

# TODO®

*A Gardner Denver Product*

TODO-MATIC®



## Service instruction

### Hose unit 3"

### Conical piston

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## Required tools

|                         |                                         |
|-------------------------|-----------------------------------------|
| 2.5 mm Allen key        | Dismounting / mounting tool (TODO) 6252 |
| 5 mm Allen key          | 17 mm wrench key                        |
| 8 mm Allen key          | 13 mm socket wrench key                 |
| O-ring tool (TODO) 6640 | Magnet                                  |

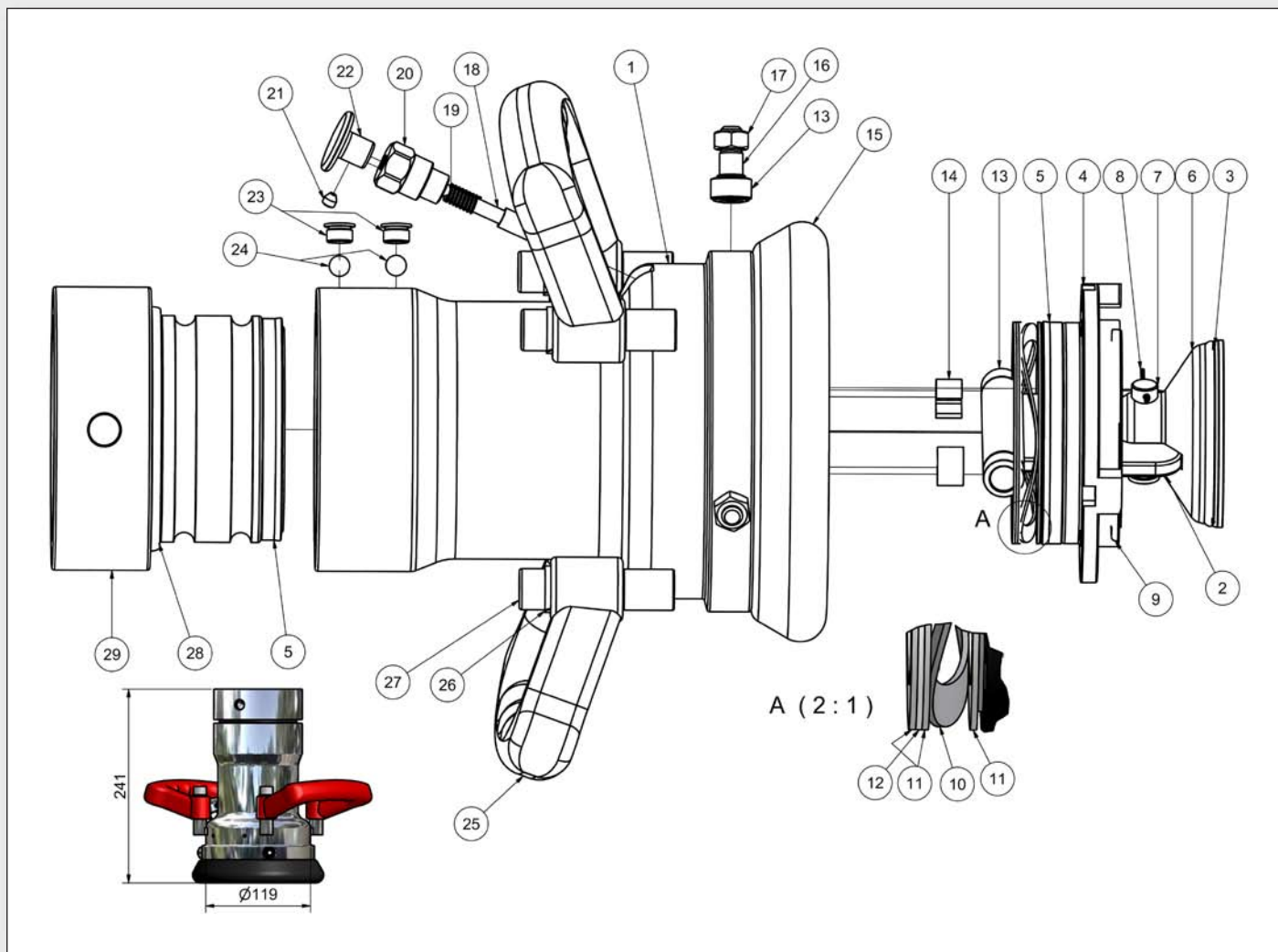
## Lubricants

Grease: TODO code 2, 5, 6.

See separate lubrication instructions, please see downloads at [www.todo.se](http://www.todo.se)



## Assembly drawing 3" hose unit



- |                            |                     |                      |
|----------------------------|---------------------|----------------------|
| 1. Couplings body complete | 12. Flat seal       | 23. Plug             |
| 2. Piston guide            | 13. Roller          | 24. Ball             |
| 3. O-ring                  | 14. Teflon bar      | 25. Handle           |
| 4. Driving plate           | 15. Protective ring | 26. Spring washer    |
| 5. Sealing ring            | 16. Shaft           | 27. Bolt             |
| 6. Piston                  | 17. Locking nut     | 28. O-ring           |
| 7. Pin                     | 18. Locking pin     | 29. Hose unit swivel |
| 8. Split cotter            | 19. Spring          |                      |
| 9. O-ring                  | 20. Bushing         |                      |
| 10. Wavy washer            | 21. Screw           |                      |
| 11. Washer                 | 22. Knob            |                      |

## Dismantling and assembly procedure Step 1-3

**Always make sure the coupling is decontaminated and that you work in a clean environment. Clean the parts with a cloth and a proper solvent.**

1.  
Remove the three rollers from the coupling body. After removing the nuts, carefully remove the shafts by gently tapping with a plastic hammer or similar.



2.  
Insert the disassembly tool into the socket of the coupling. Release the coupling internals by turning it clockwise.



3.  
Pull out the inner part of the hose unit .



## Dismantling and assembly procedure Step 4-6

4.

Disassemble the two grub screws to access the two ball races and remove all of the ball bearings. 34 pieces in each ball race. We recommend to use a magnet.



5.

Disassemble the parts and clean them, checking at the same time for any wear or damage.



6.

Lubricate the replacement o-rings for the piston and driving plate with grease no: 2.



## Dismantling and assembly procedure Step 7-9

7.

Mount the new o-ring in the piston. Ensure that it is not twisted, as this may cause leakage and /or premature failure of the seal



8.

Mount the O-ring by initially pressing it down into its groove as indicated in the photograph.

Continue this process, pressing down on opposite sides until there are no remaining bulges and the O-ring sits smoothly in the O-ring groove.



## Dismantling and assembly procedure Step 9-11

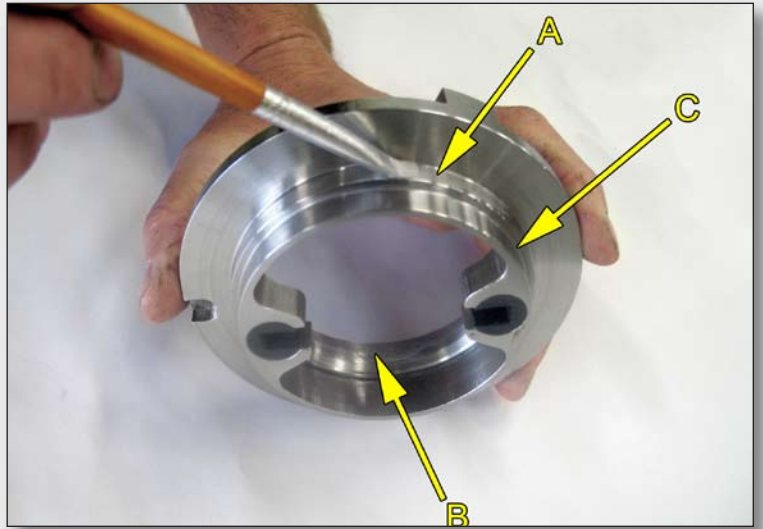
**9**

Lubricate the driving plate with recommended grease as indicated .

A: Grease no: 2

B: Grease no: 2

C: Grease no: 5



**10.**

Lubricate the sealing ring.

Grease no: 5.



**11.**

Push the sealing ring gently downwards with equally applied pressure.



## Dismantling and assembly procedure Step 12-14

**12.**

Locate the teflon bushings.



**13.**

Lubricate the spindle ends with grease no: 2



**14.**

Remount the washer pack onto the piston guide in the following order as shown  
Flat washer, teflon seal, flat washer, wavy washer, flat washer



## Dismantling and assembly procedure Step 15-17

**15.**

Fit the piston guide/ washer pack assembly into the driving plate.



**16.**

Re-attach the piston head using the piston pin and split cotter pin.



**17.**

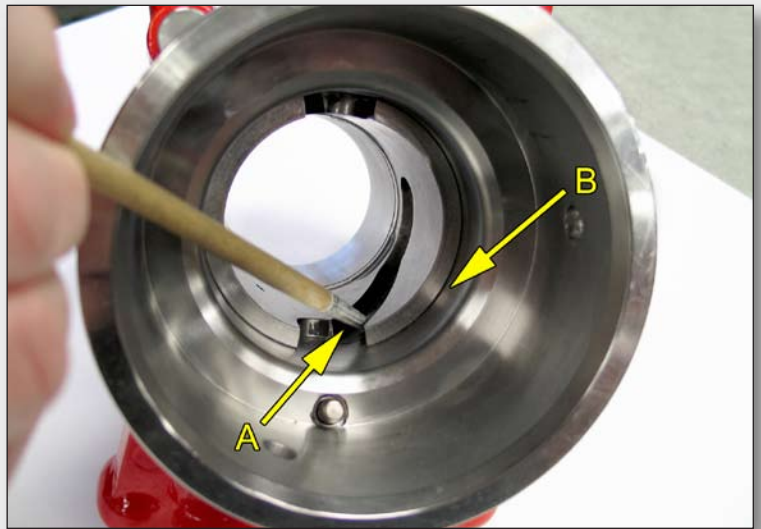
Mount new rollers.  
Be sure that the curved surfaces of the rollers are directed outwards.



## Dismantling and assembly procedure Step 18-20

**18.**

Lubricate the cam curve A with grease no: 2 and the sealing surface B with grease no: 5.



**19.**

Reassemble the inner part as shown.



**20.**

Push the inner part downwards applying even pressure.



## Dismantling and assembly procedure Step 21-23

**21.**

Turn the disassembly tool anti clockwise until the locking mechanism locks with a click.



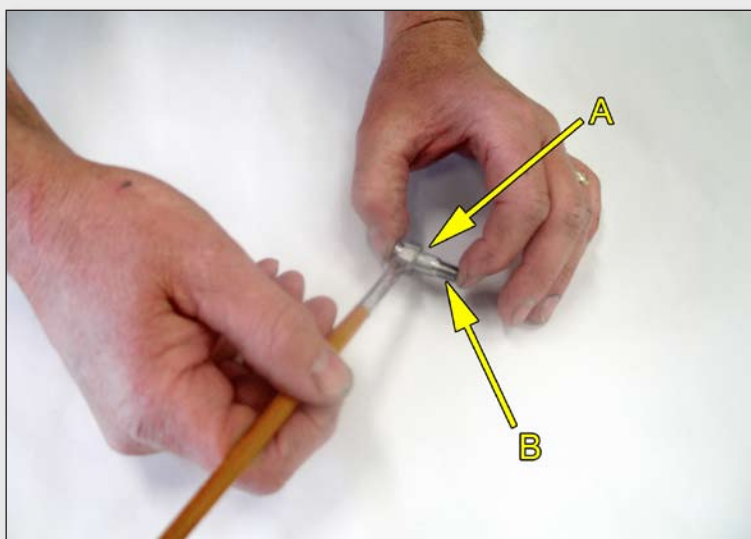
**22.**

Check that the holes for the rollers are aligned directly above the driving plate lugs.



**23.**

Lubricate the roller-shafts as indicated. Position A with grease No.2 and position B with grease No.6



## Dismantling and assembly procedure Step 24-26

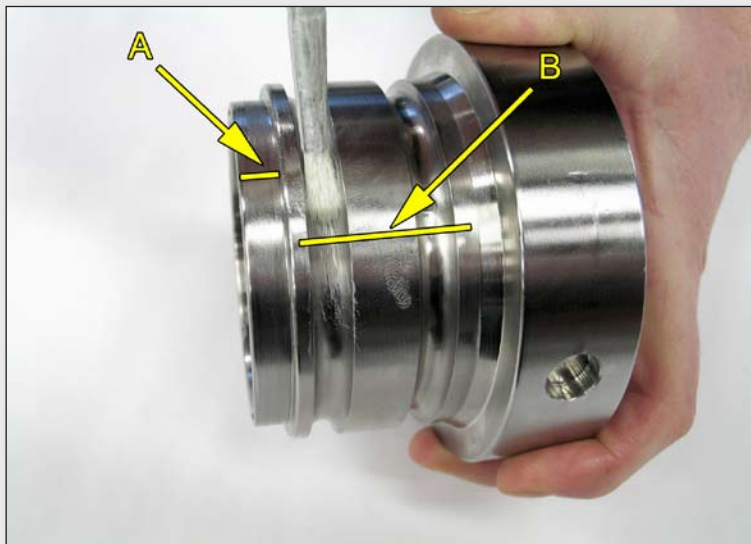
**24.**

Reassemble new shafts and rollers.  
Be sure that the curved surfaces of the rollers are directed towards the coupling body inner radius. Check that the rollers run free. Replace the old locking nuts with new ones.



**25.**

Clean and lubricate the swivel body.  
Position A: grease no: 5  
Position B: grease no: 2



**26.**

Lubricate the sealing ring.  
Grease no: 5.



## Dismantling and assembly procedure Step 27-29

**27.**

Replace the sealing ring by gently pushing downwards, applying an even pressure.

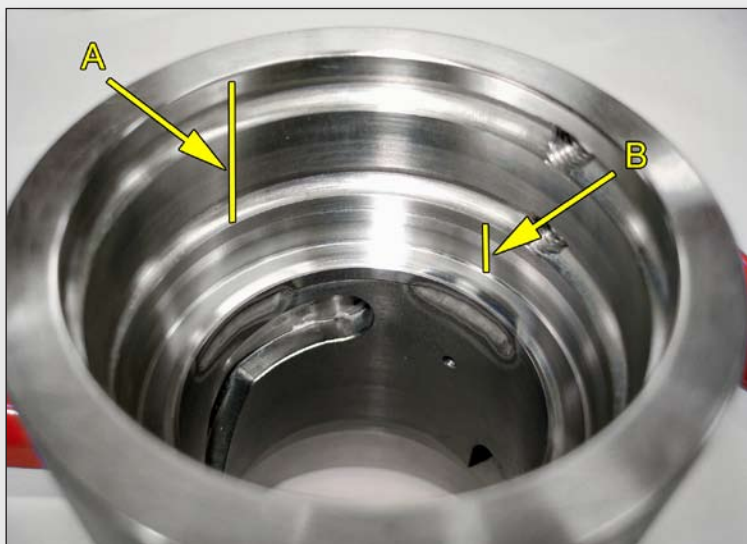


**28.**

Clean and lubricate the ball races in the coupling body.

Position A: grease no: 2

Position B: grease no: 5



**29.**

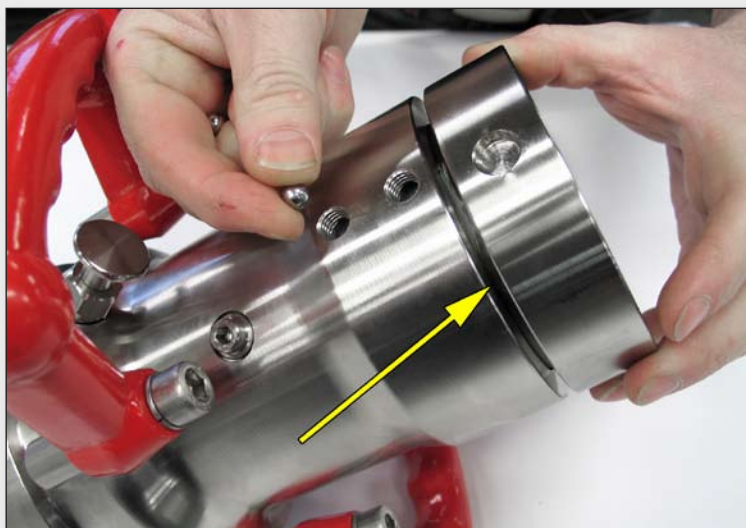
Reassemble the swivel avoiding damaging the sealing ring. The last 10 mm of the assembly demands a firm pressure at the same time as turning the swivel.



## Dismantling and assembly procedure Step 30-31

**30.**

Assemble the ball bearings in the ball races and refit the two grub screws. Replace the dust protection O-ring as indicated.



**31.**

Fit new flat thread seal. This does not apply to NPT threaded and Flanged couplings.



To ensure that the coupling is pressure tight and functional TODO recommends the hose unit be tested as follows:

Pressurise the hose unit with air, 2 bar, under water .

No bubbles should be visible from the piston seal.

Finally, carry out a function test. Couple and uncouple with a tank unit several times, ensuring a smooth connection.