TACOMA FRONT 3-LINK SUSPENSION KIT

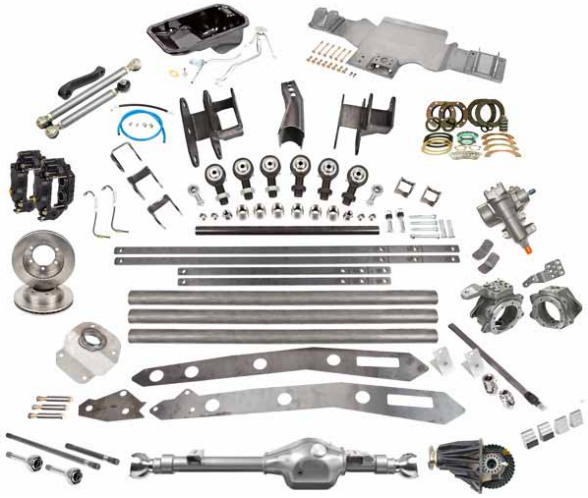
300757-1-KIT (1995)
300805-1-KIT (1996-2004)
300806-1-KIT (1995-2004 W/O STEERING HARDWARE AND FRAME PLATES)

KIT CONTENTS

Tacoma Front 3-Link Kit

Tacoma Front 3-Link Kit "A"

Tacoma Front 3-Link Kit "B"



Tacoma Front 3-Link Kit "C"

TRAIL-GEAR INC
5356 PINE AVE • FRESNO, CA • 93727
USA TOLL FREE: 877.4X4.TOYS • WORLDWIDE: 559.252.4950
WWW.TRAIL-GEAR.COM

RECOMMENDED TOOLS

Angle finder
Welder
Grinder
Socket set
Wrench set
Jack stands
Jack
Hammer
Tape measure

CAUTION

1. Read all instructions completely and carefully before you begin.

2. Check to make sure the kit is complete and that no parts are missing (refer to the Kit Contents List on the first page of these instructions). If anything is missing, please contact Trail-Gear at 559.252.4950.

3. Park vehicle on a clean, dry, flat, level surface and block the tires so the vehicle can not roll in either direction.

4. This build is so in depth that not every step could be covered in these instructions. If anything is not clear, please call our tech support line at 1.877.4X4.TOYS before proceeding. We have trained technicians waiting to help you.

5. Do not fully weld any link brackets until all clearances have been double checked.

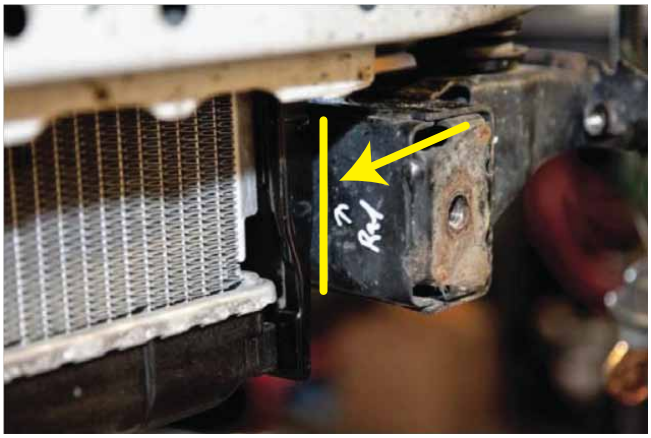
INSTALLATION INSTRUCTIONS

STEP 1
Measure current wheel base and take note. If your truck already has a solid axle swap kit also measure and take note of the pinion angle.

STEP 2
If your truck already has a TG SAS kit, remove leaf spring hardware and skip to step 81. If not remove front bumper, skid plate, and splash guards.

STEP 3
On vehicles with a 3.4 L V6 engine that have a radiator that hangs below the frame like shown, you will need to replace the radiator with following part numbers. (Performance Radiator #1774, Napa # APD 2740)

STEP 4
Mark the edge of the radiator for future use.

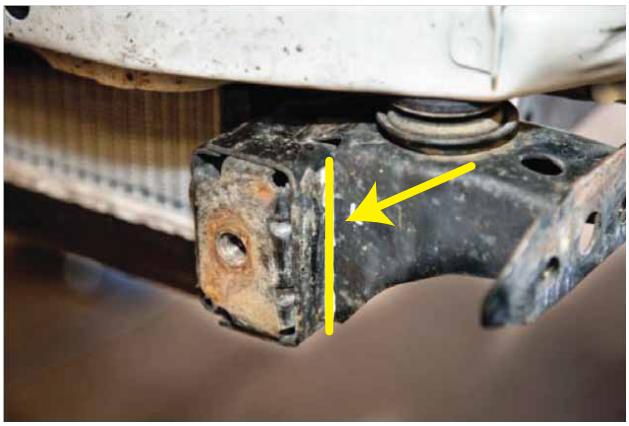


STEP 5
Remove the radiator

INSTALLATION INSTRUCTIONS

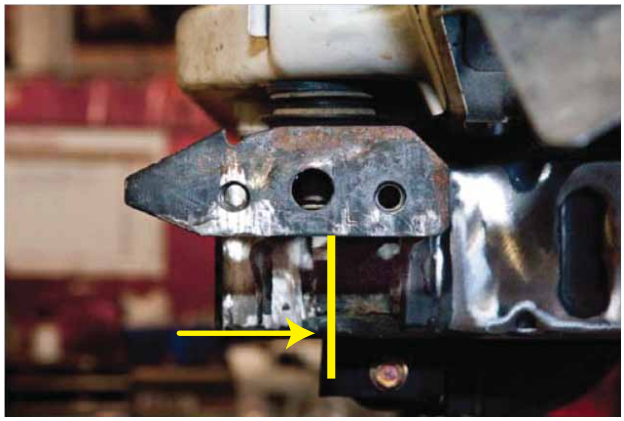
STEP 6
Unbolt and remove all IFS components.

STEP 7
Mark the body mount as close to weld as possible

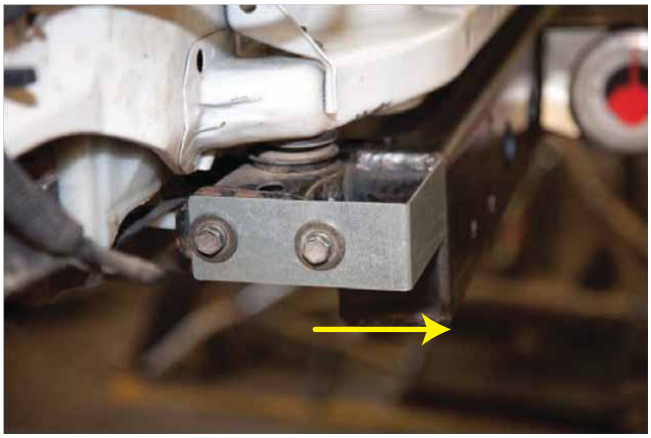


STEP 8
Cut the body mount along the previously drawn line and grind the weld down. You want an approximately ¼" gap between the frame and edge of the mounting bracket

STEP 9
Cut the inner support plate of the body mount ½ of the way in.

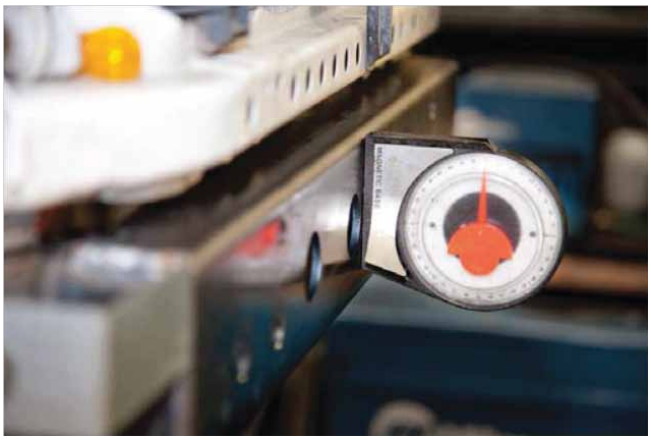


STEP 10
Slide front hanger mount onto the frame rails. Mount hanger locating jig to the body mount and slide it all the way forward.



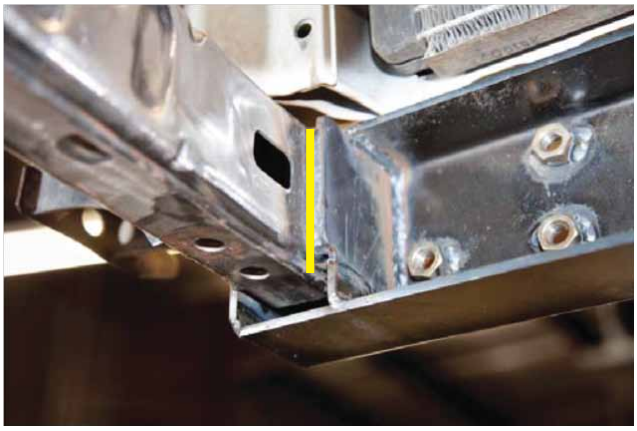
STEP 11
Use straight edge to ensure that the mount is flush with the jig.

STEP 12
Make sure the mount is square and straight to the truck



STEP 13
Tack the mount in place. Verify the mount is still straight and weld it completely.

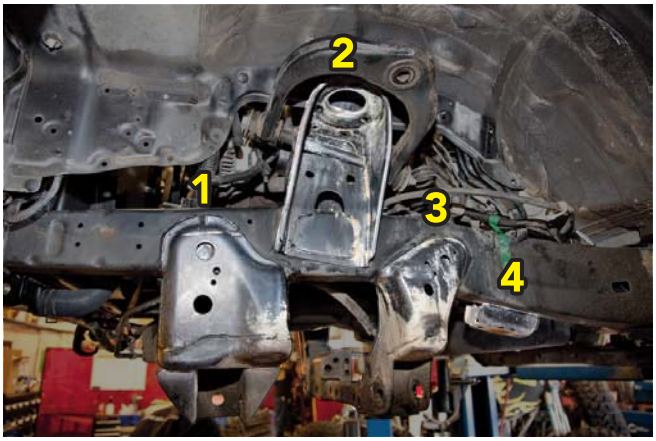
STEP 14
Weld the area shown below.



STEP 15
Weld the areas shown below.

STEP 16
Cut the brake line tab off as shown for future.

STEP 17
After all of the other brackets have been unbolted or removed, brackets 1,2,3, and 4 will need to be removed with a torch or plasma cutter.



STEP 18
Grind the frame clean

STEP 19
If you have a 2.7L engine, start here to remove the oil pan. If you have a 3.4L engine, skip to step 36. Remove the dust shield.

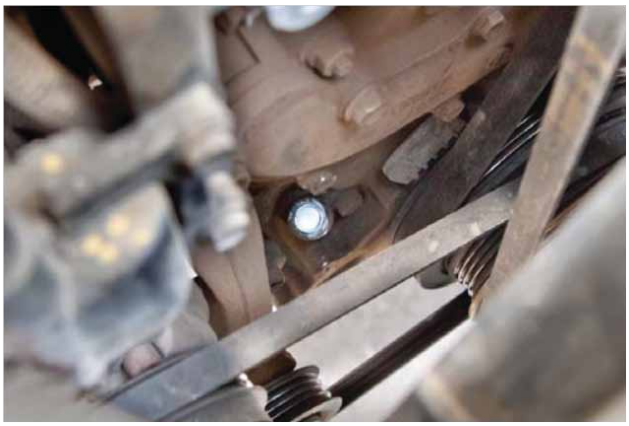
STEP 20
Remove the oil pan.

STEP 21
Remove dipstick bracket hardware.

STEP 22
Remove the stock dipstick.

STEP 23
Apply Ultra Grey to bottom of freeze plug.

STEP 24
Place freeze plug in stock dipstick hole.

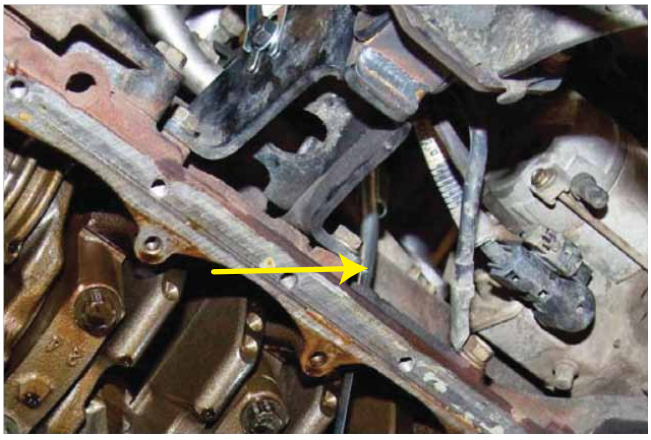


STEP 25
Lightly tap freeze plug to secure it into place.

STEP 26
Locate the small freeze plug approximately 2" behind motor mount.

STEP 27
Using a punch, remove the freeze plug.

STEP 28
Install the new dipstick tube into the block using Ultra Grey at the mating surface.

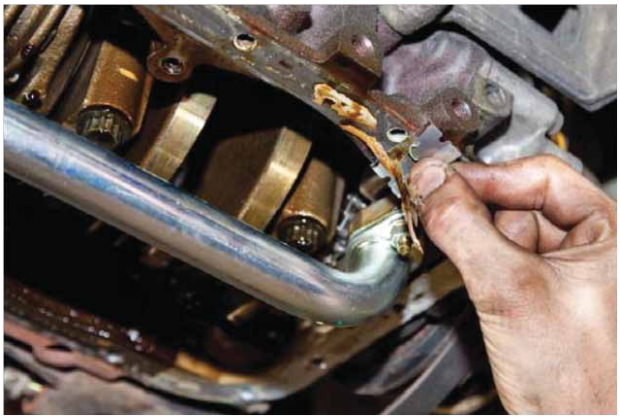


STEP 29
Mark and drill a hole in the motor mount bracket to mount dipstick tube. We drilled a 5/16" hole and used an 8mm bolt.

STEP 30
Fasten the dipstick tube to the motor mount.

STEP 31
Remove the stock strainer and install the new one.

STEP 32
Using a razor, clean the oil pan mating surface on the block.



STEP 33
Apply a bead of ultra grey to the oil pan mating surface.

STEP 34
Install the new oil pan. The strainer now sits towards the back of the truck.

STEP 35
Re-install the dust shield.

STEP 36

Install the drain plug.

STEP 37

If you have a 3.4L engine, follow these instructions to replace your oil pan. Remove dust shield.

STEP 38

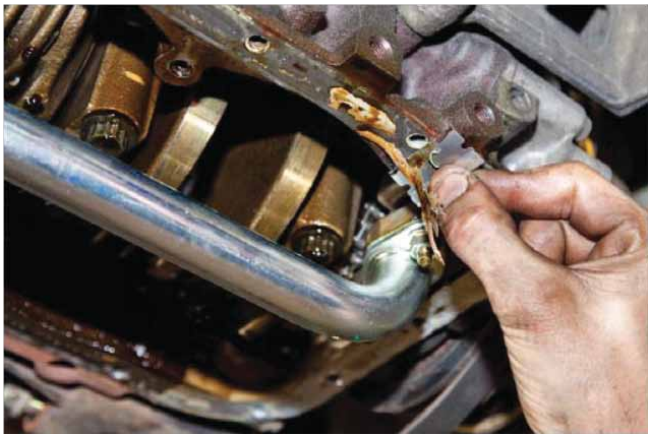
Remove the oil pan.

STEP 39

Remove the stock strainer and replace it with the new one.

STEP 40

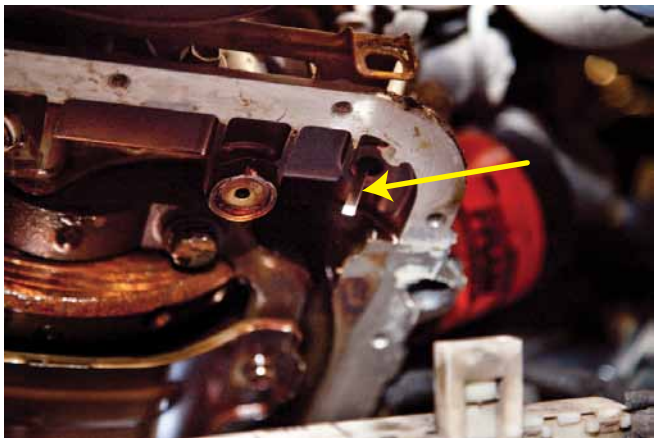
Using a razor, clean the oil pan mating surface on the block.



STEP 41

Mark the stock dipstick 1/8" below full line and cut off the excess. The stock full level on the dipstick will still be used and the 6 ½ quarts of oil are used.

STEP 42
Re-install the dip stick into the block.



STEP 43
Apply a bead of Ultra Grey to the oil pan.

STEP 44
Install the new oil pan. The strainer now sits towards the back of the truck.

STEP 45
Re-install the dust shield. The circled bolt will need to be shortened by 3/8”

STEP 46
Install the drain plug with gasket.

STEP 47
Weld off the body mount.

STEP 48
Mark the inner vendor well as shown in the picture below. Be careful not to cut the pinch weld.

STEP 49
Clamp steering box in desired location. The box should be moved as far forward as possible leaving approximately a ¼" of clearance between the core support and steering box.

STEP 50
Clamp the frame plate to the frame, centering it on the frame and aligning it with the previously marked hole.

STEP 51
Using the frame plate as a template, drill the 2 marked holes in the frame to ½". Be sure to drill straight through both sides of the frame.

STEP 52
On the inside of the frame only, drill holes to ¾" to allow the sleeves to be installed in the frame.

STEP 53
Install (3) ½" bolts through the previously drilled holes. Install sleeves over bolts and inner frame plates as shown.

STEP 54
Tack weld the inner frame plate and sleeves in place.

STEP 55
Tack weld the frame plate to the frame and then weld in sections to avoid frame warping. At this time you can also weld off inner frame plate and sleeves.

STEP 56
On the passenger side, position and clamp the frame plates to the frame, aligning the rectangle hole and centering the rest of the plate on the frame.

STEP 57
You may want to plug weld the frame holes shown.

STEP 58
Tack weld the frame plate to the frame and remove the clamps.

STEP 59
We recommend welding the frame plate on the frame in steps, allowing the frame to cool to prevent warping. First, weld the inner holes.

STEP 60
Next, weld the front, rear and angled section.

STEP 61
After frame cools finish welding remaining portions.

STEP 62
Install IFS steering box.

STEP 63
Remove the steering shaft dust cover located behind the brake pedal.

STEP 64
Remove the steering shaft and coupler from the column.

STEP 65
Remove the seal housing from the firewall.

STEP 66
Remove the seal from the seal housing.

STEP 67
Install the factory seal from your seal housing into the supplied seal housing. Paint as desired.

STEP 68
Install the seal housing into the firewall.

STEP 69
Install supplied steering box coupler to the supplied steering shaft. Tighten long set screw to make mark on shaft. Remove the coupler.

STEP 70
Using the previously made mark, drill one side of the shaft out to 3/8”

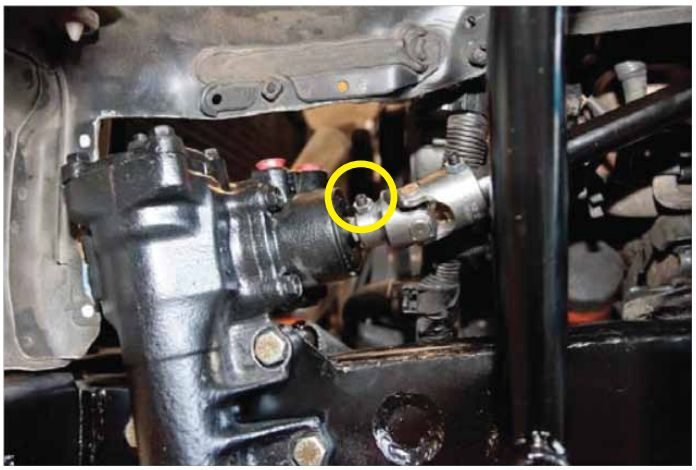
STEP 71
Once the hole is drilled, install the coupler using red locktite on the set screws.

STEP 72
Loosen the set screw to allow for adjustment.

STEP 73
Slide the steering shaft through the seal housing and install in to the new coupler and column as shown. Make sure to use red loctite on all screws. Note: 95.5 Tacoma steering shafts are a different spline and size than 96-04. Because of this, when installing the steering joint in a 95.5 you will get a 9/16" x ¾" double-d steering joint. The 9/16" end will have no splines; this is the side of the steering joint that you will put over the spline section of your steering rod.

Use set screw to make the same type of mark you did on the first end, then drill out the hole. Install the joint and tighten the set screw, we recommend putting a small tack weld on each side of the joint as a safety precaution.

STEP 74
Install coupler on steering box using red loctite on set screw.



STEP 75
On 3.4L engines; Remove the half moon piece from your original fan shroud and reuse it on the new fan shroud.

STEP 76
The lower fan shroud tab on the driver's side might need to be trimmed to clear the steering box

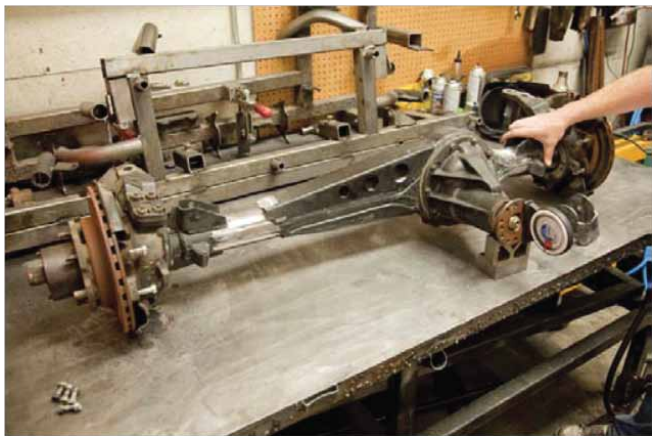
STEP 77
A self tapping screw may also be required to secure the fan shroud to the radiator. Be careful not to drill though the radiator.

STEP 78
Slight notching of the fan shroud may be necessary to clear the steering box mount.

STEP 79
The new radiator should be approximately 2" shorter than the original radiator.

STEP 80
It is important to note that any items installed after this point should only be tacked on as they may need to be repositioned for clearance issues. Finish welding should only be done after all clearances have been double checked.

STEP 81
Place axle on bench or jack stands and raise the pinion until the pinion angle matches the angle from step one or approximately 5 degrees above the horizontal if the truck has not yet had a solid axle swap.



STEP 82
Place the panhard axle bracket on the long side of the axle approximately 2-1/8" away from the knuckle ball offset adapter. The front of the bracket should be perpendicular to level. And tack in place. With Tie rod and drag link in place turn steering lock to lock to ensure that the tie rod will not contact the panhard mount.

STEP 82 CONTINUED

STEP 83

We trimmed the passenger side lower link mount as shown to fit over the panhard mount.

STEP 84

Place the passenger lower link mount approximately ½" away from the knuckle offset adapter and level with the ground. Tack into place.

STEP 85

Driver side lower link mount will need to have the upper portion of the radius removed as shown in the picture to fit around the short side truss.

STEP 86

Place the driver side lower link mount approximately ½" away from the knuckle offset adapter and level with the ground.

STEP 86 CONTINUED

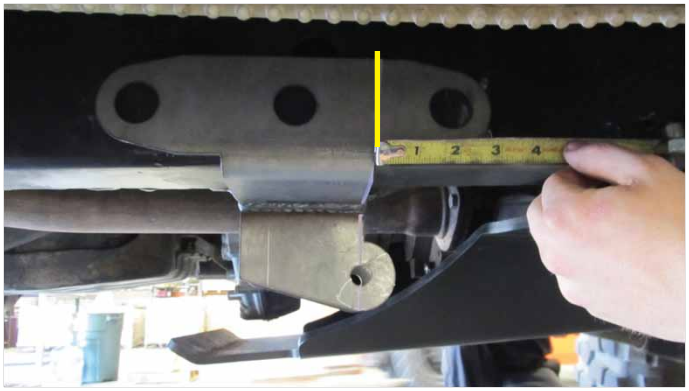
STEP 87

The upper link should be centered over the diff stud as shown. And slid back on the center section until the center of the bolt hole is flush with the faceplate as shown. Tack into place. Tack gussets into place depending on axle breather application one or two gussets may be used.

STEP 87 CONTINUED

STEP 88

Install frame side link brackets on frame, the passenger side is the single lower link mount while the driver side mounts both the upper and lower link. On test builds the center of the link mount hole was approximately 19 ½" inches from the body mount measured as shown. Tack into place. A c-clamp my be used to hold the brackets onto the frame for welding.



STEP 89
If axle does not currently have shock mounts install them now.

STEP 90
With the truck at desired ride height place axle under the truck at the desired wheel base, and roughly center the axle side to side under the truck. Install frame side panhard as shown. When installed panhard bar should be perpendicular to the frame at ride height.

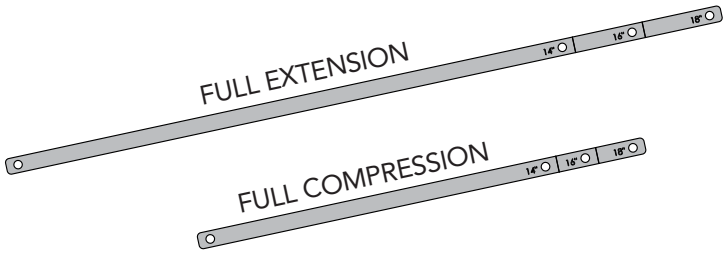
STEP 91
Measure for link lengths, by measuring from eye to eye between the axle side and frame side brackets and record in table below

STEP 92
To determine cut lengths for links start off by installing a creeper joint into a bung with a few threads showing to leave room for adjustability, the exact amount depends on the end user. Then measure from the center of the bolt hole to where the end of the tubing would sit on the bung. Take this measurement and multiply by two to account for both creeper joints on one link. Use the following table to keep track of the measurements. Measurement #4 in the table below will be the cut length for your links. The cut lengths for our build happened to be 35 ½" for the lowers and 37 5/8" for the upper, but may vary from truck to truck.

Lower Links	
	Measurement
1. Axle bracket to frame bracket	
2. Center of creeper joint to tube stop on bung	
3. Double measurement #2	
4. Subtract measurement #3 from #1	
Upper Link	
	Measurement
1. Axle bracket to frame bracket	
2. Center of creeper joint to tube stop on bung	
3. Double measurement #2	
4. Subtract measurement #3 from #1	

STEP 93
Install upper link, lower links, panhard link, link bolts, tie rod and drag link.

STEP 94
Cut shock "mock-up" strips to proper application length for the shock that you will use. We recommend 14" shocks for this kit. Note: These shock strips will only work with Fox 2.0 air shocks.



STEP 95
Once all links and panhard have been installed raise the vehicle/lower the axle to maximum droop. The cross-member may need to be clearanced on the driver side for the upper link in some cases. Full extension will be when the u joint starts to bind or slightly before the tie rod end of the drag link runs out of travel. Using the full extension shock strip as a guide you may now fabricate upper shock mounts. It is important to ensure that the tie rod will drop below the steering arm at full extension to prevent damage to the tie rod end which could result in loss of steering as shown below.

STEP 96
Once full extension is determined and suitable shock mounts are made move the axle to full compression and install the short shock strips. Check for any metal to metal contact such as the panhard link contacting the oil pan or the panhard mount contacting the frame, to prevent this it may be necessary to limit the up travel of the suspension by installing bump stops. It is also important to check that the tie rod does not contact the drag link.

STEP 97
Using shock strips check all clearances to check for any binding or metal to metal contact. Full extension, full compression, full flex left ,full flex right.

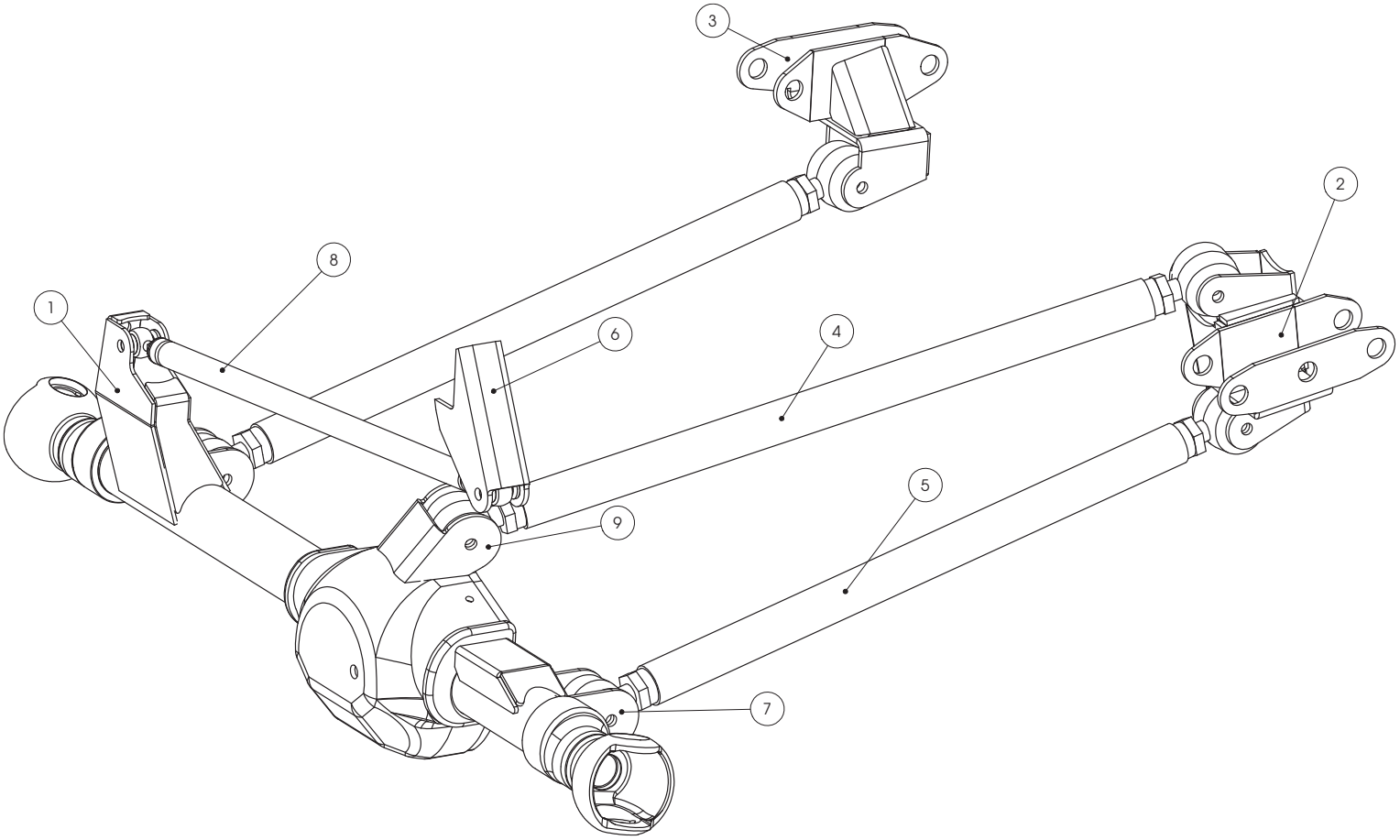
STEP 98
Install tire and shocks, but do not pressurize to check clearances. Again check full extension, full compression, full flex left, full flex right.

STEP 99
When all clearances are verified remove shocks and links. Fully weld all brackets and paint as desired. Reinstall shocks, links, steering and necessary hardware.

STEP 100
Pressurize shocks to set desired ride height. Test drive and recheck all hardware.

INSTALLATION INSTRUCTIONS

SERVICE PARTS:



ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	300650-1	TACOMA FRONT 3 AXLE SIDE PANAHRD	1
2	300644-1	TACOMA FRONT 3 DRIVER LINK MOUNT	1
3	300661-1	TACOMA FRONT 3 PASSENGER LINK MOUNT	1
4	110126-1	LINK TUBING 40 INCH	1
5	110182-1	LINK TUBING 36 INCH	2
6	300271-1-KIT	FRONT 3 HIGHSTEER FRAME SIDE PANHARD	1
7	110077-1-KIT	LOWER LINK MOUNT	2
8	300797-1	PANHARD BAR FRONT 3 TACOMA	1
9	110144-1	UPPER LINK MOUNT	1