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Maintenance Manual

Swivel Disconnect

F582/F584 Series

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LIST OF EFFECTIVE PAGES

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INTRODUCTION

1. General

This manual provides component maintenance shop instructions for the Swivel Disconnect (disconnect).

2. Revision Service

This manual will be revised as necessary to show the current information.

3. Weights and Measurements

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

DESCRIPTION AND OPERATION

1. Description

The Swivel Disconnect provides the ability to custom build a nozzle or hydrant coupler system to meet many customer requirements. All of these disconnects use a ball-locking mechanism and all are equipped with heavy duty couplings.

2. Operation (Refer to Figure 2)

A. To Disengage the Swivel Body and the Coupling:

- 1) Lift the safety lock ring (3, IPL Figure 1) out of its groove and slide it back to the body shoulder.
- 2) Back out the two locking screws (7) until the sleeve (4) is free to move.
- 3) Disengage the coupling from the swivel body by pulling them apart.

B. To Engage the Swivel body and Coupling:

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- 1) Slip the coupling into the swivel body.
- 2) Slide the sleeve (4) forward (this cannot be accomplished until the coupling and swivel body are fully engaged).
- 3) Slide the safety lock ring (3) forward until it positions itself in its locking groove.
- 4) Install the two locking screws (7) in their locking slot.

2. Leading Particulars (Refer to Table 1)

3. Model Variations

A. General

The F582/F584 series disconnects have flanged outlets to mate with the F594A/F595A series valve inlets. Refer to Table 2 for the available F582 disconnect variations. Refer to Table 3 for the available F584 disconnect variations. Refer to the **ILLUSTRATED PARTS LIST** section for additional details.

Table 1. Leading Particulars
Service Automotive and Aviation Fuels
Operating Pressure 0 to 200 psi (13,8 bar)
Fluid Temperature –65 to 135°F (–54 to 57°C)
Ambient Temperature –65 to 160°F (–54 to 71°C)

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Table 2. F582 Swivel Disconnect Model Variations

MOD LETTERS	DESCRIPTION	
NOTE: All F582 series swivel disconnects use 2½-inch strainers.		
Basic	Swivel Assembly	Use F582AE
A	Body Assembly	2½-inch ANPT inlet, less coupling
AE	Swivel Assembly	Flanged end mates with F115, F116, F117, F574, F594 and F595, 2½-inch ANPT
B	Body Assembly	2½-inch BSPPL inlet, less coupling
BE	Swivel Assembly	2½-inch BSPPL swivel body inlet and coupling
C	Body Assembly	3-inch ANPT inlet, less coupling
CE	Swivel Assembly	3-inch ANPT swivel body inlet and coupling
D	Body Assembly	2-inch ANPT inlet, less coupling
DE	Swivel Assembly	2-inch ANPT swivel body inlet and coupling
E	Coupling Assembly	Aluminum body, 2½-inch, replaceable stainless steel wire bearing rings, bearing strip, quad ring and packing

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Table 2. F582 Swivel Disconnect Model Variations (continued)

MOD LETTERS	DESCRIPTION	
F	Body Assembly	3-inch BSPPL inlet, less coupling
EF	Swivel Assembly	3-inch BSPPL swivel body inlet and coupling
EK	Swivel Assembly	4-inch ANPT swivel body inlet and coupling
EV	Swivel Assembly	3½-inch ANPT swivel body inlet and coupling
EX	Swivel Assembly	2-inch female BSPPL swivel body inlet and coupling
G	Elbow Assembly	90-degree (formerly F580)
H	Coupling Assembly	3-inch disconnect (Formerly F506) (Mates with D1 nozzle) (Includes hardware)
J	Coupling Assembly	2½-inch male NPT (Formerly F501)
K	Body Assembly	4-inch ANPT inlet
M	Strainer	Adds 40-mesh strainer
N	Strainer	Adds 60-mesh strainer
P	Strainer	Adds 100-mesh strainer
T	Body Assembly	2-inch female Camlock inlet
U	Body Assembly	4-inch male Camlock inlet, less coupling
V	Body Assembly	3½-inch ANPT inlet, less coupling
X	Body Assembly	2-inch female BSPPL inlet, less coupling
Y	Coupling Assembly	2½-inch, aluminum body (Same as F582E except mates with J.C. Carter flange)

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Table 3. F584 Swivel Disconnect Model Variations		
MOD LETTERS	DESCRIPTION	
NOTE: All F584 series swivel disconnects use 3-inch strainers.		
Basic	Body Assembly	Use F584CL
A	Body Assembly	2½-inch ANPT inlet, less coupling
AL	Swivel Assembly	2½-inch ANPT swivel body inlet and coupling
B	Body Assembly	2½-inch BSPPL inlet, less coupling
BL	Swivel Assembly	2½-inch BSPPL swivel body inlet and coupling
Table 3. F584 Swivel Disconnect Model Variations (continued)		
MOD LETTERS	DESCRIPTION	
C	Body Assembly	3-inch female ANPT inlet, less coupling
CL	Swivel Assembly	3-inch female ANPT swivel body inlet and coupling (Mates with F115, F116, F117 nozzles, and F574, F594 and F595 hose end control valves) (Interchangeable with F575 series)
D	Body Assembly	2-inch ANPT inlet, less coupling
DL	Swivel Assembly	2-inch ANPT swivel body inlet and coupling
E	Body Assembly	3-inch BSPPL inlet, less coupling
EL	Swivel Assembly	3-inch BSPPL I swivel body inlet and coupling
F	Body Assembly	3-inch, National Valve type connections
H	Coupling Assembly	3-inch with MS flange hardware
L	Coupling Assembly	3-inch, aluminum body, with replaceable stainless steel wire bearing rings, bearing strip, packing and quad ring
M	Strainer	Adds 40-mesh strainer
N	Strainer	Adds 60-mesh strainer
P	Strainer	Adds 100-mesh strainer
S	Coupling Assembly	3-inch, aluminum body, 45-degree elbow
W	Coupling Assembly	3-inch, aluminum body, 45-degree elbow (mates with J.C. Carter flange)
Y	Coupling Assembly	3-inch, aluminum body, 45-degree elbow (same as F584L except mates with J.C. Carter flange)

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FAULT ISOLATION

1. General

Refer to Table 4 for fault isolation information. Locate suspected faulty component and take appropriate remedial action.

Table 4. Fault Isolation		
FAULT	POSSIBLE CAUSE	CORRECTIVE ACTION
F582 SWIVEL DISCONNECT		
External leakage	Damaged quad ring (10, IPL Figure 1) or packing (11)	Replace the quad ring and the packing.
F584 SWIVEL DISCONNECT		
External leakage	Damaged quad ring (9, IPL Figure 2) or packing (10)	Replace the quad ring and the packing.

DISASSEMBLY

1. Disassembly Procedure (Refer to IPL Figure 1)

A. Disengage the swivel body from the coupling.

CAUTION: Be careful not to lose the balls (6).

B. Remove the retaining ring (5) from the end of the body (2).

CLEANING

1. Cleaning Materials

Refer to Table 5 for recommended cleaning materials. Suitable equivalent cleaning materials may be substituted for the items listed.

2. Cleaning Procedures

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WARNING: DRY CLEANING SOLVENT IS FLAMMABLE AND TOXIC TO EYES, SKIN, AND RESPIRATORY TRACT. SKIN/EYE PROTECTION REQUIRED. AVOID REPEATED/PROLONGED CONTACT. USE ONLY IN WELL VENTILATED AREAS. GOOD GENERAL VENTILATION IS NORMALLY ADEQUATE. KEEP AWAY FROM OPEN FLAMES OR OTHER IGNITION SOURCES.

A. Clean all metal parts by washing thoroughly in dry cleaning solvent. Remove stubborn deposits by scrubbing with a nonmetallic stiff bristle brush.

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

WARNING: WEAR EYE PROTECTION WHEN DRYING PARTS WITH COMPRESSED AIR. DO NOT DIRECT AIRSTREAM AT PERSONNEL OR LIGHT METAL PARTS.

B. Dry parts with clean lint-free tissues or clean, dry compressed air.

Table 4. Recommended Cleaning Materials

DESCRIPTION	SPECIFICATION	SOURCE
Brush, Bristle, stiff, nonmetallic	--	Commercially available
Dry Cleaning Solvent	--	Commercially available
Tissues, lint-free	--	Commercially available

INSPECTION

1. General

A. Under strong light and magnification, visually check all parts in accordance with the general criteria specified in paragraph 2 below.

B. Repair minor damage in accordance with local directives. If damage is major or beyond simple repair, replace the part rather than attempt extensive repairs.

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2. Component Checks (Refer to Table 5)

Table 5. Component Checks	
DESCRIPTION (IPL Figure 1 Item Number)	CHECK CRITERIA
General	Visually check 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 that the ports, passages, recesses and sealing grooves are clean and unobstructed.
	Check all sealing and seating surfaces for damage or corrosion that would affect sealing.

REPAIR

1. General

Minor repairs that do not affect the original function may be accomplished using standard shop practices.

ASSEMBLY

1. Recommended Maintenance Materials

Refer to Table 7 for recommended assembly materials. Suitable equivalent materials may be substituted for the items listed.

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Table 6. Recommended Assembly Materials		
DESCRIPTION	SPECIFICATION	SOURCE
Petrolatum	–	Commercially available

2. Assembly Procedure

- A. Refer to IPL Figure 1 or 2 as a guide to assembly.
- B. During assembly, apply a liberal coating of petrolatum (petroleum jelly) on the bearing holes of the body (2) to retain the balls (6).
- C. Slide the sleeve (4) over the balls (6) and install the retaining ring (5).
- D. Engage the swivel body with the coupling.

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ILLUSTRATED PARTS LIST

1. General

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

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 (see 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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FIG. ITEM	PART NUMBER	DESCRIPTION 1 2 3 4 5 6 7	MOD CODES	UNITS PER ASSY
1 1	–	BODY ASSEMBLY		REF
2	1429-585784-2	· BODY, 2-1/2" NPT Female	A	1
	1429-585784-4	· BODY, 2-1/2" BSPPL Female	B	1
	1429-595208-1	· BODY, 3" BSPPL Female	C	1
	1429-585784-1	· BODY, 2" NPT Female	DT	1
	1429-585208-2	· BODY, 3" BSPPL Female	F	1
	1429-586130	· BODY, 4" NPT Female	KU	1
	2642838	· BODY, 3-1/2" NPT Female	V	1
	1429-585785-5	· BODY, 2" BSPPL Female	X	1
3	2803016-101	· RING, SAFETY		1
4	1429-585783	· SLEEVE		1
5	CMS16626-1350	· RING, RETAINING		1
6	2706786-26	· BALL, BEARING		8
	CMS19060-26	· BALL, BEARING (Alternate)		8
7	CMS35276-280	· SCREW, SELF-LOCKING		2
8	CMS35338-139	· WASHER, FLAT		2
9	–	ELBOW ASSEMBLY		REF
10	2823082-101	· ELBOW	G	1
11	2661058A042	· PACKING, PREFORMED	EY	1
12	Q4231-366Y	· RING, QUAD	EGHJY	1
13	2803082-101	· SEAL, BACKUP	EGHJY	1
14	2803015-101	· RING, BEARING	EGHJY	2
15	–	COUPLING ASSEMBLY		REF
16	2803361-101	· COUPLING, 2-1/2"	E	1
	2823085-101	· COUPLING, 2-1/2" (MS Flange)	H	1
	2823077-101	· COUPLING, 2-1/2" (2-1/2" Male NPT)	J	1
	2823102-101	· COUPLING, 2-1/2" (JC Carter Flange)	Y	1
17	2672020-1	· STRAINER (40 Mesh)	M	1

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FIG. ITEM	PART NUMBER	DESCRIPTION	MOD CODES	UNITS PER ASSY
		1 2 3 4 5 6 7		
	2672020-2	· STRAINER (60 Mesh)	N	1
	2672020-3	· STRAINER (100 Mesh)	P	1
18	2706133-104	· NIPPLE, CLOSE (2" NPT)	T	1
19	200D	· FITTING, CAMLOCK (2" Female)	T	1
20	400FAL	· COUPLING, CAMLOCK (4" Male)	U	1
21	7-449-6	· GASKET (Not Shown)	H	1
22	CAN960-516	· WASHER, FLAT (Not Shown)	H	6
23	CAN509-516R18	· SCREW, MACHINE (Not Shown)	H	6
24	CAN365-564	· NUT, SELF-LOCKING (Not Shown)	H	6

FIG. ITEM	PART NUMBER	DESCRIPTION	MOD CODES	UNITS PER ASSY
		1 2 3 4 5 6 7		
2 1	–	BODY ASSEMBLY		REF
2	2793388-101	· BODY, 2-1/2" NPT Female	A	1
	2793388-104	· BODY, 2-1/2" BSPPL Female	B	1
	2793388-105	· BODY, 3" NPT Female	C	1
	2793388-102	· BODY, 2" NPT Female	D	1
	2793388-106	· BODY, 3" BSPPL Female	E	1
	27020241	· BODY, 3" National Valve	F	1
3	2793393-101	· RING, SAFETY		1
4	2681559	· SLEEVE		1
5	5108-400	· RING, RETAINING		1
6	CMS19060-26	· BALL, BEARING		8
7	NK500A416-7	· SCREW, SELF-LOCKING		2
8	CAN960-416	· WASHER, FLAT		2
9	–	COUPLING ASSEMBLY		REF

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FIG. ITEM	PART NUMBER	DESCRIPTION	MOD CODES	UNITS PER ASSY
		1 2 3 4 5 6 7		
10	2661058A042	· PACKING, PREFORMED	HLS	1
	2661058A151	· PACKING, PREFORMED	WY	1
11	Q4235-366Y	· RING, QUAD	HLSWY	1
12	2793392-101	· SEAL, BACKUP	HLSWY	1
13	2793391-101	· RING, BEARING	HLSWY	2
14	2823108-101	· COUPLING, 3" (MS Flange)	H	1
	2793390-101	· COUPLING, 3"	L	1
	2823188-101	· COUPLING, 3" (45° Elbow)	S	1
	2823188-102	· COUPLING, 3" (45° Elbow and JC Carter Flange)	W	1
	2823103-101	· COUPLING, 3" (JC Carter Flange)	Y	1
15	2681633-1	· STRAINER (40 Mesh)	M	1
	2681633-2	· STRAINER (60 Mesh)	N	1
	2681633-3	· STRAINER (100 Mesh)	HP	1
16	7-449-6	· GASKET (Not Shown)	H	1
17	CAN960-516	· WASHER, FLAT (Not Shown)	H	6
18	CAN509-516R18	· SCREW, MACHINE (Not Shown)	H	6
19	CAN365-564	· NUT, SELF-LOCKING (Not Shown)	H	6

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