



Hydra-Jac

By

Radflo Suspension Technology

Service Instruction Guide

Tools and Parts Needed:

M10 Socket/Wrench

M17 Socket/Wrench

Breaker Bar with ½" x 1.5" Pin on the End

21" Socket Extension

11/16" Socket

Torque Wrench

Pin Tool

Pick Tool

Small Flat-Head Screwdriver

Light Grease

Hydraulic Jack Disassembly

Step 1: Prepare the Hydraulic Jack Picture 1A

- 1.1 Securely mount the hydraulic jack in a vertical position using a vice to ensure stability during disassembly.
- 1.2 Remove M10 Cap Screw and Copper Washer and set aside.
- 1.3 Open the bleed screw by rotating it two full turns counter-clockwise to release any residual pressure.
- 1.4 Pull the shaft down to the fully extended position, and securely close the bleed screw to prevent fluid leakage.

Step 2: Plunger Handle Removal Picture 1B, 1C

- 2.1 Use M8 Socket/Wrench to remove the lower bolt securing the plunger handle.
- 2.2 Carefully detach the plunger handle from the jack assembly.

Step 3: Plunger Removal - Picture 1D

- 3.1 Gently remove the plunger from the jack assembly.

Step 4: Reservoir-Pump Separation - Picture 1E, 1F

- 4.1 Apply Heat to Top of Housing at threads
- 4.2 Insert a breaker bar into the plunger port.
- 4.3 Rotate counter-clockwise to facilitate disassembly.
- 4.4 Carefully separate the reservoir pump from the housing.

Step 5: bleed screw Removal

- 5.1 Rotate the handle counter-clockwise to remove the bleed screw from the reservoir pump.

Step 6: Fluid Removal

- 6.1 Drain the oil from the housing/shaft assembly into a suitable container for future use.

Step 7: Jack Foot Removal - Picture 1G

- 7.1 Use an M17 socket/wrench to remove the jack foot and slide it off the housing.

Step 8: Shaft Bolt and Piston Extraction - Picture 1H, 1I, 1J, 1K

- 8.1 Clamp the shaft with $\frac{7}{8}$ " soft jaws in a vise, holding it at the bottom towards the base.
- 8.2 Fully collapse the housing, capturing any excess fluid.

- **8.3** Using an 11/16” Socket with a 21” Socket Extender, remove the shaft bolt located at the end of the shaft inside the housing.
- **8.4** Carefully separate the housing from the shaft assembly once the bolt has been removed.
- **8.5** Utilize a 21” Socket Extender to push the shaft bolt and piston through the housing.

Step 9: Jack Reservoir Separation - Picture 1L, 1M, 1N, 1O

- **9.1** Apply heat to the seam between the Jack Reservoir and Jack Pump to facilitate removal.
- **9.2** Using the pin tool and breaker bar, remove the Jack Reservoir by rotating it counter-clockwise.

Step 10: Seal and O-Ring Removal

- **10.1** Using a pick tool or a small flat-head screwdriver, remove all seals. Ensure not to damage threads or seal grooves, as this will cause leaks.

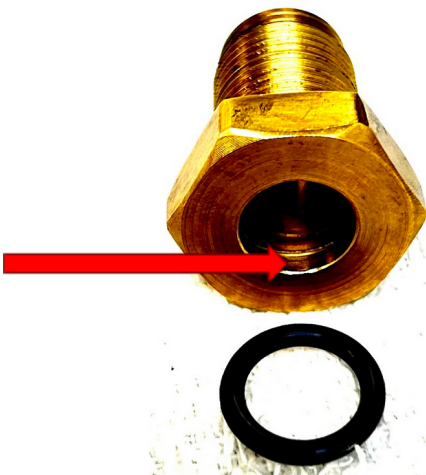
Seal Replacement: Bleed Screw Seal (x1)

Picture 2A



Plunger Port Seal (x1)

Picture 2B



Reservoir Seal (x1)

Picture 2C



Housing Seal (x1)

Picture 2D



Piston Seals* (x2)

Picture 2E, 2F



* There are 2 types of piston seals.

1. 6mm Seal
2. 5mm Seal with 1mm Backing Washer

Housing Wiper Seal (x1) and DU Bushing (x1)

Picture 2G



Port Washer (x1)

Picture 2H



End Cap Bolt Washer (x1)

Picture 2I



Hydraulic Jack Reassembly

Step 1: Reassembly Preparation

- 1.1 Ensure all components are clean and free of contaminants before reassembly.
- 1.2 Apply a thin layer of grease to all seals and o-rings.

Step 2: Jack Reservoir Installation

- 2.1 Secure the Jack Reservoir to the Pin Tool.
- 2.2 Connect Jack Reservoir with Jack Pump and tighten with the breaker bar.

Step 3: Shaft Bolt and Piston Reassembly - Picture 2E, 2F

- 3.1 Ensure Jac Shaft is securely in vise
- 3.2 Use grease to lubricate piston seals, shaft wiper seals, and housing threads.
- 3.3 Slide the housing over the shaft assembly until fully collapsed.
- 3.4 Insert the piston and shaft bolt into the housing, ensuring proper alignment.
- 3.5 Secure the shaft bolt inside the housing using an 11/16" Socket and 21" Socket Extender, tighten and torque to 45 ft-lbs or 61 N-m.

Step 4: Jack Foot Reattachment

- 4.1 Slide the jack foot onto the housing, ensuring it is securely in place.
- 4.2 Fasten the jack foot to the housing by tightening bolts using an M17 socket/wrench.

Step 5: Fluid Replacement

- 5.1 Mount Housing/Shaft Assembly vertically in vise as in Picture 1A and fully extend.
- 5.2 Refill the jack housing with the hydraulic oil up to the base of the threads inside the housing.

Step 6: Reservoir Pump Connection

- 6.1 Apply a thin line of Blue Loctite around housing threads on the jack pump assembly.
- 6.2 Reattach the reservoir pump assembly to the housing, using the breaker bar to rotate it clockwise until tight.

Step 7: Bleed Screw Installation

- 7.1 Insert the bleed screw into the reservoir pump and rotate the handle clockwise to tighten.

Step 8: Plunger Replacement

- **8.1** Carefully insert the plunger into the jack assembly.

Step 9: Plunger Handle Reattachment

- **9.1** Attach the plunger handle to the jack assembly and secure it with the lower bolt.

Step 10: Final Steps

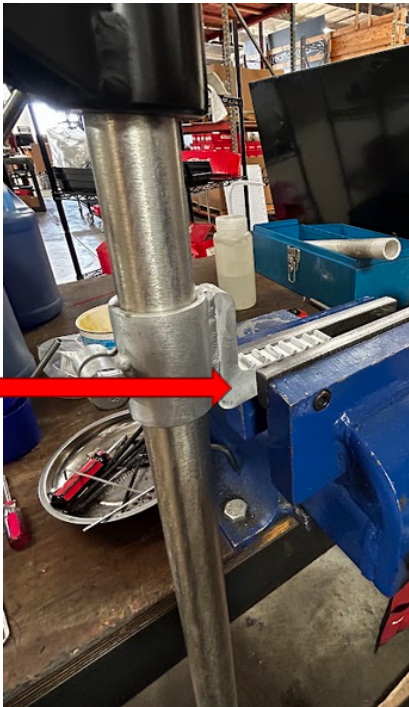
- **10.1** Open the bleed screw by rotating it one full turn in a counter-clockwise direction.
- **10.2** With M10 End Cap Bolt and Washer not installed, push shaft up until fully compressed to push air through the valve.
- **10.3** Wait 30 Seconds for pressure to equalize and install M10 End Cap Bolt/Washer and close the bleed screw.

Step 11: Final Checks

- **11.1** Ensure all components are securely fastened and properly aligned.
- **11.2** Verify that there are no fluid leaks.
- **11.3** Perform a functionality test by extending and retracting the hydraulic jack to ensure proper operation.

Appendix

Picture 1A



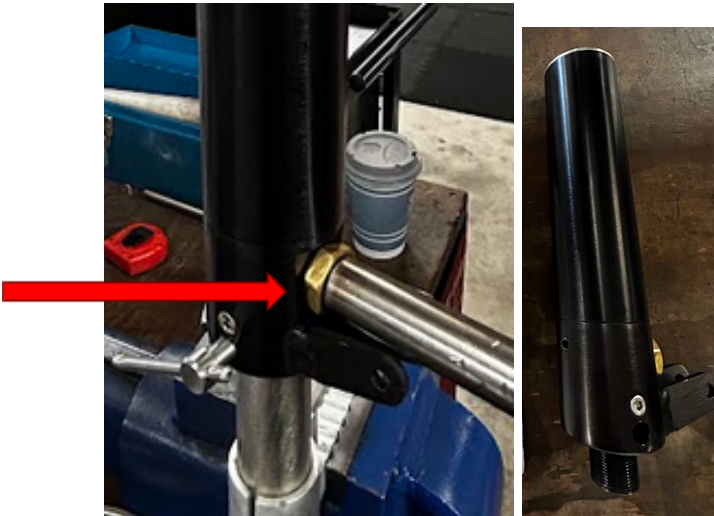
Picture 1B, 1C



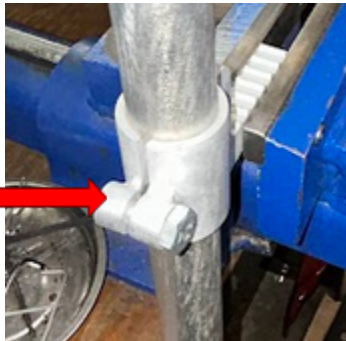
Picture 1D



Picture 1E, 1F



Picture 1G



Picture 1H



Picture 1I



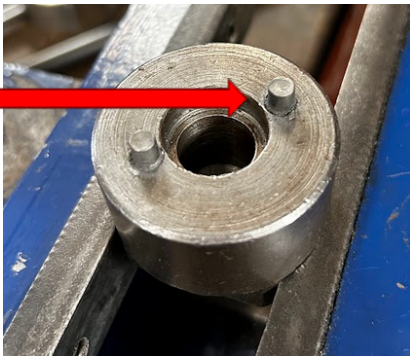
Picture 1J, 1K



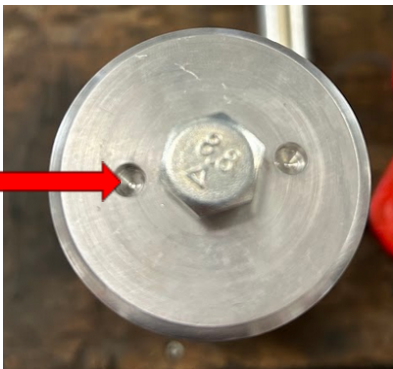
Picture 1L



Picture 1M



Picture 1N



Picture 10

