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Aerospace Group  
Conveyance Systems Division  
Carter® Brand Ground Fueling Equipment

**SM64254**  
February 2006

Applicable additional  
manuals:

SM64201 Nozzle  
SM64349 Nozzle  
SM64349 H Nozzle  
SM64349 J Nozzle  
SM64349 CDK Nozzle  
SM61429ACDGK Nozzle  
SM61429AGH Nozzle

## **Maintenance Manual**

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### **Low Pressure Drop Quick Disconnect**

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### **Model 64254**

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## Maintenance, Overhaul & Test Instructions Model 64254 Low Pressure Drop Quick Disconnect

### 1.0 INTRODUCTION

This manual furnishes detailed instructions covering the maintenance and overhaul of Eaton's Carter brand Model 64254 Quick Disconnect designed to mate Carter brand

military nozzle Models 61429, 64349 and 64201. This item will also mate with any other D-1 or D-2 nozzle but was not available on earlier Carter brand D-1/D-2 style nozzles.

### 2.0 EQUIPMENT DESCRIPTION

Model 64254 is a low pressure drop version of a dry break quick disconnect designed for use on any D-1/D-2 military nozzle. It is available as Option 6YH, 6YL and 6YP on nozzle Model 64201. The unit is designed to allow for a higher

flow rate under normal refueling pressures. When disconnected the hose side of the unit is a dry break type allow spillage of only the fuel trapped within the nozzle itself.

### 3.0 DISASSEMBLY

3.1 Regardless of which option one has the first step is to separate the female half from either male half (Option E or W) or remove the dust plug (Option Q). Remove Option X Safety Clip if present and set aside. Depress both latches on the sleeve and pull the sleeve toward the inlet (hose end). Pull out the male half or dust plug. Set them aside for later disassembly if necessary.

B. Attempt to insert gauge IF220351 into the inlet end (flapper end). If the gauge slides into the part, the sleeve 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.

3.2 Female Half – 47584-1, -2 & -3 - Refer to Figure 2.

Remove 8 Bolts (1) and separate the Inlet Adapter (2) from the assembly.

- Insert the Outlet Adapter or Dust Plug (E, W or Q) into the unit to open the flapper. Remove the Cotter Pin (4) and Washers (5) from the flapper. Discard the cotter key and keep the washer for reuse.
- Remove the outlet adapter or dust plug. Set aside for disassembly as noted later.
- The Flapper Assembly (6) can be removed from the Inlet Adapter by pulling it off of the Spring Pins (7). Do not remove spring pins unless it is damaged. They are not normally replaceable part.
- The flapper, Hinge (8) and Hinge Pin (9) can be removed.
- Remove and discard O-ring (11).
- Reach into the outlet end of the unit and remove and discard O-ring (13).
- Before further disassembly is done, it is suggested that a pre-disassembly inspection of sleeve assy as follows:

A. Slide the sleeve assy to the locked position (away from the outlet and allow it to lock in place.

3.3

Military Male Half Adapter – 47633 (Option E).

- The Ball Race Rings (27) need not be disassembled from the adapter unless evidence of wear or brinelling is apparent. Removal requires the use of tool number

210367 to prevent damage to the adapter. The tool is slipped onto the adapter and one end of the race ring is carefully pried up onto the tool surface. The race ring is then carefully unwound from the adapter onto the tool. The tool is then removed from the adapter. Refer to Figure 6 for further information.

- Remove and discard O-ring (26).

3.4 Dust Plug – 47568 (Option Q)

- Inspect the Ball Race Rings (36) for wear and if there is need to replace them refer to paragraph 3.3.

- If the attaching Cable (34) is not worn do not remove it. If worn, cut it to replace with a new cable.
- A crimping tool will be needed to retain the cable by crimping Swedge Sleeves (34).
- Ring (35) can be assembled before the swedging operation or after by threading into place.

3.5 3" NPT Outlet Adapter – 47634 (Option W)

- Inspect the Ball Race Rings (39) for wear and if there is need to replace them refer to paragraph 3.3.

4.0 INSPECTION & SPECIAL TOOLS

Special tools 210367 Ring Removal Tool and 44752 Ring Installation Tool are required if the wear rings on the male halves or dust plug are to be replaced.

It is recommended that the following parts be replaced at each overhaul:

Part Number	Description	Used on Option
GF24665-1011	Cotter Pin	All
221826	O-ring	All
GF29513-234	O-ring	All

201201-151 O-ring E  
 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.

Use 44752 Ring Installation Tool if the wear rings were removed from the 64254. A cable crimping tool will be needed if the dust plug cable assembly is to be replaced.

5.0 REASSEMBLY

5.1 Reassemble in reverse order of disassembly (Refer to Figures 2-5), observing the following:

5.1.1 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 or equivalent, 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.

5.1.2 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.

5.1.3 Reassembly in reverse order of disassembly noting the following:

- A. If a wear ring was removed use special installation tool shown in Figure 7 to reinstall it.
- B. When installing the cotter pin onto the flapper be sure to bend the ends tightly around the hinge pin to retain properly.

C. Note that O-ring (11) has to be shaped to fit into the special shaped groove.

D. If either of the latches and springs were removed during disassembly, position the latch into the approximate location required. One of the holes, for the pin, is larger than the other to allow easier installation. Push the Pin into the larger hole and into one leg of the Latch. Push the Spring under the Latch, with the open ends of the Spring against the Housing, until the pin can be inserted into the coil diameter and on into the other hole of the latch. Locate the other hole in the sleeve and drive the pin into it for approximately 0.25 (6.35 mm). Check to see that the latch is spring loaded and will return from the fully depressed position. When installing the sleeve assy, spring and balls it is recommended that the balls be coated with petroleum jelly to retain them in the holes in the housing.

E. If the dust plug cable assembly was cut or has to be replaced insert one end of the cable into the hole in the dust plug and loop back. Slid a Swedge Sleeve (34) onto both ends of the loop. Leave approximately 0.2" (5 mm) of the free end of the cable and swedge it to retain. Loop the other free end into the hole in the inlet adapter and swedge in the same manner.

6.0 TEST

6.1 The Unit shall be tested as a part of a completed nozzle or coupler as instructed in SM61429, SM64349 or SM64201.

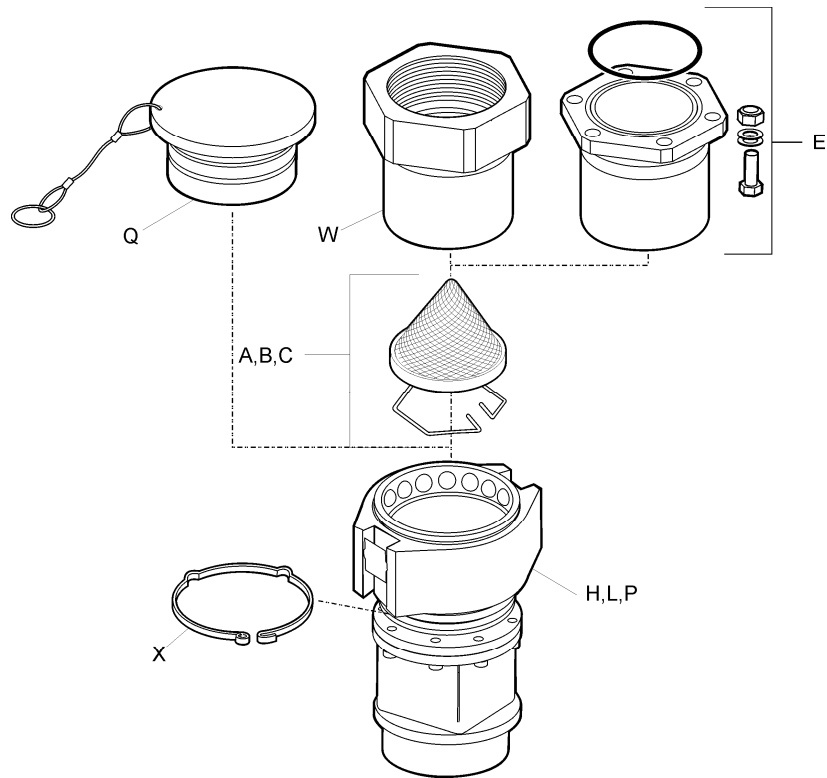
7.0 ILLUSTRATED PARTS CATALOG

Table 1.0 tabulates the parts and sub-assemblies comprising the various inlet assemblies. The item numbers of the table are keyed to the exploded view of the units diagrammed in Figures 1 thru 5.

**TABLE 1.0**  
**Model 64254 Low Pressure Drop Dry Break Quick Disconnect**

**Available Options**

Fig.	Item No.	Part Number	Description	Qty/ Assy	Used on Option	Spares/10 Units/Yr.
1	A	44373-40	Screen assembly – 40-mesh	1	A	-
	B	44373-60	Screen assembly – 60-mesh	1	B	-
	C	44373-100	Screen assembly – 100-mesh	1	C	-
	E	47633	Military outlet male half – QD	1	E	-
	H	47584-2	Female half – QD – 2 ½" NPT	1	H	-
	L	47584-3	Female half – QD – 3" NPT	1	L	-
	P	47584-1	Female half – QD – 2" NPT	1	P	-
	Q	47568	Dust plug – femalf half	1	Q	-
	W	47634	Outlet male half – QD – 3" FNPT	1	W	-
	X	210641	Safety clip	1	X	-



**Figure 1 - 64254 Options**

**TABLE 2.0**  
**47584 Low Pressure Drop Dry Break Quick Disconnect – Female Half**

47584-1 is used on Option P

47584-2 is used on Option H

47584-3 is used on Option L

Fig.	Item No.	Part Number	Description	Qty/ Assy	Used on Option	Spares/10 Units/Yr.
2	1	GF16998-28L	Bolt	8	All	-
	2	221831	Inlet adapter – 2" NPT	1	1	-
		221820	Inlet adapter – 2 ½" NPT	1	2	-
		221830	Inlet adapter – 3" NPT	1	3	-
	3	221828	Flapper hinge pin	1	All	-
	4	GF24665-1011	Cotter Pin	4	All	40
	5	5710-454-30	Washer	4	All	-
	6	47567	Flapper	1	All	-
	7	GF16562-224	Spring pin	2	All	-
	8	221824	Hinge	1	All	-
	9	221827	Hinge pin	2	All	-
	10	221822	Link	2	All	-
	11	221826	O-ring	1	All	10
	12	221821	Spring guide	1	All	-
	13	GF29513-234	O-ring	1	All	10
	14	221819	Body	1	All	-
	15	GF19060-4818	Ball	16	All	-
	16	221825	Spring	1	All	-
	17	221848	Spring	1	All	-
	18	44659	Sleeve assembly	1	All	-
	19	209884	Sleeve	1	All	-
	20	209885	Latch	2	All	-
	21	210151-3	Pin	2	All	-
22	209946	Spring	2	All	-	
23	RS-354-S	Retaining ring	1	All	-	

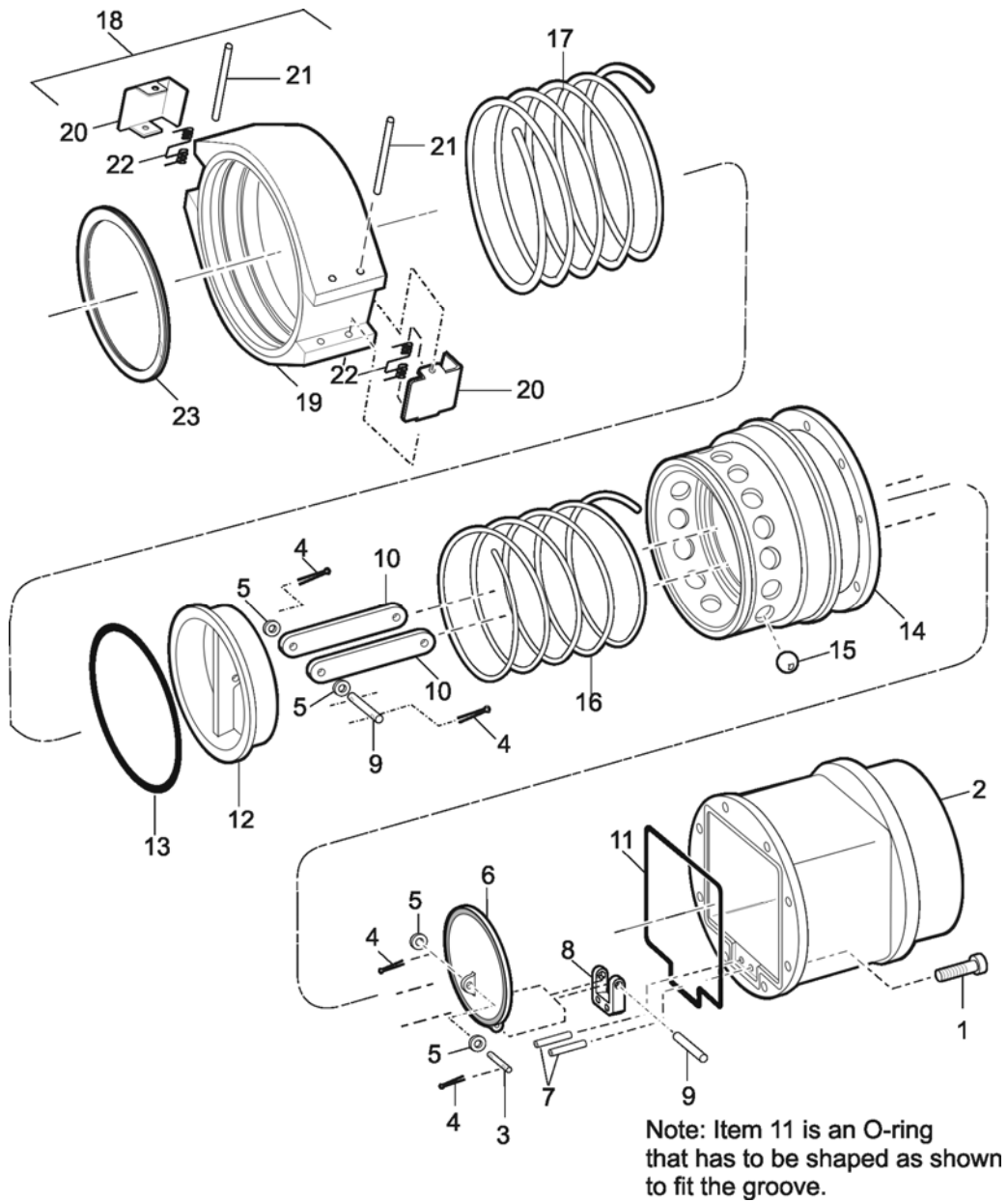
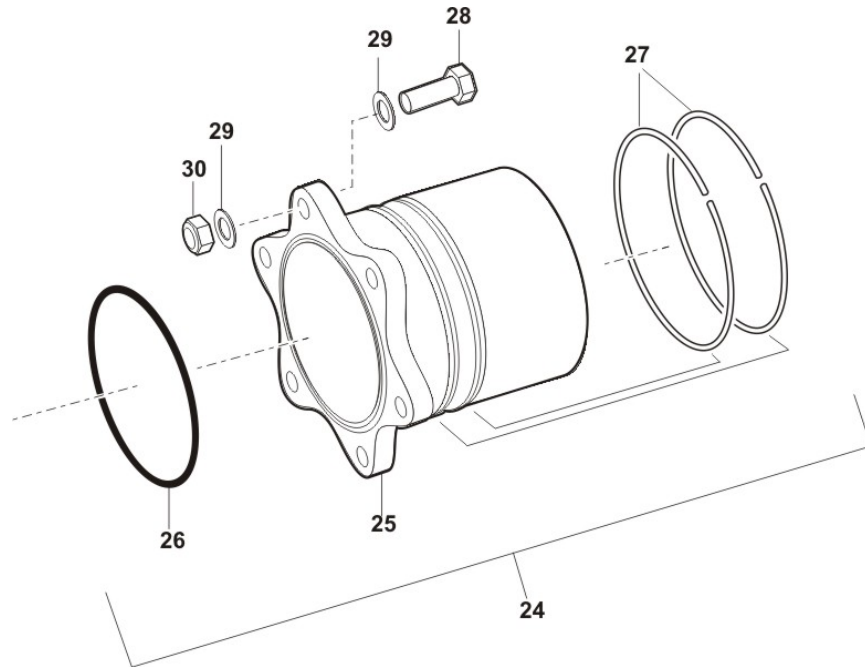


Figure 2 – 47584-1, -2 & -3 Female Half QD

**TABLE 3**  
**Option E - 47633 Military Outlet Adapter Assembly**

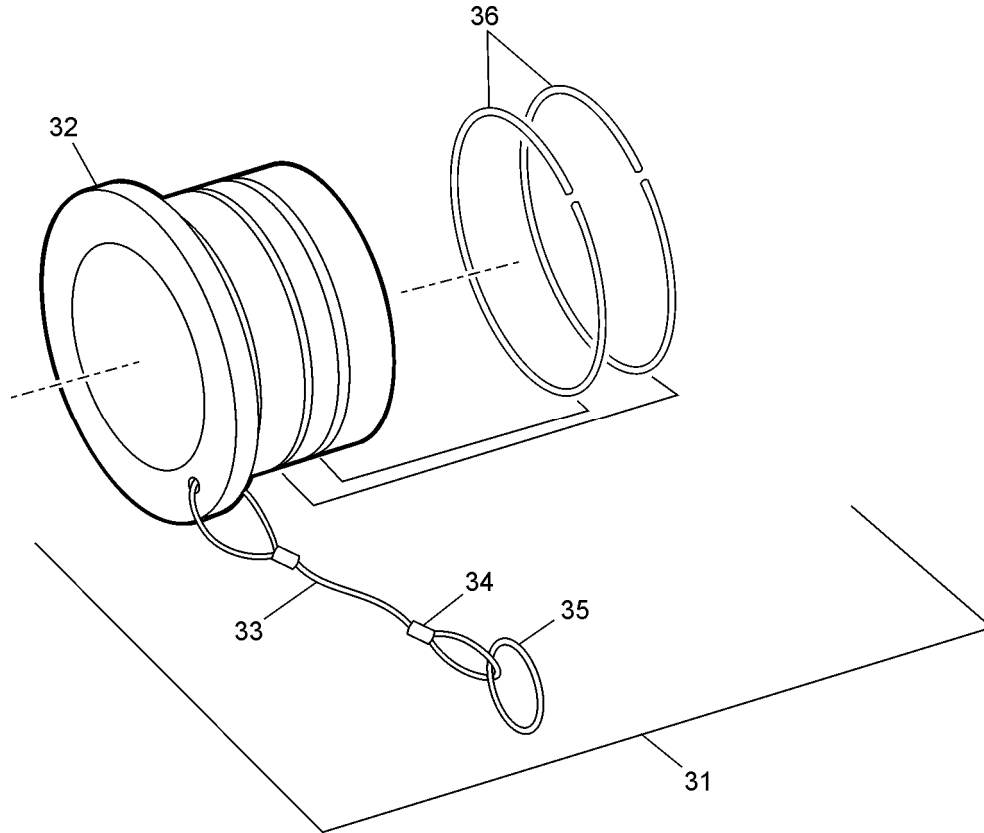
Fig.	Item No.	Part Number	Description	Qty/ Assy	Used on Option	Spares/10 Units/Yr.
3	24	47633	Outlet Adapter, Military	1	E	-
	25	221829	Adapter	1	E	-
	26	201201-151	O-ring	1	E	10
	27	207364	Wear Ring	2	E	-
	28	GF35308-334	Bolts	6	E	-
	29	GF960C516	Washers	12	E	-
	30	GF21083-C5	Nuts	6	E	-



**Figure 3 - Option E – Military Male Half QD – 47633**

**TABLE 4 – Option Q Dust Plug Assembly**

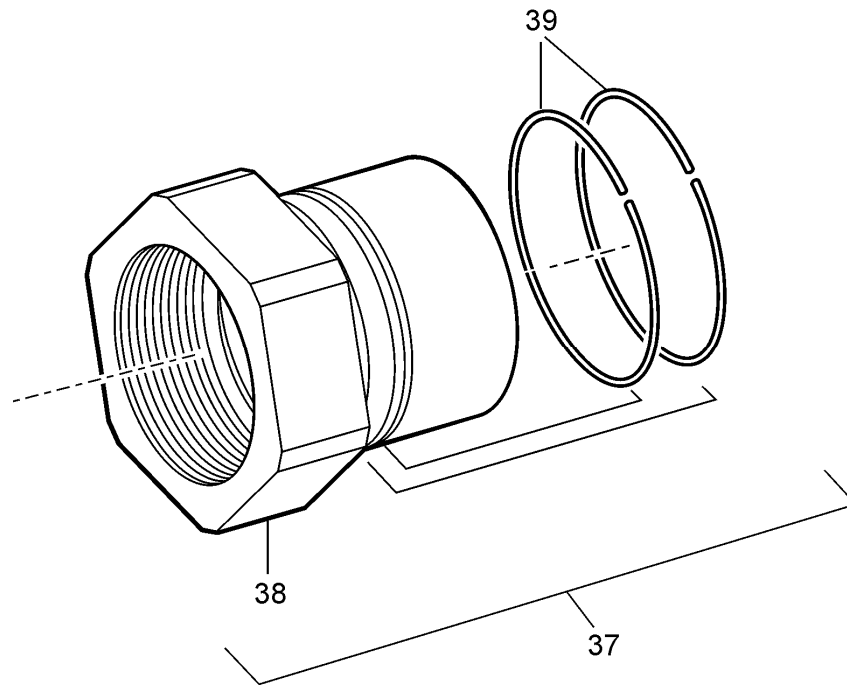
Fig.	Item No.	Part Number	Description	Qty/ Assy	Used on Option	Spares/10 Units/Yr.
4	31	47568	Dust Plug Assembly	1	Q	-
	32	221832	Dust Plug	1	Q	-
	33	82499-2300	Cable	1	Q	-
	34	22-2-G	Swedge Sleeve	2	Q	-
	35	220482	Ring	1	Q	-
	36	207364	Wear Ring	2	Q	-



**Figure 4 - Option Q – Dust Plug - 47568**

**TABLE 5 – 3" NPT Outlet Adapter – 47634**

Fig.	Item No.	Part Number	Description	Qty/ Assy	Used on Option	Spares/10 Units/Yr.
5	37	47634	Outlet Adapter, 3" NPT	1	W	-
	38	221920	Adapter	1	W	-
	39	207364	Wear Ring	2	W	-

**Figure 5 – 3" NPT Outlet Adapter – 47634**

- Notes:
1. The recommended spare parts shown above are the number required to support 10 Units for one year or each overhaul whichever is sooner. These quantities do not include replacement spares for intermediate replacement of parts required by abuse or misuse of the equipment. 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.
  2. 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 an "AN" part, otherwise it is interchangeable with an "MS" part of the same number.
  3. The 64254H, L or P were only available on the 64201 as options 6YH, 6YP and 6YI. Any of them will fit onto any D-1 or D-2 Nozzle.

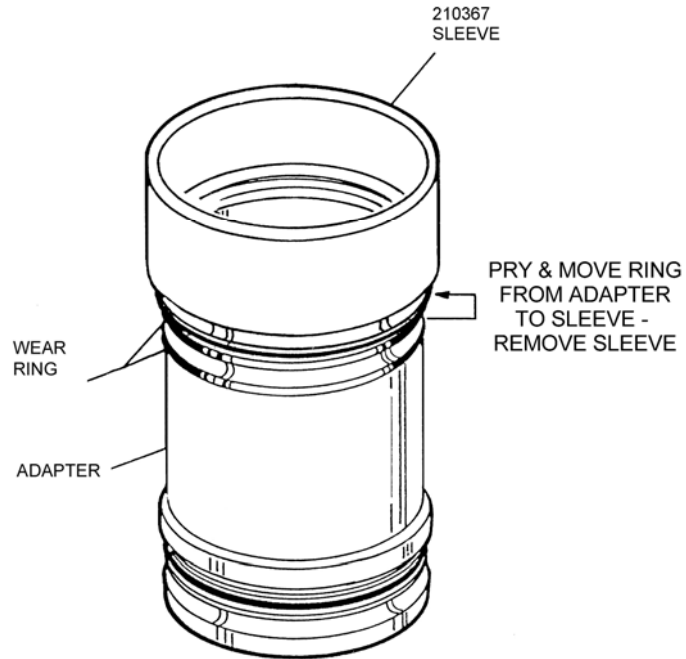
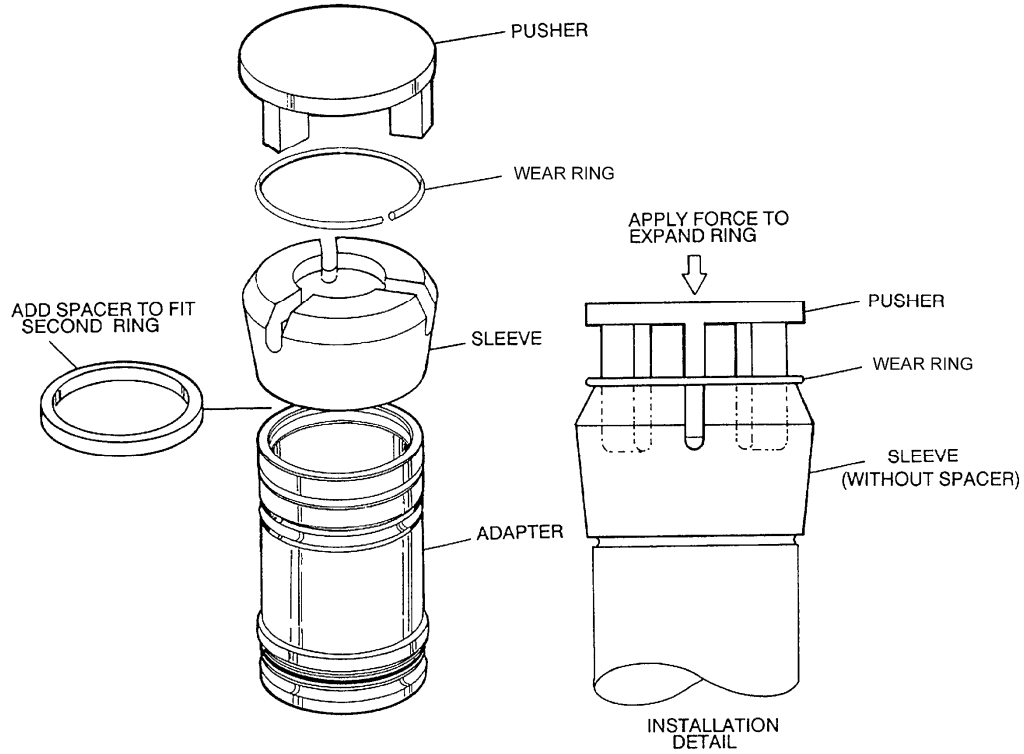


Figure 6 – 210367 Wear Race Removal Tool



44752 Ring Installation Tool

Figure 7 - Ball Groove Wear Ring Installation

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