DEUBLIN	Installation and Removal Instructions	Model: SP0467 Number: 040-746 Date: 1/15/15 Revision: -

1. Union Specifications

a. Media:	Hydraulic Oil
b. Media Filtration:	5 micron
c. Press. (max.):	100 bar (1,450 psig)
d. Temp. (max.):	50 C (122 F)
e. Speed (max.):	1,000 (rpm)
f. Flowrate:	1.14 m3/m (300 gpm)
g. Static Torque @ 800 psi:	68 n-m (50 ft-lbs)
h. Running Torque @ 800 psi & 500 rpm:	41 n-m (30 ft-lbs)
i. Seal Leakage @ 800 psi & 500 rpm:	15 l/hr (4 gph)
j. Union net Weight:	250 kg (550 lbs)
k. Attachments Total Weight Limit:	45 kg (100 lbs)

2. Warehousing & Transportation

a. The rotating union should be stored with the original packaging, in an area that protects the union from corrosion and contamination.

b. The union should be protected from shocks during any transporting of the union from place to place

3. Installation

a. Pre-Installation Check List

i. Union is supplied with the following Installation parts.

1. Housing Inlet & Outlet Port Cover Plates (2x)
2. Eye Bolts (2x)
3. Rotor O-Rings (2x)
4. Anti-Rotation Pins (2x)

ii. Customer Supply

1. Anti-rotation Bracket (1x)
2. Rotor Flange Fasteners (6x)

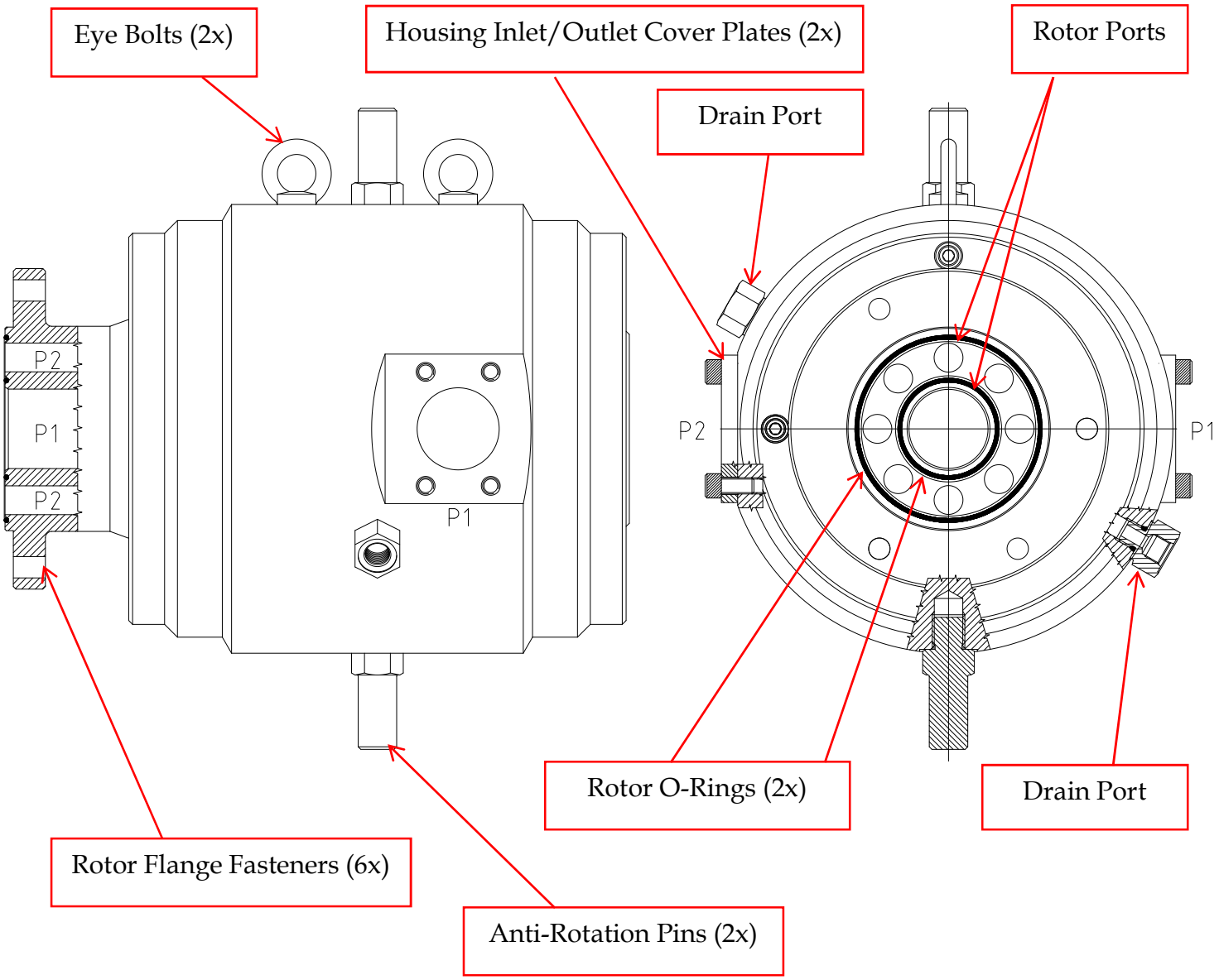

Fig. #1

b. Installation Process, see Fig(s). #1, #2, #3.

- ***i. Verify that the dimensions of the journal end are as shown on the installation drawing #SP-0467-IC.***
- ***ii. Clean the journal end mounting surface.***
- ***iii. Install Rotor O-Rings (2x).***
  1. ***Ensure Rotor ports are free from debris.***
- ***iv. Lift the union, via the eye bolts (2x), into place and carefully lead the rotor into the journal pilot diameter.***
- ***v. Draw the union up to the journal end as evenly as possible.***

vi. *Secure and fix the rotor flange to the journal with the appropriate grade and size fasteners.*
    1. *Apply Anti-Siezure paste to each fasteners.*
    2. *Torque fasteners to recommended value for size & grade*
        a. *Grade 8 for UNC and 12.9 for Metric*

vii. *Rotate Union to the required orientation*
    1. *Example, see Fig. #2*

viii. *Install Anti-Rotation Pin.*
    1. *Both are not required, only the one associated with the corresponding anti-rotation bracket.*

ix. *Install anti-rotation bracket suitable to handle the rotational forces of the union.*
    1. *Bracket must engage union anti-rotation pin.*
    2. *Any kind of restriction to the movement of the union, axial or radial must be avoided.*

x. *Remove Inlet and Outlet Port Covers.*
    1. *Ensure Ports are free from Debris.*
    2. *Do not discard these plates as these must be re-installed onto Union when storing or transporting.*

xi. *Connect Flexible Hoses to the Inlet and Outlet Ports.*
    1. *Ensure Hoses do not impart any loads to the union.*

xii. *Connect Flexible Hose to Drain Port.*
    1. *Drain Ports (2x)*
        a. *Connect to only (1x) Port*
        b. *(1x) Above Horizontal Centerline*
            i. *Recommended Connection*
            ii. *Plug other Port*
        c. *(1x) Below Horizontal Centerline*
            i. *Establish Hose Loop as shown in Fig. #3*
            ii. *Plug other Port*
    2. *Ensure Hose does not impart any loads to the union.*

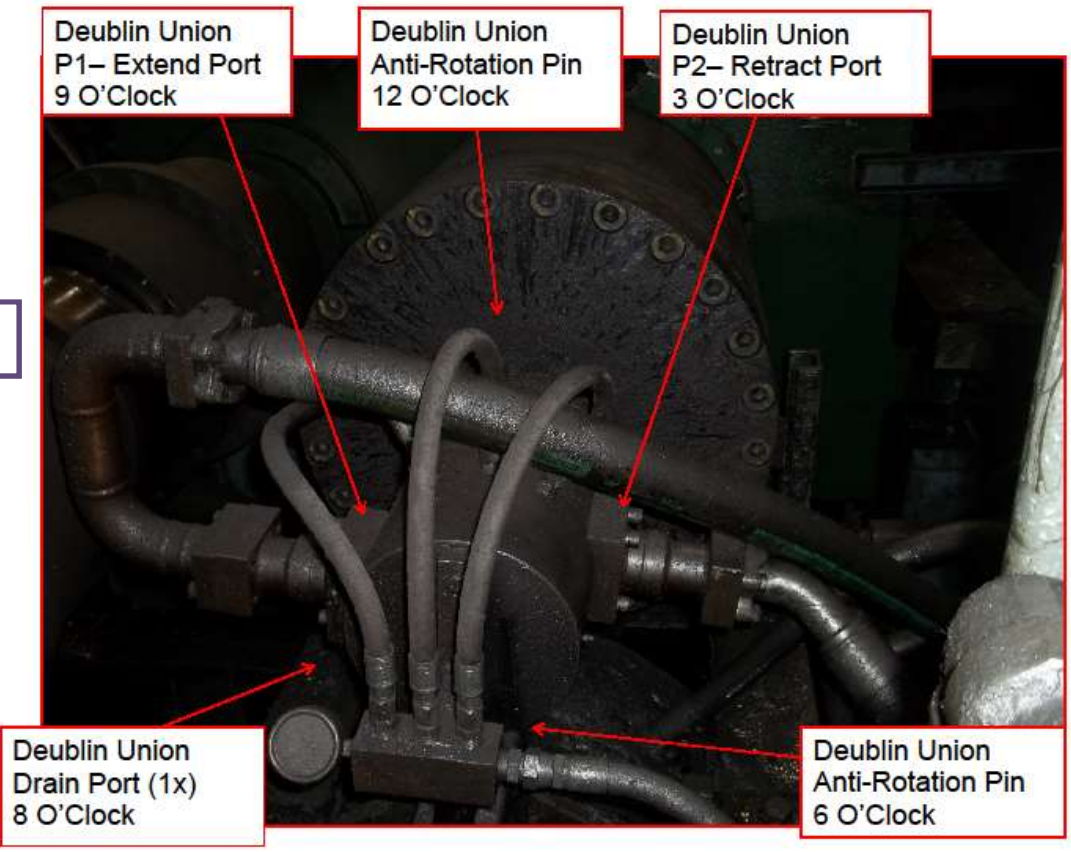

Fig. #2

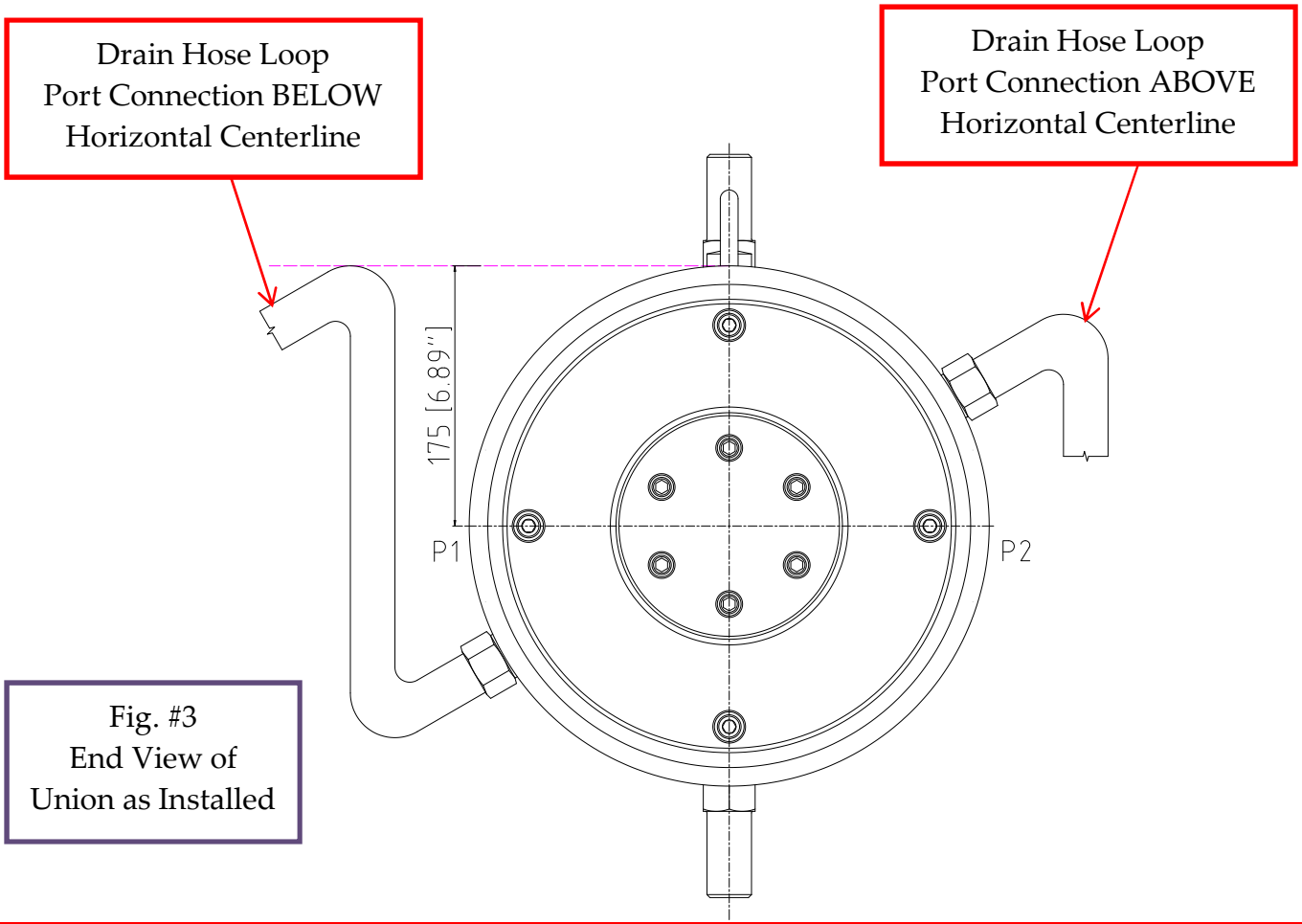

Fig. #3
End View of
Union as Installed

4. Maintenance

a. No operating maintenance is required to the Union.

b. The union can not be run dry.

   i. Running the union dry will result in seal failure.

   ii. Oil Flow through union must be established for several miuntes prior to initiating union rotation.

c. Drain line must be free from obsrtuction and vented to atmosphere.

   i. Drain line back pressure in excess of 5 psi could lead to Lip Seal failure.

d. Routinely monitor oil leakage from drain port. Typical leakage rates are listed under section #1 of this document. If there is a noticable increase in leakage rate (i.e. Double), union should be removed from service and sent back to a Deublin repair or manufacturing facilty.

e. At the time that the union leaks beyond the limits stated above or becomes unacceptable due to performance related issues, the unit should be removed and returned to the nearest Deublin facility for inspection and repair. Any required service or repair will be completed at the Deublin manufacturing center with customer approval. These repairs are conducted by highly trained specialists using only original Deublin components. All repaired or serviced units will be factory tested prior to return to the customer and will carry a reinstated 12 month standard warranty period.

5. Repair Policy

a. Return union to the nearest authorized Deublin repair or manufacturing facility for inspection and repair.

6. Lubrication

a. No external lubrication is required. The union is internally lubricated with the media oil.

7. Spare Parts

a. Spare parts are not available. Unions can be repaired at an authorized Deublin repair or manufacturing facility.

8. Union Installation Drawing

a. Obtain copy of drawing #SP0467-IC.