

# WILD HORSES

## FOUR WHEEL DRIVE

Phone (209) 400-7200 Fax (209) 943-7923 www.wildhorses4x4.com

Note: To assure a completely clean tank, use the large hole to inspect tank for any debris. It is highly recommended that the tank be flushed out before installing. Don't move on to assembly until you are satisfied with the cleanliness of the inside of the tank.

### EXTERNAL FUEL PUMP MODULE ASSEMBLY

1. Locate fuel module and remove the fuel tray. The fuel tray will not be used unless you are running EFI with a return line to the fuel tank.

2. Remove the hose from the "S" fitting. Install the main part of the module in the orientation shown in Pic #1/2. Gasket is not necessary at this time. Don't tighten the screws just snug them down to keep the module from moving.

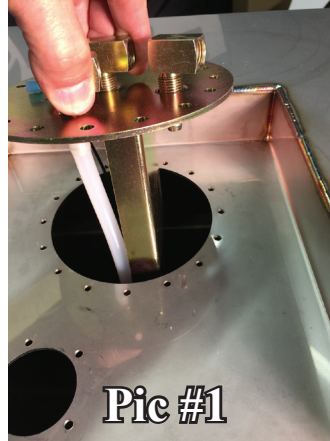
3. Mark the top of the module for the fittings with the corresponding letters V=Vent, R=Return and S= Supply. Remove the three 90 degree NPT fittings. Pic #2

4. Use Permatex High Tack Gasket Sealant Pic #3 or another fuel resistant sealant on the threads of the fittings. Reinstall only the fittings you will be using, in this order V, R, and S. Make sure not to cover screws as you will be removing the unit once this step is done. These are tapered NPT threads, the fittings must be very tight and pointed as shown in Pic #4 when done. Your kit has 2 NPT plugs that you can use to cap off the return and vent if you are not using them. Use Permatex High Tack Gasket Sealant Pic #3 or another fuel resistant sealant on the threads of the plugs. Now remove the assembly from the tank.

5. Remove the fuel pump wiring from the bottom of the module and remove the wire connectors from the top of the module. These will not be used because your fuel pump is not inside the fuel tank. Be sure to tighten the screw going through the hole in the module. You can use some Permatex High Tack Gasket Sealant on the threads. Pic #5/6

### Main Fuel Tank

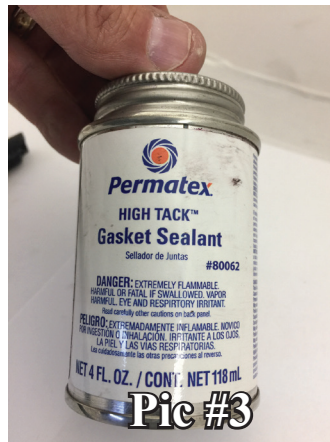
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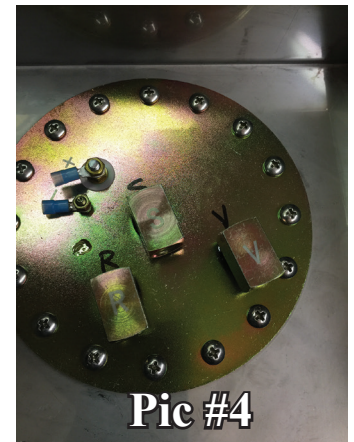
Pic #1



Pic #2



Pic #3



Pic #4



Pic #5



Pic #6

**START HERE UNLESS YOU ARE GOING TO RUN A RETURN LINE FOR EFI. IF USING RETURN LINE MOVE TO STEP 6A BELOW**

6. Now set up the supply hose on the tank side of the module. Please note the hose is submersible fuel hose, if you change or customize something make sure you use submersible fuel hose on the tank side of the module. Attach the hose back to the "S" fitting with a hose clamp. (Top hose clamp in Pic #8.) Remove the screw from one of the high pressure clamps and push the high pressure clamp onto the fuel hose. Put the screw in from the back of the module and through the clamp Pic #7. This is to hold the hose to the module. You can leave it loose for now. Push the fuel pick up tube into the hose. Set it up at 12 1/2" from the tank side of the module as shown in Pic #8. Don't tighten hose clamp yet. Test fit the module into the tank with the cork gasket. You want to make sure the tube is at the bottom of the tank. Once you are happy with the fit, tighten both the high pressure clamp and the bottom hose clamp. Move to step #7.

6A. Mark 3/4" down from bottom of slot on main part of module and drill a 3/16" hole. Pic #6A

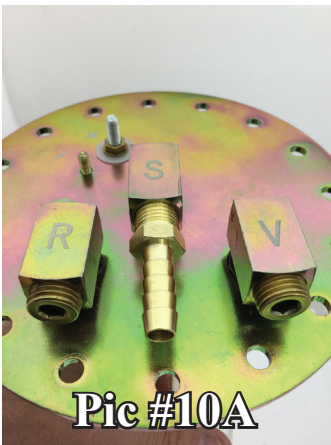
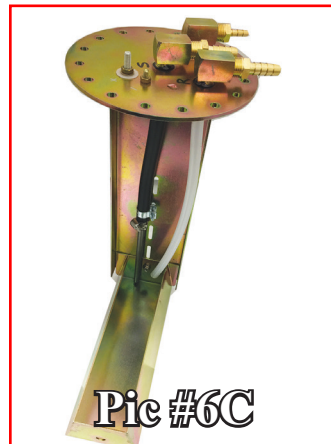
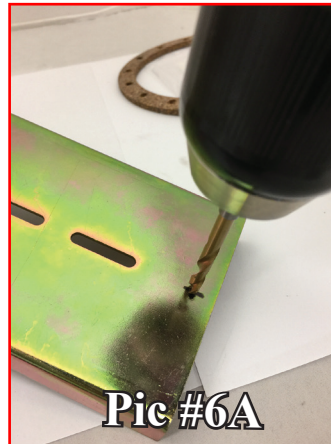
6B. Bolt the fuel tray to the main part using one of the two 3/16" screws and nuts. Pic #6B

6C. Test fit the module into the tank. Use the cork gasket for correct spacing. You are checking that the fuel tray is as close to the bottom of the tank as possible, but not resting on the bottom of the tank. If the fuel tray is resting on the bottom of the tank, drill another hole or slot the first hole. The fuel tray must sit just slightly off of the bottom of the tank in order for the gasket to seal properly.

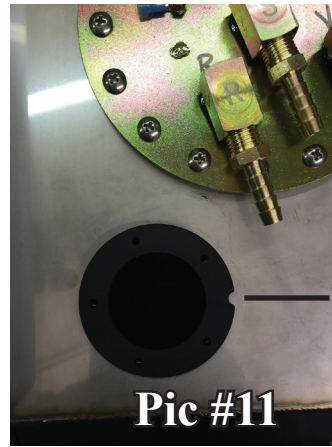
6D. Put return fuel tube (white tube) into fuel tray. Install the fuel pick up tube into the submersible fuel hose with the tapered end of the tube towards the fuel tray. Tighten all clamps. Pic #6C

**FUEL MODULE INSTALL INTO FUEL TANK**

7. Use Permatex High Tack Gasket Sealant Pic #3 or another fuel resistant sealant between the cork gasket and tank and then between the cork gasket and fuel module. Pic #9 Install fuel module in same orientation as we did in Pic #1 and Pic #2. Use 16 screws to install module to tank. Coat each screw with Permatex High Tack Gasket Sealant. Start all of the screws evenly making sure not to cross thread. All screws should be started before any are tightened down. Seat all screws to the top of the module just finger tight to start. Once all screws are finger tight use screw driver to tighten all 16 evenly being careful not to over tighten. Installed module should look like Pic #4 at this time.



8. Now install barb fittings into the proper locations on the top of the fuel module. Every one will use the "S" barb for fuel supply. The vent is optional and can be capped off with the 1/4" NPT plug if no vent is going to be used. The vent is supplied for locations that require tank venting per emissions regulations. The "R" fitting is for return which you will use with most fuel injection systems. If you are not using the "R" it can be capped off with the 1/4" NPT plug. Coat hose barb fittings and plugs with Permatex High Tack Gasket Sealant and thread in. These are 1/4" NPT and must be tight. When done your module should look like Pic #10A or Pic #10B.



Pic #11



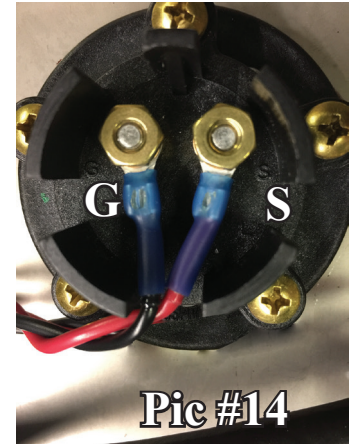
Pic #12

### SENDING UNIT INSTALL INTO FUEL TANK

WH uses only made in the USA ISSPRO sending units specifically designed for this tank. We simply can't purchase anything better. They have been tested and retested. The original Ford gauges vary greatly so we took a range of gauges in order to come up with the settings for our sending units. If everything is working properly I.E. gauge, tank switch on dash, gauge regulator, and wiring when you are at empty you should only have a gallon or so left. At full because of the recess it may take a few miles before the gauge starts to travel towards empty. Run through a few tanks of fuel and get used to the new Gauge/sending unit readings.



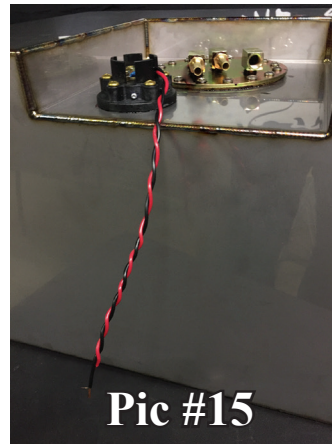
Pic #13



Pic #14

9. Please note the sending unit and sending unit seal only install to the tank in one spot. The holes are not symmetrical so you will want to determine the orientation of the seal and unit ahead of time. See Pic #11 The notch in the gasket will line up with the ISSPRO logo on the sending unit. Pic #12

10. Coat seal top and bottom with Permatex High Tack Gasket Sealant. Use a little sealant on each of the five sending unit screws. Tighten sending unit screws evenly being careful not to cross thread or strip threads. Pic #13



Pic #15

### WIRING SENDING UNIT

11. Sending unit terminals are marked G=ground and S=supply. Use 12" of black 16 ga. wire for the ground and 12" of red 16 ga. wire for the supply. Install ring terminals to both wires and attach to sending unit in proper locations. Pic #14/15

12. Now install starter hose for your supply and return if using a return. Also install your vent hose at this time if using one. Pic #17 shows 1/4" NPT plug because this unit was not using a vent. Pic #17-18 shows stainless hose for the supply and rubber for return. You don't have to use stainless. Regular low pressure fuel hose can be used for both the supply and return. Now at this point you may be thinking why use the starter hoses? Why not just connect the hose that will run all the way to the fuel pump? You can do that but if you ever need to remove the tank for any reason it will take a lot more work to do so. The choice is yours.



### REMOVAL OF EXISTING STOCK TANK

We are going to assume your Bronco still has the stock rear/main tank for this discussion.

13. Disconnect the battery for safety.

14. If you still have a lot of fuel in the tank you will want to drain it at this time.

15. Remove any existing skid plate. Pic #19

16. Pull sending unit connector off of the tank. Pic #20

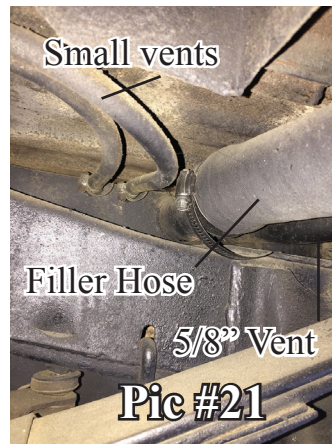
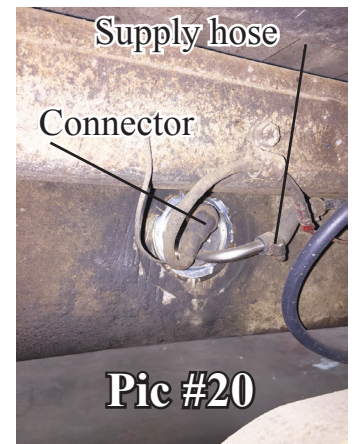
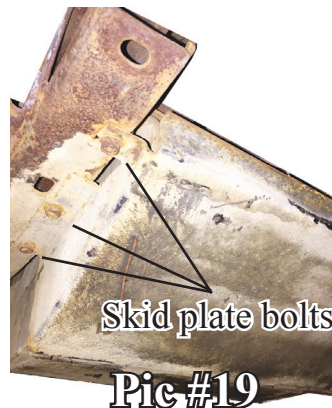
17. Disconnect the fuel supply hose from the port on the sending unit at the front of the tank. Pic #20

18. Disconnect fuel filler hose and large 5/8" vent hose next to the filler hose. Very early Broncos did not have the vent hose. If this is the case on your Bronco you can cap off the 5/8" vent tube on the side of your new tank or swap in a new fuel filler tube like WH #9727 into your Bronco so you can use the vent. Pic #21

19. You may have small vent hoses. Disconnect them at this time if you have them. They will be located on the same side of the tank as the filler hose. Pic #21

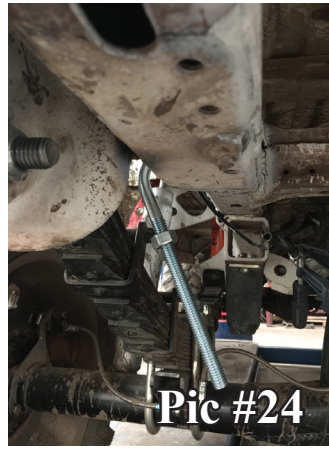
20. Loosen the j-bolt on the driver side of the frame. This is the bolt holding the tank strap. Remove the j-bolt and strap. You should now be able to lower the tank and remove it from the frame. Pic #22

21. Remove the tank supports from the frame. There are two at the back of the frame on the right side and on the left. There are two at the cross member towards the front. Remember this is if you have a stock tank. If you have an after-market tank these brackets are already removed. Pic #23

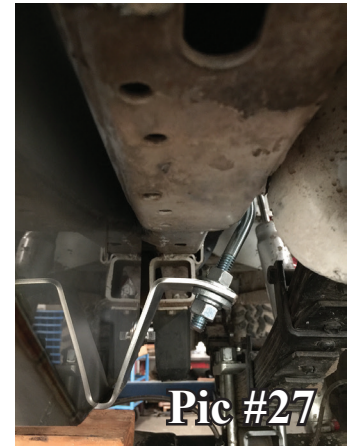


## INSTALLING M1A1 TANK

22. Test fit 7/16" candy cane bolts into frame. You need to make the frame hole slightly larger for the new HD bolts. Do this with a drill or round file. The bolts should move freely when the holes are the right size. Thread one 7/16" nut all the way up the threads on each bolt. NOTE: If you have any body lift you can cut that amount off the candy cane bolt, so the bolts won't hang down below the tank. The M1A1 is designed to go up into the space of any body lift. This will also increase ground clearance. Pic #24



23. Now take note of the underside of the floor of your Bronco where the tank will sit. There should be nothing sticking through the floor in this area with the exception of the seat belt bolts. Those bolts will fit inside the recess in the new tank and allow the tank to sit flat against the floor. If you see anything like screws, bolts or anything else in the way of the tank, it will need to be removed before you install the new tank. Pic #25



24. Note the condition of the frame and check for any pigeon poop welds coming off the inside of the frame. Take a grinder to any excessive welds. The M1A1 fits right inside the frame and this allows for as short of a tank as possible while retaining the increased fuel capacity.



25. Position the M1A1 tank up in the frame against the floor of the Bronco. Make sure your wiring and hoses are coming over the top of the cross member and accessible. If you are installing the skid plate, install the tank and skid plate at the same time. You can hold everything in-place with a floor jack or some other means. Add a washer to the candy cane bolts then the skid plate or strap, another washer, lock washer and nut. Tighten them by hand at this time. Double check to make sure all wires and hoses are positioned properly. Also check that the tail light wiring is not being pinched by the tank. Tank should be flat against floor of Bronco. Pic #26 (Shown in Bronco with 3" body lift) Pic #28 (shows strap install in Bronco with 3" body lift) Pic #29&31 M1A1 with skid plate.

26. Install filler hose and 5/8" vent hose. Now you can tighten the candy cane bolts evenly to secure the tank. Once the lower nuts are tightened use the upper nuts and washers to tighten the skid plate or strap between the nuts and washers. Slight deformation on end of strap will take place as shown in Pic #27. Pic #28 shows tank installed with strap in Bronco with 3" body lift. Pic #30 shows filler and 5/8" vent hose. Pic #31 shows M1A1 with skid plate in Bronco with 3" body lift..



27. Now wire your sending unit. You can cut the old stock connector off the existing wiring. Follow the old ground wire and remove it from the frame. You can install the new sending unit ground wire to the same spot as the old. The remaining wire goes to the gauge. Use a butt connector or some other means to connect the wiring. Pic #32

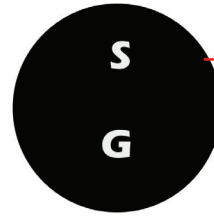
29. Connect your supply and return hoses. WH highly recommends you add a 30 micron filter (for EFI) somewhere after the fuel pump and before the EFI unit. Many EFI system will come with the filters as part of the kit. Remember your supply is under high pressure so use the correct hose and clamps. A regular auto parts store fuel filter is recommended for carbureted applications. Also connect small tank vent hoses if necessary at this time.

30. Secure wiring and hoses to the frame by your preferred method. Now you are ready to add fuel!

Thanks for your business. Please provide any comments on the WH website [www.wildhorses4x4.com](http://www.wildhorses4x4.com) or call them in M-F 8:30-5:00 PST.

Pic #32

**Sending unit**



**To fuel  
gauge wire**

**To ground**

**Ground for pump and sending  
unit can go to same place on the  
frame.**