

# Maintenance Instructions

For

**Dixon Bayco**

## **BS61-200, BS62-200, BSS61-200, BSS62-200, BC61-200, BC62-200 2" Bayonet Style Dry Disconnects**

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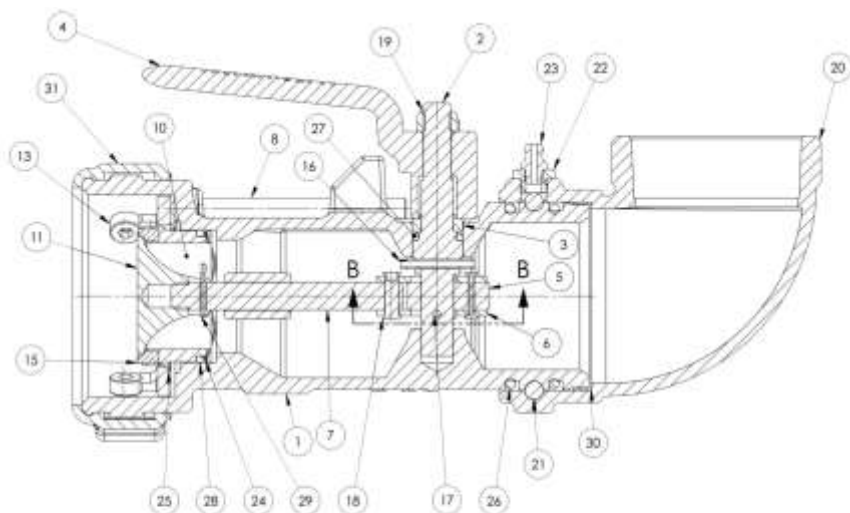
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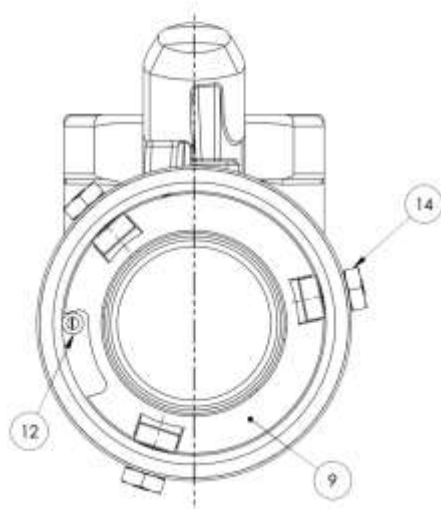
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## 2" Bayonet Style Dry Disconnects



BS SERIES



SHOWN WITHOUT  
BUMPER RING

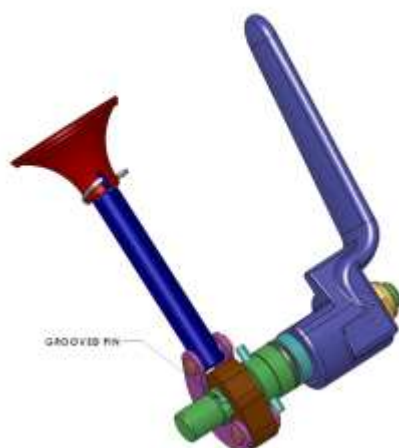
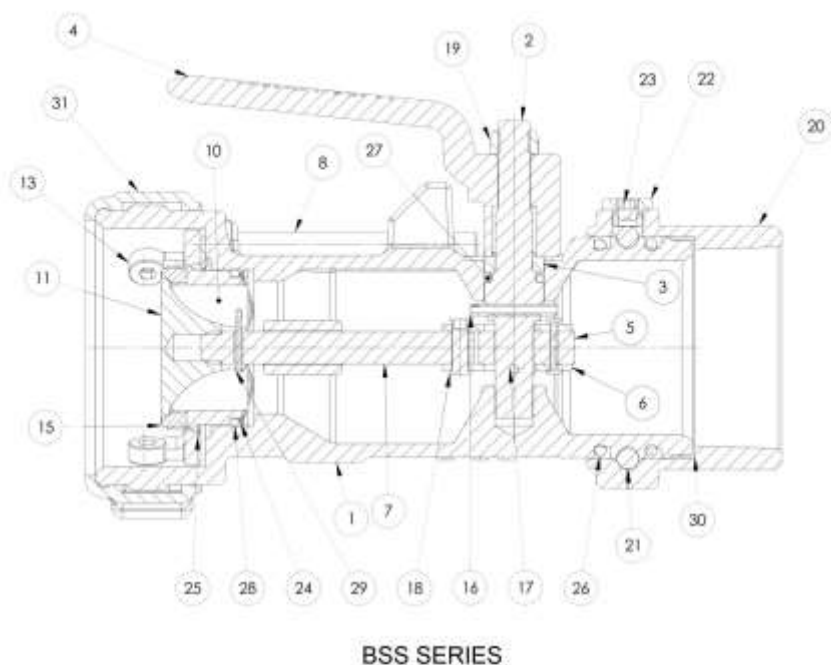


Figure 1

## 2" Bayonet Style Dry Disconnects

Basic BOM for BS61 (Buna-N) Series					
Item	Qty	Part No.	Material	Description	Notes
1	1	40136HC	ALUM	BODY	
2	1	40138SS	SST	SHAFT	
3	1	40139SS	SST	FOLLOWER	
4	1	40140SS	SST	LEVER	
5	1	40141SS	SST	LINK	
6	2	40142SS	SST	BENT LINK	
7	1	40143SS	SST	STEM	
8	1	40144SS	SST	INTERLOCK PIN	
9	1	40145HC	SST	LOCK RING	
10	1	40146HC	ALUM	NOSE PIECE	
11	1	40147RA	ALUM	POPPET	
12	1	40148SS	SST	COILED PIN	
13	3	40149SS	SST	BAYONET STUD	
14	3	40150SS	SST	JAM NUT	
15	1	40150BN	BUNA-N	NOSE SEAL	For B62 series (Viton) Use 40150VI
16	1	40152SS	SST	SPRING PIN	
17	1	40153SS	SST	GROOVED PIN	
18	2	40154SS	SST	RIVET	
19	1	40155SS	SST	LOCK NUT	
20	1	40137HC	ALUM	ELBOW	For BSS (Straight) Use 40179HC
21	32	40156SS	SST	BALL BEARING	
22	1	40157BR	BRASS	BALL PLUG	
23	1	40158ST	STEEL	GREASE FITTING	For BSS (Straight) Use 40178SS Set Screw
24	2	40159SS	SST	WAVE SPRING	
25	1	40160SS	SST	WAVE SPRING WASHER	
26	2	40161BN	BUNA-N	O-RING	For B62 Series (Viton) Use

## 2" Bayonet Style Dry Disconnects

					40161VI
27	1	40162BN	BUNA-N	O-RING	For B62 Series (Viton) Use 40162VI
28	1	40163BN	BUNA-N	O-RING	For B62 Series (Viton) Use 40163VI
29	1	40164SS	SST	COTTER PIN	
30	1	40165NY	NYLON	BEARING STRIP	
31	1	40166VY	PVC	BUMPER RING	

### Operating Instructions

These products are designed to operate as Dry Disconnect couplings. They are to be used in place of standard couplings when it is desired to prevent product from spilling from the fittings upon disconnect. This product is not intended to be the primary flow control or flow shut off device. Just as with standard non-dry disconnect fittings, it is intended that a flow control and flow shutoff valve will be installed in the system.

1. To use these fittings, attach the coupler to the mating adapter by aligning the three bayonet studs with the three corresponding notches in the adapter.
2. Push the coupler onto the adapter and rotate clockwise about 20° clockwise until the coupler stops rotating.
3. To open the fittings, rotate the lever on the coupler approximately 190° counterclockwise until it moves into an over center position and remains in place. At this time, the flow control valve can be opened to transfer product.
4. After the product has been transferred, close the flow control valve, then rotate the coupler lever clockwise until it returns to its over center closed position and remains in place. Rotate the coupler about 20° counterclockwise until the coupler stops rotating. Separate the coupler from the adapter.
5. Care must be taken in the design of the piping system to avoid trapping liquid between a shut off valve and a Dry Disconnect Coupler or Adapter. If liquid is trapped in this manner and the temperature increases, the pressure in the closed volume will rise dramatically and the Dry Disconnect fitting will be damaged.

### Disassembly



**When assembling or disassembling these products, always wear safety glasses. Severe eye injury may result if not wearing safety glasses.**

If you are repairing the swivel seals or wish to remove the swivel to gain better access to the inside mechanism, proceed as follows... (Note you must remove the elbow style swivel to repair the shaft seals.

1. Remove the BALL PLUG.
2. Remove the BALLS by holding the access hole pointing downward over a cup and rotating the MAIN BODY. A small cylindrical magnet may be useful to help remove balls that are stuck in the grease.
3. After all balls have been removed, pull the swivel axially from the BODY.
4. Remove the BUMPER RING by heating with an industrial heater to soften the material.
5. Depress the LOCK RING and rotate clockwise to disengage it from the BAYONET STUDS.
6. Remove the BAYONET STUDS by holding the head with an "Allen" wrench while loosening the JAM NUT holding the BAYONET STUD.
7. Rotate the LEVER counterclockwise to open the POPPET. Remove the POPPET by first removing the COTTER PIN that secures it then unthreading the POPPET from the STEM.
8. Remove the NOSE PIECE, 2 WAVE SPRINGS and 1 WAVE SPRING WASHER.
9. Rotate the LEVER & SHAFT until the GROOVED PIN is aligned with the inlet of the BODY.
10. Drive the GROOVED PIN flush with the SHAFT by striking with a hammer and punch.
11. Remove the SPRING PIN from the SHAFT by striking with a hammer and punch.

12. Remove the LEVER & SHAFT from the BODY.
13. Remove the BENT LINK and STEM subassembly through the BODY inlet.
14. Remove the LOCKNUT from the SHAFT. Slide the FOLLOWER off of the SHAFT to remove the SHAFT O-RING.
15. Remove the GROOVED PIN from the SHAFT.

### Reassembly

Prior to reassembly, inspect all components for damage especially scratches to the sealing surfaces. Pay close attention to the BODY, POPPET, NOSE PIECE, SWIVEL and SHAFT. If you are re-using any seals, inspect them to make sure there are no cracks or locations showing wear. When in doubt, it is often better to replace a seal at this stage rather than tear the unit down again.



**All lubricants used in the assembly of Dry Disconnects must be compatible with the seal material used and also with the commodity being transferred through these fittings Use Versilube G322L grease, Lubriplate Low Temp grease (L0172-098), or a grease of like viscosity.**

1. Insert the two WAVE SPRINGS into the BODY in the bore for the NOSE PIECE. Do not align the gaps in the WAVE SPRINGS.
2. Insert the WAVE SPRING WASHER into the recess in the BODY. This will be under the LOCK RING.
3. Insert the INTERLOCK PIN into the hole in the body with the pointed end up toward the coupling end.
4. Insert the LOCK RING into the BODY such that the notch in the LOCK RING straddles the COILED PIN. Rotate the LOCK RING clockwise until the edge of the notch contacts the COILED PIN. Make sure the WAVE SPRING WASHER is under the LOCK RING and centered in the recess in the BODY.
5. Assemble the BAYONET STUDS to the BODY and tighten the three JAM NUTS.
6. Install the O-RING and NOSE SEAL into the NOSE PIECE.



7. Lubricate the O-RING and outside diameter of the NOSE PIECE and press the assembled NOSE PIECE through the hole in the LOCK RING and into the body.
8. Slide the STEM and BENT LINK assembly into the BODY from the swivel end. The STEM will pass through the hole in the cast boss in the BODY.
9. Thread the POPPET loosely to the STEM.
10. Install the O-RING to the SHAFT.
11. Install the FOLLOWER over the SHAFT with the thin lip toward the SHAFT threads.
12. Install the LEVER onto the SHAFT making sure the hole in the SHAFT that will have the GROOVED PIN inserted later is orientated as shown in Figure 1.
13. Install the LOCK NUT onto the SHAFT but do not fully tighten.
14. Lubricate the O-RING on the SHAFT and with the LEVER in the counterclockwise position (POPPET open position) insert the SHAFT & LEVER assembly into the BODY and through the square hole in the LINK. See Figure 1 for the correct orientation of the BENT LINKS when the LEVER is rotated to the "POPPET closed" position.
15. With the LEVER rotated in the "POPPET closed" insert the SPRING PIN through the large hole in the SHAFT and tap in place with a hammer and punch. SPRING PIN should be centered on the SHAFT.
16. Rotate the LEVER 90° counterclockwise and insert the GROOVED PIN in the small hole of the SHAFT. Tap the GROOVED PIN into the SHAFT using a hammer and punch such that the grooves in the pin are below the surface of the SHAFT. The GROOVED PIN should protrude slightly above the flat surface on the SHAFT to prevent the Link from sliding.
17. Tighten the LOCK NUT on the SHAFT.

18. Thread the POPPET onto the STEM while rotating the Lever from the open to closed position. When the mechanism reaches the point where the NOSE PIECE bottoms out and the LEVER can no longer be rotated to the closed position, begin to slightly loosen the POPPET until the LEVER will just rotate to the closed position. If the hole in the STEM aligns with the slot in the POPPET, insert the COTTER PIN. If the hole in the STEM does not align with the slot in the POPPET, loosen the POPPET just enough until the hole and slot align and insert the COTTER PIN.

19. Check the LEVER and POPPET operation and if satisfactory, flare the COTTER PIN.

20. While pushing the LOCK RING downward, rotate the LOCK RING counterclockwise until the ears on the LOCK RING are under the BAYONET STUDS.

21. Install the BEARING STRIP into the ELBOW or STRAIGHT SWIVEL.

22. Install two O-RINGS into the grooves in the BODY at the swivel end.

23. Lubricate the BEARING STRIP and two O-RINGS and using a rotating motion, push the ELBOW or STRAIGHT SWIVEL onto the BODY.

24. Hold the ELBOW stationary with the opening for the balls pointing upward, and while rotating the BODY, insert the same number of balls that were removed.

25. Assemble the BALL PLUG and insert a GREASE FITTING into the BALL PLUG.

26. Inject grease into the GREASE FITTING until grease is forced out of the small vent hole opposite the BALL PLUG or between the swivel and BODY. If the unit has a STRAIGHT SWIVEL (not an ELBOW), remove the GREASE FITTING and install the SET SCREW. Thread the SET SCREW into the STRAIGHT SWIVEL until it is flush with the surface of the BALL PLUG

27. Pressure test the unit for leaks as described below.

28. Heat the BUMPER RING with an industrial heater to soften the plastic then assemble it to the BODY

### Test Procedure

The procedure for testing these products involves applying pressure to the coupler, submerging the coupler under water and checking for the appearance of bubbles. Generally the appearance of bubbles indicates a leak and is cause for rejection. There is often trapped air in various parts of the unit so the tester needs to make sure that the bubbles being seen are a leak (a steady repeating bubbling pattern) and not merely trapped air being released.



**Safety glasses must always be worn when using compressed air for any testing.**

1. Install a test plug with airline adapter into the threaded end of the coupler.
2. Pressurize the coupler to between 3 P.S.I.G. and 5 P.S.I.G. Submerge under water and check for leaks. (Low Pressure Test)
3. Increase pressure to 30 P.S.I.G. while still under water and check for leaks. (High Pressure Test)
4. Remove pressure, remove unit from water and blow off excess water.

## Repair Kits

Repair kits for Bayonet Dry Disconnect Couplers  
(BC, BS & BSS Series)

Base Kit #	Size	Repair Kit	Qty	Item #	Description	Additional Description
BS61 Buna-N	200	RK1	1	15	Nose Seal	
			1	16	Spring Pin	Large Hole in Shaft
			1	17	Grooved Pin	Small Hole in Shaft
			1	26	O-Ring	Swivel Seals
			1	27	O-Ring	Shaft Seal
			1	28	O-Ring	Nose Piece Seal
			1	29	Cotter Pin	Attach Poppet
			1	30	Bearing Strip	Swivel
			1	31	Bumper Ring	
BS61 Buna-N	200	RK2	2	26	O-Ring	Swivel Seals
			1	30	Bearing Strip	Swivel
BS62	200	RK2	2	26	O-Ring	Swivel Seals
			1	30	Bearing Strip	Swivel

## Dixon Bayco Warranty

For complete warranty information, please refer to the latest  
Dixon catalog.