'entrée principale fournie avec l'appareil. Ce cordon supporte le 100/120V pour les USA. Si vous avez l'intention d'utiliser l'appareil dans les pays utilisant du 220/240V, veuillez le remplacer par un cordon d'alimentation homologué TUV nominale de 220/240V. GPD Global peut fournir les cordons d'alimentation appropriés.</i>
	<i>Qualified personnel are persons who, due to their training, expertise and instruction, as well as their knowledge of relevant standards, provisions, accident prevention regulations and operating conditions, have been authorized by the person responsible for safety of the system to perform the required tasks and, in the process, can identify and prevent potential risks (definitions for specialists according to the VDE 105 or ICE 364).</i>	<i>Un personnel qualifié est une personne spécialisée qui par sa formation, son expertise ainsi que ses connaissances en normes et règlements de prévention des accidents a été autorisées par la personne responsable de la sécurité du système à exécuter les tâches requises, identifier et prévenir les risques potentiels (les définitions des spécialistes selon la norme VDE 105 ou ICE 364).</i>
	<i>Shock Hazard. There are no user-serviceable components under the cover. Main voltages ranging from 100 to 240 VAC are inside. Disconnect the power cord and contact GPD Global if there is any desire to remove the cover.</i>	<i>Risque de choc. Il n'existe aucun composant réparable par l'utilisateur sous les boîtiers. Les tensions d'alimentaion allant de 100 à 240 VAC sont à l'intérieur. Débranchez le cordon d'alimentation et contactez le service clientèle de GPD Global s'il y a un besoin d'ouvrir les boîtiers.</i>

# 1. Required Tools and Parts

This document describes the installation procedure for the Heater Seal and Cylinder Assembly Upgrade Kit for the GPD Global NCM5000 Jet Pump. This procedure replaces the main air (hammer) cylinder, lever, and jet spring, and installs a heater seal and new manifold spacer.

## 1.1 NCM5000 Heater Seal & Cylinder Upgrade Kit



Parts List:

Item	Description	Part Number
1	New manifold spacer (accommodates heater seal)	2650-0314
2	Heater seal	2650-0315
3	Washer	2650-0316
4	Jet spring	2650-0321
5	Manifold spacer screws (2)	2650-0317
6	Hardened hammer air cylinder (no washers)	2650-0325
7	Lever, new	2650-0318
8	Pivot (shoulder) bolt	2650-0319

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## 1.2 Required Tools

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After completing procedure, set gap using *NCM5000 Pump Maintenance Tool Kit* (PN 22290042).

## 2. Install the Cylinder Kit and Heater Seal

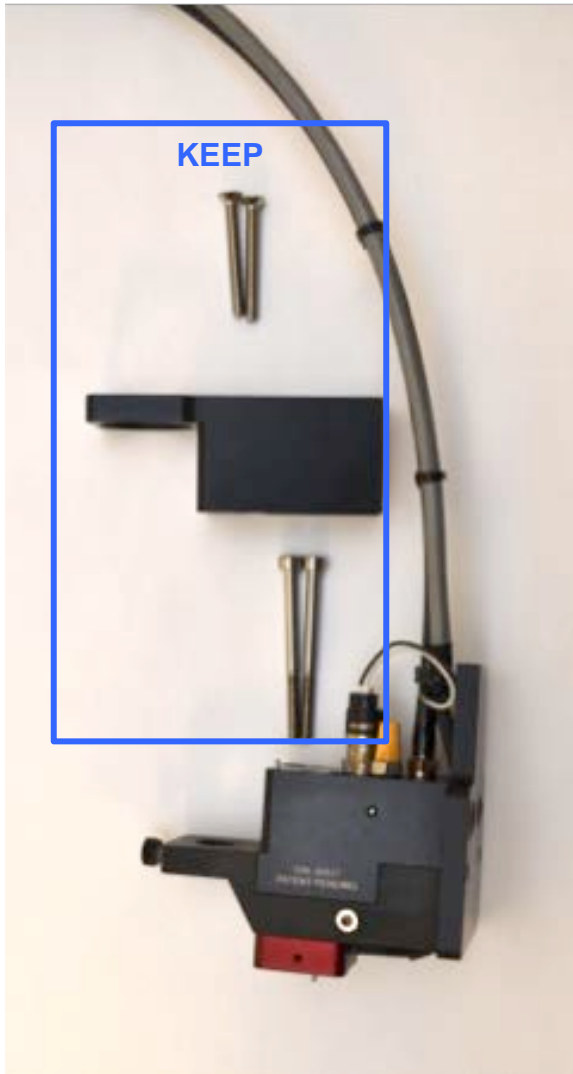
This section describes the procedure for installing the air cylinder kit and the heater seal. After installing the parts and reassembling the jet, continue to Section 3 and set the jet hammer gap.

### 2.1 Disassemble the Jet

#### 2.1.1 Remove the Top Cover and Nozzle Plate

Remove and set aside (using tool specified):

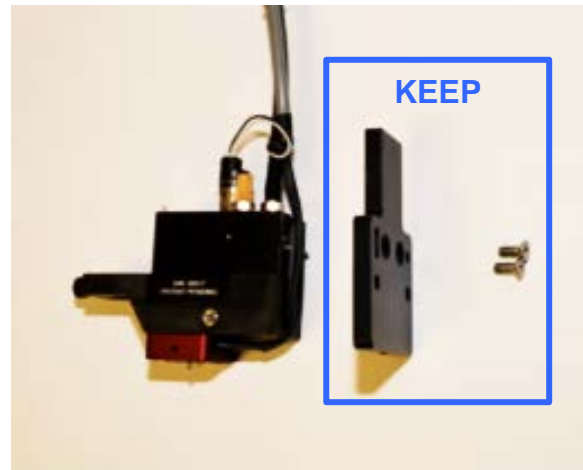
- The two screws securing the top cover (#2 PH) and the top cover
- The two screws securing the nozzle plate



#### 2.1.2 Remove the Mounting Plate

Remove and set aside:

- The two screws securing the mounting plate
- The mounting plate



#### 2.1.3 Disconnect the Heater Block

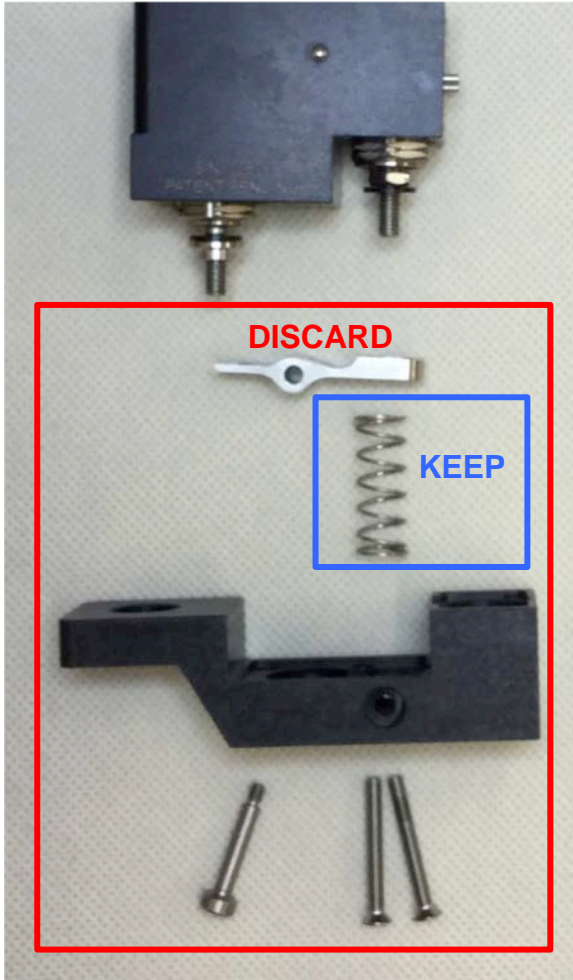
Remove and set aside the two screws securing the heater block (#1 PH). Remove and discard the jet compression spring.



## 2.1 Disassemble the Jet, cont'd.

### 2.1.4 Remove the Spacer

Remove and discard the spacer screws and the pivot (shoulder) bolt (5/64" hex). Remove and discard the manifold spacer and the lever. Set aside the lever/shutoff spring.



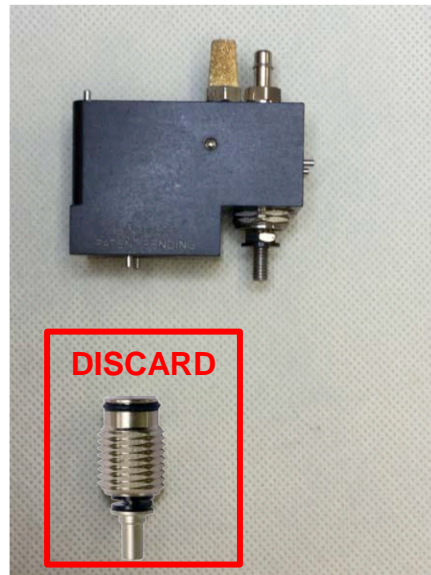
### 2.1.5 Loosen the Locking Screws

Use the 5/64" hex driver to loosen the setscrews that lock the air cylinders in place.



### 2.1.6 Remove the Main Air Cylinder

Use the 13-mm wrench to remove the main air (hammer) cylinder; discard.

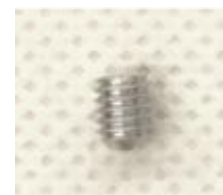


### 2.1.7 Check for Parts/Screws Set Aside

TOP COVER, NOZZLE PLATE, MOUNTING PLATE, HEATER BLOCK



AIR CYLINDER  
SETScrew



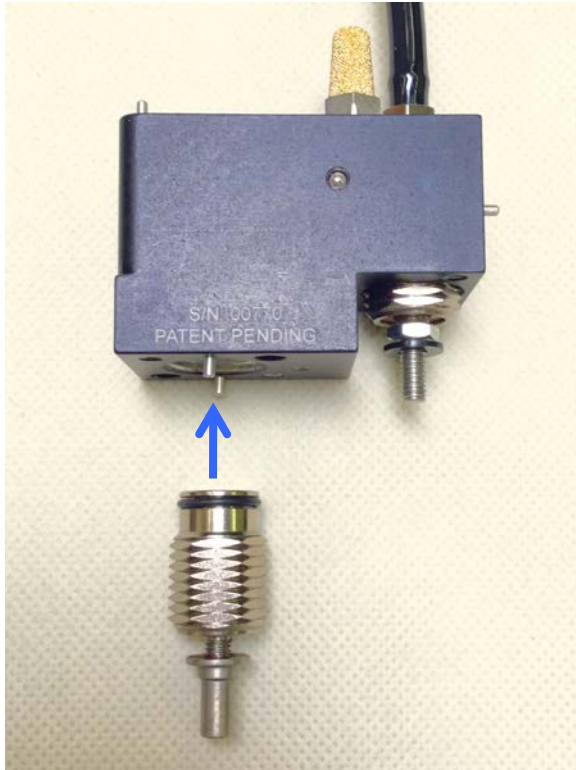
LEVER/SHUTOFF  
SPRING



## 2.2 Air Cylinder Assembly

### 2.2.1 Install the New Air Cylinder

Install the new jet hammer air cylinder, using the 13-mm wrench to tighten to a hard stop.



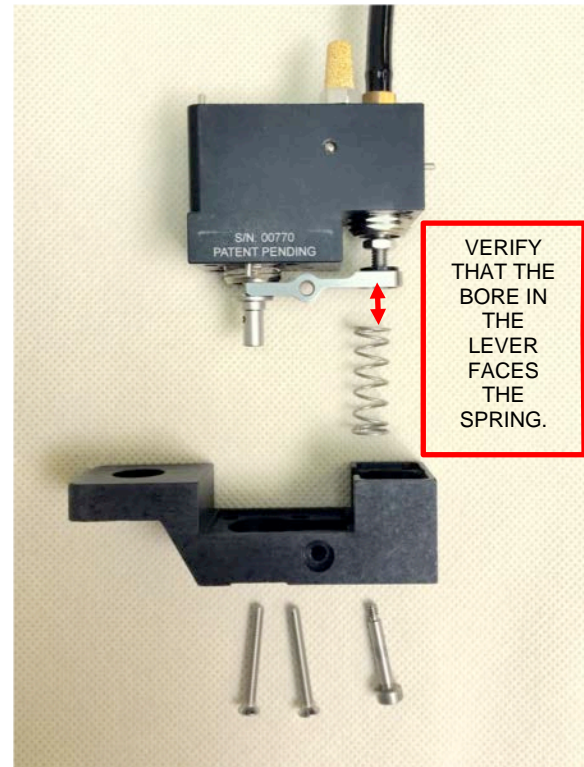
### 2.2.2 Tighten the Locking Screw

Apply a light coating of Loctite 243 to the air cylinder setscrew. Tighten the setscrew.



### 2.2.3 Assemble the Spacer

Locate the new spacer and new spacer screws, and the new shoulder bolt, lever, and the automatic lever/shutoff spring that was set aside.





## 2.2 Air Cylinder Assembly, cont'd.

### 2.2.4 Check the Lever Assembly

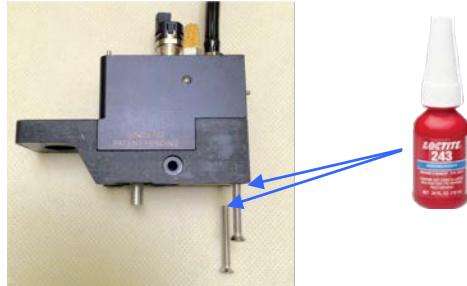
Observe the orientation of the lever and washer as shown below—proper positioning is critical.

- There is one washer on the shutoff cylinder below the lever.
- The bore in the lever faces up toward the lever/shutoff spring.



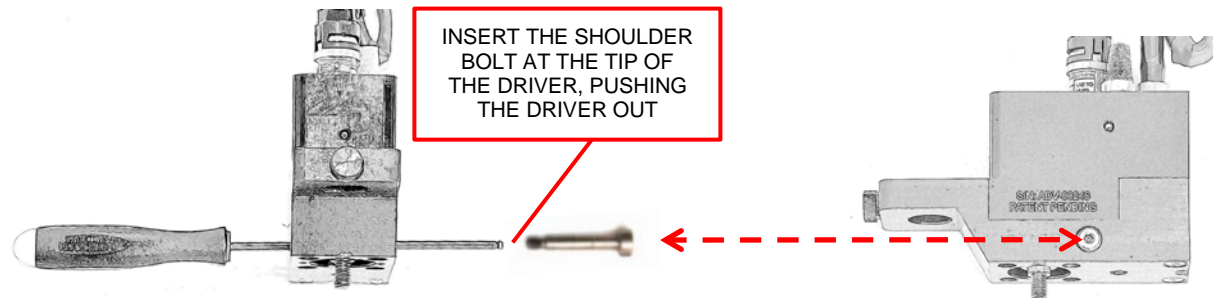
### 2.2.5 Attach the Spacer

Apply a light coating of Loctite 243 to the threads of the new spacer screws and attach the new spacer.



### 2.2.6 Align the Lever with the Shoulder Bolt

Use a 5/64-in hex driver (or tool of similar diameter) to line up the hole in the lever with the hole for the shoulder bolt.



### 2.2.7 Install the Shoulder Bolt

- Verify that the lever moves freely before tightening the shoulder bolt.
- Apply a light coating of Loctite 243 to the threads of the shoulder bolt and wipe off any excess.



*Do not allow Loctite from the shoulder bolt tip to transfer to the lever!  
Do not over-tighten the shoulder bolt.*

- Insert the shoulder bolt as shown above and tighten with the 5/64" hex driver.
- Re-verify that the lever moves freely (cylinder tip moves up and down) after tightening the shoulder bolt.



## 2.3 Install the Heater Seal

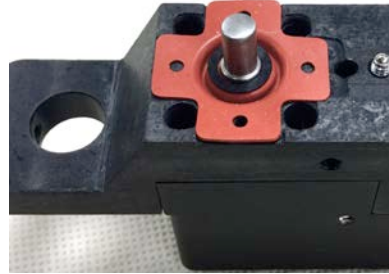
### 2.3.1 Install Heater Seal

Position the heater seal on the tip of the air cylinder with the indent positioned as shown (ridge faces down).



### 2.3.2 Install Washer

Position the washer over the air cylinder tip.



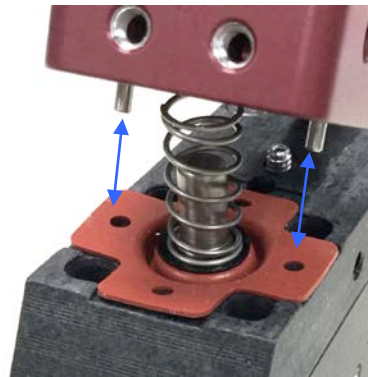
### 2.3.3 Install New Jet Spring

Place the jet compression spring on top of the washer.



### 2.3.4 Position Heater Block

Align the pins in the heater block with the heater seal as shown below.



### 2.3.5 Attach the Heater Block

Apply Loctite 243 to the threads of the new (longer) screws supplied and re-attach the heater block. The cylinder tip should be visible through the weep holes.



## 2.4 Reassemble the Jet

### 2.4.1 Install the Mounting Plate

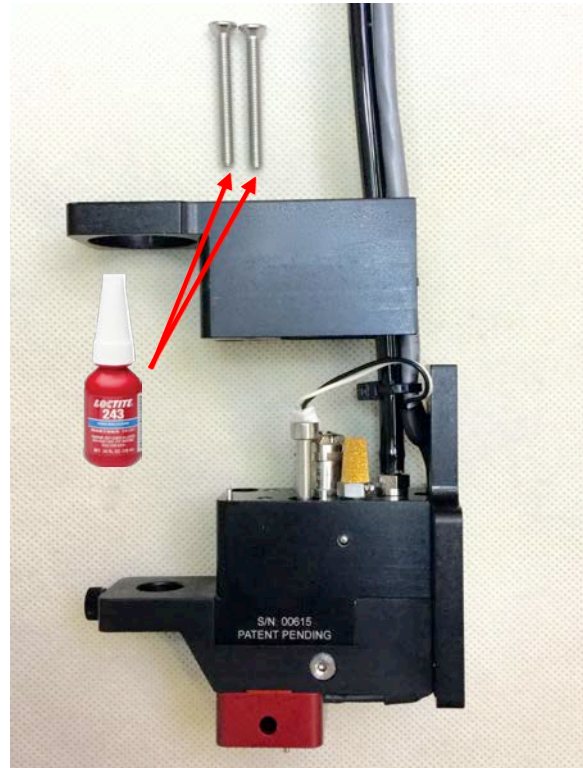
Locate the screws and mounting plate that were set aside. Apply Loctite 243 to the threads of the screws. Install as shown in the diagram below.

Take care that the cable is not pinched between the mounting plate and manifold.



### 2.4.2 Replace the Top Cover

Locate the top cover and top cover screws. Install as shown in the attached photo. Apply Loctite 243 to the tips of the screws that secure the top cover.



***Continue to the next section—Set the Hammer Gap.***

### **3. Set the Hammer Gap**

Set hammer gap to 0.145" using necessary hardware. Required hardware: *NCM5000 Pump Maintenance Tool Kit* (PN 222900042).