



# **LIQUIP DRYBREAK COUPLER**

## **API800 Series**

### **MAINTENANCE INSTRUCTIONS**

API LOADING COUPLER TO API RP1004



**June 2015**  
**Issue: F**

## CONTENTS

API800 Series Datasheet.....	3
API800 Series Drawing .....	4
API800 Series Parts List .....	5
API800 Series Exploded View.....	6
What You Will Need.....	6
Testing For Excessive Wear .....	8
Suggested Maintenance Schedule .....	8
Replace Product Seal (In-Situ).....	9
Replace Outer O-Ring (In-Situ) .....	10
Replace Bush And O-Ring Assembly (In-Situ).....	11
Disassemble And Reassemble Procedure – disassemble (On Work Bench).....	13
Disassemble And Reassemble Procedure - reassemble (Continued) .....	15
Optional Method To Replace Coupler Internals (On Work Bench) .....	17
Troubleshooting .....	19
Spare Parts .....	20

## API800 Series Datasheet



*Leading The Way in Fluid Handling Solutions Worldwide*

# API800 Series Bottom Loading Coupler

API bottom loading dry-break coupler with automatic latching.

Built with a stainless steel latch release handle and coming in at 8.5kg the slimline Liquip API800 Series coupler is impressive by any measure.

With a robust design and ease of servicing, customers will experience effortless bottom loading. Liquip has considered each detail of the coupler with the user in mind to maximise the safety, performance, service life and quality of the coupler.



## Key Features

- Fast in-field replacement of all seals on or off the arm
- A range of seals for use to suit a range of applications.
- Two operating handle sizes to suit various applications.
- 4 true interlocking stainless steel latches for secure coupling and maximum safety.
- Stainless steel collar and hard anodised body for increased service life and durability.
- Stainless steel latch release handle for long term strength and durability.
- High quality components for increased operating life.
- Increased site safety via minimal product leakage during disconnect.
- Vastly reduced risk of leakage through new sealing design.
- Improved ergonomic operating handle and carry loop during use with less physical strain on users.

## Associated Equipment

Liquip 'Velvet Touch' Loading Arms.

## Specifications

Handle Length	Short (150mm) or Long (200mm)
Seals	Viton B or Viton GFLT (recommended for ethanol blends)
Max Working Pressure	550 kPa
Product Test Pressure	820 kPa
Design Pressure	2500 kPa
Max Surge Pressure	3400 kPa
Operating Temperature	-20°C to +80°C (-4°F to + 176°F) -40°C to +60°C (-40°F to + 140°F)
Design Standard	API RP 1004 8th EDITION 2003 - Bottom Loading and Vapour Recovery
Dismantling	Removal of one roll pin enables the shaft assembly and main poppet to be withdrawn
Mounting	<ul style="list-style-type: none"> <li>• By industry standard 100mm (4") TTMA Flange</li> <li>• 8 holes Ø11mm on 149mm PCD, 168 outside diameter (Ø7/16" on 5.8" PCD, 6.6" OD)</li> <li>• Use spring washers when mounting coupler as per common industry practice</li> </ul>
Weight	8.5kg

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M:\Product-Info\API8xx\8-Sales\API800 Datasheet.pdf

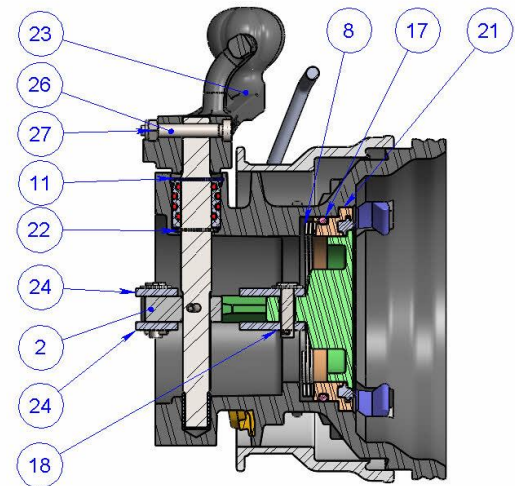
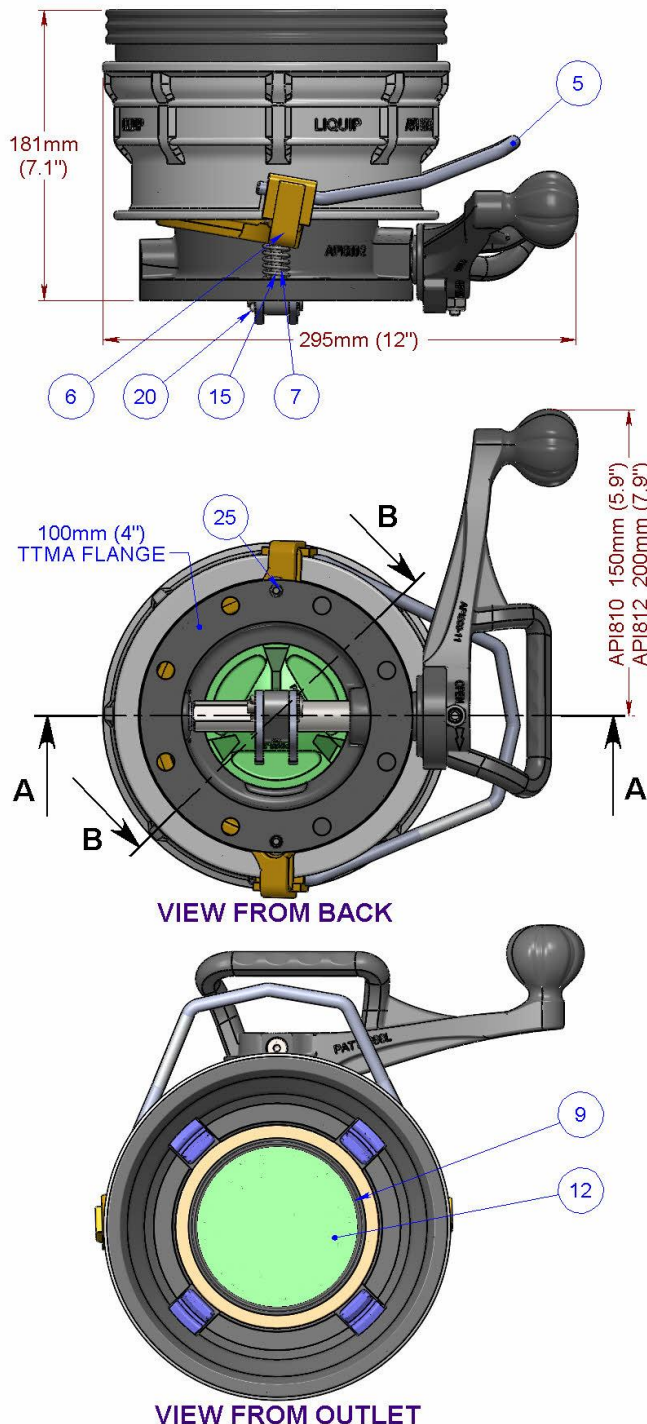
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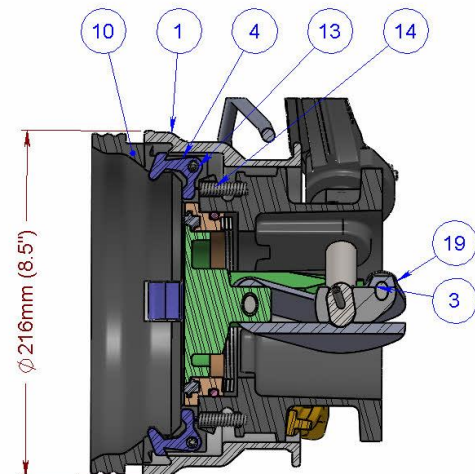
Page 1

## API800 SERIES DRAWING

# API800 SERIES COUPLERS



SECTION A-A



SECTION B-B

NOTE: API812- LONG STYLE  
OPERATING HANDLE SHOWN

METERS - VALVES - VENTS - MANHOLES - HOSEREELS - OVERFILL PROTECTION - LOADING ARMS - ELECTRONIC DIPSTICKS



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Sheet 1 of 3  
Issue: E

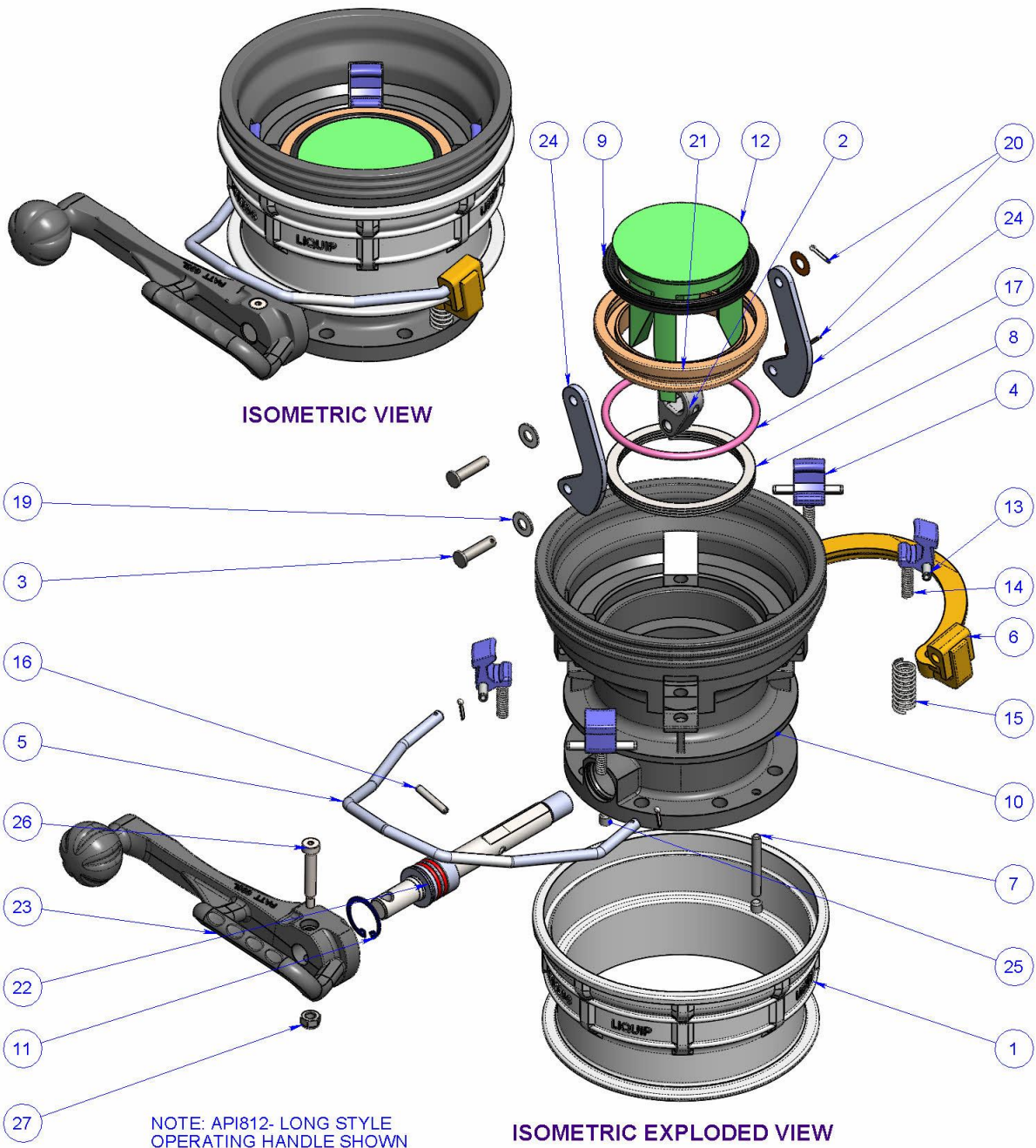


## API800 SERIES PARTS LIST

API800 SERIES COUPLERS							
ITEM NO.	PART NUMBER	DESCRIPTION	API810	API812	API810VG	API812VG	MATERIAL
1	API800-3	OUTER BODY (COLLAR)	1	1	1	1	ST STEEL
2	API800-8	CAM ECCENTRIC	1	1	1	1	ST STEEL
3	API800-12	PIN CLEVIS	2	2	2	2	STEEL PHOSPHATED
4	API725-4	LATCH COLLAR INTERLOCK	4	4	4	4	ST STEEL
5	API555-6	HANDLE - OUTER BODY RING	1	1	1	1	ST STEEL
6	API555-10	LEVER OUTER BODY	1	1	1	1	ALUMINIUM
7	API800-13	PIN - SPRING RETURN	2	2	2	2	ST STEEL
8	6182	SPRING SPIRAWAVE	1	1	1	1	SPRING STEEL
9	API800-1	SEAL PRODUCT	1	1	-	-	VITON B
	API800-1VG	SEAL PRODUCT	-	-	1	1	VITON GFLT
10	API800-2	BODY API800 COUPLER	1	1	1	1	ALUMINIUM
11	55074	CIRCLIP INTERNAL	1	1	1	1	ST STEEL
12	API800-9	POPPET 4"	1	1	1	1	ALUMINIUM
13	0927	SPRING (SELLOK) PIN	4	4	4	4	Z/P STEEL
14	6171	SPRING COMPRESSION	4	4	4	4	ST STEEL
15	4497	SPRING - RETURN	2	2	2	2	SPRING STEEL
16	55072	SPRING (SELLOK) PIN	1	1	1	1	ST STEEL
17	0203	O-RING	1	1	-	-	VITON B70
	0203VG	O-RING	-	-	1	1	VITON GFLT
18	5351	WASHER FLAT THIN	2	2	2	2	ST STEEL
19	0101	WASHER FLAT	2	2	2	2	Z/P STEEL
20	0762	SPLIT COTTER PIN	4	4	4	4	ST STEEL
21	API800-4	POPPET ADAPTOR RING	1	1	1	1	ALUMINIUM
22	API800-5A	SHAFT AND BUSH ASSY	1	1	-	-	STEEL, VITON A & ACETAL
	API800-5AVG	SHAFT AND BUSH ASSY	-	-	1	1	STEEL, VITON GFLT & ACETAL
23	API800-15	SHORT STYLE HANDLE OPERATING	1	-	1	-	ALUMINIUM
	API800-11	LONG STYLE HANDLE OPERATING	-	1	-	1	ALUMINIUM
24	API800-6	CAMPLATE FOR API COUPLERS	2	2	2	2	STEEL PHOSPHATED
25	3227	GRUBSCREW MET	2	2	2	2	BLK STEEL
26	55091	CAPSCREW SHOULDER METRIC	1	1	1	1	STEEL PHOSPHATED
27	4399	NUT NYLOC	1	1	1	1	Z/P STEEL
<div> <div> <b>NOTE:</b> For a list of available spare parts please refer to section 9.         </div> <div>  <p>           P.O. Box 7049            Wetherill Park BC, 2164            Sydney NSW Australia            Email: liquip@liquip.com            Phone: +612 9725 9000            Fax: +612 9725 1252         </p> </div> <div> <p>See website for Liquip branches and Distributors</p> <p>www.liquip.com</p> </div> </div>							
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## API800 SERIES EXPLODED VIEW

# API800 SERIES COUPLERS



METERS - VALVES - VENTS - MANHOLES - HOSEREELS - OVERFILL PROTECTION - LOADING ARMS - ELECTRONIC DIPSTICKS



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Sheet 3 of 3  
Issue: E

## WHAT YOU WILL NEED



Roll Pin Punch for 5mm pin



4mm Allen Key



Internal Circlip M32 Pliers (For bush and o-ring assembly circlip)



Hammer



Flathead Screwdriver or O-Ring Pick

## ATTENTION

THE STEPS OUTLINED IN THIS DOCUMENT MUST BE PERFORMED BY AUTHORISED PERSONNEL ONLY.  
 FOR FURTHER EXPLANATION PLEASE CONTACT YOUR LIQUIP REPRESENTATIVE.

### 1. TESTING FOR EXCESSIVE WEAR

Option 1: Connect an API-LI to the API 800 series coupler. Please consult Liquip for more info on the API-LI.  
 Option 2: Connect the coupler to a new API vehicle adaptor. With the vehicle adaptor clamped securely in a vice try to rock the coupling in relation to the vehicle adaptor. Be sure to rock the coupler about the axis which it would normally receive the most wear and tear. If there is any more than 5mm lateral movement at the back end of the coupler it is worn out and unserviceable.

### 2. SUGGESTED MAINTENANCE SCHEDULE

Recommended Service Schedule for Liquip International API800 Series Couplers.  
 Because loading gantries vary in usage the following schedule is calculated on the number of connections.

#### 1. DETERMINE THE LOADING GANTRY CATEGORY

**Note: All Chemical Couplers should be treated and maintained as per the HIGH USE schedule.**

- LOW USE: 1 to 10 Connections per day.
  - MEDIUM USE: 11 to 20 Connections per day.
  - HIGH USE: 21 to 50 Connections per day.
- Choose a category that best suits your loading gantry.

#### 2. SERVICE NUMBER

##### a. SN 1

- Visually inspect the product seal for damage, replace if required.
- Visually inspect latches for dirt build up and clean if required.
- Inspect handle interlock for damage, report and locate cause if evident.
- Visually inspect for leaks on all sealing areas while the coupler is on the loading arm.

##### b. SN 2

As SN1 with the addition of:

- Check the operation of the self-latching mechanism for smooth and free operation.
- Visually inspect the latches for excessive wear.
- Visually inspect poppet adaptor ring for damage.
- Visually inspect the body adjacent to the poppet adaptor ring for mushrooming and/or burrs.
- Visually inspect the poppet face for damage.

##### c. SN 3

As SN1 and SN2 with the addition of:

- Strip and remove shaft and bush assembly and replace o-ring and bush assembly.
- Check the hinge casting and wire handle are in good condition and do not show significant signs of wear. Check springs are not broken.
- Visually inspect the wave spring for damage, replace if required.
- Visually inspect the latches for excessive wear when stripped inspect the roll pin axles are tight and not worn, replace if required.
- Replace all product seal and outer o-ring.
- Visually inspect the sealing surface for the poppet adaptor ring, any wear or damage shown in this area, replace the body.
- Check valve mouth for excessive wear or damage and replace body if required.

OPERATING PERIOD	LOW USE	MEDIUM USE	HIGH USE
3 MONTHS	SN 1	SN 1	SN 1
6 MONTHS	SN 1	SN 1	SN 2
9 MONTHS	SN 1	SN 2	SN 1
1 YEAR	SN 2	SN 1	SN 3
1 YEAR & 3 MONTHS	SN 1	SN 1	SN 1
1 YEAR & 6 MONTHS	SN 1	SN 3	SN 2
1 YEAR & 9 MONTHS	SN 1	SN 1	SN 1
2 YEARS	SN 3	SN 2	SN 3

Carry out service number listed at each time interval, when service No 3 is reached, return back to the start of the operating period.



### 3. REPLACE PRODUCT SEAL (API800-1 Viton B / API800-1VG Viton GFLT) (IN-SITU)



**NOTE:** Photos are provided for key steps



= Care must be taken to ensure the quality of the unit.

1. Isolate loading arm to prevent product flow. Drain off the loading arm and ensure the API800 is clean and dry.
2. Squeeze the handle (API555-6) and push all four latches in at once. Whilst holding the latches in, slowly release the handle to allow the collar to slide forward.
3. Turn the operating handle (API800-11 or API800-15) to open the poppet (API800-9).
4. Push the poppet adaptor ring (API800-4) back and remove the product seal using a suitable tool ensuring you don't damage the poppet adaptor ring.



**NOTE:** Do not damage the poppet adaptor ring when removing the product seal.

5. Clean the product seal groove and poppet adaptor ring using a clean cloth.
6. Inspect the poppet tapered sealing face ensuring it is clean and free from damage. If dirty remove grease and debris with a clean cloth and if damaged replace the poppet (as per Section 6).



**NOTE:** Ensure you inspect the poppet seal face for damage and replace if required.

7. Check and inspect wear on poppet legs. If poppet legs are worn replace the poppet.



**NOTE:** Ensure you inspect poppet legs for damage and replace if required.

8. Push the new product seal into the product seal groove using your thumbs (as shown) ensuring the seal is fitted correctly under the groove.



**NOTE:** When installing the product seal, loosely press in 4 places equally around the seal before pushing the seal securely home to avoid uneven compressing of the seal. Ensure seal outside edge is in the groove all around.

9. Check that the product seal is fitted correctly by rubbing your fingers over it. It should feel free from lumps.



**NOTE:** If lumps are felt, remove the product seal and refit. It is important that the product seal is fitted correctly.

10. If you want to replace the outer o-ring, follow steps 4 to 7 of Section 4 and then continue this procedure.
11. Close the coupler operating handle and then pull back the latch release handle allowing the collar to retract and click into place.



Step 2



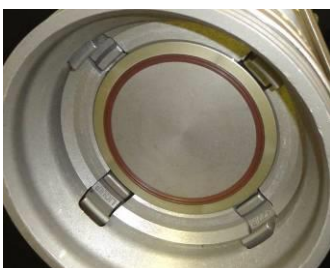
Step 3



Step 4



Step 8



Step 9



Step 11

#### 4. REPLACE OUTER O-RING (IN-SITU)



**NOTE:** Photos are provided for key steps



= Care must be taken to ensure the quality of the unit.

1. Isolate loading arm to prevent product flow. Drain off the loading arm and ensure the API800 is clean and dry.
2. Squeeze the handle (API555-6) and push all four latches in at once. Whilst holding the latches in, slowly release the handle to allow the collar to slide forward.
3. Turn the operating handle (API800-11 or API800-15) to open the poppet (API800-9).
4. Pull the poppet adaptor ring (API800-4) forward.
5. Remove the outer o-ring (0203 or 0203VG) without damaging the poppet adaptor ring.



**NOTE:** Do not damage the poppet adaptor ring when removing outer o-ring.

6. Clean the outer o-ring poppet groove and body mating surface using a clean cloth.
7. Grease the new outer o-ring using solvent resistant grease and install the o-ring onto the poppet adaptor ring.



**NOTE:** During insertion minimise o-ring twist and do not overstretch or damage the o-ring. Do not roll the o-ring into place, as this will shorten the life of the o-ring.

8. Close the coupler operating handle and pull back the latch release handle allowing the collar to retract and click into place.



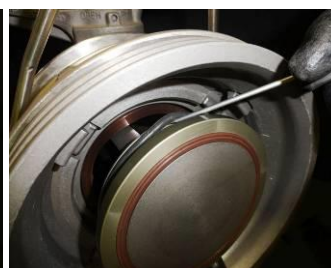
Step 2



Step 3



Step 4



Step 5



Step 7



Step 8

## 5. REPLACE BUSH AND O-RING ASSEMBLY (IN-SITU)



**NOTE:** Photos are provided for key steps



= Care must be taken to ensure the quality of the unit.

1. Isolate loading arm to prevent product flow. Drain off the loading arm and ensure the API800 is clean and dry.
2. Squeeze the handle (API555-6) and push all four latches in at once (as shown). Whilst holding the latches in, slowly release the handle to allow the collar to slide forward.
3. Turn the operating handle (API800-11 or API800-15) to open the poppet (API800-9).
4. Remove the cap screw (55091) and nyloc nut (4399) using an Allen key and remove the operating handle.
5. Remove circlip (55074) from above the bush assembly using circlip pliers.



**Warning:** Wear Safety glasses and remove circlip with caution as it may spring out when removed.

6. Pull shaft to reveal the lip of the bush and o-ring assembly (if required, use a screwdriver or similar through the hole in the shaft to assist).
7. Extract the bush and o-ring assembly using a suitable tool (e.g. a small flathead screwdriver).



**NOTE:** If using a sharp tool, be careful not to damage the coupler.

8. Remove the bush and o-ring assembly. If the washer comes out, clean it with a clean cloth for refitting as per step 9.
9. Clean the shaft and the bore free of grease and debris using a clean cloth.
10. Install the new washer if it came out during step 8. If it did not come out simply grease the new bush and o-ring assembly well using solvent resistant grease and install the new bush and o-ring assembly ensuring it clears the circlip groove.



**NOTE:** Use your thumbs to push the bush and o-ring assembly into place until it is seated into position and ensure the bore is clean and free from debris.



**Step 2**



**Step 3**



**Step 4**



**Step 5**



**Step 7**



**Step 8**



**Step 9**



**Step 10**

11. Install new circlip (55074) and ensure it is seated correctly into the groove.



**Warning:** Wear safety glasses and install circlip with caution as it may spring out during insertion.

12. Refit the operating handle as per the orientation shown and refit the cap screw & nyloc nut (4399), ensuring the handle is secured in place by tightening the cap screw/nyloc nut.



**NOTE:** 1. Ensure a new Nyloc nut is used each time. Do not re use old Nyloc nut.  
2. When refitting the handle bolt recommended torque is 3-4Nm (this is the torque required to screw through the nyloc nut, but excessive force may damage or strip the nut threads).

13. Close the coupler operating handle and pull back the latch release handle allowing the collar to retract and click into place.



**Step 11**



**Step 12**



**Step 13**



## 6.1.1 DISASSEMBLE AND REASSEMBLE PROCEDURE (on work bench)



**NOTE:** Photos are provided for key steps



= Care must be taken to ensure the quality of the unit.

### Disassemble

1. With the coupler removed from the arm, squeeze the handle (API555-6) and push in all four latches in at once. Whilst holding the latches in, slowly release the handle to allow the collar to slide forward.
2. Turn the operating handle (API800-11 or API800-15) to open the poppet (API800-9).
3. Remove the cap screw (55091) and nyloc nut (4399) using an Allen key and remove the operating handle.
4. Remove circlip (55074) from above the bush assembly using circlip pliers.



**Warning:** Wear Safety glasses and remove circlip with caution as it may spring out when removed.

5. Remove roll pin (55072) using a pin punch and hammer. Punch the roll pin completely out.
6. Pull the shaft and bush assembly out (API800-5A or API800-5AVG).
7. Remove the sleeve from the bottom groove where the shaft sits.
8. Lift the coupler body. The poppet (API800-9) and wave spring (6182) will come out. (Put these aside)
9. Remove the grub screws (3227) using an Allen key.
10. Turn the unit so the 4" TTMA flange faces down and the pins (API800-13) should slide out.
11. Turn the unit so the 4" TTMA flange faces up.
12. Remove the springs (4497). If they are damaged replace them as required.



**Warning:** Wear Safety glasses and remove springs with caution as they may spring out when removed.



Step 1



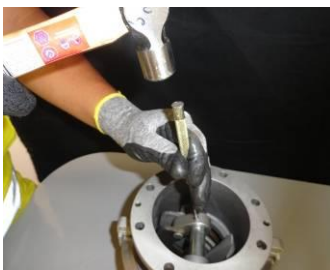
Step 2



Step 3



Step 4



Step 5



Step 6



Step 7



Step 8



Step 9



Step 10



Step 11



Step 12

13. Remove split pin (0762) from the latch release handle (API555-6) and lever (API555-10).
14. Pull the latch release handle and lever apart.
15. Lift and slide out the lever.
16. Lift the collar off the body (API800-2).
17. Inspect the collar for wear. If wear is evident contact your local Liquip Representative.
18. Inspect Wave Spring (6182) for damage. If it is damaged or broken replace as per **Section 6.2 - Disassemble and Reassemble procedure (pages 13-14)**.

**NOTE:** The remaining parts are the latches and latch return springs, these can be removed by knocking the roll pin out until the latch falls free. There should be no reason to remove these latches, as they should not wear significantly to require changing. If it appears that the latches or latch return springs need replacing please contact your Liquip representative.



**Step 13**



**Step 14**



**Step 15**



**Step 16**

## 6.1.2 DISASSEMBLE AND REASSEMBLE PROCEDURE (continued)



**NOTE:** Photos are provided for key steps



= Care must be taken to ensure the quality of the unit.

### Reassemble

1. Sit body on bench with the 4" TTMA flange facing down.
2. If any of the springs (6171) came out during the disassemble procedure. Inspect them for wear and replace as required. Refit the springs into the drilled holes in the body.



**NOTE:** If latches do not move or operate freely, replace them or contact your local Liquip Representative.

3. Sit body assembly on bench with 4" TTMA flange facing up.
4. Place the collar over body. Ensure all latches are pressed in so that the collar drops flush with the base.
5. Place lever (API555-10) on the bottom of the coupler as per the orientation shown.
6. Place springs (4497) into the grooves of the lever, lining them up with the holes for the grub screws.



**Warning:** Wear Safety glasses and install springs with caution as they may spring out during insertion.

7. Place pin-springs (API800-13) into the holes of the coupler body.
8. Fit the grub screws (3227) and tighten with an Allen key so they sit below the surface of the coupler body.
9. Fit the latch release handle (API555-6) into the lever (API555-10) ensuring it is in the correct orientation as shown.
10. Fit the split pins (0762) into both ends of the handle and secure by knurl the longer end of the pin over (as shown).
11. Replace seals on poppet adaptor ring in line with instructions in **Sections 3 – Replace Product Seal and 4 – Replace Outer O-Ring.**



**Step 3**



**Step 4**



**Step 5**



**Step 6**



**Step 7**



**Step 8**



**Step 9**



**Step 10**



12. Inspect poppet (API800-9) and replace as necessary.
13. Place the poppet adaptor ring (API800-4) over the poppet (API800-9) followed by the wave spring (6182).
- ◆ **NOTE:** Ensure the wave spring (6182) is replaced before the coupler is re-assembled.
14. Place body (API800-2) on top of poppet assembly. To ensure proper orientation, ensure the back of the cam plates are facing the scallop on the body (as shown).
15. Grease the sleeve using solvent resistant grease and fit the sleeve ensuring the flat end of sleeve is facing the inside of the coupler.
16. Grease the shaft and bush assembly (API800-5A or API800-5AVG) and fit it, ensuring it goes through the cam eccentric and sits in the sleeve.
17. Push the bush and o-ring assembly in past the circlip groove.
18. Install new circlip (55074) and ensure it is seated correctly into the groove.



**Warning:** Wear Safety glasses and install circlip with caution as it may spring out during insertion.

19. Refit the operating handle(API800-11 or API800-15) as per the orientation shown and refit the cap screw & nyloc nut (4399), ensuring the handle is secured in place by tightening the cap screw/nyloc nut.



- NOTE:**
1. Ensure a new Nyloc nut is used each time. Do not re use old Nyloc nut.
  2. When refitting the handle bolt recommended torque is 3-4Nm (this is the torque required to screw through the nyloc nut, but excessive force may damage or strip the nut threads).

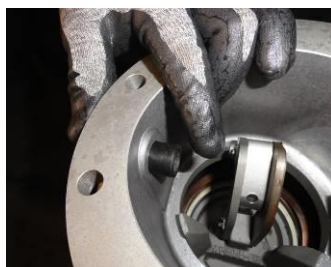
20. Hammer a new roll pin through the cam eccentric (55072) ensuring it doesn't protrude on either side of the shaft.
21. Close the coupler operating handle and pull back the latch release handle allowing the collar to retract and click into place.



**Step 13**



**Step 14**



**Step 15**



**Step 16**



**Step 17**



**Step 18**



**Step 19**



**Step 20**



**Step 21**



## 7. OPTIONAL METHOD TO REPLACE COUPLER INTERNALS (on work bench)



**NOTE:** Photos are provided for key steps



= Care must be taken to ensure the quality of the unit.

1. Sit coupler face down on bench. If the split pin is not accessible, open the coupler and use your thumb to rotate the clevis pin (API800-12) so that the split pin is accessible, then close the coupler and continue as below.
2. Remove the split pin (0762) using a pair of pliers and remove the thick washer (0101) from the roll pin (55072).
3. Engage all 4 latches and squeeze the handle (API555-6) to allow collar to slide forward. Place the coupler face down on bench. For ease of engaging latches, first pull back the handle and then press the latches.
4. Turn the operating handle (API800-11 or API800-15) to open the poppet.
5. Using your thumb, push out the roll pin (55072) and then pull it out along with the thin (5351) washer. This will allow the camplates and poppet to be removed from the coupler.
6. Lift the coupler to expose the internals and place the coupler body and external assembly aside.
7. Lift and remove the wave spring (6182) from the poppet.
8. Lift and remove the poppet adaptor ring (API800-4) from the poppet.
9. With a screw driver, pry underneath the outer o-ring (0203 or 0203VG) and slide it off the poppet adaptor ring.



**NOTE:** Do not damage the poppet adaptor ring when removing outer o-ring.  
Do not re-use the o-ring.



**Step 1**



**Step 2**



**Step 3**



**Step 4**



**Step 5**



**Step 7**



**Step 8**



**Step 9**

10. With a screw driver, pry underneath the product seal (API800-1 Viton B / API800-1VG Viton GFLT) and slide it off the poppet adaptor ring.

◆ **NOTE:** Do not damage the poppet adaptor ring when removing the product seal.

11. Clean the seal grooves and poppet adaptor ring using a clean cloth.
12. Grease the new outer o-ring using solvent resistant grease and install o-ring into the poppet adaptor ring groove.

◆ **NOTE:** Do not "roll" the o-ring into place as this will shorten the life of the o-ring.

13. Push the new product seal into the product seal groove using your thumbs ensuring the seal is correctly fitted correctly under the groove.

◆ **NOTE:** When installing the product seal, loosely press in 4 places equally around the seal before pushing the seal securely home to avoid uneven compressing of the seal. Ensure seal outside edge is in the groove all around.

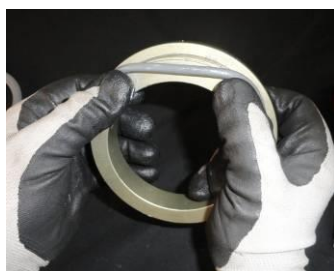
14. Check that the product seal is fitted correctly by running your fingers over it. It should feel free from lumps.

◆ **NOTE:** If lumps are felt, remove the product seal and refit. It is important that the product seal is fitted correctly.

15. Place poppet adaptor ring back on poppet.
16. Replace with a new wave spring (6182) and place it over the poppet adaptor ring.
17. Place coupler body (API800-2) on top of poppet assembly. To ensure proper orientation, ensure the back of the cam plates are facing the scallop on the body (as shown).
18. Angle the coupler and push the poppet with your hand to line the holes on the cam plates with the cam eccentric.
19. Insert pin (API800-12) and thin washer (5351) through the first cam plate and cam eccentric and out through the last cam plate. Ensure orientation is as shown. I.e., the head of the clevis pin is facing the end of the cam plates.
20. Replace thick washer (0101) on exposed end of pin.
21. Insert new split pin and knurl the end over as shown.
22. Close coupler by rotating handle.



Step 10



Step 12



Step 13



Step 16



Step 17



Step 18



Step 19



Step 21

## 8. TROUBLESHOOTING

### LEAKS AROUND OPERATING SHAFT (API800-5A or API800-5AVG)

Leaks between the operating shaft and the bush are caused by worn or damaged o-rings on the operating shaft. Refer to **Section 3 - Replace Bush and O-Ring Assembly** for bush and o-ring replacement.

### LEAKS AROUND POPPET/POPPET ADAPTOR RING (API800-9/API800-4)

Leaks around the poppet adaptor ring are caused by worn or damaged o-rings in the adaptor ring. Refer to **Section 4 - Replace Outer O-Ring**.

### LEAKS WHEN COUPLED WITH API ADAPTOR (TRUCK VALVE) DURING LOADING

This indicates the coupler product seal may be damaged or worn. Check visually on disconnection from the truck valve. Also check the API adaptor (truck valve) seal face for damage or wear. If replacement of the coupler product seal is required this can be carried out without taking the coupler valve out of service. Refer to **Section 5 - Replace Product Seal**.

### LEAKS IMMEDIATELY AFTER DISCONNECTION WITH API ADAPTOR (TRUCK VALVE)

This indicates the coupler product seal may be damaged or worn. Check visually on disconnection from the truck valve. This could also indicate that the API adaptor poppet may be protruding excessively from the adaptor seal surface. Check the API adaptor (truck valve). If replacement of the coupler product seal is required this can be carried out without taking the coupler valve out of service. Refer to **Section 5 - Replace Product Seal**.

### COUPLER NOT LATCHING CORRECTLY TO THE TRUCK ADAPTOR

Dirt built up on the latches may prevent the coupler from latching correctly to the truck adaptor and may prevent the collar from sliding forward naturally. Remove dirt from all latches and regularly monitor.

For other issues, contact your local Liquip Representative.

## 9. SPARE PARTS

The table below lists common spare parts for the API800 series.

(Please refer to Pages 4 and 5 for further item detail.)

Part Number	Spare Part Description	Contents	Quantity required
API8KITZ	API800 Poppet Seal/O-ring Kit (Viton B)	1.00 x API800-1 Product Seal (Viton B) 1.00 x 0203 Outer O-ring (Viton B) 1.00 x 5805 Grease Kit	1
API8VGKITZ	API800 Poppet Seal/O-ring Kit (Viton GFLT)	1.00 x API800-1VG Product seal (Viton GFLT) 1.00 x 0203VG outer o-ring (Viton GFLT) 1.00 x 5805 Grease Kit	1
API800-7A	Bush and O-ring assembly (Viton B)	1.00 x Bush and O-ring assembly (Viton B) 1.00 x Nyloc Nut (4955) 1.00 x 55074 (circlip internal) 2.00 x 55075 (circlip internal)	1
API800-7AVG	Bush and O-ring assembly (Viton GFLT)	1.00 x Bush and O-ring assembly (Viton GFLT) 1.00 x Nyloc Nut (4955) 1.00 x 55074 (circlip internal) 2.00 x 55075 (circlip internal)	1
API800SKZ	API800 All seal kit (Viton B)	1.00 x API800-1 Product Seal (Viton B) 1.00 x 0203 Outer O-ring (Viton B) 1.00 x 5805 Grease Kit 1.00 x API800-7A	1
API800VGSKZ	API800 All seal kit (Viton B)	1.00 x API800-1VG Product seal (Viton GFLT) 1.00 x 0203VG outer o-ring (Viton GFLT) 1.00 x 5805 Grease Kit 1.00 x API800-7AVG	1
API800-1	Product Seal (Viton B)	1.00 x Seal Product (Viton B)	1
API800-1VG	Product Seal (Viton GFLT)	1.00 x Seal Product (Viton GFLT)	1
0203	O-ring (Viton B)	1.00 x O-ring for poppet adaptor ring (Viton B)	1
0203VG	O-ring (Viton GFLT)	1.00 x O-ring for poppet adaptor ring (Viton GFLT)	1
55072	Spring Roll Pin for Eccentric Cam	1.00 x Spring Roll Pin (For Eccentric Cam)	1
6182	Wave Spring	1.00 x Wave Spring	1
0762	Split Pin	1.00 x Split Pin	4
API725-4	Latch Collar Interlock	1.00 x Latch Collar Interlock	4
0927	Spring Roll Pin for latches	1.00 x Spring (Roll) Pin (for Latches)	4

### SPECIAL NOTES FOR SPARE PARTS

#### API800-7A and API800-7AVG

- If your coupler operating handle is fitted two circlips (55075), disregard the Nyloc Nut (4955)
- If your coupler operating handle is fitted with a Nyloc Nut (4955), disregard the two smaller circlips (55075).