Installation & Operating Instructions

For

Dixon Bayco

BL062 – BL072 Ball Nozzles for Bulk Delivery

For Sales and Service Contact

USA:
Dixon Bayco USA
Chestertown, Maryland
Phone: 410-778-2000
Fax: 410-778-4702
Toll Free: 800-355-1991
E-mail: dixonbayco@dixonvalve.com

Canada:
Dixon Group Canada Limited
Innisfil (Barrie), Ontario
Phone: 705-436-1125
Fax: 705-436-6251
Toll Free: 877-963-4966
E-mail: isales@dixongroupcanada.com

Europe:
Dixon Group Europe Ltd
Preston, England
Phone: +44 (0)1772 323529
Fax: +44 (0)1772 314664
E-mail: enquiries@dixoneurope.co.uk

Asia Pacific:
Dixon (Asia Pacific) Pty Ltd Wingfield,
South Australia
Phone: +61 8 8202 6000
Fax: +61 8 8202 6099
E-mail: enquiries@dixonvalve.com.au

Mexico:
Dixva, S. de R.L. de C.V.
Monterrey, N.L
Phone: 01-800-00-DIXON (34966)
Fax: 01-81-8354-8197
E-mail: contactenos@dixonvalve.com.mx

DIXON

The Right Connection®

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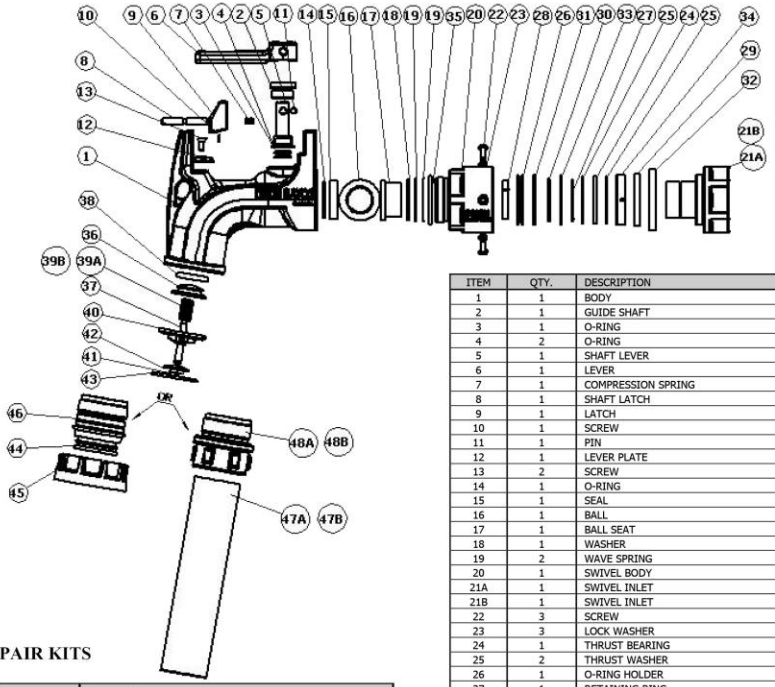

ITEM	QTY.	DESCRIPTION
1	1	BODY
2	1	GUIDE SHAFT
3	1	O-RING
4	2	O-RING
5	1	SHAFT LEVER
6	1	LEVER
7	1	COMPRESSION SPRING
8	1	SHAFT LATCH
9	1	LATCH
10	1	SCREW
11	1	PIN
12	1	LEVER PLATE
13	2	SCREW
14	1	O-RING
15	1	SEAL
16	1	BALL
17	1	BALL SEAT
18	1	WASHER
19	2	WAVE SPRING
20	1	SWIVEL BODY
21A	1	SWIVEL INLET
21B	1	SWIVEL INLET
22	3	SCREW
23	3	LOCK WASHER
24	1	THRUST BEARING
25	2	THRUST WASHER
26	1	O-RING HOLDER
27	1	RETAINING RING
28	1	FRONT BEARING
29	1	REAR BEARING
30	1	O-RING
31	1	O-RING
32	1	DUST SEAL
33	1	SUPPORT WASHER
34	1	SUPPORT RING
35	1	O-RING
36	1	POPPET
37	1	STEM
38	1	O-RING
39A	1	COMPRESSION SPRING (3 PSI)
39B	1	COMPRESSION SPRING (5 PSI)
40	1	BRIDGE
41	1	RETAINING RING
42	1	WASHER
43	1	O-RING
44	1	O-RING
45	1	SWIVEL NUT
46	1	SWIVEL ADAPTER
47A	1	SPOUT
47B	1	SPOUT
48A	1	SPOUT ADAPTER
48B	1	SPOUT ADAPTER

REPAIR KITS

CODE	DESCRIPTION
SWMF-RK1	SWIVEL GREASE FITTING KIT INCLUDES GREASE NIPPLE, SCREW ADAPTER.
SWMF-RK2 / SWMF-RK22	SWIVEL SEAL AND WEAR KIT INCLUDES ITEMS 26, 28, 29, 30, 31, 32.
SWMF-RK3 / SWMF-RK32	SWIVEL COMPLETE REBUILD KIT INCLUDES ITEMS 22(3), 23(3), 24, 25(2), 26, 27, 28, 29, 30, 31, 32, 33, 34.
SWMF-RK4 / SWMF-RK5 / SWMF-RK6 / SWMF-RK42 / SWMF-RK52 / SWMF-RK62 / SWMF-RK72 /	SWIVEL REPLACEMENT KIT INCLUDES ITEMS 20, 21A/B, 22(3), 23(3), 24, 25(2), 26, 27, 28, 29, 30, 31, 32, 33, 34, 35.
BL-RK10 / BL-RK102	BALL NOZZLE SEAL KIT INCL. ITEMS 3, 4(2), 14, 15, 17, 35, 38, 43, 44.
BL-RK11 / BL-RK112	CHECK VALVE 5 PSI SPRING KIT INCLUDES ITEMS 39B, 43.
BL-RK12 / BL-RK122	CHECK VALVE CARTRIDGE KIT (3 PSI) INCLUDES ITEMS 36, 37, 38, 39B, 40, 41, 42, 43.
BL-RK13	TRIGGER KIT INCLUDES ITEMS 6, 7, 8, 9, 10, 11, 12, 13(2)
BL-RK4	SHAFT SEAL KIT INCLUDES ITEMS 2, 3, 4(2), 5.

To properly operate and maintain your Dixon Bayco ball nozzle, the following instructions are provided. Please read with care as improper handling or maintenance may cause a hazardous condition.

Do not modify your Dixon Bayco ball nozzle for any reason. It can result in a hazardous condition due to operating difficulties or operation malfunction. Disassembly or tampering will void the product warranty.

Safety

Nozzle must be attended when filling tank. Never leave nozzle unattended.

Never smoke or allow an open flame near your dispenser when handling volatile materials such as gasoline or fuels. An explosion could result.

Immediately remove from service any ball nozzle that is not performing satisfactorily.

Do not drag nozzle across rough surfaces.

Remember safety is everyone's business.

Installation

Dixon Bayco ball nozzles are properly adjusted, tested and ready to use upon leaving the factory.

1. When connecting the nozzle to the pump hose, apply a thin layer of a suitable thread sealant (such as DIXON "LCTS 1") to the male threads on the hose fitting or swivel.

2. Using a spanner or crescent wrench tighten snugly. (To avoid damage to the nozzle & fitting, do not use an Adjustable Pipe Wrench, and take care not to over tighten the treads.)

How to Use

1. The nozzle spout should be inserted as far as possible into the fill-pipe.

2. If equipped with a swivel nut adapter, thread the swivel nut securely onto the fill-pipe adapter to ensure a leak-proof connection.

3. Never leave nozzle unattended, these nozzles are designed for bulk delivery and do not have an auto-shut off mechanism.

4. Flow rate is activated and increased as the trigger is rotated in either direction from the closed position. Maximum flow rate is achieved when lever is at 90° to closed position.

5. Lower flow settings are recommended for “hard to fill” conditions, such as when “topping-off” or splashing may occur.

Inspection

Ball nozzles can fail if not properly maintained. Frequently check for damaged, loose or missing parts. Please see back page for available repair kits.

Check for Loose Adapters

Occasionally check the connection of the spout adapter (or swivel nut adapter) to the body outlet. Also check the connection of the inlet swivel assembly to the body. These connections should be tight. If found to be loose, reinstall the component using a removable thread-locking product such as Loctite 242. Tighten with care. Avoid excessive force, which can damage the nozzle body or the mating component.

Lubricating the Inlet Swivel Assembly

Dixon Bayco supplies the inlet swivel assembly already lubricated. However, if the inlet swivel should become difficult to rotate it is recommended to re-apply lubrication. The inlet swivel can be lubricated without disassembly. HOWEVER, MAKE SURE THE BALL NOZZLE AND INLET SWIVEL ARE NOT UNDER PRESSURE. DAMAGE TO THE PARTS OR PERSONAL INJURY MAY OCCUR!

1. Order repair kit SWMF-RK1.

2. Remove one of the three set-screws (22) from the inlet swivel assembly with a 1/8" hex key.

3. Insert the grease-fitting adapter into the screw hole; connect grease fitting to adapter. Be careful not to strip the threads inside the screw hole!

4. Apply a lubricating product until it begins to emerge through the screw holes (loosen one additional screw to ease emerging grease) or from the dust seal end. It is highly recommended to use such a product as DuPont Krytox GPL-204 to ensure superior cold temperature performance and longevity of the internal seals.

5. Remove grease-fitting adapter; reinsert the set-screw (22) complete with lock washer (23); tighten snug, but be careful not to strip the threads!

Inspecting and Rebuilding the Inlet Swivel Assembly

The Dixon Bayco hose swivel may be rebuilt while still connected to the ball nozzle and hose fitting. However, the hose line must be depressurized and completely emptied prior to disassembly TO AVOID COMPONENT DAMAGE OR PERSONAL INJURY!

1. Remove all three set-screws (22) and lock washers (23); gently pull swivel housing (20 and 21A/21B) apart.

2. Remove dust seal (32) and rear bearing (29); remove front bearing (28); remove O-ring holder complete with O-ring seals (26, 30, 31); remove support washer (33). At this point it may be decided to simply replace the main seals (26, 30, 31), the dust seal (32) and the radial bearings (29, 28). If this is the case, use repair kit SWMF-RK2 / SWMF-RK22. Then, skip the next two disassembly steps and proceed to the bottom paragraph describing reassembly. However, if a complete inlet swivel rebuild is required (including ball bearing [24, 25] and support ring [34]), use repair kit SWMF-RK3 / SWMF-RK32 and proceed with the following instructions.

3. Remove retaining ring (27) with proper removal pliers, be careful NOT TO SCRATCH any sealing surfaces on the swivel inlet (21A/21B) when pulling off.

4. Remove thrust washers (25) and thrust bearing (24); remove support ring (34).

Thoroughly wipe off the old grease from all removed components with a clean rag. Visually examine all components. Remove any burrs and sharp edges that could damage the seals during reassembly. Replace any damaged parts. Before assembly, liberally apply lubricant (DuPont Krytox GPL-204 is recommended) to the inside diameter of the swivel body (20), the outside diameter of the swivel inlet (21A/21B), the O-ring holder complete with O-ring seals (26, 30, 31), and the thrust bearing (24). Reinstall all components in reverse order as disassembly instructions.

Replacing the Inlet Swivel Assembly

1. Order repair kit SWMF-RK4 for 1-1/2" NPT inlet swivel (BL064, BL068, BL072, BL072NS) or SWMF-RK5 for 1-1/4" NPT inlet swivel (BL062, BL066, BL066NS) or SWMF-RK6 for 1-1/2" BSPP inlet swivel (BL072-BSPP).

2. Order repair kit SWMF-RK42 for 2" NPT inlet swivel (BL920 & BL919) or SWMF- RK52 for 1-1/2" NPT inlet swivel (BL918) or SWMF-RK62 for 2" BSPP inlet swivel (BL924) or SWMF-RK72 for 1-1/2" BSPP inlet swivel (BL917).

3. Secure the ball nozzle in a bench vice with the inlet end pointing vertically up; this will prevent loose internal components from falling out.

4. Then remove the inlet swivel assembly; DO NOT use a pipe wrench, which can cause distortion of the swivel body (20) and possible leakage. A spanner or crescent wrench is recommended. Using a pipe wrench WILL VOID WARRANTY.

5. Install replacement inlet swivel; apply a removable thread locker such as Loctite 242 to the male threads of the swivel body (20) and thread into the body (1). Use a crescent wrench (NOT a pipe wrench) to tighten until swivel body (20) bottoms out against ball nozzle body (1).

Changing the Check Valve Pressure Setting

Repair kit BL-RK11 / BL-RK112 provides to possibility to reset the check valve pressure setting from the standard 3psi to 5psi.

1. Remove the spout adapter (48A/48B) (or swivel nut adapter [46]) from the body outlet end (1).

2. Remove the O-ring seal (43) and the check valve “cartridge” (36, 37, 38, 39A, 40, 41, and 42).

3. Decrease the tension from the check valve cartridge by slightly compressing the spring; carefully remove the retaining ring (41); check valve cartridge will come apart.

4. Replace the old spring (39A – set at 3psi) with the new spring (39B – set at 5psi).

5. Reassemble the check vale cartridge in reverse order and secure by reinstalling the retaining ring (41).

6. Insert check valve cartridge into body outlet end; insert new o-ring seal (43) provided in repair kit into groove in check valve bridge (40); apply a removable thread locker such as Loctite 242 to the male threads of the spout adapter (48A/48B) (or swivel nut adapter [46]) and thread into the body (1). Use a wrench to tighten snug; do not over tighten.

Inspecting and Rebuilding the Ball Nozzle

Depending on what components need to be replaced in your Dixon Bayco ball nozzle, the following sections provide instructions on how to rebuild the different areas of your ball nozzle.

To replace the check valve “cartridge” (3PSI) order repair kit BL-RK12 / BL-RK122.

1. Remove the spout adapter (48A/48B) (or swivel nut adapter [46]) from the body outlet end (1).

2. Remove the O-ring seal (43) and the check valve “cartridge” (36, 37, 38, 39A, 40, 41, and 42).

3. With a clean rag remove all dirt from the valve seat inside the ball nozzle body (1).

4. Insert new check valve cartridge into body outlet end; insert new O-ring seal (43) provided in repair kit into groove in check valve bridge (40); apply a removable thread locker such as Loctite 242 to the male threads of the spout adapter (48A/48B) (or swivel nut adapter [46]) and thread into the body (1). Use a wrench to tighten snug; do not over tighten.

To rebuild a leaking or worn shaft seal order repair kit BL-RK4.

1. Secure the ball nozzle in a bench vice with the inlet end pointing vertically up; this will prevent loose internal components from falling out.

2. Then remove the inlet swivel assembly; DO NOT use a pipe wrench, which can cause distortion of the swivel body (20) and possible leakage. A spanner or crescent wrench is recommended. Using a pipe wrench WILL VOID WARRANTY.

3. Make sure the actuating lever (6) is in the closed position (inline with ball nozzle body); then remove two wave springs (19), washer (18), ball follower (17), and ball (16); it is not necessary to remove ball seal (15) and ball seal O-ring (14).

4. Remove the pin (11) from the actuating lever (6); remove the lever from the stuffing box shaft (5).

5. Remove the stuffing box as follows: push the shaft (5) into the ball nozzle body (1) and remove it through the body inlet end; remove nut with wrenching tool (eg. steel bar 1/8" x 1/2" x 3").

6. Install new stuffing box assembly in reverse order; apply a removable thread locker such as Loctite 242 to the nut (2); tighten the nut (2) until it bottoms out against the ball nozzle body (1).

7. Reinstall the old lever (6) with the old pin (11); rotate the pin (11) 90° from its original position to ensure a secure press fit.

8. Reinstall remaining components in reverse order; apply a removable thread locker such as Loctite 242 to the male threads of the swivel body (20) and thread into the ball nozzle body (1). Use a crescent wrench (NOT a pipe wrench) to tighten until swivel body (20) bottoms out against ball nozzle body (1).

To replace all seals in your ball nozzle (not including the inlet swivel seals), order repair kit BL-RK10 / BL-RK102.

1. Remove the check valve “cartridge” as described above; replace poppet O-ring (38), check valve bridge O-ring (43), and swivel nut adapter O-ring (44) if applicable; reinstall all components; apply a removable thread locker such as Loctite 242 to the male threads of the spout adapter (48A/48B) (or swivel nut adapter [46]) and thread into the body (1). Use a wrench to tighten snug; do not over tighten.

2. Next secure the ball nozzle in a bench vice with the inlet end pointing vertically up; this will prevent loose internal components from falling out.

3. Then remove the inlet swivel assembly; DO NOT use a pipe wrench, which can cause distortion of the swivel body (20) and possible leakage. A spanner or crescent wrench is recommended. Using a pipe wrench WILL VOID WARRANTY.

4. Make sure the actuating lever (6) is in the closed position (inline with ball nozzle body); then remove two wave springs (19), washer (18), ball follower (17), ball (16), ball seal (15), and O-ring (14).

5. Remove the pin (11) from the actuating lever (6); remove the lever from the stuffing box shaft (5).

6. Remove the stuffing box as follows: push the shaft (5) into the ball nozzle body (1) and remove it through the body inlet end; remove nut with wrenching tool (eg. steel bar 1/8" x 1/2" x 3").

7. Replace the two shaft O-rings (4), and the nut O-ring (3); reinstall the stuffing box assembly in reverse order; apply a removable thread locker such as Loctite 242 to the nut (2); tighten the nut (2) until it bottoms out against the ball nozzle body (1).

8. Reinstall the old lever (6) with the old pin (11); rotate the pin (11) 90° from its original position to ensure a secure press fit.

9. Replace ball seal O-ring (14), ball seal (15), ball follower (17), and inlet O-ring (35).

10. Reinstall remaining components in reverse order; apply a removable thread locker such as Loctite 242 to the male threads of the swivel body (20) and thread into the body (1). Use a crescent wrench (NOT a pipe wrench) to tighten until swivel body (20) bottoms out against ball nozzle body (1).

Dixon Bayco Warranty

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