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# FITTING INSTRUCTIONS

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## PART NUMBER:

TR78S - 140L

TR78L - 155L

## DESCRIPTION:

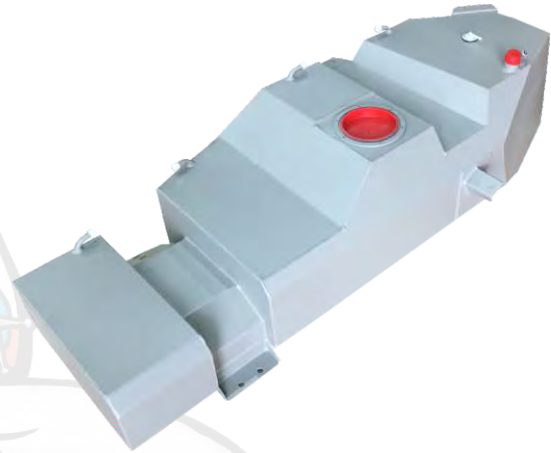
Long Ranger Fuel Tank

## MODEL FITMENT:

Nissan Navara NP300 2015 ON

All 4WD Diesel Models

Including Single, Extra and Dual Cab



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## GENERAL NOTES

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- a) Fitting time is approximately 2.5hrs. No major vehicle modifications are required. This LONG RANGER tank locates under the vehicle in place of the standard tank.
- b) A hoist is not essential but will speed the job up significantly.
- c) The original filler, fuel level sender unit and pick-up unit are reused in this installation. Extreme care and cleanliness is recommended when handling fuel level sender and submerged fuel pump units. Inspect any components that are to be reused from the original tank installation for serviceability and replace any item found to be defective.
- d) Check if the vehicle owner wants to retain the original tank and any associated parts.
- e) Both of the TR78 tanks have an upwards taper on the leading edge to assist in maximizing ramp over clearance. The main body of the TR78S offers approximately 20mm higher ground clearance than the OEM tanks bash plate and has its final mounting position 5mm higher than the chassis. The TR78L main body is approximately 10mm lower than the OEM 4wd tank bash plate and 30mm lower than the chassis.
- f) LONG RANGER tanks are coated with a high-performance primer. For added protection, a topcoat may be added. If the vehicle has been rustproofed, it is suggested that the tank (and any changes made to the vehicle during fitting) be touched up after installation.
- g) The trip meter distance to empty will no longer work as intended by the manufacturer.
- h) Ensure all fasteners are torqued to correct tension as per the table in the installation kit

Observe safety precautions during the installation of the LONG RANGER fuel tank

# PARTS LIST

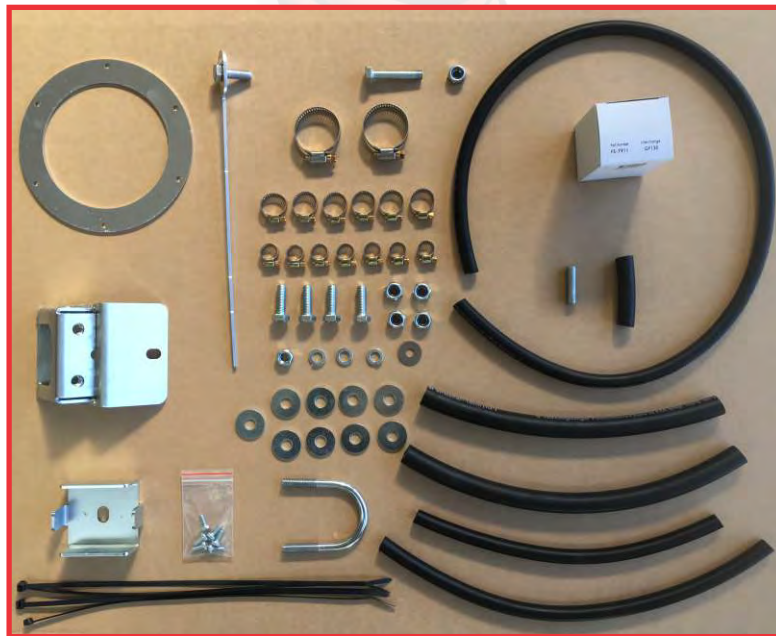
QTY	TANK
1	LONG RANGER Tank #TR78S (37KG)
1	LONG RANGER Tank #TR78L (38KG)
1	Plastic Bag 550mm Long
1	Fitting Instructions
1	Warranty Information and Return Card
1	LONG RANGER Sticker
1	Owner's Manual Update Sticker

QTY	HARDWARE
1	Flat Washer M8 x 24mm S/S
4	Bolt M10 x 30mm
4	Self-Locking Nut M10
9	Flat Washer M10 x 30mm 2.5mm
1	Plain Nut M10
3	Spring Washer M10
1	Setscrew Fine M10 x 1.25P x 50mm
1	Self-Locking Nut Fine M10 x 1.25P
6	Screw M5 x 12mm
6	Hose Clamp #MH4
7	Hose Clamp #MH6
2	Hose Clamp #HS20

QTY	MANUFACTURED
1	Clamp Ring #TR77CR
1	Cross Member Clamp Plate #TR78B1
1	LHS Aux Mounting Bracket #TR78B2
1	U-Bolt M10 x 75mm x 54mm #FAUBOLTA48
1	Tag Bolt M10 x 30mm #TR78SF19
1	Metal Blanking Plug 10mm

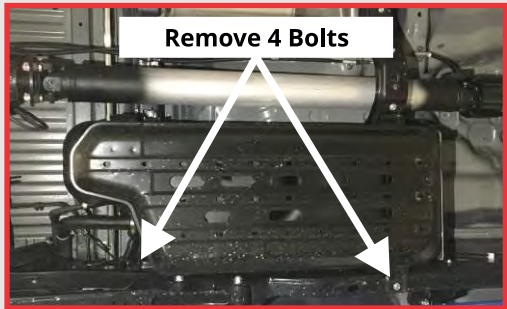
QTY	ELECTRICAL
4	Cable Tie 5mm x 300mm

QTY	FUEL
1	12mm x 285mm (Link Breather - Front)
1	12mm x 330mm (Link Breather - Rear)
1	10mm x 60mm (Breather Block Off)
1	8mm x 300mm (Check Valve to Filter)
1	8mm x 1000mm (Filter to Chassis)
1	8mm x 400mm (Rollover Valve to Check Valve)
1	Inline Fuel Filter #FS-7911 (Rollover Breather Line)
1	Factory Fitted in Top of Tank-Rollover Valve #VAROLLO7
1	Factory Fitted in Top of Tank-Rollover Valve Grommet #VAROLLO8



FASTENER SIZE	RECOMMENDED TORQUE (Nm)	RECOMMENDED TORQUE (lbft)
M6 Class 8.8	9 Nm	7 lbft
M8 Class 8.8	22 Nm	16 lbft
M10 Class 8.8	44 Nm	32 lbft
M12 Class 8.8	77 Nm	57 lbft
M10 U-Bolt	17 Nm	12 lbft

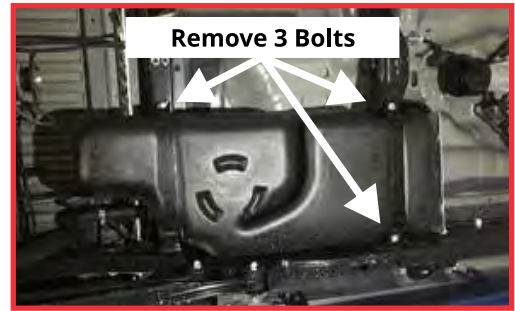
# INSTALLATION GUIDE

1. Take a few minutes to read through this installation guide before proceeding.
  2. Check that all items listed in the LONG RANGER kit have been received, and that nothing has been damaged in transit.
  3. The LONG RANGER tank has been cleaned and sealed at the factory, it is recommended that its interior be thoroughly checked just prior to fitting the fuel pickup unit as an added precaution against blocked filters and/or fuel pump damage.
  4. If parts are missing or damaged, if foreign matter is found in the tank, or if any problems arise during installation, contact the factory office without delay for advice phone (02) 4953 3288, or email [fitting@thelongranger.com.au](mailto:fitting@thelongranger.com.au)
- Our web page also contains an FAQ, so some of your questions may already be answered.*
5. Apply the new owner's manual update sticker to section 9-4 (fuel recommendation) of the vehicle manual.
  6. Prepare the vehicle for fitment in a safe place on level ground, if using a hoist ensure all the necessary safety precautions are taken. If required drain the fuel from the factory fuel tank into a clean fuel safe container. Open the fuel door and remove the fuel cap.
  7. Mark the position of the tail shaft on the flanges. Remove the tail shaft from the vehicle by unbolting the 4 bolts at the diff flange end and sliding the spline end out of the transfer case-keep bolts for re-fitting.
  8. Remove the 4 bolts holding the fuel tank stone tray in place, remove stone tray.
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9. Loosen the hose clamps on the main filler and fast fill breather and disconnect them from the filler neck inlet pipes.
  10. Follow the hard breather line to the point where it pushes into the chassis and disconnect the fuel system breather from the chassis.

# INSTALLATION GUIDE

**11 .** Support the tank with an appropriate stand. Remove the 3 bolts from the tank mounting straps. Lower the tank approximately 100mm, taking care not to stretch or break the fuel lines or wiring harness.

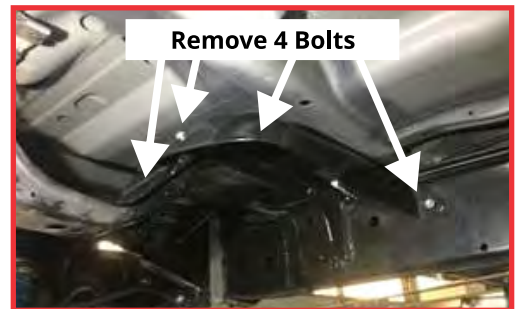
*Note: Keep 1 x short M10 strap bolt to re-use*



**12.** Mark the 2 x fuel lines to help with re-connecting. Disconnect the fuel lines and sender wiring harness from the top of the tank (squeeze and pull to disconnect fuel lines). Carefully lower the tank completely and remove from the vehicle.

**13 .** Remove the 4 bolts holding the upper metal tank guard and remove from vehicle.

*Note: Keep 2 x M8 factory bolts for re-use later*

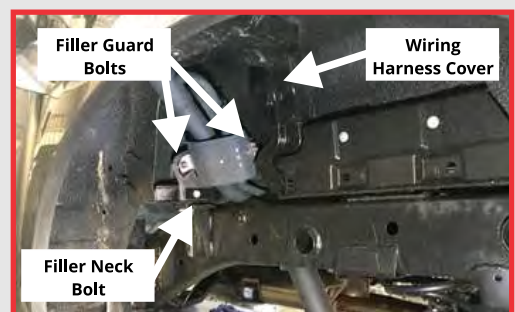


**14.** Working in the passenger side rear wheel arch remove the 2 x M6 bolts holding the filler guard in place. Remove the 1 x M6 bolts holding the filler neck assembly in place. Cut the cable tie off the breather tube

*Note: Keep all fasteners and cover plate for re-fitting later.*

**15.** Remove the plastic wiring cover by taking out the 4 x plastic body clips. Using long nose pliers squeeze the middle of the 4 x square retaining clips to release them. Remove the top cover piece completely from the vehicle, the lower section is tied to the wiring harness and can be moved but remain in the vehicle

*Note: Retain all fasteners and cover for refitting later.*

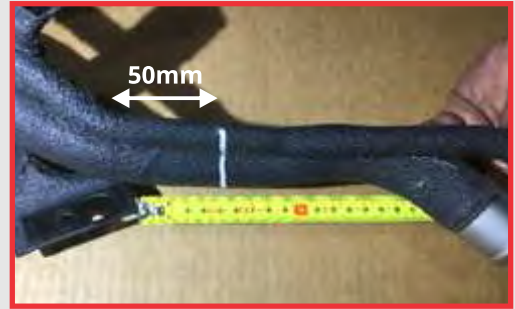


**16.** Press the rubber filler neck surround out of the wheel arch and remove the entire assembly from the vehicle.

*(Note:- on some vehicles clearance between the body and chassis makes it difficult to remove the filler assembly, cutting the breather off at the lower elbow in the vehicle will make this easy to remove where necessary)*

# INSTALLATION GUIDE

**17.** Measure 50mm from the filler neck mounting bracket and mark a line on the main filler and the fast fill breather. Cut the lower section off at the line, sand off any body deadener on the remaining section to approximately level with the mounting bracket.



**18.** Remove the rubber filler and breather hoses from the factory fuel tank ready for modification.

*Note: Discard all the factory hose clamps*

**19.** Modify the filler and breather hoses by cutting 30mm off the short elbow end of the main filler hose & cutting 25mm off the long elbow section of the fast fill breather hose. Set aside for re-assembly later.



**20.** Remove the factory fuel tank breather line from the sender unit.

*Note: This is a squeeze and pull clip.*

# INSTALLATION GUIDE

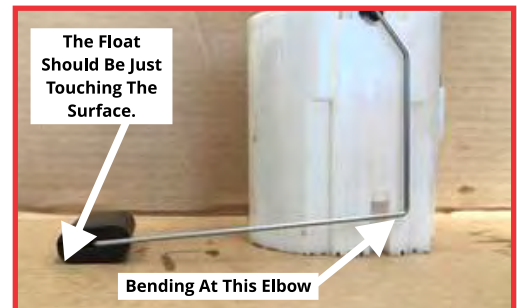
**21.** Cut the factory hard lines off the check valve on the factory breather system. Keep the check valve for re-use later.



**22.** Clean around the sender ring on the factory tank to prevent dirt entering the fuel. Remove the sender clamp ring by tapping in a counter-clockwise direction until free.

**23.** Carefully remove the sender and O-ring from the factory tank. Gently clean the O-ring ready for installation on the new LONGRANGER tank.

**24.** With the sender unit sitting on a flat surface gently bend the float arm downwards at the 90 degree elbow joint. The float should just touch the surface the sender unit is sitting on.



**25.** Fit the O-ring and sender unit to the new LONGRANGER tank. Correct orientation is achieved when the float arm is facing the driver's side of the tank.



**26.** Align the sender clamp ring and fit using 6 x M5x12 Pan/Phil screws. Tighten screws in a star pattern to ensure even tension and a good seal.

**27.** Fit supplied 400mm section of 8mm fuel line to the LONGRANGER rollover valve with the supplied MH4 hose clamp.

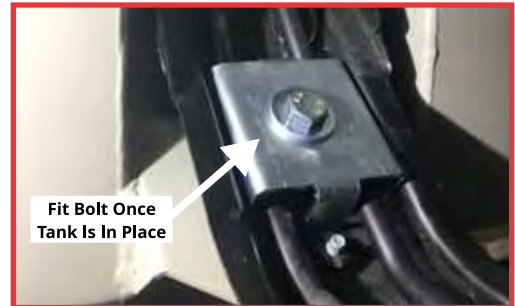
**28.** Block off the breather line on the factory sender unit with the supplied 60mm hose section and bung. Secure in place with supplied MH4 hose clamps. The breather is the single outlet facing forward.

# INSTALLATION GUIDE

**29.** Using 1x M8 and 1x M10 factory bolt that was saved earlier fit the front passenger side auxiliary mounting bracket (#TR78B2) to the chassis.



**30.** Sit the cross member clamp plate (#TR78B1) in place ready to be bolted in when the tank is lifted into place

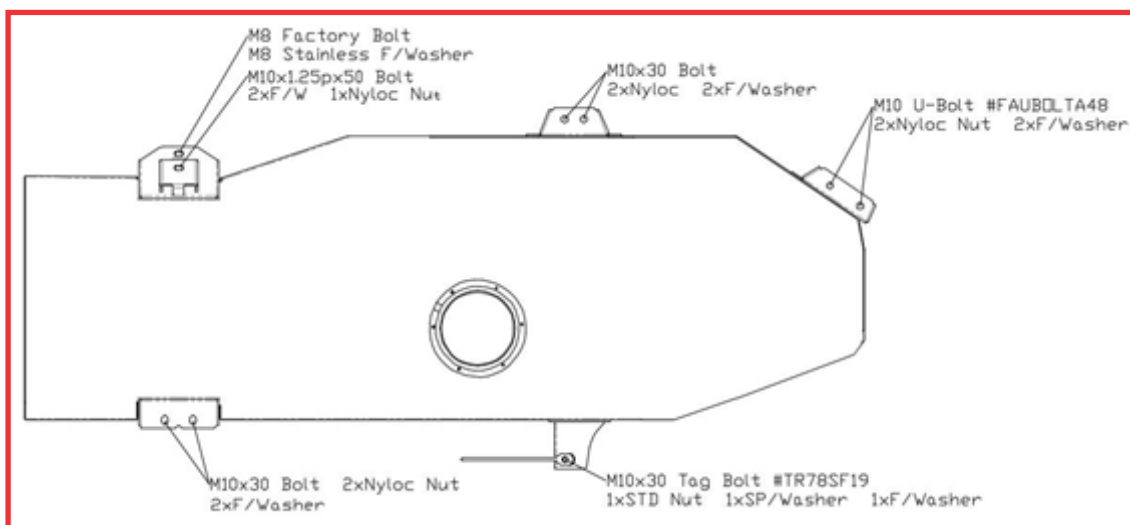


**31.** With the help of another person lift the LONGRANGER tank under the vehicle and into position. Support with an appropriate stand about 100mm lower than the final position. Re-connect the 2 x fuel lines and wiring harness.

*Note: ensure correct fuel line connection as per earlier markings and that the clips are correctly seated.*

**32.** Raise the tank into its final position and bolt into place as per the bolting diagram.

*Note: With the tank supported it is far easier to start all the bolts before tightening any*



# INSTALLATION GUIDE

**33.** The middle drivers side mount needs to have 2 x 10.5mm holes drilled in the cross member. Using the mid passenger side mount holes as a guide drill and rust treat the exposed metal. Bolt in place using 2 x M10 x 30mm bolts, flat washers & self-locking nuts.

*Note: Care should be taken as there is a wiring harness in the cross member. This should be done after all other bolts are aligned and tightened*

**34.** Tension all the mounting bolts as per the supplied table.

**35.** Fit the 2 x breather link hoses to the driver's side of the LONGRANGER tank using the supplied 12mm fuel line and MH6 hose clamps *Note: front line is 285mm rear is 330mm.*

**36.** Re-fit tail shaft to the vehicle ensuring correct alignment as marked earlier and tighten to correct factory specifications.

**37.** Fit the now modified rubber filler and breather hoses to the LONGRANGER tank with the 2 short elbow ends towards the tank. Secure in place with supplied MH6 & MH20 hose clamps. *Note: It is easiest to attach the fast fill breather first*

**38.** Fit the main filler assembly to the now fitted rubber hose sections and mount back into the factory filler surround, secure in place with the supplied MH6 and MH20 hose clamps. Re-fit the factory M6 filler neck mounting bracket bolt

**39.** Using the supplied 300mm section of 8mm fuel hose attach the factory check valve at one end and the supplied inline filter at the other. Secure with 2 x Mh4 hose clamps.

*Note: ensure the correct orientation of both the check valve and filter, they will both be fixed to the hose at their largest diameter ends.*

**40.** Attach the supplied 1000mm section of 8mm fuel hose to the other end of the inline filter at the narrow end, secure with MH4 hose clamp.



**41.** Locate the 400mm hose section fitted to the rollover valve earlier, pull it between the chassis and body, connect the factory check valve, hose and filter section to rollover valve hose, secure with MH4 hose clamp

# INSTALLATION GUIDE

**42.** Route the breather line up the filler neck to create an “s-bend” effect and cable tie in place. . Route this hose over the chassis to the inboard side of the chassis rail, over the top of the coil tower and push into the open hole in the chassis.



**43.** Re-fit the factory filler guard using the 2 x M6 factory bolts.

**44.** Re-fit the factory wiring harness covers. Clip in the square mount tabs first then install the 4 x body clips.

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# OPERATING PROCEDURE

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- a)** The LONG RANGER tank will fill in a similar fashion to the tank it replaces, but the operator has the option of carrying a substantially larger quantity of fuel.
- b)** Due to the different shape of the LONG RANGER tank the gauge will measure a larger quantity of fuel and will remain on FULL for a longer distance before slowly moving to EMPTY.
- c)** The trip computer with distance (range) to empty will no longer accurately show the distance left to travel. The computer still thinks the tank only has 80lt and will not give a larger range reading with the new tank installed. It is suggested that the readings be cautiously interpreted along with the gauge until familiar with the new readings. As a rough guide the range will be approximately twice the distance shown.
- d)** The quoted capacity of the LONG RANGER tank was determined by a bench test. The actual operating capacity may vary slightly from vehicle to vehicle.
- e)** The vehicle manufacturer selected springs without accounting for a bigger fuel tank. Several suspension modification options are available.
- f)** The LONG RANGER tank is a premium quality accessory that will provide many years of outstanding service provided that the Care and Maintenance items listed below are taken care of each time the vehicle is serviced.

*Hand these instructions, together with the Warranty Registration card and warranty information, to the owner. Neatly apply the LONG RANGER sticker to the rear bumper or window.*

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# CARE AND MAINTENANCE

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- 1.** After the first 1,000 kilometers, clean or replace the fuel filter, check that there is no rubbing or chafing of the tank, fuel hoses or associated components.
- 2.** At each of the vehicle manufacturer's recommended services, check all fastenings for the correct tension, that rust preventative has been correctly applied where applicable, release the tank drain plug and confirm that there is no water present, and replace the fuel filter according to manufacturer's recommendations.