

Service Call:

Replacing the U-Cup in the Control Head

Tools Required:

Basic Hand Tools

Hammer

Punch Set

Vaseline

10-15 PSI Pressure Gauge

Model(s):

5FA, 5FB, 5HA, 5FC, 6H, TC, TCX, RM, RMX

Introduction

The captive air cylinder is used as part of the safety interlock system. Squeezing the trigger strokes the cylinder, sending air down to a pressure switch on the turntable. The pressure switch activates the safety enable interlock solenoid allowing oil to flow to the control valves for boom functions.

As the U-cup wears, the amount of air traveling through the air line decreases, eventually causing the unit to be inoperative from the upper controls.

If the upper control enable trigger needs to be squeezed several times to activate the enable interlock, or the enable trigger needs to be squeezed often to keep the enable interlock active, then the U-cup is either dry and needs to be lubed with 3 in 1 oil, or it is worn and needs to be replaced.

A good U-cup should create about 10 psi at the control head.

Prior to disassembling of the control head to service the U-cup, the air line should be checked to make sure it is free of any water/moisture.

To do this, simply remove the air line from the air switch and squeeze the enable trigger several times at the control head. If moisture comes out of the airline, it will need to be blown out using compressed nitrogen.

Never use compressed air as it might contain moisture droplets.

Tech Tip Safety Rules



Danger

Failure to obey the instructions and safety rules in the appropriate Operator's Manual and Service Manual for your machine will result in death or serious injury. Many of the hazards identified in the operator's manual are also safety hazards when maintenance and repair procedures are performed.

Do Not Perform Maintenance Unless:

- You are trained and qualified to perform maintenance on this machine.
- You read, understand and obey:
 - manufacturer's instructions and safety rules
 - employer's safety rules and worksite regulations
 - applicable governmental regulations
- You have the appropriate tools, lifting equipment and a suitable workshop.

The information contained in this tech tip is a supplement to the service manual. Consult the appropriate service manual of your machine for safety rules and hazards.

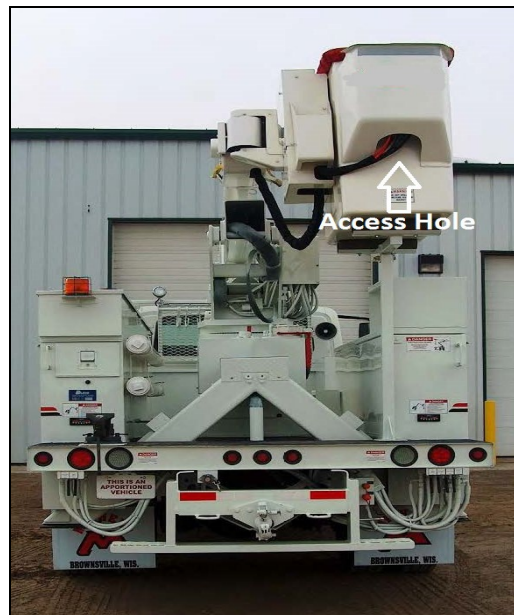
Step 1

Position the unit in a safe location.

Step 2

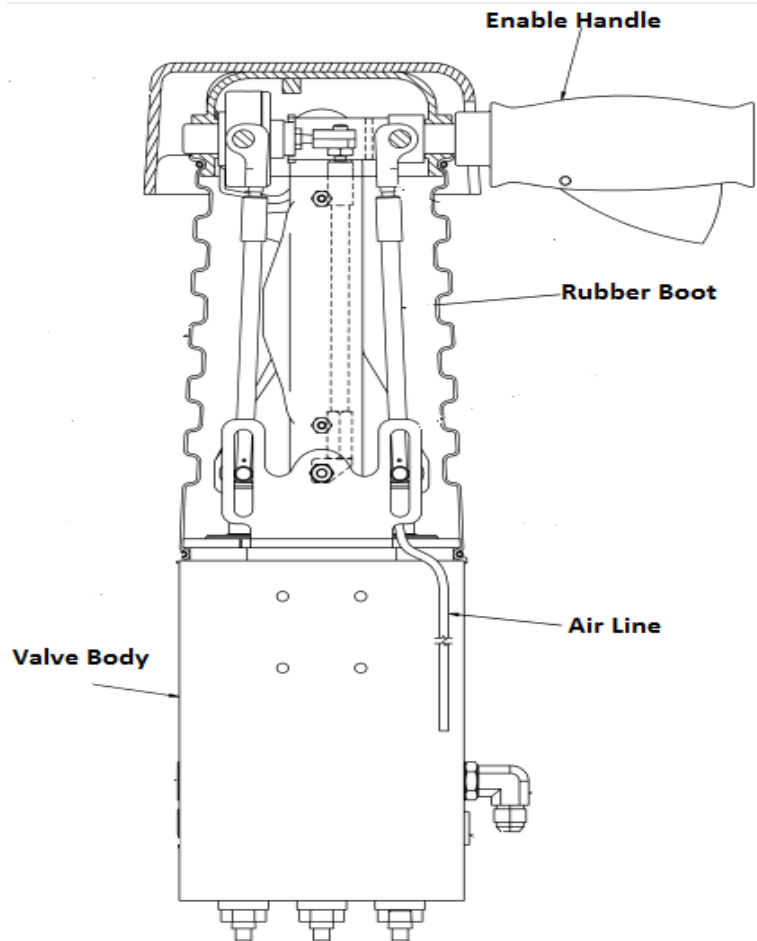
Remove the upper control head fiberglass cover (if possible).

On some units, the cover is molded into the platform. The control head is accessible through the access hole in the cover.



Step 3

Remove the plastic cap and rubber boot from the single stick controller.



Step 4

Remove the cotter pins and pins from the linkages.



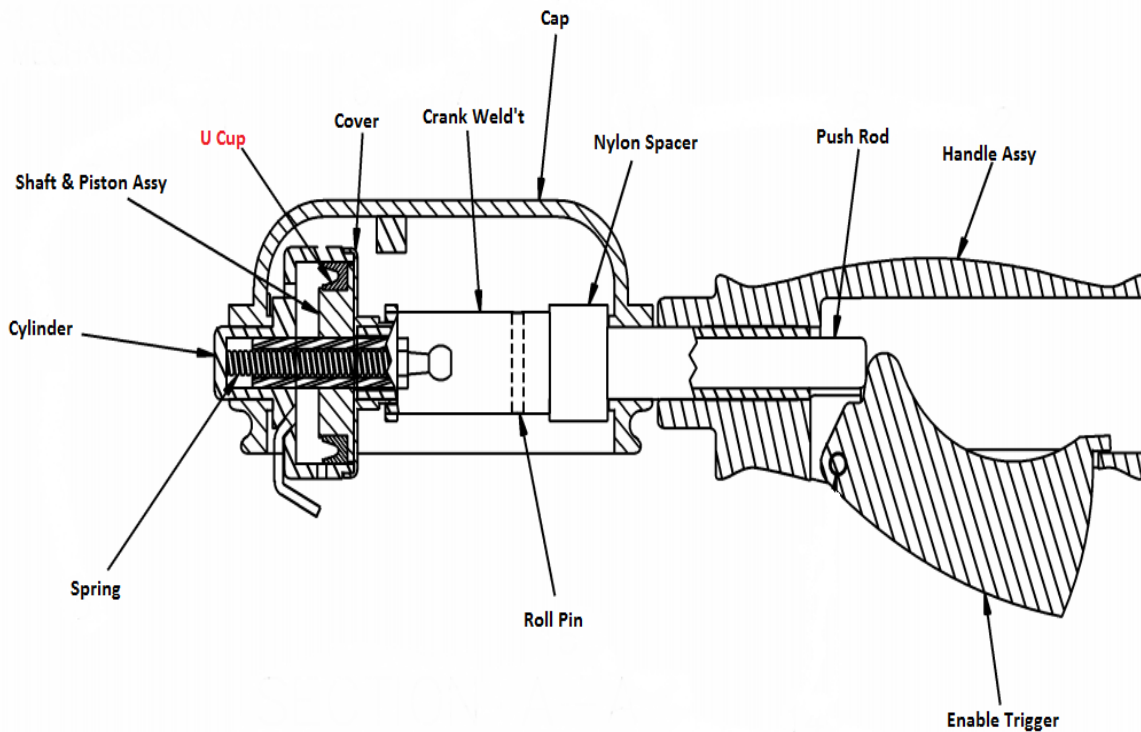
Step 5

Remove the 2 bolts that hold the ladder to the valve body.



Step 6

Flip the control cap over and locate the roll pin.



Step 7

Rotate the handle assembly slightly and gently pound out the roll pin using a properly sized roll pin punch.

Step 8

With the roll pin removed, pull the handle assembly and pushrod out of the cap. Remove the nylon spacer and crank weldment.

Note: Do not lose the spring during disassembly.



Step 9

Remove the cover and piston assembly.

Using an O-ring pick, remove the old U-Cup from the cylinder.

Step 10

Clean and inspect the brass cylinder for damage.



Step 11

Lube the inside of the brass cup with Vaseline and install the new U-cup into the cylinder.



Step 12

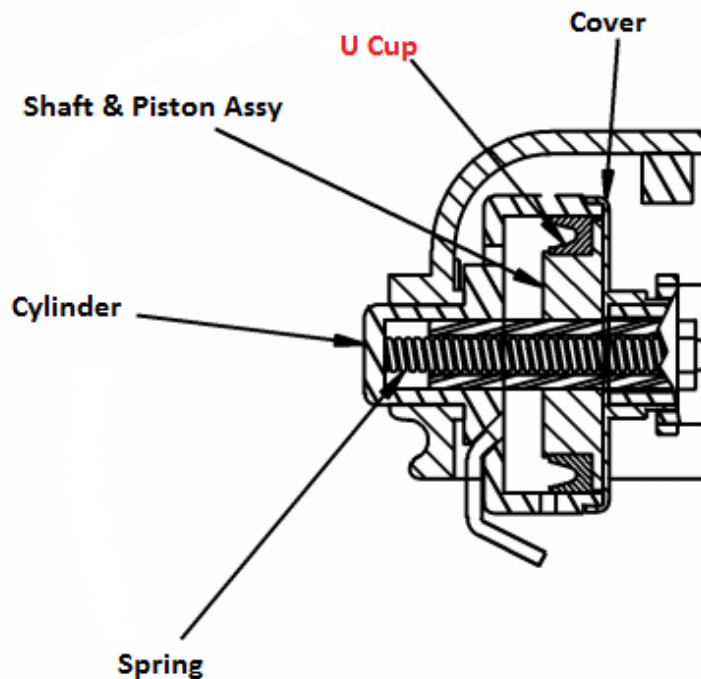
Install spring, shaft and piston assembly, crank weldment, and nylon spacer. Insert pushrod and handle assembly into the cap.

Step 13

Line up the hole for the roll pin and gently pound it in.

Step 14

When roll pin is in place, squeeze the enable trigger to seat U-cup into place.



Step 15

Attach a pressure gauge into the air line, squeeze the enable trigger and hold it.

Pressure gauge should read about 10 PSI and hold the pressure for as long as the trigger is squeezed.

Step 16

Reattach all linkages to the cap and the linkages to the valve body if they were removed.

Step 17

Operate through its full range of functions from the lower and then the upper controls before returning it back to service.