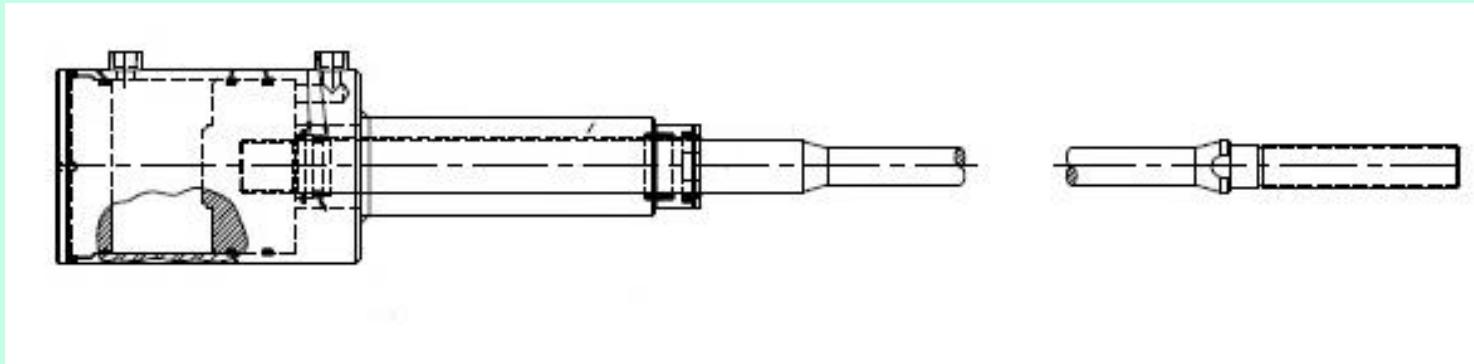




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CTU INJECTOR TRACTION



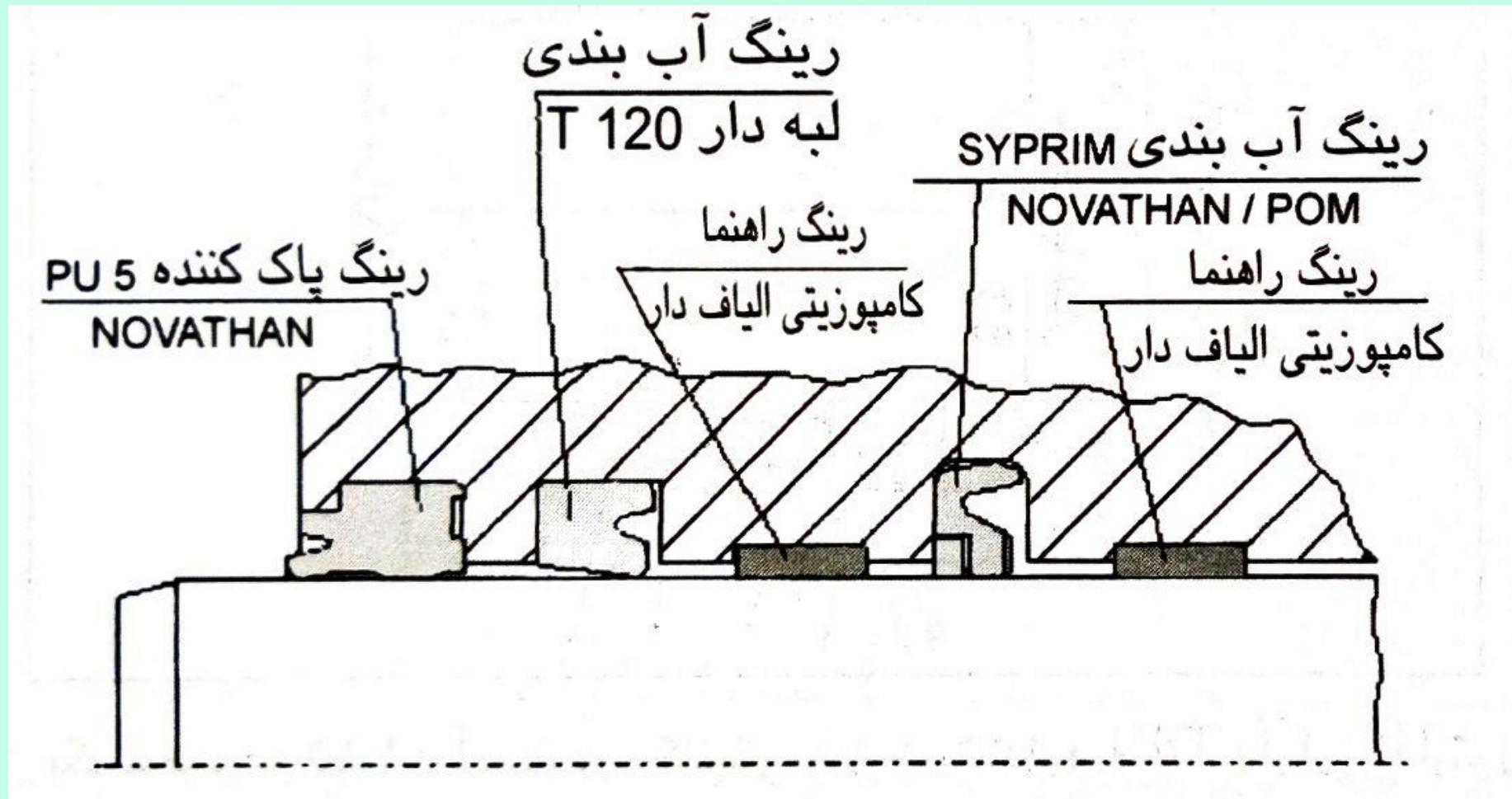
Author: Jalal Alali

2018.12



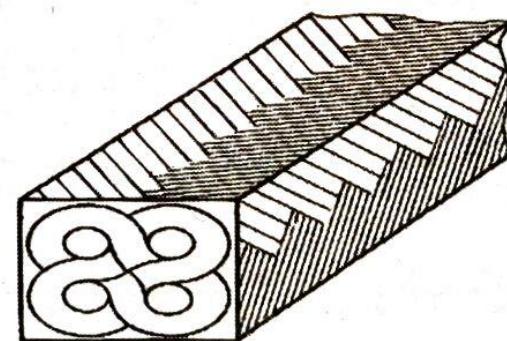
WORK CONTENT

- Overview
- Description
- Operation
- Tool maintenance process
- Function Test

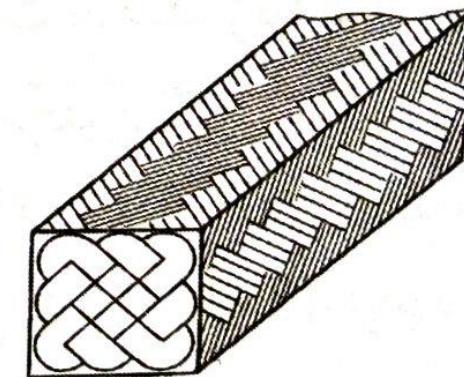




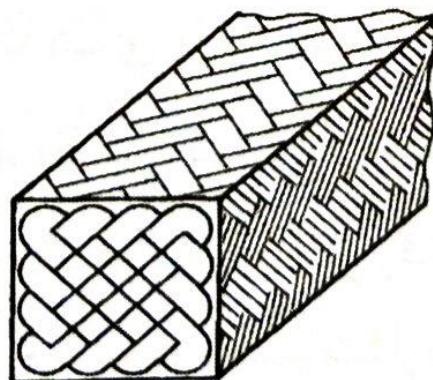
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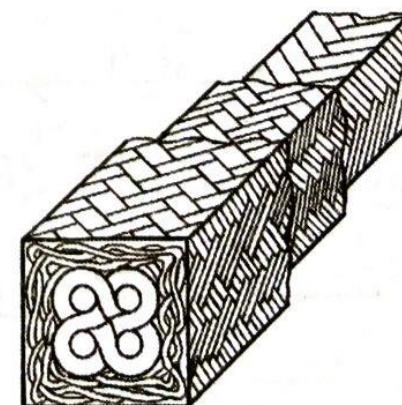
الياف تابیده شده مربعی



الياف تابیده شده سه ردیفه قطری



الياف تابیده شده چهار ردیفه قطری



الياف تابیده شده چند لایه



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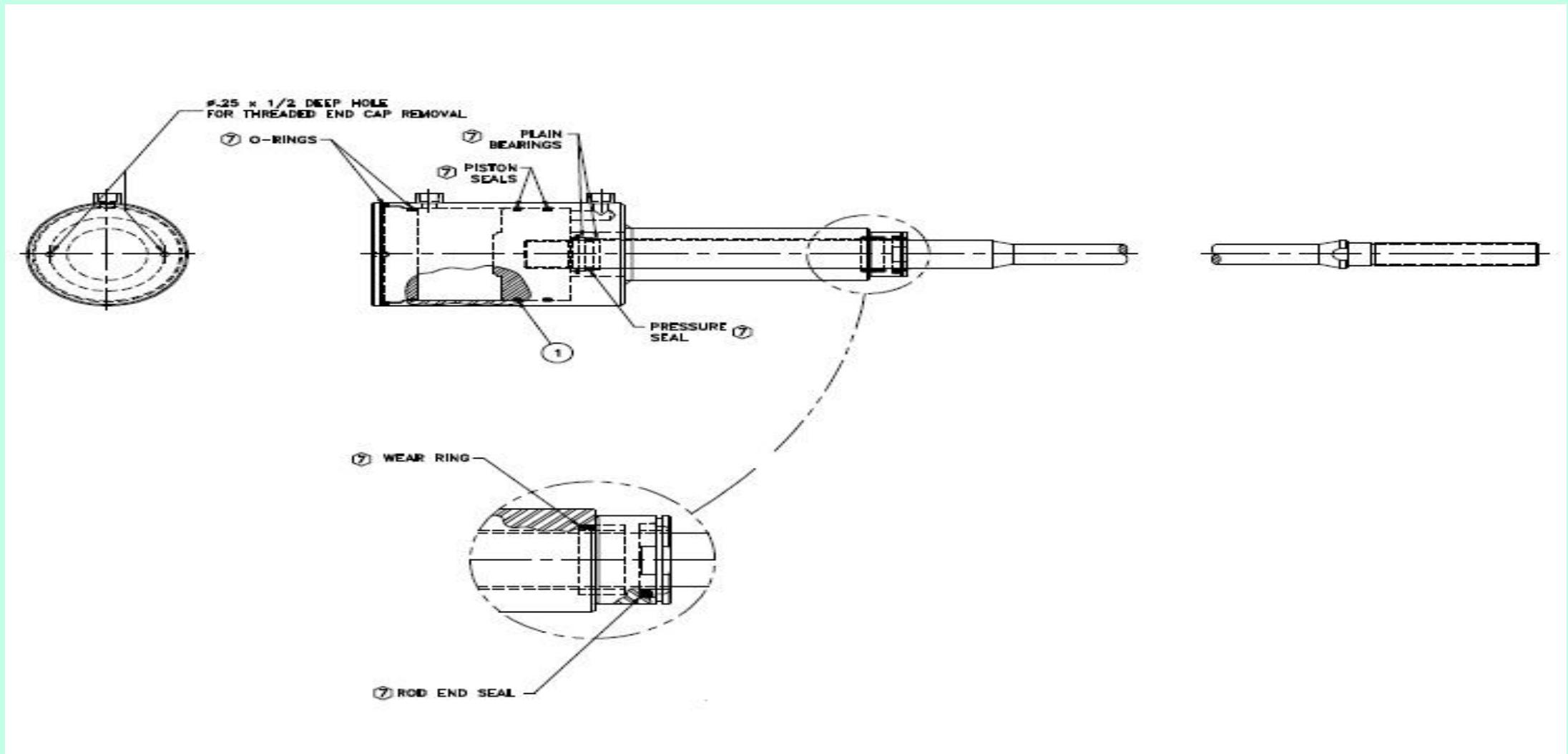
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assembly drawing





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Required auxiliary equipment and related Hand tools

No	Tool Name	Quantity	Note
1	Vise	1	
2	24"Pipe wrenches	2	
4	Allen wrench	Some	
5	Common Hand Tools	some	

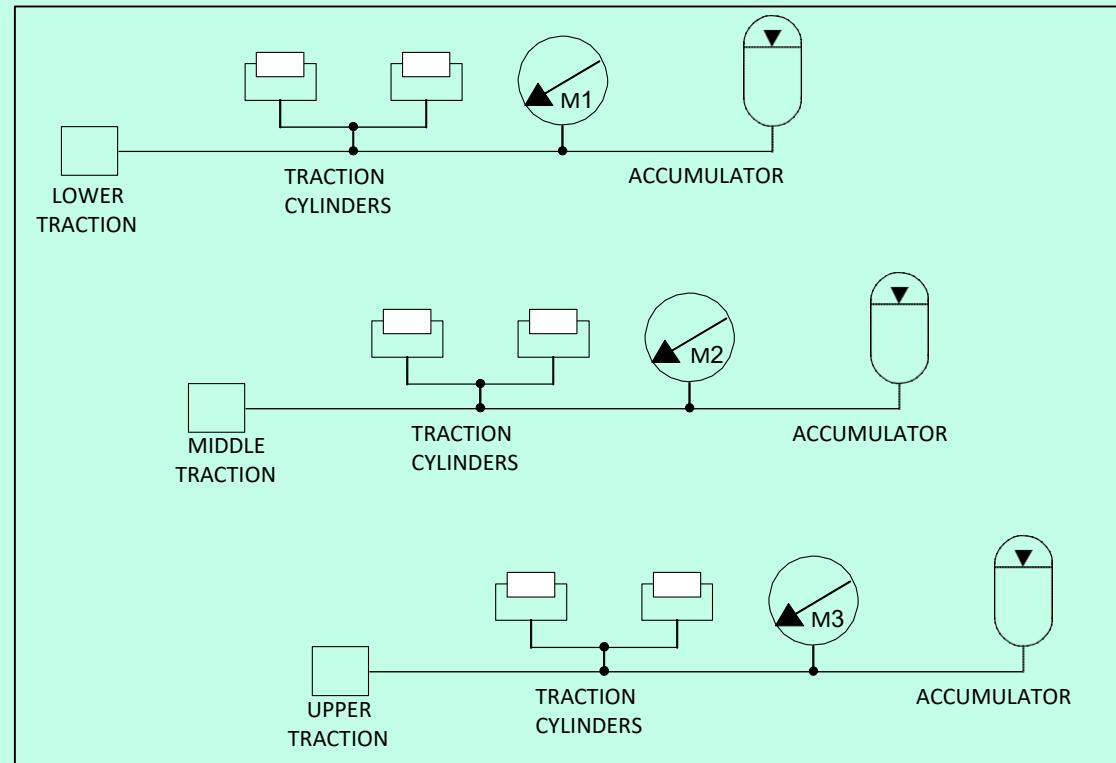


DESCRIPTION

- The traction system consists of three pairs of cylinders which act on two hardened steel skates, between which the chain carriers are clamped as they pass through grip zone. Each pair of cylinders reacts against one another through structural beams connected by tension rods. Each traction set floats horizontally in the injector structure in bushings.
- Pressure to the hydraulic cylinders is controlled from the cabin through three separate circuits, each having an accumulator to dampen the dynamic effects of the chain during operation and to provide pressure in the event of hydraulic pressure loss. The injector pulling force is directly related to the traction force applied. The ratio of traction force to pulling force varies depending on many factors, including insert condition, oil or other substances on the tubing surface, tubing wall thickness, running speed and tubing ovality.



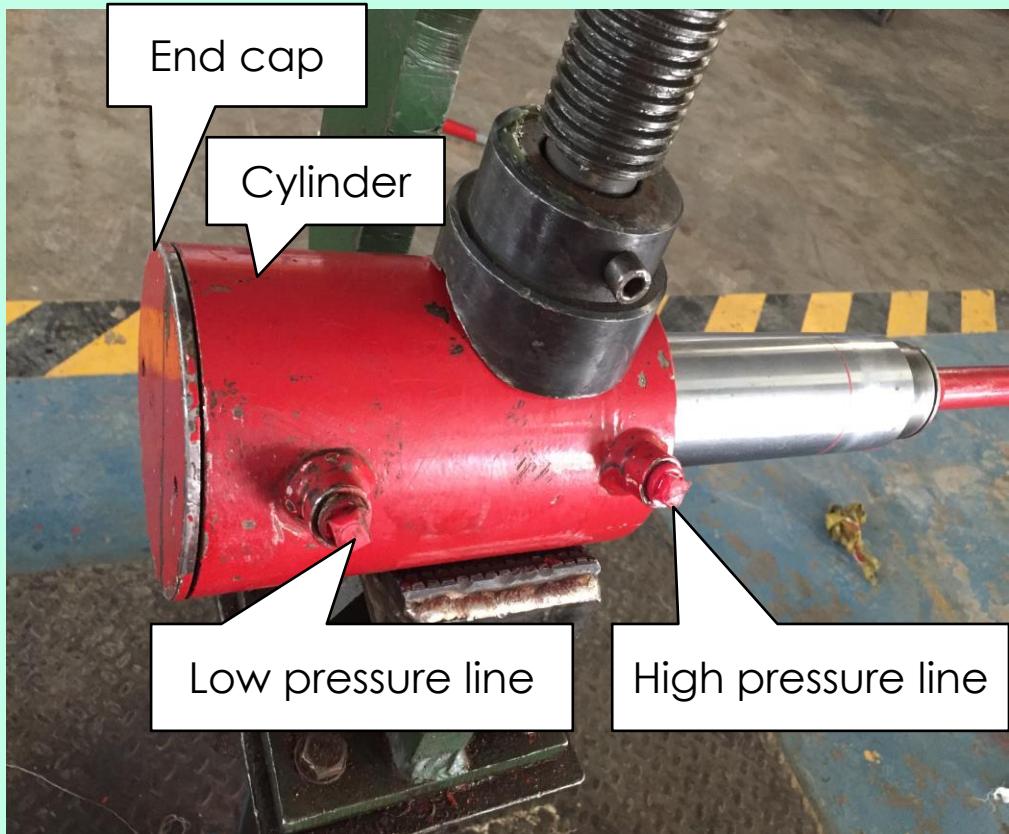
INJECTOR TRACTION CIRCUIT





Disassembly

- ➡ Unscrew the end cap





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NOTE:
HOLD SOMETHING LIKE BOTTLE UNDER THE CYLINDER TO AVOID HYDRAULIC OIL LEAKAGE ON THE AREA



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- ▶ PUSHING FORWARD THE ROD BY HAMMER HITTING TO TAKE OUT PISTON FROM THE CYLINDER

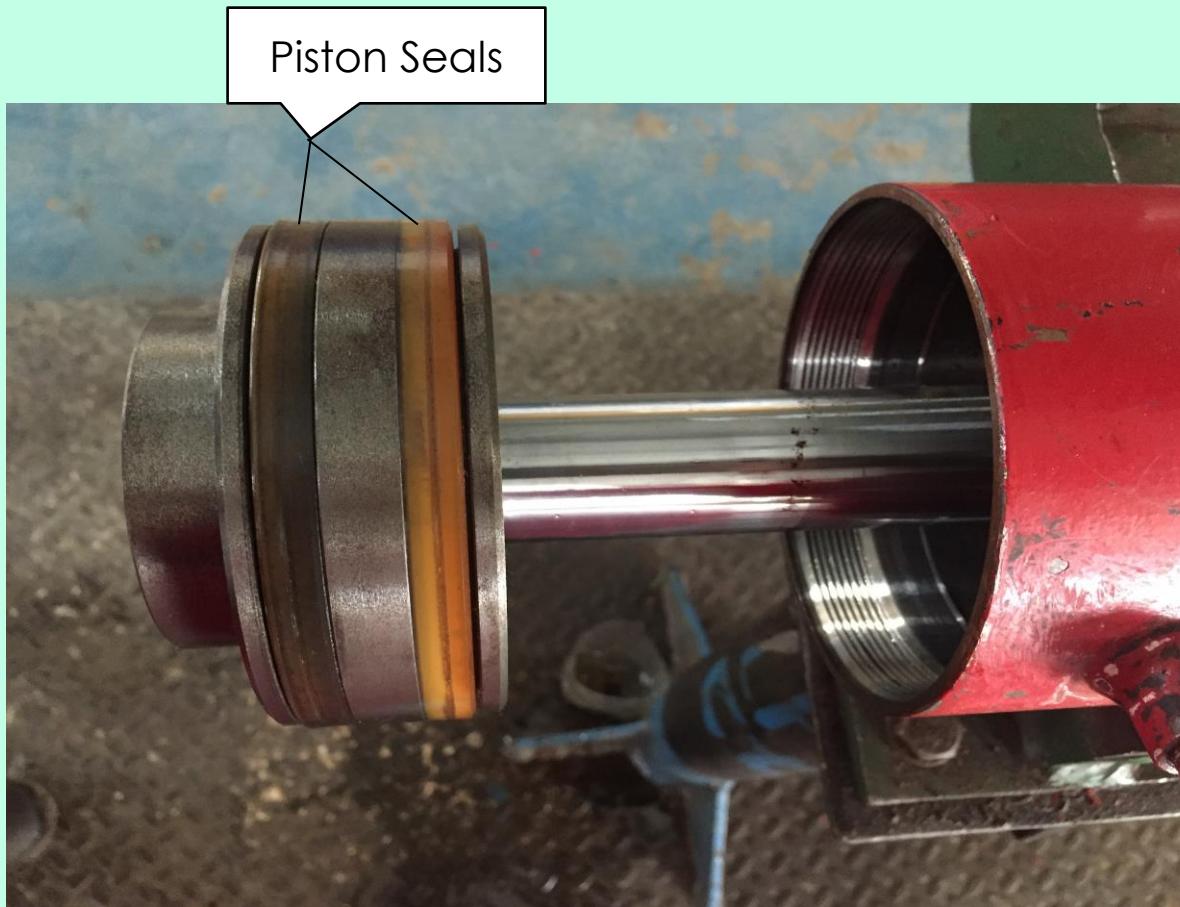




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► COMPLETELY SLIDE PISTON FROM THE CYLINDER





NOTE:

THE SHAPE AND CONDITION OF PISTON SEALS ARE MUCH IMPORTANT FOR SEALING AND AT THE ABOVE PHOTO ARE NOT SUITABLE AND SHOULD BE CHANGED



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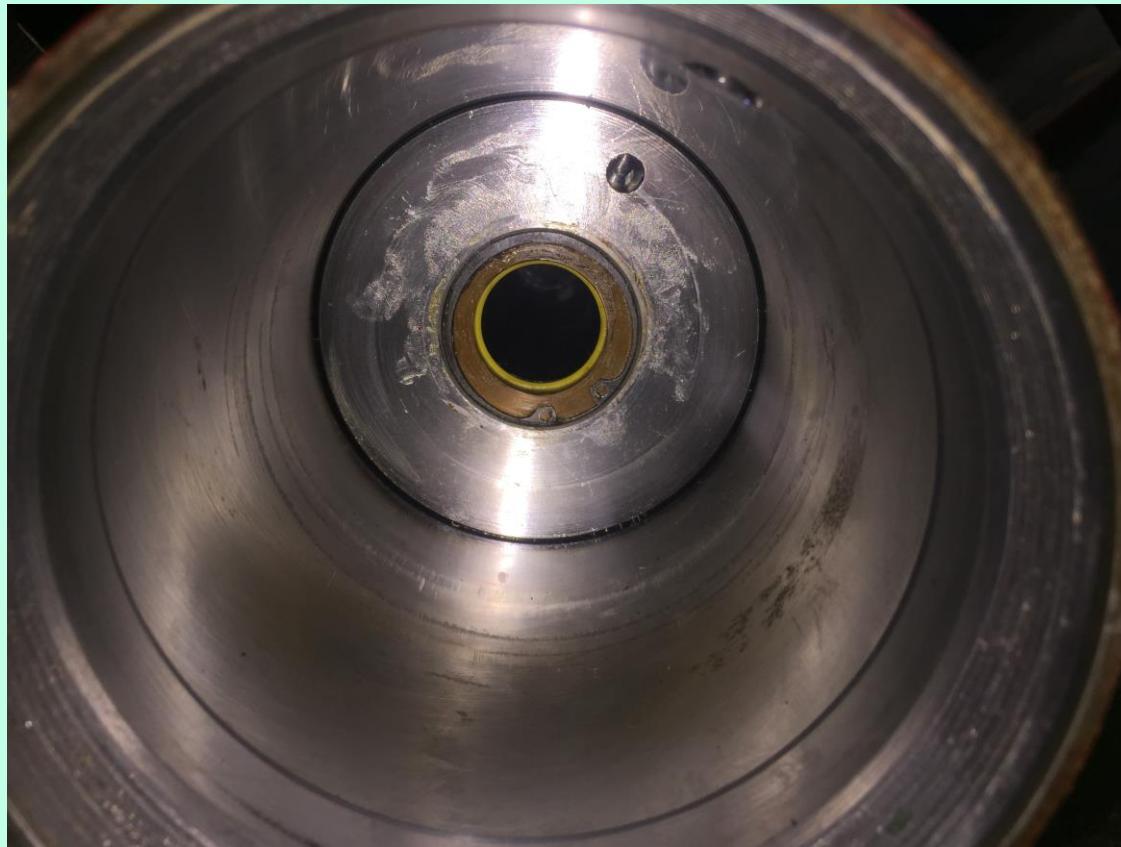
► CORRECTIVE DIRECTION OF PISTON SEALS DURING INSTALLATION IS TOO MUCH IMPORTANT FOR SUITABLE SEALING AND PREVENT LEAKAGE





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► REMOVE THE SEAL PACKING INSIDE THE CYLINDER RESPECTIVELY





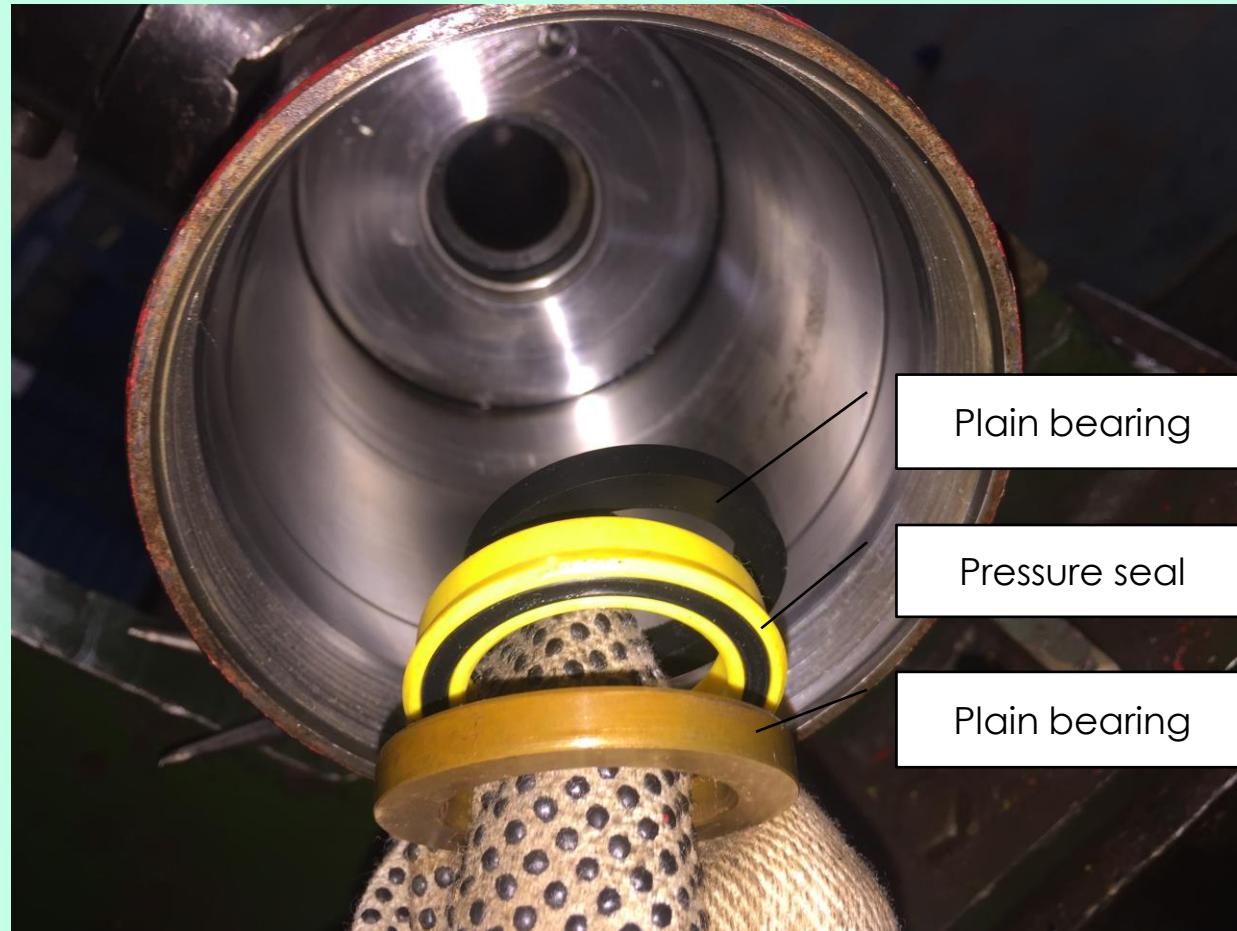
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► REMOVE THE RETAINER RING





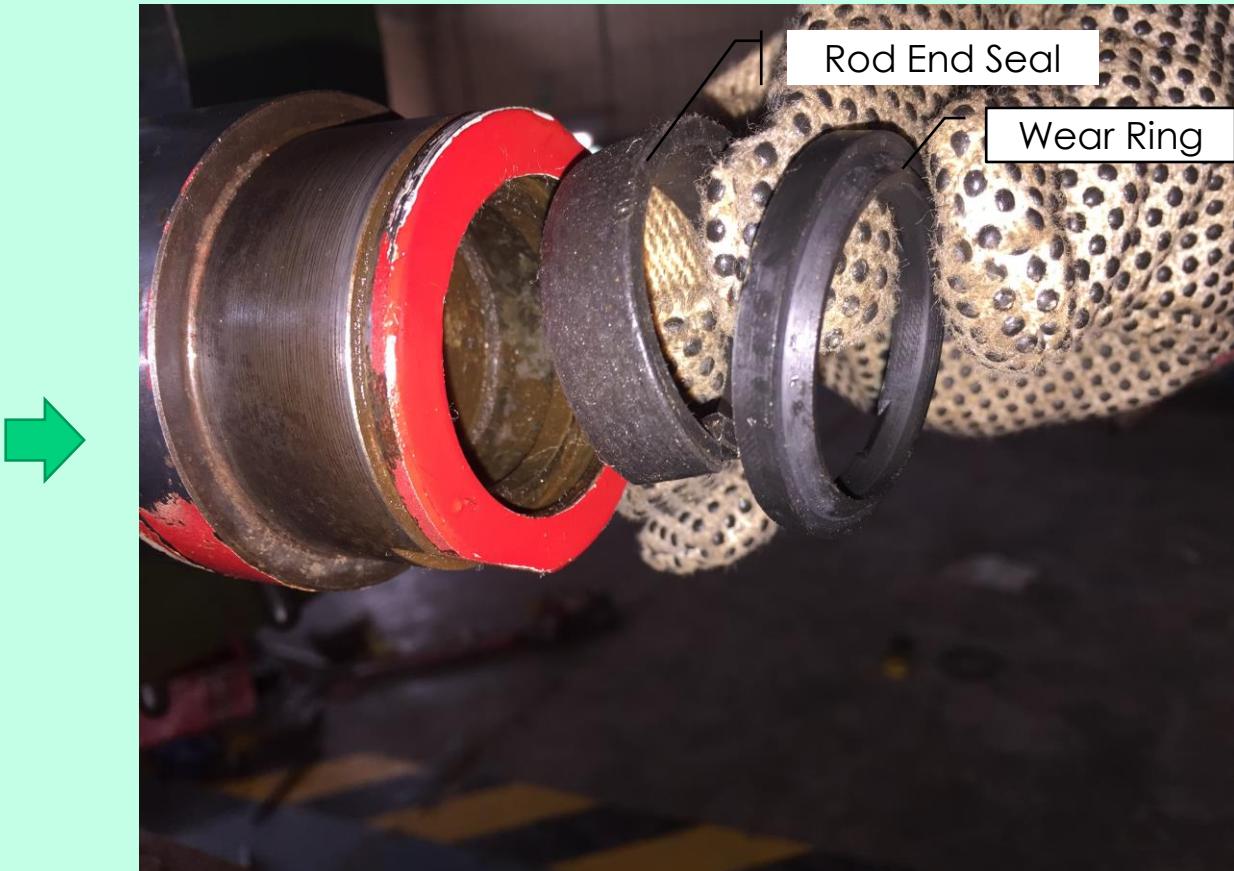
► SLIDE PLAIN BEARINGS AND PRESSURE SEAL





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► REMOVE THE ROD END SEAL AND WEAR RING





Assembly

- ▶ INSTALL THE SEAL PACKING INSIDE THE CYLINDER RESPECTIVELY





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INSTALL RETAINER RING





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► INSTALL THE ROD END SEAL AND WEAR RING AND GREASING





- SLIDE THE ROD INTO THE CYLINDER AND INSTALL PISTON INSIDE THE CYLINDER BY SOFTLY HAMMER HITTING





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► SCREW THE END CAP TO THE CYLINDER





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Function Test





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► FILLING THE HAND PUMP TANK WITH HYDRAULIC OIL





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► CONNECT HAND PUMP HOSE TO THE HIGH PRESSURE TRACTION LINE AND START GETTING PRESSURE TEST





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► SLOWLY INCREASE THE PRESSURE FROM ZERO TO 2500 PSI, MAINTAIN PRESSURE AND VISUALLY CHECK UP THE TRACTION AND GAUGE PRESSURE



NOTE:

DURING PRESSURE TEST, IF PRESSURE DROP OR LEAKAGE OCCURRED , ALL THE SEALING SHOULD BE CHECKED TO FIND UP THE PROBLEM