



# **RHINO JR. PINE JENNY HOLLOW CORE PULLER**

## **OPERATING MANUAL**



[www.USAIindustries.com](http://www.USAIindustries.com) • [info@USAIindustries.com](mailto:info@USAIindustries.com)

(713) 941-3797 • (800) 456-8721

315 State Street • S. Houston, TX 77587



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**PLEASE READ THROUGH ALL PROCEDURES THOROUGHLY AND CAREFULLY BEFORE ATTEMPTING INSTALLATION.**

*Rhino Jr. Pine Jenny parts identified in this manual can be found on the last page of this document in Figure 8.*





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USA Industries offers this tool in both pneumatic and electric models. The following instructions apply to both versions except where specified.

## Operating Procedures

- *It is critical that before commencing the installation procedures outlined in this manual that the far side of the tube is severed completely from the tube sheet. Failure to do so may turn into a potentially costly and irreversible situation. If the flared end of the far side of the tube is pulled through the exchanger baffles it can severely deform the baffles and place added pressure on the adjacent tubes. USA Industries' One-Rev Internal Tube Cutter (see Figure 9) is the best tool to use when cutting the tube. Call us at (800) 456-8721 for more information.*
- Connect *Hydraulic Hose* quick connects. "A" Port corresponds with the back of the *Cylinder*; "B" Port corresponds with the front of the *Cylinder*. The back has a smaller hole; the hollow *Rod* is visible. The front has a large hole; the *Rod* is not visible (see Figure 1).



Figure 1

- **Pneumatic version only** - Excess moisture in air supply line may cause equipment to malfunction or lock up. Ensure that air supply passes through a dryer before connecting to the power unit. If a dryer is not available, apply pneumatic oil liberally to the inside of the air line and power unit port.
- **Pneumatic Version** - Connect shop air (see Figure 2) to the air supply port on the *Power Unit*.
- **Electric Version** - Plug in power unit to 110 Volt power (see Figure 3).



Figure 2



Figure 3

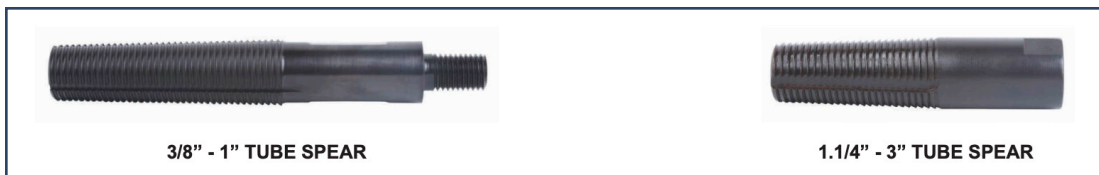


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- Select the correct size of *Self-Tapping Tube Spear*. *Spears* are marked with corresponding tube size on *Shaft* (see *Figure 4*).



*Figure 4*

- Remove protective *Wax Coating* (see *Figure 5*) from threads of the *Spear* and apply a moly based lubricant to the threads (both sides).



*Figure 5*

- Insert *Spear* into tube to be pulled. Using a hand or impact wrench, tighten the *Spear*; hand tight plus 2 to 3 turns.

**Note:** There are wrench flats on each *Spear*, if an impact gun is to be used, the *Double Pull Adaptor* (Part Number: PJPA-6, see *Figure 8*) should be threaded onto the *Spear* to use the *Square Drive* at the rear of that tool. USA Industries, Inc. does not recommend using an impact wrench on *Spear* for tubes 1" and smaller.

- If not done in the previous step, thread the *Double Pull Adaptor Tool* (Part Number: PJPA-6, see *Figure 8*) onto the protruding end of the *Tube Spear*. For *Tube Spears* larger than 1", the *Male by Male Adaptor* (Part Number: PJAE-5, see *Figure 8*) and the appropriate size *Extension Chair* (see *Figure 8*) should be used. The *Adaptor* is installed between the *Tube Spear* and the *Double Pull Adaptor*. The *Extension Chair* is installed over the assembly before installing the *Cylinder*.



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- Place the *Hollow Cylinder* over the *Adaptor* and *Spear*, front end (larger hole) closest to the tube sheet.
- Make sure the front of the *Cylinder or Extension Chair* is pushed up against the tube sheet. The first locking notch should be visible; slide the *Horse Shoe Lock* (Part Number: PJHL-4, *see Figure 8*) into the locking notch. Note: ensure the *Horse Shoe Lock* is fully seated in the locking notch.
- **ENSURE THAT ALL PERSONNEL AND EQUIPMENT ARE CLEAR OF PINCH POINTS AND NOT STANDING BEHIND THE CYLINDER.**
- Ensure the *Directional Valve Lever* is turned to the “B” position (*see Figure 7*). Actuate *Cylinder* by depressing the button on the *Air Supply Port*. The *Hollow Rod* should begin to extend, pulling the tube. The stroke is 6”. Keep button depressed until the *Rod* stops or until the near end rolled connection to the tube sheet is broken.
- If tube or stub is not free, toggle the *Directional Valve Lever* to the “A” position (counter clockwise, *see Figure 6*) and depress the button on the *Air Supply Port* until the *Rod* is fully retracted. The second locking notch on the *Double Pull Adaptor* should be visible.
- Move the *Horse Shoe Lock* to the second locking notch.
- Turn the *Directional Valve Lever* to the “B” position (*see Figure 7*) and extend the *Rod* again by depressing the button on the air supply port.

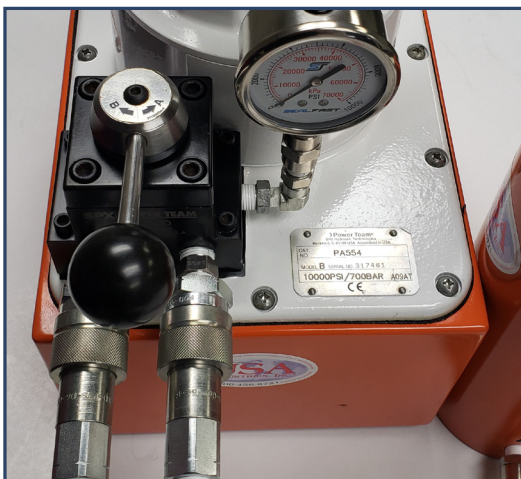


Figure 6



Figure 7



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## Parts List & Cylinder Insert Configurations:

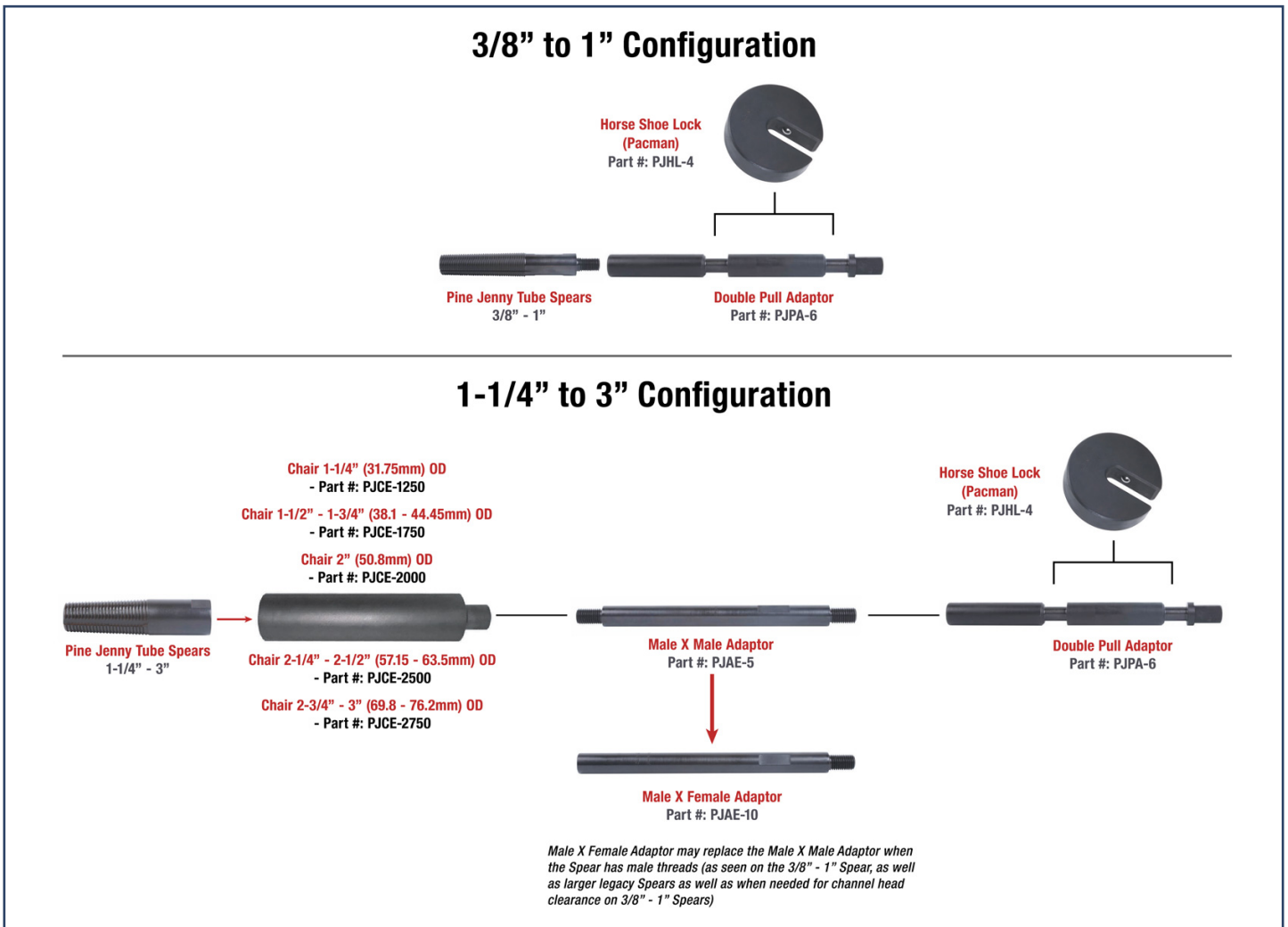


Figure 8



Figure 9 - USA Industries, Inc. One-Rev Internal Tube Cutter