

# INSTALL INSTRUCTIONS FOR 86-1003

## BEFORE YOU START

Thank you for purchasing your new S&B Filters Fuel Sending Unit. If at any time you need additional assistance with installation or have any other questions or comments, feel free to call our customer support team at 909-947-0015.

Our [installation video](#) walks you through the step by step installation process for the S&B Fuel Sending Unit.

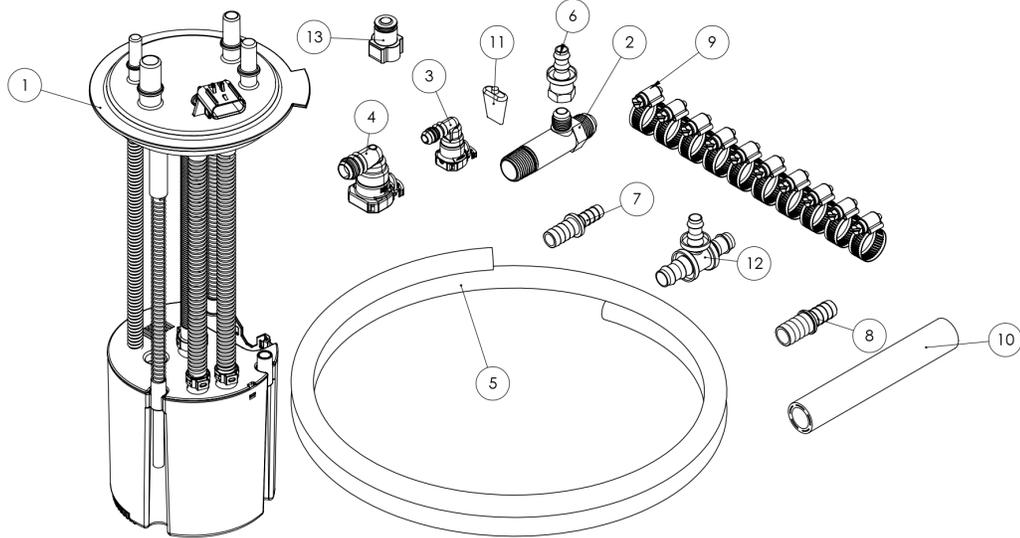
**READ CAREFULLY:** Verify you have the fuel line given with your pump to route both the fuel return line and the suction line from your lift pump directly to the sending unit. The S&B Sending Unit has dedicated ports for the lift pump return and a larger 5/8" suction port, so your lift pump return line will be routed directly between your aftermarket lift pump and the sending unit without adapting to the factory lines. If you have an AirDog, make sure you have the 3/8" cap (S&B Part Number Ai3297-00) that will plug the small end of the return tee supplied by AirDog.

## REQUIRED TOOLS

- 7/8" Wrench
- Mallet/Hammer
- Flathead Screwdriver

## 86-1003

2011-2016 POWER STROKE LONGBED W/ S&B TANK



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	AL4003-00	SENDING UNIT ASSEMBLY, 11-16 POWER STROKE, LONGBED W/ S&B TANK	1	7	AI2738-00	BRASS 1/2" BARB TO 3/8" BARB	1
				8	AI2739-00	BRASS 1/2" BARB TO 5/8" BARB	1
2	AI2691-00	1/2" NPTF TO 1/2" JIC WITH AN OFFSET 3/8" TEE OFF	1	9	AG1000-00	HOSE CLAMP, #8	10
3	AI2760-00	3/8" FUEL LINE QUICK CONNECT ELBOW	1	10	AI1039-19	5/8" FUEL LINE, 8" LONG	1
4	AI2714-00	5/8" FUEL LINE QUICK CONNECT ELBOW	1	11	TI1302-00	THREAD SEALANT	1
5	AI2722-01	3/8" FUEL HOSE	1	12	AI2831-00	PUSH LOCK TEE FITTING REDUCER	1
6	AI2716-00	3/8" BARBED PUSH-ON HOSE FITTING TO FEMALE 3/8" JIC SWIVEL	1	13	AI3297-00	3/8" QUICK CONNECT PLUG, FUEL LINE, CAP, BUNDY FEMALE	1

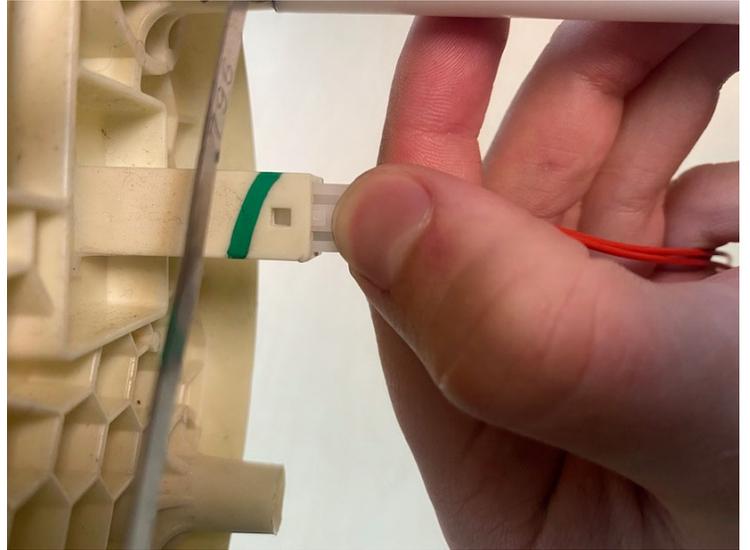
## STEP 1

Begin by following S&B Tank instructions to drop the tank and remove the sending unit. Also, follow your lift pump installation instructions but **DO NOT MODIFY** your stock sending unit. **WARNING:** The S&B Sending Unit is optimized for aftermarket lift pumps set to 65 PSI, do **NOT** exceed 70 psi on your lift pump!



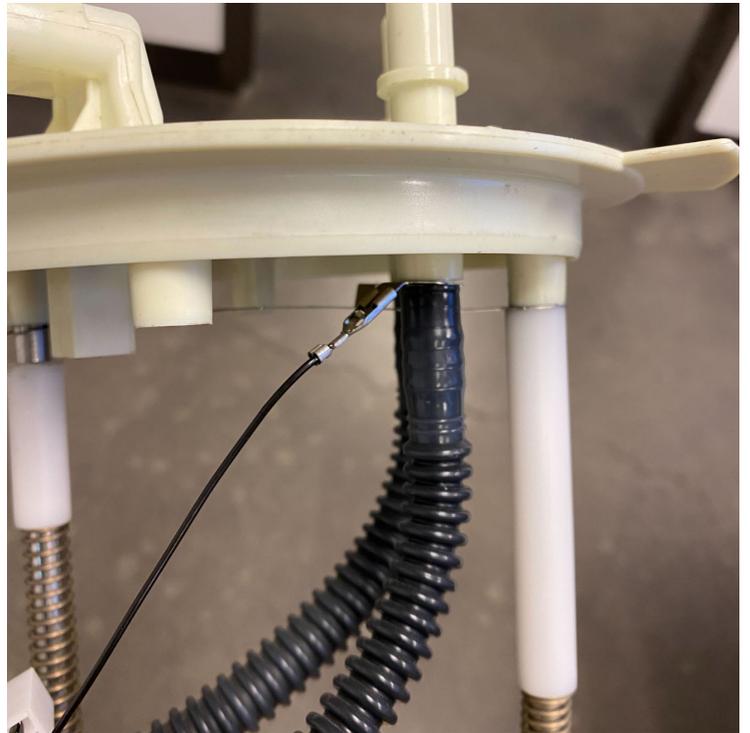
## STEP 2

With the stock sending unit removed from the tank, CAREFULLY remove the stock sending unit resistor card with the float by depressing the snap connector on the stock flange and pulling directly away from the flange.



## STEP 2B

Press down on the small snap arm on the metal piece connected to the black wire and to pull off the metal tab on the stock sending unit.

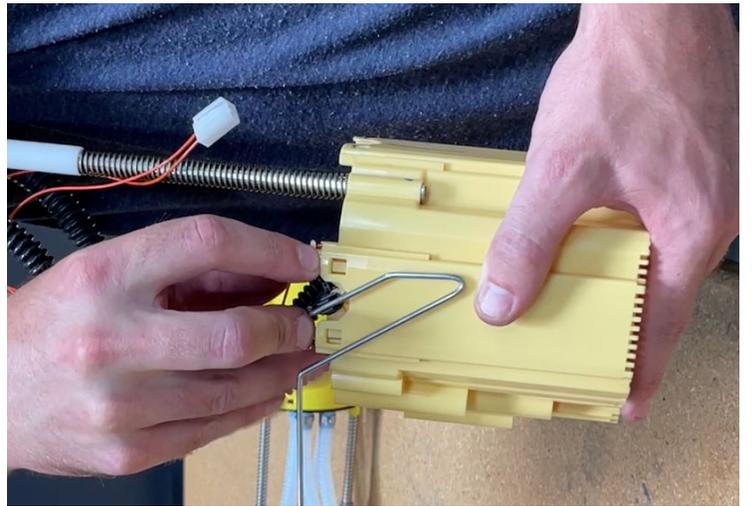


## STEP 2B (IMAGE 2)



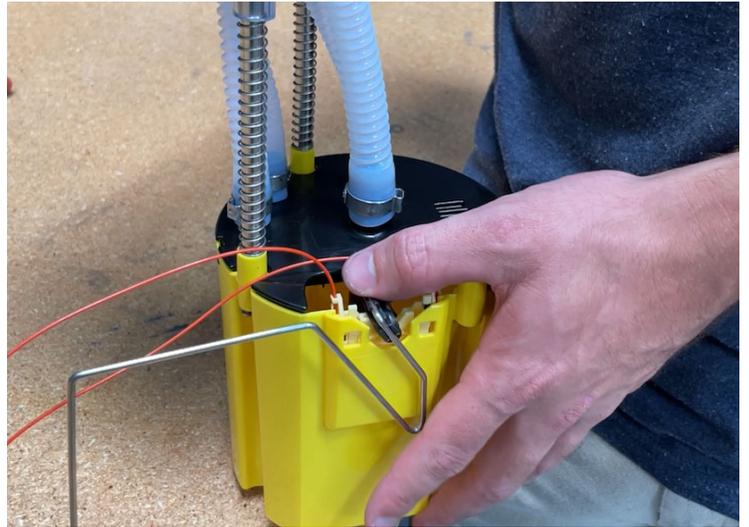
## STEP 3

CAREFULLY depress the snap-in arms on the resistor card and slide it directly up and out of the reservoir.



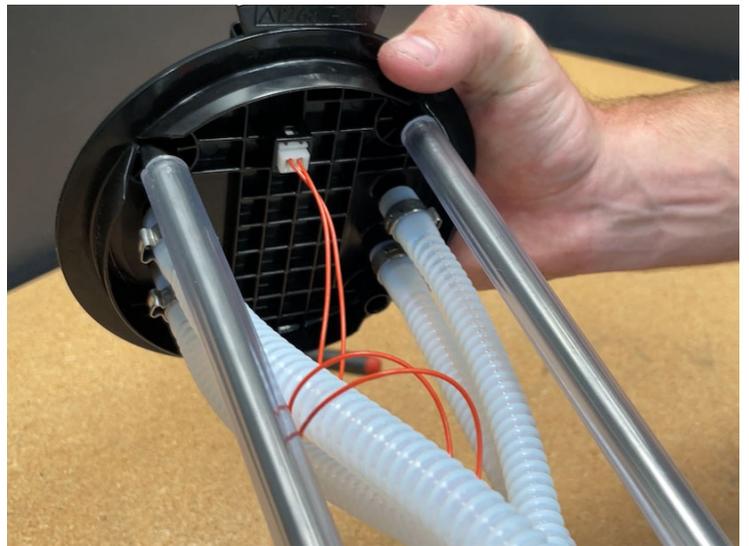
## STEP 4

Install the resistor card and float into the reservoir of the S&B sending unit. Verify the resistor card is firmly snapped in and cannot move.



## STEP 5

Wrap the resistor card wire around the large hose a few times so that it cannot tangle with the float. Snap in the electrical connector into the flange of the S&B Sending Unit, verifying it cannot move. Connect the metal piece connected to the black wire (from step 2B) to the tab on the rod of the S&B Sending Unit.



## STEP 6

Insert the S&B Sending Unit into your fuel Tank. The

center of the tab on the sending unit flange should line up with the arrow on the tank. Be careful to not damage the OEM float when putting it in the tank.



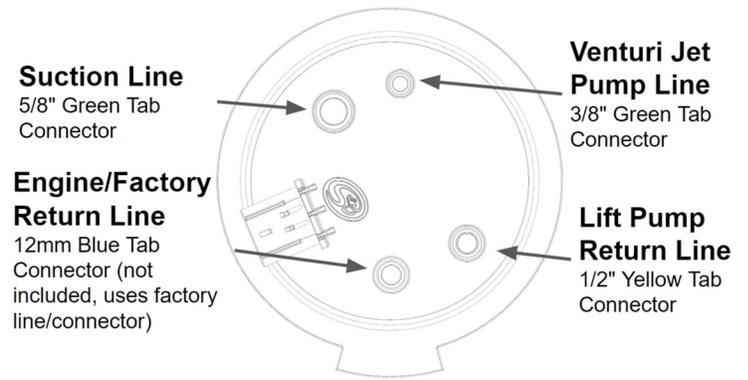
## STEP 7

Secure the S&B sending unit into the tank. Make sure the locking ring is oriented as it was on the OEM Tank so the sending unit guard will install without interference. Hammer the locking ring clockwise.



## SENDING UNIT CONNECTOR DIAGRAM

Use this diagram to help you with the next steps in connecting the fuel lines to your S&B Sending Unit.

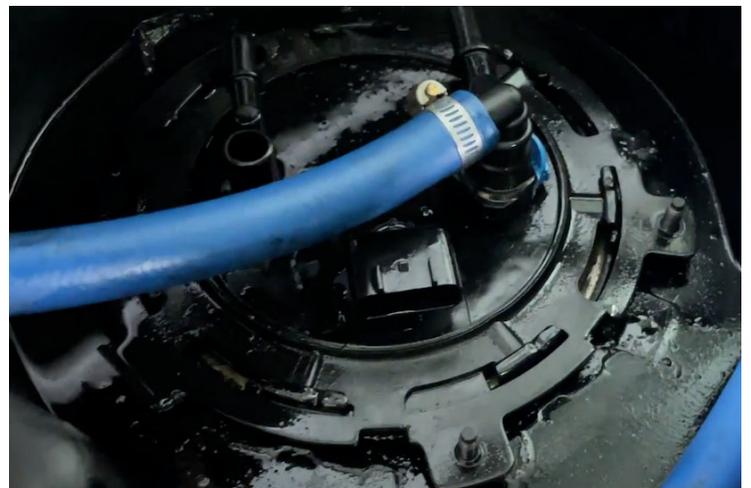


## STEP 8

Connect the factory return (elbow quick connect fitting with a blue tab) to the location shown in the diagram.

For FASS pumps, you will use the supplied quick connect to quick connect adapter (FASS Part number DB-4646) in the location of the factory lift pump according to FASS instructions step 4.

For AirDog lift pumps, you will connect their supplied Return Tee (AirDog part number 001-4B-1-0067) where the factory lift pump used according to AirDog instruction step 9-1. However, unlike the AirDog



instructions step 9-2 and 9-3, you will cap the small end of the Tee. This is different because the S&B Sending Unit will have the AirDog return routed directly to the sending unit instead of merging the factory return and AirDog return into one line.

## STEP 9

Connect the lift pump return (using the S&B supplied elbow quick connect fitting with a yellow tab) to the location shown in the diagram. This lift pump return routes directly from the S&B Sending Unit directly to your FASS/ AirDog using their supplied fuel line without merging with the factory return line.



## STEP 10

Snap on the vehicle's electrical connector to the sending unit.



## STEP 11

Press AI2714-00 (elbow quick connect with a green tab) into the tank side of your lift pump's suction hose and tighten a hose clamp around it. Connect it to the large straight nipple on the sending unit, pressing in the locking tab.

**IMPORTANT NOTE:** If you already have a fitting installed on this end, cut it out to insert the quick connect. This suction hose will route directly to your lift pump and not connect to the factory lines. If your lift pump uses  $\frac{1}{2}$ " fuel line for suction, use AI1039-19 ( $\frac{5}{8}$ " fuel hose) and AI2739-00 ( $\frac{5}{8}$ " to  $\frac{1}{2}$ " brass reducer) to adapt the suction line to fit the quick connect.



## DETERMINE YOUR LIFT PUMP TYPE

The type of lift pump you have will determine the next

steps:

If your lift pump has JIC fittings for swivel hose connections, follow steps 12 to 14.

If your lift pump has male quick connect hose fittings and a provided wye fitting, skip to step 15 to set up the Venturi power line. The wye fitting supplied with your lift pump is necessary for installation! You will not be using the brass tee fitting that comes with the S&B Sending Unit.



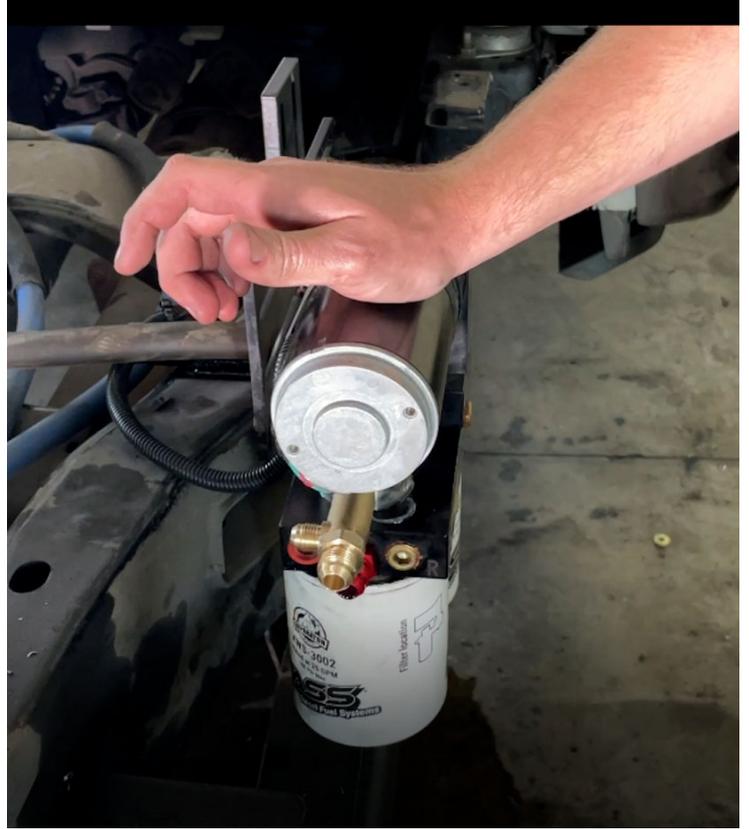
## STEP 12

Unscrew the 'to engine' fitting and 'return' hose (not the fitting) if they are already connected to your lift pump. Wrench matching your lift pump's fittings.



## STEP 13

Apply the supplied thread sealant to the NPTF, or the long side, of AI2691-00 (brass tee fitting) and hand tighten. Use a  $\frac{7}{8}$ " wrench for the last turn and angling the tee off towards the frame of the truck.



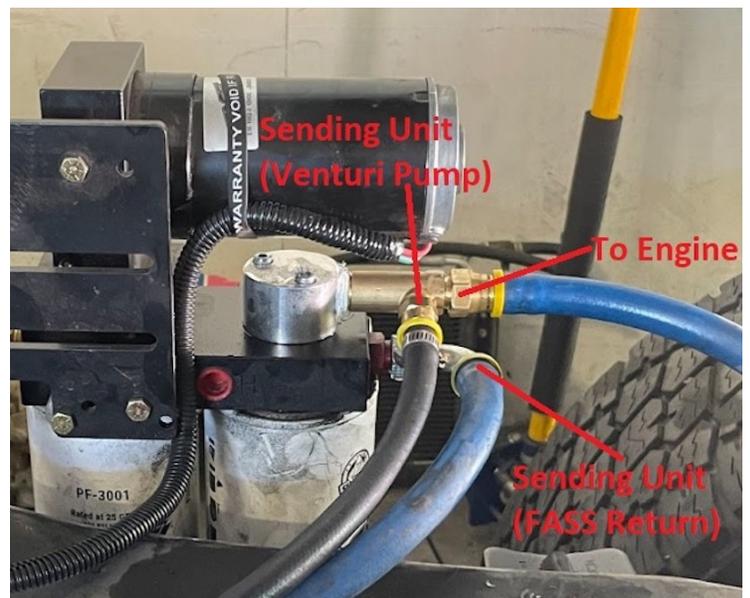
## STEP 14A

Press AI2760-00 (3/8" elbow quick connect) into one end of AI2722-01 (3/8" push lock fuel hose) and AI2716-00 (3/8" push lock JIC swivel) into the other end of the hose. Quick connect to the flange and screw the fitting to the tee along with the "To Engine" and "Return Lines" for your lift pump. Skip to step final checklist.

Note: Only use clean fuel hose to power the venturi so that your S&B Sending Unit performs correctly!



## STEP 14B



## STEP 15

If you have an Airdog, use the barbed push lock tee fitting to splice the lift pump's "To Engine" line (black hose in picture). Make sure the fitting will have clearance when installed in the vehicle. Use the provided 3/8" fuel hose (blue hose in picture) to route to the S&B Sending Unit from the smaller tee off. Use the smallest elbow connector with a green tab to connect to the Venturi Pump location on the sending unit (see diagram) after cutting the hose to length.



## FINAL CHECKLIST

**This final checklist is very important.**

1. Make sure all quick connectors are locked in.
2. Prime your lift pump according to your manufacturer's instructions.
3. Check for leaks before reinstalling the tank according to S&B instructions.

If you have any questions, call or text us at