ARB FRONTIERTANK

Part Number:	**TAD101**
Product Description:	**FRONTIER SERIES POLYMER FUEL TANK 145L**
Suited to vehicle/s:	**TOYOTA HILUX 4X4 MANUAL & AUTO, ALL CAB VARIANTS, 2005 ON.**

WARNING

NOTE THE FOLLOWING:

- This product must be installed exactly as per these instructions using only the hardware supplied.
- In the event of damage to any component, contact your nearest authorised ARB stockist. Repairs or modifications must not be attempted.
- Do not use this product for any vehicle make or model, other than those specified by ARB.
- This product is designed to carry diesel fuel only and is not suitable for use in petrol applications.
- Do not remove labels from this product.
- This product or its fixing must not be modified in any way.
- The fuel gauge and distance to empty indicator may vary from factory condition.
- The installation of this product may require the use of specialized tools and/or techniques
- It is recommended that this product is only installed by trained personnel
- State regulations vary, please check with your local authorities regarding documentation of this installation.
- Biodiesel fuels do not conform to a mandatory code of practice regarding the chemical make-up of the fuel, therefore use of biodiesel is not recommended in this tank.
- These instructions are correct as at the publication date. ARB Corporation Ltd. cannot be held responsible for the impact of any changes subsequently made by the vehicle manufacturer
- During installation, it is the duty of the installer to check correct operation/clearances of all components
- Work safely at all times
- Unless otherwise instructed, tighten fasteners to specified torque

ARB 4x4 ACCESSORIES

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GENERAL CARE AND MAINTENANCE

By choosing a Frontier Series fuel tank, you have bought a product that is one of the most sought after 4WD products in the world. Your fuel tank is manufactured from a High Density Poly Ethylene (HDPE) product that has superior cross linking qualities. This cross linking polymer provides high impact resistance, high strength and rigidity and will not be effected by harsh chemicals and minerals. It is engineered to be a reliable high quality accessory that represents excellent value. To keep your fuel tank in original condition it is important to care and maintain it following these recommendations:

- It is recommended that following exposure to salt and or other contaminants, the fuel tank mounting straps, and fuel sender mounting area be thoroughly rinsed to prevent corrosion.
- As part of any Pre Trip Preparation, or on an annual basis, it is recommended that a thorough visual inspection of the vehicle is carried out, making sure that all bolts and other components are torqued to the correct specification. Also check that all wiring sheaths, fuel line connectors, and fittings are free of damage. Replace any components as necessary. This service can be performed by your local authorized ARB Stockist.

FITTING REQUIREMENTS

REQUIRED TOOLS FOR FITMENT OF PRODUCT:

BASIC TOOLS KIT	**HOSE CUTTERS**
VEHICLE HOIST OR HYDRAULIC JACK AND STANDS	**LIFTING EQUIPMENT SUITABLE FOR SUPPORTING FUEL TANKS**
FUEL SENDER REMOVAL TOOLS	**FUEL TRANSFER EQUIPMENT**

HAVE AVAILABLE THESE SAFETY ITEMS WHEN FITTING PRODUCT:

Protective eyewear 	**Hearing protection** 

NOTE: 'WARNING' notes in the fitting procedure relate to OHS situations, where to avoid a potentially hazardous situation it is suggested that protective safety gear be worn or a safe work procedure be employed. If these notes and warnings are not heeded, injury may result.

FASTENER TORQUE SETTINGS:

SIZE	Torque Nm	Torque lbft
M6	9Nm	7lbft
M8	22Nm	16lbft
M10	44Nm	32lbft
M12	77Nm	57lbft

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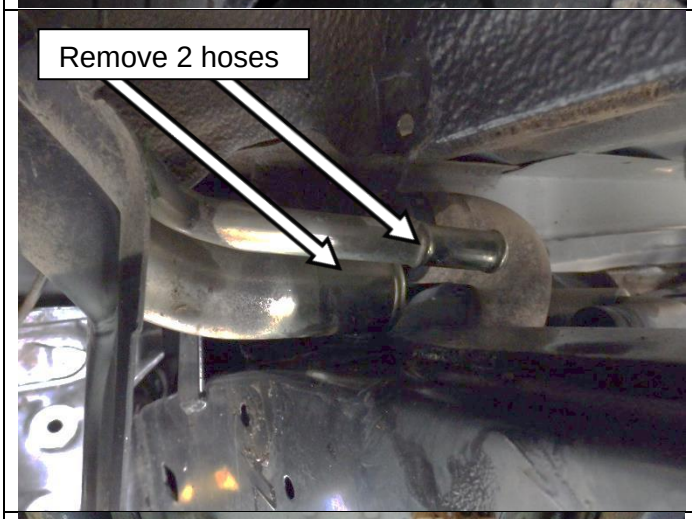
PARTS LISTING-TAD101BK			
APPLICATION.	**PART NO.**	**QTY**	**DESCRIPTION**
FRONTIER SERIES FUEL TANK INSTALLATION	**TAD101**	**1**	**POLYMER FUEL TANK ASSY**
	BP80173	**1**	**RUBBER INSULATOR 80 x 300mm**
	BP80175	**1**	**RUBBER INSULATOR 80 x 400mm**
	BP80154	**1**	**RUBBER SUIT 40mm STRAP x 650mm**
	BP80154	**1**	**RUBBER SUIT 40mm STRAP x 840mm**
	BP80111	**1**	**35mm HOSE BARB JOINER**
	BP80054	**2**	**#24 HOSE CLAMPS SUIT 35mm HOSE**
	BP80060	**1**	**12mm FUEL HOSE @ 400mm**
	BP80053	**2**	**#8 HOSE CLAMP SUIT 12mm HOSE**
	BP80094	**1**	**M5 X 12 SEMS PAN HEAD**
	BP80086	**2**	**HEAT SHIELD PATCHES**
	BP80160	**1**	**GAUGE CAUTION STICKER**
	3789434	**1**	**INSTRUCTIONS**
	BP80224	**1**	**STICKER BUMPER ARB FRONTIER**
TAD101 HILUX 05 ON STRAP KIT	**BP80186**	**1**	**FRONT MOUNT STRAP**
		1	**FRONT MOUNT STRAP ADAPTOR**
		1	**REAR MOUNT STRAP**
		1	**REAR MOUNT STRAP ADAPTOR**
		2	**M12 FLAT WASHER**
		2	**M12 X 1.25 NYLOCK NUT**

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REMOVAL OF ORIGINAL FUEL TANK



Remove plastic trim from inside LHR wheel arch to expose steel fuel filler neck.



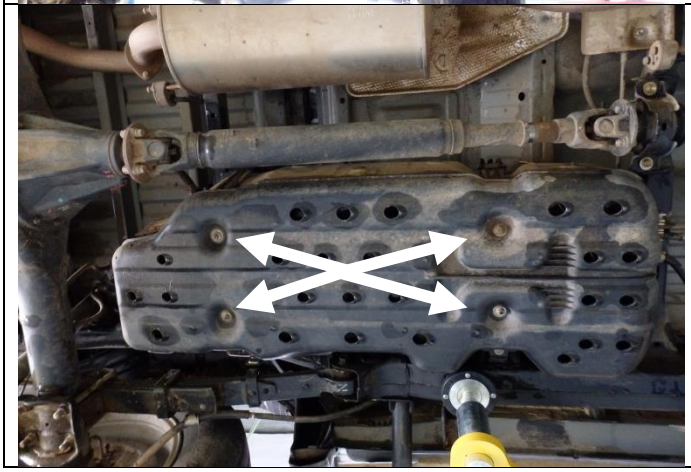
Disconnect 35mm fill hose and 16mm breather hose from the base of the steel fuel filler neck. Retain clamps for the installation procedure.

It may be necessary to remove the M8 bolt securing the filler neck assembly to the chassis rail to disconnect the pipes.



Disconnect 2 fuel hoses from the steel fuel lines, (supply and return) at front of original tank.

Retain clamps for installation process.

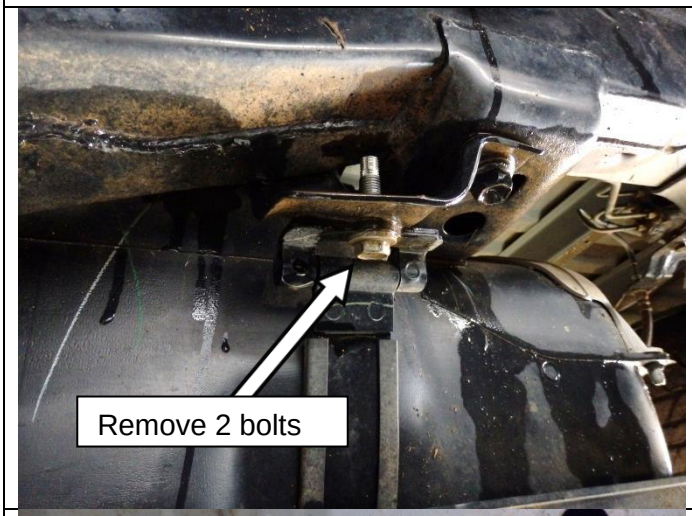


Remove 4 x M8 nuts securing shield to tank mounting straps.

Disconnect the driveshaft from the front of the rear diff and tie across to the RH side of the vehicle.

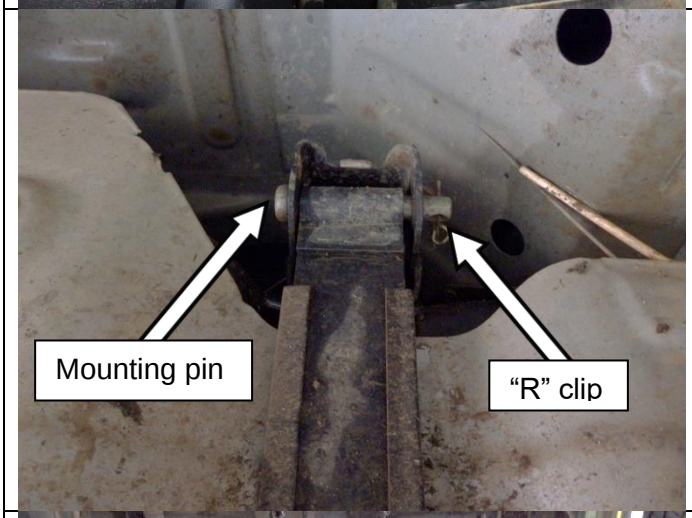
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REMOVAL OF ORIGINAL FUEL TANK



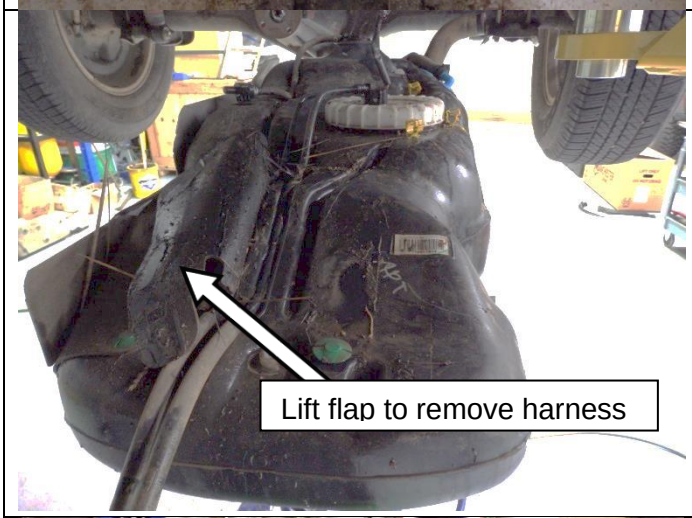
Remove 2 x M10 bolts securing the tank mounting straps to the vehicle.

Retain the bolts for the installation process.



Swing mounting straps down away from the tank. Remove the “R” clip from the inner pivot on the mounting strap and remove the mounting pin by sliding it out of the chassis and strap.

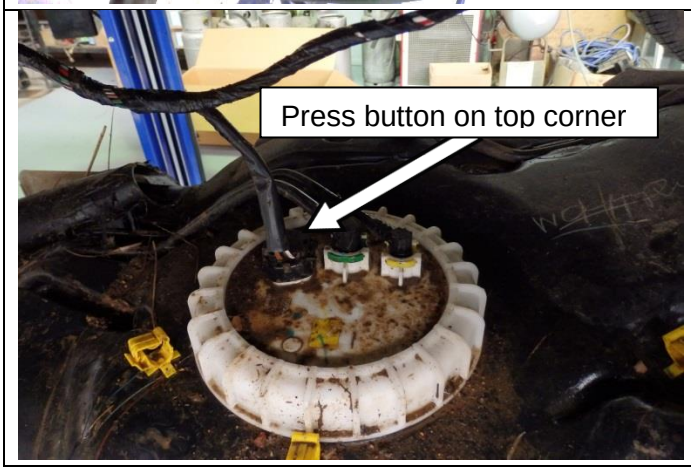
Retain the mounting pin and “R” clip for the installation process.



Whilst lowering the tank remove the adhesive rubber mat from the top of the fuel tank to expose the fuel sender wiring harness.

Remove the fuel sender wiring harness from the recess in the tank.

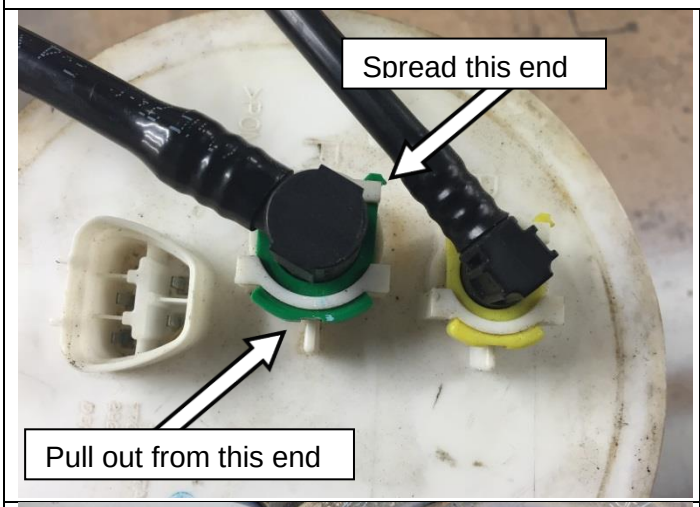
You will also need to detach the wiring harness at the plastic clips at the rear end of the fuel tank.



Disconnect the fuel sender wiring as shown. Press the plastic button on the top of the sender facing the front of the vehicle.

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REMOVAL OF ORIGINAL FUEL TANK



Carefully remove the yellow and green retaining clips from the fuel supply and return hoses.

Spread the open end of the horseshoe and pull the clip out from the other end.

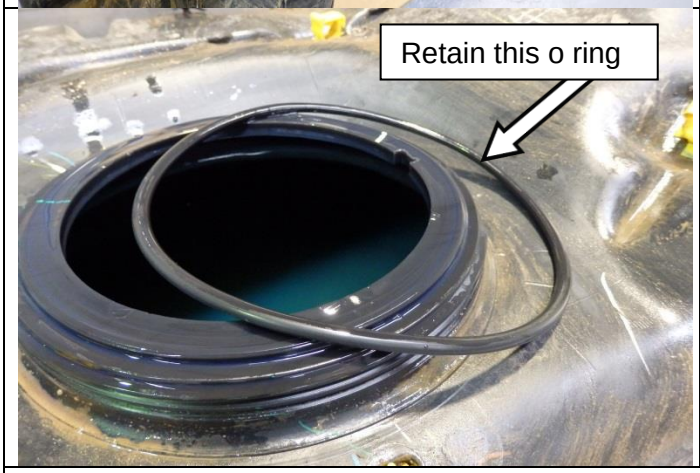


After removing the fuel lines. Remove fuel sender retaining ring by rotating anti-clockwise.

This ring can be difficult to remove and may require mechanical assistance. Various tools can be used for this, options include:

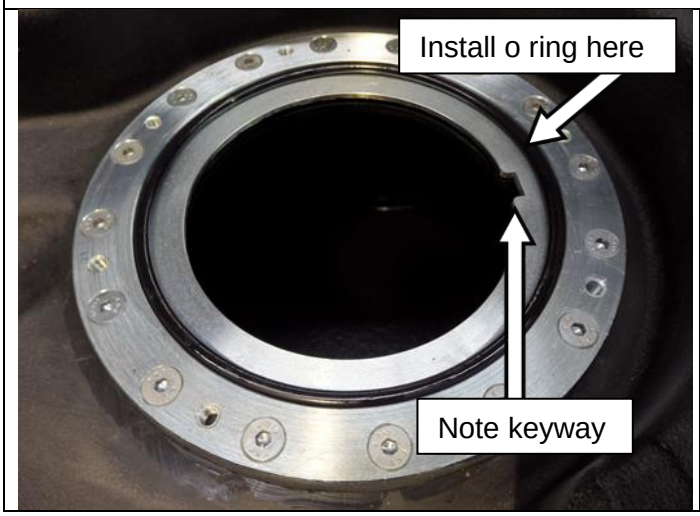
- Large pliers or filter wrench
- Sender tool
- Hammer and screwdriver

Lift fuel sender assembly out of tank and retain for the installation process.



Remove the o ring gasket from the original tank and retain this o ring for the installation process

FITTING PROCEDURE

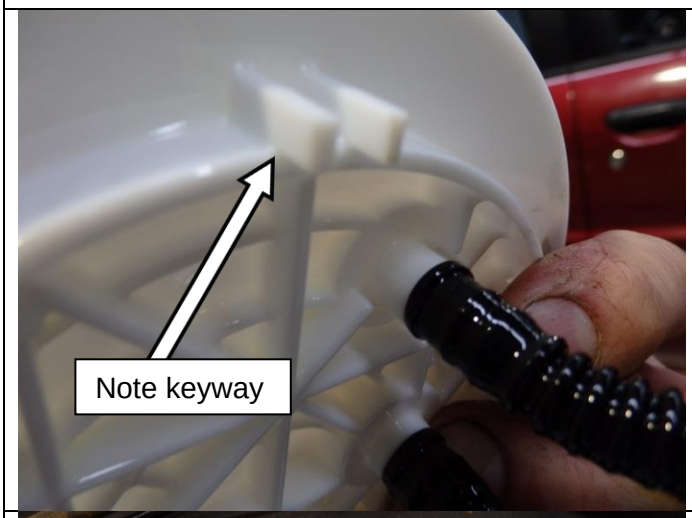


Remove all red protective caps from the Frontier tank.

Install the o ring gasket to the sender mounting flange on the new fuel tank.

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FITTING PROCEDURE



Install the fuel sender into the sender mounting flange.

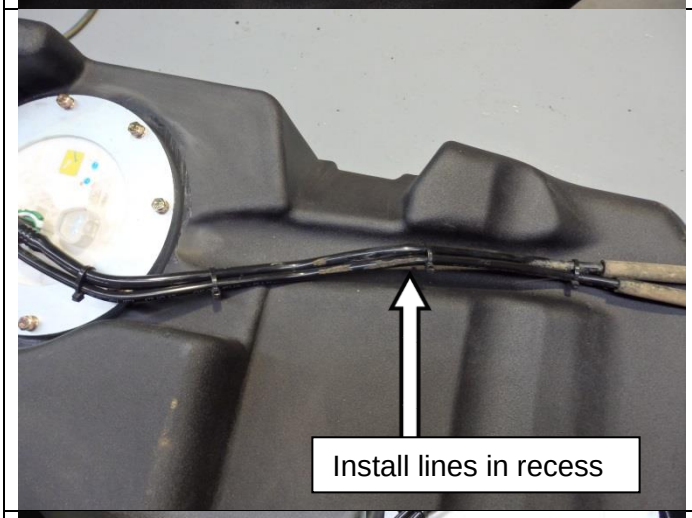
Ensure that the keyway on the underside of the sender top plate is aligned with the keyway in the fuel sender mounting flange.



Push the sender down against the mounting flange and install the sender retaining plate over the top of the sender.

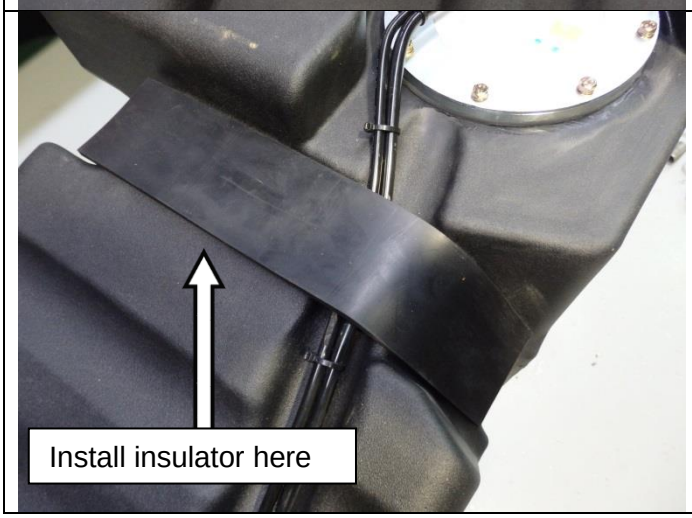
Secure the retaining plate using the 8 M6 x 12 bolts supplied and tighten.

9Nm.



Install the original fuel hoses onto the sender. Secure lines by refitting green and yellow horse shoe clips.

Using cable ties tie the 2 fuel lines together and position them into the recess on top of the frontier tank as shown.



Remove the white cover from the adhesive on the 300mm long insulator pad and install this pad over the fuel lines as shown.

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FITTING PROCEDURE



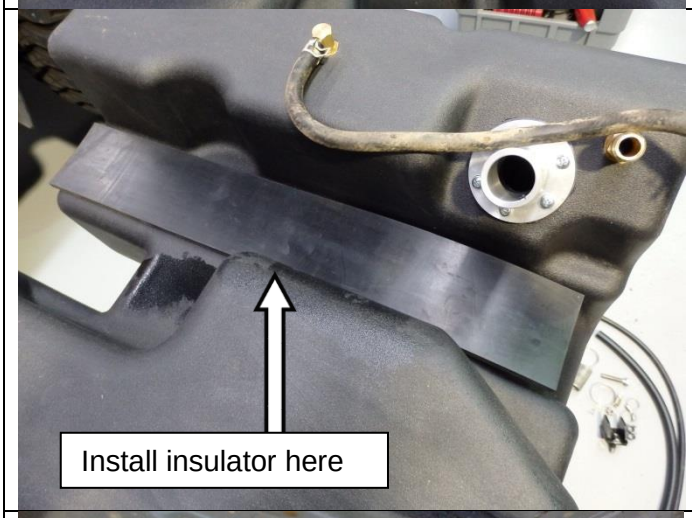
Disconnect the rollover valve breather hose from the original tank.

Retain clamp and hose.

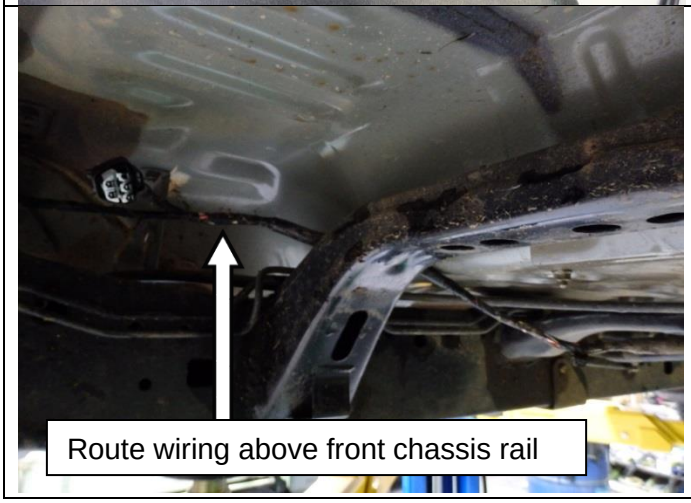


Install rollover breather hose and dust cap removed in previous step to the rollover valve on the new tank as shown.

See notes later in instruction for remounting of this hose.



Remove the white cover from the 400mm long insulator pad and install on tank as shown.



Relocate the fuel sender wiring so that it is positioned above the front fuel tank mounting on the chassis rail.

Remove the 2 x M8 bolts securing the wiring harness to the rear crossmember above the diff. Move wiring harness away from crossmember. The wiring harness will be re-positioned during installation process.

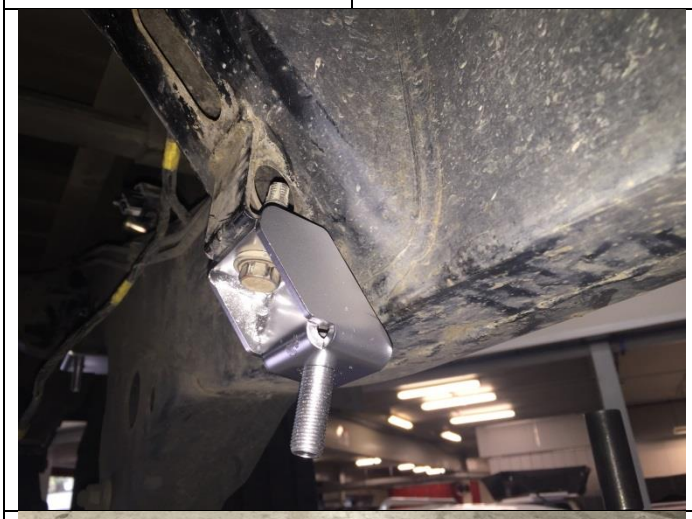
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FITTING PROCEDURE





Remove the original rear strap mount adaptor from the chassis by removing the 2 M12 bolts. Secure the new mount adaptor using the same bolts.



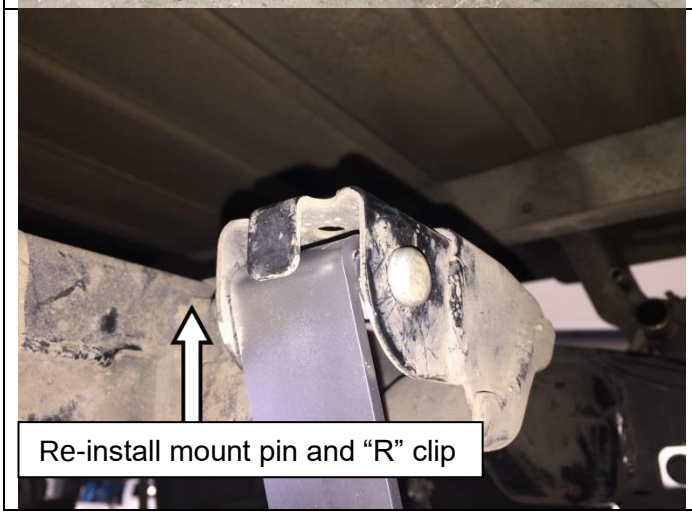
Using the original strap mounting bolt, mount the front strap mount adaptor to the chassis rail as shown.

The exposed thread on the adaptor should be facing down, and positioned under the chassis rail.

44Nm.



Install 2 pieces of tanks strap insulating rubber to the straps as shown.



Raise the fuel tank into the vehicle.

Whilst raising the tank reconnect the fuel sender wiring.

Ensure that the 2 fuel lines are positioned in the recess on top of the fuel tank under the front chassis rail above the tank.

To install 2 the new mounting straps, align the eyelet in the new mounting straps with the holes where the original straps were mounted into the vehicles chassis.

Insert the 2 mounting pins and “R” clips.

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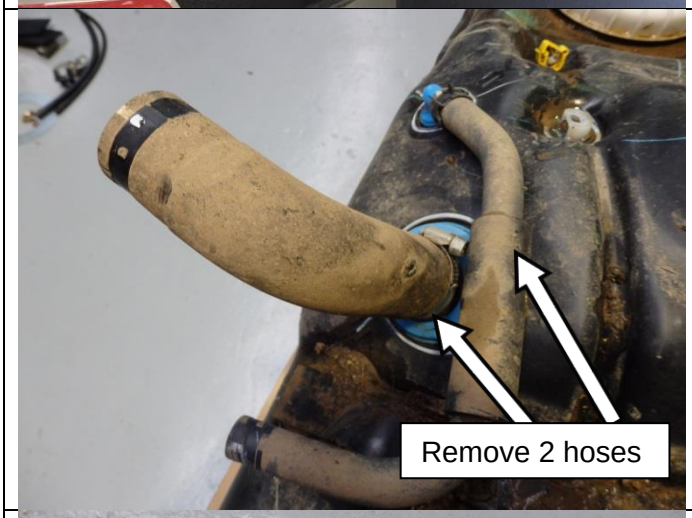
FITTING PROCEDURE



Swing front strap under tank and secure to front strap mount adaptor using the M12 nylock nut and flat washer supplied.



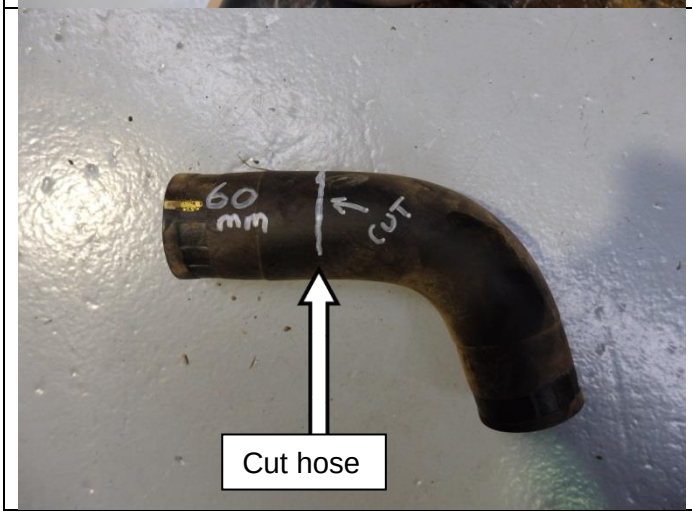
Swing the rear strap under the tank and secure the strap to the rear strap mount adaptor and secure using the M12 nylock nut and flat washer supplied.



Remove 35mm fill hose and 16mm breather hose from original fuel tank.

Retain clamps for installation.

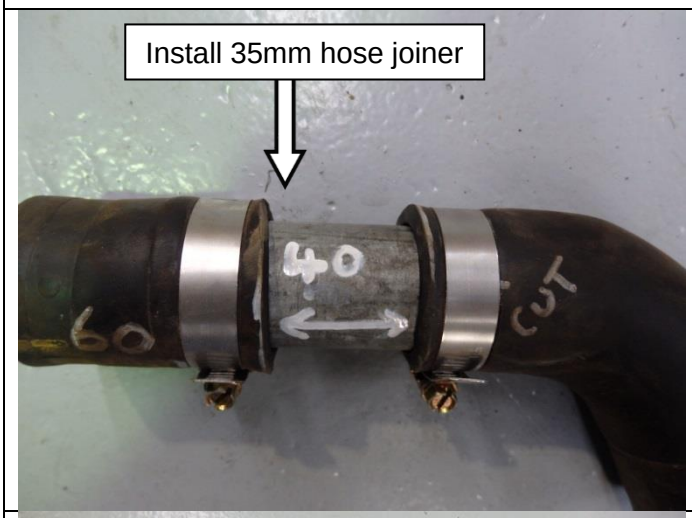
Retain hoses for modification in the next step.



Measure 60mm from fill neck end of hose. Cut hose cleanly and squarely.

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FITTING PROCEDURE



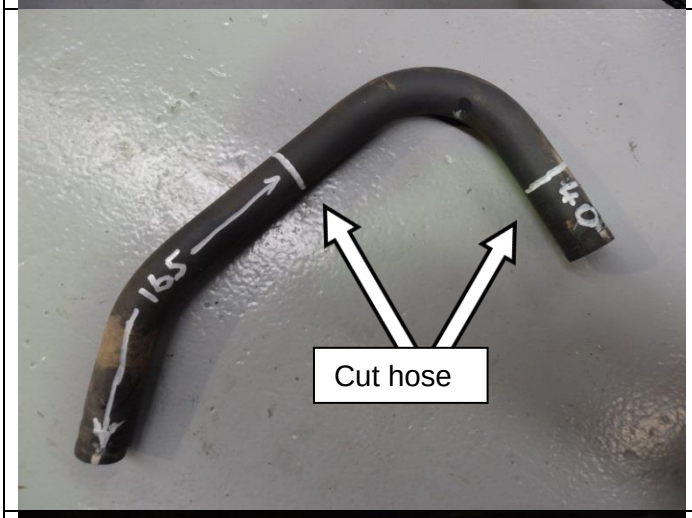
Install 35mm hose barb joiner into cut hose.

Position the hose to obtain a 40mm gap between the 2 cut ends.

Tighten the hose onto the barb using 2 hose clamps supplied in kit.



Remove the protective sleeve from the 16mm breather hose.



Measure 40mm from tank end of hose and cut hose.

Measure 165mm from filler neck end of hose and cut hose.

Retain the elbow section from the middle of the hose.

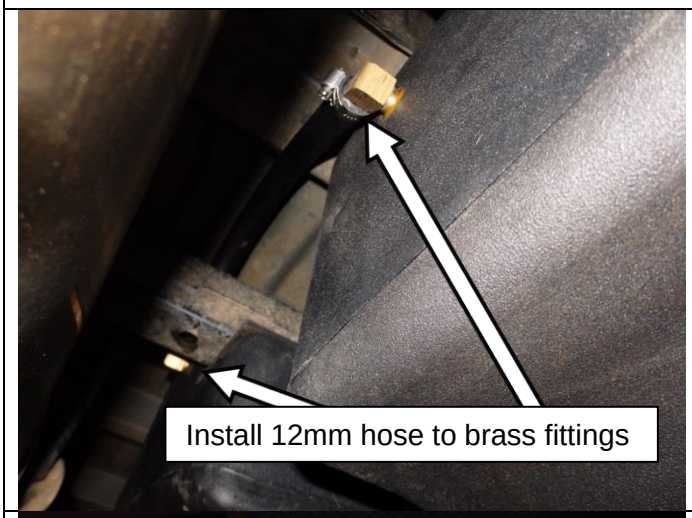


Re-install 35mm and 16mm hoses to filler neck and tank. Secure using clamps retained from tank removal procedure.

Route the rollover valve breather hose up to the fill hoses and secure using a cable tie.

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FITTING PROCEDURE



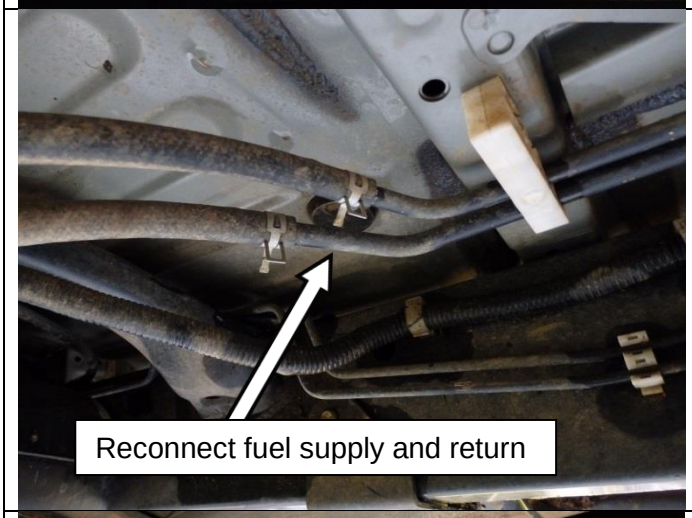
Install 400mm length of 12mm fuel hose to the 2 12mm brass fittings on the RH side of the tank above the driveshaft.

Route the hose above the chassis so that fuel cannot accumulate in the hose.

Secure using the 2 clamps supplied.



Remove the adhesive cover from the 2 heat shield patches supplied in the kit. Install these patches over the 2 brass fittings moulding them in place.



Re-connect the supply and return hoses at the front of the fuel tank and secure using the clamps retained in the tank removal procedure.

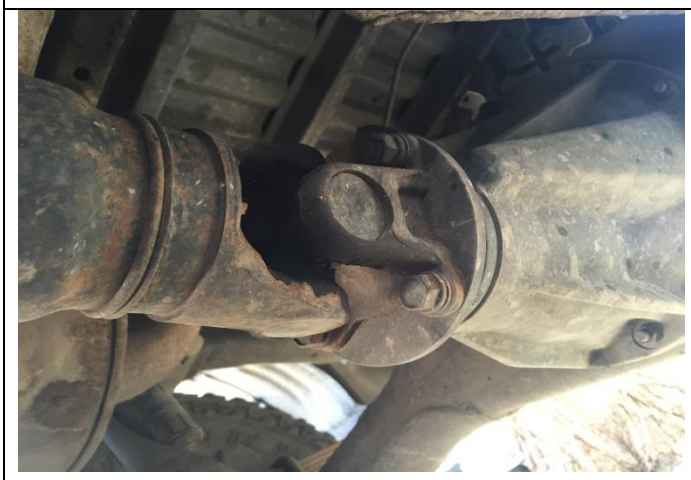


Secure wiring harness that is routed to the differential to the thread insert on top of the rear wall of the tank. Use the M5 screw provided in the kit.

Tie up the remainder of the wiring harness to the chassis rail in the wheel arch ensuring clearance around moving parts.

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FITTING PROCEDURE



Re-install driveshaft to vehicle and tighten.

44Nm.

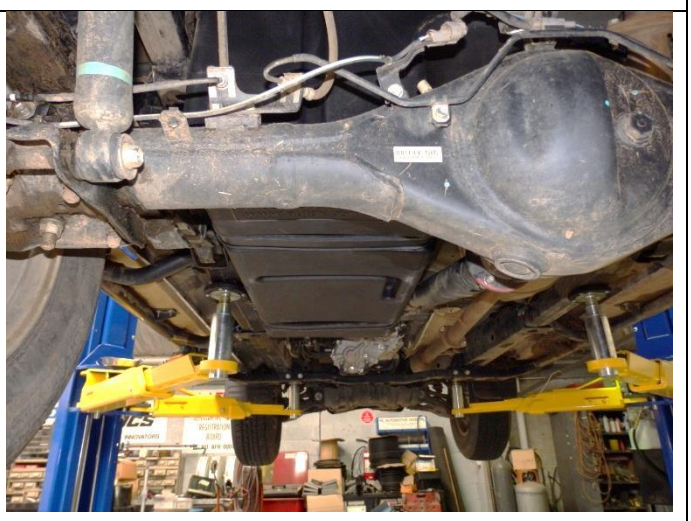


Add fuel to tank. Run engine and check for leaks.

Install the gauge caution label to top RH corner on the inside of the windscreen.

FITTED PRODUCT





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