



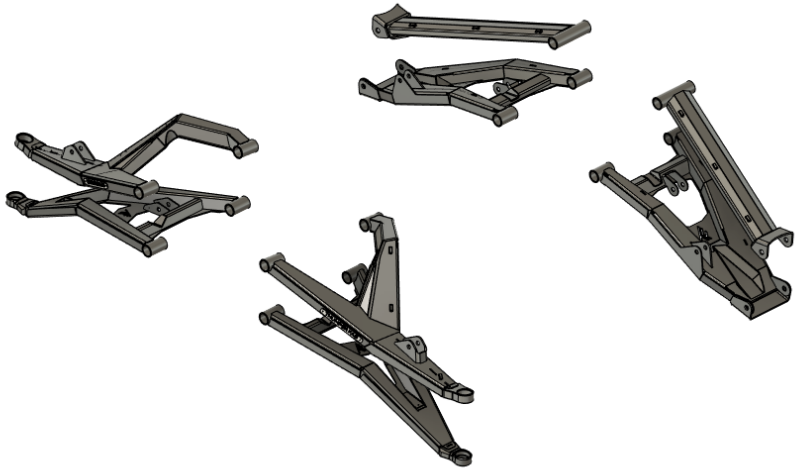
THUMPER FAB

Aluminum Audio Roofs ♦ Roll Cages ♦ UTV Accessories

Polaris RGR 1500XD

Long Travel

SKU: TF232001



Thumper Fab

5103 Elysian Fields Rd, Marshall, TX 75672

Customer Service: 903-472-0928

www.thumperfab.com

Ver. 0424

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PARTS

REF	QTY	DESCRIPTION
1	1	Front Upper Driver Control Arm
2	1	Front Upper Passenger Control Arm
3	1	Front Lower Driver Control Arm
4	1	Front Lower Passenger Control Arm
5	1	Rear Upper Driver Control Arm
6	1	Rear Upper Passenger Control Arm
7	1	Rear Lower Driver Control Arm
8	1	Rear Lower Passenger Control Arm
9	4	Axles
10	1	Brake Line Kit
11	2	Tie Rods (Main Body)
12	2	Steering Boots
HARDWARE KIT		
A	2	Inner Tie Rods
B	2	3/4" LHT Heim Joint
C	2	3/4" LHT Jam Nut
D	2	Steering Pins
E	2	Steering Misalignments
F	16	Zip Ties
G	2	Steering Stops

TOOLS

- 15mm Socket and Wrench
- 18mm Socket and Wrench
- 19mm Socket
- 30mm Socket
- Snips
- Channel Locks
- Pick
- Loctite
- Anti-Seize

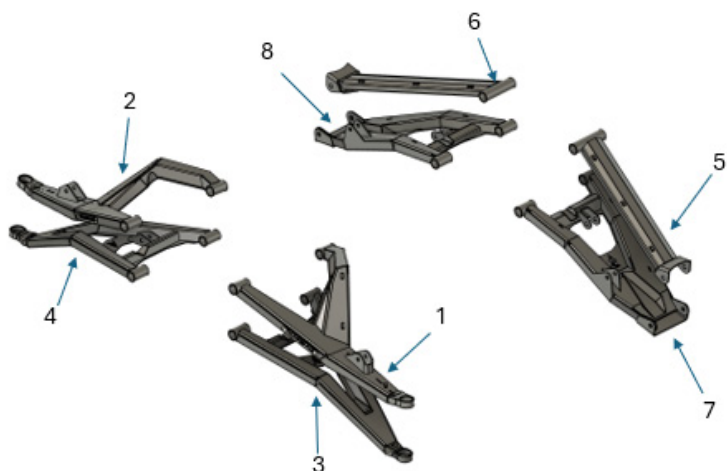
BEFORE YOU BEGIN

If you do not feel comfortable installing your Thumper Fab Long Travel, please see your nearest Polaris Dealer for installation.

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***Axles, Brake
Line Kit, and Zip
Ties not Shown**

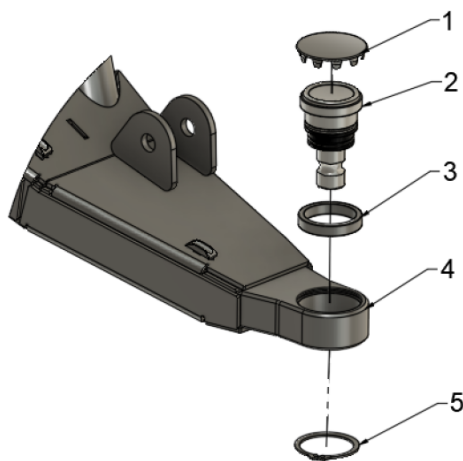
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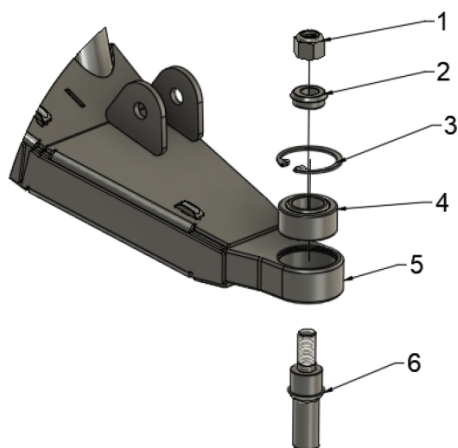
OEM



PARTS LIST	
ITEM #	DESCRIPTION
1	SNAP IN PLUG
2	OEM BALL JOINT
3	RING INSERT
4	CONTROL ARM / HOUSING
5	EXTERNAL RETAINING RING

1. Press RING INSERT into CONTROL ARM / HOUSING.
2. Press OEM BALL JOINT into RING INSERT & HOUSING.
3. Install EXTERNAL RETAINING RING.
4. Install SNAP IN PLUG.

UNIBALL



PARTS LIST	
ITEM #	DESCRIPTION
1	LOCKNUT
2	MISALIGNMENT
3	INTERNAL RETAINING RING
4	UNIBALL
5	CONTROL ARM / HOUSING
6	UNIBALL PIN

1. Press in UNIBALL into HOUSING.
2. Ins tall INTERNAL RETAINING RING.
3. Insert UNIBALL PIN into UNIBALL.
4. Ins tall MISALIGNMENT onto threaded end of UNIBALL PIN
5. Thread and tighten LOCKNUT onto UNIBALL PIN

INSTALLATION INSTRUCTIONS

Installation Preparation

Remove all factory suspension including: wheels, brake calipers, brake rotors, brake lines, tie rod assemblies, steering rack boots, inner tie rods, knuckles, shocks, control arms, axles, and disconnect sway bar links from control arms, if applicable. In addition to removal of suspension components, remove front bumper to gain access to control arm mounting bolts (**FIG 1**).



FIG 1 - Remove OEM Suspension and Front Bumper

With OEM parts removed, prepare the tie rod for installation. You will need to remove the small boot from your inner tie rod with a pick and discard to allow for clearance to the inside of the steering track housing (**FIG 2**).

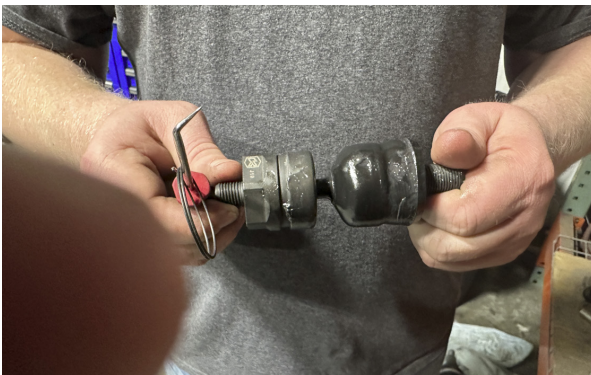


FIG 2 - Remove boot from inner tie rod end using a pick and discard

INSTALLATION INSTRUCTIONS

Installation - Front

With the boot removed from the inner tie rods (A), slide the inner tie rod through the supplied steering rack boot (12) before reinstalling jam nuts onto the inner tie rods (FIG 3).



FIG 3 - Slide Inner Tie Rod end through steering rack boot and reinstall jam nut

Apply loctite to the short threads on the inner tie rod and install into the steering rack using channel locks to ensure the inner tie rod end is fully tightened into the steering rack. Use 4 x zip ties to fasten the boot securely to the steering rack and to the inner tie rod end (FIG 4 & FIG 5).



FIG 4 - Fasten Inner Tie Rod to steering rack using Channel Locks



FIG 5 - Fasten Boot to steering rack and Inner Tie Rod using Zip Ties

INSTALLATION INSTRUCTIONS

Installation - Front

Thread the tie rod assembly onto the inner tie rod, leave assembly loose to allow for toe adjustment as needed once installation is completed. (FIG 6).



FIG 6 - Thread Tie Rod Assembly onto Inner Tie Rod

Replace all brake lines except the one highlighted below (Line from master cylinder to rear distribution block) (FIG 7).



FIG 7 - Replace Brake Lines

INSTALLATION INSTRUCTIONS

Installation - Front

Remove OEM Brake Line from rear port on master cylinder, and replace with front brake line provided in Long Travel kit (**FIG 8**).



FIG 8 - Replace front brake lines

Unthread brake line from distribution block and remove rear brake lines/distribution block. Replace rear brake lines with brake lines provided in Long Travel kit (**FIG 9 & FIG 10**).

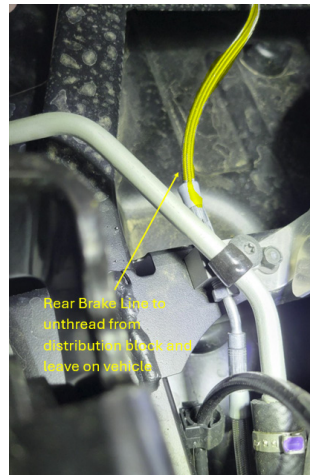
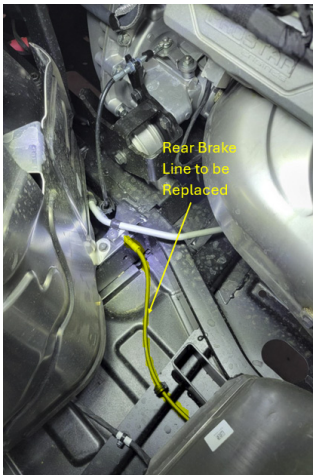


FIG 9 & FIG 10 - Replace Rear Brake Lines

INSTALLATION INSTRUCTIONS

Installation - Front

Mount the lower control arm to the unit using OEM hardware, tighten using an 18mm socket and wrench (**FIG 11**).

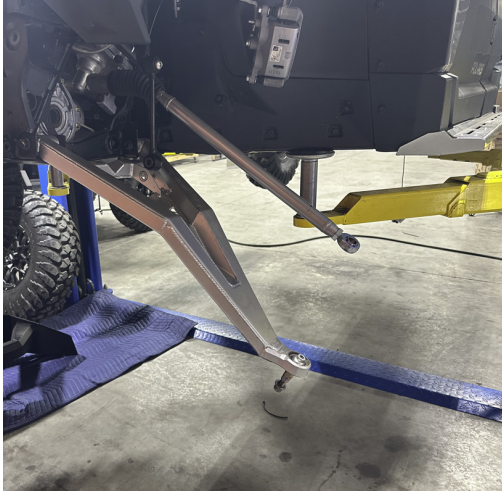


FIG 11 - Mount Lower Control Arm

Apply anti-seize to the splines on the axle before inserting into the front differential (**FIG 12**).



FIG 12 - Install axle into front differential

INSTALLATION INSTRUCTIONS

Installation - Front

Mount the knuckle to the lower ball joint/uniball using an 18mm socket (FIG 13).

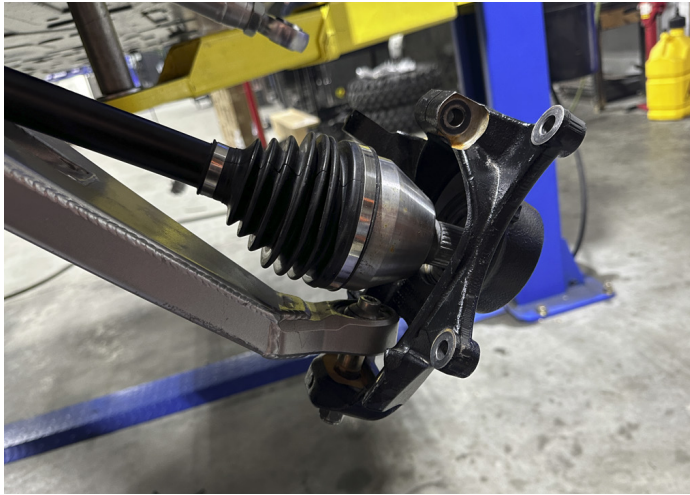


FIG 13 - Mount Knuckle to Lower Ball Joint

Mount the upper control arm to the vehicle using the OEM hardware. Tighten using an 18mm socket and wrench (FIG 14).



FIG 14 - Install Upper Control Arm using an 18mm Socket and Wrench

INSTALLATION INSTRUCTIONS

Installation - Front

Mount the knuckle to the upper ball joint/uniball using the OEM cross bolt and 15mm socket and wrench (**FIG 15**).



FIG 15 - Mount the knuckle to the Upper Ball Joint using a 15mm Socket and Wrench

Mount the shock to the outer shock mounting hole on the frame and the shock to the upper control arm using the factory hardware. Tighten using an 18mm socket and wrench (**FIG 16 & FIG 17**).

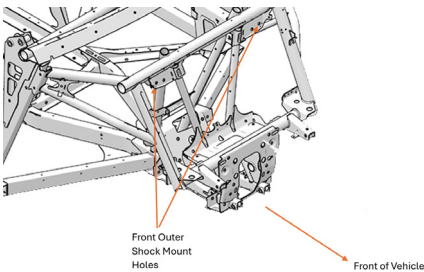


FIG 16 - Mount shock to the frame using the outer mounting hole

FIG 17 - Mount shock to the upper control arm

INSTALLATION INSTRUCTIONS

Installation - Front

Mount the steering pin to the knuckle using a M12 flange nylon lock nut. Insert the steering misalignment into the 3/4" LHT heim before tightening with an M12 flange nylon lock nut (**FIG 18**).



FIG 18 - Mount the tie rod to the knuckle using an 18mm Socket

Apply antiseize to the splines of the axle, mount the rotor to the knuckle using the axle nut, tighten using a 30mm socket. Install cotter pin through axle nut to prevent the nut from backing off the axle (**FIG 19**).



FIG 19 - Mount Rotor to the Knuckle using a 30mm Socket

INSTALLATION INSTRUCTIONS

Installation - Front

Mount the sway bar end link to the lower control arm using the OEM hardware. Tighten using an 18mm socket and wrench (**FIG 20**).

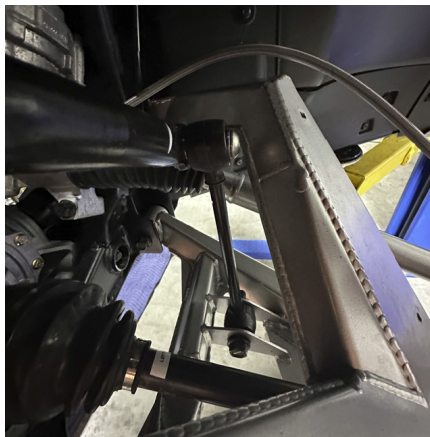


FIG 20 - Mount the sway bar end link to the lower control arm

Mount the brake caliper to the knuckle using the OEM bolts, tightening a 15mm socket (**FIG 21**).

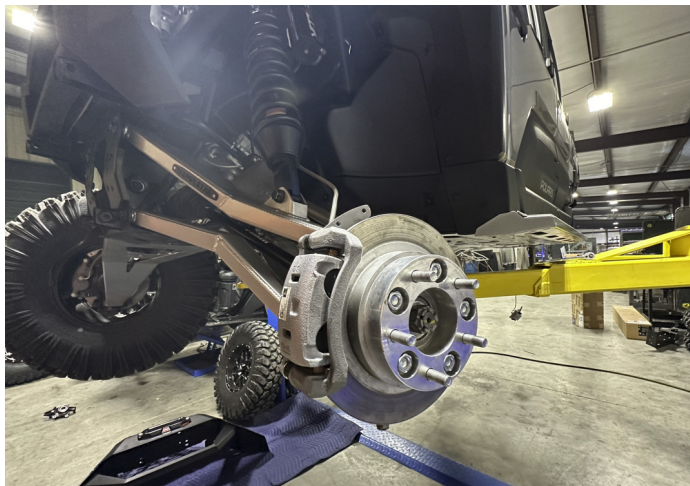


FIG 21 - Mount the Brake Caliper to Knuckle

INSTALLATION INSTRUCTIONS

Installation - Front

Fasten the brake lines to the upper control arms using 6 x zip ties to fasten the brake line to the brake line tab welded to the upper arm. (FIG 22).



FIG 22 - Mount the brake lines to the upper control arm using zip ties

Installation - Rear

Mount the lower control arm to the rear of the unit using the OEM hardware. Tighten using an 18mm socket and wrench (FIG 23).



FIG 23 - Mount the Rear Lower Control Arm to the unit

INSTALLATION INSTRUCTIONS

Installation - Rear

Fasten the knuckle to the lower control arm using the factory hardware, tighten using a 18mm socket and wrench (**FIG 24**).



FIG 24 - Mount the knuckle to the lower control arm

Mount the upper control arm to the frame using the OEM hardware, tighten using a 18mm socket and wrench (**FIG 25**).



FIG 25 - Mount the Upper Control Arm to the Unit

INSTALLATION INSTRUCTIONS

Installation - Rear

Apply anti-seize to the splines on the rear axles before sliding the axle into the differential. Push the lower control arm and knuckle down to be able to slide the axle into the knuckle (**FIG 26**).



FIG 26 - Install the Rear Axles

Fasten the upper control arm to the knuckle with the factory bolt and nut, tighten using a 21mm socket and wrench (**FIG 27**).

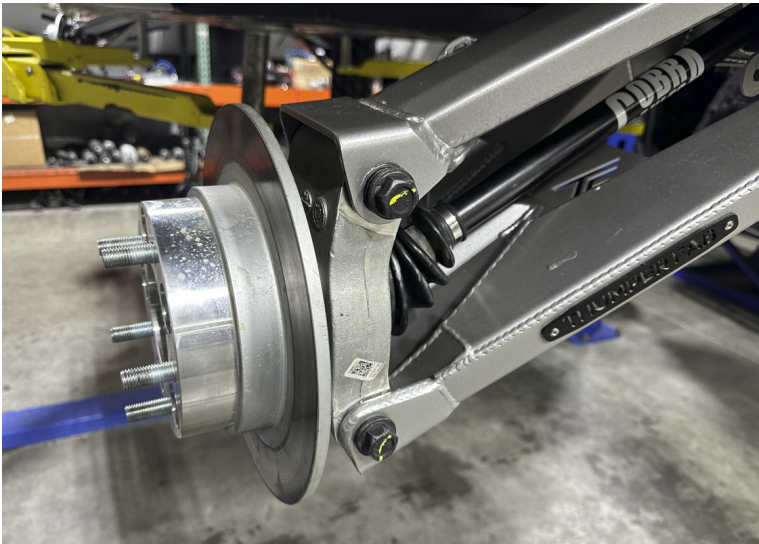


FIG 27 - Mount the Upper Control Arm to the Knuckle

INSTALLATION INSTRUCTIONS

Installation - Rear

Fasten the axle to the knuckle using the rear axle nut, tighten using a 30mm socket (**FIG 28**).



FIG 28 - Install Rear Axle Nut

Fasten the rear shock to the frame using the outer most hole in the frame and to the lower control arm. Attach using the OEM hardware, tighten with a 18mm socket and wrench (**FIG 29**).



FIG 29 - Mount the Rear Shock to the Frame (Outer Most Hole)

INSTALLATION INSTRUCTIONS

Installation - Rear

Fasten the sway bar end link to the lower control arm with the OEM hardware, tighten using an 18mm socket and wrench (**FIG 30**).



FIG 30 - Mount the sway bar to the lower control arm

Attach the brake lines to the upper control arm using 3 x zip ties per side (**FIG 31**).



FIG 31 - Fasten the Brake Line to the Upper Control Arm

Bleed the brake, reinstall the tires and set the vehicle down on the ground. After rolling the vehicle back and forth, adjust toe as needed. Once you ensure all bolts are tight, you are ready to enjoy your new Thumper Fab Long Travel!



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PARTS

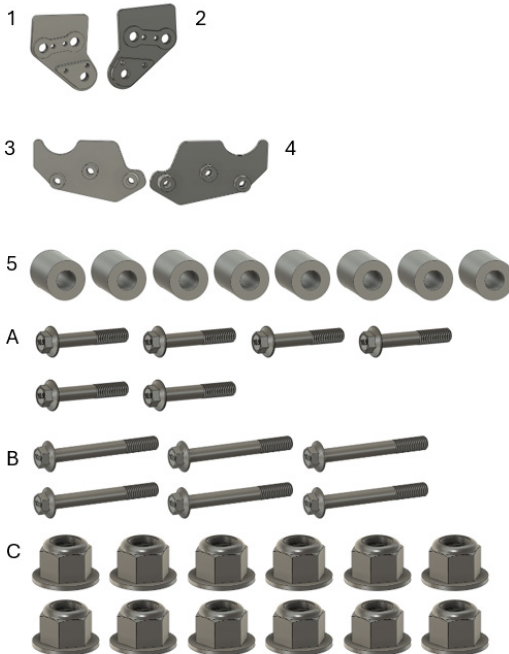
REF	QTY	DESCRIPTION
1	2	Front OEM Shock Relocation Brackets - Left
2	2	Front OEM Shock Relocation Brackets - Right
3	2	Rear OEM Shock Relocation Brackets - Left
4	2	Rear OEM Shock Relocation Brackets - Right
5	8	Shock Spacers
HARDWARE KIT		
A	6	M12 x 80mm Flange Bolts
B	6	M12 x 100mm Flange Bolts
C	12	M12 Flange Nylon Lock Nuts

TOOLS

- 18mm Socket and Wrench

BEFORE YOU BEGIN

If you do not feel comfortable installing your Thumper Fab Long Travel OEM Shock Relocation Kit, please see your nearest Polaris Dealer for installation.



INSTALLATION INSTRUCTIONS

Installation - Front

If using OEM Shocks with Thumper Fab Long Travel Kit, an OEM Shock Relocation Kit need to be installed. For the installation on the front, bolt a left and right front shock relocation bracket to the OEM shock mount using 2 x M12 x 80mm flange head bolts and 2 x M12 flanged nylon lock nuts per side. Shock spacer is placed inbetween frame during assembly. Tighten using an 18mm socket and wrench (**FIG 1**).

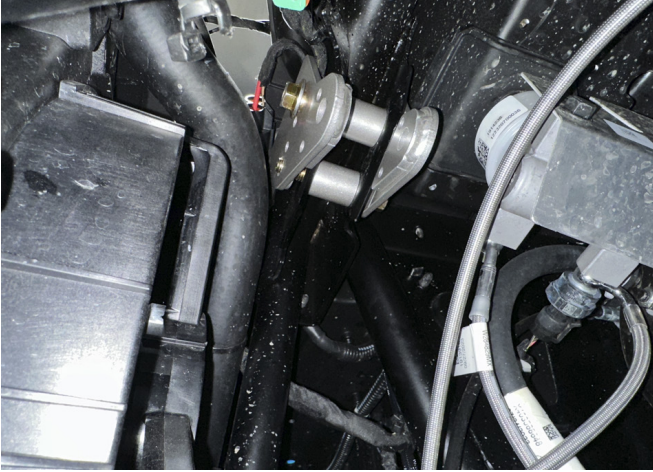


FIG 1 - Mount Front Shock Relocation Brackets and Spacers to Frame

With the front shock relocation brackets mounted and tight, fasten the top of the shock to the hole shown below (Relocated Shock Position) (**FIG 2**).

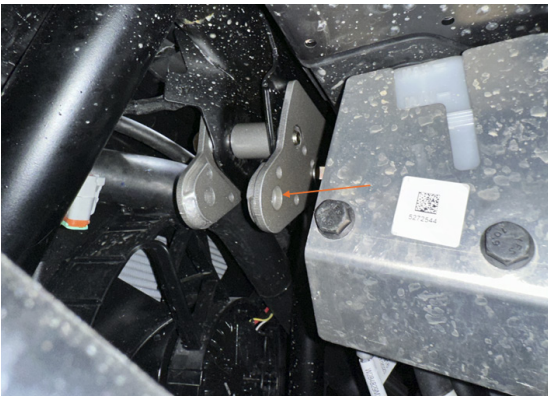


FIG 2 - Relocated Front Shock Upper Mounting Position

INSTALLATION INSTRUCTIONS

Installation - Rear

For the installation on the rear, bolt a left and right rear shock relocation bracket to the OEM shock mount using 2 x M12 x 100mm flange head bolts and 2 x M12 flanged nylon lock nuts per side. Shock spacer is placed inbetween frame during assembly. Tighten using an 18mm socket and wrench (**FIG 3**).



FIG 3 - Mount Rear Shock Relocation Brackets and Spacers to Frame

With the rear shock relocation brackets mounted and tight, fasten the top of the shock to the hole shown below (Relocated Shock Position) (**FIG 2**).



FIG 4 - Relocated Rear Shock Upper Mounting Position

INSTALLATION INSTRUCTIONS

PRODUCT DISCLAIMER

The installation of products sold or manufactured by Thumper Fabrication, LLC (Thumper Fab) including, but not limited to suspension components such as lift kits, audio roofs, roll cages, frame stiffener kits, and tires that exceed the original specifications for the vehicle, may change the vehicle's center of gravity and handling characteristics both on- and off-road. You are aware that the installation of tires that are larger than original vehicle specifications may reduce the effectiveness of the braking system. Use of these products may place added stress to the original factory vehicle components which could cause them to weaken or possibly fail.

Products sold or manufactured by Thumper Fab are intended for off-road use only. Operation of a vehicle modified with these products on a road could result in serious bodily injury or death, and such operation may violate the laws of your state or municipality. You agree to operate your vehicle exclusively in the manner intended by the vehicle manufacturer. You agree that failure to safely and reasonably operate your vehicle could result in serious bodily injury or death, and that, as a result of installation of this product(s) to your vehicle, extreme care must be taken to prevent vehicle rollover or loss of control, which may be more likely to occur as a result of said modifications. You will avoid unsafe maneuvers, including sudden sharp turns or other abrupt maneuvers, which could make a vehicular accident more likely. You understand that Thumper Fab is not responsible or liable for any damages or any injuries to yourself or your passengers that could occur upon possible accidents due to driver error, incorrect installations, bad judgment, incompatibility with other aftermarket accessories or natural disasters to the fullest extent allowable by law. You will have all vehicle occupants fasten seatbelts, if equipped, and wear proper safety equipment, such as DOT approved helmet and eye protection prior to operating the vehicle. You understand and acknowledge that failure to wear proper safety equipment may increase the risk of serious bodily injury or death to yourself and any passengers.

Proper installation of products sold or manufactured by Thumper Fab requires knowledge of the factory recommended procedures for removal and installation of original equipment components. Installation of these products without proper knowledge and experience may affect the performance of these components and the safety of the vehicle and cause serious bodily injury or death. It is strongly recommended that a certified mechanic familiar with the installation of similar components perform the product(s) installation.

Prior to installing any products sold or manufactured by Thumper Fab, you will perform or cause to be performed an inspection of their vehicle to confirm its condition is suitable for the installation of these products. A proper inspection of the vehicle includes confirmation that the vehicle has not been in a collision and is free of corrosion. If the vehicle is suspected to have been in a collision or misused, or is otherwise unsuitable for modification, you will not install the product(s). You will continue to inspect the vehicle prior to each use to confirm its condition is suitable for its intended use, and you acknowledge that the failure to do so may result in serious bodily injury or death, as well as damage to the vehicle itself.

You will install any warning labels provided with the product so it may be prominently seen by yourself and all passengers. You will notify all passengers of the modifications performed to your vehicle prior to operation.

Insurance companies may handle coverage of a modified vehicle differently. Please check with your insurance carrier prior to modifying the vehicle to ensure your coverage remains sufficient. Installation of this product(s) may void your vehicle warranty. If this is a concern, please check with the manufacturer or dealer before purchase or installation of this product(s).



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