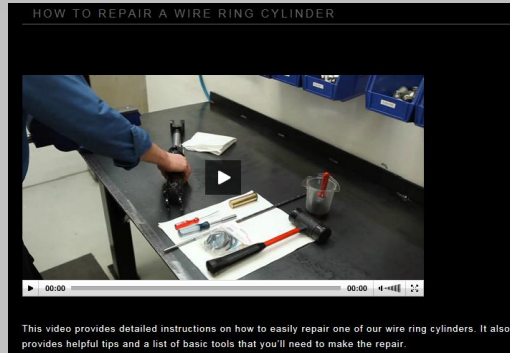
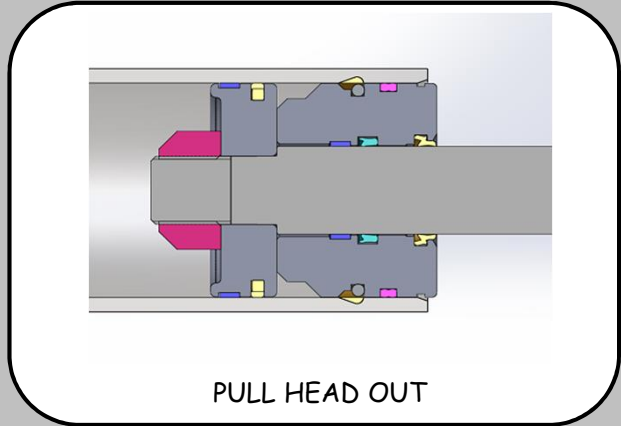
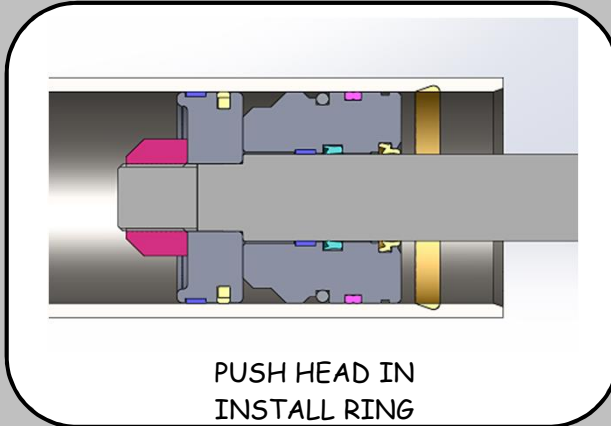
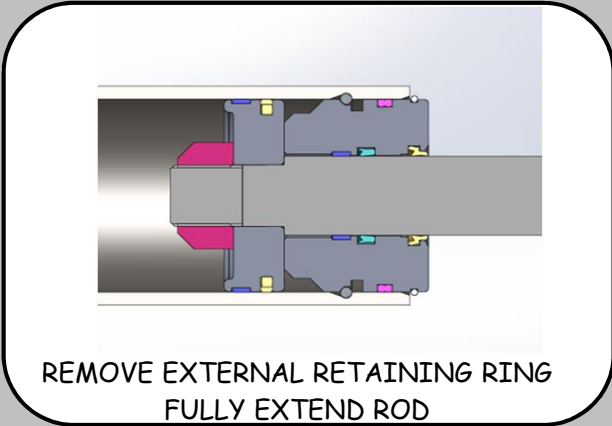


An online video of this process can be found at <http://www.monarchindustries.com/lion-hydraulics/media/>



DISASSEMBLY OVERVIEW STEPS 1-12

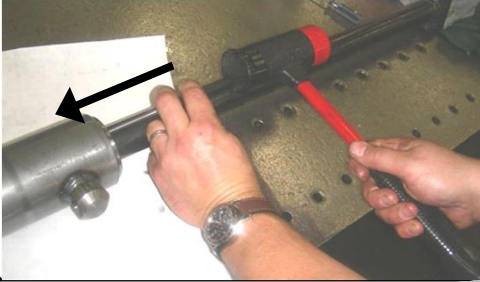


1 TOOLS REQUIRED:
RUBBER Mallet, SCREW DRIVER,
PUNCH, SUPPLIED PLASTIC RING,
SUPPLIED BAND CLAMP

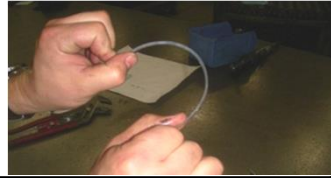
2 REMOVE EXTERNAL STEEL WIRE
LOCKING RING. THIS RING WILL
BE REUSED

3 FULLY EXTEND ROD.
ROD NEEDS TO BE FULLY EXTENDED
TO PULL PISTON OUT LATER

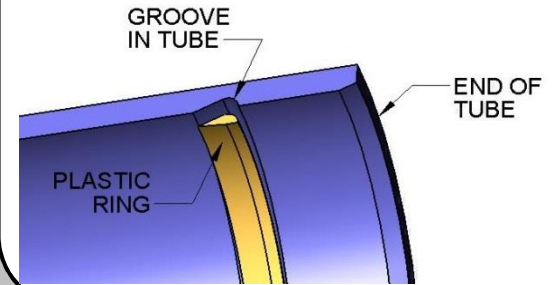
4 PUNCH THE CYLINDER HEAD INTO CYLINDER TUBE UNTIL INTERNAL TUBE LOCKING GROOVE IS FULLY EXPOSED



5 IN THE SERVICE KIT LOCATE THE PLASTIC RELEASE RING. TAKE THE CURL OUT OF THE RING BEFORE INSTALLATION. REMOVING CURL WILL MAKE IT SNAP INTO THE GROOVE EASIER IN STEP 7 AND PREVENT IT FROM FALLING OUT.



6 *NOTE: THE PLASTIC REMOVAL RING PROFILE MUST MATCH THE CYLINDER TUBE GROOVE PROFILE



7 USE SCREWDRIVER OR A FINGER TO HOLD ONE END OF THE PLASTIC RELEASE RING IN THE GROOVE WHILE FITTING THE OTHER END OF THE PLASTIC RELEASE RING INTO THE GROOVE. TIPS OF THE PLASTIC RELEASE RING SHOULD SNAP IN TOGETHER



8 DO NOT CUT THE PLASTIC RELEASE RING SHORTER AS IT WILL NOT STAY IN THE CYLINDER GROOVE PROPERLY. **IT IS IMPORTANT TO ENSURE THE PLASTIC RELEASE RING IS COMPLETELY IN THE CYLINDER GROOVE BEFORE PULLING THE PISTON ROD OUT.** IF THE PLASTIC RELEASE RING STICKS OUT IT WILL GET STUCK BETWEEN THE CYLINDER HEAD AND CYLINDER TUBE.

9 EXTEND ROD COMPLETELY TO PULL HEAD OUT OF TUBE - USE PIN THROUGH BASE END TO HOOK TUBE ON EDGE OF TABLE



10 IF THE ROD DOES NOT PULL OUT EASILY, PUSH THE HEAD BACK IN AND ENSURE THE RING IS PROPERLY IN THE GROOVE. REPLACE PLASTIC RING IF NECESSARY. (A SECOND RING HAS BEEN PROVIDED IN CASE THE FIRST RING GETS DAMAGED) **CAUTION: EXCESSIVE FORCE WILL NOT OVERCOME A JAMMED RING AND COULD DAMAGE THE CYLINDER.**

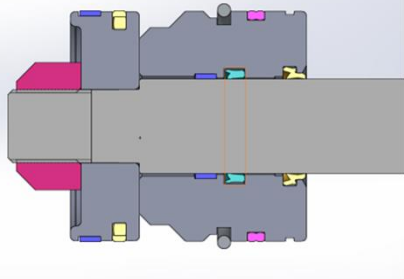
11 COMPLETELY REMOVE ROD AND HEAD FROM TUBE



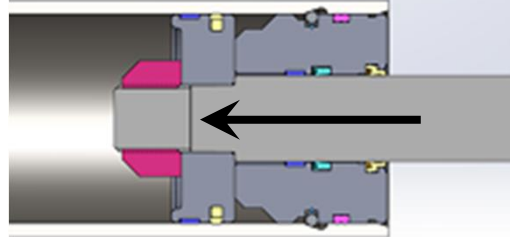
12 REMOVE PLASTIC RELEASE RING FROM THE CYLINDER AND DISCARD, INSPECT AND CLEAN DEBRIS FROM TUBE ID AND GROOVE, BUFF ANY SCRATCHES AS NECESSARY



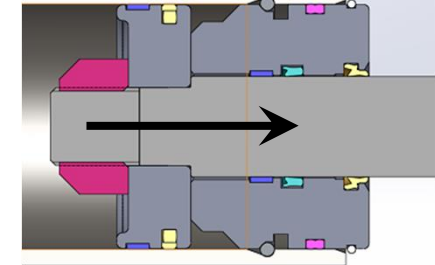
REASSEMBLY OVERVIEW STEPS 13-23



REPLACE SEALS



PUSH HEAD IN



PULL HEAD OUT

13

PRIOR TO REPLACING THE SEALS NOTE THE LOCATION OF THE CURRENT PARTS. REPLACE ALL SEALS ON THE PISTON AND LEAVE THE CYLINDER HEAD SEAL LOOSE ON THE ROD AS SHOWN



14

USE BAND CLAMP PROVIDED IN THE SERVICE KIT TO COMPRESS LOCKING RING SO IT WILL SLIDE INTO THE TUBE. DO NOT OVERTIGHTEN THE HOSE CLAMP. IT MUST BE FREE TO SLIDE AS THE CYLINDER HEAD IS INSTALLED INTO THE TUBE.



15

MAKE SURE CAM IS NOT OVER TOP OF GAP IN RING. LUBRICATE SEALS AND TUBE WITH HYDRAULIC OIL



16

CAREFULLY INSERT PISTON ROD AND CYLINDER HEAD INTO THE CYLINDER TUBE



17

TAP CYLINDER HEAD INTO CYLINDER TUBE UNTIL CLAMP SLIDES OVER AND RING IS INSIDE THE TUBE. THE SEAL GROOVE ON THE CYLINDER HEAD SHOULD REMAIN EXPOSED



18

IF NECESSARY LOOSEN BAND CLAMP TO ALLOW CYLINDER HEAD TO BE INSERTED INTO THE CYLINDER TUBE AND THEN REMOVE FROM THE CYLINDER ROD



- 19** INSTALL CYLINDER HEAD SEAL IN POSITION WHICH WAS INSTALLED ON THE PISTON ROD FROM STEP 13. LUBRICATE WITH HYDRAULIC OIL



- 20** GENTLY TAP THE HEAD THE REST OF THE WAY INTO THE CYLINDER. HEAD SHOULD BE FLUSH WITH THE END OF THE TUBE



- 21** THE CYLINDER HEAD MUST BE FLUSH WITH THE CYLINDER TUBE TO ALLOW THE RETAINING RING TO SNAP INTO THE GROOVE. FAILURE TO INSERT THE HEAD AS SHOWN IN STEP 20 WILL RESULT IN THE CYLINDER HEAD AND PISTON ROD ASSEMBLY COMING OUT OF THE CYLINDER TUBE WHEN PRESSURE IS APPLIED TO THE CYLINDER

- 22** GENTLY PULL ROD OUT TO EXPOSE WIRE RING GROOVE IN CYLINDER HEAD



- 23** INSERT WIRE RING REMOVE FROM STEP 2 INTO CYLINDER HEAD GROOVE



- ALTERNATE METHOD FOR STEPS 14-18:** SQUEEZE WIRE RING WITH PLIERS AND TAP CYLINDER HEAD UNTIL WIRE RING IS INSERTED INTO TUBE



Drawing Number: **247001**

Subject: **REPAIR OF ROUND
WIRE RING STYLE
CYLINDERS**

Revision: **4**

Date: **30NOV16**