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FJ40 Land Cruiser Metal-tech Fabrication Swing-Out Rear Bumper

Your rear bumper should contain:

- 1 Main bumper assembly
- 1 Left swing arm
- 1 right swing arm
- 2 latches
- 2 Stop mounts
- 1 Installation template
- 1 Hardware box
- Optional
- 1 Spare tire mount
- 1 Tire mount stinger
- 1 Fuel tank/Basket Rack
- 1-3 Fuel can holders
- 2 Fuel tank support
- 1 Large or Small Basket

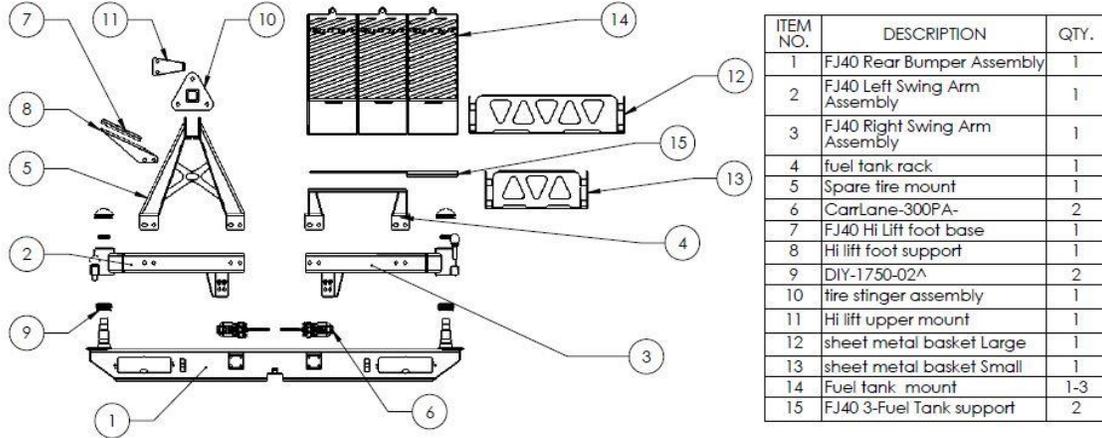
SAFETY! Use the appropriate safety devices during your installation. Wear safety glasses at all times. SAFETY!

Thank you for your purchase of a Metal-tech Fabrication FJ40 rear bumper for your Land Cruiser. We have taken great pride in their development and manufacturing. We also wheel what we make and look forward to the opportunity to see you on the trail! Before you begin your installation take a moment to read through this write up. There are a few key things that will make the installation go smoothly.

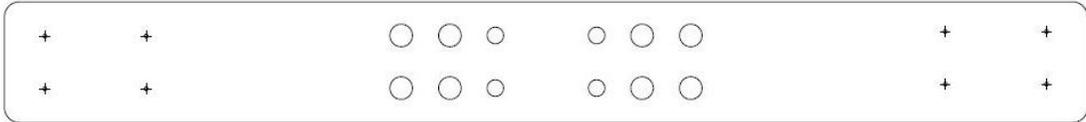
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Rev. 1.0

Page 2 FJ40 rear bumper install continued.



- 1.0 Remove old parts and prep for the new:
 - 1.1 Remove stock or aftermarket bumper – IF installed on truck.
 - 2.0 2.1 Included with the FJ40 swing out bumper is an installation template it is designed to help facilitate hole placement on the rear of your FJ40.

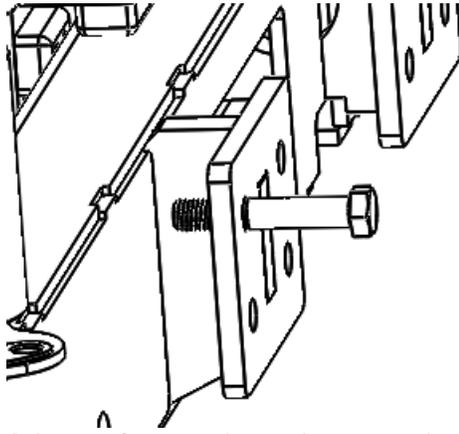


- 2.2 after removing all necessary parts bolt the installation template to the four holes in the center of the existing frame.
- 2.3 The template is designed to be drilled through starting with a ¼ inch drill bit and progressively enlarging up to ½ in.

“Caution use care when using power tools BE SAFE were safety glasses”

- 3.0 3.1 Once you have the holes drilled in the frame you are ready to mount the main bumper assembly to your FJ “if you have not already talked a few friends in to helping you already you may want to now” hold bumper up to you FJ and start the center bolts leaving them loose

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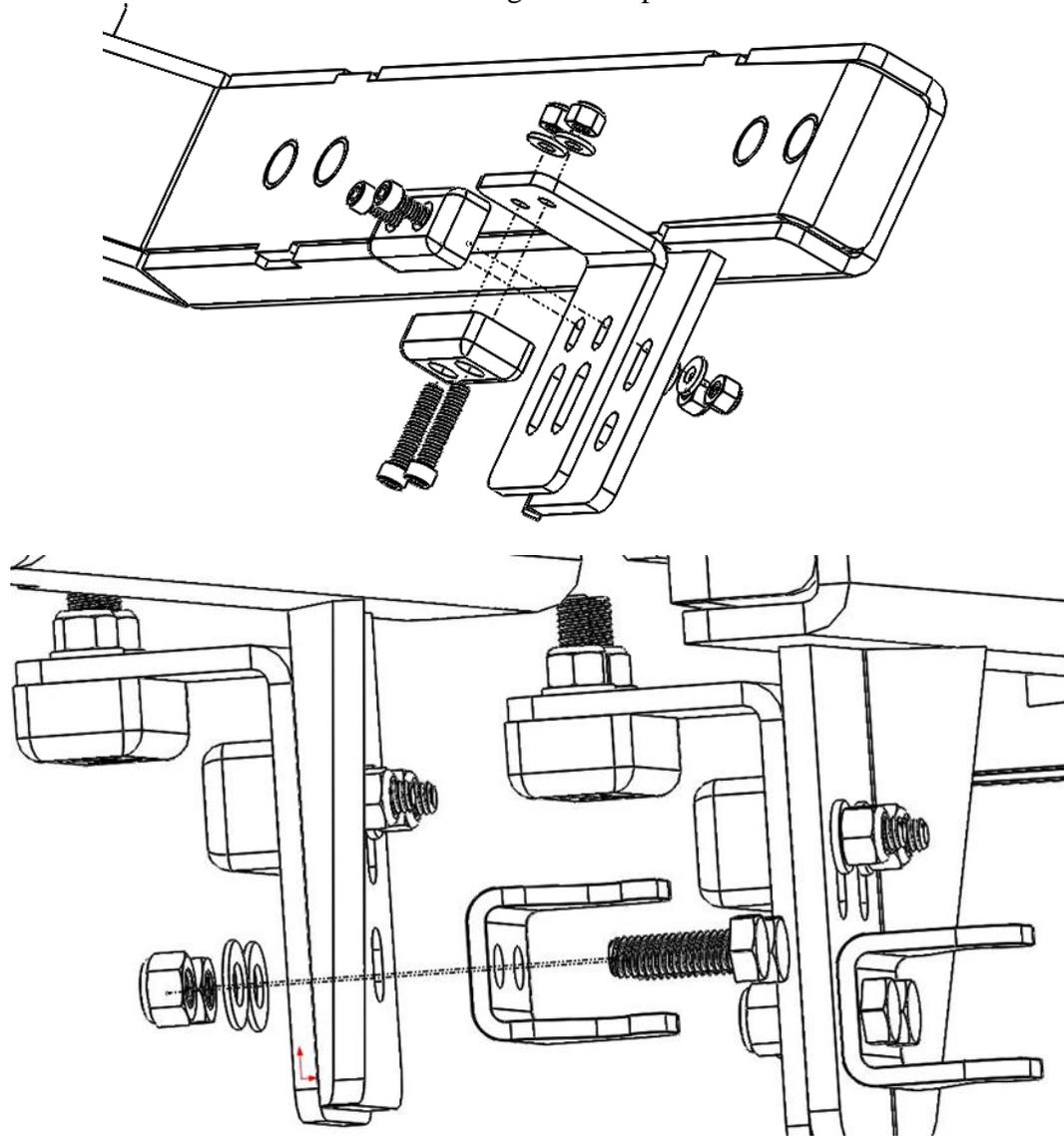
- 3.2 after you have the center bolts installed loosely you are ready to install the outer leg bolts. They will need to be install from the back side of the frame with the nuts towards the bumper
 - 3.3 after you have all the bolts in place you will start tightening them from the center outwards
- 4.0
- 4.1 now you are ready to install your swing arms
 - 4.2 Hand pack grease (moly or lithium wheel bearing grease) into the 4 tapered radial bearings.
- 5 Wipe any manufacturing dust from the pivot shell at the end of the swing arm. Lightly pre-grease the inner races. (Note we have already installed the inner races for you inside the pivot shell)
 - 6 With the swing arm upside down, drop large radial bearing into pivot shell on swing arm. NOTE: make sure the taper of the bearing is facing the taper of the race already in the shell.

1 x large tapered radial bearing
 - 7 Tap pivot lip seal into place on top of the large radial bearing. (Tip put a little grease on the outer part of the seal can so it seats easier) Use caution to seat the seal evenly, unevenly can damage the seal rendering it worthless. (Metal-tech Fabrication stocks replacement parts for all components)

1 x lip seal per arm
 - 8 Install latch and landing pads on end of swing arm .

6 x 5/16-18 x 3/4" long bolt (silver)
6 x 5/16-18 Nuts (silver)

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- 9 Install Left OR Right swing arm on to the spindle. Drop in upper smaller tapered radial bearing, washer then castle nut. Lift swing arm up and down a bit to help the tapered bearing seat into the race. Tighten the nut firmly but still allowing the pivot to swing.

- 1 x Small tapered radial bearing per arm
- 1 x Large pivot washer per arm
- 1 x Large pivot castle nut per arm

- 10 Close the swing arm and adjust the latch U bolt so it pulls and locks swing arm in place. Adjust landing pad up or down for optimum performance.

- 11 Torque all of the bolts.

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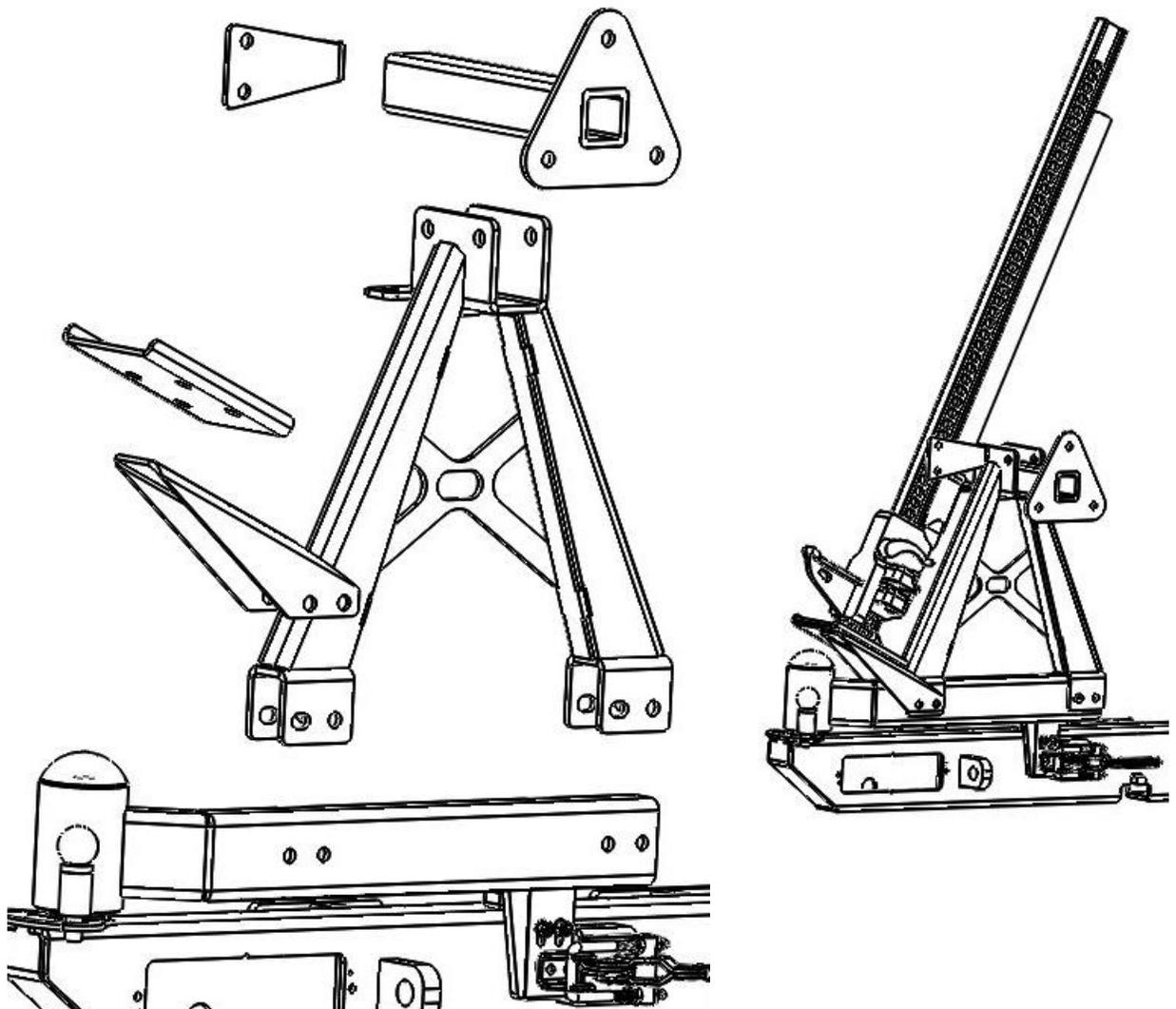
- 107 foot lbs - 1/2" bolts
- 64 foot lbs - 12mm bolts
- 23 foot lbs - 3/8" bolts

12 Back spindle nut off a 1/2 turn and install cotter pin. Tap dome cap into place.

- 1 x Cotter pin
- 1 x Dome cap

13 **TIP:** Once dome cap is in place paint it with Rust-Oleum Textured Black #7220830 so it matches the bumper. (This cap is not powder coated since the powder coating would be damaged when it is installed. However it is zinc plated so left silver is fine.)

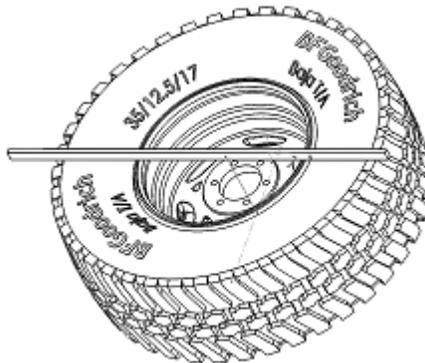
14 You are now ready to install the spare tire upright which is designed to be placed on either the left or right swing arm the tire carrier also comes with a universal Hi-Lift jack mount that can be mounted on either side of the carrier



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15 Install tire stinger into clamp on swing arm. **WARNING!** IF the stinger is mounted too far back IT WILL HIT THE BACK DOOR OF YOUR TRUCK AND DAMAGE YOUR DOOR. Use caution as you do this step. The best thing to do is measure the true back spacing needed for your tire/rim combo.

- 1.0 Lay your spare tire face down on the ground.
- 2.0 Place a flat edge across the tire from one side to the other sitting on the rubber.
- 3.0 Measure the distance from that flat edge to mounting flange of the rim.
- 4.0 This is the maximum offset you need for the stinger adjustment. You do want the inside rubber of the tire to touch the swing arm face. So subtract $\frac{1}{2}$ " from the offset number you got and use that.



5.0 Install the stinger and clamp down so the face of the stinger is the distance to the front of the swing arm, you got to set your offset to.

- 2 x 3/8-16 x 3" long Grade 8 bolts
- 2 x 3/8-16 Grade 8 nuts
- 4 x 3/8" Grade 8 washers
- 2 x 3/8 Grade 8 lock washers

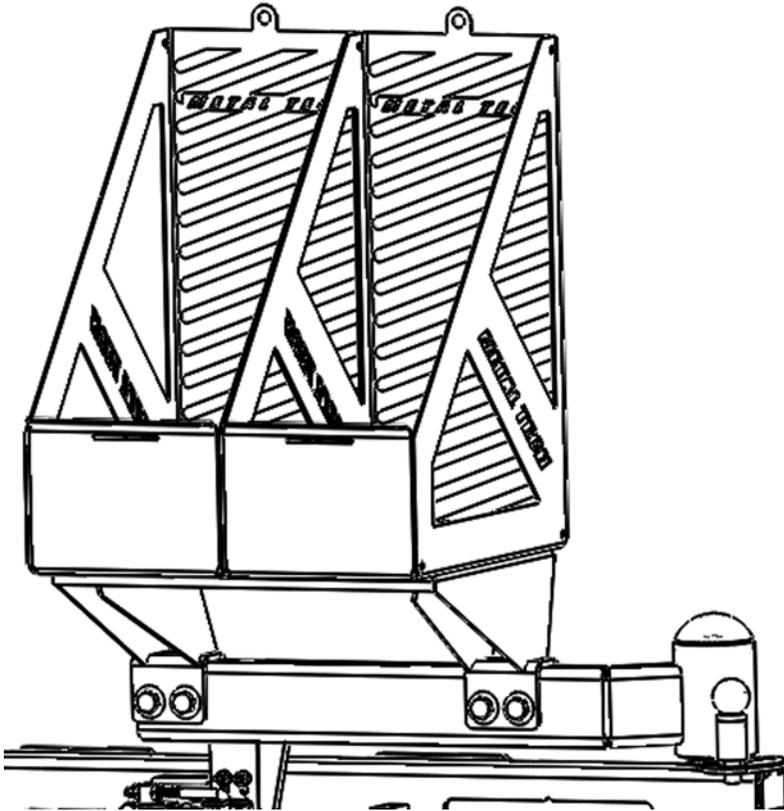
WARNING!!!! SLOWLY CLOSE your swing arm checking that the back of the stinger does NOT contact the back door. Damage to your truck can happen if you do not use caution. If it will hit, you need to shorten the stinger tube by cutting it down.

- 2 x $\frac{1}{2}$ "-13 x 2" long Grade 8 bolts
- 4 x $\frac{1}{2}$ "-13 Grade 8 nuts
- 6 x $\frac{1}{2}$ " Grade 8 small SAE washer (yellow)
- 2 x $\frac{1}{2}$ " Grade 8 lock washer.

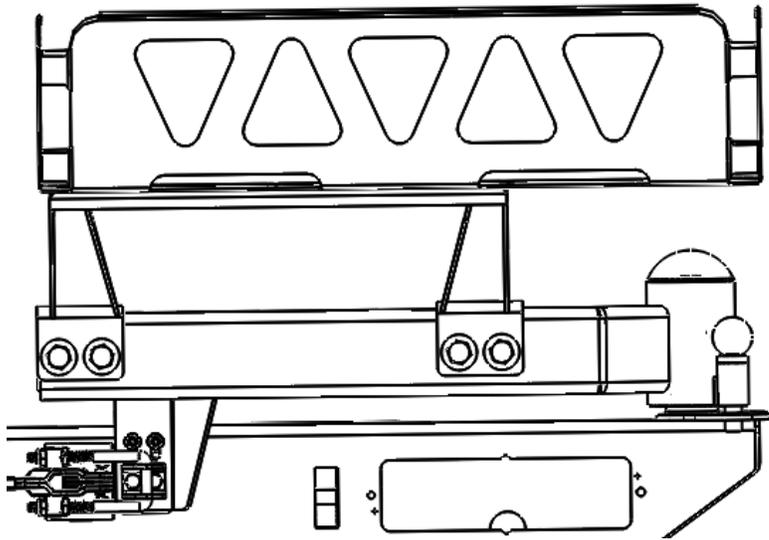
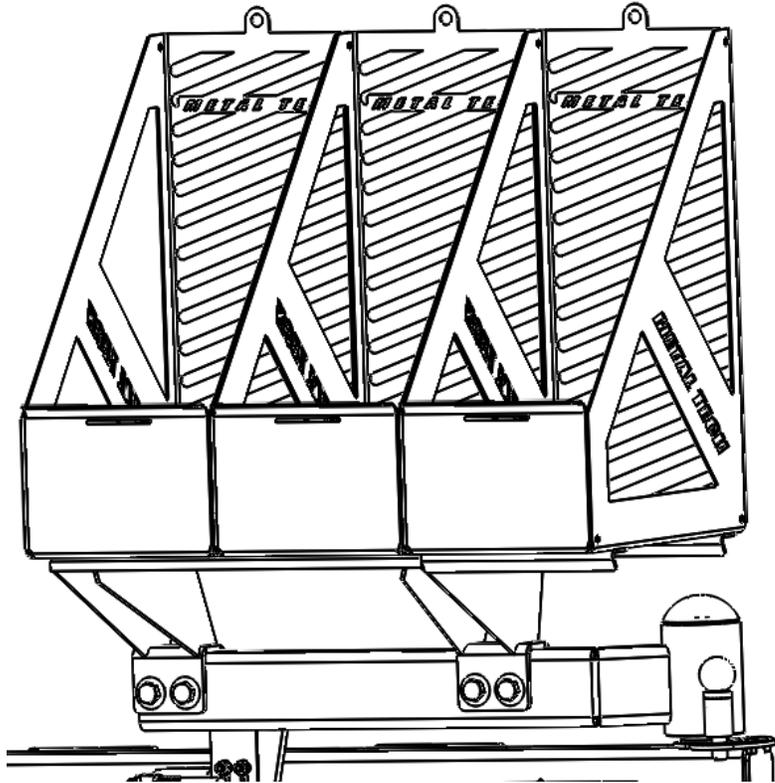
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16 If you purchased either the fuel can holder or a basket you can install it on either the left or right swing arm, there are a few configurations that can be had

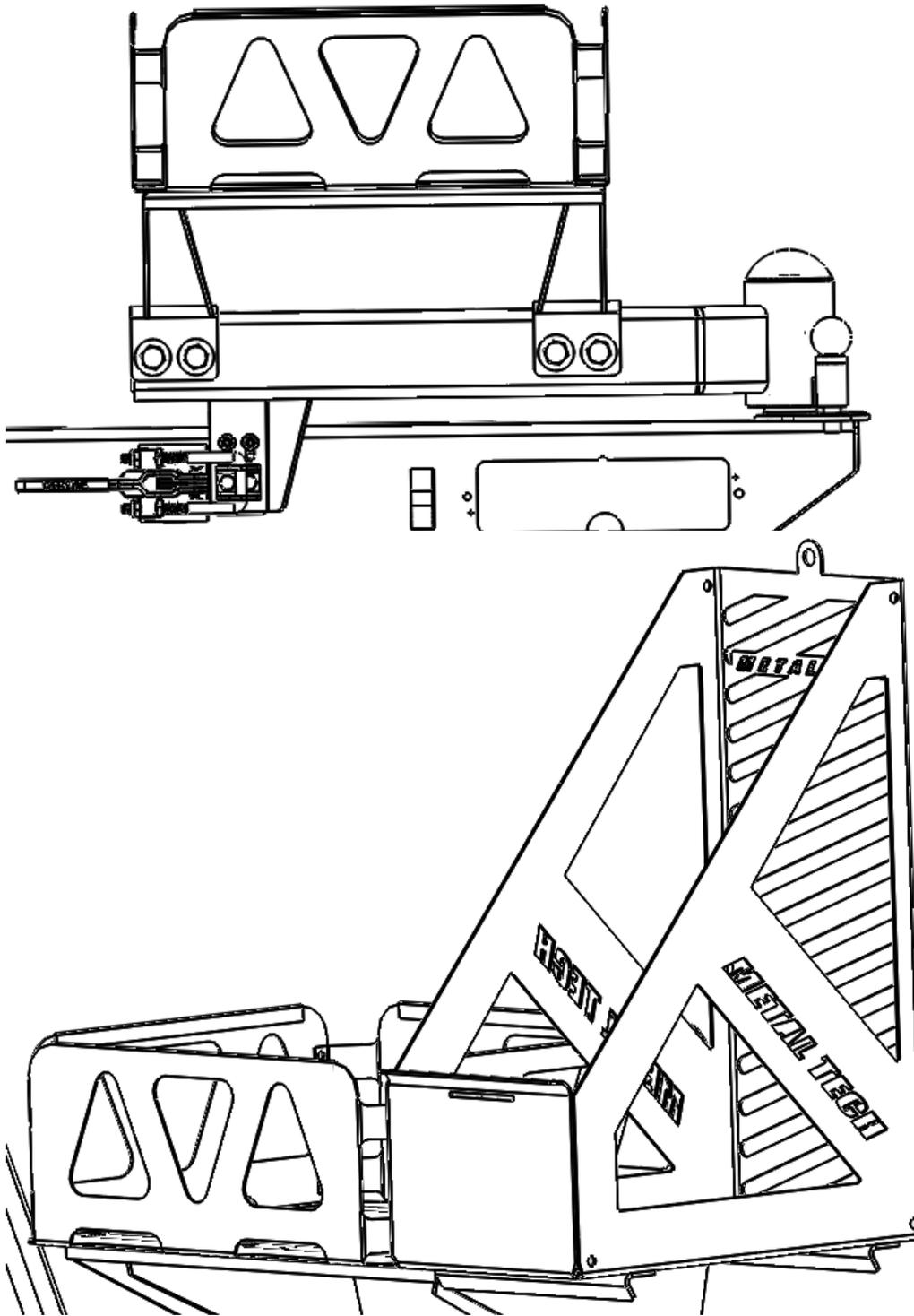
- 1 One-Three fuel can holders
- 2 Large rack
- 3 Small rack and one fuel can holder



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Once you have driven about 100 miles with the bumper on the truck, torque all the bolts. Give special care to the frame bolts on the left pod.

We welcome your feed back on our products and your experience with Metal-tech. You can reach us toll free at 800-839-0684 Mon-Fri 8:30 AM to 5 PM PST. Or via e-mail at info@metaltech4x4.com