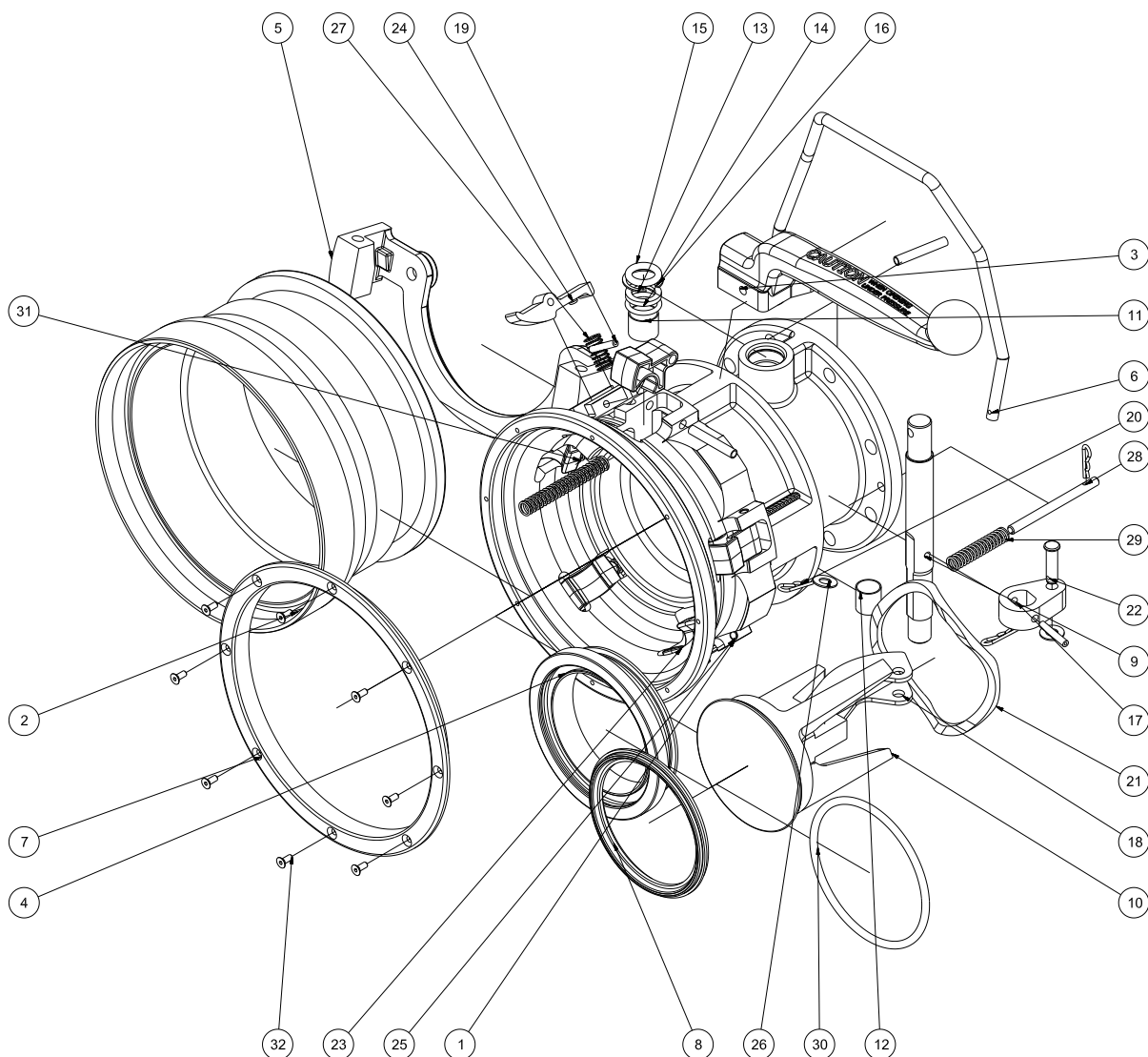


J0452 API Coupler

(J0452-05* Shown)



Part NO.	Description	Kit
494529	Viton Seal Kit	
494531	LT Viton Seal Kit	
494530	Buna Seal Kit	
676139	EPDM Seal Kit	
674227	Nose Piece & Poppet Kit	
673294	Nose Ring Kit	
673293	Claws & Interlock Lug Kit	
673295	J0452 Lever Kit	
672869	J0451/J0452 Shaft Kit	
673951	Pump Viton Seal Kit	

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NOTE: API couplers should always be used in conjunction with primary shutoff system such as a meter with preset valve. A relief valve must be provided for the Fig. 1 trapped product between the primary shutoff and the API coupler.

WARNING care must be taken when manually operating the lugs as the sleeve is under considerable spring pressure. Ensure that nothing will become trapped between the body and sleeve when it moves forward.

IMPORTANT: Before you begin, drain the line of all product. This can be done by depressing the 5 interlock claws on the coupler (23), the safety lug (24) and turning the lever (3).

Service Sheet

SSJ0452

EMCOWHEATON
A Gardner Denver Product

ITEM	QTY	051	052	053	055	DESCRIPTION	PART NUMBER	MATERIAL
1	1	•	•	•	•	Body	673262	Aluminum 356-T6
2	1	•	•	•	•	Sleeve	673257	Aluminum 356-T6
3	1	•	•	•	•	Lever	673259	Aluminum 356-T6
4	1	•	•	•	•	Nose Piece	673991	Aluminum 6061-T6
5	1	•	•	•	•	Retractor Bale, Top Lever	673255	Aluminum 356-T6
6	1	•	•	•	•	Retractor Handle	673264	Stainless Steel
7	1	•	•	•	•	Nose Ring	673265	Aluminum 6082-T6
8	1	•				Nose Seal	672213	Viton
8	1		•			Nose Seal	672550	Buna
8	1			•		Nose Seal	672528	Low Temp Viton
8	1				•	Nose Seal	676137	EPDM
9	1	•	•	•	•	Shaft	672319	Stainless Steel
10	1	•	•	•	•	Poppet	673992	Aluminum 356-T6
11	1	•	•	•	•	Bearing	560594	Plastic
12	1	•	•	•	•	Bearing	560595	Plastic
13	1	•				O-Ring	407433	Viton
13	1		•			O-Ring	564769	Buna
13	1			•		O-Ring	672548	Low Temp Viton
13	1				•	O-Ring	676138	EPDM
14	1	•	•	•	•	Spacer	240805203	Nylon
15	1	•	•	•	•	O-Ring (Dust Seal)	561320	Buna
16	1	•	•	•	•	Retaining Ring	408169	Steel
17	1	•	•	•	•	Link	408254	Stainless Steel
18	2	•	•	•	•	Bent Link	408262	Stainless Steel
19	2	•	•	•	•	Spring Pin	561852	Stainless Steel
20	4	•	•	•	•	Hitch Pin	560489	Stainless Steel
21	1	•	•	•	•	Wave Spring	564090	Stainless Steel
22	2	•	•	•	•	Link Pin	408252	Stainless Steel
23	5	•	•	•	•	Locking Claw	674213	Stainless Steel
24	1	•	•	•	•	Safety Lug	674190	Stainless Steel
25	6	•	•	•	•	Roll Pin	470078	Stainless Steel
26	4	•	•	•	•	M8 Thin Washer	671270	Stainless Steel
27	1	•	•	•	•	Safety Lug Spring	674191	Stainless Steel
28	2	•	•	•	•	Retractor Guide	673241	Stainless Steel
29	2	•	•	•	•	Retractor Spring	577205	Stainless Steel
30	1	•				Quad Seal	564760	Viton - PTFE Treated
30	1		•			Quad Seal	564756	Buna
30	1			•		Quad Seal	675079	Low Temp Viton
30	1				•	Quad Seal	676257	EPDM
31	5	•	•	•	•	Locking Claw Spring	673269	Stainless Steel
32	8	•	•	•	•	M4 x 10 C'Sunk Screw	617025	Stainless Steel
33	2	•	•	•	•	Cotter Pin	234131	Stainless Steel

Sheet: SSJ0452, 31/08/18, Rev: 5 As a part of a continuous commitment to product development the company reserves the right to alter the specification of its products without prior notice

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J0452 Pump Variants

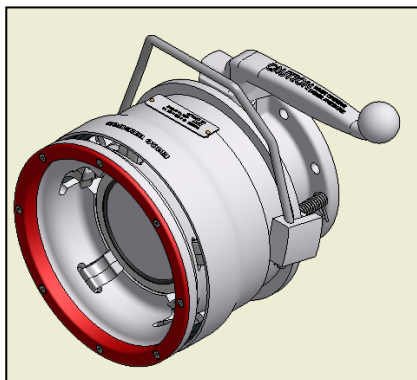


Fig. 2

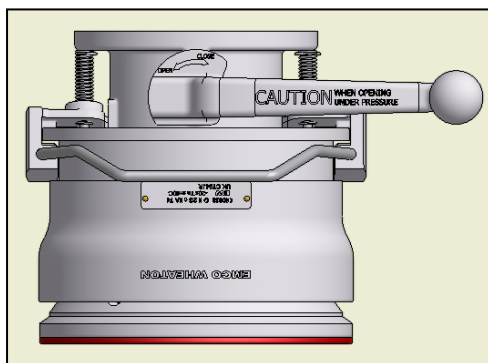


Fig. 3

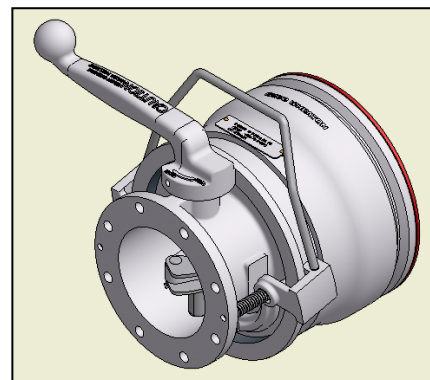


Fig. 4

J0452-05* Variant

- J0452-051 – Viton Seals
- J0452-052 – Buna Seals
- J0452-053 – Low Temp Viton Seals
- J0452-055 – EPDM Seals

Spares Kits

Viton Seal Kit – Part No. 494529			
Item	Qty	Description	Part No.
8	1	Nose Seal	672213
11	1	Bearing	560594
12	1	Bearing	560595
13	1	O-Ring	407433
15	1	O-Ring	561320
19	2	Spring Pin	561852
21	1	Wave Spring	564090
25	2	Roll Pin	470078
30	1	Quad Seal	564760

Buna Seal Kit – Part No. 494530			
Item	Qty	Description	Part No.
8	1	Nose Seal	672550
11	1	Bearing	560594
12	1	Bearing	560595
13	1	O-Ring	564769
15	1	O-Ring	561320
19	2	Spring Pin	561852
21	1	Wave Spring	564090
25	2	Roll Pin	470078
30	1	Quad Seal	564756

LT Viton Seal Kit – Part No. 494531			
Item	Qty	Description	Part No.
8	1	Nose Seal	672528
11	1	Bearing	560594
12	1	Bearing	560595
13	1	O-Ring	672548
15	1	O-Ring	561320
19	2	Spring Pin	561852
21	1	Wave Spring	564090
25	2	Roll Pin	470078
30	1	Quad Seal	675079

EPDM Seal Kit – Part No. 676139			
Item	Qty	Description	Part No.
8	1	Nose Seal	676137
11	1	Bearing	560594
12	1	Bearing	560595
13	1	O-Ring	676138
15	1	O-Ring	561320
19	2	Spring Pin	561852
21	1	Wave Spring	564090
25	2	Roll Pin	470078
30	1	Quad Seal	676257

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Nose Piece & Poppet Kit – Part No. 674227			
Item	Qty	Description	Part No.
4	1	Nose Piece	673991
10	1	Poppet	673992
20	2	Hitch Pin	560489
22	2	Link Pin	408252

Nose Ring Kit – Part No. 673294			
Item	Qty	Description	Part No.
7	1	Nose Ring	673265
32	8	Screw	617025

J0452 Lever Kit – Part No. 673295			
Item	Qty	Description	Part No.
3	1	Lever	673259
15	1	O-Ring No. 312	561320
25	1	Roll Pin	470078

J0451/J0452 Shaft Kit – Part No. 672869			
Item	Qty	Description	Part No.
9	1	Shaft	672319
16	1	Ret. Ring	408169
19	1	Spring Pin	561852
25	1	Roll Pin	470078

Claws & Interlock Lug Kit – Part No. 673293			
Item	Qty	Description	Part No.
19	1	Spring Pin	561852
20	2	Hitch Pin	560489
23	5	Locking Claw	674213
24	1	Interlock Lug	674190
25	5	Roll Pin	470078
27	1	Interlock Spring	674191
31	5	Locking Lug Spring	673269
33	2	Cotter Pin	234131

Pump Viton Seal Kit– Part No. 673951			
Item	Qty	Description	Part No.
34	0.83'	Felt Packing	516046200
36	1	Star Retaining Ring	244008001
44	1	Filter	306050200
52	1	U-Cup Seal	512050212
53	3	O-Ring	EW-405968
54	2	O-Ring	522011234
55	2	O-Ring	522011233

To Change Nosepiece Seal – Kits 494529, 494530, 676139, 494531 & 674364

1. Once fully drained, remove coupler from loading arm at flange.

WARNING care must be taken when manually operating the lugs as the sleeve is under considerable spring pressure. Ensure that nothing will become trapped between the body and sleeve when it moves forward.

2. Depress the 5 Locking Claws (23) and the Interlock Lug (24) to allow the sleeve to move forward under spring pressure.

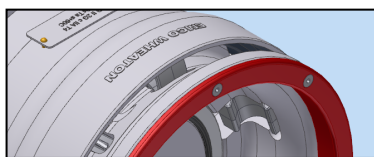


Fig. 6

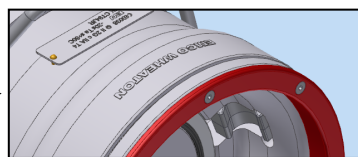


Fig. 7

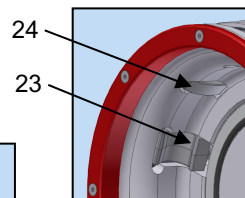


Fig. 5

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- Turn the Lever (3) to open the coupler to allow access to the poppet linkage assembly. (Poppet linkage assembly consists of the Poppet (10), Bent Links (18) and Link Pins (22).

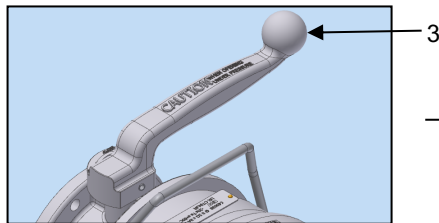


Fig. 8

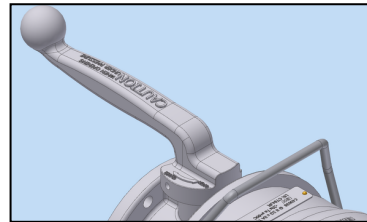


Fig. 9

- With no tension on the poppet assembly, use needle nose pliers to remove one set of the Hitch Pin (20), Link Pins (22) and Washers (26). (Fig. 11)

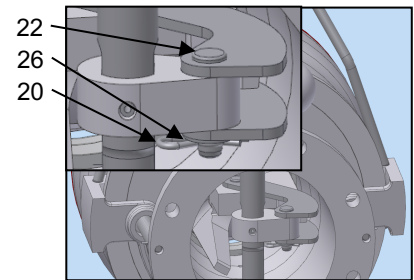


Fig. 10 & 11

- After the pin set has been removed, remove poppet assembly from the body bore. Carefully remove the Nosepiece (4) and Wave Spring (21). Do not nick the bore in the process. (See Fig. 12)

- If replacing Quad Seal (30) & Nose Piece Seal (8). Without scratching the seal seats on the Nosepiece (4), use a pick to carefully remove Nose Seal (8) and the Quad Seal (30). If not replacing Quad Seal & Nose Piece Seal Move to step 8.

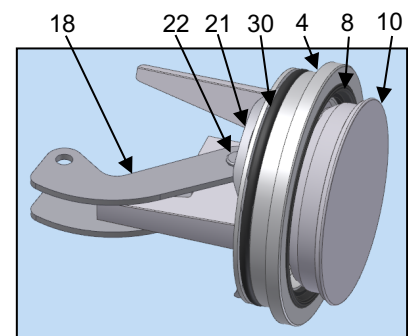


Fig. 12

- Using a solvent, thoroughly clean the bore and nosepiece seal grooves. Make sure all grit is removed. Carefully assemble New Quad Seal (30) & Nose Piece Seal (8) into the Grooves. Apply Parker Super Lube (or equivalent) to outside of Nose Piece Seal once assembled.

- If shaft seal needs replacing, go to steps 9-12 before reattaching poppet and bent links. If not then reassemble, reversing the above steps. Once Coupler is fully reassembled pull back Retractor Handle (6) pulling the Coupler Sleeve back into the Uncoupled Position (Fig. 6). The Coupler is now ready for use.

To Change Shaft Seals - Kits 494529, 494530, 676139 & 494531

9. With Lever still open, use a hammer and punch to remove roll pin (25) from lever (3). Slide lever off the end of the shaft. (See Fig. 13)

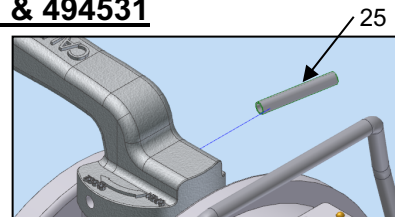


Fig. 13

10. Remove dust seal (15) with picking tool. Discard dust seal. Remove retaining ring (16) with retaining ring pliers. (See Fig. 14)

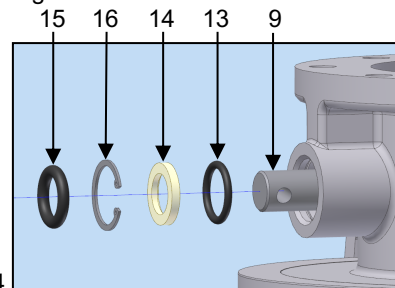


Fig. 14

11. Slide shaft out to expose spacer (14) and O-Ring (13). Remove spacer and O-Ring discard O-Ring. Thoroughly clean the bore. If Replacing Bearings (11&12) go to step 13.

12. Lubricate New O-Ring (13) with Parker Super Lube (or equivalent) and assemble in reverse order. Lubricate new dust seal (15) before installation. Replace Lever (3) and using a hammer & punch install New Roll Pin (25). (See Fig. 13) Return to step 8.

13. Use a hammer and punch to remove roll pin (19) to free link (17) on shaft. Slide shaft (9) out of Body and link off shaft. (See Fig. 15)

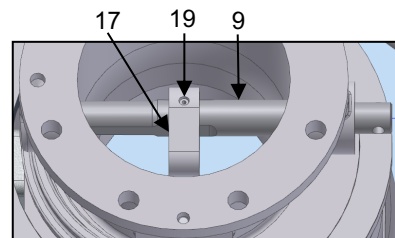


Fig. 15

14. Remove Top Bearing (12) and Bottom Bearing (11) (Fig. 16) and discard.

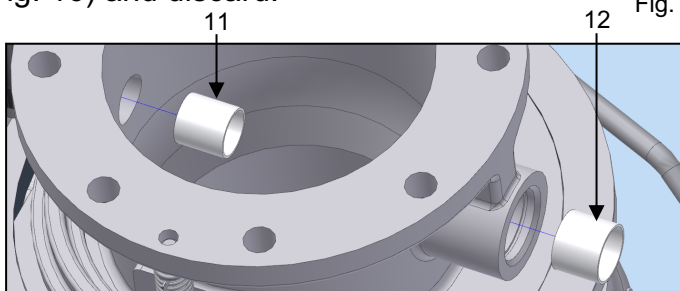


Fig. 16

15. Thoroughly clean the bores, replace Top and Bottom Bearings (11 & 12).

16. Lubricate Shaft (9) with Parker Super Lube (or equivalent) as indicated in Fig. 17 and replace into bore with Link (19), push shaft all the way in. Use New Spring Pin (19) to secure link to shaft with hammer. Return to step 12.

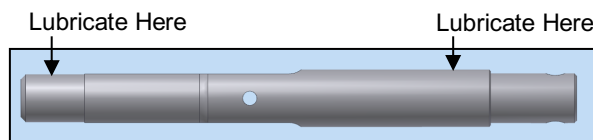


Fig. 17

To Change Claws & Interlock Lug – Kit 673293

WARNING care must be taken when manually operating the lugs as the sleeve is under considerable spring pressure. Ensure that nothing will become trapped between the body and sleeve when it moves forward.

17. Follow steps 1 & 13 to move sleeve forward and strip down coupler, without discarding or replacing any parts. **Keep removed parts to one side for re-assembly.**

18. Remove Cotter Pins (33) (discard) and washers (26) from either side of Coupler. (See Fig. 18)

19. Pull Retractor Handle (6) out of Retractor Bale (5). (See Fig. 18)

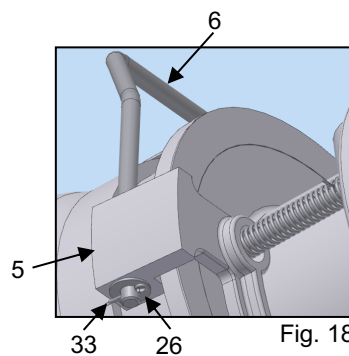


Fig. 18

20. Remove Hitch Pins (20) (discard) from Retractor Guide (28) on both sides of Coupler. (Fig 19)

21. Use Pliers inside of Retractor Spring (29), depress retractor spring, grip Retractor Guide (28) and slide guide out of the Coupler. Once retractor guide removed, remove retractor spring. Repeat process to remove spring and guide on the other side of the Coupler. **Warning, be careful whilst completing this step as the mechanism is highly sprung.** The Retractor Bale (5) will now fall away from the Coupler. (Fig. 20)

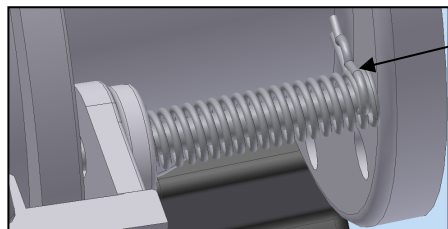


Fig. 19 Note: Hitch Pin pulled all the way through when re-assembling

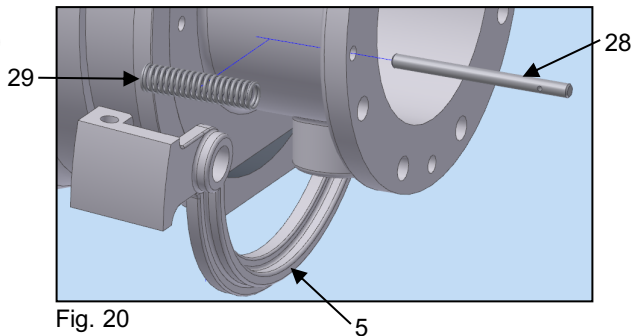


Fig. 20

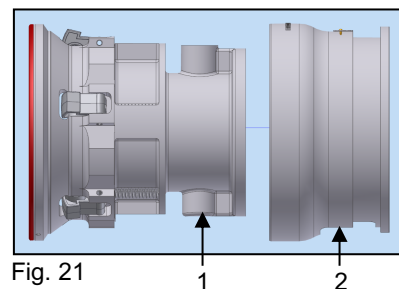
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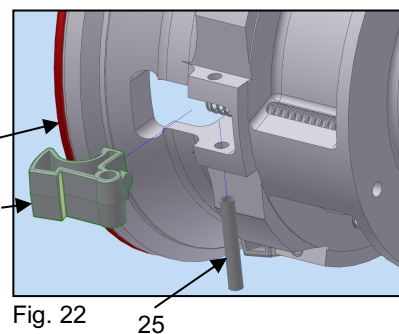


22. The Coupler Sleeve (2) is now free to be slide off the back of the Coupler Body (1). (Fig. 21)

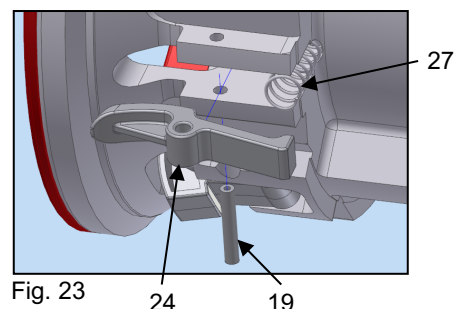
23. Use a punch and hammer to remove Roll Pin (25) from Body (1). The Locking Claw (23) will now be free to remove. Repeat process for the other 4 locking claws. Discard locking claws and roll pins. (Fig. 22)



24. Insert New Locking Claw (23) into the slot in the Body (1). Secure locking claw to body with New Roll Pin (25) with a hammer. Repeat process for other 4 Claws. (Fig. 22)



25. Use a punch and hammer to remove Spring Pin (19) from Body (1). The Safety Lug (24) and Spring (27) will now be free to remove. Discard safety lug, spring and spring pin. (Fig. 23)



26. Insert New Safety Lug (24) into the slot in the Body (1). Secure interlock lug to body with New Spring Pin (19) with a hammer. Insert New Spring (27). (Fig. 23)

27. Slide Coupler Sleeve (2) over Coupler Body (1) (Fig. 21).

28. Depress 5 x Locking Claws (23) and Safety Lug (24) (Fig. 5) to allow the sleeve to slide forward (Fig. 7).

29. Reassemble Coupler reversing steps 17 to 21 using existing parts except for New Cotter Pins (33) and New Hitch Pins (20) to retain Retractor Guide (28). Pull Hitch Pins all the way through (Fig. 21).

30. Once Coupler is fully reassembled pull back Retractor Handle (6) pulling the Coupler Sleeve back into the Uncoupled Position (Fig. 6). The Coupler is now ready for use.

To Change the Nose Ring – Kit 673294

31. Undo the 8 screws (32) on the front of the coupler using a 2.5mm allen key. (Fig. 24)
32. Remove the nose ring (7) and discard. If the nose ring is difficult to remove, use a screwdriver to lever the ring off. (Fig. 24)
33. Replace nose ring and fit new retaining screws. Use one drop of a medium strength thread locking compound such as loctite 241/2/3, on each screw. (Fig. 24)

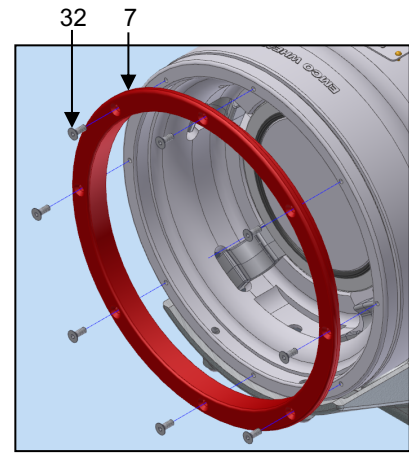


Fig. 24

To Change the Lever– Kit 673295

34. Follow steps 1 to 3 to open Coupler.
35. Using a hammer and punch, remove roll pin (25) from lever (3). Slide lever off the end of the shaft. (See Fig. 13)
36. Remove dust seal (15) with picking tool. Discard dust seal. Lubricate New Dust Seal (15) with Parker Super Lube (or equivalent) before replacing. (See Fig. 14)
37. Replace New Lever (3) and using a hammer & punch install New Roll Pin (25). (See Fig. 13)
38. Turn Lever (3) back to the closed position and pull back Retractor Handle (6) pulling the Coupler Sleeve back into the Uncoupled Position (Fig. 6). The Coupler is now ready for use.

To Change shaft – Kit 672869

39. Follow steps 1 to 13 to remove current Shaft (9) without discarding any parts except for the Retaining Ring (16).
40. Lubricate New Shaft (9) with Parker Super Lube (or equivalent) as indicated in Fig. 17 and replace into bore with Link (17), push shaft all the way in. Use New Spring Pin (19) to secure link to shaft with hammer.
41. See Fig. 14: Lubricate O-Ring (13) with Parker Super Lube (or equivalent) and assemble in reverse order, use New Retaining Ring (16) before assembling Dust Seal (15). Lubricate dust seal before installation. Return to step 8.

To Change Nose Piece & Poppet – Kit 674227

42. Follow steps 1 to 5 to detach Poppet Assembly from Coupler.
43. Discard Poppet (10), Nose Piece (4), Hitch Pins (20) and Link Pins (22) and replace with New Items. Remove Seals (30 & 8) carefully using a pick and transfer to New Nose Piece if not using with a Seal Kit. Make sure Nose Piece Grooves are free from any grit and dirt. (Fig. 10 & 12)
44. Reverse Step 42 then pull back Retractor Handle (6) pulling the Coupler Sleeve back into the Uncoupled Position (Fig. 6). The Coupler is now ready for use.