

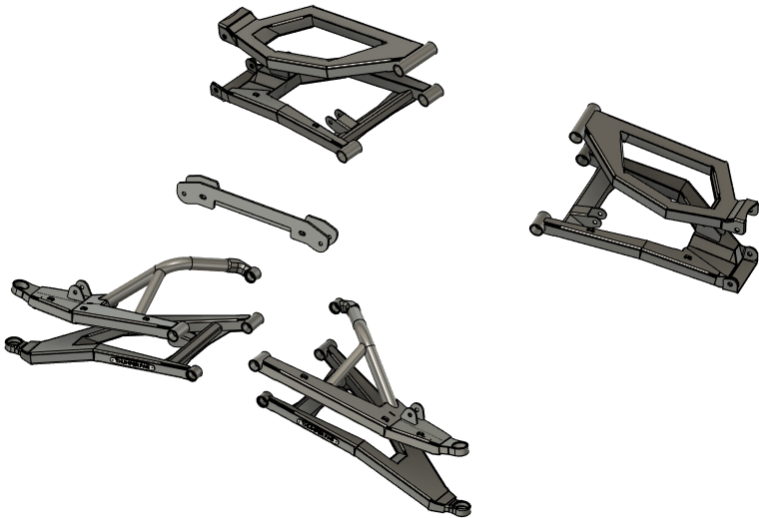


THUMPER FAB

Aluminum Audio Roofs ♦ Roll Cages ♦ UTV Accessories

Polaris Xpedition Long Travel Suspension

SKU: TF202001



Thumper Fab

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Customer Service: 903-472-0928

www.thumperfab.com

Ver. 0324

Polaris Xpedition

Long Travel

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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	1	Front Shock Relocation Bracket - Inner
10	1	Front Shock Relocation Bracket - Outer
11	4	Axles
12	1	Brake Line Kit
13	2	Tie Rods (Main Bodies)
14	2	Steering Boots
HARDWARE KIT		
A	2	Inner Tie Rods
B	2	3/4" LHT Heim Joint
C	2	3/4" LHT Jam Nuts
D	2	Steering Pins
E	2	Steering Misalignment
F	14	Zip Ties
G	6	M12 Flanged Nylon Lock Nut
H	12	M12 Flat Washers
I	2	M12 x 60mm Flange Head Bolt
J	4	M12 x 70mm Flange Head Bolt
K	2	Front Shock Relocation Spacers

TOOLS

- 14mm Socket
- 15mm Socket and Wrench
- 18mm Socket and Wrench
- 21mm Socket and Wrench
- 30mm Socket
- Snips
- Channel Locks
- Pick
- Pry Bar
- Locktite
- Anti-Seize
- Grinder
- Touch Up Paint (Black)

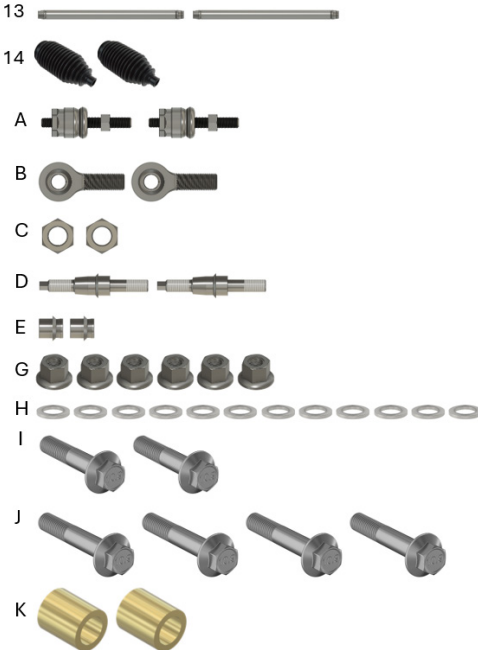
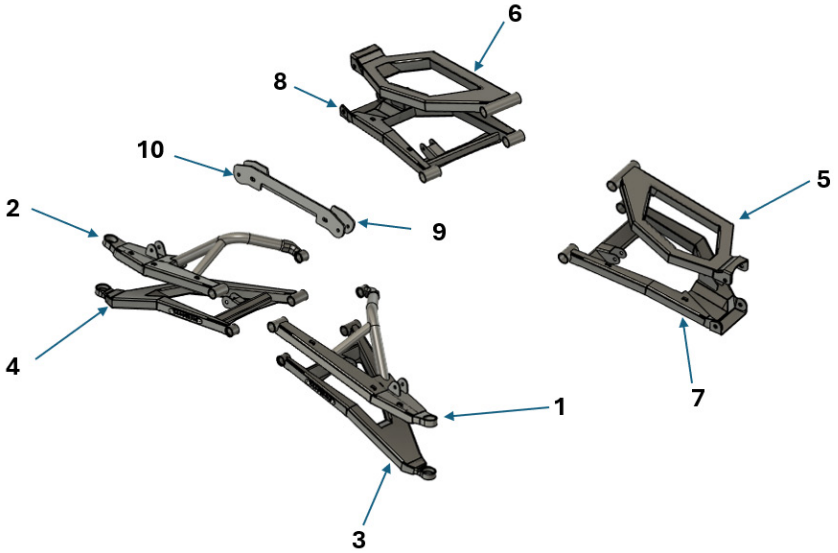
BEFORE YOU BEGIN

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, & Zip Ties Not Shown

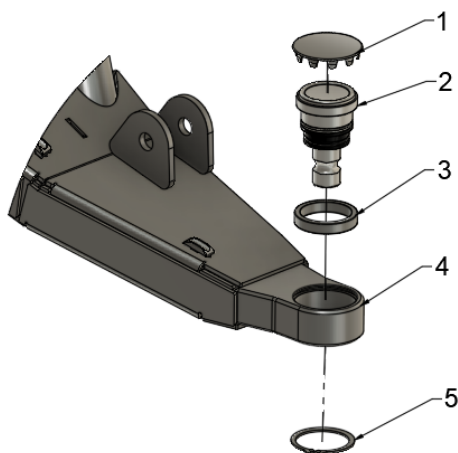
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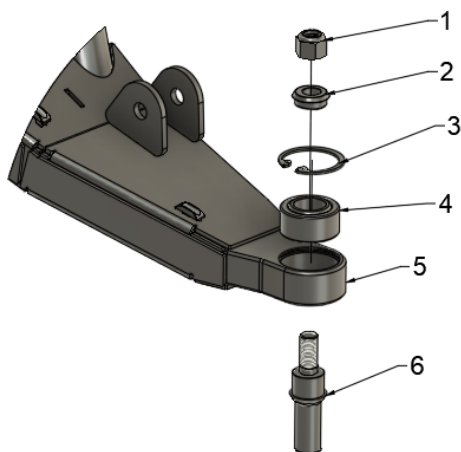
OEM



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. Install INTERNAL RETAINING RING.
3. Insert UNIBALL PIN into UNIBALL.
4. Install 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, and 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 the muffler and front winch to gain access to control arm mounting bolts (**FIG 1**).



FIG 1 - Remove OEM Parts to prepare for installation

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**).

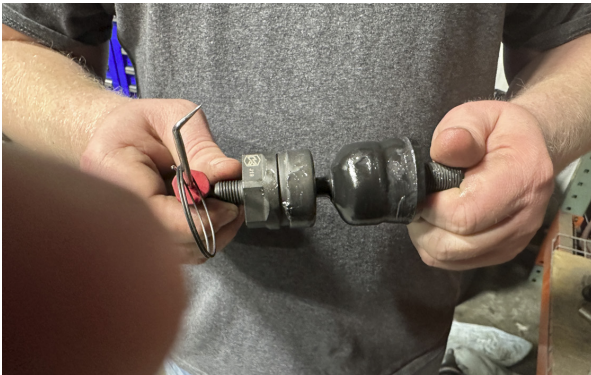


FIG 2 - Remove boot from inner tie rod end using a pick

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 (14) 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).

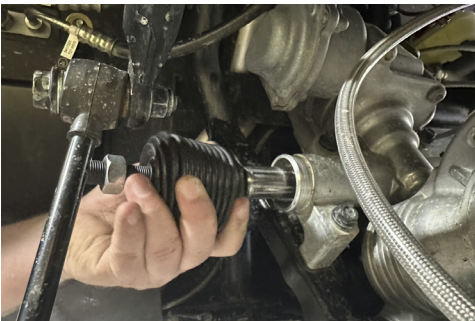


FIG 4 - Fasten Inner Tie Rod to steering rack using Channel Locks



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

Loosley place the front inner and outer shock relocation brackets (9 & 10) into place. View is from passenger side (FIG 7).



FIG 7 - Place Shock Relocation Brackets into position

INSTALLATION INSTRUCTIONS

Installation - Front

Loosley mount the shock relocation brackets to the frame in the order shown below. Use 2 x M12 x 70mm flange head bolts (**J**), 4 x M12 flat washers (**H**), and 2 x M12 flange lock nuts (**G**). 4 x M12 washers go inbetween brackets and frame. Frame is represented by yellow below, 2 x spacers (**K**) go inside frame at OEM shock mounting position, shown in green below. Do not tighten (**FIG 8**).

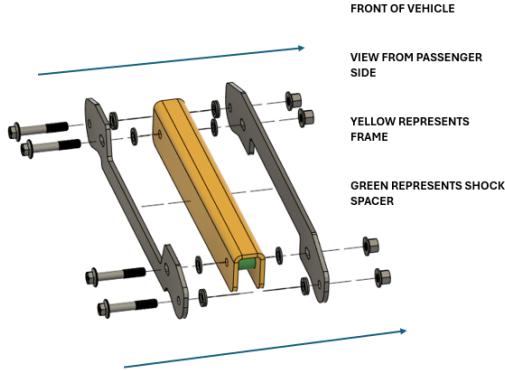


FIG 8 - Loosley Fasten Front Shock Relocation Brackets to Frame

Fasten the shocks to the shock relocation brackets using 2 x M12 x 70mm flange head bolts (**J**), 8 x M12 flat washers (**H**), and 2 x M12 flange lock nuts (**G**). 2 x M12 washers (**H**) go on each side of the shock, with the fastener started, tighten using an 18mm socket and wrench, once tight, fully tighten shock relocation bracket frame mounting hardware (**FIG 9**).



FIG 9 - Mount Shock and tighten hardware, starting with shock bolts first using 18mm Socket and Wrench

INSTALLATION INSTRUCTIONS

Installation Preparation

Replace all brake lines except the one highlighted below (Line from master cylinder to rear distribution block) (**FIG 10**).



FIG 10 - Replace Brake Lines using provided kit

If using Fox shocks, clearance of rear shock mount will need to be performed with a grinder. After clearancing, touch up with black spray paint to revert rusting (**FIG 11 & FIG 12**).

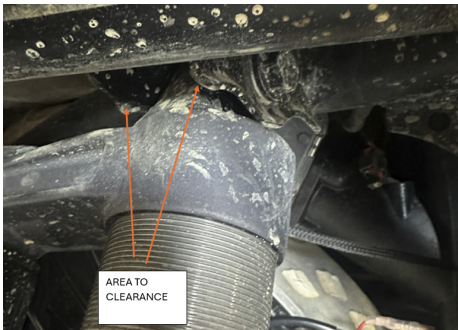


FIG 11 - Pre - Clearancing

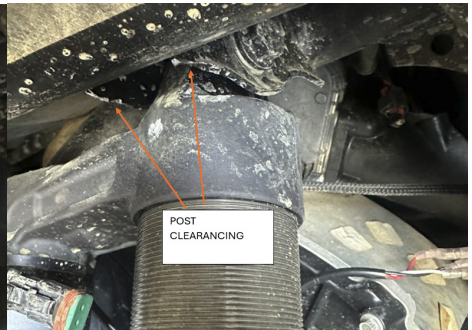


FIG 12 - Post - Clearancing

INSTALLATION INSTRUCTIONS

Installation - Front

Install front axles after applying anti-seize to splines for ease of removal in the future if needed. Mount front lower control arms to the frame using OEM hardware, do not tighten (**FIG 13**).



FIG 13 - Install Axles, mount Front Lower Control Arms using OEM Hardware

Mount the knuckles to the lower ball joints, use an 18mm socket to fully tighten (**FIG 14**).



FIG 14 - Mount Knuckles to Lower Ball Joints using 18mm Socket

INSTALLATION INSTRUCTIONS

Installation - Front

Mount front upper control arms to the frame using OEM hardware. Do not fully tighten (**FIG 15**).



FIG 15 - Mount Front Upper Control Arms using OEM Hardware

Mount the knuckle to the upper ball joint using the OEM cross bolt and nut, use a 15mm socket and wrench to fully tighten (**FIG 16**).

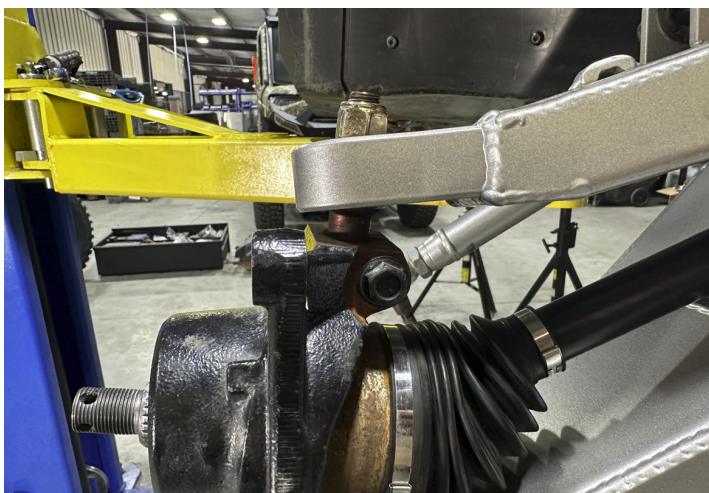


FIG 16 - Mount Knuckle to Upper Ball Joint using 15mm Socket and Wrench

INSTALLATION INSTRUCTIONS

Installation - Front

Mount shock to upper control arm using factory hardware, tighten using 18mm socket and wrench (**FIG 17**).



FIG 17 - Mount shock to Upper Control Arm using 18mm Socket and Wrench

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



FIG 18 - Mount sway bar link to lower control arm using 18mm Socket and Wrench

INSTALLATION INSTRUCTIONS

Installation - Front

Fasten tie rod to knuckle using 18mm socket to tighten steering pin (D) to knuckle. Next slide heim (B) over steering pin along with steering misalignment (E) before tightening lock nut using 18mm socket (FIG 19).

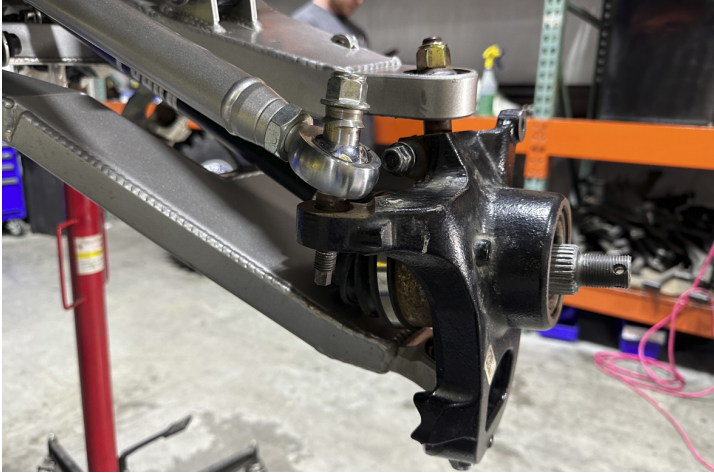


FIG 19 - Fasten Tie Rod to Knuckle using an 18mm Socket

Slide hub over axle, tighten axle nut using a 30mm socket. Once tight, install a cotter pin through castle nut and axle to ensure nut can not back off axle (FIG 20).



FIG 20 - Install Hub, tighten Axle nut using 30mm Socket

INSTALLATION INSTRUCTIONS

Installation - Front

Replace brake rotor onto hub and mount brake caliper to knuckle using factory bolts. Tighten using a 15mm socket (**FIG 21**).



FIG 21 - Fasten Brake Caliper to Knuckle using a 15mm Socket

Use zip ties (**F**) to fasten brake line to brake line tabs on the upper control arm. Snip excess zip tie off for a cleaner appearance. Tighten all remaining front hardware (**FIG 22**).



FIG 22 - Zip Tie brake lines to Upper Control Arms

INSTALLATION INSTRUCTIONS

Installation - Rear

Reinstall shocks into frame mount using 18mm socket and wrench. Install rear axle into differential after applying anti seize to splines (**FIG 23**).



FIG 23 - Reinstall Rear shocks to frame mount, install axle into differential

Fasten rear lower control arms to the frame using OEM hardware. Do not tighten (**FIG 24**).



FIG 24 - Mount Rear Lower Control Arm using Factory Hardware

INSTALLATION INSTRUCTIONS

Installation - Rear

Mount knuckle to lower control arm, fully tighten axle nut using 30mm socket, fasten upper arm to frame and knuckle using OEM hardware (**FIG 25**).



FIG 25 - Reinstall Knuckle, Tighten Axle Nut using 30mm Socket, and mount Upper Arm using OEM Hardware

Fasten shock to lower control arm using 2 x M12 x 60mm flange head bolt (**I**) and 2 x M12 flanged nylon lock nut (**G**). Feed bolts through shock bracket and shock from back to front. Tighten using 18mm socket and wrench (**FIG 26**).



FIG 26 - Fasten Shock to Lower Control Arm using 18mm Socket and wrench

INSTALLATION INSTRUCTIONS

Installation - Rear

Fasten sway bar link to lower control arm using OEM hardware, tighten using an 18mm socket and wrench (**FIG 27**).



FIG 27 - Fasten Sway Bar Link to Lower Control Arm using an 18mm Socket and Wrench

Reinstall the brake rotor and brake caliper using factory bolts. Tighten using a 15mm socket (**FIG 28**).



FIG 28 - Reinstall Brake Rotor and Caliper using a 15mm Socket

INSTALLATION INSTRUCTIONS

Installation - Rear

Fasten the brake line to the brake line tabs using zip ties, clipping off any excess with snips (**FIG 29**).



FIG 29 - Fasten Brake Lines to Lower Arm

Reinstall the wheels, muffler, and winch before setting the vehicle back down on the ground. Bleed the brake and adjust toe as needed. Enjoy your new Thumper Fab Long Travel!

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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