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ROYAL CANADIAN AIR FORCE

*Checked  
10 Dec 93  
R. M. Selby*



**HANDBOOK WITH PART LIST**  
**FUEL FLOW TRANSMITTER**  
**F-6914**  
**(REVERE)**

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# LIST OF RCAF REVISIONS

ROYAL CANADIAN AIR FORCE

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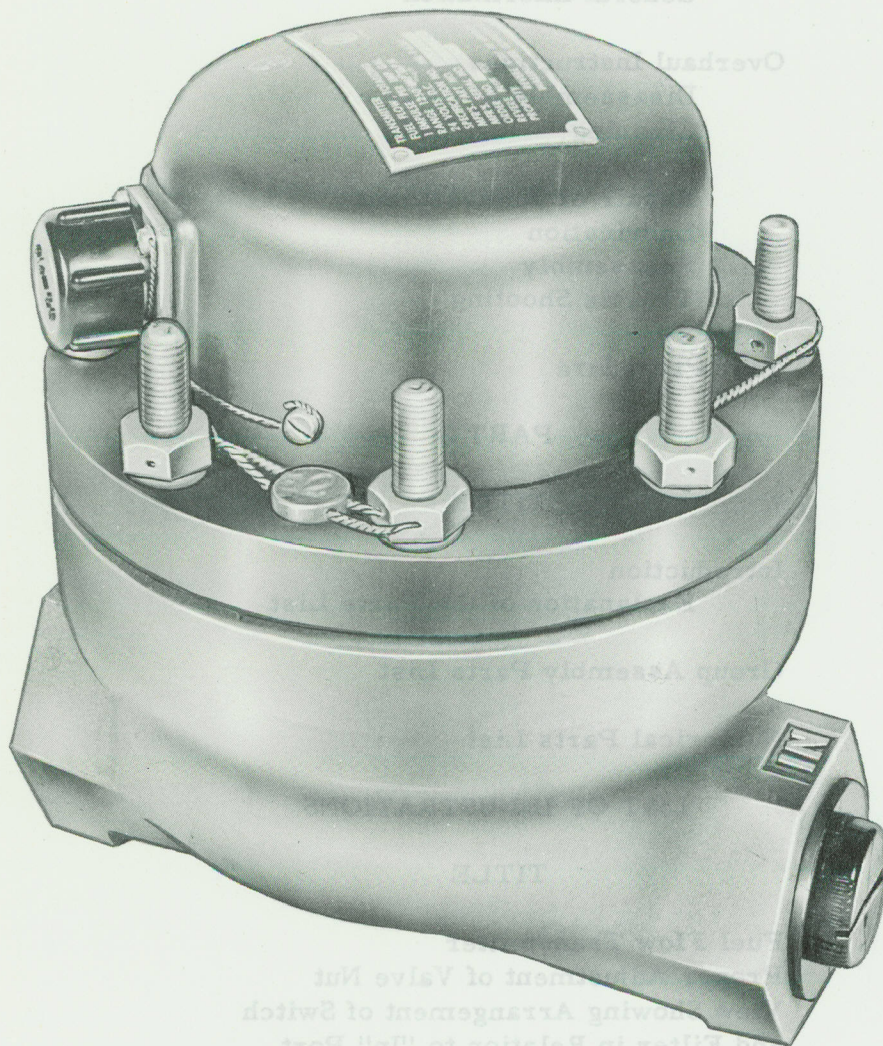
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Fuel Flow Transmitter

PART 1

SECTION 1

INTRODUCTION

GENERAL INFORMATION

This part contains overhaul instructions for the Totalizing Fuel Flow Transmitter, part number F-6914-135, manufactured by the Revere Corporation of America, Wallingford, Conn., U.S.A.

NOTE

All these Totalizing Transmitters are manufactured in accordance with the Revere Corporation of America's basic drawing F-6914. At the time of final assembly, the electric receptacle setting is obtained by rotating clockwise the top housing to the desired angle in relation to the "IN" port. Thus, part number F-6914-135 would have the electric receptacle set at 135° from the "IN" port. For settings of 135°, 180°, and 225°, the magnet and filter assembly is positioned 180° from the position used for the 45°, 90°, 270°, 315° and 360° settings. (See figure 1-2).

2 These transmitters have a flow range of 8.5 to 1250 Imperial G.P.H. (10.2 - 1500 U.S. G.P.H.). The 24 volt D.C. switch in

the transmitter can handle an inductive load of 0.5 ampere.

3 The Revere Totalizing Fuel Flow Transmitter (Frontispiece) is a remote-indicating type totalizer and is normally located in the aircraft's main high-pressure line. The "totalizing" transmitter measures the fuel passing through it and indicates the result on a subtractive type of solenoid-operated counter located in the pilot's compartment.

4 Since the counter is set to indicate the total amount of usable fuel on board when the aircraft's fuel tanks are filled, it continuously provides the pilot with an accurate indication of the total number of gallons of usable fuel remaining at any given time.

5 The accuracy of the counter is affected only by the following conditions:

(a) Any fuel lost when the drop tanks are jettisoned will not be registered on the counter.

(b) Any fuel lost from the fuel system through leakage or evaporation upstream of the fuel flowmeter will not be counted.

SECTION 2

OVERHAUL INSTRUCTIONS

OVERHAUL TOOLS

1 No special tools have been procured by the Government for this equipment.

DISASSEMBLY

2 Disassemble the transmitter in the following steps referring to figure 2-1:

**CAUTION**

Cleanliness must be observed when overhauling the equipment. The bench on which parts are placed must be free of dirt, dust, metal chips and other foreign matter. Before using any hand tools they should be thoroughly cleaned with cleaner fluid CGSB specification 3-GP-8 (RCAF Ref. 33C/182). The assembler must have clean hands. Small particles in the metering element will render the transmitter inoperative.

NOTE

Note the position of the electrical receptacle before disassembly as it must be replaced in this same position (see Frontispiece).

(a) Remove the four screws (6) that attach the top housing (5) to the pressure cap (32). Remove the four screws (4) that attach the receptacle (2) to the top housing (5). Rotate the top housing in a counter-clockwise direction enough to permit access to the leads and to facilitate removal of the top housing.

(b) Pull out the receptacle (2) far enough to permit unsoldering its leads. Re-

move receptacle, receptacle gasket (3) and top housing (5).

(c) Unsolder lead (28) and lead on switch and lead assembly (24) from terminal (15). Remove terminal and three screws (12), lockwashers (13) and plain washers (14) that attach the magnet and filter assembly (11) to the pressure cap (32).

(d) Unsolder the leads from the filter (21). Then remove the two screws (22) that attach it to the bracket.

(e) Mark the magnet (16) and bracket (23) to indicate its position on the bracket plate. Remove the screw (18), lockwasher (19), plain washer (20), magnet cap (17) and magnet (16).

(f) Remove the switch and lead assembly (24). If this assembly is to be replaced, slide the two rubber rings (26) off the ends of the switch.

(g) If necessary remove the dust ring (31) from the pressure cap.

(h) Separate the pressure cap (32) from the meter body (77) by removing the eight nuts (33) and washers (34).

(j) Disassemble the magnet, gear train and drive dog assembly (41) by removing the four screws (42). Remove the four hold-down springs (37) only if necessary.

(k) Remove the upper plate assembly (43) by taking out the screws (44) and washers (45).

(l) Remove the elastic nut (46), gear (47), spacer (48), shaft (56), magnet caps (54), magnet (55), magnet spacer (53), re-

taining ring (52), bearings (50) and spacer (51).

(m) Remove gears (57) (59) and posts (58) (60).

(n) Lift out the metering element assembly (62) and gasket (69) from the meter body.

#### NOTE

Detail parts of the metering element assembly are not separately procurable. However, the assembly can be disassembled by carefully inserting a thin blade screwdriver in the slots provided and prying up the cylinder cap (63). Lift out the piston (64) and wipe out any loose dirt with a lint-free cloth.

#### CAUTION

The metering element parts are adjusted as an assembly at time of manufacture and therefore must not be interchanged with parts of another metering assembly.

#### CAUTION

If a particle of metal is found imbedded in the element body wall, it should be removed with a sharp tool and the area around it stoned smooth to assure that no upset edges remain. Replace the same piston and gently tap the cylinder cap back in place. Slip the complete element assembly into a clean cellophane bag to protect it from dirt and dust.

(p) From the "IN" port of the meter body remove the cotter pin (83), valve nut (82) and valve spring (81). The by-pass

valve assembly (70) can now be taken from the "OUT" port.

(q) The by-pass valve is disassembled by removing the two screws (72). This releases the valve pin (75), valve stem (76), valve cap (71), valve clamp (74) and valve washer (73).

(r) Meter body studs (79) should not be removed unless damaged. If necessary, use a commercial puller to remove studs.

#### CLEANING

3 Clean all parts, except components of the switch, filter assembly and receptacle, with an approved solvent and dry thoroughly in accordance with standard shop practice. Parts may be wiped dry with a clean, lint-free cloth and blow dry those parts which are not accessible with a rag.

#### INSPECTION

4 Conduct a thorough visual inspection of all parts and assemblies. Be sure all dirt and foreign matter is removed.

#### TESTING

5 No tests are required prior to reassembly.

#### REPAIR OR REPLACEMENT

6 No repairs are recommended. Replace any defective part.

7 To replace a meter body stud, use a suitable commercial puller. When inserting a new stud, brush Alcoa Thread Lubricant onto stud threads before driving. These studs are 5/16-26 NF-5. The dimension between the face of the meter body and the end of the stud - when driven - is 1-11/16 inches.

#### LUBRICATION

8 Use Uni-Temperature Grease, Specification AN-G-25, for anti-friction bearings on all shafts and moving parts at assembly except the metering element assembly. This should be left dry.

REASSEMBLY

**NOTE**

If any electrical components such as wiring, sleeving or filter assembly, are replaced, the new parts must be fungus treated by dipping in or spraying the parts with "M and W" Dulac Fungus Resistant Lacquer, No. 86A and No. 30 Thinner, manufactured by Mass and Waldstein Co., Newark, New Jersey, U.S.A. or the equivalent. Allow parts to air dry until they can be handled without marking.

**WARNING**

This lacquer is inflammable. Do not use near fire. Use only in a well ventilated room. Avoid inhaling lacquer fumes.

9 Reassemble the transmitter in the following manner referring to figure 2-1.

(a) Place the valve clamp (74) on the drilled end of the valve stem (76). Insert valve pin (75) through the slot in the clamp and the hole in the stem. Holding the three assembled parts in the right hand, push up against the bottom of the clamp to prevent the pin from dropping out of the slot and hole. Place a valve washer (73) on top of the clamp. Place the valve cap (71) on top of the washer. Line up the holes. Attach the clamp to the cap with two screws (72). Safety wire the screws.

(b) Insert the by-pass valve assembly in the "OUT" port, guiding the threaded end of the valve stem (76) into the valve tube which is part of the body assembly.

(c) Insert a valve spring (81) through the "IN" port into the open end of the valve

tube, sliding it over the valve stem (76) that projects into the other end of the tube. Insert the valve nut (82) in the tube. Hold the by-pass valve assembly in place and push a 1/4 inch screwdriver bit in the valve nut slot enough to overcome the spring pressure (see figure 1-1). Turn the nut until end of stem is available to put in cotter pin (83, figure 2-1). The travel of the nut from the fully extended spring position to spring compression position should be between 1/4 - 3/16 inch.

**CAUTION**

This is a critical adjustment and will affect the transmitter performance.

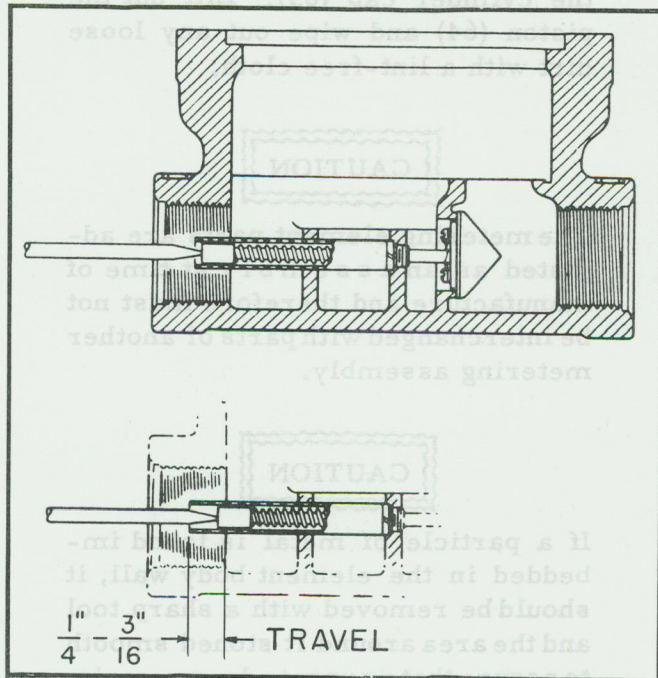


Figure 1-1. Proper Adjustment of Valve Nut

(d) Reassemble the metering element assembly.

**CAUTION**

The metering element parts are ad-



justed as an assembly at time of manufacture and therefore must not be interchanged with parts of another metering assembly.

(e) Insert the metering element assembly (62) into the bore of the meter body (77), lining it up with the locating pin (80) in the body.

(f) Place a meter body gasket (69) on the step in the meter body.

(g) Assemble the magnet caps (54), magnet (55), spacer (53), retaining ring (52), bearings (50), spacer (51), spacer (48), bushing and plate assembly (49) and gear (47) on the shaft (56). Tighten with the elastic nut (46).

(h) Assemble the gears (57) (59) and posts (58) (60) to the mounting plate (61),

**CAUTION**

Care must be taken to assure that the correct gears are set in the proper positions as these gears appear to be identical.

(j) Attach upper plate assembly (43) to the lower plate assembly (61) with screws (44) and lockwashers (45) and safety wire the screws.

(k) Turn the pressure cap upside down. Attach the complete gear train and magnet assembly (41) with the four screws (42). Safety wire the screws.

(l) Attach the hold-down springs (37) with screws (38) and lockwashers (39).

**NOTE**

When assembling the hold-down springs, be sure they are pushed in toward the center of the pressure

cap as far as possible and with an even space between the spring tips and the I.D. of the cap. The flat center section of the springs must be in full contact with the cap. They must not "hang up" on the shoulder of the body.

(m) Assemble the switch (25) with its two rubber washers (26) and insulation sleeving (27) over each end and leads. Insert the switch in the groove atop the pressure cap with the blades of the switch in a horizontal position.

**CAUTION**

Unless the blades are horizontal the unit will not function properly.

(n) Assemble the magnet cap (17) and magnet (16) to the bracket with the screw (18), lockwasher (19) and washer (20). Also attach the filter (21) to the bracket (23) with the screws (22). Safety wire the screws.

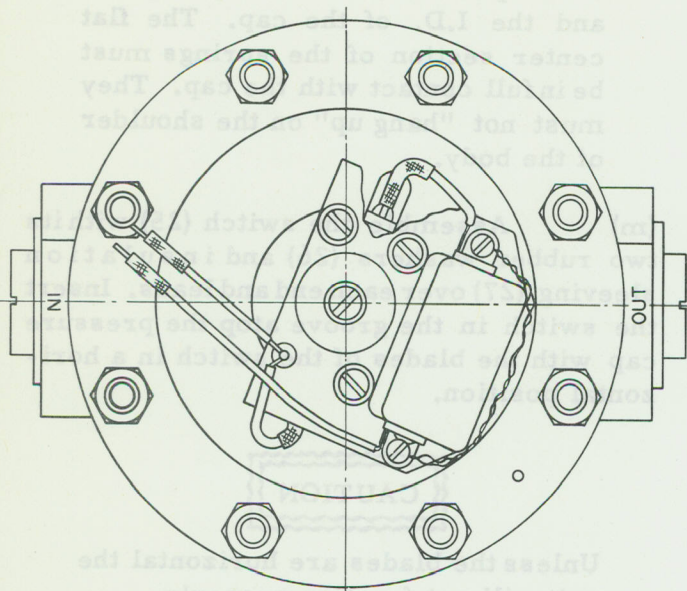
**NOTE**

The magnet should be assembled so that the marks on this magnet and bracket plate line up. However if the magnet (16) was replaced the north and south poles of the magnet (16) should be parallel to the slot in the top of the pressure cap.

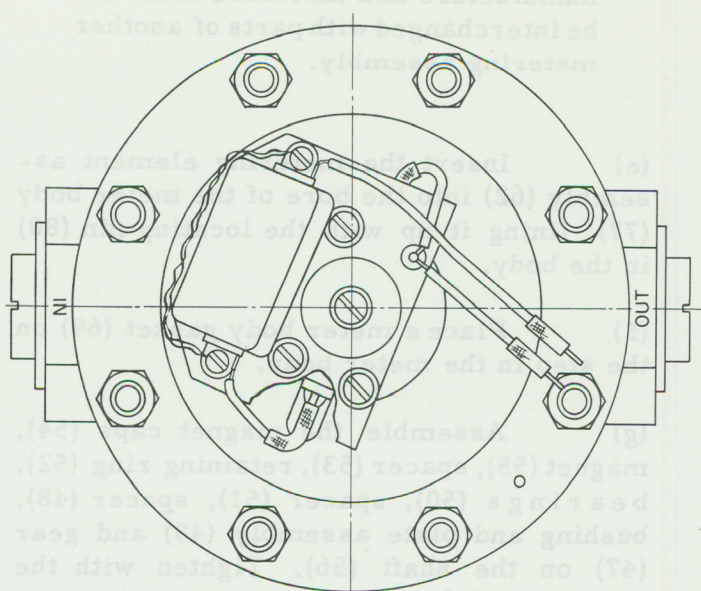
(p) Attach the magnet and filter assembly (11) to the pressure cap with the screws (12), lockwashers (13) and plain washers (14). Attach terminal (15) and lockwasher (13) to the assembly.

**NOTE**

The magnet and bracket assembly should be attached in the position indicated in figure 1-2 depending on the setting of the receptacle.



VIEW SHOWING WIRING, SWITCH & FILTER ARRANGEMENT FOR POSITIONING RECEPTACLE AT 45°, 90°, 270°, 315° & 360° CLOCKWISE FROM PORT "IN"



VIEW SHOWING WIRING, SWITCH & FILTER ARRANGEMENT FOR POSITIONING RECEPTACLE AT 135°, 180° & 225° CLOCKWISE FROM PORT "IN"

Figure 1-2. View Showing Arrangement of Switch and Filter in Relation to IN Port

(q) Using 60/40, 16 gauge solder, Federal Specification QQ-S-571b with flux in core, solder one lead of the switch to the filter (21, figure 2-1) and the other lead to the terminal (15). Solder an additional lead (28) to the terminal and one lead (29) to the filter (see figure 1-3). The latter two leads will be connected to the receptacle.

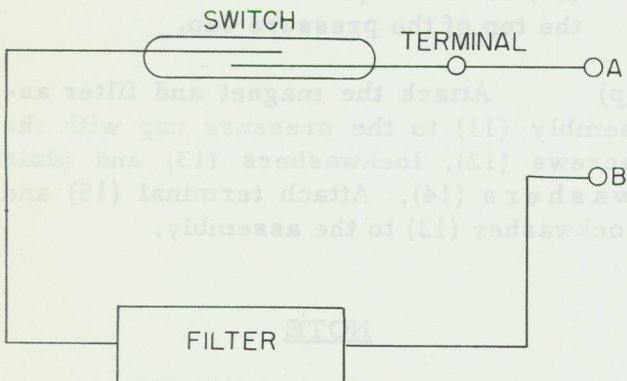


Figure 1-3. Wiring Diagram of Leads

(r) Conduct the following test on the pressure cap assembly prior to installing it to the transmitter assembly:

(1) Using a Triplett Model 666-HH ohmmeter, or equivalent, equipped with alligator clips, attach one clip to each terminal of the switch.

(2) Rotate the drive dog on the gear train assembly (41, figure 2-1) to see if switch operates once for each 50.4 turns of the dog. If not, rotate top magnet (16) until condition exists.

(s) Place the meter body assembly on the bench with the "IN" port facing the assembler. Rotate the piston in the metering element so its "pin" lines up with the locating pin hole in the body. Rotate the drive dog on the gear train and magnet assembly (41) so it lines up with the pin in the pressure cap assembly (32). Carefully lower the pressure cap assembly onto the meter body so the cap pin (36) lines up with

the pin hole in the body. The stud holes must line up with the eight studs. When the "dog" mates properly with the "pin", there will be approximately 3/16-inch clearance between the mating faces of cap and body.

**NOTE**

A simple test for proper "dog" and "pin" alignment can be conducted by blowing into the "IN" port with the mouth. The metering element will rotate if alignment is proper.

(t) If the test is satisfactory fasten the flat washers (34) and hex nuts (33) on each of the body studs. Torque the nuts to exactly 15 foot-pounds. Safety wire the nuts (33).

(u) Place the dust ring (31) in its groove on the pressure cap.

(v) Before the top housing (5) is attached with screws, conduct a test and check for proper wiring and proper mechanical operation of the transmitter:

(1) Again using the ohmmeter, or equivalent, attach one clip to each terminal of the impulse switch.

(2) Blow into the "IN" port of the body and observe the ohmmeter dial for opening and closing of the entire electrical circuit only. If the ohmmeter indicates

properly, it can be safely assumed that the electrical and mechanical components of the transmitter have been properly assembled.

(w) Apply a light film of grease or vaseline around the inside of the housing (5) to facilitate assembly. Draw the leads through the receptacle opening and slip the top housing (5) in place so the receptacle opening is aligned with the impulse switch assembly (24). Slip the receptacle gasket (3) over the leads. Be sure lead wire insulation tubing is in place on the leads.

(x) Clean lead wire and receptacle terminals thoroughly, removing all dirt, paint and other foreign matter. Use 60/40, 16/gauge solder Federal Specification QQ-S-571b with flux in core. Solder leads to the receptacle (see figure 1-3).

(y) Positioning the top housing in the same location as it was before disassembly (in relation to the "IN" port) fasten with screws (6, figure 2-1) and safety wire.

(z) Attach the receptacle (2) to the top housing with screws (4). Safety wire these screws. Use receptacle protecting cap (1) to protect receptacle. Insert seal plugs (84) in both ports.

**TROUBLE SHOOTING**

10 Table 1 shows the trouble that may be encountered, the probable causes and remedies.

TROUBLE	PROBABLE CAUSE	REMEDY
<b>ELECTRICAL TROUBLES</b>  No electrical output.	Switch inoperative	Inspect switch for arcing and settings of points. Use a magnet to see that points open and close properly. (Switch makes audible "click" when points close.) Make certain flat leaves of switch are in a horizontal position when switch is mounted on top of pressure cap.
	Broken solder joints	Inspect all solder joints to make sure they are tight. Resolder any which are loose.
	Mechanical difficulties	See mechanical troubles.
Continuous electrical output.	Switch	Inspect switch for frozen points. If switch appears in good condition, check lower magnet and gear train for proper rotation.
	Shorted filter	Filter must be removed from the circuit and checked. If breakdown has occurred, the filter must be replaced.
	Mechanical difficulties	See mechanical troubles.
<b>MECHANICAL TROUBLES</b>  Metering element jammed.	Dirt or other foreign matter lodged in element	Clean the element and piston. Piston in element must rotate freely before element is replaced in body. Never force piston to rotate. Free rotation of piston can be checked by holding element in hand and swinging in a flat circular motion. As element is being swung the piston should rotate.
	Improper assembly	Reassemble dog on lower gear train over pin on the piston.

Table 1. Trouble Shooting Chart

TROUBLE	PROBABLE CAUSE	REMEDY
Jammed gear train.	Dirt or other foreign matter lodged between teeth of gears.	Remove gear train and magnet assembly. Clean gear train in dry cleaning solvent CGSB specification 3-GP-8 (RCAF Ref. 33/C 182). Visually inspect all gears. If the teeth on the gear train will not mesh, replace gears.
Broken dog on gear train and magnet assembly.	Jammed lower gear train.	Transmitter will be inoperative, as the dog will jam the element after it breaks off shaft. Gear train and magnet assembly must be replaced. Inspect element and proceed as instructed in "metering element jammed".
	Improper assembly of body of transmitter.	Proceed as instructed in "jammed gear train".
CALIBRATION TROUBLES Excessive volumetric.	Worn by-pass valve assembly or damaged valve washer.	Remove valve assembly from body and inspect washer for small cuts or excessive wear. Replace if necessary.
	Adjustment	Check adjustment of valve assembly by pushing it forward until it stops. There should be a minimum of 3/16 inch.
	Weak valve spring.	Remove and replace valve spring.
	Excessive drag on gear trains.	If there is excessive drag on the gear train and lower magnet assembly and it cannot be corrected, that particular assembly must be replaced.
	Element	Excessive drag caused by dirt or corrosion in element or by improper assembly of element will cause a high volumetric error during calibration. Proceed in this case as in remedy given for jammed metering element.
	Transmitter gives an impulse at greater than one for every gallon.	Upper magnet rotated out of position.

Table 1. Trouble Shooting Chart (Cont.)

SECTION 3

TEST PROCEDURE

1 After final assembly, the transmitter should be subjected to a 2500 psi static leakage test. Using a suitable plug capable of withstanding 2500 psi, cap the "OUT" port and fill the transmitter with a suitable testing fluid or hydraulic oil. Then connect the transmitter "IN" port to a high pressure hose or stainless steel tubing. Connect the hose to a Sprague air operated high pressure pump model C35 or equivalent and apply 2500 psi to the transmitter. Any leakage is most likely to occur around the gasket and pressure cap. However, the external surface of the unit should be checked also.

2 If the leakage test is satisfactory, connect the unit to a Revere Calibration Stand Part No. F-8537. If this stand is not available any suitable stand capable of pumping 1250 gallons per hour at 22 psi should be satisfactory. Using cleaner fluid CGSB specification 3-GP-8 (RCAF Ref. 33/C 182) as a testing medium proceed as follows:

but must be splinter-proof so that no pieces will be introduced into the metering element chamber during the test.

(b) With the nylon rod in place, the transmitter should be connected to the test stand and the pressure drop between the "IN" and "OUT" ports measured for flow rates of 1000 and 320 gph. The pressure drop at 1000 gph should not exceed 22 psi and the drop at 320 gph should not exceed 18 psi. If the pressure drop is greater than specified the valve spring (81, figure 2-1) has excessive compression. Adjust the compression by backing off the valve nut (82) (reference section 2 paragraph 9c).

(c) If satisfactory pressure drop is obtained, remove the nylon rod from the "OUT" port.

(d) Connect the "OUT" port again and check the transmitter for accurate flow measurement at room temperature. Check for flow rates of 100, 400, 1000 and 1250 gph. The actual gallons of fluid pumped through the transmitter should be within  $\pm 1\%$  of the gallons measured by the transmitter. Care should be taken to start and stop fluid measurement at the point where the impulse switch either makes or breaks its contacts.

(e) If accurate flow rates cannot be obtained, replace the metering element and retest. If, after two metering elements have been replaced, proper flow cannot be obtained, the transmitter should be replaced.

NOTE

Gasoline may be used as the test medium but all safety precautions must be observed.

(a) Insert a 1/4-inch diameter nylon rod approx. 3" long, shaped like an "L", through the "OUT" port so that the rod will project into the outlet port of the metering element.

NOTE

A substitute material may be used

PART 2

SECTION 1

INTRODUCTION

CONTENTS

1 This parts list illustrates and describes the procurable assemblies and parts of the Totalizing Fuel Flow Transmitter, part no. F-6914-135.

EXPLANATION OF THE PARTS LIST  
Group Assembly Parts List

2 The Group Assembly Parts List (Section 2) provides an illustration description of each procurable assembly and part for the equipment involved.

3 When an assembly is shown by its parts only, no index number is given in the listing. However, each individual part is indexed

4 The PART NUMBER column lists the vendor's number of that particular part. If the part is not a Revere part number, the vendor's code as shown below will appear at the end of the item description. The corresponding Revere part number will appear in parenthesis at the end of the description.

CODE	MANUFACTURER
AMP	American Phenolic Corporation, Chicago, Illinois
EN	Elastic Stop Nut Corporation of America, Union, New Jersey
USEA	U.S. Engineering Company, Glendale, California
WDAB	SS While Co., Industrial Division, New York, N.Y.

Table 2. Vendor's Code

5 The NOMENCLATURE column is arranged to show the relationship of a part or an assembly to another part or assembly. This relationship is shown by indentation of the parts under the numbers 1 through 7 which appear in the heading.

6 Those parts used to attach other parts or assemblies to the main assembly or to each other are designated "ATTACHING PARTS". These "ATTACHING PARTS" are listed immediately following the assembly or part they attach.

7 The number appearing in the UNITS PER ASSEMBLY column is the total quantity of the listed part required in its immediate assembly.

Special Service Tools

8 No special service tools have been procured for this assembly.

Numerical Parts List

9 The Numerical Parts List (Section 3) serves as an index to the Group Assembly Parts List (Section 2).

10 The quantity shown in the TOTAL QUANTITY column of the Numerical Parts List is the total quantity of the part required in a transmitter.

Bulk Material Charts

11 No wiring assemblies are utilized which require bulk materials.

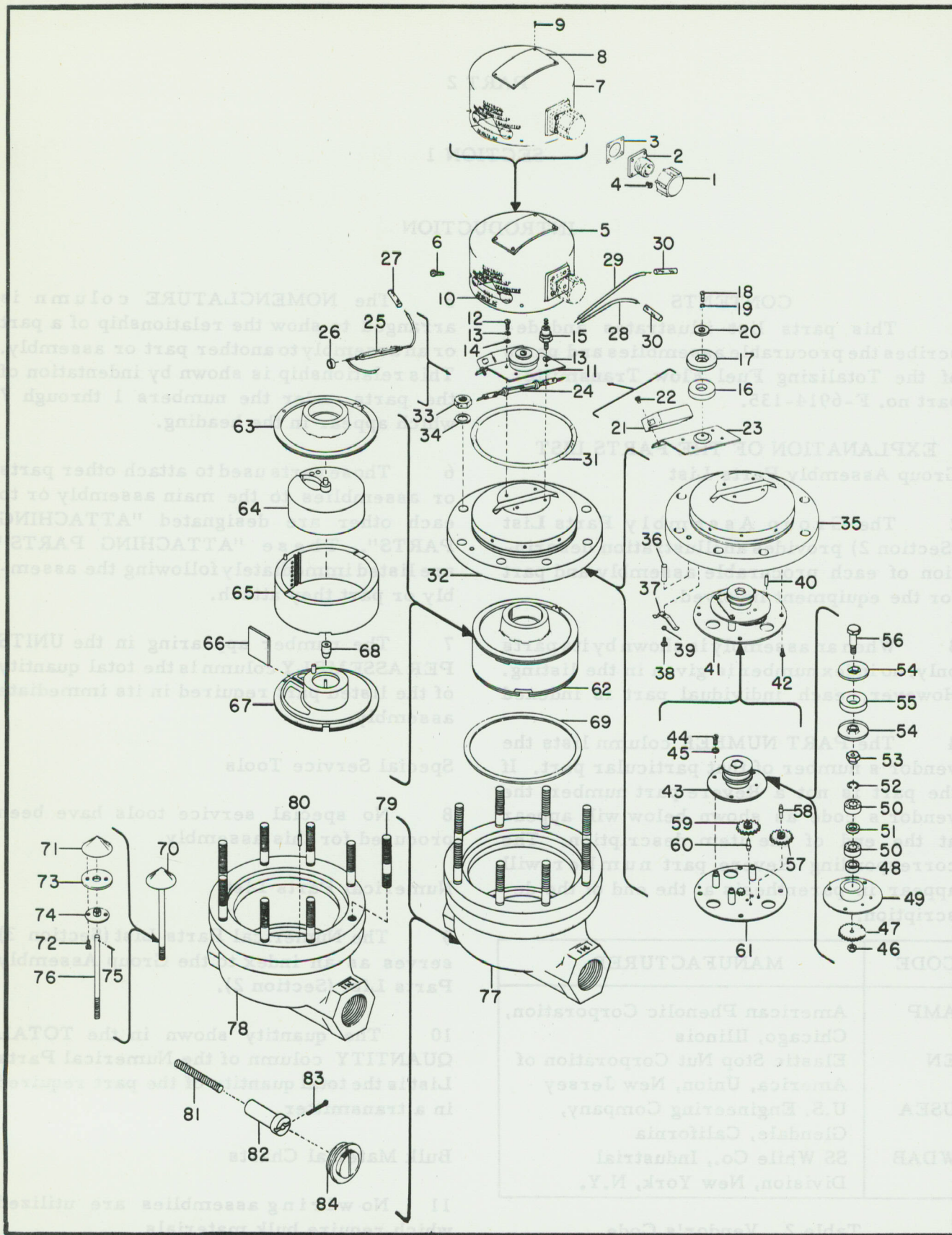


Figure 2-1. Exploded View



FIGURE and INDEX NUMBER	GROUP FUEL SYSTEM							Units Per Ass'y	Usage on Code	
	MAJOR ASSEMBLY FUEL FLOW TOTALIZING TRANSMITTER									
	PART NUMBER	1	2	3	4	5	6 7			NOMENCLATURE
2-1-	F-6914-135	Transmitter - Fuel Flow Totalizing							1	
-1	F-1862	Cap - Receptacle, protective							1	
-2	97-3102A12S -3P(231)	Receptacle (AMP) (F-1962)							1	
-3	F-1916	Gasket - Receptacle							1	
		Attaching Parts								
-4	AN500A4-4	Screw - Fillister head, #4-40 x 1/4 in. lg.							4	
-5	F-5404-2	Housing Assembly - Top							1	
		Attaching Parts								
-6	AN500A6-4	Screw - Fillister head, #6-32 x 1/4 in. lg.							4	
-7	F-1996	Housing - Top							1	
-8	F-7262	Nameplate							1	
		Attaching Parts								
-9	AN470A2-3	Rivet - Semi-tubular							4	
-10	F-3851	Decalcomania - Wiring Diagram							1	
-11	F-3008	Magnet and Filter Assembly							1	
		Attaching Parts								
-12	AN500A6-4	Screw - Fillister head, #6-32 x 1/4 in. lg.							3	
-13	AN935-6	Washer - Spring lock							4	
-14	AN960-6	Washer - Plain							3	
-15	1400-B	Terminal - Insulated (USEA) (Revere Part No. F-7523)							1	
-16	F-1962	Magnet							1	
-17	F-7907	Cap - Magnet							1	
		Attaching Parts								
-18	AN515-8-7	Screw-Round head, #8-32 x 7/16 in. lg.							1	
-19	AN935-8	Washer - Spring, lock							1	
-20	F-8069	Washer - Plain							1	
-21	F-2984	Filter - Noise							1	
		Attaching Parts								
-22	AN500A6-4	Screw - Fillister head, #6-32 x 1/4 in. lg.							2	
-23	F-2989	Bracket							1	
-24	F-2137	Switch and lead Assembly							1	
-25	E-5600	Switch							1	
-26	F-2139	Ring							2	
-27	S-6859-8A1-1/2	Sleeving							2	
-28	S-7922-3	Lead-Wire							1	

FIGURE and INDEX NUMBER	GROUP FUEL SYSTEM							Units Per Ass'y	Usage on Code	
	MAJOR ASSEMBLY FUEL FLOW TOTALIZING TRANSMITTER									
	PART NUMBER	1	2	3	4	5	6 7			NOMENCLATURE
-29	S-7922-5							Lead-Wire	1	-1-
-30	S-6859-12A3/4							Sleeving	2	-1-
-31	F-1887							Ring - Dust	1	-2-
-32	F-2083-5							Cap Assembly - Pressure	1	-3-
								Attaching Parts		
-33	F-1661							Nut - Hex	8	-3-
-34	F-1855							Washer - Flat	8	-4-
-35	F-1939							Cap-Pressure	1	
-36	F-1622							Pin - Locating	1	-5-
-37	F-1840							Spring - Holddown	4	
								Attaching Parts		
-38	AN500A4-4							Screw - Fillister head, #4-40 x 1/4 in. lg.	4	-6-
-39	AN935-4							Washer - Spring lock	4	-7-
-40	F-3004							Pin - Locating	1	-8-
-41	F-7261							Magnet, Gear Train and Drive Dog Assembly	1	-9-
								Attaching Parts		
-42	AN500A6-6							Screw - Fillister head, #6-32 x 3/8 in. lg.	4	-10-
-43	F-3182-2							Plate Assembly - Upper	1	-11-
								Attaching Parts		
-44	AN500A4-4							Screw - Fillister head, #4-40 x 1/4 in. lg.	3	-12-
-45	F-2652							Washer - Plain	3	-13-
-46	68-NM-40							Nut-#4-40 (EN) (Revere Part No. S-7112)	1	-14-
-47	F-8202							Gear - 40 teeth	1	-15-
-48	F-2401-3							Spacer	1	-16-
-49	F-3181-3							Plate and Bushing	1	-17-
-50	F-1883							Bearing	2	-18-
-51	F-2401-2							Spacer	1	-19-
-52	S-7595-37							Ring - Retaining	1	-20-
-53	F-7787							Spacer - Magnet	1	-21-
-54	F-7907							Cap - Magnet	2	-22-
-55	F-1962							Magnet	1	-23-
-56	F-2402							Shaft - Magnet	1	-24-
-57	F-7166							Gear Assembly - 10 and 35 teeth	1	-25-
-58	F-7263							Shaft	1	-26-
-59	F-7167							Gear Assembly - 10 and 36 teeth	1	-27-

FIGURE and INDEX NUMBER TOTAL	GROUP FUEL SYSTEM							NOMENCLATURE	Units Per Ass'y	Usage on Code
	MAJOR ASSEMBLY FUEL FLOW TOTALIZING TRANSMITTER									
	PART NUMBER	1	2	3	4	5	6			
-60	F-7263							Shaft	1	
-61	F-3179-2							Plate Assembly - Lower	1	
-62	F-1629							Element Assembly - Metering	1	
-63	No number*							Cap - Cylinder	NP	
-64	No number*							Piston	NP	
-65	No number*							Cylinder	NP	
-66	No number*							Web	NP	
-67	No number*							Base	NP	
-68	No number*							Sleeve	NP	
-69	F-1823							Gasket	1	
-70	F-8263							Valve Assembly - By-pass	1	
-71	F-1815							Cap - Valve	1	
								Attaching Parts		
-72	AN500A4-4							Screw - Fillister head, #4-40 x 1/4 in. lg.	2	
-73	F-1816							Washer - Valve	1	
-74	F-1814							Clamp - Valve	1	
								Attaching Parts		
-75	F-1817							Pin - Valve	1	
-76	F-8136							Stem - Valve	1	
-77	F-1872-2							Body Assembly	1	
-78	F-8104							Body and Valve Tube Assembly	1	
-79	F-1610							Stud - Meter	8	
-80	F-1622							Pin - Locating	1	
-81	F-1811							Spring	1	
								Attaching Parts		
-82	F-8137							Nut - Valve	1	
-83	AN381-2-6							Pin - Cotter	1	
-84	1604-98							Plug - Seal, size 1-5/16-2 (WDAB)	2	
								* Non-procurable		

## SECTION 3

## NUMERICAL PARTS LIST

PART NUMBER	FIGURE AND INDEX NUMBER	TOTAL QUANTITY	PART NUMBER	FIGURE AND INDEX NUMBER	TOTAL QUANTITY
Base	2-1-67	NP	F-2652	2-1-45	3
Cap	2-1-63	NP	F-2984	2-1-21	1
Cylinder	2-1-65	NP	F-2989	2-1-23	1
Piston	2-1-64	NP	F-3004	2-1-40	1
Sleeve	2-1-68	NP	F-3008	2-1-11	1
Web	2-1-66	NP	F-3179-2	2-1-61	1
E-5600	2-1-25	1	F-3181-3	2-1-49	1
F-1610	2-1-79	8	F-3182-2	2-1-43	1
F-1622	2-1-36	2	F-3851	2-1-10	1
	2-1-80		F-5404-2	2-1-5	1
F-1629	2-1-62	1	F-7166	2-1-57	1
F-1661	2-1-33	8	F-7167	2-1-59	1
F-1811	2-1-81	1	F-7261	2-1-41	1
F-1814	2-1-74	1	F-7262	2-1-8	1
F-1815	2-1-71	1	F-7263	2-1-58	2
F-1816	2-1-73	1		2-1-60	
F-1817	2-1-75	1	F-7787	2-1-53	1
F-1823	2-1-69	1	F-7907	2-1-17	3
F-1840	2-1-37	4		2-1-54	
F-1855	2-1-34	8	F-8069	2-1-20	1
F-1872-2	2-1-77	1	F-8104	2-1-78	1
F-1883	2-1-50	2	F-8136	2-1-76	1
F-1887	2-1-31	1	F-8137	2-1-82	1
F-1889	2-1-1	1	F-8202	2-1-47	1
F-1916	2-1-3	1	F-8263	2-1-70	1
F-1939	2-1-35	1	S-6859-8A3/4	2-1-30	1
F-1962	2-1-16	2	S-6859-8A 1-1/2	2-1-27	2
	2-1-55		S-7595-37	2-1-52	1
F-1996	2-1-7	1	S-7922-3	2-1-28	1
F-2083-5	2-1-32	1	S-7922-5	2-1-29	1
F-2137	2-1-24	1	1400-B	2-1-15	1
F-2139	2-1-26	2	16-NM-40	2-1-46	1
F-2401-2	2-1-51	1	1604-98	2-1-84	2
F-2401-3	2-1-48	1	97-3102A12S-	2-1-2	1
F-2402	2-1-56	1	3P(231)		