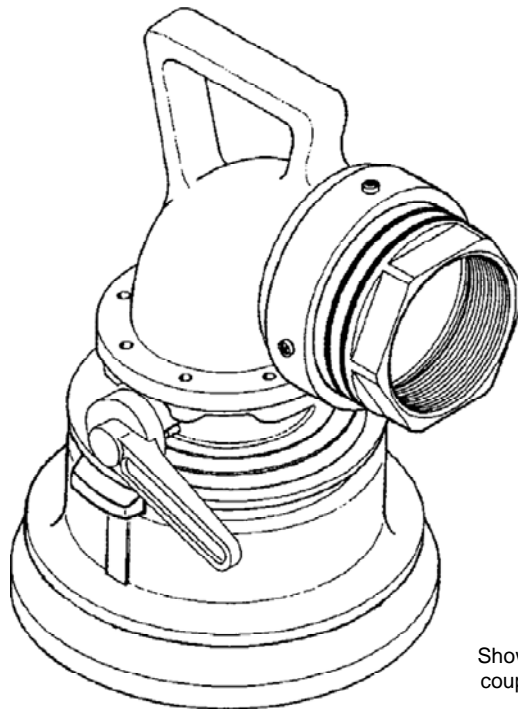


Maintenance Manual

HYDRANT COUPLER

F251 Series

MMF251
Revision 4.0
28 February 2014



Shown with additional
coupler modifications

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REVISION RECORD

Keep this record in the front of the manual. When you get the revisions, put the revised pages in the manual. Write the revision number, date issued and your initials on this page.

REV NO.	PAGES AFFECTED	DESCRIPTION OF CHANGE	DATE	APPROVED BY
1.0	ALL	Initial Release	05/31/2011	A.B
1.1	ALL	-	06/06/2011	A.B
2.0	ALL	-	09/30/2011	A.B
2.1	ALL	-	04/20/2012	A.B
3.0	ALL	See DCN	07/30/2013	A.B
4.0	1, 9-12, 14, 18 & 19	See DCN	3/19/14	A.B

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IMPORTANT SAFETY INSTRUCTIONS

SAVE THESE INSTRUCTIONS!

This manual contains important instructions that shall be followed during installation and maintenance of the Hydrant Coupler. The following are general safety precautions that are not related to specific procedures and therefore do not appear elsewhere in this publication. These are recommended precautions that personnel must understand and apply during maintenance.

The coupler is a mechanical device and can be dangerous if not correctly operated or maintained.

Safety Alert Symbols

Safety alert symbols are used in this manual to identify potential or immediate personal injury hazards. The safety alert symbol words are explained below:



- indicates an imminently hazardous situation which, if not avoided, will result in injury or serious injury.



- indicates a potentially hazardous situation which, if not avoided, could result in injury or serious injury.



- indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.



- used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

WEAR PROTECTIVE CLOTHING

- Wear protective clothing (gloves, apron, etc.) approved for the materials and tools being used.

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Equipment Safety Information

The following safety information briefly discusses hazards peculiar to the equipment, which are likely to be encountered during maintenance activity.

COUPLER INSTALLATION AND OPERATION PRECAUTIONS

- The design of the piping system must provide adequate pressure to prevent exceeding the limits of the coupler.
- Make sure the coupler orientation is correct and install the coupler in-line with the flanges. Make sure the piping flanges are correctly positioned and spaced. Do not force the piping in order to fit the coupler.
- Make sure the coupler operates correctly after installation.
- Do not exceed the pressure limits of the coupler.

COUPLER MAINTENANCE PRECAUTIONS

- Do not loosen any fasteners or attempt to remove the coupler from the line until all pressure is isolated and released from the system.
- Use only authorized replacement parts or hardware.

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INTRODUCTION

NOTE: The F251 Hydrant Coupler is a direct upgrade replacement for the F250 coupler. The F251 Coupler complies with the API Standard 1584 3rd edition breakaway requirements. The shaft and seals are designed to improve safety, reliability and maintainability.

1. General

The information and procedures contained in this manual have been prepared to assist qualified repair personnel in off-aircraft maintenance of the Hydrant Coupler (coupler). The instructions provide information necessary to perform maintenance functions. The Coupler is manufactured by Meggitt (North Hollywood), Inc., 12838 Saticoy Street, North Hollywood, California 91605.

2. Scope

The instructions contained in this manual do not claim to cover all details or variations in equipment. They do not provide for every problem that could occur during installation, operation, or maintenance. If further information is required, contact Meggitt (North Hollywood), Inc., Product Support Department.

3. Standard Shop Practices

Use approved procedures and safety precautions to prevent damage to the equipment and injury to personnel.

4. Weights and Measurements

Weights and measurements in this manual are expressed in both English (U.S. customary) and Metric (SI) units.

5. Revision Service

This manual will be revised, as necessary, to reflect current information.

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DESCRIPTION AND OPERATION

1. Description

The Hydrant Coupler (coupler) (see [Figure 1](#)) provides the means of connecting 4-inch hydrants and adapters conforming to API Standard 1584. The various optional configurations permit the use of several thread and hose sizes. The major functional components of the hydrant coupler are the swiveling outlet adapter, the elbow and the coupler body section.

2. Installation/Operation

A. Install Coupler on Hydrant

The coupler may be connected to the hydrant adapter by pressing it downward onto the adapter. This actuates the six locking lugs, and releases the shroud. The shroud slides downward and holds the locking lugs in their locked position. If product selection is installed, the shroud will need to be rotated to align the product selection screws with the slots in the shroud.

B. Operate the Coupler

CAUTION

DO NOT OPEN THE COUPLER WITHOUT BEING CONNECTED TO AN ADAPTER. SLEEVE SEAL DAMAGE MAY OCCUR.

After installation, to open the coupler, rotate the handle to the OPEN position. To close the coupler, rotate the handle to the CLOSED position.

C. Remove Coupler from Hydrant

With the hydrant closed, the coupling may be disengaged from the hydrant adapter by rotating its operating handle to the CLOSED position and pulling back the shroud to disengage the locking lugs.

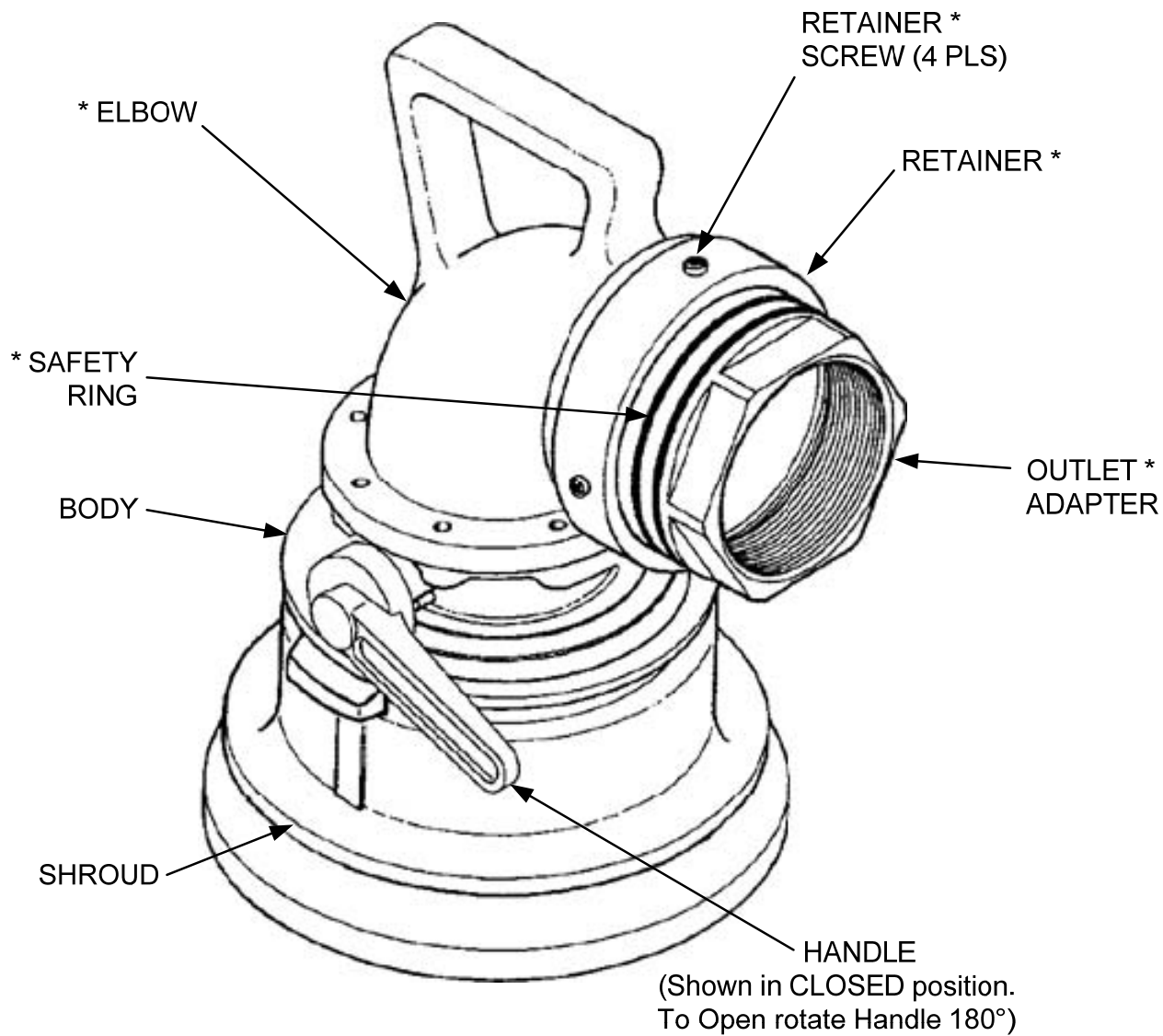
D. Remove Coupler and Elbow from Hose

Pull the safety ring from its groove and slide it back to the retaining ring. Do not remove the safety ring. Unscrew the four retaining screws approximately 3 full turns. Slide the retainer back to the safety ring. The elbow can now be separated from the hose.

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(* – Refer to Table 1 for Coupler Modifications)

Figure 1. Hydrant Coupler

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3. Leading Particulars (Refer to [Table 1](#))

Table 1 Leading Particulars

Service	Automotive and Aviation Fuels
Operating Pressure	
Maximum Working.....	200 psi (1380 kPa)
Peak Surge.....	305 psi (2100 kPa)
Pressure Drop (connected to F368 Hydrant) (approximate)	13 psi at 1200 gpm (90 kPa at 4500 lpm)
Fluid Temperature.....	-40 to 160°F (-40 to 71°C)
Ambient	-40 to 160°F (-40 to 71°C)
Weights (approximate)	
Basic.....	16.6 pounds (6.2 kg)
Mod A – Hydrant 4 inch Coupler for CCMZ7300M2/ CCMZ7309M2 Pressure Control Elbow.....	16.6 pounds (9.7 kg)
Mod B – with 90° Elbow + F597A 4 inch NPT Swivel	24.4 pounds (9.7 kg)
Mod C – with 90° Elbow + F597B 4 inch BSPPL Swivel.....	25.2 pounds (10.1 kg)
Mod D – with 90° Elbow + F597C 3 inch NPT Swivel.....	25.2 pounds (10.1 kg)
Mod E – with 90° Elbow + F597D 3 inch BSPPL Swivel.....	25.2 pounds (10.1 kg)
Mod F – with 90° Elbow + F597E 2.5 inch NPT Swivel	25.2 pounds (10.1 kg)
Mod G – with 90° Elbow + F597F 2.5 inch BSPPL Swivel.....	24.4 pounds (9.7 kg)
Mod H – with 90° Elbow + F597G 4 inch NPSM Swivel	21.9 pounds (8.6 kg)
Mod J – with 90° Elbow for F597 Swivel.....	+0.1 pound (+0,05 kg)
Mod K – (Use only with MOD B thru J) + 0.75 inch NPT THD in Elbow, with plug.....	21.9 pounds (8.6 kg)
Mod L – Add Product Selection Position 4.....	No weight change
Mod M – With 90° Elbow + F597M 4 inch NPSH.....	24.4 pounds (9.7 kg)
Mod R – Viton Seals.....	No weight change

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FAULT ISOLATION

1. General

Refer to [Table 2](#) for fault isolation information. Locate suspected faulty component and take appropriate remedial action.

Table 2 Fault Isolation

FAULT	POSSIBLE CAUSE	CORRECTIVE ACTION
Leakage from outlet adapter	Damaged or worn bearing ring, (IPL Figure 2, 6), seal (IPL Figure 1, 15) or O-ring (21)	Check condition and if necessary replace the bearing ring, seal, and/or O-ring.
Leakage from elbow flange	Damaged or worn O-ring (13)	Check condition and if necessary replace the O-ring.
Leakage past handle shaft	Damaged or worn O-ring (33)	Check condition and if necessary replace the O-ring.
Leakage past poppet when closed	Damaged or worn O-ring (21)	Check condition and if necessary replace the O-ring.
	Damaged or worn sleeve assembly (12)	Check condition and if necessary replace the seat.
	Damaged or wear on seat face of poppet (9)	Check condition and if necessary replace poppet.
Leakage at hydrant adapter when open	Damaged or worn O-ring (21)	Check condition and if necessary replace the O-ring.
	Damaged or worn seal (15)	Check condition and if necessary replace the seal.

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DISASSEMBLY

1. Overhaul Parts Kits

Refer to the [ILLUSTRATED PARTS LIST](#) section for the Overhaul Parts Kit information.

2. Disassemble the Hydrant Coupler

A. (Mods B – K and M) Swivel Assembly Removal (See [IPL Figure 2](#))

Remove the Swivel Assembly from the Coupler Elbow as follows:

1. (Mod M) Remove and discard seal (1) from its groove on the outlet adapter attached to the Swivel body.
2. Remove safety rings (2) from its groove on locking ring (5).
3. Loosen screws (3) just enough to allow the locking ring (5) to slide back to safety ring (2).
4. The swivel assembly can now be pulled off of the elbow (14).

Note: The ring (7) can be replaced without further disassembly.

B. (Mods B – K and M) Disassemble Swivel Assembly (See [IPL Figure 2](#))

1. Remove safety rings (2) from its groove on locking ring (5). Slide safety rings (2) and locking ring (5) from body (9).
2. Remove bearing balls (8) and ring (7).

C. (Mods B – K and M) Elbow Removal (See [IPL Figure 2](#))

1. Remove screws (10), washers (11), nuts (12), elbow (14) and O-ring (13) from the Hydrant Coupler Assembly (see [IPL Figure 1](#)). Discard O-ring (13).

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D. Disassemble the Coupler Assembly (See [IPL Figure 1](#))

Note: Before disassembly; if coupler assembly is equipped with elbow ([IPL Figure 2, 14](#)); remove screws (10), washers (11) and nuts (12) from coupler assembly.

1. Remove dust cover assembly (1) from shroud (3).
2. Use an API-style adapter without a poppet to release the latching lugs (7). (A 6.0 inch (152 mm) outside diameter x 4.25 inch (108 mm) inside diameter x 3.0 inch (76 mm) long tube may be used as an alternate for the adapter.)

Note: Alternate method to release the latching lugs (7) is to depress one lug by hand then slide a thin plate or a small Allen wrench between the back of the lug and the shroud (3) to prevent the lug from catching in the groove. Repeat this step for all lugs to release shroud (3) from body (37). Do step 4 after using this method.
3. Put the coupler assembly on the adapter. Press the coupler assembly down until the latching lugs release the shroud. Slide the shroud down as far as it will go.
4. Rotate handle (17) about 45 degrees to the OPEN position.
5. Remove screw (10) from poppet (9). Remove poppet (9) from hinge (32).
6. Turn the coupler and gently tap the sleeve assembly (12) and springs (11) from body (37).
7. Pry the seal retainer (14) from the sleeve assembly (12).
8. Remove and discard seal (15) and O-ring (13) from the sleeve assembly (12).
9. Rotate handle (17) to the CLOSED position.
10. Remove cotter pin (23), washer (24), and pin (26) from crank (27). Discard cotter pin (23).
11. Remove links (31) and hinge (32) out of body (37).
12. Use a 0.06 inch (1.5 mm) diameter wire to push pin (25) out of the crank (27).
13. Drive pin (18) out of body (37).

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14. Remove together; handle (17) felt wiper (18), bushing (20), O-ring (21), shaft (22), and crank (27) from body (37).
Note: Look at the relative positions of the handle (17) and the crank (27) for assembly reference.
15. Drive pin (16) out of handle (17).
16. Remove handle (17), felt wiper (19), bushing (20) and O-ring (21) from shaft (22). Discard O-ring (21).
17. Remove cotter pin (28), washer (29), pin (30) and links (31) from hinge (32). Discard cotter pin (28).
18. Remove and discard O-ring (33) from hinge (32).
19. Remove together both; guard (2) and shroud (3) from body (37).
20. Remove felt wiper (4) from shroud (3).
21. Remove springs (8) and latching lugs (7) in body (37) as follows:
Note: Long nose pliers may be used to pull the spring loop during the removal of a spring in the body, but be careful to avoid damaging the spring. The wire shall not be marked or scratched.
 - a. Drive spring tangs out of the latching / locking lug groove.
 - b. Pull the loop of spring (8) from the hole in body (37), with the two tangs resting on the top surface. Pull the spring in as far as possible, so the two tangs move away from the body surface. As the loop of the spring shall be a tight press fit in the hole, make sure the spring is removed gently and carefully from the body, to avoid any damage to it. Repeat for each of the springs (8) and locking lugs (7).
22. Drive groove pin (5) out of latching lug (7) and shear pin (6). Remove shear pin (6) from latching lug (7). Repeat for remaining lugs.

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23. Check condition of shear pin (6), if bent or cracked; discard. Check groove dimension as follows:
- (Mods: Basic,B-K,M,R: p/n 430141, Gold Shear Pin) The gold shear pin (6) groove dimensions shall measure; $\varnothing 0.0245 \pm 0.0005$ in. at 2 places. If measurement is out of tolerance, discard gold shear pin (6).
 - (Mod A: p/n 430220, Red Shear Pin) The red shear pin (6) groove dimensions shall measure; $\varnothing 0.02565 \pm 0.0005$ in. at 2 places. If measurement is out of tolerance, discard red shear pin (6).
24. Check condition of bushing (34), if worn do as follows:
- Use a 3/8-16UNC, 6-1/2 inch long bolt threaded into the bushing as a draw-bolt and remove bushing (34) from the body (37). Discard bushing (34).
25. Remove screw (36) and spacer (35) from body (37). Check spacer (35) thickness as follows:
- The spacer (35) thickness shall measure; 0.063 ± 0.001 inch. If thickness is out of tolerance, discard spacer (35).
26. Check condition of guard (2), if worn do as follows:
- Use a sharp bladed tool to cut the guard (2) from the shroud (3). Discard guard (2).

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CLEANING

1. Cleaning Materials

Refer to [Table 3](#) for recommended cleaning materials. Suitable equivalent cleaning materials may be substituted for the items listed.

Table 3 Recommended Cleaning Materials

DESCRIPTION	SPECIFICATION	SOURCE
Alcohol, Isopropyl	ASTM D770	Commercially available
Bags, Plastic	-	Commercially available
Brush, Bristle, Stiff, Non-metallic	-	Commercially available
Pick, Teflon	-	Commercially available
Solvent, Dry Cleaning	P-D-680, Type 2	Commercially available
Tissues, Lint-free	-	Commercially available

2. Cleaning Procedures



DRY CLEANING SOLVENT IS A HAZARDOUS MATERIAL. BEFORE USE, READ AND OBEY THE MATERIAL SAFETY DATA SHEET (MSDS) INSTRUCTIONS FOR CORRECT HANDLING. FAILURE TO OBEY THIS WARNING MAY RESULT IN PERSONAL INJURY, LONG TERM HEALTH HAZARDS OR DEATH.

- A. Clean all metal parts by washing thoroughly in dry cleaning solvent. Remove stubborn deposits by scrubbing with a nonmetallic stiff bristle brush. Brush all threaded areas. Use a Teflon pick to remove obstructions from the ports, the seal or packing grooves and the flow passages.
- B. Clean all of the non-metallic parts by wiping them with clean lint-free tissues slightly moistened with isopropyl alcohol.

Note: All parts must be free of corrosion, dirt, grease, oil or any other foreign matter.

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WEAR EYE PROTECTION WHEN USING COMPRESSED AIR. DO NOT DIRECT AIRSTREAM AT PERSONNEL OR LIGHT METAL PARTS.

- C. Dry parts with clean lint-free tissues or clean, dry compressed air.
- D. Package clean parts in plastic bags.

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INSPECTION

1. General

- A. Under strong light and magnification, Look at all parts in accordance with the general criteria specified in [Table 4](#).
- B. Repair minor damage in accordance with local directives. If damage is major or beyond simple repair, replace the part.

2. Component Checks (Refer to [Table 4](#))

Table 4 Component Checks

DESCRIPTION	CHECK CRITERIA
General	<p>Look at all parts as applicable for nicks, cracks, cuts, burrs, corrosion, breaks, scoring, chafing, scarring, deformation, dents, thread damage, or any other obvious defects. Make sure the ports, passages, recesses and sealing grooves are clean and are not blocked.</p> <p>Make sure all sealing and seating surfaces are free from damage or corrosion.</p>

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ASSEMBLY

1. Overhaul Replacement Parts

Refer to the [ILLUSTRATED PARTS LIST](#) section for recommended replacements parts information.

2. Assembly Materials

Refer to [Table 5](#) for recommended assembly materials. Suitable equivalent materials may be substituted for the items listed.

Table 5 Recommended Assembly Materials

DESCRIPTION	SPECIFICATION	SOURCE
Petroleum Jelly	--	Commercially available
Thread Locker	Loctite® 262	Commercially available

3. Assemble the Hydrant Coupler

A. Lubrication

Before assembly, lightly lubricate all of the O-rings and seals with petroleum jelly.

B. Assemble the Coupler Section (See [IPL Figure 1](#))

1. If bushing (34) was discarded, press a new bushing into the body (37).



DO NOT TOUCH HOT SURFACES WITH BARE HANDS. USE HEAT RESISTANT INSULATED GLOVES WHEN HANDLING HOT COMPONENTS.

2. If guard (2) was discarded from shroud (3), heat a new guard (2) in an oven at 150°F for 3 to 5 minutes. Use gloves to handle the guard (2) and install onto shroud (3).

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3. Install shear pin (6) into latching lug (7). Install pin, groove (5) thru latching lug (7) to shear pin (6). Repeat for remaining lugs.

Note: Gold Shear pins shall be used on F251 couplers mated on the F239 pressure control coupler assembly.

Red shear pins shall be used on F251A couplers mated to the CCMY8500M3 pressure control coupler assembly.

4. Install springs (8) and latching lugs (7) in body (37) as follows:

Note: Long nose pliers may be used to close the spring loop during installation of a spring in the body, but be careful to avoid damaging the spring. The wire shall not be marked or scratched.

- b. Push the loop of spring (8) into the hole in body (37), with the two tangs resting on the top surface. Push the spring in as far as possible, so the two tangs contact the body surface. The loop of the spring shall be a tight press fit in the hole.
- c. Position latching lug (7) in its groove on body (37), spring anchor end inward to contact the ends of the two tangs of spring (8). Lift and place the ends of the spring tangs into the groove of the locking lug. Press the locking lug inward and rotate it into position. Make sure that both of the spring tangs are still in their correct positions and that latching lug (7) rotates freely. Repeat for each of the springs (8) and locking lugs (7).

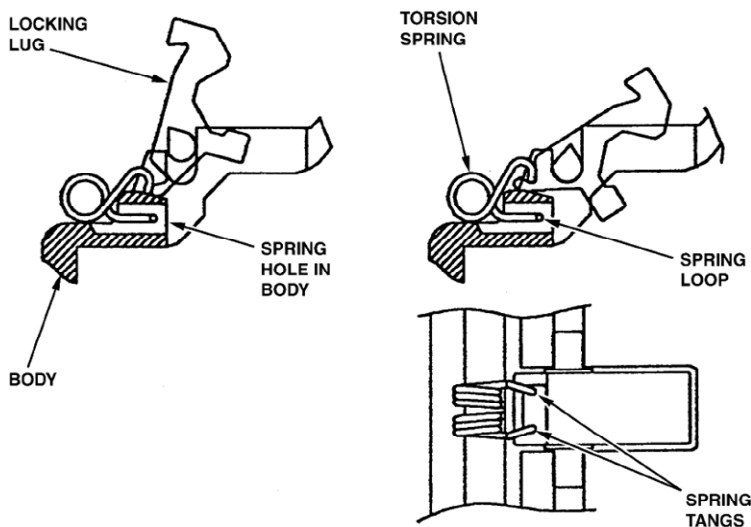


Figure 2. Coupler Section Assembly

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5. Install felt wiper (4) in wiper groove of shroud (3).
6. Install shroud (3) on body (37). Make sure the latching lugs (7) are seated correctly for the shroud to slide past.
7. Install seal (15) in seal groove on sleeve assembly (12) and secure with retainer (14). Install O-ring (13) in O-ring groove of sleeve assembly (12).
8. Assemble links (31), clevis pin (30), washer (29) and cotter pin (28) on hinge (32).

CAUTION

MAKE SURE PIN (16) IS FLUSH OR BELOW THE SURFACE OF THE HANDLE (17). FAILURE TO OBEY THIS CAUTION MAY CAUSE DAMAGE TO PIN (16).

9. Apply petroleum jelly to new O-ring (21), and install O-ring (21), bushing (20), wiper (19) and handle (17) on shaft (22). Secure handle (17) to the shaft (22) with pin (16).
10. Install shaft assembly into body (37) and through crank (27). Make sure crank (27) is oriented with the hole for pin (26) farthest away from the flat of handle (17).
11. Drive pin (18) into the pin bore of body (37) to secure shaft assembly.
12. Install wave washer spring (11) and sleeve assembly (12) into body (37).
13. Rotate handle (17) to the CLOSED position. Align hole on crank (27) with hole on shaft (22) and install pin (25) through crank (27) and shaft (22).
14. Put body (37) on the API-style Adapter (or equivalent) used during disassembly of the coupler. Slide shroud (3) past body (37).

Note: The Allen wrench method may be used to prevent latching lugs (7) from catching onto shroud (3) to slide shroud (3) past body (37).
15. Locate bow of links (31) on the hinge (32) and holes on top of link (31) with crank (27). Install pin (26), washer (24) and cotter pin (23). The bow of links (31) shall be pointing 180° from operating handle (17), when the handle is in the CLOSED position.
16. Rotate the handle (17) to the OPEN position. Install O-ring (33) on to hinge (32). Install poppet (9) on to hinge (32). Apply thread lock on screws (10) and secure poppet (9) with screws (10), and torque to 19 ±2 in-lbs.
17. Rotate handle to the CLOSED position; slide the shroud (3) up to the handle (17) until the locks are engaged.

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C. (Mods B – K and M) Assemble and Install the Swivel Assembly (See [IPL Figure 2](#))

1. Apply petroleum jelly to new O-ring (13) and install in groove on elbow (14). Engage the elbow (14) with hydrant coupler body ([IPL Figure 1](#), 37) and secure it with screws ([IPL Figure 2](#), 10), lock washer (11) and nut (12). Torque screws to 212 lb-in.
2. Install ring bearing (6) on to elbow (14).
3. Apply petroleum jelly to ball bearing (8) and install ball bearing (8) into swivel body (9).
4. Slide locking ring (5) onto swivel body (9).
5. Install safety ring (2) on to the first groove on the swivel body furthest from the ball bearings (8).
6. Apply petroleum jelly to quad ring (7) and install into swivel body (9).
7. Slide swivel body (9) onto elbow (14).
8. Install safety ring (2) onto the second groove on the swivel body (9).
9. Install screws (3) and washer (4) onto locking ring (5) and tighten until screw bottoms out on lock ring (5).
10. (Mod M) Install seal (1) into the groove of the outlet adapter attached to the swivel body (9).

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ILLUSTRATED PARTS LIST

1. General

This section lists, describes, and illustrates all detail parts required for maintenance support of the Hydrant Coupler.

2. Scope of Information

A. The parts list is arranged in the general order of disassembly. The listing is indented to show the relationship between each part and its next higher assembly. Item numbers used in the parts list are keyed to the corresponding numbers of the accompanying illustration.

B. MODIFICATION CODE

The modification code (refer to Table 1) indicates the parts usage with respect to the end item. When the MODIFICATION CODE column is blank, the part usage is applicable to all versions unless otherwise specified in the DESCRIPTION column.

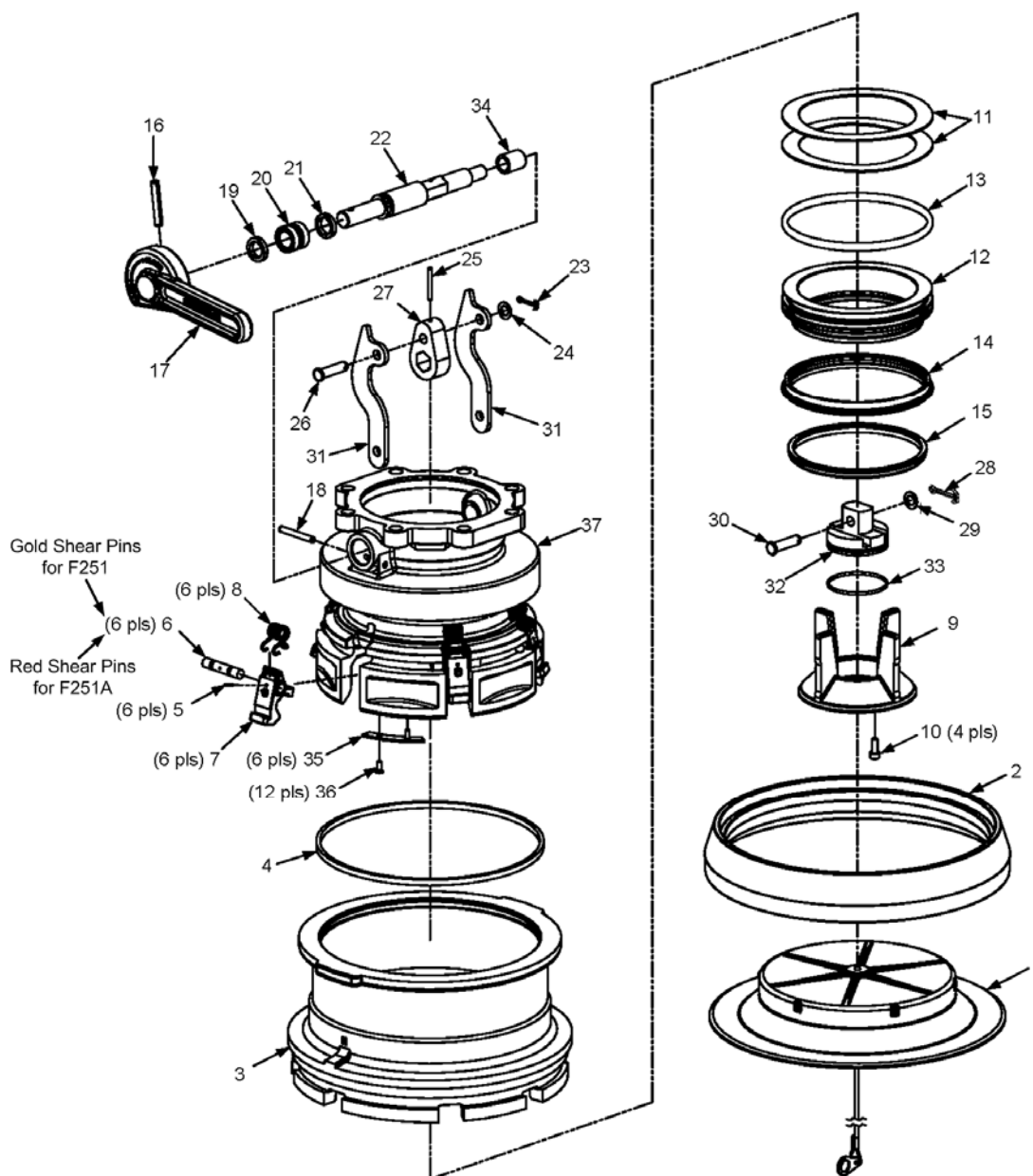
C. Abbreviations

ASSY	Assembly
FIG.	Figure
IPL	Illustrated Parts List
MOD	Modification

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IPL Figure 1. Hydrant Coupler, F251

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FIG. ITEM	PART NUMBER	DESCRIPTION	MOD CODES	UNITS PER ASSY
HYDRANT COUPLER F251				
1- 1	900001-101	. DUST COVER ASSY		1
2	2763486-101	. GUARD.....		1
3	901004-104	. SHROUD – MACHINING		1
4	MS28932C-23-3	. WIPER – FELT		1
5	MS35678-2	. PIN – GROOVED		6
6	430141	. GOLD SHEAR PIN.....	B-K,M,R	6
	430220	. RED SHEAR PIN.....	A	6
7	430148	. LUG – LATCHING		6
8	430432	. RETAINER – SPRING		6
9	430142-1	. POPPET – MACHINED.....		1
10	NAS1352N3-8	. SCREW – CAP, SOCKET HEAD.....		4
11	W4997-050	. WASHER – WAVE SPRING		2
12	2763489-106	. SLEEVE ASSY	A-K,M	1
	2763489-107	. SLEEVE ASSY	R	1
13	2661058BD350	. O-RING.....	A-K,M	1
	2661058AF350	. O-RING.....	R	1
14	2672293	. RETAINER – SEAL.....		1
15	2672292-1	. SEAL	A-K,M	1
	2672292-2	. SEAL	R	1
16	MS171658	. PIN – SPRING.....		1
17	901006-101	. HANDLE – MACHINING		1
18	MS171594	. PIN – SPRING.....		1
19	2763494-101	. WIPER.....		1
20	901010-101	. BUSHING		1
21	2661058A207	. O-RING	A-K,M	1
	2661058AF207	. O-RING.....	R	1
22	901009-101	. SHAFT		1
23	MS24665-300	. PIN – COTTER.....		1

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FIG. ITEM	PART NUMBER	DESCRIPTION	MOD CODES	UNITS PER ASSY
HYDRANT COUPLER F251				
1-				
24	AN960C516L	. WASHER.....		1
25	901014-101	. PIN.....		1
26	MS20392-4C33	. PIN.....		1
27	901011-102	. CRANK.....		1
28	MS24665-300	. PIN – COTTER.....		1
29	AN960C516L	. WASHER.....		1
30	MS20392-4C33	. PIN.....		1
31	2763497-103	. LINK.....		2
32	430147	. HINGE.....		1
33	2661058A032	. O-RING – PREFORMED.....	A-K,M	1
	2661058AF032	. O-RING – PREFORMED.....	R	1
34	901012-101	. BUSHING.....		1
35	430149-1	. SPACER.....		6
36	MS24693-C26	. SCREW – FLAT COUNTERSUNK HD.....		12
37	430140-102	. BODY – ASSEMBLY.....	B-K,M,R	1
	430140-104	. BODY – ASSEMBLY.....	A	1
- 38	MS171530	. . PIN – SPRING, CRES.....	A	2
- 39	MS21209C0610	. . INSERT, HELICAL COIL.....		12
- 40	430140-96	. . BODY – MACHINING.....	A	1
	430140-98	. . BODY – MACHINING.....	B-K,M,R	1

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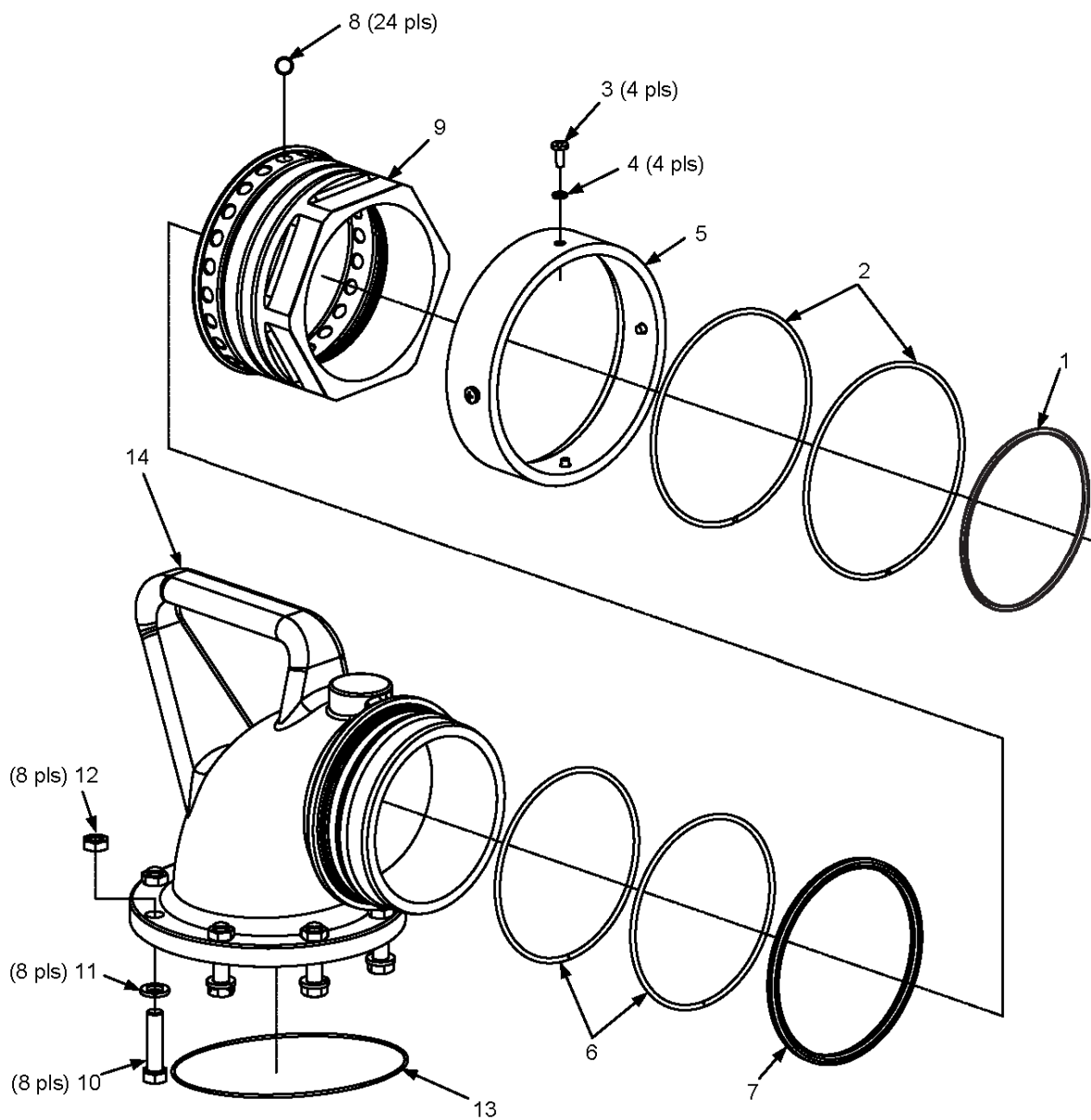
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IPL Figure 2. Swivel Assembly F597

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FIG. ITEM	PART NUMBER	DESCRIPTION	MOD CODES	UNITS PER ASSY
SWIVEL ASSEMBLY F597				
2- 1	430547	. SEAL.....	M	1
2	2763539-101	. RING, SAFETY.....	B-K,M	2
3	2706511CC05012	. SCREW, MACHINE.....	B-K,M	4
4	MS35338-43	. WASHER, LOCK.....	B-K	4
	AN935-10L	. WASHER, LOCK.....	M	4
5	2803018-101	. RING, LOCKING.....	B-K,M	1
6	2763537-101	. RING, BEARING.....	B-K,M	2
7	Q4248-366Y	. RING, QUAD.....	B-K,M	1
8	MS19060-4818	. BALL, BEARING.....	B-K	24
	2706786-26	. BALL, BEARING.....	M	24
9	2861015-101	. BODY, SWIVEL, NPT (4-inch).....	B	1
	2861015-102	. BODY, SWIVEL, BSPPL (4-inch).....	C	1
	2861015-103	. BODY, SWIVEL, NPT (3-inch).....	D	1
	2861015-104	. BODY, SWIVEL, BSPPL (3-inch).....	E	1
	2861015-105	. BODY, SWIVEL, NPT (2.5-inch).....	F	1
	2861015-106	. BODY, SWIVEL, BSPPL (2.5-inch).....	G	1
	2861015-107	. BODY, SWIVEL, NPSM (4-inch).....	H	1
	2861015-111	. BODY, SWIVEL, NPSH (4-inch).....	M	1
10	CMS90725-64	. SCREW, SOCKET HEAD CAP (3/8 x 1.5 inch).....	B-K,M	8
11	CMS35338-141	. WASHER, LOCK.....	B-K,M	8
12	CMS35691-17	. NUT, JAM.....	B-K,M	8
13	2661058A157	. O – RING.....	B-K,M	1
14	2861016-102	. ELBOW.....	B-J,M	1
	2861016-103	. ELBOW, TAPPED BOSS..... (Used only with MOD Codes B-J)	K	1

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