



Energy products

Acrospace
Defense
 **Energy**

Maintenance Manual

WATER DETECT FLOAT (with Switch)

F599A/F599AB Series

MMF599A/F599AB

**Revision 2.0
31 July 2015**

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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	02/15/2005	
1.1	ALL		02/01/2006	
2.0	ALL	See DCN	08/11/2015	A.JUNG

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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 Water Detect Float Assembly (with Switch) (float). 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 float is a mechanical device and can be dangerous if incorrectly 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.

USE APPROVED SAFETY EQUIPMENT

- Use only approved equipment and make sure firefighting equipment is readily available.

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GIVE CLEANERS SPECIAL CARE

- When cleaners are being used read and obey the material safety data sheet (MSDS) instructions for correct handling.

Equipment Safety Information

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

GENERAL OPERATING LOCATION PRECAUTIONS

- Use only authorized replacement parts or hardware.
- Obey Lock-Out/Tag-Out procedures when working on the float and make sure personnel protection equipment such as electrical grounds are installed.
- Avoid hazardous voltage situations that can result from unsafe conditions such as, but not limited, to the following:
 - o Incorrect grounding.
 - o Handling electrical leads or devices with wet hands or on wet ground.
 - o Damaged electrical wire insulation.
 - o Incorrect connection of the power terminals.
 - o Short circuits to ground.

OPERATION AND MAINTENANCE OF FUEL SYSTEMS

- Protect all fuel lines from damage or puncture. Do not operate the float if a fuel leak is detected.
- Do not use flammable solvents for cleaning parts.
- Before operation, make sure there are no tools, rags, or loose parts left in the area.
- Before removal of float, make sure all pressure is isolated and released from the system.

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INTRODUCTION

1. General

The information and procedures contained in this manual have been prepared to assist qualified repair personnel in off-aircraft maintenance of the Water Detect Float (with Switch) (float). The instructions provide information necessary to accomplish maintenance functions. The float 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 Water Detect Float (with Switch) (float) (see [Figure 1](#) and [Figure 2](#)) provides the means of detecting free water accumulation in filter/separators, storage tanks and other refueling system components. The major functional components of the float; are the switch, the switch actuating mechanism, the test lever, the float, the sump, and the plunger assembly. The fully enclosed F599AB version (see [Figure 2](#)) is designed for remote installation.

2. Operation

A. Negligible Free Water Accumulation

When the accumulated water in the sump is negligible, the specific gravity of the float is sufficient to keep it from floating, and the refueling system operates normally.

B. Excessive Free Water Accumulation

As free water accumulates, its higher specific gravity causes the float to move upward. When the free water accumulation is sufficient, float movement actuates its normally closed switch contacts to their open position, interrupting the circuit path for the control signal. When this occurs, the refueling system shuts down.

C. Refueling System Start

When the refueling system has been shut down due to excessive free water accumulation in the water sump, operator action is required to drain the water. When the water sump has drained, the float will sink, the switch will close and complete the control signal, path and normal operation will resume.

D. Pre-Check Test Lever

The pre-check TEST lever provides the means to make sure correct operation of the float. When the lever is rotated downward, it removes ballast weight from the float, allowing it to float in fuel. This causes the normally closed contacts of the switch to open. An audible click is produced when the switch is actuated. The pre-check TEST lever can be used periodically, in accordance with the established operating procedures.

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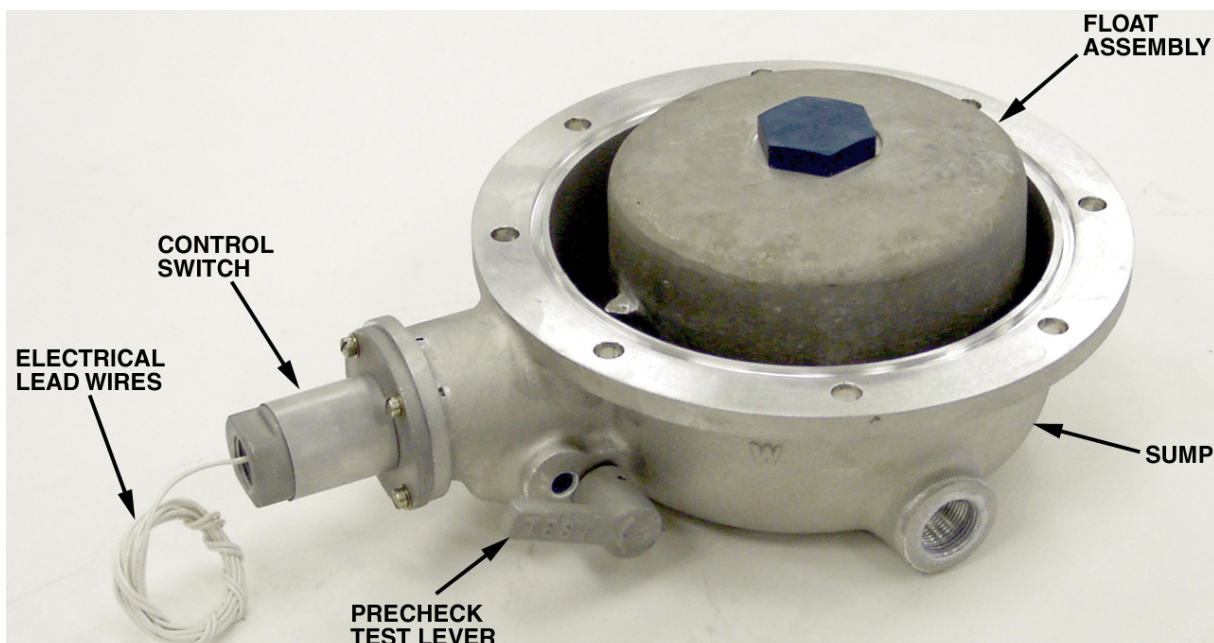


Figure 1. Water Detect Float (with Switch) P/N F599A

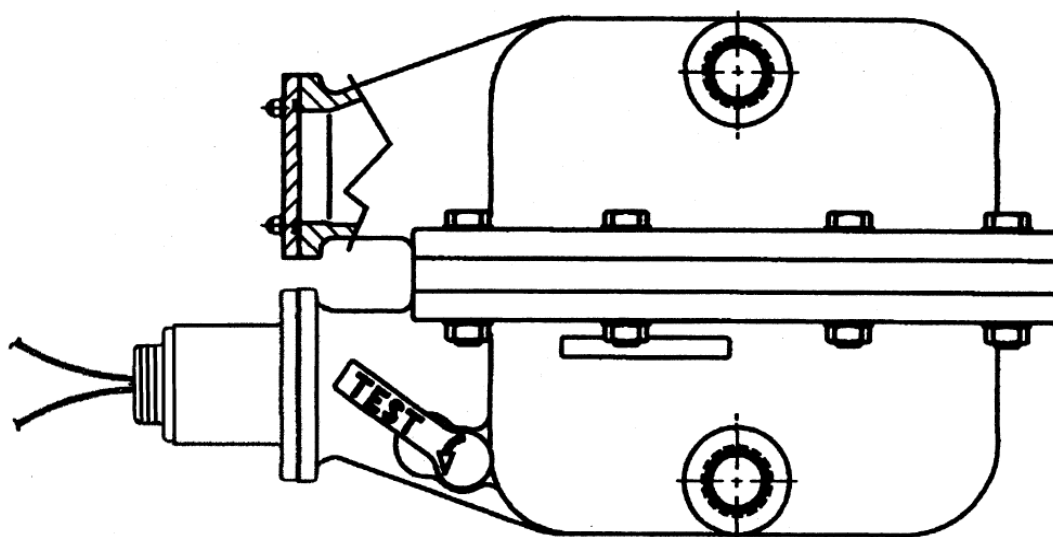


Figure 2. Water Detect Float (with Switch and 2nd Sump) P/N F599AB

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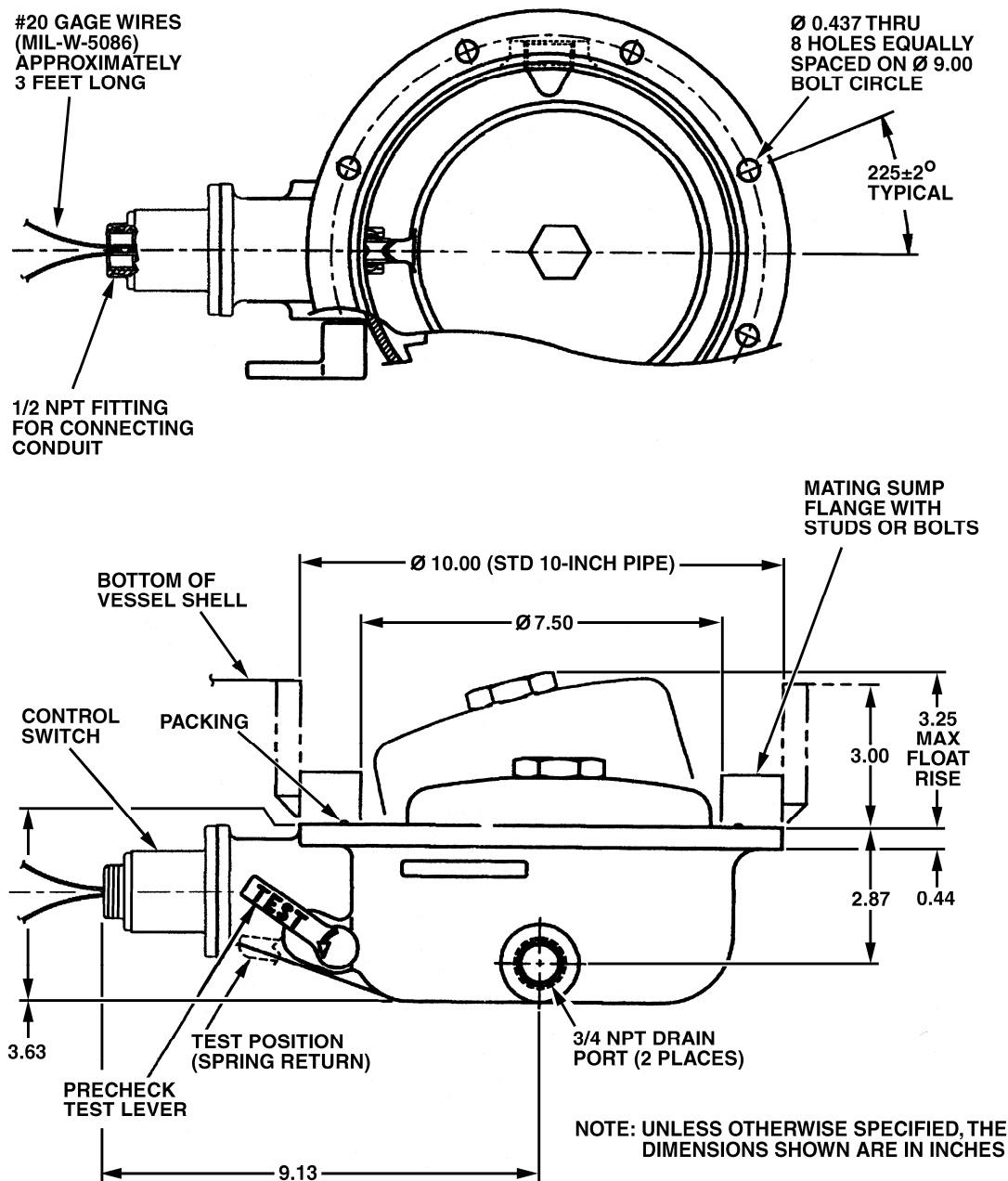


Figure 3. Water Detect Float (with Switch) – Interface Dimensions

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3. Leading Particulars

For the leading particulars refer to [Table 1](#).

Table 1. Leading Particulars

Service	Automotive and Aviation Fuels and Water (Specific gravity: 0.83 maximum)
Operating Pressure	
Maximum Working.....	200 psi (1379 kPaG)
Through Switch	85 psi (586 kPa)
Switch Contact Rating.....	1.0 ampere
Temperature:	
Ambient	-65 to 160°F (-54 to 71°C)
Fluid	-35 to 135°F (-37 to 57°C)
Weight (approximate)	15 pounds (6.8 kg)
Envelope Dimensions	See Figure 3

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Water Detect Float (with Switch) – F599A/F599AB Series

FAULT ISOLATION

1. General

This section contains fault isolation procedures for the float. Operate the float in accordance with the Operation section, if the float fails to operate correctly refer to [Table 2](#) and select the appropriate action. [Table 2](#) identifies the Fault, Probable Cause and Corrective Action.

Table 2. Fault Isolation

FAULT	PROBABLE CAUSE	CORRECTIVE ACTION
Switch will not close	Rod (IPL Figure 1 , 28) incorrectly adjusted	Adjust the rod (refer to ASSEMBLY section, paragraph 3H).
	Switch (11) incorrectly adjusted	Adjust the switch (refer to ASSEMBLY section, paragraph 3S).
	Defective switch (11)	Replace the switch body.
	Weight of float assembly (22) is incorrect	Check and correct the float weight (refer to ASSEMBLY paragraph 3B).

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DISASSEMBLY

NOTE: Before disassembly, the vessel in which the float is installed must be drained in accordance with the applicable instructions, and the float must be disconnected and removed from the vessel.

1. Replacement Parts Kits

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

2. Disassemble the Water Detect Float (with Switch) (See [IPL Figure 1](#))

- A. (Mod B) Remove screws (40), washers (41), plate (42) and packing (43). Discard packing (43).
- B. (Mod B) Remove screws (44), washers (45), nuts (46), sump (47), packing (48) and spacer (49). Discard packing (48).
- C. Remove and discard packing (2) from packing groove of the sump (39).
- D. Remove screw (3), washers (4 and 5) and cover (6) from the switch housing (17).
- E. Remove screws (9), washers (10), switch (11) and insulator (12) from the switch housing (17). Remove washer (8) and grommet (7) from electrical wires of the switch (11).
- F. Remove (switch adjustment) screw (15) from rod (28).

CAUTION

BEFORE REMOVING THE SWITCH HOUSING (17); MAKE SURE PINS (16 AND 27) ARE REMOVED FROM FLOAT ASSEMBLY (23).

- G. Remove screws (13), washers (14) and gently pull the switch housing (17) away from sump (39). Using a suitable small diameter tool (a straightened large paper clip works well), push out pins (16 and 27).
- H. Remove the switch housing (17) and associated parts.
- I. Remove and discard packing (18) from switch housing (17).
- J. Remove retaining ring (19), packing (20) and rod (28). Discard packing (20).

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CAUTION

USE CARE WHEN REMOVING THE FLOAT ASSEMBLY (23), TO AVOID DAMAGING IT AND ITS SURROUNDING PARTS.

- K. Gently lift the end of the torsion spring (36) to remove float assembly (23) from sump (39).
- L. Remove screw (21), nut (22) and washer (14) from float assembly (23).
- M. Remove screws (29) and collar (30).
- N. Remove shaft assembly (31), packing (32), and bearing ring (33). Discard packing (32).
- O. Remove plug (34) and mandrel (35).
- P. Remove link (38) and torsion springs (36 and 37).

Q. Disassemble the Float Assembly (23)

- 1) Remove plug and bleeder (24) and packing (25) from float assembly (23). Discard packing (25).

Note: Do not remove plug (26) from float assembly (23) unless there has been obvious leakage.

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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 AND ISOPROPYL ALCOHOL ARE HAZARDOUS MATERIALS. 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.

- 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.
- 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 the parts with clean lint-free tissues or clean, dry, compressed air.
- D. Package all of the clean parts in plastic bags.

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CHECK/INSPECTION

1. General

Under strong light and magnification, look at all parts in accordance with the general criteria specified in [Table 4](#).

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 (IPL Figure 1 Item Number)	INSPECTION CRITERIA
General	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 not blocked.
	Make sure all sealing and seating surfaces are free from damage or corrosion.
	Look to make sure the ports, passages, recesses and sealing grooves are clean and not blocked.
Float Assembly (23)	Make sure weight is 3.03 (± 0.03) pounds (1.37 ± 0.01 kg) (including plug and bleeder (24), packing (25), and plug (26).
Switch (11)	Check for positive make and break of continuity when the switch is actuated.

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REPAIR

1. General

Repairs normally will consist of replacing damaged or malfunctioning parts with new parts; however, this section outlines minor repair procedures permissible for component parts, and specifies mandatory replacement parts.

2. Repair Materials

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

Table 5. Recommended Repair Materials

DESCRIPTION	SPECIFICATION	SOURCE
Cloth, Abrasive, Crocus, 600-grit	P-C-458	Commercially available

3. Repair or Replacement

- A. Replace all parts which are obviously cracked, worn, deformed, damaged beyond repair, or which do not meet check requirements and cannot be restored to serviceable condition by allowable repair.
- B. Polish out minor corrosion and surface damage on stainless steel parts with crocus abrasive cloth.
- C. After polishing, clean parts as specified in the [CLEANING](#) section.
- D. Clear minor thread damage with a thread restoring tool; replace all threaded components having crossed or stripped threads.

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ASSEMBLY

1. Overhaul and Replacement Parts Kits

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

2. Assembly Materials

Refer to [Table 6](#) for recommended assembly materials. Suitable equivalent materials may be substituted for the items listed.

Table 6. Recommended Assembly Materials

DESCRIPTION	SPECIFICATION	SOURCE
Cleaning Solvent	P-D-680	Commercially available
Clean Tap Water	--	--
Petroleum jelly	--	Commercially available
Primer N	Loctite® 7649	Loctite® (commercially available)
Sealant, Pipe Thread	SWAK®	Swagelok Corporation 29500 Solon Road, Solon, Ohio 44139
Switch Test Fixture	T90109	Meggitt (North Hollywood), Inc.
Test Light	--	Commercially available
Thread Locking Compound	Loctite® 262	Loctite (commercially available)
Thread Locking Compound	Loctite® 290	Loctite® (commercially available)
Thread Sealing Compound	Loctite® NV	Loctite® (commercially available)
Voltage Source	0.5 ampere maximum	Commercially available

3. Assemble the Water Detect Float (with Switch) (See [IPL Figure 1](#))

A. Lubrication

Before assembly, lightly lubricate all of the packings, seals and screw threads with petroleum jelly.

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B. Assemble the Float Assembly (23)

- 1) If removed; apply thread sealant (SWAK®) to the threads of plug (26) and install on float assembly (23); make sure the plug (26) is flush or below flush outer surface of float assembly (23)
- 2) Fill the float assembly (23) with clean tap water, put new packing (25) on float assembly (23); apply thread sealant (Loctite® Grade HV) to the threads of the plug and bleeder (24) and install on float assembly (23).

Note: Make sure total weight of float assembly (23); including plug and bleeder (24), packing (25), and plug (26) is 3.03 (±0.03) pounds (1.37 ±0.01 kg).

- C. Put torsion spring (36) in the sump (39); align the holes of torsion spring (36) with holes in sump (39) and install mandrel (35).
- D. Apply thread sealant (SWAK®) to the threads of plug (34) and install in sump (39); make sure the plug (34) is flush with or up to two threads below the outer surface of sump (39).
- E. Put new packing (32) and bearing ring (33) in the grooves of the shaft assembly (31).

Note: The bearing ring (33) may be split in one place for installation.

CAUTION

MAKE SURE THE END OF SPRING (37) IS ENGAGED WITH LINK (38).

- F. Align the assembled shaft assembly (31) with the hole in sump (39); put and align the torsion spring (37), and link (38) with the hole in sump (39) and install assembled shaft assembly (31).
- G. Put collar (30) on shaft assembly (31); apply thread sealant (Loctite® 262) to the threads of screws (29). Line up the holes in link (38) and collar (30) to shaft assembly (31), and install screws (29).
- H. Install screw (21), nut (22), and washer (14) on the float assembly (23).

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CAUTION

USE CARE WHEN INSTALLING THE FLOAT ASSEMBLY (23), TO AVOID DAMAGING IT AND ITS SURROUNDING PARTS.

- I. Lift the end of torsion spring (36) and carefully put float assembly (23) in sump (39). Release the spring (36) and make sure its roller rides on the V-track of the float assembly (23).
- J. Pre-adjust the screw (21) as follows:
 - 1) Fill the sump (39) with 2 quarts (1.89 liters) of water.
 - 2) See [Figure 4](#) and adjust the screw (21) until the clearance gap between the head of the screw (21) and surface of the sump (39) is 0.09 to 0.17 inch (2.3 to 4.3 mm).
 - 3) Tighten nut (22) to secure screw (21). Make sure the clearance gap is as shown in Figure 4.
 - 4) Drain the sump (39) and allow the parts to dry.

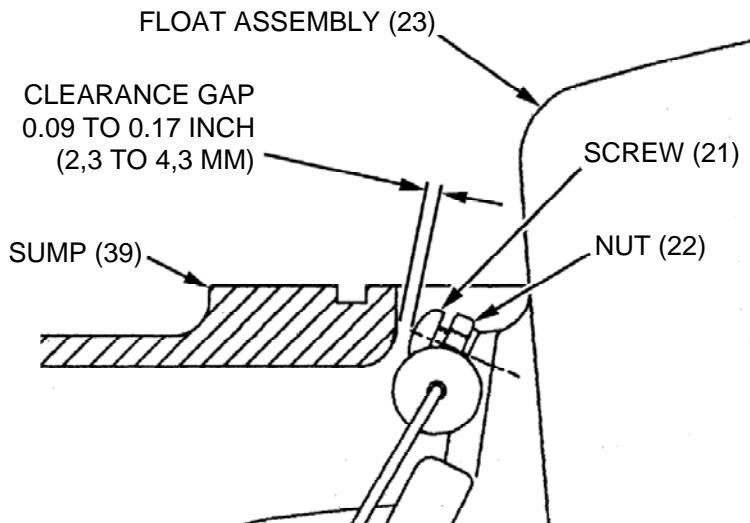


Figure 4. Float Assembly Stop Adjustment Detail

- K. Align the hole of rod (28) with the hole in the arm of float assembly (23) and install pin (27).

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CAUTION

USE CARE, DO NOT STRETCH OR CREASE PACKING (18).

- L. At the switch housing (17); put new packing (20) and retaining ring (19) (prongs outward) on switch housing (17). Put new packing (18) in the packing groove of the switch housing (17).

CAUTION

MAKE SURE THE PIN (16) IS ALIGNED WITH THE HOLE IN THE SWITCH HOUSING (17) AND HOLE IN LEVER OF THE FLOAT ASSEMBLY (23).

- M. Align assembled switch housing (17) to sump (39); insert rod (28) on the float assembly (23) through retaining ring (19) and packing (20) in the switch housing (17). Line up the pivot pin hole of the switch housing (17) with the holes in the arm of the float assembly (23) and install pin (16).

CAUTION

MAKE SURE PACKING (18) IS CORRECTLY SEATED IN ITS GROOVE ON THE SWITCH HOUSING (17).

- N. Secure the switch housing (17) to sump (39) with screws (13) and washers (14).

CAUTION

DO NOT APPLY T PRIMER TO THE THREADS OF SCREW (15) AND ROD (28).

- O. Clean the threads of screw (15) and rod (28) with primer (Loctite® N Primer #7649).
- P. Thread (switch adjustment) screw (15) into the rod (28), so that its head is approximately 0.14 inch (3.5 mm) from the end of the rod (28).
- Q. Install grommet (7) in the hole of the washer (8). Insert the electrical wires of the switch (11) through the grommet (7). Put washer (8), grommet (7) and wires into the switch housing (17).
- R. Put insulator (12) and switch (11) in the switch housing (17) and install screws (9) and washers (10).

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S. Adjust the Switch (11)

1) Open Circuit Position

- a. Connect a test light and voltage source (0.5 ampere maximum) between in series with the switch (11).
- b. Fill the sump (39) with 2 quarts (1.89 liters) of water.

Note: A wire inserted into the hole in the head of the screw (15) can be used to turn it.
- c. Adjust the screw (15) outward (counterclockwise) until the test light goes off. The switch (11) shall open at the 2 quarts (1.89 liters) level within ± 190 ml.
- d. Drain the sump (39) and allow the parts to dry.

2) Closed Circuit Position

- a. Install the float in the switch test fixture (P/N T90109) or equivalent. Fill the sump (39) with cleaning solvent (P-D-680) so that the float assembly (23) is completely submerged.
 - b. The float assembly (23) must sink and the test light shall come on and remain on.
 - c. Drain the cleaning solvent and remove the float from the switch test fixture. Allow the parts to dry.
- T. Apply thread locker (Loctite® 290) to the threads of (switch adjustment) screw (15) and rod (28).
- U. Put cover (6) on switch housing (17) and install screw (3) and washers (4 and 5).
- V. Put new packing (2) in the packing grooves of the sump (39).
- W. (Mod B) Put new packing (48) in the packing grooves of the sump (47). Put spacer (49) on sump (39) and install screws (44), washers (45) and nuts (46).
- X. (Mod B) Put new packing (43) in the packing groove of the plate (42). Put plate (42) on sump (47) and install screws (40) and washers (41).

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Meggitt Fuelling Products Maintenance Manual (MMF599A/F599AB) Water Detect Float (with Switch) – F599A/F599AB Series

TESTING

NOTE: Before testing, the vessel in which the float is installed must be drained in accordance with the applicable instructions, and the float must be disconnected and removed from the vessel.

1. Leakage and Functional Test

- A. Connect a test light and voltage source (0.5 ampere maximum) between in series with the switch electrical wires. The test light should come on.



AVIATION FUEL 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.

- B. Immerse the switch with its mounting flange horizontal and facing upward in a container of clean aviation fuel.
- C. The float must remain at its lower travel limit. The test light must remain on.



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

- D. Turn off the voltage source. Remove the float from the container and blow it dry with shop air.
- E. Immerse the switch with its mounting flange horizontal and facing upward in a container of clean water. Turn on the voltage source.
- F. The float should rise to its upper travel limit. The test light must go off.
- G. Manually push the float to its lower travel limit and hold it down. The test light must come on.
- H. Release the float. The float should rise to its upper travel limit. The test light must go off.
- I. Manually push the float to its fully down position and hold it down. The test light must come on.
- J. Remove the test voltage and disconnect the test light circuit. Remove the switch from the container and thoroughly dry it with shop air.

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Meggitt Fuelling Products
Maintenance Manual (MMF599A/F599AB)
Water Detect Float (with Switch) – F599A/F599AB Series

ILLUSTRATED PARTS LIST

1. General

This section lists, describes, and illustrates all detail parts required for maintenance support of the Water Detect Float (with Switch).

2. Scope of Information

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.

A. MODIFICATION CODE

The modification code indicates the parts usage with respect to the end item. When the MOD column is blank, the part usage is applicable to all versions unless otherwise specified in the DESCRIPTION column.

B. How to Identify a Part

When the part number is known: Refer to the parts list for the item number, description, modification codes, and quantity. Refer to the illustration to make sure of the physical appearance and location of the part.

When the part number is not known: Examine the illustrations to identify the part by physical appearance and location. Refer to the accompanying parts list to get the part number, nomenclature, modification codes, quantity, etc.

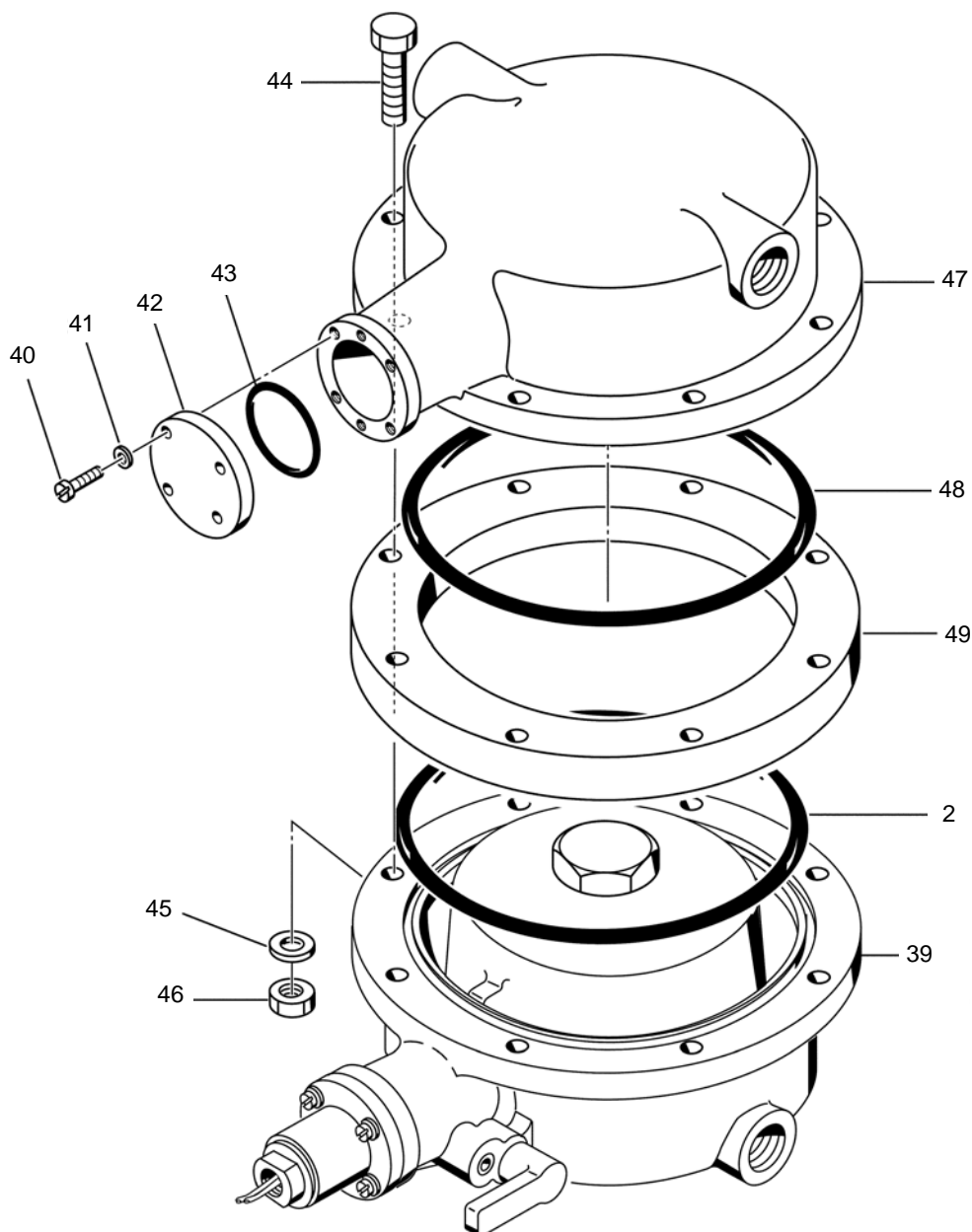
C. Abbreviations

ASSY	Assembly
FIG.	Figure
REF	Reference Item
IPL	Illustrated Parts List
MOD	Modification

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IPL Figure 1. Water Detect Float (with Switch) (Sheet 1 of 2)

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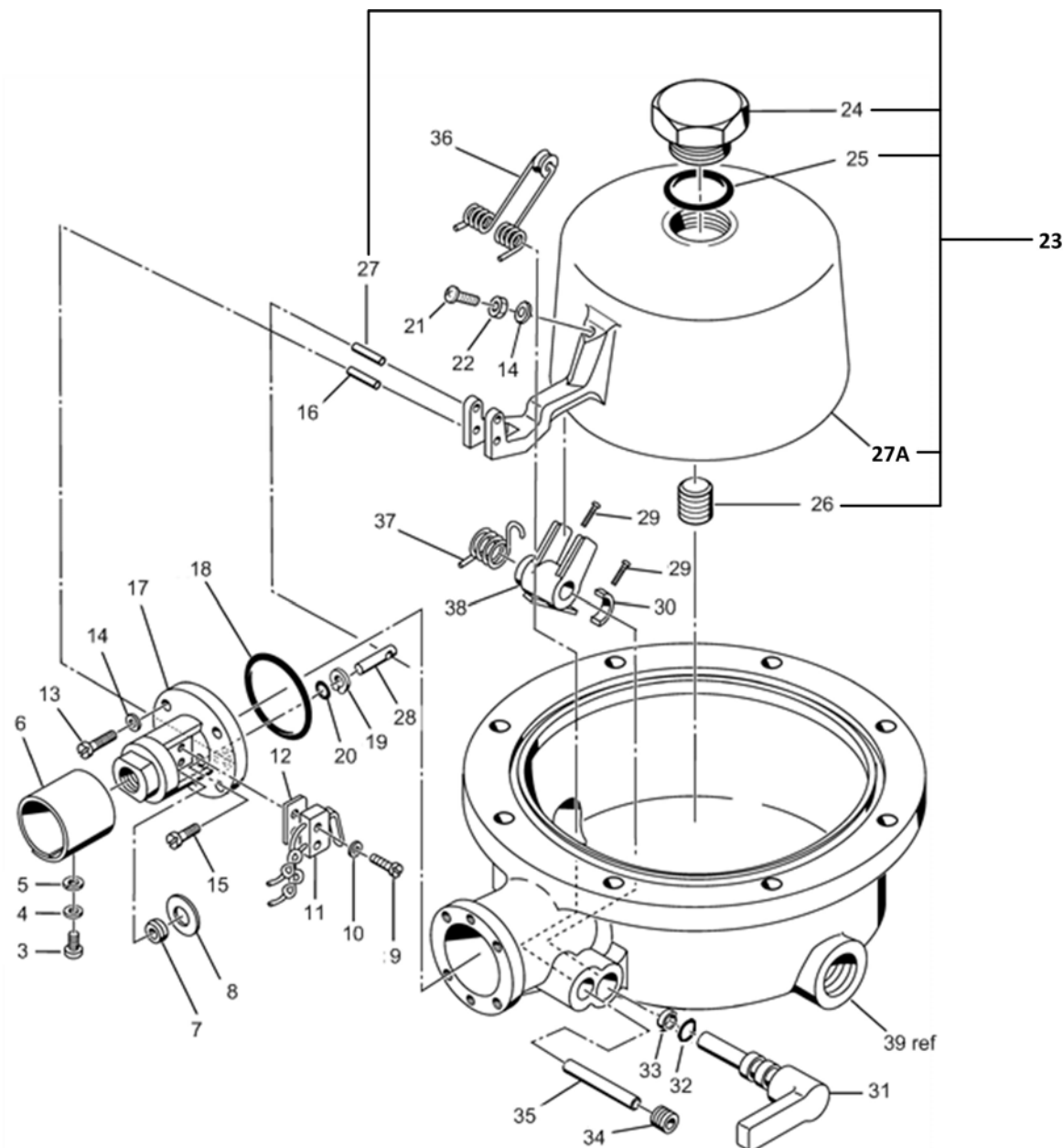
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Meggitt Fuelling Products Maintenance Manual (MMF599A/F599AB) Water Detect Float (with Switch) – F599A/F599AB Series



IPL Figure 1. Water Detect Float (with Switch) (Sheet 2)

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FIG. ITEM	PART NUMBER	DESCRIPTION	MOD CODES	UNITS PER ASSY
1 2 3 4 5 6 7				
1 - 1	F599A	FLOAT ASSY, WATER DETECT, (WITH SWITCH).....	A	REF
- 1	F599AB	FLOAT ASSY, WATER DETECT, (WITH SWITCH..... AND SECOND SUMP)	B	REF
2	2661058A266	. PACKING, PREFORMED		1
3	CAN515-6-5	. SCREW, MACHINE		1
4	CAN935-6	. WASHER, LOCK.....		1
5	CAN960C2	. WASHER, FLAT.....		1
6	F60W1763	. COVER.....		1
7	CMS35489-4	. GROMMET.....		1
8	F60W1958	. WASHER, FLAT.....		1
9	CAN515B2-8	. SCREW, MACHINE		2
10	CAN935B2	. WASHER, LOCK.....		2
11	F60W1761	. SWITCH		1
12	AT10063	. INSULATOR.....		1
13	CAN500-10-10	. SCREW, MACHINE		4
14	CMS35333-39	. WASHER, LOCK.....		5
15	NK500A2-8	. SCREW, SELF-LOCKING		1
16	F60W1627	. PIN, HINGE		1
17	F60W1760	. HOUSING, SWITCH		1
18	2661058A133	. PACKING, PREFORMED		1
19	5000-37H	. RING, RETAINING.....		1
20	2661058BD007	. PACKING, PREFORMED		1
21	CAN520-10-10	. SCREW, MACHINE		1
22	CMS35650-304	. NUT, HEX.....		1
23	931205-101	. FLOAT ASSEMBLY		1
24	CAN814-16D	. . PLUG AND BLEEDER		1
25	CMS29512-16	. . PACKING, PREFORMED		1
26	2706138-105	. . PLUG.....		1
27	79-012-062-0687	. . PIN, SPRING		1

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FIG. ITEM	PART NUMBER	DESCRIPTION 1 2 3 4 5 6 7	MOD CODES	UNITS PER ASSY
27A	931206-101	. . FLOAT, MACHINED		1
28	F60W1758	. ROD		1
29	2706700-19	. SCREW, CAP		2
30	931026-101	. COLLAR, SHAFT		1
31	931208-101	. SHAFT ASSY		1
32	2661058BD109	. PACKING, PREFORMED		1
33	931027-101	. RING, BEARING (Nylon)		1
34	CAN932D2	. PLUG		1
35	921316-101	. MANDREL, SPRING		1
36	921315-101	. SPRING, TORSION		1
37	931033-101	. SPRING, TORSION, PRECHECK		1
38	931023-101	. LINK, PRECHECK		1
39	931021-101	. SUMP		1
40	CAN503-10-10	. SCREW, MACHINE	B	4
41	CMS35333-39	. WASHER, LOCK	B	4
42	F61W2207	. PLATE	B	1
43	2661058A133	. PACKING, PREFORMED	B	1
44	CMS90727-66	. SCREW, HEX HEAD, CAP	B	8
45	CAN935-616	. WASHER, LOCK	B	8
46	CMS35690-628	. NUT, HEX	B	8
47	F60W1622-2	. SUMP	B	1
48	2661058A266	. PACKING, PREFORMED	B	1
49	F61W2186	. SPACER	B	1

- Not Illustrated

REPLACEMENT PARTS KITS AVAILABLE		
KIT PART NUMBER	DESCRIPTION	ITEMS IN KIT (IPL Figure 1)
KITF599-2	Seal Replacement	2, 18, 19, 25, 32, 43 (Mod B only)
KITF599-3	Overhaul	2, 7, 11, 15, 16, 18, 19, 25, 26, 32, 33, 43 (Mod B only)

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