



# PowerPro Lift Assist Gas Cylinder Upgrade Installation

## INTRODUCTION

This new Gas Cylinder for your Shopsmith PowerPro? Headstock will assist you lifting your machine for vertical machine operations. Before you install it there are several new features you should know about.

- It is the same length as your old gas cylinder. No adjustment of the upper or lower mounts will be necessary.
- It is larger in diameter and stronger so it will lift the 72 lb. PowerPro Headstock with the same ease as the old gas cylinder lifted your old Headstock.
- It has a quick-release feature on one end of the gas cylinder. This quick-release makes it easy to remove one end of the cylinder from the Upper Mount. This is helpful when removing the Headstock for service. It also us useful for NEW Shopsmith Mark-7? owners when they tilt their machine to the left for under-table operations.

### *TOOLS REQUIRED:*

- √ 1/2" Open End Wrench
- √ Small, Straight-Blade Screwdriver

### **PARTS LIST**

Ref No.	Part No.	Item Description	Qty
1	522809	. Gas Cylinder .....	1

## SAFETY

### **WARNING**

Please read, understand and follow:

- √ **ALL of the assembly and alignment procedures covered in this instruction sheet prior to installing your MARK V Lift Assist.**
- √ **Make sure the Mark V is turned off and unplugged before assembling and adjusting the Lift Assist.**
- √ **Always use proper Safety Equipment and Procedures when operating machines.**
- √ **Be sure to tighten all hardware securely before using.**

## OLD CYLINDER REMOVAL

To remove the Cylinder from the installed Lift Assist, just slip a small, straight-bladed screwdriver behind the retainer clip and pry it off. See Figure 1.

### **NOTE:**

**Position your free hand behind the Clip to avoid losing it in the event it pops off the Cylinder receptor during removal.**

### **WARNING**

This Ball Stud Retaining Clip must be popped back into position in its groove on the end of the Cylinder before re-installation on the Ball Stud. Failure to do so will cause the Cylinder to pop off the Ball Stud when compressed . . . potentially flying off and causing injury.



Figure 1

## ADDITIONAL SAFETY WARNINGS

### **WARNING**

If the MKV Headrest Lock is not properly adjusted – and the Work Table and Headstock are at the far right of the Way Tubes, the MARK V will raise itself into vertical position, possibly causing personal injury. You may have to make an adjustment to your Headrest Lock to prevent this from occurring. Refer to your Mark V Owner's Manual.

### **WARNING**

Always remove the Gas Cylinder from the Lift Assist before removing the headstock from the way tubes of the Mark V. Failure to do so will result in the Lift Assist suddenly raising the way tubes into the vertical position, possibly causing personal injury as the way tubes swing upward.

### **WARNING**

Even though the Lift Assist will help to hold your MARK V in the vertical position, it should still, always be secured in that position by tightening your MARK V's Arm Lock Knob. Refer to your Mark V Owner's Manual.

## INSTALLATION

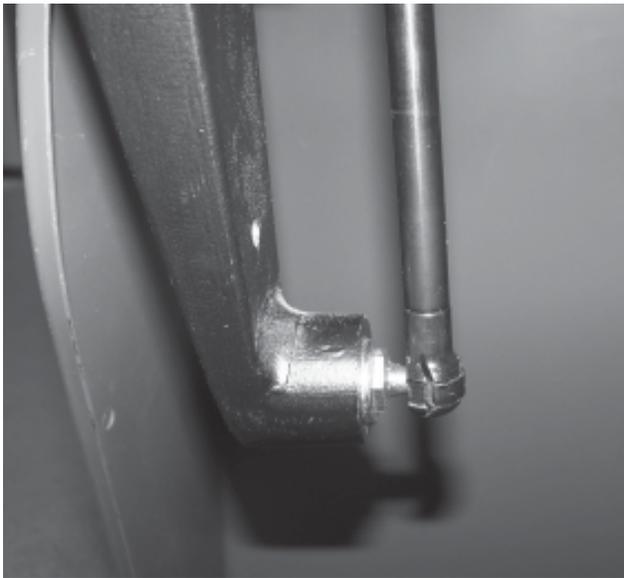
Gas cylinder installation is done with your Mark-V in the vertical drill press position. Because of the larger gas chamber on the lower end of the cylinder, it must be spaced away from the Lower Mount to provide clearance between the large end of the gas cylinder and the base of the Lower Mount. This is done with a flat washer.

## NOTE

You may find the large end of the gas cylinder touches the Lower Tie when your machine is in the vertical drill press position. This is OK and will not cause damage to either your machine or the Gas Cylinder.

The new gas cylinder will snap in place with no further adjustments required by following the instructions below.

1. Snap the Ball Receptor on the small end of the cylinder on the Ball Stud in the Lower Mount, see figure 2.



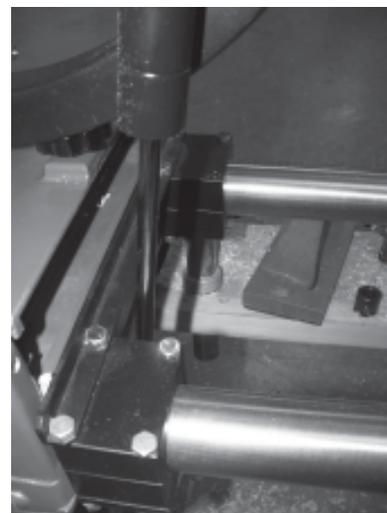
**Figure 2**

2. The quick-release end of the Gas Cylinder is cylindrical with a knurled surface and a round notch. Follow steps 2-a, 2-b, & 2-c below to install this end of the gas cylinder.
  - a. Be sure the round notch aligns with the Ball Recess inside the receptor. To align this notch with the ball recess, rotate the outer sleeve until the round notch aligns with the receptor inside.



**Figure 3**

- b. Firmly grasp the knurled surface of the outer sleeve and pull it toward the opposite end of the cylinder. You will see the ball receptor open up, as shown in Figure 3.
  - c. Slip the open receptor over the ball end of the Threaded Ball Stud on the Upper Mount and release the outer sleeve on the Gas Cylinder
3. To remove this end of the Gas Cylinder, reverse the order of steps "2-c" and "2-b" above.



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## MAINTENANCE

The Shopsmith MKV Lift Assist requires no maintenance other than an occasional cleaning with a clean, dry cloth. The Cylinder is a sealed unit with no serviceable parts inside.

### NOTE

If you have any questions about your *Shopsmith PowerPro* Lift Assist, please call our Customer Service Department TOLL-FREE at 1-800-762-7555, send us an e-mail at [techsupport@shopsmith.com](mailto:techsupport@shopsmith.com), visit our website at [www.shopsmith.com](http://www.shopsmith.com), or write to us at: RLFSHOP, LLC., Attn: Customer Service Technical Dept., 6530 Poe Avenue, Dayton, Ohio 45414.

