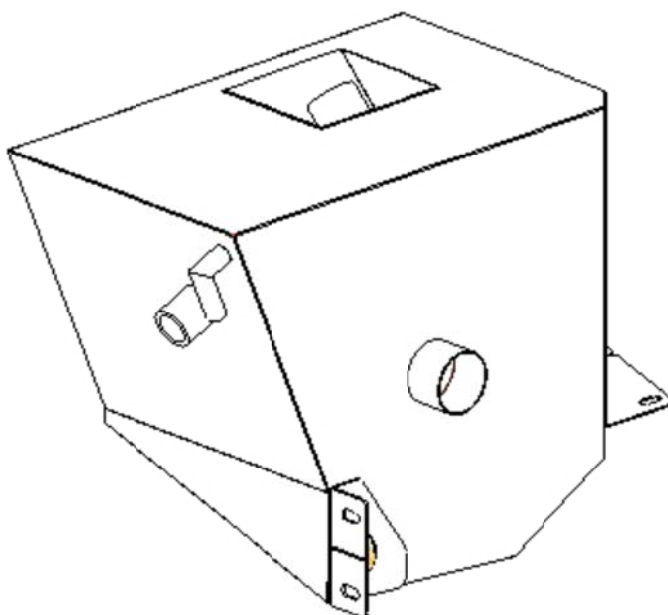




INSTALL TIME: 5 hours



1 GET ORGANIZED

you will need:

- ☐ a Land Rover 110
- ☐ a screw driver (medium size, flat)
- ☐ a 10,13,16 wrench
- ☐ a 7, and 16 socket with wrench
- ☐ a vice
- ☐ a metal hand saw
- ☐ an 8.5 and 10mm drill bit
- ☐ a tube of Loctite threadlocker or locktite quicktape
- ☐ a clean dry work area near your vehicle
- ☐ a retractable blade or sharp knife
- ☐ a wire "hooking" tool (further information provided)
- ☐ a hammer
- ☐ a rivnut gun (tool)

...CONT'D

IMPORTANT WARNING!

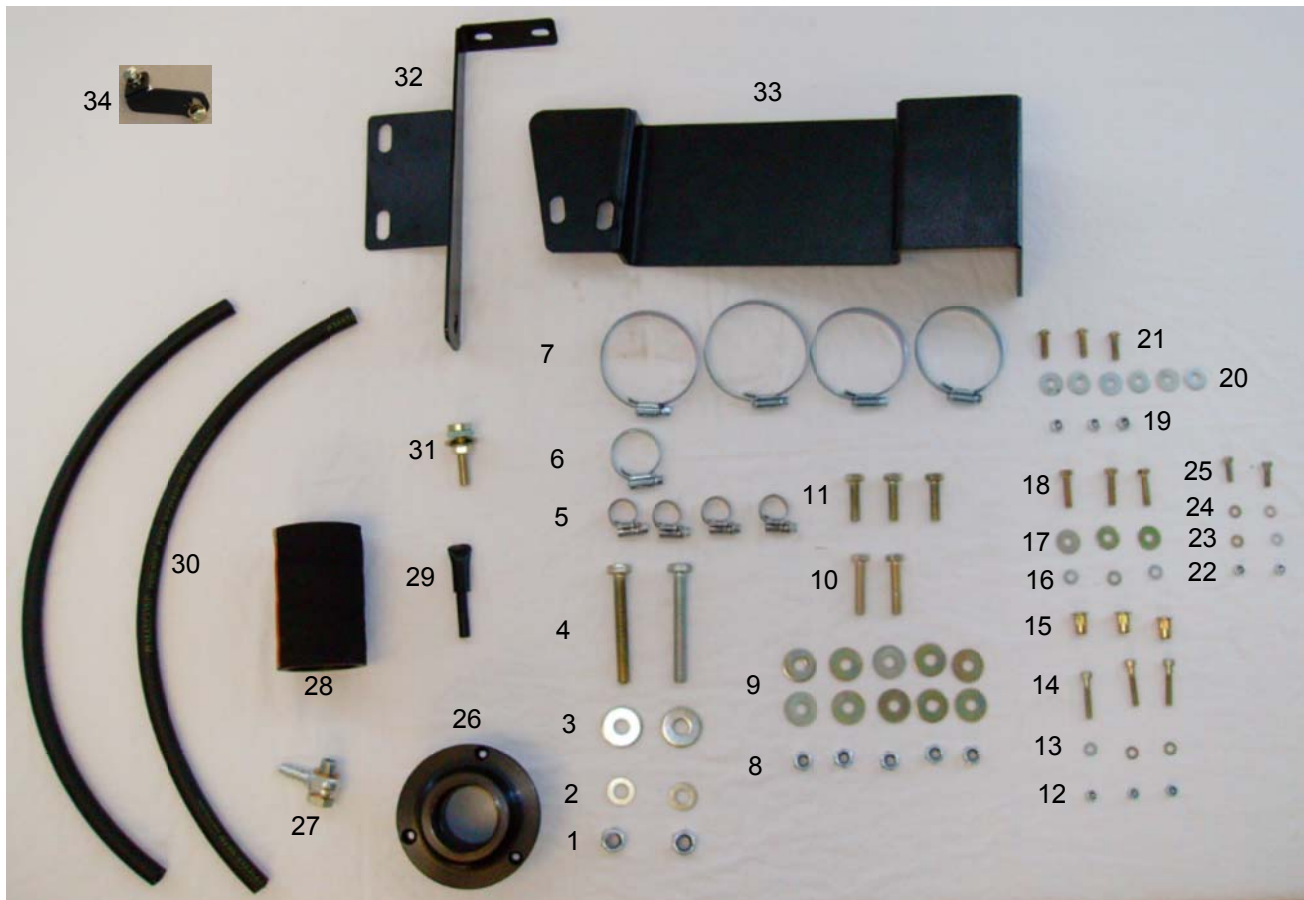
IT IS CRITICAL THAT ALL FRONT RUNNER RACKS AND ACCESSORIES BE PROPERLY AND SECURELY ATTACHED TO YOUR VEHICLE. IMPROPER ATTACHMENT COULD RESULT IN AN AUTOMOBILE ACCIDENT, AND COULD CAUSE SERIOUS BODILY INJURY OR DEATH TO YOU OR TO OTHERS. YOU ARE RESPONSIBLE FOR SECURING THE RACKS AND ACCESSORIES TO YOUR CAR, CHECKING THE ATTACHMENTS PRIOR TO USE, AND PERIODICALLY INSPECTING THE PRODUCTS FOR ADJUSTMENT, WEAR, AND DAMAGE. THEREFORE, YOU MUST READ AND UNDERSTAND ALL OF THE INSTRUCTIONS AND CAUTIONS SUPPLIED WITH YOUR FRONT RUNNER PRODUCT PRIOR TO INSTALLATION OR USE. IF YOU DO NOT UNDERSTAND ALL OF THE INSTRUCTIONS AND CAUTIONS, OR IF YOU HAVE NO MECHANICAL EXPERIENCE AND ARE NOT THOROUGHLY FAMILIAR WITH THE INSTALLATION PROCEDURES, YOU SHOULD HAVE THE PRODUCT INSTALLED BY A PROFESSIONAL INSTALLER SUCH AS A QUALIFIED GARAGE OR AUTO BODY SHOP.

1

GET ORGANISED

...CONT'D

Below is an image of what you will receive in your packing kit...



- | | |
|------------------------------|---|
| 1. 2 x M10 Nylock nuts | 18. 3 x M6 x 25mm bolts |
| 2. 2 x small M10 washers | 19. 3 x M6 nyloc nuts |
| 3. 2 x large M10 Washers | 20. 6 x M6 large washers |
| 4. 2 x M10 x 80mm bolts | 21. 3 x M6 x 20mm button heads |
| 5. 4 x 8mm hose clamps | 22. 2 x M5 nyloc nuts |
| 6. 1 x 13mm hose clamp | 23. 2 x M5 spring washers |
| 7. 4 x 50mm hose clamps | 24. 2 x M5 washers |
| 8. 5 x M8 nyloc nuts | 25. 2 x M5 x 16mm bolts |
| 9. 10 x M8 large washers | 26. 1 x filler neck |
| 10. 2 x M8 x 40mm bolt | 27. 1 x banjo bolt with copper washers |
| 11. 3 x M8 x 30mm bolt | 28. 1 x 100mm 50mm hose |
| 12. 3 x M5 nyloc nuts | 29. 1 x dust cap |
| 13. 3 x M5 washers | 30. 2 x 8mm x 500mm fuel hose |
| 14. 3 x M5 x 30mm cap screws | 31. 1 x banjo bolt with nut and fibre washers |
| 15. 3 x M6 rivnuts | 32. 1 x front tank support bracket |
| 16. 3 x M6 spring washers | 33. 1 x seat belt support bracket |
| 17. 3 x large M6 washers | 34. 1 x fender support tank tab |

B)

Familiarize yourself with the parts and then step away from the work area and read through these instructions from beginning to end. Grab a cup of coffee and take a moment. A little prep now may save you a lot of time later

2

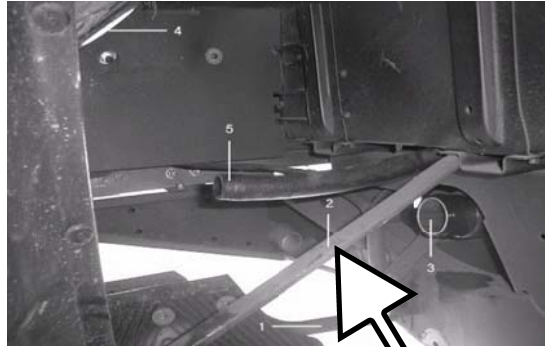
PREPARING YOUR LAND ROVER

NOTE:

This tank is designed for most of the Land Rover 110 models. It fits all the models excluding the 2.8i petrol the TDI, and the high capacity. The differences in the tank install are negligible, however there are some differences in the preparation of the vehicles that are worth mentioning. Also, if you have left over parts don't be concerned, there will be extra items that you will not use for your installation.

A)

The tank is going to be installed in the cavity at the back right hand side of the vehicle. On all the 110 vehicles the following is applicable. Remove the mud flap bracket, fender support bracket, filler neck, rubber filler hose and the breather hose clamp.



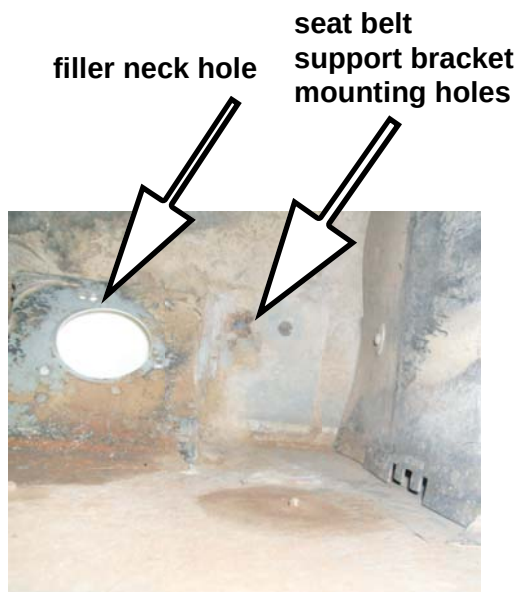
Fender bracket

B)

Some of the 110 Land Rover vehicles have studs protruding into the cavity where the tank will be positioned. They have no structural purpose. Use your grinder to, cut these studs flush with the vehicles fenders/nuts to ensure they do not chaff with the new tank.

C)

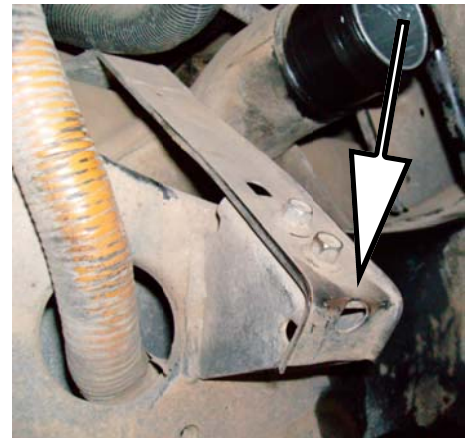
The older TD5 vehicles have a seat belt support that needs to be removed. The image is taken from below the vehicle pointing upward. The seat belt support bracket is located just rear of the filler neck hole. Remove this bracket.



D)

The bracket which supports the original tank needs to be modified. Using your hammer, hit the end of the bracket downward so that it becomes flush with itself. This will prevent it from interfering with the tank.

original tank support bracket



E)

Step E is applicable to the 110 Puma vehicles only.

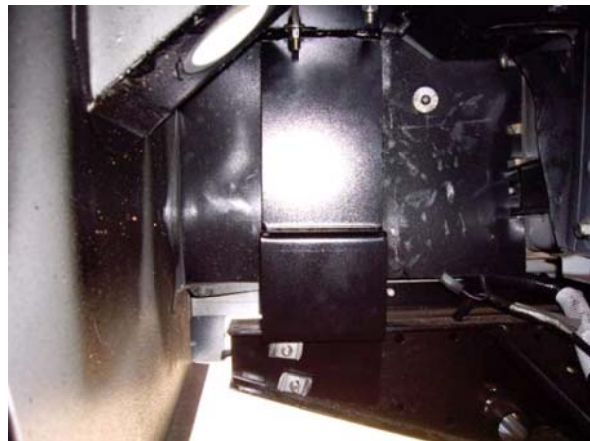
The seat belt support bracket needs to be removed. From the under side of the vehicle (see section 2 step 3) loosen the nuts on the support bracket. Now, from inside of the car remove the studded plate from the right hand side of the car.



Grab your 16 socket and place the socket over the head of the stud (stud must protrude from the other side of the plate). Position the plate with the socket in the vice and tighten the vice to pop the studs out of the plate.



A replacement seat belt support bracket (supplied) now needs to be fastened to the vehicle. Line the top of the bracket up with the existing holes. The holes on the lower portion of the bracket will line up with the holes in the rear bumper. Drop item 10 from inside the vehicle through both brackets, and fasten using the washers and nyloc nuts. Fasten the lower portion of the bracket using the long M10 fasteners (item 4). Ensure that the outside of the vehicle has the larger M10 washers (item 3), and the inside has the small washers (item 2).



There is a fender support bracket that needs to be modified. Using your grinder cut the bracket just above the hole to split the bracket into two pieces. Using your hammer, hit the bracket so that both pieces are flush with the body of the vehicle.



F)

The safety support bracket must now be modified. Clamp the 'flat' portion in the vice, and using your hack saw cut the tube off as close to the plate as possible. The modified plate now needs to be mounted as it originally was, with the supplied replacement support bracket on to it.



G)

The original rubber filler pipe needs to be modified. Using your blade, cut 100mm of either end of the rubber pipe (elbow shape). The straight part you cut is the portion you will use, the other portion is scrap



H)

A hole needs to be drilled into the existing tank and the balance fitting needs to be installed.

Drain your fuel tank. Use your 8.5mm drill bit and drill a hole in the bottom right hand side of the tank (looking from the right hand side of the vehicle).



I)

A tool is required to be made for this process. Make the tool from wire approximately 1.5mm in diameter and 800mm long



J)

You will need around 1m of thin wire. Bend a small kink into the wire and slide the balance fitting onto the wire with one fibre washer. The stud of the balance fitting must point towards the kink. Drop the wire with the fitting into the top of the original fuel tank. Now, using your tool made in step G pull the fitting through the drilled hole. Fasten using the other fibre washer and the supplied nut.



K)

On the under side of the rear bumper there are three hexagonal holes. The supplied rivnuts (item 15) need to be inserted into these holes using your rivnut gun.



3

INSTALLING YOUR FUEL TANK

A)

The tanks front support bracket needs to be installed. Remove the bolts and nuts from the sway bar (stabilizer) bracket. The top hole in the bracket will line up with an existing hole in the chassis. Use your 8.5mm drill bit to increase the diameter of this hole. Fasten this bracket with the M8 bolts nuts and washers supplied (item 11). use the original bolts from the sway bar to fasten the lower portion of the bracket



B)

The 100mm piece of original pipe you have put aside can be clamped onto your original tanks filler inlet. Ensure you have an extra clamp on the pipe. Also, clamp the supplied 50mm hose pipe onto the inlet of the auxiliary tank.



C)

The tank can now be lifted into position. You will need a friends help. Once the tank is lifted into the cavity, start by pushing the tanks 'side outlet port' onto the 100mm pipe on the original tanks input. Also, insert two M8 bolts (item 11) with washers (item 9) through the front tank bracket. Fasten with nyloc nuts but do not tighten.

The back brackets three mounting holes will line up with rivnuts you have already inserted. Using the M6 spring washers (item 23), washers (item 24) and bolts (item 25) fasten the back of the tank.

Ensure that all the pipes line up and torque the nuts and bolts sufficiently.



D)

The filler neck (item 26) now needs to be installed. Look through the filler hole in the body of the vehicle. The tanks input will line up. Add a clamp onto the pipe which is already clamped to the tank.

Drop the filler neck into the existing hole in the body. Use a pen to mark the three hole locations. Remove the filler neck and drill the holes using a 5mm drill bit. The filler neck must be pushed into the pipe from the tank, and fastened using the M5 cap screws (item 14) washers and nyloc nuts. Remember to tighten the clamp on the filler pipe.



E)

The breather pipe needs to be routed to the front of the tank. Manoeuvre the pipe under the chassis as shown below.



F)

The 110 Puma has an overflow pipe coming off the original tank which needs to be extended. Use one of the fuel hoses supplied (item 30) and clamp it to the overflow pipe just after the vapor valve. Use the supplied clamps to secure it. Route and cable tie the hose next to the breather pipe (step E). Insert the dust valve (item 28) into the end of the pipe and fasten using the supplied clamp.



G)

Wrap the banjo bolt (item 26) with lock tite and fasten the bolt so it faces downwards. Grab the supplied 13mm fuel hose (item 31) and connect the banjo bolt to the balance fitting (item 30) in the original tank. Ensure both sides of the hose are clamped (item 5) and that the pipe is routed underneath the chassis.

G)

Using your knife. Trim the mudguard to size. Use the mudguard bracket welded to the tank as reference. When the size is right drill three holes into the mudflap, and secure it to the bracket using the M6 button heads (item 21), washers and nyloc nuts.

There is a 'tank tab' supplied which connects the mudguard bracket to the fender. Fasten the tab to the mudguard bracket using the M5 fasteners (item 25, 24 and 23) and using a marker, mark where a hole needs to be drilled on the flange of the fender. Drill the hole and fasten the tab using the other M5 fasteners.



H)

All the fasteners need to be double checked and ensure that everything is tight and secure.

4

IMPORTANT NOTE!

On the front face of the fuel tank there is a stainless steel BSP fitting. This fitting is supplied so that if you ever decide to add another tank (under the belly) you will not have to purchase a different fender tank. The system is modular.

5

CHECK OUT OUR WEBSITE OR DEALER TO PURCHASE OTHER ACCESSORIES FOR YOUR VEHICLE

WWW.FRONTRUNNEROUTFITTERS.COM

6

TAKE A TRIP

A)

After your first adventure, check the tension on all the bolts and screws and re-tighten where necessary

B)

Go on many more adventures with your new extended fuel capacity. Make sure to check your fasteners periodically.

➔ **Modifying your vehicle involves some risks and may void certain aspects of your vehicle's warranty.**

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