


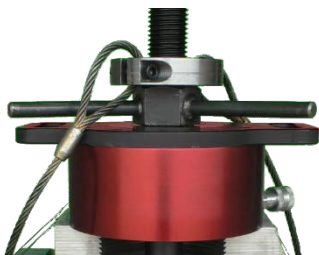
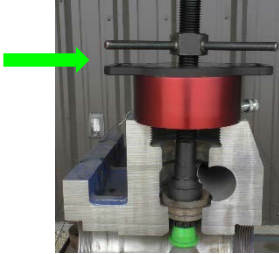


Acumen Quick Release Valve Seat Puller

FRAC Pump Operations Critical Check Points

<p>Bottom Nose Ensure bottom nose is fully threaded (hand tight) and flush with puller shaft.</p>	 Two views of the puller head assembly. The top view shows the red nose and black body. The bottom view shows the red nose and black body from a different angle. A green checkmark is positioned to the left of the top view.
<p>Cross Pin Access Hole Turn outer collar 90 degrees covering access hole to prevent cross pin from sliding out.</p>	 Two views of the puller head assembly. The top view shows the red nose and black body. The bottom view shows the red nose and black body from a different angle. A green checkmark is positioned to the left of the top view, and a green curved arrow indicates a 90-degree rotation.
<p>Pull Button The pull button is a visual cue. When properly engaged, only the slim “neck” portion of the silver pull button will be exposed. If more than this section of pull button can be viewed when pressuring up, puller head is not properly engaged.</p>	 Two views of the pull button assembly. The top view shows the silver pull button and blue base. The bottom view shows the silver pull button and blue base from a different angle. A green checkmark is positioned to the left of the top view.
<p>Tie Down Install tie down onto puller shaft over the nut to secure valve seat puller. This will prevent injury or damage to tool. Leave approximately 3” slack in lines.</p>	 A red puller head assembly with a tie down strap secured over the nut on the shaft.
<p>Removing the Next Seat When engaging the next seat, back nut off hydraulic jack to allow enough travel for puller head to properly engage the seat. The acorn nut will confirm its position.</p>	 A red puller head assembly with a green arrow pointing to the nut on the shaft.

Acumen Quick Release Valve Seat Puller

FRAC Pump Operation

Instructions

Carefully read all instructions before operating Quick Release Valve Seat Puller (QRVSP). Please also view operational video.

1. Proper Personal Protective Equipment (PPE) required during operation.
2. Inspect all components prior to each use ensuring puller is in correct working order.
3. Use proper puller head for the valve seat being removed.
4. Ensure bottom nose is fully threaded (hand tight) onto puller shaft before inserting puller into valve seat. Bottom of puller shaft should be flush with bottom nose. If bottom nose is left loose, damage to puller assembly may occur.
Warranty does not cover damage caused by bottom nose being left loose.
5. Ensure outer housing/collar access hole is turned at a minimum ¼ turn to cover puller shaft cross pin access hole/slot.
6. Insert puller into valve seat to engage.
Warranty does not cover damage incurred by dropping puller onto valve seat.
7. Install hydraulic jack onto puller shaft.
8. Install 2" nut onto puller shaft.
Grab and lift puller shaft to ensure puller head is properly coupled with valve seat.
9. Align nut and jack directly over valve seat to ensure a straight pull
10. Tighten nut firmly onto hydraulic jack while lifting on puller shaft to ensure proper engagement between valve seat and puller head
11. Install Tie Down over shaft and properly secure to prevent puller and hydraulic jack from ejecting from fluid end.
Warranty does not cover damage caused by puller and hydraulic jack not being secured to fluid module.
12. Pressure up and extend jack until valve seat disengages.
13. Remove tie down off puller shaft
14. Pull up on aluminum pull button at the top of the shaft to release valve seat from jaws.
15. Completely disassemble unit or lift puller and jack together by grabbing puller shaft and set assembly onto next valve seat to be removed. Use proper lifting techniques and supports to avoid injury.
16. If unit is kept assembled, be sure to back nut off enough to allow puller head to fully engage valve seat.
17. Repeat steps 4 thru 16 until all valve seats have been removed.

WARRANTY:

GUARANTEED FOR MECHANICAL DEFECT AND WORKMANSHIP. TOOL IS SPECIFICALLY DESIGNED TO PULL VALVE SEATS AND IS NOT TO BE USED FOR ANY OTHER PURPOSE. TOOL IS TO BE REGULARLY INSPECTED AND CLEANED OF DIRT AND GRIME TO ENSURE PROPER FUNCTION WHILE OPERATING

WARRANTY DOES NOT COVER DAMAGE CAUSED BY TOP OF PULL KNOB, OR PULLER SHAFT BEING HIT, BY PULL ROD ASSEMBLY BEING LEFT LOOSE, BY BOTTOM NOSE BEING LEFT LOOSE, BY PULLER ASSEMBLY EJECTING FROM FLUID END MODULE, BY DROPPING PULLER ONTO VALVE SEAT AND BY NOT PROPERLY SECURING PULLER AND JACK TO FLUID END MODULE.

ACUMEN IS NOT RESPONSIBLE FOR INJURIES DUE TO IMPROPER OPERATION OR FAILURE TO PROPERLY SECURE QRVSP TOOL AND RELATED PARTS.