

## INSTALLATION INSTRUCTIONS:

### #4520 1966-1977 Bronco - 20 Gallon Fuel Tank Assembly

#### CONTENTS:

##### Main Box

1 - 333-4520 20 Gallon SS Fuel Tank  
4 - 7/16-20 X 1-1/4 HEX BOLT  
8 - 7/16-20 X 3/4 HEX BOLT  
8 - 7/16 SAE SMALL FLAT WASHER ZINC  
4 - 7/16 USS LARGE WASHER ZINC  
12 - 7/16 SPLIT LOCK WASHER  
2 - Frame Mounting L Brackets 1 driver 1 passenger  
2 - Frame Nut Plates  
1 - 333-4520 Mounting Hardware & Brackets  
1 - 333-4520 Fuel Level Sending Unit

##### Second Box

1 - 004-4520 Universal Pickup Assembly  
1 - Electronic Connector Pack

##### Optional Equipment Boxes

1 - 004-4520 Aeromotive Fuel Pump with hardware  
1 - 004-4520 Skid Plate and Hardware



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For technical assistance please visit  
duffuff.com/tech to submit a tech request.

INSTALLATION DIFFICULTY RATING: 4.5 out of 10

**BEFORE STARTING PLEASE READ & UNDERSTAND INSTRUCTIONS - VERIFY ALL PARTS & HARDWARE ARE PRESENT.**

**NOTE: YOU WILL HAVE TO DRILL HOLES INTO YOUR FRAME TO COMPLETE THE INSTALLATION**

**IMPORTANT: When preparing your tank for install, inspect the inside of your tank for debris and packing material.**

**Make sure it is empty, clean & dry prior to starting the next steps.**

**NOTE: Removing your rear bumper is recommended to install the tank frame mounting brackets.**

**1.) Safety First: Before installing make sure the vehicle is on flat ground, the parking brake is set and wheels are chocked. Remove any surrounding fire hazards or ignition sources, have a class B fire extinguisher close by, and always wear PPE - personal protective equipment.**

**2.) Disconnect the negative (-) battery cable.**

**3.) Drain and disconnect your existing fuel tank. Remove it and its mounting system**

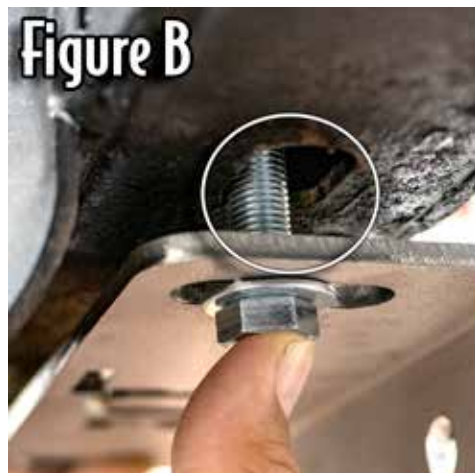
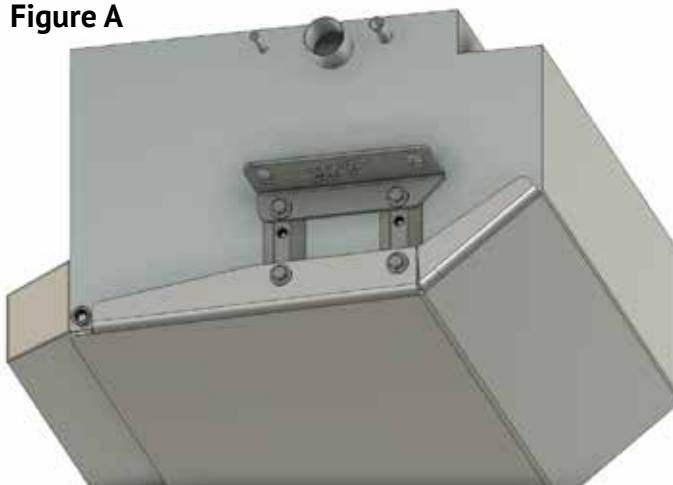
**4.) NOTE: If you have a '77 model it will require you to cut, slot & remove the OEM tank mounting hardware from the frame. (use templates provided on page 4)** Next you need to mark and drill a hole in each frame rail to mount the tank. Locate the driver and passenger LCR tank mounting brackets. See **Figure A** for Driver Side Orientation. The LCR logo cut into the bracket needs to be flat against the frame rail with the legible side facing down and the angle cut of the bent portion of the bracket facing the back of the Bronco. Starting with the driver side, position the mounting bracket on the frame so the back slotted hole is aligned with the slotted hole in the frame just forward of the rear frame end.

Using **FIGURE B** as a guide, use the supplied 7/16"-20 X 1-1/4 HEX BOLT & 7/16" USS LARGE WASHER ZINC and insert it into the slotted hole in the bracket and the frame. Be sure the bolt is pushed as far forward as possible in the slot on the frame before making your mark. Hold the bracket firm flat & square against the bottom of the frame and make a mark in the forward slotted hole on the bracket. Be sure the mark is in the center of the slotted hole in the bracket and the center of the frame. These will be the only holes you will need to drill.

Remove the bracket from the frame & center punch the center of your mark. This will be your drill point. Start with a 3/16" drill bit and drill a pilot hole. Follow it with the 3/8" drill bit, followed by a 1/2" bit and finish with a 5/8" bit. Repeat this step for the passenger side frame rail using the passenger side frame bracket. Be sure to inspect the inside of the frame for any burrs from the drilled holes or old weld slag/

<b>TOOLS NEEDED:</b>	3/8" Ratchet Extensions
Tape Measure	5/8" Shallow Well Socket
Electric Drill	11/16" Open End Wrench or
3/16", 3/8", 5/8" Drill Bit	Adjustable Wrench
Hammer	Floor Jack
Center Punch	Block of Wood
#2 Phillips Screwdriver	Heat Source aka hot air gun
Wire Crimps	Permatex Form-A-Gasket
3/8" Drive Ratchet	

**Figure A**



debris that could cause issues with mounting the tank brackets and frame nut plates. Debur newly drilled holes/slots.

**Important: The next two steps outline the installation of the pump plate you purchased. The tanks are sold specific to fuel delivery applications; Carbureted/External Pump - STEP 5 or EFI/Internal Pump - STEP 6. Be sure to follow the correct step for the version you purchased.**

#### 5.) Carbureted/External Pump

On the top of the plate is an R and S etched next to the two AN fittings. In this configuration you will use the supplied AN cap found in the box and cap the S fitting. Using a 11/16" open end wrench (aluminum preferred) snug the fitting, do not over tighten, this is capping the fitting not needed for carbureted systems. **Skip to Step 7**

#### 6.) **NOTE: In the following step, you may need to bend or manipulate the welded metal clamp that secures the pump to the long metal tube. Install the screen onto the bottom of the pump.**

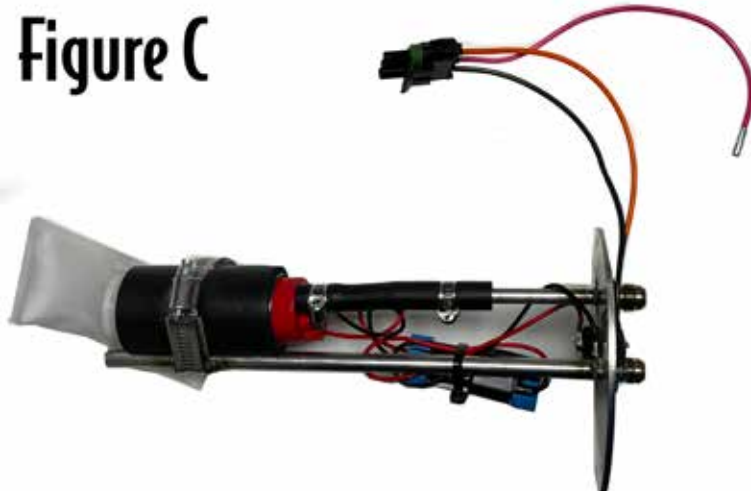
EFI/Internal Pump - See **FIGURE C-1** for a visual reference and guide for this step

Locate the Aeromotive fuel pump box. In that box you will find a fuel pump, pigtail, short section of hose, filter screen, pump insulator sleeve and 2 small hose clamps. In the pump plate hardware kit will be one large hose clamp, this is used to attach the pump to the pick up bracket. Starting with the pump, install the thick foam black sleeve onto the body of the pump. Next install the hose onto the pump barb at the top of the pump and install and tighten a small clamp securing the hose to the pump. Next using the tape measure, measure from the top edge of the fuel pump opening of the tank to the bottom of the tank and note this dimension. Subtract 1/4" from this number and write it down here \_\_\_\_\_, this will be your depth to set the pump measurement. Now take the pump with the hose installed and install the other end of the hose with the other small clamp onto the short metal tube on the pump plate. Using the measurement, set the bottom of the pump (where the filter screen will attach) to the correct height and tighten the hose clamp. Placing the pump against the small v-shaped mounting plate, use the bend to cradle the pump and install the hose clamp to secure the pump body to the plate.

6a.) Install the crimped ends of the pump wiring to the bottom of the pump plate. The red wire attaches to the black delrin isolator using the supplied 8-32x1" screw and #8 flat washer and the black wire mounts directly to the pump plate using the same size screw and flat washer shown in **FIGURE C-2**. Wrap excess wire cleanly around fuel return pipe.

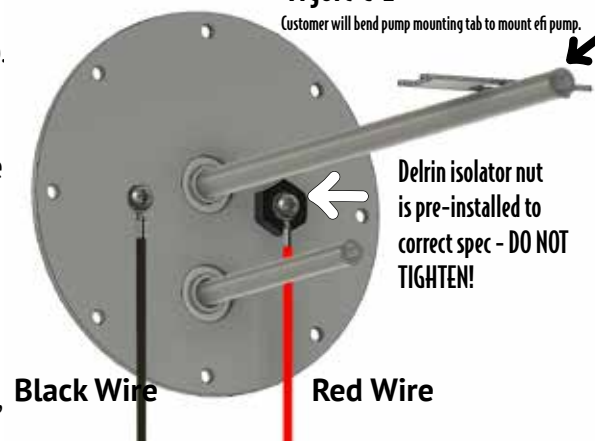
7.) Installing the Fuel Pump/Pickup Assembly - With the front of the tank facing towards you and orientated as it would be installed on the Bronco, orientate the pump plate so the **R and S** are on the right hand side. **Before mounting the pump plate, place it on the tank with the gasket in place and look through the sending unit hole with a flashlight and verify the pump sock/filter is not touching the bottom of the tank or above a 1/4" from the bottom.** Using the supplied brass screws from the hardware kit, insert the brass screws and tighten evenly in a crisscross pattern until snug. A small amount of gasket maker can be applied to the screws. You should have even pressure on the gasket but it should not be bulging.

**Figure C**



**Figure C-2**

Customer will bend pump mounting tab to mount efi pump.



**Figure D**



8.) Locate the long white skinny box containing the sending unit and its hardware bag. Slide the supplied cork gasket over the tube up to the base and insert the tube into the top of the tank. The hole orientation is critical, on the edge of the plastic base you will see a tab that aligns with a screw, see **FIGURE D** for proper orientation and installation of the sending unit. The holes will only line up when the orientation is correct. Once the holes are aligned, insert the brass screws and tighten evenly in a crisscross pattern until snug, a small amount of gasket maker can be applied to the screws. You should have even pressure on the gasket but it should not be bulging.

9.) As shown in **FIGURE E** with the pump plate and sending unit securely fastened, it is time to connect the fuel pump & sending unit wiring. On the supplied pigtail you will see a pink wire with a butt connector already attached. Slide the piece of included heat shrink over the connector and down the wire.

Trim the white wire at the sending unit to length and crimp it into the butt connector, slide the heat shrink over the connection and using a heat source shrink the tubing. The black wire will get trimmed down and the ring terminal crimped to it and go to the grounding lug on the pump plate along with the black wire from the pigtail. No insulation or heat shrink is necessary for this connection. Secure both black wires at the grounding lug with a supplied washer and nut.

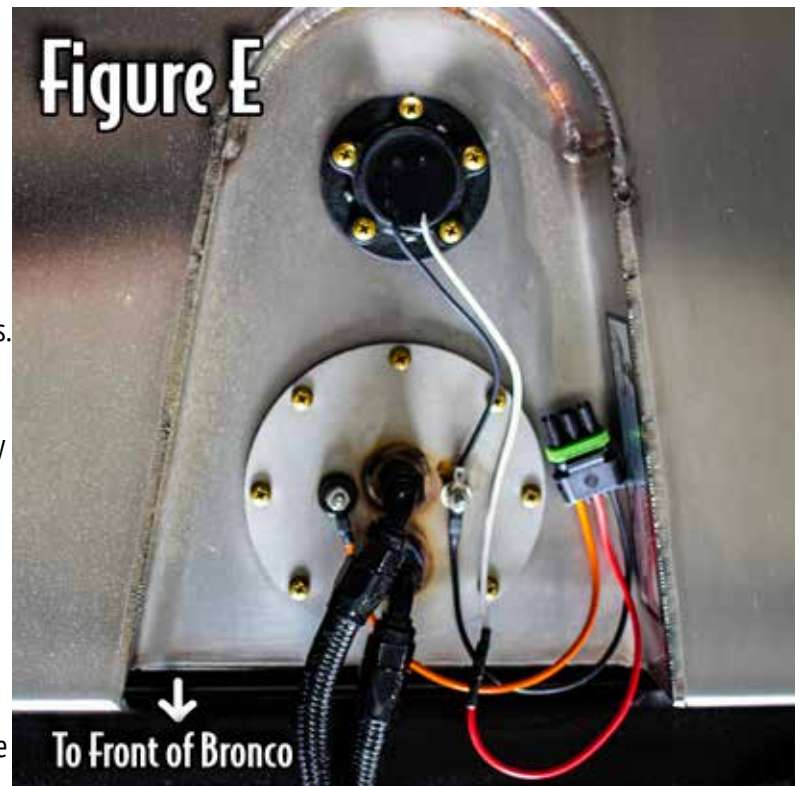
10.) **Use anti-seize on all tank mounting hardware. Check that the bolts thread in easily if not run a tap. Use hand tools only to install, do not use impacts or power tools.** With the tank pump plate and sending unit assembled and installed and holes drilled into the frame it is time to start installing the tank into your Bronco. A helper is nice but not entirely necessary if you have the proper equipment. Starting with the nut plates, slide them into the frame rail ends and using the 4 supplied 7/16"x 1-1/4" bolts, install a lock washer followed by a 7/16" USS Large Flat Washer then slide it through the LCR bracket holes into the frame and into the corresponding nut plate end. Repeat this for the other hole and bracket on the other side noting the orientation of the mounting brackets in **FIGURE A**.

**NOTE: BE SURE TO LEAVE ROOM FOR THE BUMPER OR RECEIVER TO FIT ONCE RE-INSTALLED - TEST FIT NOW IF YOU'RE NOT 100% SURE.**

11.) **IMPORTANT: CHECK THREADS FIRST & DO NOT USE AN IMPACT TO SECURE THE HARDWARE IN THIS STEP. IF YOU DO USE AN IMPACT YOU WILL RISK DAMAGING THE THREADS IN THE TANK MOUNTING BRACKETS.** On the side of the tank mounting rails you will see two mounting brackets welded to each side of the tank with 4 holes. The lowest hole on the mounting brackets is for mounting the optional skid plate only. The top 3 are as follows, top hole is for no body lift, middle hole is for 1" body lift and the bottom is for 2" body lift. When you slide the tank up be sure you use the correct holes for your application and loosely install the 7/16" x 3/4" bolt with a 7/16" Split Lock Washer followed by 7/16" SAE small flat washer. Now you can start to align the tank so it is square in the frame rails and as far back as possible and snug up all of the mounting bolts.

12.) Now it is time to put the tank in place and connect the fuel lines. Using your floor jack, or similar device and block of wood, slide the tank up into the frame rails leaving enough room to get your hand into the fuel fittings. Some have small enough hands that they can skip over this but you need to make sure you have room to get in and work on it.

We provided AN 90° connectors, 1 if it is carbureted and 2 if it is EFI. Secure hoses with supplied push lock connectors but we advise securing with the supplied hose clamps as well. If carbureted you will attach it to the open fitting and gently snug it up. Do not over tighten these as they are aluminum. If you have an EFI tank you will attach your return line to the "R" port and the Supply line to the "S" port. We recommend installing an in-line fuel filter. 30 micron for carbureted and 10 micron for EFI.





13.) Reinstall your filler neck and vent hoses to the side of the tank and secure with your existing clamps. Replace if they are worn. Make sure the drain plug is snug.

14.) Connecting the wiring - Locate the weather pack connector, 3 pins and seals. On the connector you will see terminal A, B and C marked. Terminal A is for fuel pump power, Terminal B is for Fuel Sending Unit and Terminal C is for Chassis Ground. See **Figure E** for wiring layout.

**NOTE: BE SURE TO USE THE WEATHER PACK CRIMPER HERE. WE PROVIDE WEATHERPROOF FITTINGS, THIS WILL REQUIRE THAT YOU HAVE THE CORRECT TOOL. THIS IS THE BEST METHOD FOR A TROUBLE FREE INSTALL. HOWEVER, YOU MAY INSTALL USING YOUR PREFERRED METHOD.**

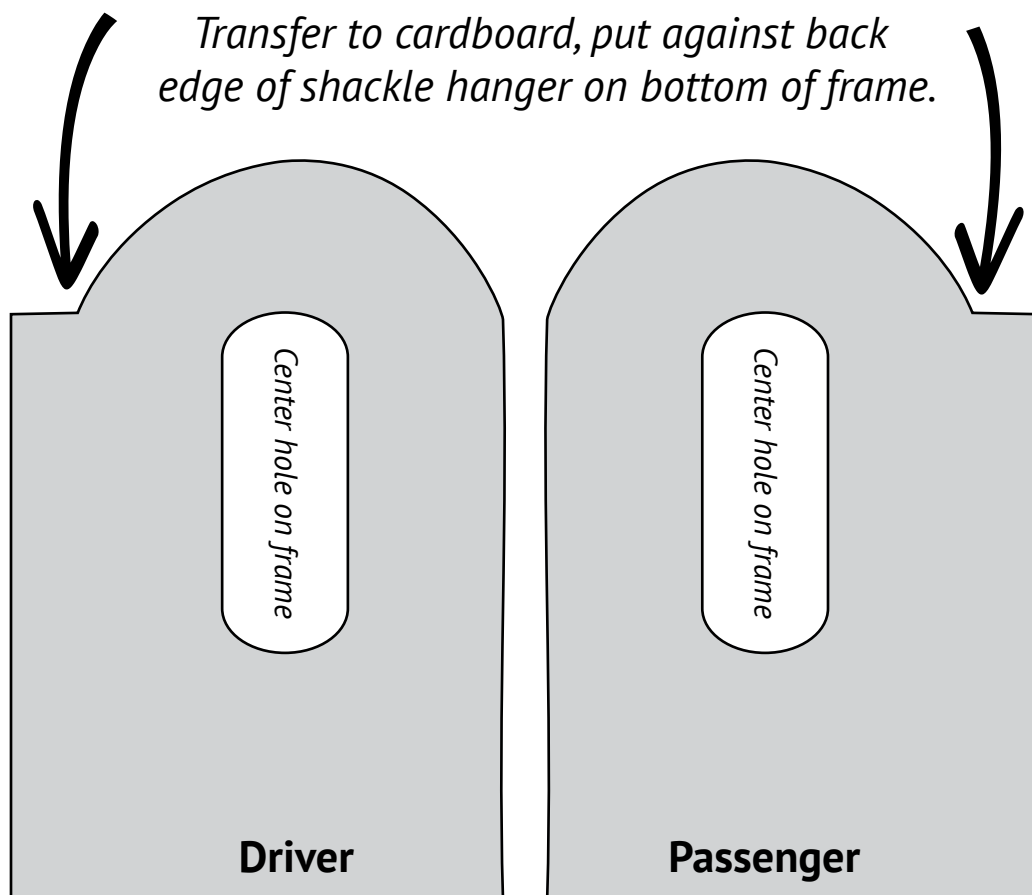
15.) Reinstall your rear bumper and reconnect your battery.

16.) Now it is time to test your tank, add 3 to 5 gallons and check for leaks on the drain plug, if it is leaking gently snug it until it stops but do not over tighten it. After this has been confirmed that there are no external leaks it is time to test your fuel line connections etc. and make sure you are getting fuel to the engine and no leaks. It is always wise to thoroughly check all of your connections even if you didn't touch them from the tank to the fuel delivery. Remember you may have not touched them intentionally but you have disturbed the system and it is good practice to take the time to inspect things. Once you are satisfied you can proceed to fill the tank.

**IMPORTANT: Only fill the tank to the first click of the handle, over filling can result in spillage.**

## 1977 SS Tank Mounting Hole Template

*Transfer to cardboard, put against back edge of shackle hanger on bottom of frame.*



### LIMITED WARRANTY

Lick Creek Restorations LLC. warrants products to the original purchaser to be free from defects in materials and workmanship. Warranty periods begin at the date of purchase and varies by product. Fuel Tanks have a one year warranty. All warranties are to the original purchaser with proof of purchase only. Such obligations under this warranty shall be limited to the repair or replacement, at LCR's discretion, of any assembly or part which upon examination by LCR proves to be defective. Any costs of removal, installation, re-installation or freight charges are expressly excluded from this warranty. This warranty covers only manufacturers defects, and does not cover product finish or damage resulting from abuse, misuse, negligence, racing, alteration, accident or damage in transit. All returns must be pre-authorized by LCR and accompanied with a Return Goods Authorization Number (RGA) and a dated proof of purchase. Returns must be made within 30 days of arrival, packaged sufficiently to prevent damage in shipment and sent prepaid Email tech@duffuff.com for a return address. Returns without an RGA# will be refused. This warranty is expressly in lieu of all other warranties, expressed or implied, including the implied warranties of merchantability and fitness for use. This warranty gives you specific legal rights including other rights that vary from state to state. Some states do not allow limitations on how long an implied warranty lasts, or do not allow the exclusion of limitation of incidental or consequential damages, so the above limitations and/or exclusions may not apply to you.