Powering Business Worldwide

Aerospace Group
Conveyance Systems Division

Carter® Brand
Ground Fueling

SM61154

July 2011

Applicable addition manuals:
SM61428 Nozzle
SM60427 Nozzle
SM64348 Nozzle
SM64349 Nozzle
SM64200 Nozzle
SM64201 Nozzle

Maintenance Manual

Dry Break Swivel Quick Disconnect

To Mate 60427, 64200, 64201, 64348 & 64349 Nozzles
(also used on older models 61428 & 61429 no longer in production)

Model 61154

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Maintenance, Overhaul & Test Instructions
Eaton's Carter® Brand
Model 61154 Swivel Quick Disconnect

1.0 INTRODUCTION

This manual furnishes detailed instructions covering the maintenance and overhaul of Eaton's Carter brand Model 61154 dry break swivel quick disconnect assembly.

Model 61154 Dry Break Swivel Disconnect is made in many variations of inlet configurations. They are obtained by procuring different "options" to the basic part number 61154. When procured as a part of a nozzle, each of these variations corresponds to a different "option" number and letter (depending on the desired adapter and inlet types) on Eaton's Carter brand nozzle Models 60427, 64200, 64201, 64348 or 64349. The 61154 was also utilized on obsolete nozzles 61428 and 61429. Refer to paragraph 3.0 for a detailed explanation of the various options.

2.0 EQUIPMENT DESCRIPTION

Model 61154 Dry Break Swivel Disconnect is designed to be used as a part of Eaton's Carter brand nozzle Models 60427, 64200, 64201, 64348 or 64349 to provide connection to various sizes and types of hose fittings and to provide a quick means of disconnecting the nozzle from the hose for inspection of the screen utilized therein. The outlet adapter that mates the nozzle is also the male half of the disconnect.

3.0 TABLE OF OPTIONS

The unit is available with various inlet thread sizes and types as shown below. The corresponding options to the nozzles used to obtain it as a part of the nozzle are also shown. **The male half adapter connection to the female half of the 61154 series units is not interchangeable with the corresponding items of the old 44363 or 60672-1 dry break disconnects. Replacement of a part of the older unit will require the replacement of the entire unit (male and female halves).**

		Option Number/Letter when ordered as part of nozzle model		
Part No.	**Description**	**60427**	**64200/64348**	**64201/64349**
61154H	2 ½" NPT inlet thd	7H, 8H	7H	6H, 7H, 8H
61154K	2 ½" BSPP inlet thd	7K, 8K	7K	N/A
61154L	3" NPT inlet thd	7L, 8L	7L	6L, 7L, 8L
61154M	3" BSPP inlet thd	7M, 8M	7M	N/A
61154N	2" BSPP inlet thd	7N, 8N	7N	N/A
61154P	2" NPT inlet thd	7P, 8P	7P	6P, 7P, 8P

The option letters shown below can be added to any of the above 61154 units to provide the complete part number for ordering a dry break disconnect assembly separate from a nozzle. The corresponding nozzle option letters are also shown.

		Nozzle Model		
Option Letter	**Description**	**60427**	**64200/64348**	**64201/64349**
A	Adds 40 mesh screen (44373-40)	N/A	A	A
B	Adds 60 mesh screen (44373-60)	B	B	B
C	Adds 100 mesh screen (44373-100)	C	C	C
D	Adds long male half adapter to mate 60427 nozzle without regulator (44700)	8H-N	N/A	N/A
E	Adds male half adapter to mate D-1/D-2 military nozzle (44663)	N/A	N/A	6H, 6L, 6P
F	Adds male half adapter with 2" BSPP male outlet - overwing nozzle interchange (44746)	N/A	N/A	N/A
G	Adds male half adapter to provide 1½" BSPP male thread to mate over- wing nozzle. (47024)	N/A	N/A	N/A
H	Adds 2 ½" NPT Inlet, Female	N/A	N/A	7H, 7L, 7P

Option Letter	Description	Nozzle Model 60427	64200/64348	64201/64349
J	Adds short male half adapter to mate 60427 nozzle or 64348 nozzle with regulator(44185)	7H-P	7H-P	N/A
K	Adds 2 ½" BSPP Inlet, Female	N/A	N/A	7H, 7L, 7P
L	Adds 3" NPT Inlet, Female	N/A	N/A	7H, 7L, 7P
M	Adds 3" BSPP Inlet, Female	N/A	N/A	7H, 7L, 7P
N	Adds 2" BSPP Inlet, Female	N/A	N/A	7H, 7L, 7P
P	Adds 2" NPT Inlet, Female	N/A	N/A	7H, 7L, 7P
R	Adds short male half adapter to mate 64349 nozzle with regulator (44697)	N/A	N/A	7H, 7L, 7P
S	Adds long male half adapter to mate 64348 without regulator (44701) Note: On newer nozzles with the two piece operating lever Option R can be used in lieu of this option.	N/A	8H-P	8H, 8L, 8P
T	Adds male half adapter with 1½" NPT male outlet - overwing nozzle interchange (44698)	N/A	N/A	N/A
U	Adds male half adapter to provide 2" NPT male thread to mate overwing. (47065)	N/A	N/A	N/A
W***	Without Safety Clip (210641)	Optional on older units, now standard		

*** Safety clip (P/N 210641) for the 61154 Dry-Break QD is a standard item. However it may be considered FOD (Foreign Object Damage) and is not included on military nozzle assemblies unless specified.

4.0 SPECIAL TOOLS

The following special tools or their equivalent should be utilized to accomplish the overhaul and repair of the subject units:

- 6912-ST1 -- Utilized to properly wind the two coil springs and install them in the check valve assembly.
- 43113-ST1 -- For use in assembling the check valve assembly into the housing.
- 44752 -- For use in installing the ball race Wear Rings (6) onto the various male adapters to prevent damage to the Adapters.
- 210367 -- For use in removing worn ball race Wear Rings (6) from the various male adapters to prevent damage to the Adapters.
- IF220351 -- Go-no go gauge for checking wear on Sleeve (46).

5.0 DISASSEMBLY

5.1 Remove nozzle/swivel quick disconnect from end of hose. If the thumb Latches (47) of the dry break disconnect are locked by optional Cotter Pins (on older units only), remove same. Cotter Pins (51) were not furnished with Option E for military use. Older units may or may not have Clip (57) to lock the thumb Latches (47) of the Disconnect. Clip (57) is standard on newer units and it will be necessary to move the Clip (57) from position A to position B as shown in Figure 1 or remove it completely during repair. Depress the Latches (47) and move the Sleeve Assy (45) toward the inlet of the unit. Grasp the Male Adapter Half and twist while applying pressure to separate the two halves of the Disconnect.

5.2 If a Screen (24A-C) is present it may be removed for replacement or cleaning by removing its Retainer (25) first. **Note: The tangs of the Retainer (25) should always be installed facing the screen to prevent them from interfering with the Actuator (40) of the Check Valve Assy (28). This will hamper proper swiveling action.**

5.3 Pre-disassembly Inspection of Sleeve Assy (45) - Prior to disassembling Disconnect (26), perform the following inspection procedure:

- Slide the Sleeve (46) to the locked position (away from the threaded end of the Housing (27) and allow it to lock in place.
- Attempt to insert gauge IF220351 into the open end (opposite to the threaded end). If the gauge slides into the part, the Sleeve (46) is worn out and has to be replaced. If the gauge does not enter the part, the unit is acceptable for use and disassembly can continue as below.

5.4 While holding the Sleeve Assy (45) in the retracted position remove Retaining Ring (42). Use a small blade screw driver or a sharp pointed instrument to lift one end of the Retaining Ring (42) free from its groove and peel

the ring off of the Housing (27). Remove the Sleeve Assy (45), Spring (50), and Balls (44).

5.5 If the Latches (47) and Springs (48) are not damaged do not disassemble the Sleeve Assy (45) further. If necessary to replace either the Latches (47) or the Springs (48), using a .093 (2.362 mm) drift pin drive the Roll Pin (49) out of the Sleeve Assembly (45).

5.6 Wear Band (43), located inside the Housing (27), should not be disassembled until the inside diameter has been inspected in accordance with paragraph 6.6 below. If replacement is necessary, it can be removed by use of a small blade screwdriver to pry one end out of the groove. Then carefully remove the entire band.

5.7 If the Check Valve (28) is to be overhauled, first, with a small blade screw driver or sharp pointed instrument remove Ring (38) from its internal groove and peel it out. Grasp the Actuator (40) and simultaneously turn and pull it out of the Housing (27). Remove O-ring (37) from the internal groove and discard it. Remove Screw (41), Actuator (40), Spring (50) from Check Valve Assy (28).

5.7 Unless the special tools recommended in paragraph 4.0 are available it is recommended that the Check Valve Assy (28) be replaced as a complete part number and that it not be disassembled further. If disassembly is to be achieved, apply light finger pressure slightly off center and downward on top of Springs (30) & (31). Using a 1/8" (3.18 mm) diameter pin push on Hinge Pin (29) until it protrudes approximately 3/4" (19 mm) out of opposite side. While maintaining finger pressure on Springs (30) & (31), remove Hinge Pin (29) by pulling on the protruding pin. Slowly release pressure from springs being careful not to allow springs to unwind rapidly. After Springs (30) & (31) have been removed, Check Valves (32) may be removed from Retainer Assy (36). Care should be taken not to lose Spacers (34) when removing Check Valves (32). Note orientation of Spacers (34) and Washers (35) for proper reassembly.

5.8 Remove and discard Seal or O-ring (7) from Male Half Adapter (1, 9, 13, 15, 17, 19 or 21). Note: Later units will have O-ring (7) and only the newer o-ring is available. Do not remove Wear Band (8) from Adapter (1, 9, 13, 15, 17, 19 or 21) until the outside diameter has been inspected in accordance with paragraph 6.5. If necessary to replace, carefully, using a small blade screwdriver, pry the Wear Band (8) from its groove and peal it from the part and discard.

5.9 The Ball Race Rings (6) need not be disassembled from the Adapter (1, 9, 13, 15, 17, 19 or 21) unless evidence of wear or brinelling is apparent. Removal requires the use of tool number 210367 to prevent damage to the Adapter (1, 9, 13, 15, 17, 19 or 21). the tool is slipped onto the Adapter (1, 9, 13, 15, 17, 19 or 21) and one end of the Race Ring (6) is carefully pried up onto the tool surface. The Race Ring (6) is then carefully unwound from the Adapter (1, 9, 13, 15, 17, 19 or 21) onto the tool. The tool is then removed from the Adapter (1, 9, 13, 15, 17, 19 or 21). Refer to Figure 7 for further information.

6.0 INSPECTION

It is recommended that O-Rings (2), if present, and (37) and Seal (7) be replaced upon each overhaul of the Unit.

6.1 Inspect all metal parts for dings, gouges, abrasions, etc. Use 320 grit paper to smooth and remove sharp edges. Replace any part with damage exceeding 15% of local wall thickness. Use alodine 1200 to touch up bared aluminum.

6.2 Inspect inside of Sleeve Assy (45) for indications of brinelling or ball indentations at intersection of tapered surface with constant inside diameter at ball lock area as well as for cracks, excessive abrasions, or other damage. Replace Sleeve Assy (45) or Sleeve (46) if damaged or worn as described above. Depress the Thumb Latches (47) to assure that they will return smartly from a fully depressed position. If not, replace the Spring (48).

6.3 Inspect Housing (27) for cracks around the end opposite the threaded inlet at the Retainer Ring (42) groove. Check the inside diameter of the Housing (27) adjacent to the Wear Band (43) for evidence of extreme galling. Measure this diameter, it shall be a minimum of 3.009 (76.302 mm). Excessive galling on this diameter means that the Wear Bands (8) and (43) should be replaced. Replace if evidence of cracking is present or excessive wear is apparent.

6.4 Check the smallest diameter of the Male Half Adapter (1, 9, 13, 15, 17, 19 or 21) for evidence of extreme galling. If this diameter is less than 2.989 (75.921 mm) at any point it should be replaced. Evidence of extreme galling, even though the diameter is greater than this dimension, means that the Wear Bands (8) and (43), need replacing.

6.5 Measure the outer diameter of the Wear Band (8) on the Male Adapter (1,9,13,15,17,19, or 21). The minimum diameter shall be 3.037 (77.140 mm). If less than this dimension, replace it.

6.6 Measure the inside diameter of the Wear Band (43) located within the Housing (27). The maximum diameter of this part shall not exceed 3.007 (76.378 mm). If more than this dimension, replace it.

6.7 Inspect the rubber bonded seats of the Retainer Assy (36) for nicks, voids, cracks or build-up of

foreign material on the rubber seats. Inspect the Check Valves (32) for nicks or scratches on the sealing surfaces. Check Hinge Pin (29) hole areas for cracks or excessive wear.

6.8 If Clip (57) is present, check to see that it is not bent out of shape such that it will no longer fit snuggly in place (position A in figure 1). Replace if it has become loose and will no longer stay in place. Since it was an option on earlier units and now standard it may not be present. If Clip (57) is not present it is recommended that it be procured and installed as an additional safety device to prevent inadvertent disconnect of the unit.

7.0 REASSEMBLY

7.1 Reassemble in reverse order of disassembly (Refer to Figure 2), observing the following:

7.2 Make certain all components are clean and free from oil, grease, or any other corrosion resistant compound on all interior or exterior surfaces. Wash all parts with cleaning solvent, Federal Specification P-D-680, and dry thoroughly with a clean, lint-free cloth or compressed air.

WARNING:

Use cleaning solvent in a well-ventilated area. Avoid breathing of fumes and excessive solvent contact with skin. Keep away from open flame.

NOTE: A light coat of petrolatum, Federal Specification VV-P-236 or equivalent commercial quality, can be applied to all O-rings and screws for ease of installation.

7.3 Set Retainer Assy (36) on a flat surface with the rubber seat side up. Lay both Check Valves (32) in the position shown in the exploded view. Apply a light coating of petroleum jelly to Spacers (34) and Washers (35) and carefully install in positions indicated with a pair of tweezers. Using Installation Tool 6912-ST1 (Figure 3, View A) place Springs (30) and (31) into Tool Base Saddle with straight portion of end coil into slot in Base and under the pin at point "A" as shown in Figure 4. Insert Mandrel Shaft into inside diameter of one spring and rotate Mandrel until screw in Mandrel picks up end coil at point "B" in Figure 4. Continue rotating Mandrel in direction to tighten spring coil winding spring approximately 360° (one full turn). Transfer end coil from screw on Mandrel onto the screw head on the Base at point "C" in Figure 4. Repeat the coil winding operation with the second spring. With both springs installed and wound per above place the Installation Tool (Saddle Base less Mandrel) (see Figure 4, View B), with springs facing the Check Valves (32). Insert Hinge Pin (29) through holes on one side of Retainer Assy (36). Align Spacers (34) and Washers (35) with holes in the hinge portion of the Check Valves (32). Push the Hinge Pin (29) through the aligned holes of details described above and the center of the coils of the Springs (30) and (31). With a thin blade screw driver or a pointed instrument, lift the tangs of the springs closest to the outer edge of the Retainer Assy (36) off the edge of the small screw holding the tangs in place on the Installation Tool. After the tangs have been lifted off the screws on the tool, slide the installation tool off the tangs of the springs located at the center-line of the Check Valve Assy (28).

7.4 Following assembly, the Check Valves (32) should be actuated manually to assure free movement with no evidence of binding. The Check Valves (32) should contact the seat evenly on all surfaces.

7.5 Install new O-ring (37) into Housing (27) and lubricate with petroleum jelly. Install Check Valve Assy (28) into Housing until it is fully seated, such that the Check Valves (32) open toward the threaded end of the unit. Lubricate the inside diameter of the hollow Sleeve from Installation Tool 43113-ST1 with petroleum jelly (refer to Figure 5). Insert this sleeve fully into bore of the Housing. Insert Retainer Ring (38) into the open end of the Sleeve. Place the entire assembly into an arbor press and insert the small end of the mandrel part (solid round part) of the Installation Tool into the Sleeve. Press mandrel downward until Retainer Ring (38) snaps into its groove. Remove Installation Tool. Check Valve Assy (28) should be completely retained into Housing (27).

7.6 Lubricate threads on Screw (41) with petroleum jelly. Slide Actuator (40) over Screw (41). Slide Spring (50) over Screw (41). Then tighten Screw (41) into thread of Check Valve Assy (28) until it bottoms.

7.7 If the Latch (47) and Spring (48) were removed during disassembly, position the Latch (47) into the approximate location required. One of the holes, for the Pin (49), is larger than the other to allow easier installation. Push the Pin (49) into the larger hole and into one leg of the Latch (47). Push the Spring (48) under the Latch (47), with the open ends of the Spring (48) against the Housing (27), until the Pin (49) can be inserted into the coil diameter and on into the other hole of the Latch (47). Locate the other hole in the Sleeve (46) and drive the Pin into it for approximately 0.25 (6.35 mm). Check to see that the Latch (47) is spring loaded and will return

from the fully depressed position. When installing the Sleeve Assy (45), Spring (50) and Balls (44) it is recommended that the Balls be coated with petroleum jelly to retain them in the holes in the Housing (27).

7.8 Assemble Spring (50) onto Housing (27) and slide Sleeve Assy (45) over Spring (50) and push Sleeve Assy (45) down until the Retainer (42) can be installed into its groove in the Housing (27).

7.9 If the Ball Race Wear Rings (6) were removed and are to be replaced, use tool 44752 for the installation of new ones. See Figure 6 for further information.

7.10 Where used when installing obsolete Seal (7) be sure that open portion of the seal that contains the small diameter O-ring is pointed away from the Wear Band (8). This seal is pressure sensitive and will not function properly if installed backwards. It is recommended that the newer O-ring (7) be used in place of the older Seal (7).

Reinstall the optional Cotter Pins (51) if available or desired. Make certain that the ends of the Cotter Pins (51) are bent into a circular pattern to prevent injury from exposed ends. If Clip (57) is present reinstall into position A as shown in Figure 1. If Clip (57) is not present it is recommended that it be procured and installed as an additional safety device to prevent inadvertent disconnect of the unit.

7.11 **CRITICAL ASSEMBLY NOTE:** Where applicable on assembly of this unit to a nozzle the following torquing sequence and values for the mating to the nozzle should be used:

7.12 The Screws (4) should be torqued to 75-79 in-lbs. (8.5-9 N-m). Tighten all screws to bottom the heads against the flange without over tightening.

7.13 Then start with one screw, mentally numbered “1” working in a clock-wise pattern, tightening approximately to half of the end torque values above. Skip across to screw “4” followed by “6:, “2”, “5” and finally “3”.

7.14 Repeat the tightening at the final torque value above in the same pattern.

8.0 TEST

The unit shall be tested as a part of a completed nozzle, as instructed in the appropriate nozzle service manual, with the addition of the tests shown below.

8.1 Test conditions

Test media shall be Stoddard Solvent (Federal Specification P-D-680), JP-4 per MIL-J-5624D at 75° ± 10° F, Jet A or equivalent.

8.2 Functional Test

As mentioned above the unit should be tested in accordance with its mating nozzle. Disengage housing assembly from nozzle/adapter. Apply 60 psi pressure to the hose inlet and observe leakage from the outlet. There shall be no leakage from the outlet during a one minute observation period.

9.0 ILLUSTRATED PARTS CATALOG

The 61154 series of dry break swivel disconnects consists of two sub-assemblies as shown in Figure 1, the appropriate female half and the male adapter half with its assembled parts. The female half can be procured as a separate subassembly as shown in Table 1.0. There is a variety of male half adapters available as shown in Table 2.0 below.

Table 1.0

Inlet Thread	Complete Female Half Dry Break Part No.
2" NPT	61154P
2" BSPP	61154N
2 ½" NPT	61154H
2 ½" BSPP	61154K
3" NPT	61154L
3" BSPP	61154M

Table 2.0

Male Half Description	Complete Male Half Part No.	Used on 61154 as Option Letter
Long male half to mate 60427 nozzle when regulator **is not** used	44700	D
Male half to mate military D-1/D-2 nozzles	44663	E
Male half with 2" BSPP male threaded outlet to interchange with overwing nozzle	44746	F
Male half with 1-½" BSPP male threaded outlet to interchange with overwing & CCR nozzle	47024	G
Short male half to mate 60427 or 64348 nozzle when regulator **is** used	44185	J
Short male half to mate 64349 nozzle when regulator **is** used	44697	R
Long male half to mate 64348 & 64349 nozzles when regulator **is not** used	44701	S
Male half with 1-½" NPT male threaded outlet to interchange with overwing & CCR nozzles	44698	T
Male half with 2" NPT male threaded outlet to interchange with overwing nozzle	47065	U

Table 3.0 tabulates the parts and sub-assemblies comprising the 61154 series quick disconnect assembly and 44373 screen assemblies. The item numbers of the table are keyed figures 1 through 3, as noted. Some items from figure 2 & 3 also are referenced in figures 4-7.

Table 3.0

Fig.	Item No.	Part Number	Description	Qty/ Assy	Used on Option	Spares/10 Units/Yr.
1	1	44700	60427 Long Adapter	1	Note 6	-
2	2	201201-151	O-ring	1	Note 6	10
	3	5710-63-30	Washer	6	Note 6	-
	4	GF16995-49	Bolt	6	Note 6	-
	5	210121	Adapter	1	Note 6	-
	6	207364	Ball Race Ring	2	Note 6	-
	7	221266	O-Ring (on newer units)	1	Note 6	10
		220709-232	O-ring (on older units)	1	Note 6, 10	10
		209988	Seal (on older units - use O-ring)	1	Note 6, 10	10
	8	209976-1	Wear Band	1	Note 6	2
1	9	44663	64349 Military Adapter	1	Note 7	-
2	2	201201-151	O-ring	1	Note 7	10
	54	GF21083C5	Locknut	6	Note 7	-
	10	GF960C516	Washer	12	Note 7	-
	11	GF35308-336	Bolt	6	Note 7	-
	12	209856	Adapter	1	Note 7	-
	6	207364	Ball Race Ring	2	Note 7	-
	7	221266	O-Ring (on newer units)	1	Note 7	10
		220709-232	O-ring (on older units)	1	Note 7, 10	10
		209988	Seal (on older units - use O-ring)	1	Note 7, 10	10
	8	209976-1	Wear Band	1	Note 7	2
1	13	44185	60427 Short Adapter	1	Note 8	-
2	2	201201-151	O-ring	1	Note 8	10
	3	5710-63-30	Washer	6	Note 8	-
	4	GF16995-49	Bolt	6	Note 8	-
	14	207363	Adapter	1	Note 8	-
	6	207364	Ball Race Ring	2	Note 8	-
	7	221266	O-Ring (on newer units)	1	Note 8	10
		220709-232	O-ring (on older units)	1	Note 8, 10	10
		209988	Seal (on older units - use O-ring)	1	Note 8, 10	10
	8	209976-1	Wear Band	1	Note 8	2
1	15	44697	64349 Short Adapter	1	Note 8	-

Fig.	Item No.	Part Number	Description	Qty/ Assy	Used on Option	Spares/10 Units/Yr.
2	52	M25988/1-040	O-Ring	1	-	2
	53	207807	Seal, Swivel	1	-	2
	16	210064	Adapter	1	-	-
	6	207364	Ball Race Ring	2	-	-
	7	221266	O-Ring (on newer units)	1	-	10
		220709-232	O-ring (on older units)	1	Note 10	10
		209988	Seal (on older units - use O-ring)	1	Note 10	10
	8	209976-1	Wear Band	1	-	2
1	17	44701	64348 Long Adapter	1	Note 9	-
2	52	M25988/1-040	O-Ring	1	-	2
	53	207807	Seal, Swivel	1	-	2
	18	210122	Adapter	1	-	-
	6	207364	Ball Race Ring	2	-	-
	7	221266	O-Ring (on newer units)	1	-	10
		220709-232	O-ring (on older units)	1	Note 10	10
		209988	Seal (on older units - use O-ring)	1	Note 10	10
	8	209976-1	Wear Band	1	-	2
1	19	44698	1-½" NPT Overwing Adapter	1	-	-
2	20	210063	Adapter	1	-	-
	6	207364	Ball Race Ring	2	-	-
	7	221266	O-Ring (on newer units)	1	-	10
		220709-232	O-ring (on older units)	1	Note 10	10
		209988	Seal (on older units - use O-ring)	1	Note 10	10
	8	209976-1	Wear Band	1	-	2
1	21	44746	2" BSPP Overwing Adapter	1	-	-
2	22	210351	Adapter	1	-	-
	6	207364	Ball Race Ring	2	-	-
	7	221266	O-Ring (on newer units)	1	-	10
		220709-232	O-ring (on older units)	1	Note 10	10
		209988	Seal (on older units - use O-ring)	1	Note 10	10
	8	209976-1	Wear Band	1	-	2
1	23	44373-40	Screen Assy, 40 mesh	1	A	-
		44373-60	Screen Assy, 60 mesh	1	B	-
		44373-100	Screen Assy, 100 mesh	1	C	-
	24A	208092-40	Screen, 40 mesh	1	A	-
	24B	208092-60	Screen, 60 mesh	1	B	-
	24C	208092-100	Screen, 100 mesh	1	C	-
	25	208091	Ring, Retainer	1	A,B,C	-
3	26	61154*	Female Half (Note 5)	1	*	-
	27	210086-1	Housing - 2" NPT	1	P	-
		210086-2	Housing - 2-½" NPT	1	H	-
		210086-3	Housing - 3" NPT	1	L	-
		210086-4	Housing - 2" BSPP	1	N	-
		210086-5	Housing - 2-½" BSPP	1	K	-
		210086-6	Housing - 3" BSPP	1	M	-
	28	43173	Check Valve Assy	1	Note 1	-
	29	203390	Hinge Pin	1	Note 1	-
	30	23739-6	Spring	1	Note 1	-
	31	23739-5	Spring	1	Note 1	-
	32	201901	Check Valve	2	Note 1	-
	33	Left intentionally blank				
	34	23741	Spacer	4	Note 1	-
	35	5710-21-10	Washer	2	Note 1	-
3	36	43047	Retainer Assy	1	Note 1	-

Fig.	Item No.	Part Number	Description	Qty/ Assy	Used on Option	Spares/10 Units/Yr.
	37	201201-233	O-Ring	1	Note 1	2
	38	RRT-287-S	Retaining Ring	1	Note 1	-
	39	203393	Spring	1	Note 1	-
	40	201900	Actuator	1	Note 1	-
	41	207604	Screw	1	Note 1	-
	42	RS-354-S	Retaining Ring	1	Note 1	-
	43	209976-2	Wear Band	1	Note 1	2
	44	GF19060-4818	Ball	16	Note 1	-
	45	44659	Sleeve Assy	1	Note 1	-
	46	209884	Sleeve	1	Note 1	-
	47	209885	Latch	2	Note 1	-
	48	209946	Spring	2	Note 1	-
	49	210151-3	Pin	2	Note 1	-
	50	203392	Spring	1	Note 1	-
	51	GF24665-311	Cotter Pin (Note 2)	2	Note 2	10
1	53	44746	2" NPT Overwing Adapter	1	-	-
2	54	210351	Adapter	1	-	-
	6	207364	Ball Race Ring	2	-	-
	7	221266	O-Ring (on newer units)	1	-	10
		220709-232	O-ring (on older units)	1	Note 10	10
		209988	Seal (on older units - use o-ring)	1	Note 10	10
	8	209976-1	Wear Band	1	-	2
1	55	47065	1-½" BSPP Overwing Adapter	1	-	-
2	56	220278	Adapter	1	-	-
	6	207364	Ball Race Ring	2	-	-
	7	221266	O-Ring (on newer units)	1	-	10
		220709-232	O-ring (on older units)	1	Note 10	10
		209988	Seal (on older units - use o-ring)	1	Note 10	10
	8	209976-1	Wear Band	1	-	2
1	57***	210641	Clip	1	Note 2	-

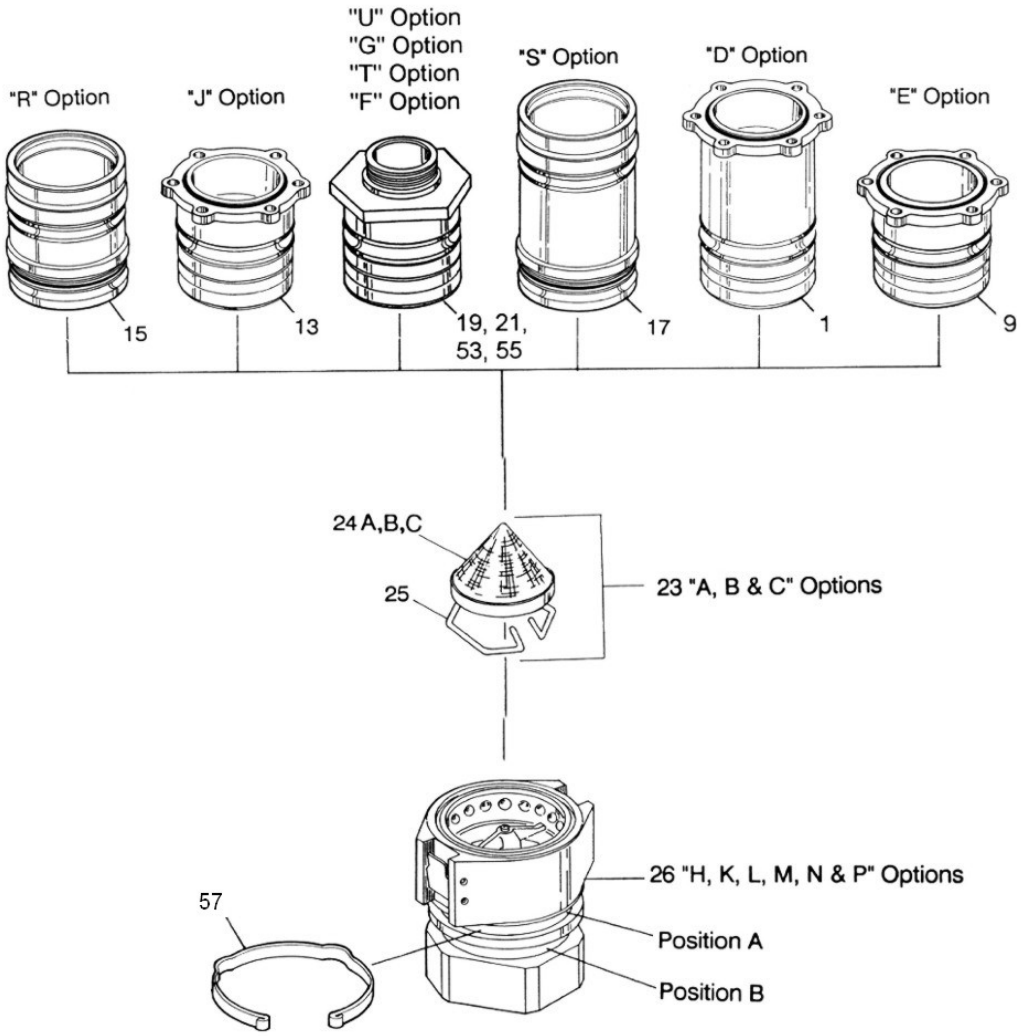
*** Safety clip (P/N 210641) for the 61154 Dry-Break QD is a standard item. However it may be considered FOD (Foreign Object Damage) and is not included on military nozzle assemblies unless specified.

KITS – Kits provided by Carter are a more economical way to obtain recommended parts to overhaul or repair a unit. They also insure that genuine Carter parts are used in such repairs. The following kits are recommended for the various options noted and their content is based on experience. If any customer desires a special kit simply ask for it with the part numbers desired in the kit and the quantity and it will be made available. The kit contents shown in this document may not necessarily be the latest. Service manuals are changed on an irregular basis and may not be as up to date as kit drawings used to produce them. If a kit ordered is different that that shown in this document the content shipped will be in accordance with the latest production drawings.

Item No.	Part Number	Description
-	KD61154-1	Kit - Provides parts to replace seals on all Options J & K in conjunction with any "H" & "K-P" Options. Contains items 2, 7, 8, 37, & 43.
-	KD61154-2	Kit - Provides parts to replace seals on any Option "D" & "S". Contains items 7, 8, 37, 43, 52, 53 & M25988/1-235.
-	KD61154-3	Kit - Same as KD61154-1 except for major overhaul (includes check valve Retainer). Contains KD61154-1 and item 36.
-	KD61154-4	Kit - Same as KD61154-2 except for major overhaul (includes check valve Retainer). Contains KD61154-2 and item 36.

Notes:

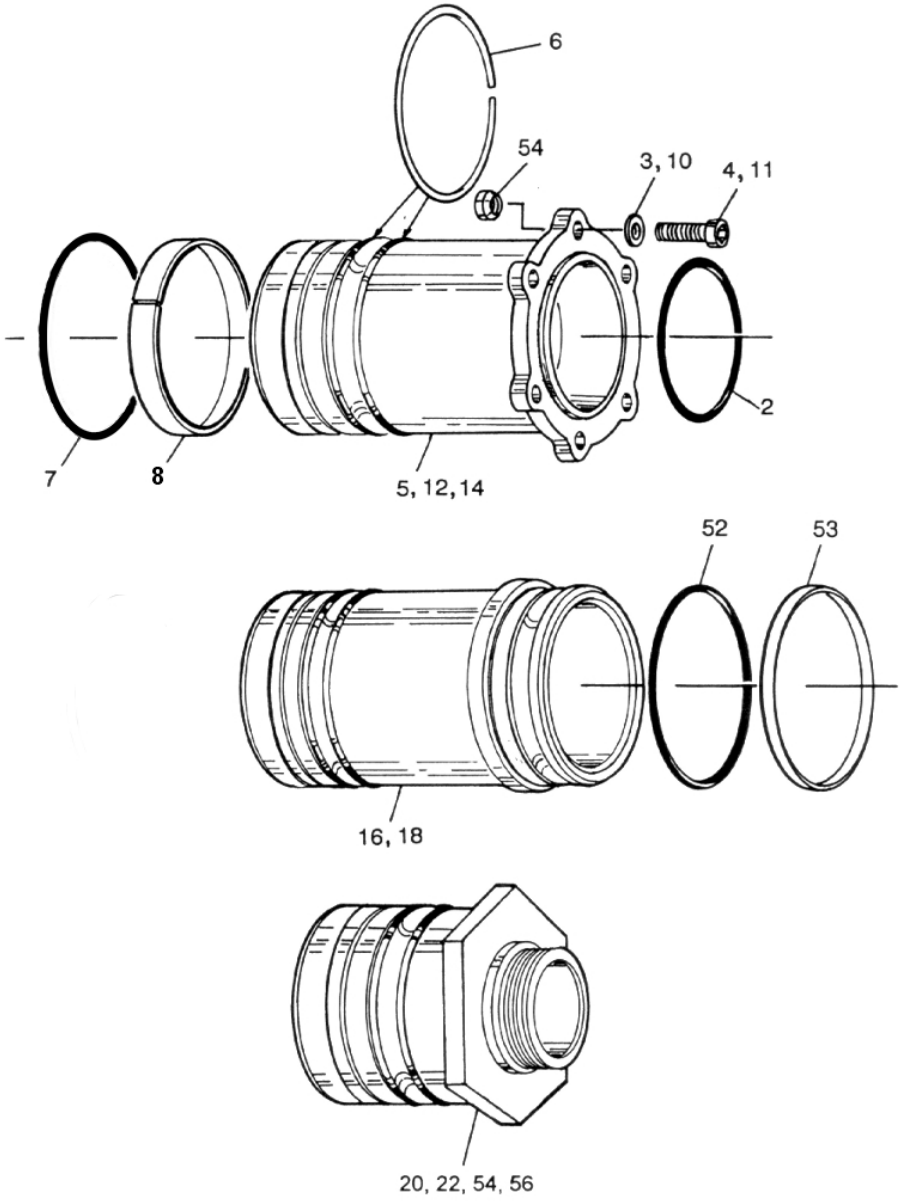
1. Used on all 60427 Nozzles with options "6,7 or 8H-P", all 64348 Nozzles with options "7H-P" and all 64349 Nozzles with options "6, 7 or 8H, L & P". Also used on all 61428 Nozzles with options "7 & 8H-P" and 61429 Nozzle with options "6, 7 or 8H, L & P".
2. Cotter Pin (51) used on early units on all 60427 Nozzles with options "6,7 or 8H-P" and all 61428 Nozzles with options "7 or 8H-P". Not furnished on 61429 Nozzles. When the X option, Clip (57), became available, the cotter pins were no longer furnished as standard equipment. Clip (57) furnished only on older units as X options of 60427 and 64348 Nozzles and on X option of the 61154 Dry Break. Clip (57) now standard on all units.
3. All part numbers beginning with "GF" are interchangeable with those beginning with either "AN" or "MS". If the "GF" is followed by three numbers it is interchangeable with and "AN" part, otherwise it is interchangeable with an "MS" part of the same number.
4. The recommended spare parts shown above are the number required to support 10 Units for one year. The recommended quantities are based on the ratio of spare parts sold for each unit during a one year period of time. The actual quantity required will vary from location to location.
5. Substitute the appropriate option letter for the "*" as noted in paragraph 3.0.
6. Used on option 8 of 60427 nozzles.
7. Used on option 6 of 64349 nozzles.
8. Used on option 7 of 60427 and 64348 nozzles. Also used on option 8 of the 64348 on newer nozzles with the two piece operating lever.
9. Used on option 8 of 64348 and 64349 nozzles. On newer nozzles with the two piece operating lever Option R can be used in lieu of this option.
10. Replace with 221266. If older part numbers are ordered after January 1, 2000 221266 will automatically be provided.



*** Safety clip (P/N 210641) for the 61154 Dry-Break QD is a standard item. However it may be considered FOD (Foreign Object Damage) and is not included on military nozzle assemblies unless specified.

Figure 1

61154 Options



NOTE: ITEMS 6,7,8, ARE COMMON TO ALL ADAPTERS

Figure 2

Male Adapter Options With Parts Breakdown

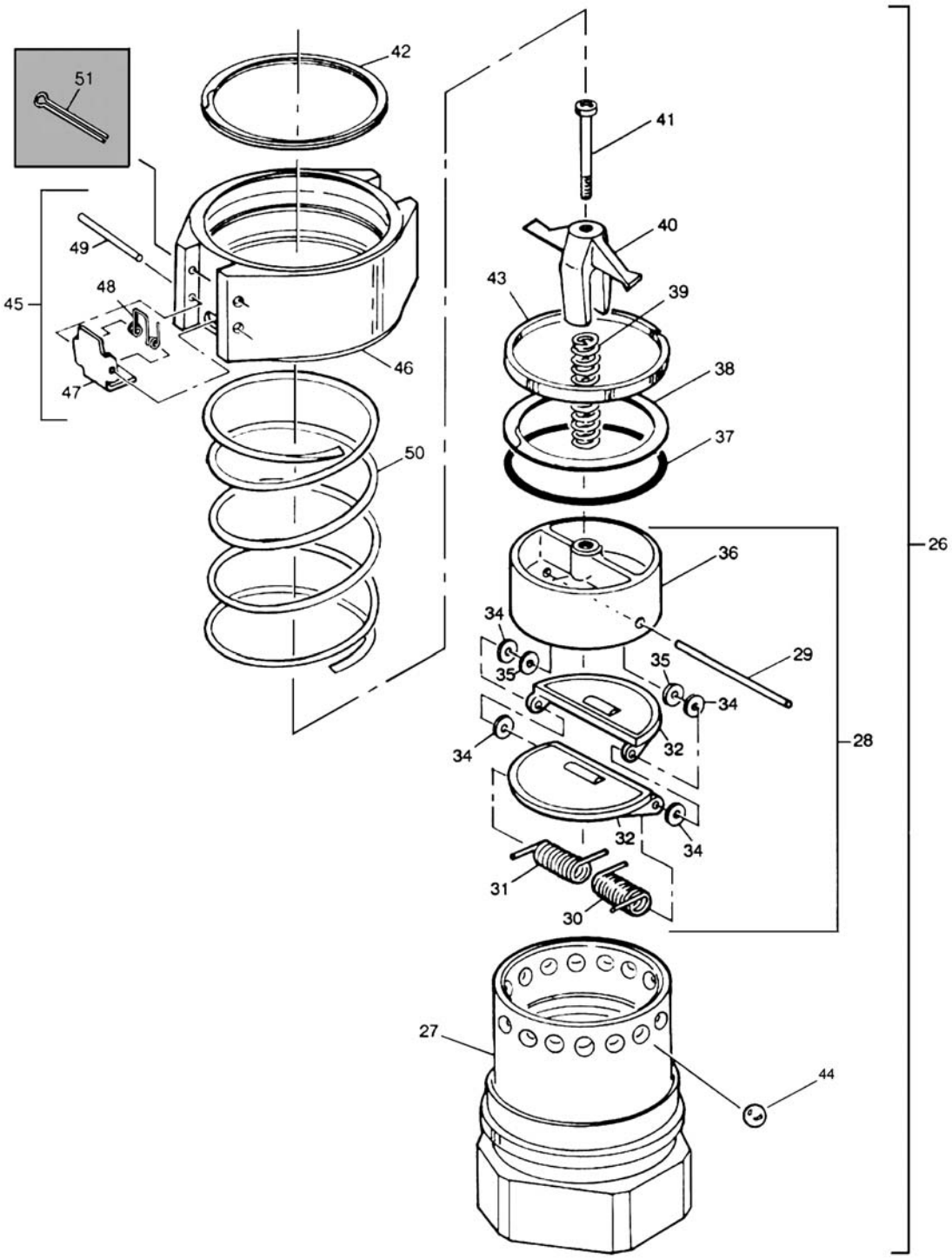


Figure 3
Female Half Disconnect with Parts Breakdown

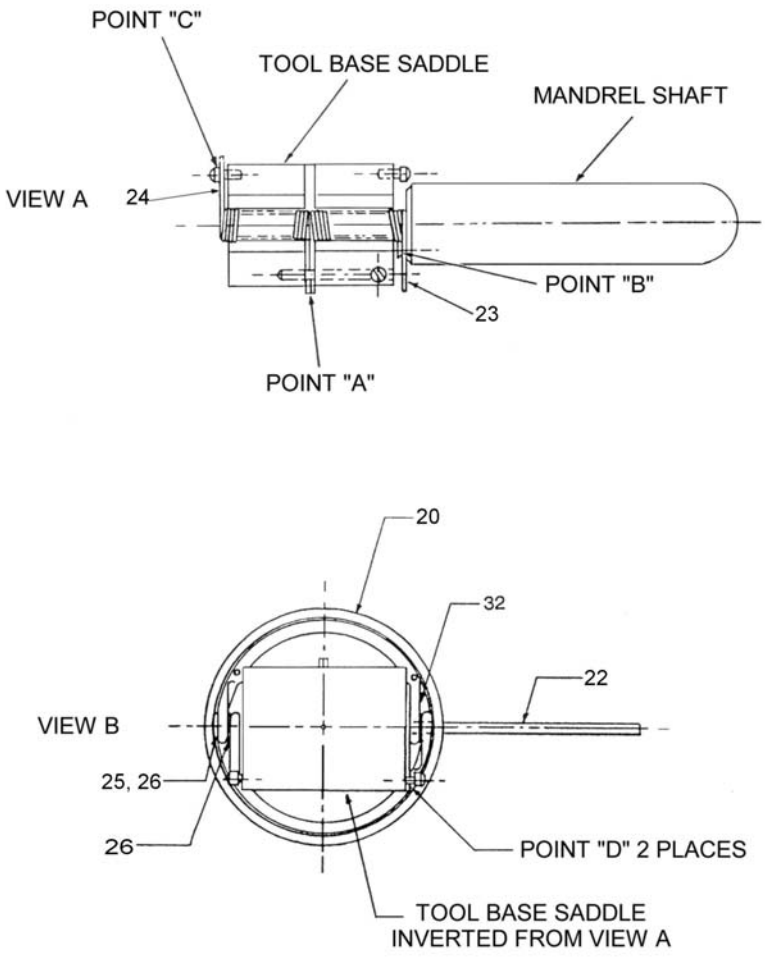


Figure 4

Installation Tool For Check Valve Springs

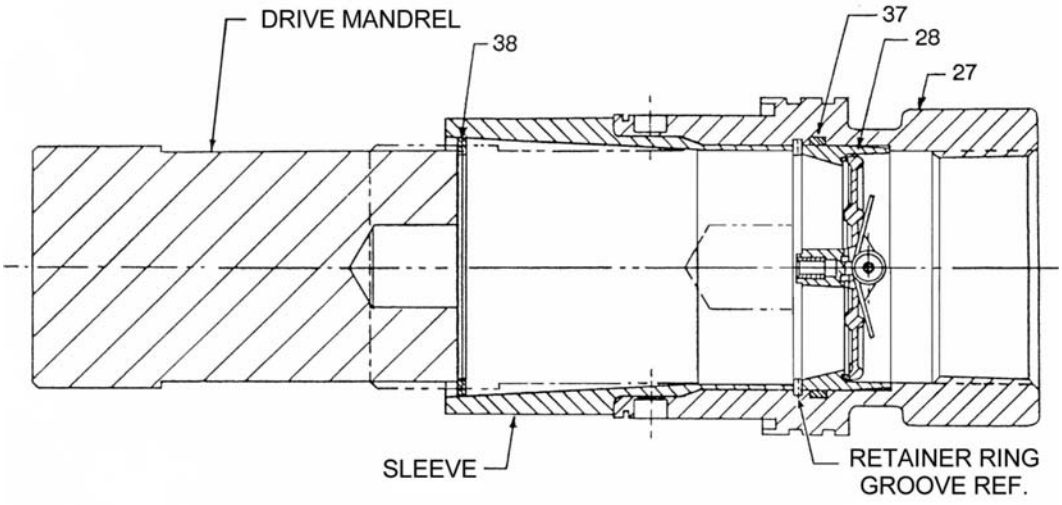


Figure 5

Installing Check Valve

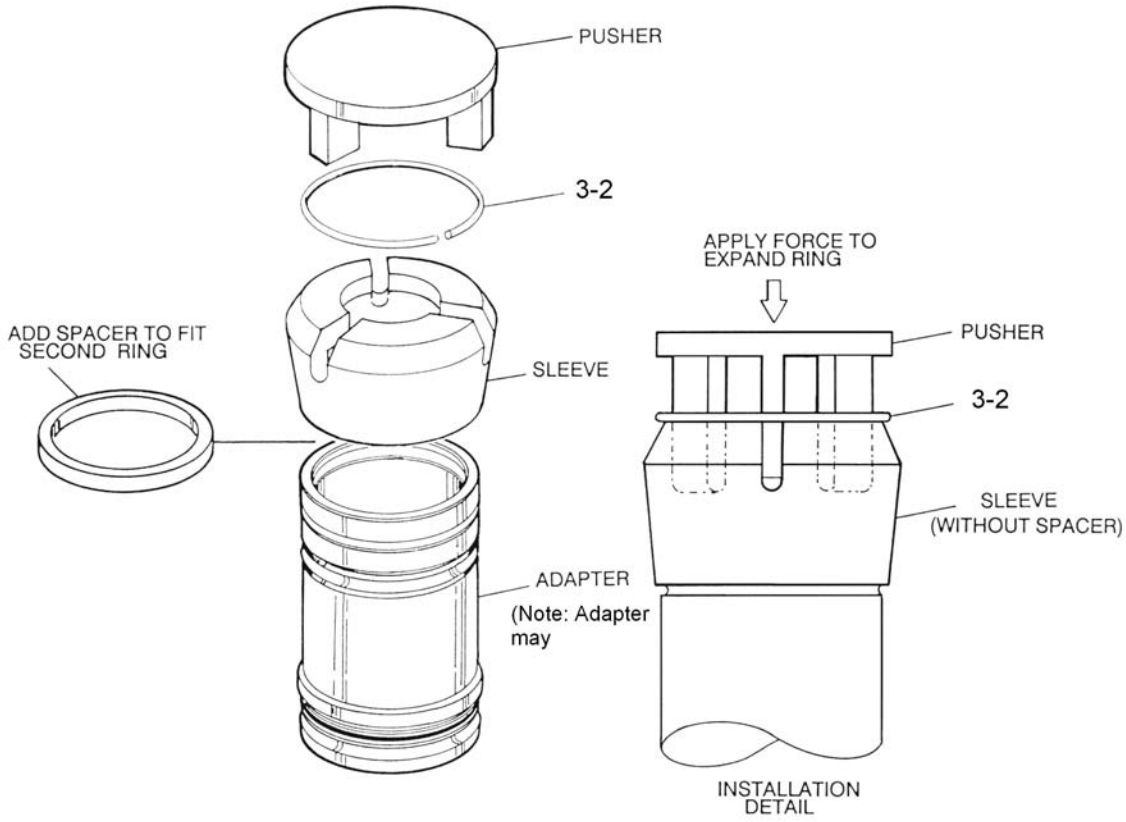
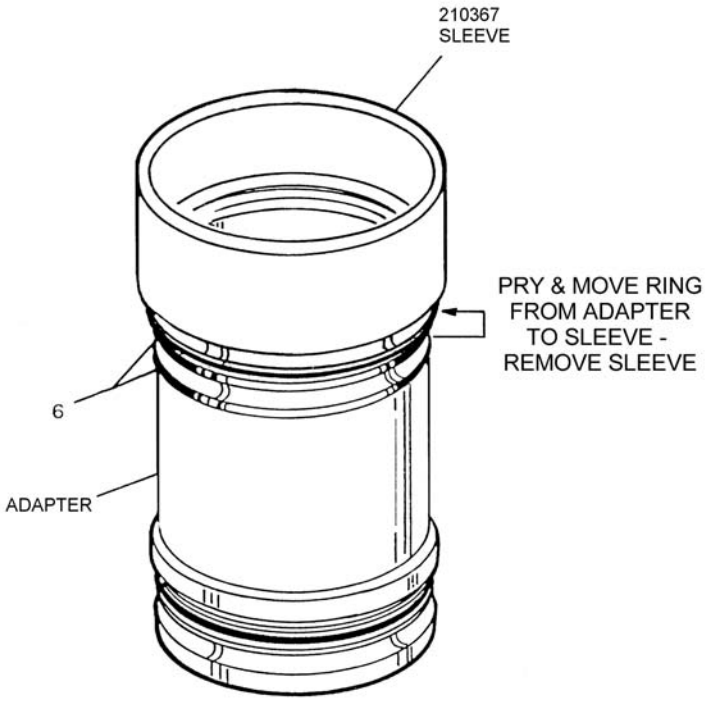


Figure 6

Ball Groove Wear Ring Installation



210367
RING INSTALLATION TOOL

Figure 7

Ball Groove Wear Ring Removal Tool

Eaton
Aerospace Group
Conveyance Systems Division
Carter Ground Fueling
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