



# LONG RANGE AUTOMOTIVE/LONG RANGE AMERICA

Product Information/Install Instructions for

Jeep Gladiator JT 2020 Onward *Four Door Pickup Petrol/Gas*

Kit P/N JGJTPA



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**NOTE:** This product is **NOT FOR SALE TO, OR USE BY, CALIFORNIA RESIDENTS**. This product has not been approved, certified, rated or otherwise passed upon by any Federal or State regulatory agency.



## PRODUCT INFORMATION/INSTALL INSTRUCTIONS

Jeep Gladiator JT 2020 Onward Four Door Pickup  
Petrol/Gas 3.6L V6 Engine Model

Direct-fit extended range fuel tank to serve expedition, long-distance travel and hauling needs...buy fuel when the price is right and be prepared for the long haul. These tank kits from Long Range Automotive of Melbourne, Australia were developed to meet the needs of North American light truck and SUV owners. We provide additional fuel capacity from a high-quality aluminized steel auxiliary or replacement tank that integrates seamlessly with factory fuel systems and emission controls in North American vehicles. These tanks are built by specialists with three decades of experience, serving customers around the world.

Part Number	JGJTPA
Type	Auxiliary
Capacity –Gallons	17
Fill Point	OEM T-Fill
Fuel	Petrol/Gas
Location	Vehicle center, LH side of Drive Shaft
Relocate Spare	NO
Relocate Exhaust	YES



This tank **may** be installed by a general automotive shop or mechanically competent vehicle owner, given adequate tools, skills and the help of a friend. **We strongly recommend that, to avoid potential injury and property damage, the tank be installed by a trained professional.** Please call if you have pre-install questions (800-224-7801 x 101 Ward Harris).

Long Range Automotive fuel tanks are imported by Long Range America, LLC  
LongRangeAmerica.com  
**1-800-224-7801**

## I. BEFORE YOU BEGIN

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### A. INTRODUCTIONS

1. We at **Long Range Automotive** (LRA) and **Long Range America** (LRAM) appreciate your selection of a Long Range Automotive fuel system for your vehicle. Please read this entire Guide before beginning installation.
2. This Guide provides information necessary to install this LRA product in your vehicle. PLEASE NOTE: We strive to be detailed and accurate with this information...however, errors and omissions can occur. Changes to install instructions can occur without notice. These Guides are constant works in progress...we are constantly working to make them as user-friendly, detailed and accurate as possible, and we welcome install feedback notes, photos, comments and suggestions to make them so. If you see an error or omission, or need additional information not provided in this manual, please contact Long Range America at 800-224-7801, extension 101 (Ward Harris).
3. This product is designed to suit vehicles as delivered when new. Modifications such as suspension, skid plates, bumpers, hitches and other aftermarket additions may impact or prevent installation.

### B. DO's AND DON'Ts

1. **DO: WE HIGHLY RECOMMEND ALL WORK TO BE COMPLETED BY A PROFESSIONAL INSTALLER.**
2. **DO:** Review these install instructions and plan your installation - tools, helpers and questions - ask ahead of time.
3. **DO:** Call 800-224-7801 ext. 101 (Ward Harris) with any questions - he will get you the right answer from the right source.
4. **DO:** Use **fuel rated thread sealer** or Teflon tape on all fittings.
5. **DO:** Keep all fuel lines away from the exhaust system and any sharp edges.
6. **DO:** Use Long Range Automotive fuel systems and parts in conjunction with original manufacturer's equipment or other Long Range Automotive systems and components.
7. **DON'T:** DO NOT have any open flames or heat sources in the installation area.
8. **DON'T:** DO NOT CUT any of the existing fuel pipes while in the vehicle or while attached to the fuel tank.
9. **DON'T:** DO NOT USE Long Range Automotive fuel systems and components with other aftermarket fuel systems. This type of use can result in malfunction and will void the Limited Warranty.

### C. SAFETY PREPARATIONS

1. **BEFORE BEGINNING INSTALLATION, TURN OFF THE KEY AND DISCONNECT THE VEHICLE BATTERY.**
2. **ALWAYS WEAR THE PROPER SAFETY EQUIPMENT (SAFETY GLASSES, HEARING PROTECTION, GLOVES, ETC. AS APPROPRIATE).**
3. **BE SURE TO KEEP HEAT, SPARKS AND OPEN FLAME AWAY FROM THE INSTALLATION AREA.**

**BEFORE BEGINNING, BE SURE TO READ SPECIAL NOTES ON PAGE 6**

## I. BEFORE YOU BEGIN *(continued)*

### D. INSTALLATION KIT CONTENTS

HARDWARE	HOSE & CLAMPS	MISC PARTS
4 x M8 x 20mm Bolt	1 x 8mm Fuel Hose @ 19.7" Long	1 x TFJGLTPA 38mm diameter Tee Filler with ICV (Inlet Control Valve)
3 x M10 x 30mm Bolt	1 x 8mm Fuel Hose @ 7.9" Long	1 x Front Secondary Bracket (2 Pieces)
1 x M10 x 75mm Bolt	1 x 16mm Fuel Hose @ 5.1" Long	1 x Tank Heat Shield
1 x M10 x 100mm Bolt	1 x 16mm Fuel Hose @ 19.7" Long	1 x Right-Hand Rear Top Mount Plate
20 x M8 x 20mm Washer	1 x 16mm Fuel Hose @ 21.5" Long	1 x FLVV TUNDRA w/P6 5/8" x 3/8"
9 x M10 x 25mm Washer	1 x 35mm Hose @ 2.95" Long	1 x BS337 O-Ring
12 x M8 Nyloc Nut	1 x 35mm Hose @ 6.3" Long	1 x WG2 Wiring Grommet
5 x M10 Nyloc Nut	CF20 Conduflex @ 17.7" Long	1 x Fuel Pump w/Filter
2 x Tek Screw	4 x 1/4" Hose Clamp	1 x Fuel Pump Mounting Plate
6 x M5 x 12mm Pan Head Screw	6 x 5/8" Hose Clamp	5 x 7" Cable Ties
6 x M5 Spring Washer	2 x 1" Hose Clamp	3 x 11" Cable Ties
1 x 10mm Spring Washer	4 x 1 1/4" Hose Clamp	JGJTPAEM Exhaust Kit (includes pipes and muffler to convert OEM exhaust for use with new tank) (If Ordered)
1 x M10 x 27mm 3mm H/D Washer		
BRASS	ELECTRICAL	
2 x P6 5/16" x 1/8" Elbow	1 x LRA-PG210 Switch/Gauge	
1 x P6 5/16" x 1/4" Elbow	1 x 3mm Two Core Wire @ 157.5" Long	
1 x TS16 Norma Tee	1 x 4mm Single Core Blue Wire @ 11.8"	
	1 x 5 AMP Fuse	
	1 x Fuse Holder	
	2 x Fuse Holder Terminals	
	1 x Red Insulated Terminal	
	2 x 5mm Red Eye Terminal	
	1 x 8mm Blue Eye Terminal	
	3 x 3mm Shrink Tube	
	1 x 0-90 OHM Sender c/w 15.75" Long Ground, installed using 5 x M5 x 10 Pan Heads and 5 x M5 Spring Washers	

## **I. BEFORE YOU BEGIN (*continued*)**

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### **E. TOOLS NEEDED**

1. Safety Items
  - a) Safety Glasses
  - b) Hearing Protection
  - c) Gloves
2. Ratchet Wrench
  - a) Metric Socket Set
  - b) SAE Socket Set
  - c) Socket Extensions
3. Drill
  - a) Metric Bit Set
  - b) Uni-Bit (step drill bit)
4. Catch Pan/Spill Mats
5. Vehicle Owner's Manual
6. Mallet
7. Hydraulic Jack
8. Flat Screwdriver
9. Small File
10. Digital Multimeter
11. Fuel Rated Thread Sealer
12. Circuit Test Light
13. Chain Pipe Cutter

## **I. BEFORE YOU BEGIN *(continued)***

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### **F. SPECIAL NOTES**

1. Fitment requires modification of OEM exhaust by a specialist shop OR modifying the OEM exhaust with exhaust kit JGJTPAEM (available for sale with this tank).

**UNPACK TANK AND FITMENT KIT AND CHECK CONTENTS FOR DAMAGE  
AND COMPLETENESS BEFORE BEGINNING INSTALL!**

## II. SWITCH/GAUGE UNIT INSTALLATION & WIRING

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### A. GET READY

1. We recommend power washing the underside of the vehicle, to remove mud and debris.
2. Unpack tank and installation kit. Review packing list and kit.

### B. INSTALLATION

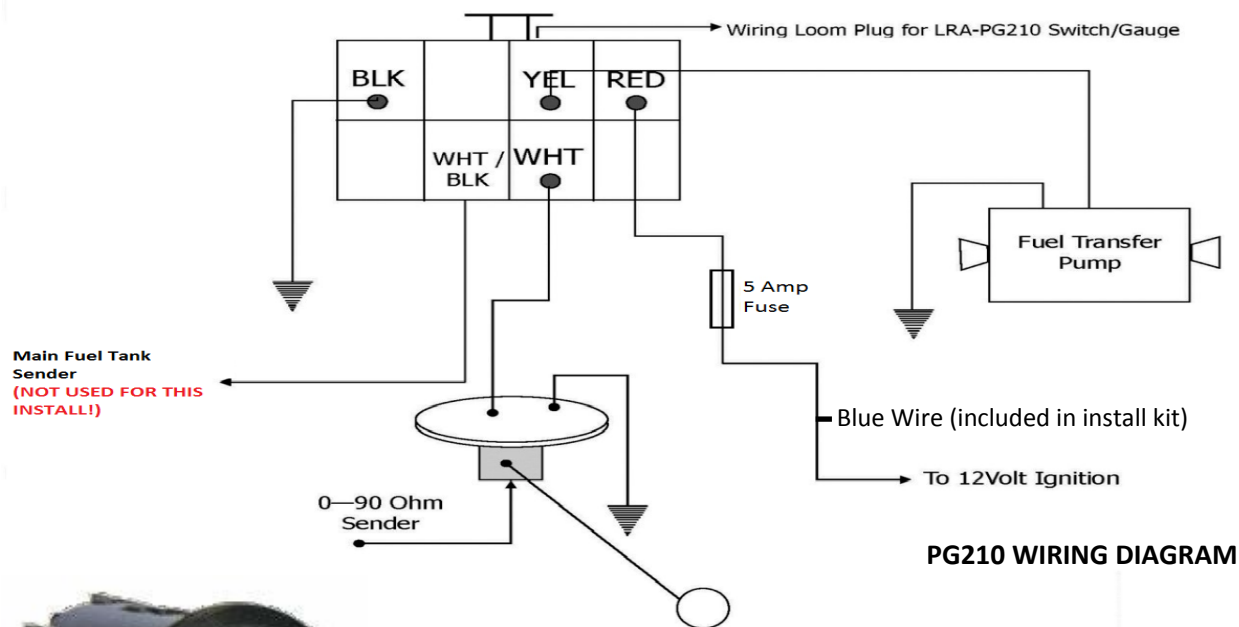
1. Find a suitable mounting location in the dash or center console. Check for adequate space behind the target panel prior to making any cut or hole. Drill a pilot hole where you will be installing the switch/gauge.
2. Use a Step Drill Bit to drill a 20mm/0.78" hole, using the pilot hole as a guide. Use a small file to carefully adjust the hole size as needed. The switch is fairly sensitive to installation. The hole diameter needs to be just the right size (20mm or .78"). If it is too small, and the switch is forced into place, the switch may be damaged or not function properly. You will need to test-fit and carefully file or cut out more material if needed. **DO NOT FORCE SWITCH INTO PLACE WHILE TEST-FITTING OR AT ANY TIME.**
3. Connections should be soldered and heat shrunk, not just crimped.
4. Double-check all connections when done.

## II. SWITCH/GAUGE UNIT INSTALLATION & WIRING (*continued*)

### C. WIRING

1. A 12 volt ignition source can be found in the wiring loom under the left-hand side of the steering column, pink wire w/yellow trace (check this with test light). Carry out wiring as per the wiring diagram, below. The 5 amp fuse and fuse holder are used in the red power wire that is connected to the ignition power source (the blue wire included runs from the power source to the fuse holder, the red wire is connected to the output side of the fuse holder).
2. Solder and heat shrink wiring connections, then route wire out the passenger side of the console, under the carpet behind the passenger seat. Remove the floor plug and install 3/4" grommet in the floor behind the passenger seat near the rocker panel. Run the wiring through the grommet and to the rear of the vehicle and over top of the OE tank (making sure to avoid heat sources and moving parts) for later connection of fuel pump and auxiliary tank fuel gauge sending unit.
3. Leave enough wire to reach the sending unit.

**PLEASE REFER TO OPERATING INSTRUCTIONS FOR THIS UNIT ON PAGES 25 & 27**



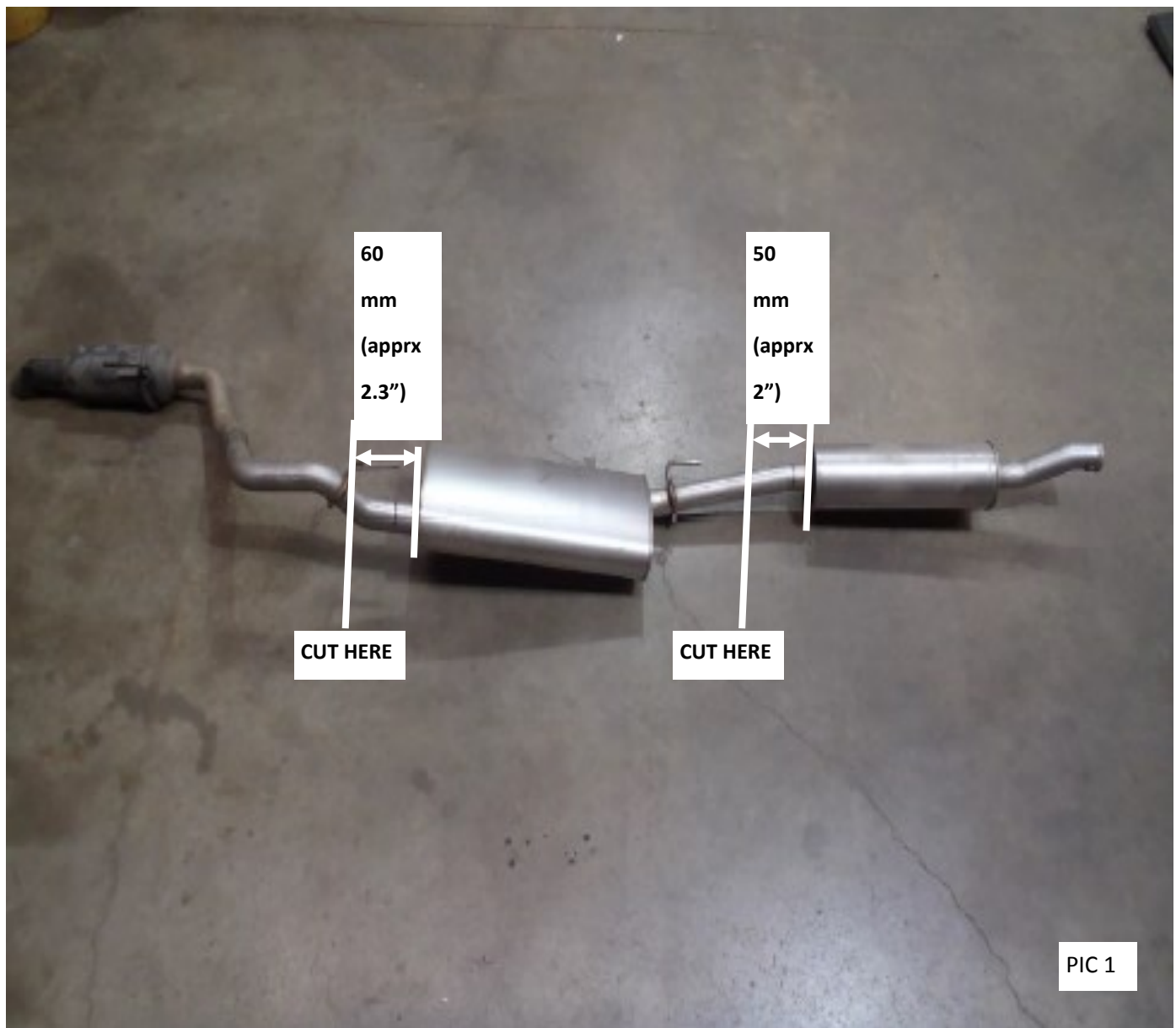


### III. VEHICLE PREPARATION

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#### A. REMOVE & MODIFY EXHAUST (OPTIONAL JGJTPAEM KIT, IF ORDERED)/INSTALL FRONT TANK MOUNT

1. Safely lift vehicle, supporting by the frame rails.
2. Remove the transfer case skid plate.
3. Disconnect the exhaust system at the slip joint next to the transfer case. Unbolt the rear exhaust mounts and remove the OEM exhaust from the vehicle.
4. Measure and cut the exhaust pipe 50mm from the rear of the **front** resonator and 60mm from the rear of the muffler (PIC 1):



### III. VEHICLE PREPARATION *(continued)*

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#### A. REMOVE & MODIFY EXHAUST (OPTIONAL JGJTPAEM KIT, IF ORDERED)/INSTALL FRONT TANK MOUNT *(continued)*

5. Before refitting the exhaust, fit the new front tank mount using M8 x 20 bolts, nuts and washers. Use the transfer case skid plate bolt for location of bracket (PIC 2):



### III. VEHICLE PREPARATION *(continued)*

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#### B. INSTALL MODIFIED EXHAUST (JGJTPAEM)

1. Fit the new exhaust mount to the left-hand chassis rail with the rubber mount installed (PIC 3):



2. Re-fit the front resonator and fit the new muffler assembly, making sure the resonator is as close to the left-hand chassis rail as possible at the front.



### III. VEHICLE PREPARATION *(continued)*

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#### B. INSTALL MODIFIED EXHAUST (JGJTPAEM) *(continued)*

3. Refit the rear tail pipe section and bolt in place. Check for alignment and clamp all slip joints and use sealer on all joints (if possible, we recommend welding the new muffler section in place). Bolt the exhaust pipe heat shield to the pipe (PIC 4):

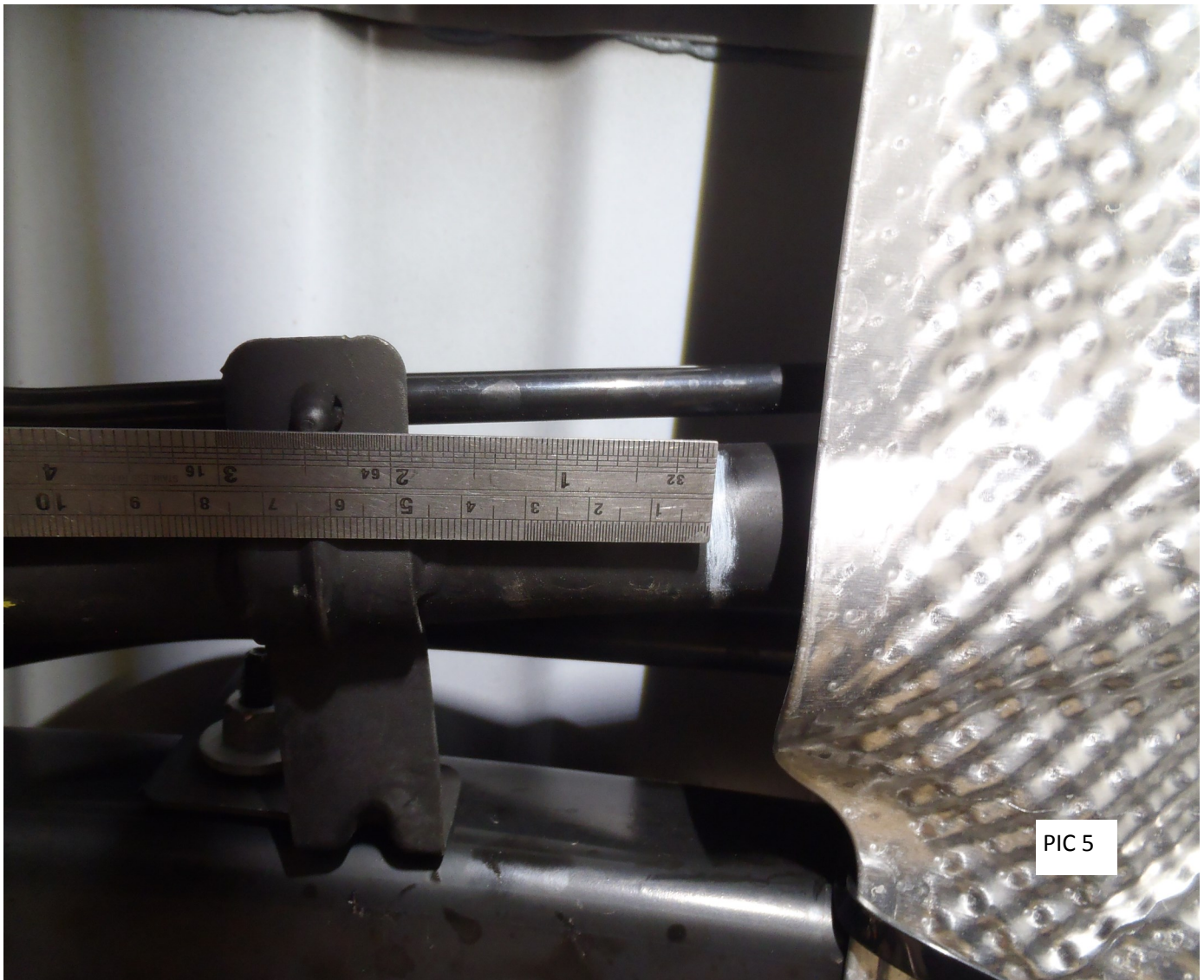


### III. VEHICLE PREPARATION *(continued)*

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#### C. MODIFY FILLER PIPES/HOSES

1. Disconnect the filler hose from the main tank. Unclip the 8mm plastic line and the charcoal canister vent line from the pipe (cap off the fuel tank filler pipe to keep debris out of the main fuel tank).
2. Once disconnected, cut the fill pipe 50mm from the mounting bracket. **DO NOT USE A SPARKING CUTTER OR FLAME TO MAKE THIS CUT!** Unbolt and remove from the vehicle (PIC 5):

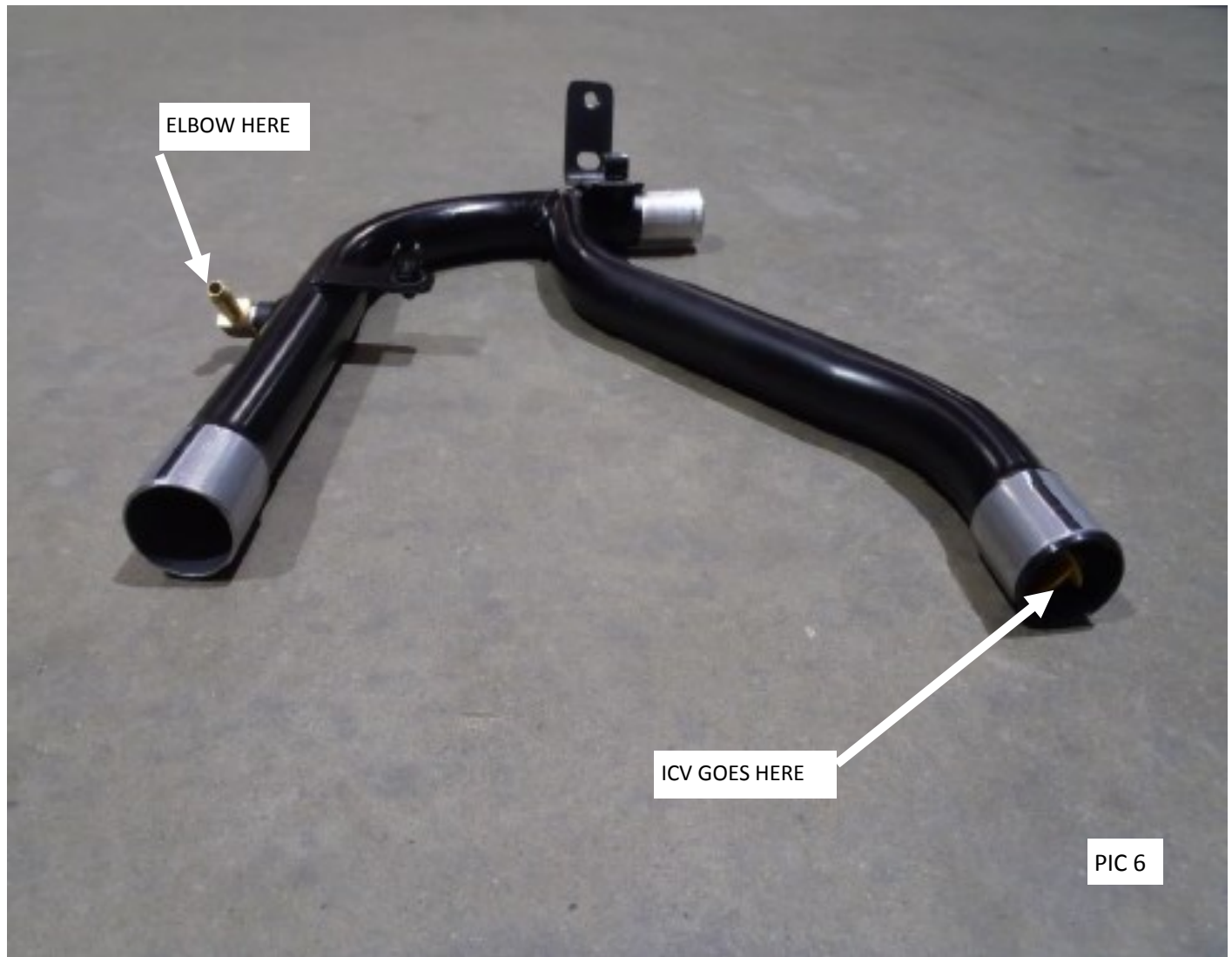


### III. VEHICLE PREPARATION *(continued)*

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#### C. MODIFY FILLER PIPES/HOSES *(continued)*

3. Fit P6 5/16" x 1/8" elbow into the main tank leg, with tee filler pointing up. Make sure the ICV is fitted to the auxiliary tank leg (PIC 6):



4. Cut 115mm from the small end of the OEM rubber fill hose. Use this piece and a new 75mm length of 35mm diameter hose at the OE main tank.



### III. VEHICLE PREPARATION *(continued)*

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#### C. MODIFY FILLER PIPES/HOSES *(continued)*

5. Refit the tee filler. Bolt in place and re-clip plastic lines.





### III. VEHICLE PREPARATION *(continued)*

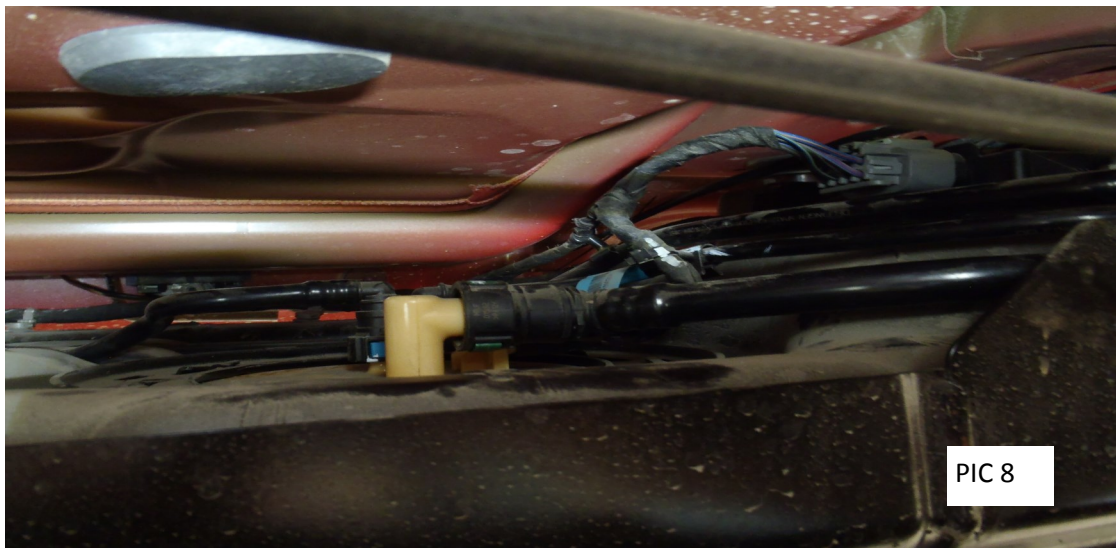
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#### D. REVISE CHARCOAL CANISTER PLUMBING

1. Disconnect the FLVV line from the OE tank to the charcoal canister (you will need to cut the line to remove). THERE ARE TWO LINES THAT RUN ACROSS THE TOP OF THE OEM TANK, THE ONE YOU WANT IS THE GAS VENT LINE (The one with 90 and 45 degree ends and green clips), per photos below (PIC 7, 8). DO NOT CUT THE OTHER LINE!



PIC 7



PIC 8



### III. VEHICLE PREPARATION *(continued)*

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#### D. REVISE CHARCOAL CANISTER PLUMBING *(continued)*

2. Remove the quick connect fitting and fit to the new rubber hoses and plastic tee provided (PIC 9):



3. Reinstall between the OE main tank and the charcoal canister, running hose outside the OE tank shield mount. Cover with 450mm Conduflex.

### III. VEHICLE PREPARATION *(continued)*

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#### E. DRILL HOLES FOR MIDDLE AND REAR AUXILIARY TANK MOUNTS

1. Drill a 7/16-inch diameter hole thru both inboard rear and middle cross-members to accommodate the middle and rear auxiliary tank mounts. As standard, there is only a hole in the bottom face, it needs to be drilled through the top face (PIC 10):



### III. VEHICLE PREPARATION *(continued)*

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#### F. ASSEMBLE/INSTALL/WIRE FUEL TRANSFER PUMP

1. Fit fuel transfer pump to mounting bracket. Screw the 5/16" x 1/8" elbow to the outlet side of the pump and filter to the inlet side.
2. Mount the fuel transfer pump to the stud which holds the right-hand side of the hand brake locator. Connect the outlet of the pump to the elbow installed in the main tank leg of the filler pipe. **THE PUMP MUST BE INSTALLED ABOVE THE FUEL LEVEL OF THE NEW TANK, AND WITHIN 12 VERTICAL INCHES OF THE NEW TANK BOTTOM. THE FUEL PUMP SHOULD BE MOUNTED WITH THE OUTLET HORIZONTAL OR ABOVE THE INLET. THIS WILL HELP TO PREVENT LOCATION-RELATED GRAVITY FEED, CHECK ENGINE LIGHTS (CELS), AND VAPOR LOCK ISSUES (PIC 11).**



PIC 11

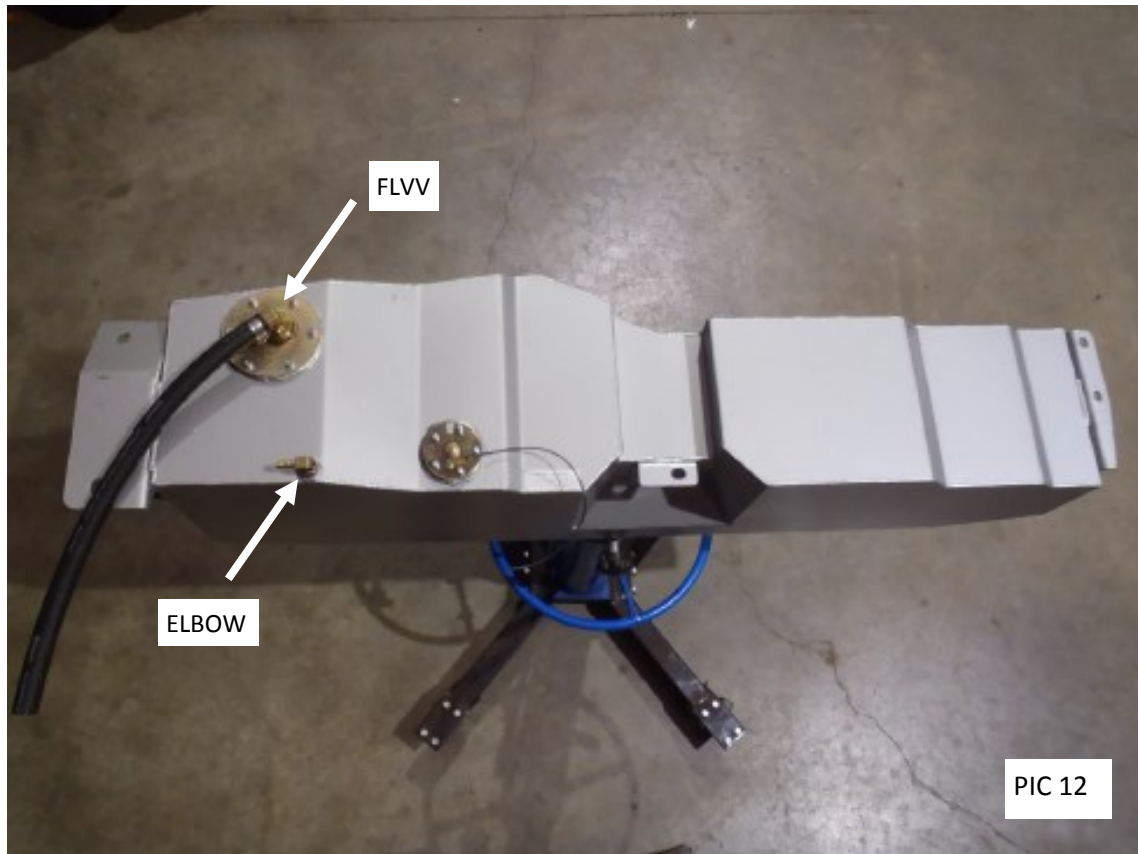
3. Complete electrical wiring by connecting white wire to the aux fuel tank sending unit, yellow wire to the fuel transfer pump, and connect ground wire. **DO NOT** ground the fuel transfer pump to the mounting bracket, instead, drill a hole in the body and clear an area for the body ground terminal to be firmly connected to bare metal. The transfer pump is sensitive to power interruption when on and a good ground is imperative.

## IV. FILLER & TANK PREPARATION

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### A. AUXILIARY TANK PREPARATION

1. Screw the 5/16" x 1/4" elbow into the remaining open socket and point to the rear of the vehicle. Connect the 19.7" length of 8mm hose to the elbow and clamp (PIC 12):



2. Remove the FLVV (if installed), drop the supplied magnet into the tank, and locate as close to the fuel pick-up point as possible without blocking it (PIC 13). Reinstall the FLVV when complete.



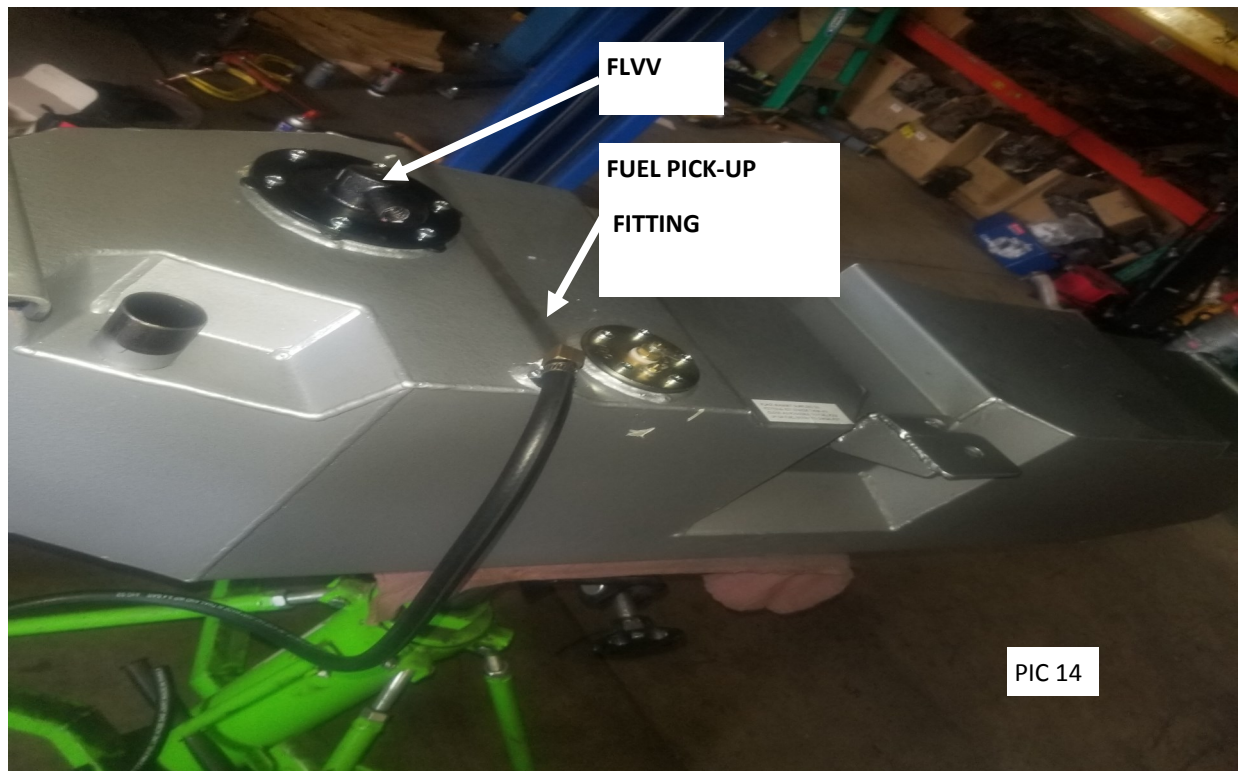


## IV. FILLER & TANK PREPARATION *(continued)*

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### A. AUXILIARY TANK PREPARATION *(continued)*

3. If not installed, using the six supplied M5 x 12mm pan head screws and spring washers, O-ring and hold-down ring, install the plastic FLVV (the Fill Limit Vent Valve, or FLVV, is designed to maximize fuel tank capacity and facilitate automatic nozzle shutoff). Fit the 19.7" long section of 16mm hose to the auxiliary tank FLVV and clamp (PIC 14):



4. Fit the 19.7" length of 8mm hose to the elbow (fuel pick-up fitting) and clamp.
5. Fit the 6.3 inch length of 35mm hose to the auxiliary tank filler pipe and clamp.

## V. TANK INSTALLATION

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### A. JACK THE TANK INTO POSITION AND SECURE

1. Carefully lift the tank into position, making sure not to pinch or kink any hoses.
2. Guide the fill hose onto the fuel filler T-pipe and clamp.
3. When tank is in position, secure tank with 2 x M10 x 30 bolts, nuts and washers for the front mount, M10 x 75 bolt, nut and washer for the center mount, and M10 x 30 and M10 x 100 bolt, support plate and nut, using heavy duty washer and spring washer on the underside of the rear inboard mount.
4. Connect the hose from the FLVV to the remaining barb on the tee piece for the charcoal canister plumbing.
5. Connect the 8mm fuel pick-up hose to the inlet side of the fuel transfer pump.
6. Connect the white wire from the auxiliary fuel gauge to the sender unit on the tank and connect the sender unit to ground.

### C. FINISH INSTALLATION

1. Check all clearances and neatly cable tie all hoses and wiring. Make sure all hose clamps and mounting hardware are tightened.
2. Check for resonator clearance at the front of the tank (JGJTPAEM exhaust kit only)
3. Refit the transfer case skid plate.
4. Reconnect vehicle battery.
5. To test, fill both tanks, check for leaks and drive as normal. When the fuel level in the main tank has run down by one-quarter tank, test transfer pump operation and make sure the gauge is working properly, the level lights are correct and listen for undue noise (a “tic-tock” noise is normal when the pump is running). Check operation of gauge.
6. Check again for leaks after the first 50 miles.

## VI. FINAL INSTALLATION CHECKLIST

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- A. Are all hose clamps tight and secure?
- B. Are all nuts and bolts secured?
- C. Are mounting brackets and straps secure?
- D. Are Fuel Gauge Sending Unit bolts secured?
- E. Are all fuel lines secure with no kinks?
- F. Does tank interfere with, or rub on, other vehicle components?
- G. Is tank calibration accurate?



**Congratulations! You have completed the install!**



# TANK USER GUIDE



## WELCOME

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And congratulations on the purchase of your new tank from Long Range Automotive of Melbourne, Australia. Properly installed and maintained, the tank is easy to operate and will provide you with years of service.

As North American agent, Long Range America is here to help along the way. Your first stop with questions about tank, installation and use is this guide, followed by a call to your installer and if need be, a visit to our website for more help.

Your kit is covered by a three-year limited warranty you can see on our website here <https://longrangeamerica.com/tank-warranty-registration/tank-limited-warranty/> and we strongly encourage you to register your purchase with us at this link <https://longrangeamerica.com/tank-warranty-registration/>

Why register? We want you to have a flawless experience, but sometimes things happen (we need to make repairs, replacements, etc.). Registration is our way of keeping track of our tanks after they leave the warehouse.

We need to collect this information within thirty days of kit purchase – whether direct sale from LRAM or through one of our authorized dealers. In addition, we occasionally make improvements to our in-service products and there may even be recalls. For these reasons, we need this information. Please help us serve and support you!

## OPERATIONS

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### **New Configuration:**

Your new tank installation included addition of a new J-fill tube that serves both original tank and your added auxiliary 17-gallon auxiliary tank. Both tanks are filled through the same point.

### **Adding Fuel:**

When filling, the path of least resistance is to the main tank, so it will fill first. When the main tank is full, the auxiliary tank will continue filling. At this point, the fill rate may slow due to normal venting as excess air in the tank is vented.

While filling, the operator must be sensitive to venting of the tank(s) as fuel is added. You may need to pause briefly and then adjust the flow rate as the dual tank fill/vent system accommodates newly added fuel.

If the pump fill control will not allow a “high speed” fill at this point, do not worry, it is just the tank venting that excess air. Fill at the allowed rate until the auxiliary tank is full (patience is a virtue) and **DO NOT ATTEMPT TO TOP OFF THE TANK.**

### **While Driving:**

Your engine will draw fuel from the main tank and that gauge will operate normally. The stock tank has 22 gallons of capacity. As you consume fuel, the gauge will go down and at some point, you will need to transfer fuel from the auxiliary tank. When you do that is up to you.



## Auxiliary Tank Fuel Monitor:

Your installation included the addition of a combination control module as seen here.

There are a series of LEDs that combine to display the contents of the auxiliary tank as follows:

1. The RED and GREEN lights display the contents of the auxiliary tank.
2. All GREEN shows FULL as shown at right. As fuel is transferred, the LEDs will go dark from top to bottom, indicating  $\frac{3}{4}$  tank,  $\frac{1}{2}$  tank,  $\frac{1}{4}$  tank of fuel remaining.
3. When all of the fuel has been transferred, the RED flashing light will indicate the tank's status as EMPTY.



## Auxiliary Tank Fuel Transfer:

1. When it is time to transfer fuel, simply press the button at the left side of the module to activate the transfer pump.
2. The transfer tank is self-priming and will make a clicking sound until it fills with fuel and begins pumping. That sound will reduce somewhat when fuel is flowing.
3. When the switch is turned ON and the ORANGE light is displayed this indicates that fuel is being transferred.
4. Fuel is transferred at around **2 quarts per minute**.
5. Fuel will be transferred from the auxiliary tank into the main tank until the auxiliary gauge shows a RED flashing light at which point the pump will continue to run for 2 minutes and then the pump will automatically shut off.
6. You can restart the pump by simply pushing the switch button again, the pump will run again for another 2 minutes before automatically shutting off.
7. It isn't possible to overfill the main tank, it will simply drain into the auxiliary tank via the "T" in the filler line.



## QUESTIONS & SUPPORT

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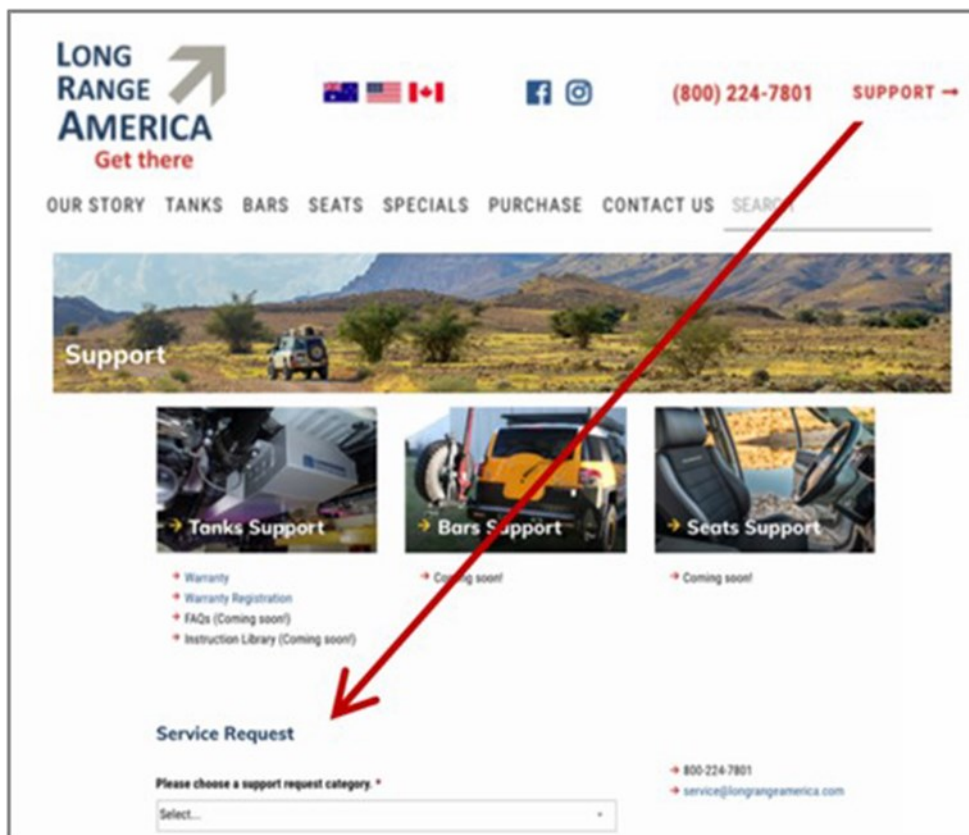
### Frequently Asked Questions:

- **Will I fill the tank in the same way as before?** See instructions on page 24.
- **Will the Distance to Empty (DTE) Function work as before?** If present, your computer will accurately report on fuel range based upon fuel level in the main tank only.
- **Who do I call with questions, or for assistance?** Your first contact should be to the installer. If you are the installer, or if the installer cannot answer your question, please contact Long Range America in any of the following ways – **our business hours are 8am to 5pm (Pacific Time) Monday to Friday.**
  - Website via <https://longrangeamerica.com/support/> (see below)
  - Email via [service@longrangeamerica.com](mailto:service@longrangeamerica.com)
  - Phone via 1-800-224-7801 extension 101 (Ward Harris)

And let us know how we can better serve you!

Best regards,

LONG RANGE AMERICA



We have attached a PDF copy of the Apexus PG210 Gauge/Switch Setup Guide, for additional information...when viewing this guide, open the file attached to the guide to view the information.