Section 8

100 Ton Ram Operating Instructions
for
Internal Expansion of
Carbon Steel & Stainless Steel Couplings
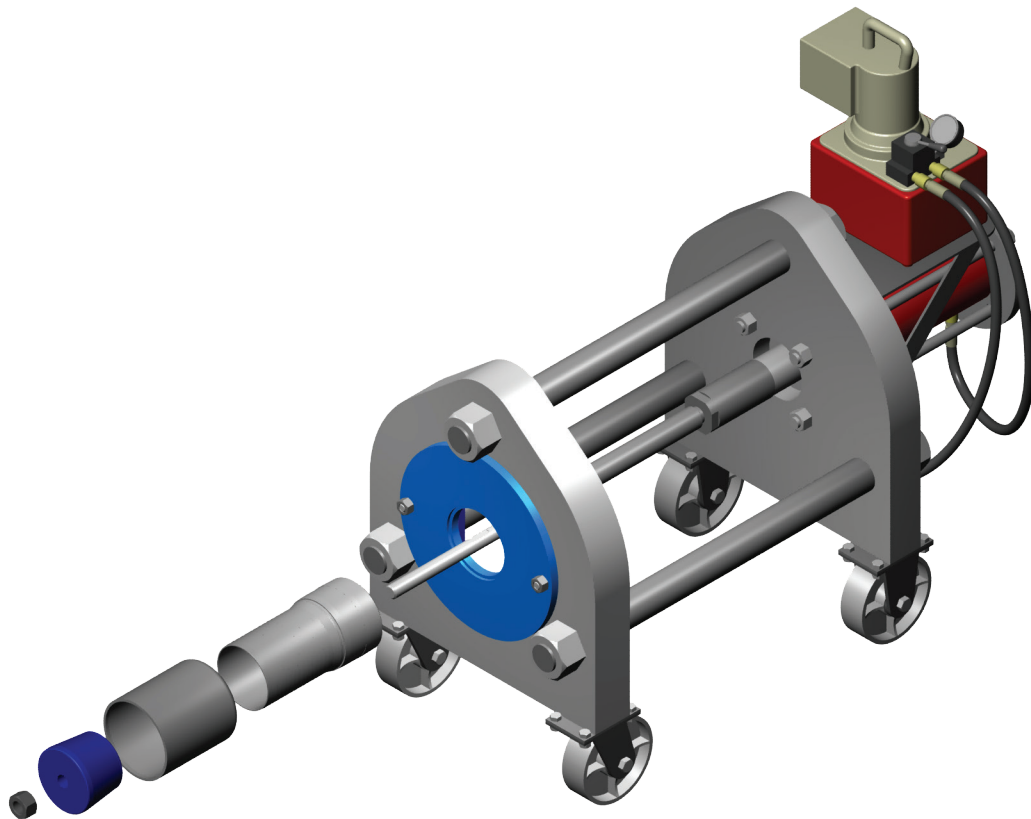
(refer to the Converting the 100 Ton Ram from Swaging to Internal Expansion section of the instruction manual)

1

Before you begin, move the directional control lever to the "FORWARD" position, depress the button on the remote and fully extend the ram cylinder. Return the directional control lever to the "NEUTRAL" position. Select the proper Pull Rod.
For 1" through 1½" use *25RODSMALL*
For 2" through 4" use *25RODLARGE*
For 5" and 6" use *001-0083*

Screw the short threaded end of the rod or the rod adapter into the IX Master Bar.
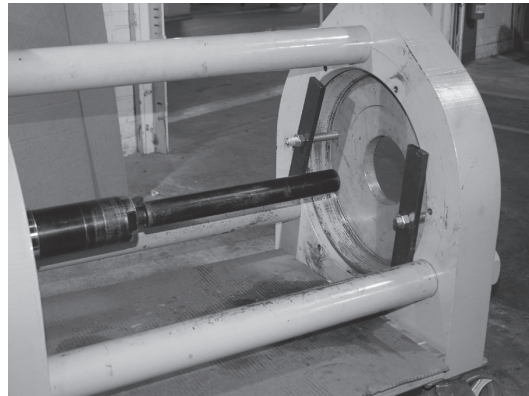
2

Select the corresponding Adapter Plate(s) for the size and type of fitting you are installing. For certain sizes and styles of couplings, multiple adapter plates may be required.

The 2" through 4" adapters have two recesses. The small diameter recess is to be used with stems having NPT, Victaulic or Plain end. The larger diameter recess is used for stems with the "Heavy Duty / California Style" end. The 6" adapter is built into the IX Master plate (*001-0072*).
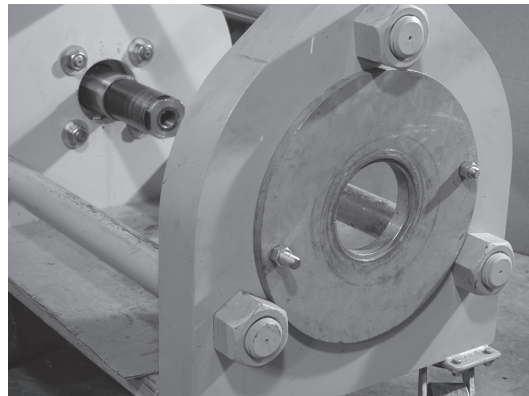
3a

Lubricate the inside of the stem with Crisco® (recommended) or high viscosity oil or heavy duty grease.
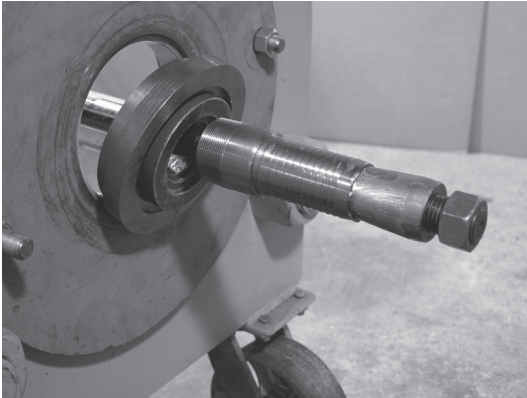

3b

Lubricate the O.D. of the plug with Crisco® (recommended) or high viscosity oil or heavy duty grease.

4

Slide the adapter(s) over the pull rod and into the recess of the IX Master Plate. While holding the adapter(s) in place with one hand, slide the stem over the pull rod and into the recess of the adapter plate with the connection side of the stem facing the ram. While holding the adapter(s) and stem in place with one hand, screw on (or slide) the IX plug, small end first, onto the pull rod and into the shank of the stem. For 2" and above screw the retaining nut on until it contacts the plug. Move the stem slightly to allow for slack and hand tighten the plug or nut until it is snug. Lubricate the rest of the O.D. of the plug.

5

Accurately measure the hose O.D. with a diameter tape. Select the correct IX ferrule from the current Dixon Price List based upon the hose O.D. just measured.

Note: <u>Always</u> measure both hose ends for accurate ferrule selection.

6

Make sure the hose end is cut square. Slide the ferrule over the hose until the turned over end of the ferrule contacts the end of the hose. Place a mark on the hose at the junction of the ferrule and hose. Move the ferrule away from the hose end ¼" and place another mark at the junction of the hose and ferrule. This will ensure that the proper rubber displacement or pocked is maintained during the expansion process.

7

Slide the hose with the ferrule on over the IX plug and shank until the ferrule contacts the shoulder of the stem. Make sure you align the ferrule with the second mark from Step 8. Make sure the pocket has been maintained.

Important! If there is insufficient pocket for the rubber to displace into, damage may occur to the stem, ferrule and / or hose. ⚠️

1

Place a rubber sheet or pad under the IX Master plate. Move the directional control lever to the "REVERSE" position. While holding the hose and ferrule firmly against the stem shoulder, engage the ram by depressing the button on the remote. The internal expansion operation is complete when the expansion plug is pulled completely through the stem (see Important! below). Release the button on the remote. Visually inspect the coupling and clean excess lubricant from the stem I.D.

Note: If the gauge reads 10,000 PSI before swaging is complete, stop. The ferrule or die used for that hose end may be incorrect. Contact Dixon for further assistance.

Important! When the pressure gauge drops to zero, release the button on the remote. Pull the assembly off of the plug and, at the same time, remove the adapter(s) from the IX Master Plate.

Assembly Procedure for 2½" & 4" Threaded Male Stems

In order to prevent possible thread collapse on the 2½" & 4" male NPT stems (carbon steel) during installation, it is recommended that a female threaded adapter be installed prior to installation. The adapter part number for 2½" is **M011-384** and 4" is **M011-385**. Following is the procedure for installation:

1. Lubricate stem I.D. and small end of expansion plug.
2. Thread **M011-384** or **M011-385** onto threads of the male stem *hand tight only!*
3. Slide stem over pull rod thread adapter first.
4. Seat **M011-384** or **M011-385** into outer recess of the adapter.
5. Follow normal IX procedure.
6. When assembly is removed from the adapter, remove **M011-384** or **M011-385** and clean the stem I.D. of excess lubricant.

Procedure Changes for Stainless Steel Food Grade Couplings

1. Step 3a. - **Must** use Crisco® for lubricant.
2. Step 3b. - **Must** use Crisco® for lubricant.
3. When IX plug is removed and cleaned of lubricant, the visible lines on the plug are deposits of stainless steel. Remove the deposits with 200 - 400 grit wet / dry sandpaper. This is to be done after **every** pull.
4. Make sure the expansion plug to be used has "FD" in the part number (stamped on the large end of the plug). If "FD" is not in the part number **DO NOT USE IT!**