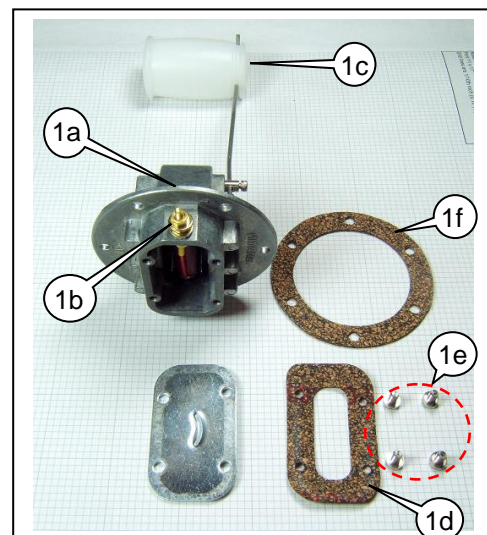


## Supplemental Information & Instructions for Fuel Tank Sending Units

Moss US	Moss EU	Moss US	Moss EU	Moss US	Moss EU	Moss US	Moss EU
011-311	C2779	021-570	1B2736	360-050	360-050	360-640	BHA4292NF
011-312	C8407	021-571	BHA4435	360-280	AHH5114	361-880	2A404

### About these Sending Units...

The Smiths 'F' series petrol tank sending units were fitted to a wide range of vehicles. The design is simple and perfectly functional, if a bit dated. The main body (1a) is die cast. The cavity for the resistance coil has a flat cover plate sealed with a cork composite gasket (1d) and secured with four screws (1e). The large round gasket (1f) seals the sending unit to the tank.



### The Resistance Coil and the Moving Contacts

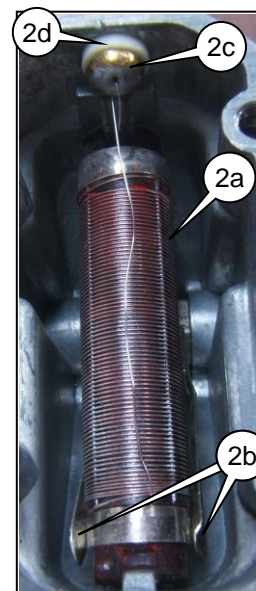
The performance of the sending unit is dependant on many factors, but a key component is the coil inside the rectangular cavity. The coil is made by wrapping a special resistance wire around a non-conducting core. The windings (2a) are evenly spaced and secured so the coils don't slide around or bunch up as the pair of moving contacts (2b) slide across the windings.

### What about the Electrical Terminal?

The resistance wire is soldered to the head of the terminal screw (1b, 2c) which passes through the body of the sender. The screw is sealed and insulated from the body of the sender by a special nylon bushing (2d). The screw has two nuts-one to secure the screw, and a second to secure the wire going to the fuel gauge. As you undo (and re-tighten) the outer nut when connecting the wire, make sure the screw itself **DOES NOT ROTATE!** If it rotates enough, the fine wire soldered to the head of the screw may break and the sending unit will no longer work. *From time to time, we get calls from customers concerned because the hollow rheostat cavity will fill with fuel. This is a design feature of the original Smiths sending unit and does not pose a safety hazard as long as the cover plate is in place and there are no leaks. Always disconnect the battery prior to removing the cover plate from the installed sending unit.*

### Testing the Unit Before Installation

Connect the sending unit wire to the screw terminal (1b), and ground the body of the sender to the chassis. Turn the ignition key to the run position, and move the float (1c) slowly through its range of motion and watch the needle on the fuel gauge. The instrument should follow the motion of the float from full to empty. Please note that you cannot use a digital ohmmeter to check the operation of the sender. Unless the meter has a sampling function, the readings will be very erratic and jump for low to high resistance and back as the float arm is moved. An older analog meter can be used if it has a 0-100 Ohm scale. Verify that the tank itself is grounded to the chassis/body; the sender is grounded through the body of the tank through the 6 mounting screws. If there are any doubts about the ground through the tank itself, you may run a wire from one of the mounting screws to the chassis.



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49 **Fitting the Sending Unit**

50 Test fit the sender in the tank without the gasket. The body of the  
51 sender has rounded corners (3a) at the flange to make sure the  
52 sender will fit the opening in the tank. Check the alignment of the  
53 holes for the mounting screws.

54

55 **Sealing the 6 Mounting Screws**

56 The threaded holes (4a) in the mounting flange go straight through to  
57 the inside of the tank, which means gasoline will be in direct contact  
58 with the screws .It is not uncommon for gas to weep past the threads  
59 of the screws used to secure the sending unit, particularly when the  
60 threads are worn or damaged. This frequently happens when one or  
61 more of the original screws have been lost and replaced by larger  
62 screws with a different thread pitch. Make sure all 6 screws can be  
63 tightened before you install the sender. If a screw cannot be tightened  
64 because the threaded hole is stripped out, you will need to correct  
65 that. We suggest sealing the threads on the screws with Hylomar AF  
66 (Advanced Formulation) gasket dressing which is impervious to  
67 gasoline. If not available locally, we can supply it (order # 232-215 or  
68 GGL1031). If the original flat washers for the sender have been  
69 misplaced or lost, nylon washers are available under #315-165; if you  
70 need the screws too, order #323-728, a set of 6 screws with the nylon  
71 315-215 washers.

72

73 **Sealing the Mounting Flange**

74 Ensure that the mounting flange on the tank is clean. Place the large  
75 round gasket (1f) illustrated on page one between the tank (4a) and  
76 the sending unit (3a). The use of a gasket sealer on the round  
77 mounting gasket is a matter of personal preference. For those that  
78 prefer to use a sealer, we recommend Hylomar AF (232-215 or  
79 GGL1031).

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81 **Brass Floats**

82 Current production sending units have white plastic floats. If you  
83 prefer, brass floats are available separately under 360-646.

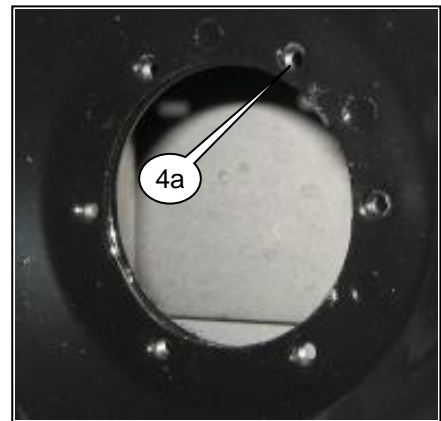
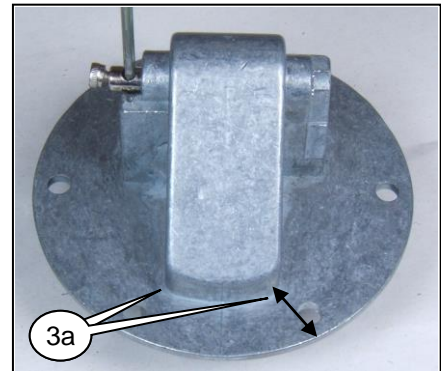
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85 **Replacement Gaskets**

86 293-400 Gasket set, synthetic rubber (1 round & 1 rectangular gasket,  
87 inert in gasoline/alcohol blends )

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*Although every effort has been made to ensure the accuracy and clarity of this information, any suggestions that you may have that will improve the information (especially detailed installation notes) are welcome.*

*Please use the simple email form on the "Contact Us" page on the Moss website:*

*<http://www.mossmotors.com/AboutMoss/ContactUs.aspx>*

*If you prefer, you may call our Technical Services Department at 805-681-3411. So many people call us for help that we are often not able to answer the calls as fast as we'd like, and you may be asked to leave a message. We apologize in advance for the inconvenience. We will get back to you within 2 business days.*



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Instruction Sheet 011-311\_011-312\_021-570\_021-571\_360-050\_360-280\_360-640\_361-880\_980-004  
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