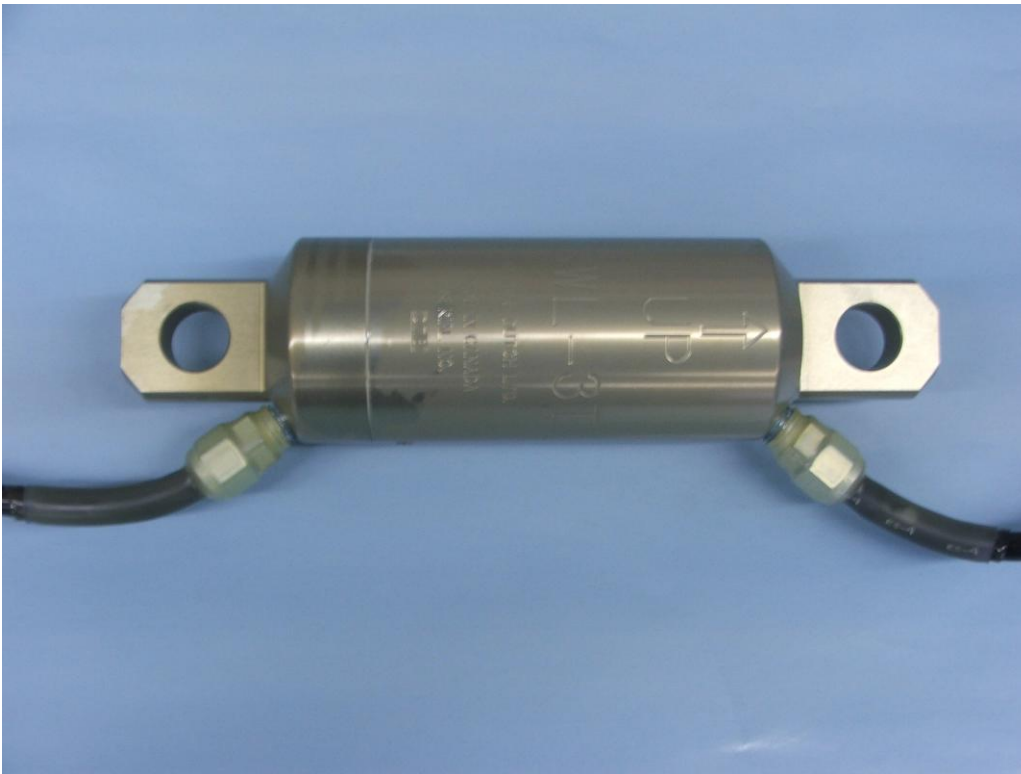


**Owner's manual for Swivel-3TE manufactured by Double Dutch Ltd.**

**Revision 2, July 12, 2008**

**Revision 3, November 1, 2013**



## Service manual for Electrical Swivel.

This swivel is set up with a mercury contact for transferring current through 3 wires under 360 degrees rotation. The rotary contact is attitude sensitive and only performs properly when the swivel is placed in the right direction. Verify attitude with the “[up arrow](#)” on the body of the swivel.

The strain-relief incorporates an O-ring to guarantee the waterproof aspects of the swivel.

Follow the following procedure to open the swivel in the unlikely event you need to replace parts.

1. Back off two set screws located on the female eye end.
2. Undo nut on the strain-relief (on top end of swivel) and back off the O-rings under the nut. On later models, the strain-relief is covered with heat-shrink for added wire protection. You will have to remove the heat-shrink first and replace after re-assembly.
3. Insert a pin into the small hole in the male eye end and rotate the eye end until the pin pushes through into a matching hole of the external threaded nut inside the swivel. Make sure to use the largest diameter pin possible (or end of a drill bit) that will fit the hole, to prevent shearing of the pin.
4. By turning the male eye end counter-clock wise with pin inserted you will be able to undo the external thread nut. Warning: You will need to feed in the wire into the strain relief (located on the top end of the swivel) as you undo the nut to prevent tension and subsequent breakage of the terminals on the rotary contact.
5. You may undo the terminals when completely exposed. Pull the terminals off in line with the contacts (not at an angle).
6. Remove the setscrew (#8-32) in the bearing nut. This locks the nut in place and also holds the rotary contact. On earlier models, the setscrew was held with high strength Loctite. This sometimes made it hard to remove the setscrew (apply heat if you encounter this problem). Later models use a self-locking and larger setscrew (#10-32). You will need to undo the straight strain relief on the bottom of the swivel and push in the wire in order to expose the terminals on the rotary contact for removal of the contact.

Installation in reversed order. Slightly pull on wire when installing contact and reassembling swivel to prevent bending the wires internally and putting strain on the terminals.

Bearing nut clearance is set at .010” and will not change due to lineup of the hole of the setscrew through the nut and body of the male eye end.

Be sure to connect the wires so the colors correspond with each other on both ends of the contact. You will notice that the one terminal on the rotary contact is located closer to the edge then the other on both top and bottom.

Use Loctite medium strength thread locker on rotary contact set screw. It is possible to enlarge and tap the hole to #10-32 allowing installation of the self-locking setscrew

(obtainable free of charge from DDR). Make sure to install the nut in its proper position and then drill and tap all the way through the nut and male bolt of the swivel in one go. Ensure not to damage the wire when drilling through and blow out all metal after tapping. When installing setscrew, do not over tighten to prevent damage to rotary contact.

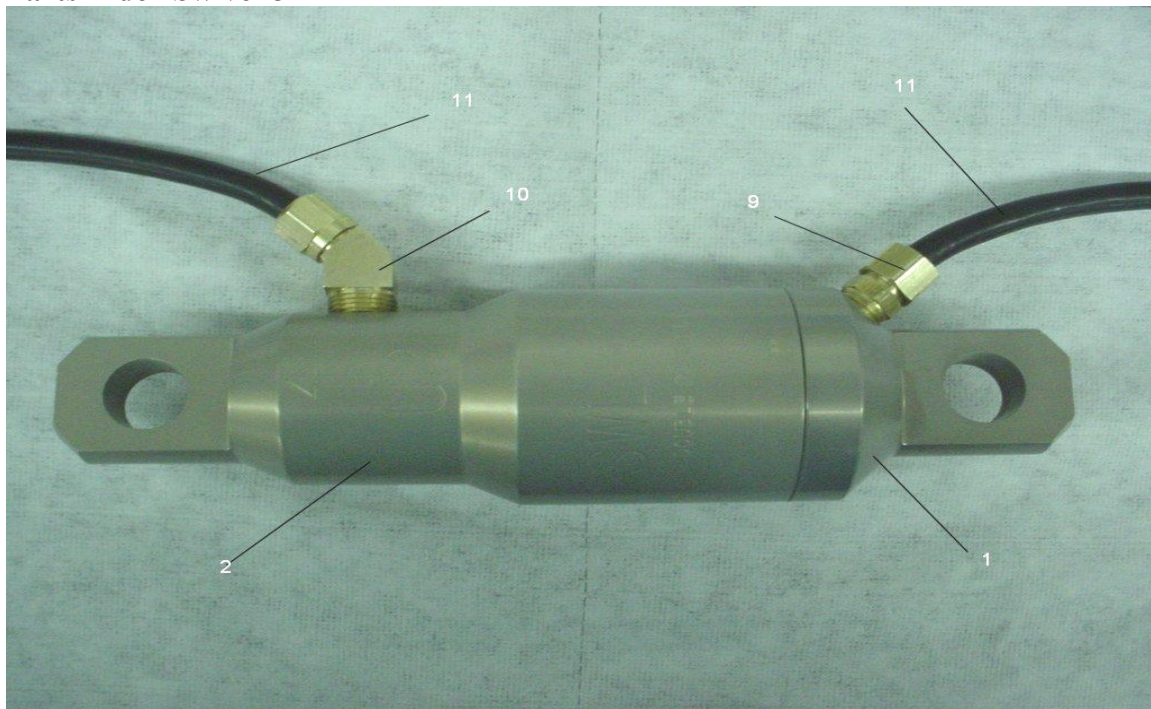
Re-grease with Lubriplate 1200-2 extreme pressure grease (or equivalent) covering both the external threaded nut and regular nut on the internal and external surfaces as well as the male shaft.

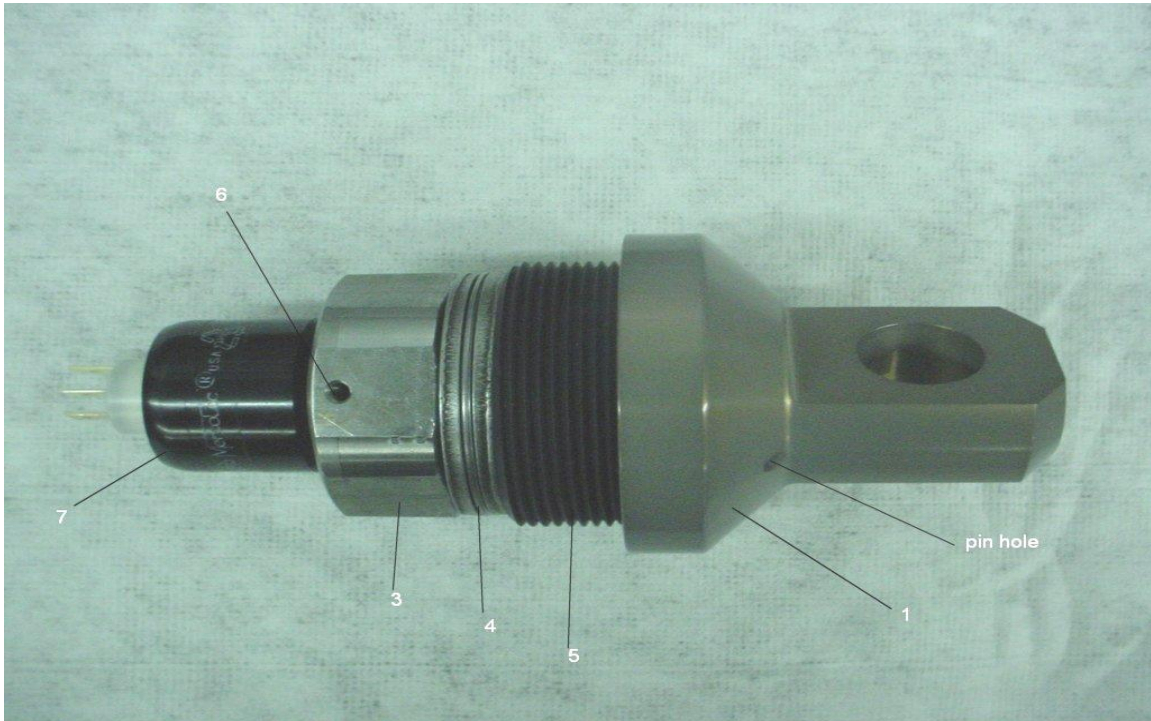
When reassembling the swivel ends make sure you tighten unto a .010" clearance is achieved between male and female parts (use feeler gauge). Tightening too much will eliminate the .010" preset clearance on the internal bearing or when tightening not enough, rotational binding can occur with too much clearance. After reassembly, tighten the two setscrews.

Overhaul:

Overhaul/ Inspection is required every 3 years from date of purchase. Disassemble, clean and inspect. Make sure the swivel turns freely and no corrosion is present on the rotating parts. Re-grease before assembly. Test.

### Parts Index Swivel-3TE





### Parts list Swivel-3TE

Index #	Part #	Description	Qty per assy
1	3TE-01	Eye end, male	1
2	-02	Eye end, female	1
3	-03	Bearing nut	1
4	-04	Thrust bearing * <b>(note)</b>	1
5	-05	External thread nut	1
6	-06A	Set screw, contact 8-32	1
	-06B	Set screw, contact 10-32	1
7	-07	Rotary contact	1
8	-08	Terminal, electrical	6
9	-09	Strain relief, straight	1 (s/n 51 up)
10	-10	Strain relief, 45 degr.	1 ( s/n 0-50)
11	-11	Electrical wire	2
12	-12	Set screw, eye end	2
13	-13	O-ring	2

Revision 2:

1. Internal setscrew is enlarged from #8-32 to #10-32.
2. New setscrew is self-locking so Loctite is no longer required for installation.
3. If installing original setscrew, use medium strength Loctite, not high strength.
4. External wires are reinforced with heat-shrink.
5. Redesign top-end to replace 45 degr. Strain-relief with straight type.

Revision 3:

1. Change to Lubriplate 1200-2 extreme pressure grease.
2. Text change with emphasis on greasing procedure and assembly of two halves clearance.

\* Note: Specify quantity and thickness for bearing washers when ordering if replacement of the washers is required.

Double Dutch Ltd.  
6128 Ada Blvd NW  
Edmonton, AB, T5W 4N9  
Phone: (780) 288-5677  
Email: doubledutchrv@hotmail.com