

## Rusty's TJ/LJ Wrangler 3"/4.5"/5.5" Long Arm Kit RK-300LT-TJ/ RK-450LT-TJ/ RK-550LT-TJ INSTALLATION INSTRUCTIONS

Last Revised: 4/29/19

### Introduction:

Rusty's recommends that this installation be performed by a certified automotive technician or a person with professional mechanical knowledge. Installing this kit without this expertise may jeopardize the handling and safety of the vehicle.

Read instructions several times before starting. Be sure you have all the needed parts and know where they install. Read each step completely as you go. Exhaust modifications may be necessary. Prior to drilling or cutting, check behind the surface being worked on for any wires, lines, or hoses that could be damaged. After any drilling or cutting, remove burrs and grind smooth any surfaces. An inclinometer or similar tool may be needed to measure driveshaft angles before and after the installation.

### Warning:

It is the owners' responsibility to inspect all Rusty's products for proper torque specs to prevent loosening of components. Seat belts and shoulder harnesses should be worn at all times. Re-check all bolts and nuts after the first 100 miles and after any off-road usage during the first 300 miles. Although all of our products are made from the highest quality materials possible, they are not a substitute for Safe and Careful driving. In other words, have good safe on-road / off-road sense. Know the terrain, the speed limitations, and any obstacles that may lie ahead. Please remember to preserve our right to enjoy public land through the proper use of off-road vehicles.

### Before Starting Installation:

1. Carefully Read all warnings and instructions completely before beginning.
2. Verify all parts have been received in this kit by checking the parts list on page#2 of this document.
3. Only install this kit on the vehicle for which it is specified.
4. Park the vehicle on a clean, dry, flat, level surface and block the tires so the vehicle cannot roll in either direction.
5. Be certain the vehicle is safely secured on jack stands or a vehicle lift prior to working around or under a vehicle. Never rely on a jack alone to support a vehicle's weight; use appropriately rated stands to support the vehicle's frame and, any other heavy components.

**Rusty's TJ/LJ Wrangler 3" Long Travel Parts List:**

**Note:** Please be sure that you have all the provided parts listed below before continuing with the installation.

<b>Part #</b>	<b>DESCRIPTION:</b>	<b>Quantity</b>
RC-CS300-TJ	Rusty's 3" TJ Front Coil Springs	2
RC-CS303-TJ	Rusty's 3" TJ Rear Coil Springs	2
RX-27	Rusty's RX100 Performance Shock: RX-64 (Contents Below)	2
	(Bushing Packs: PO1533 & PO1318)	
RX-64	Rusty's RX100 Performance Shock: RX-64 (Contents Below)	2
	(Bushing Packs: PO1532 & PO1313)	
RC-CA311-UV	Rusty's Long Arm Lower Front Control Arms (XJ,TJ,ZJ) (Pair)	1
RC-CA321-UV	Rusty's Long Arm Upper Front Control Arms (XJ,TJ,ZJ) (Pair)	1
RC-CA312-TJ <b>OR</b> RC-CA312-LJ	Rusty's Long Arm Lower Rear Control Arm (TJ) (Pair) <b>OR</b> Rusty's Long Arm Lower Rear Control Arm (LJ) (Pair)	1 <b>OR</b> 1
RC-CA322-TJ <b>OR</b> RC-CA322-LJ	Rusty's Long Arm Upper Rear Control Arm (TJ) (Pair) <b>OR</b> Rusty's Long Arm Upper Rear Control Arm (LJ) (Pair)	1 <b>OR</b> 1
RC-TB122-UV	Rusty's Adjustable Front Track Bar (2.75-5") (TJ,XJ,XJ)	1
RC-TB550-TJ	Rusty's Track Bar - Adjustable Rear (TJ) (2" +)	1
SUB1-TJ	Rusty's TJ Subframe Assembly - Right	1
SUB2-TJ	Rusty's TJ Subframe Assembly - Left	1

**Rusty's TJ/LJ Wrangler 3" Long Travel Parts List:**

**Note:** Please be sure that you have all the provided parts listed below before continuing with the installation.

<b>Part #</b>	<b>DESCRIPTION:</b>	<b>Quantity</b>
RA-BP10-TJ-E <b>OR</b> RA-BP10-TJ-L	Rusty's Belly Pan - TJ Long Arm ('97-'02) <b>OR</b> Rusty's Belly Pan - TJ Long Arm ('03-'06)	1 <b>OR</b> 1
RS-DPA1	Rusty's Drop Pitman Arm 1.25" (XJ/TJ/YJ)	1
RC-SB500-UV	Rusty's Forged Adjustable Sway Bar Quick-Disconnects	1
RB-SBL10-UV	Rusty's Stainless Steel Front and Rear Brake Hose Kit	1
RC-SB300-TJ	Rusty's Rear Extended Sway Bar Links (TJ) (Pair)	1

**TJ Long Arm Hardware List:**

**Note:** Please be sure that you have all the provided parts listed below before continuing with the installation.

<b>Part #</b>	<b>DESCRIPTION:</b>	<b>Quantity</b>
BK-SRRL-TJ	TJ Long Arm Bolt Kit (Contents Below)	1
67522524	7/16"-14 x 3-1/2" Length Grade 8 Hex Head Cap Screw	2
52593597	7/16"- 14 Grade 8 Hex Lock Nut	2
05724638	7/16" SAE Flat Washer	4
67524520	9/16"- 12 x 4-1/2" Length Grade 8 Hex Head Cap Screw	6
05724653	9/16" SAE Flat Washer	16
52593613	9/16"-12 Grade 8 Hex Lock Nut	8
67524728	9/16"-12 x 7" Length Grade 8 Hex Head Cap Screw	2
05724646	1/2" SAE Flat Washer	6
05728159	1/2"-13 x 1-1/2" Length Grade 8 Hex Head Cap Screw	6
67445403	M12 x 1.75mm x 40mm Length Hex Head Cap Screw	6

**Rusty's TJ/LJ Wrangler 4.5" Long Travel Parts List:**

**Note:** Please be sure that you have all the provided parts listed below before continuing with the installation.

<b>Part #</b>	<b>DESCRIPTION:</b>	<b>Quantity</b>
RC-CS400-TJ	Rusty's 4.5" TJ Front Coil Springs	2
RC-CS401-TJ	Rusty's 4.5" TJ Rear Coil Springs	2
RX-36	Rusty's RX100 Performance Shock: RX-36 (Contents Below)	2
	(Bushing Packs: PO1533 & PO1318)	
RX-13	Rusty's RX100 Performance Shock: RX-13 (Contents Below)	2
	(Bushing Packs: PO1532 & PO1313)	
RC-CA311-UV	Rusty's Long Arm Lower Front Control Arms (XJ,TJ,ZJ) (Pair)	1
RC-CA321-UV	Rusty's Long Arm Upper Front Control Arms (XJ,TJ,ZJ) (Pair)	1
RC-CA312-TJ <b>OR</b>	Rusty's Long Arm Lower Rear Control Arm (TJ) (Pair)	1
RC-CA312-LJ	Rusty's Long Arm Lower Rear Control Arm (LJ) (Pair)	1
RC-CA322-TJ <b>OR</b>	Rusty's Long Arm Upper Rear Control Arm (TJ) (Pair)	1
RC-CA322-LJ	Rusty's Long Arm Upper Rear Control Arm (LJ) (Pair)	1
RC-TB444-TJ	Rusty's HD Track Bar Frame Mount (TJ)	1
RC-TB199-UV	Rusty's Adjustable Front HD Track Bar (4"+) (TJ,XJ,XJ)	1
RC-TB550-TJ	Rusty's Track Bar - Adjustable Rear (TJ) (2" +)	1
SUB1-TJ	Rusty's TJ Subframe Assembly - Right	1
SUB2-TJ	Rusty's TJ Subframe Assembly - Left	1

**Rusty's TJ/LJ Wrangler 4.5" Long Travel Parts List:**

**Note:** Please be sure that you have all the provided parts listed below before continuing with the installation.

<b>Part #</b>	<b>DESCRIPTION:</b>	<b>Quantity</b>
RA-BP10-TJ-E <b>OR</b> RA-BP10-TJ-L	Rusty's Belly Pan - TJ Long Arm ('97-'02) <b>OR</b> Rusty's Belly Pan - TJ Long Arm ('03-'06)	1 <b>OR</b> 1
RS-DPA1	Rusty's Drop Pitman Arm 1.25" (XJ/TJ/YJ)	1
RC-SB500-UV	Rusty's Forged Adjustable Sway Bar Quick-Disconnects	1
RB-SBL10-UV	Rusty's Stainless Steel Front and Rear Brake Hose Kit	1
RC-SB300-TJ	Rusty's Rear Extended Sway Bar Links (TJ) (Pair)	1
RX-1313-UV	Rusty's TJ Wrangler Rear Shock Extension Kit (Pair)	1

**TJ Long Arm Hardware List:**

**Note:** Please be sure that you have all the provided parts listed below before continuing with the installation.

<b>Part #</b>	<b>DESCRIPTION:</b>	<b>Quantity</b>
BK-SRRL-TJ	TJ Long Arm Bolt Kit (Contents Below)	1
67522524	7/16"-14 x 3-1/2" Length Grade 8 Hex Head Cap Screw	2
52593597	7/16"- 14 Grade 8 Hex Lock Nut	2
05724638	7/16" SAE Flat Washer	4
67524520	9/16"- 12 x 4-1/2" Length Grade 8 Hex Head Cap Screw	6
05724653	9/16" SAE Flat Washer	16
52593613	9/16"-12 Grade 8 Hex Lock Nut	8
67524728	9/16"-12 x 7" Length Grade 8 Hex Head Cap Screw	2
05724646	1/2" SAE Flat Washer	6
05728159	1/2"-13 x 1-1/2" Length Grade 8 Hex Head Cap Screw	6
67445403	M12 x 1.75mm x 40mm Length Hex Head Cap Screw	6

**Rusty's TJ/LJ Wrangler 5.5" Long Travel Parts List:**

**Note:** Please be sure that you have all the provided parts listed below before continuing with the installation.

<b>Part #</b>	<b>DESCRIPTION:</b>	<b>Quantity</b>
RC-CS808-TJ	Rusty's 5.5" TJ Front Coil Springs	2
RC-CS403-TJ	Rusty's 5.5" TJ Rear Coil Springs	2
RX-16	Rusty's RX100 Performance Shock: RX-16 (Contents Below)	2
	(Bushing Packs: PO1533 & PO1318)	
RX-11	Rusty's RX100 Performance Shock: RX-11 (Contents Below)	2
	(Bushing Packs: PO1532 & PO1313)	
RC-CA311-UV <b>OR</b>	Rusty's Long Arm Lower Front Control Arms (XJ,TJ,ZJ) (Pair)	1
RC-CA511-UV	Rusty's Long Arm Lower Front Control Arms / High Clearance (XJ,TJ) (Pair)	1
RC-CA321-UV	Rusty's Long Arm Upper Front Control Arms (XJ,TJ,ZJ) (Pair)	1
RC-CA312-TJ <b>OR</b>	Rusty's Long Arm Lower Rear Control Arm (TJ) (Pair)	1
RC-CA512-TJ	Rusty's Long Arm Lower Rear Control Arm/High Clearance (TJ) (Pair)	1
RC-CA312-LJ <b>OR</b>	Rusty's Long Arm Lower Rear Control Arm (LJ) (Pair)	1
RC-CA512-LJ	Rusty's Long Arm Lower Rear Control Arm/High Clearance (LJ) (Pair)	1
RC-CA322-TJ <b>OR</b>	Rusty's Long Arm Upper Rear Control Arm (TJ) (Pair)	1
RC-CA322-LJ	Rusty's Long Arm Upper Rear Control Arm (LJ) (Pair)	1
RC-TB444-TJ	Rusty's HD Track Bar Frame Mount (TJ)	1
RC-TB199-UV	Rusty's Adjustable Front HD Track Bar (4"+) (TJ,XJ,XJ)	1
RC-TB550-TJ	Rusty's Track Bar - Adjustable Rear (TJ) (2" +)	1
SUB1-TJ	Rusty's TJ Subframe Assembly - Right	1
SUB2-TJ	Rusty's TJ Subframe Assembly - Left	1

**Rusty's TJ/LJ Wrangler 5.5" Long Travel Parts List:**

**Note:** Please be sure that you have all the provided parts listed below before continuing with the installation.

<b>Part #</b>	<b>DESCRIPTION:</b>	<b>Quantity</b>
RA-BP10-TJ-E <b>OR</b> RA-BP10-TJ-L	Rusty's Belly Pan - TJ Long Arm ('97-'02) <b>OR</b> Rusty's Belly Pan - TJ Long Arm ('03-'06)	1 <b>OR</b> 1
RS-DPA1	Rusty's Drop Pitman Arm 1.25" (XJ/TJ/YJ)	1
RC-SB500-UV	Rusty's Forged Adjustable Sway Bar Quick-Disconnects	1
RB-SBL10-UV	Rusty's Stainless Steel Front and Rear Brake Hose Kit	1
RC-SB300-TJ	Rusty's Rear Extended Sway Bar Links (TJ) (Pair)	1
RX-1313-UV	Rusty's TJ Wrangler Rear Shock Extension Kit (Pair)	1

**TJ Long Arm Hardware List:**

**Note:** Please be sure that you have all the provided parts listed below before continuing with the installation.

<b>Part #</b>	<b>DESCRIPTION:</b>	<b>Quantity</b>
BK-SRRL-TJ	TJ Long Arm Bolt Kit (Contents Below)	1
67522524	7/16"-14 x 3-1/2" Length Grade 8 Hex Head Cap Screw	2
52593597	7/16"- 14 Grade 8 Hex Lock Nut	2
05724638	7/16" SAE Flat Washer	4
67524520	9/16"- 12 x 4-1/2" Length Grade 8 Hex Head Cap Screw	6
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67524728	9/16"-12 x 7" Length Grade 8 Hex Head Cap Screw	2
05724646	1/2" SAE Flat Washer	6
05728159	1/2"-13 x 1-1/2" Length Grade 8 Hex Head Cap Screw	6
67445403	M12 x 1.75mm x 40mm Length Hex Head Cap Screw	6

### Front Installation Instructions (Front Disassembly)

Note: Save all factory components and hardware for reuse, unless noted.

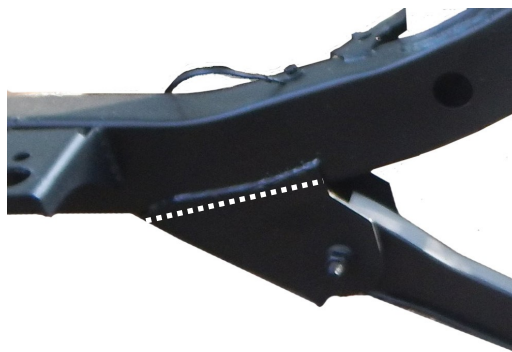
1. Secure the vehicle and properly place the lift rack or jack stands on the body mounts in line with the front windshield frame and body mounts directly below the front part of the rear flare. This will ensure the lift rack posts or jack stands will not be in the way during installation.
2. Lift the front of the vehicle and correctly place lift rack posts or jack stands. Remove the front tires and wheels. Support the front axle with a jack or jack stands.
3. Remove the front shocks at both the frame and axle. Save the hardware at the axle end as it will be re-used.
4. Remove the front sway bar links at the sway bar end and axle tab. Retain hardware as it may be reused.
5. Remove the front track bar at the axle and frame. Save the hardware for reuse.
6. Remove the bolts fastening the brake lines to the frame (One bolt per side). If the purchased kit includes extended brake lines, the stock brake lines should be removed at the frame and disconnected at the caliper. Remember to save the brass washers with the caliper bolts and cap the lines to prevent fluid loss. If the kit purchased does not include brake lines, just remove the attachment bolt for installation of the extension bracket.
7. Remove the front coil springs. The use of a coil spring compressor may be needed. If so, use caution while removing springs.
8. Verify the front axle is properly supported. Remove the upper and lower control arms at the frame and axle end. Retain the hardware at the axle end of the lower control arms as it will be reused.
9. Place a jack under the transfer case and slightly lift about 3/8" to remove load on the transmission cross member. Remove the 4 nuts at the transmission mount (save the nuts).
10. Remove the transmission cross member; there will be 3 attachment points at each frame rail.
11. Locate the factory lower control arm mounts at the frame. Both driver and passenger side will be removed. Rusty's recommends the use of a plasma cutter, torch, or cutting wheel. Cut the brackets only; the frame should be left uncut. Cut the bottom portion of the bracket and then move to the inside of the frame. **IMPORTANT:** Be sure to keep clear of fuel and brake lines on the driver side.
12. Grind smooth any rough edges and paint the exposed metal with a flat black enamel to avoid corrosion and keep a clean factory look. (Please allow several minutes to dry before moving to your next step).



**Rear Installation Instructions (Rear Disassembly)**

Note: Save all factory components and hardware for reuse, unless noted.

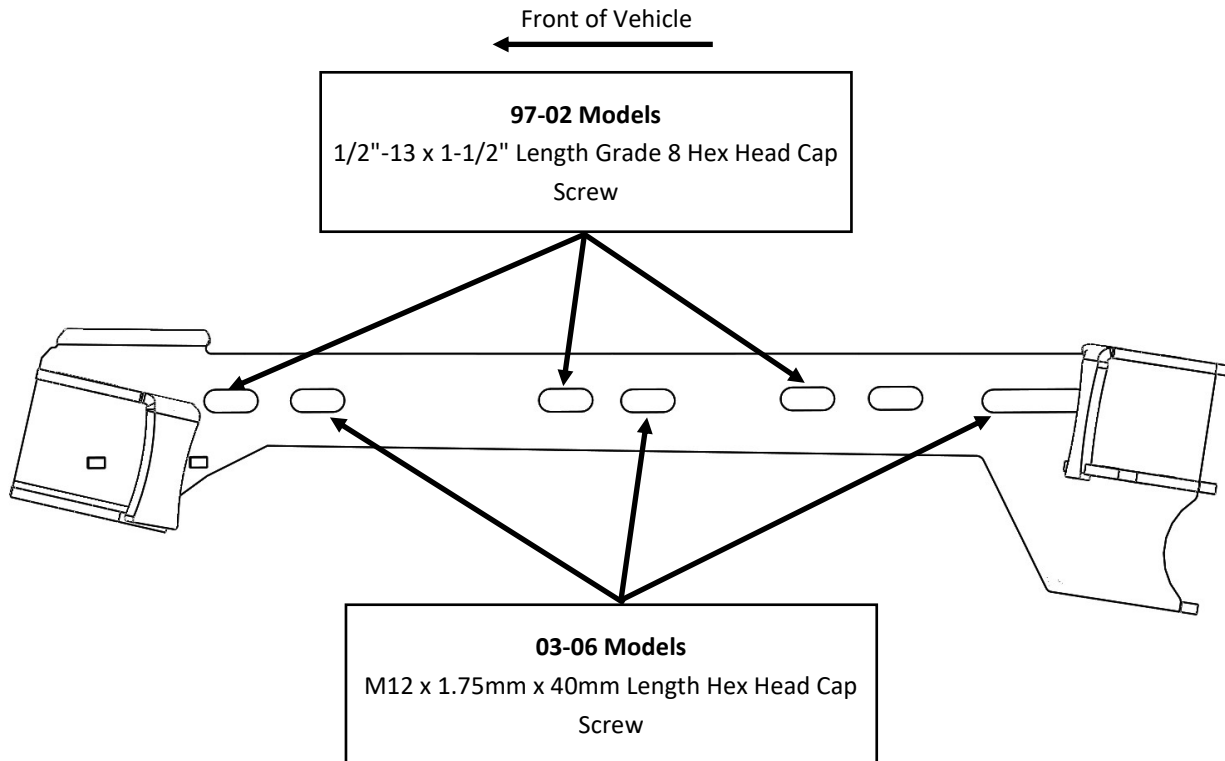
13. Secure the vehicle properly; place the lift rack post or jack stands on the body mount directly in front of the frame side lower control arm mount or 1 foot in front of this body mount for the frame rail. This will ensure the rack or jack stands will not be in the way during installation.
14. Lift the rear of the vehicle and correctly place the lift rack posts or jack stands. Support the rear axle with a jack. Remove the rear tires and wheels.
15. Remove the rear shocks at both frame and axle end. Save the hardware at the axle for reuse.
16. Remove the rear sway bar links at the sway bar and axle tab. Retain hardware as it may be reused.
17. Remove the rear track bar at the axle end and the frame. Retain the hardware at the axle and frame as it will be reused.
18. Remove the c-clip fastening the rear brake lines to the frame rail. If the kit purchased includes extended brake lines, the stock brake lines should be removed. Cap the line to prevent fluid loss.
19. If the kit purchased does not include extended brake lines, just remove the c-clip for installation of the extension bracket.
20. Remove the rear coil springs. The use of a coil spring compressor may be needed. If so, use caution while removing springs.
21. Verify the axle end is supported. Remove the upper and lower control arms at the frame and axle end. Save the hardware at the axle for reuse.
22. Locate the factory lower control arms and upper control arms at the frame. These mounts must be removed. Rusty's recommends using a plasma cutter, torch, or cutting wheel to remove these mounts. Be sure not to cut into the frame rail. Once removed, smooth the cut area with a grinder. The exposed metal surface should be cleaned, prepped, and painted with a quality flat black enamel.



## Rear Installation Instructions

Note: Save all factory components and hardware for reuse, unless noted.

23. Locate the driver and passenger side sub-frame control arm mount brackets. Place to the correct side.
24. Refer to diagram below (bottom driver side view) for the correct placement of the subframe control arm mounting brackets. TJ/LJ have different mounting points per year models. Most vehicles will use the mounting hole locations labeled in the images below but some may vary from this so it is best to get the mounting brackets, belly pan and transmission mounted in to position prior to drilling the frame. Typically the 2000-2002 models will be the only years that may vary from the diagram.

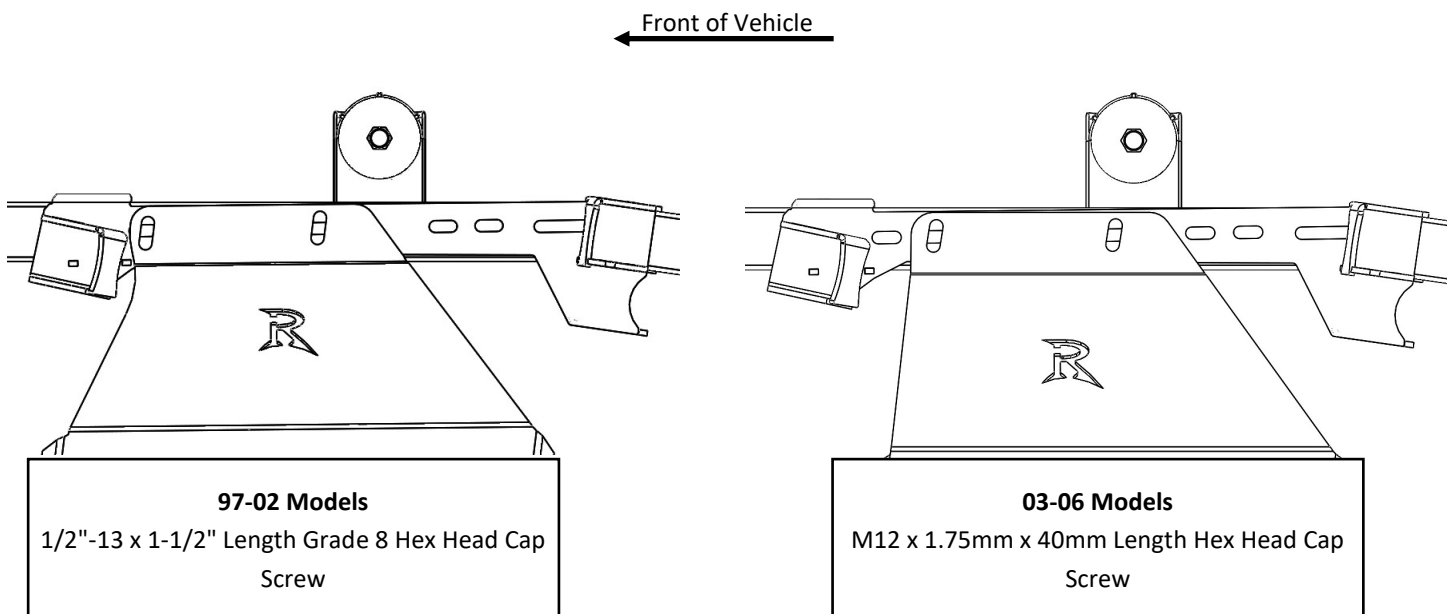


25. Locate the transmission mount. The mounting points at the transmission should be loosened (do not remove; loosen each bolt 3 to 5 threads).

## Rear Installation Instructions

Note: Save all factory components and hardware for reuse, unless noted.

26. Place the sub frame control arm mounting brackets to the frame rails, and using an assistant place the belly pan. Install the mounting bolts at the belly pan (2 on each side) and the rearward mounting bolts (1 per side). Start the bolts/washers only. Do not fully tighten.

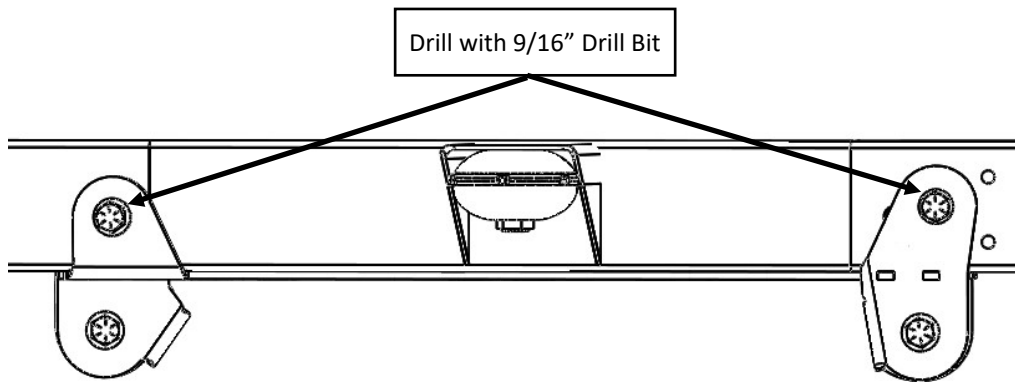


27. The sub frame mounting brackets will now be installed. With the slotted holes centered forward and backwards. To insure correct driver side and passenger side alignment, measure from the most forward body mount to the center hole in the front frame mounting point. The measurements of driver side and passenger side will need to measure the same. (Just shift forward or backwards to align).
28. Torque the 6 mounting points at the sub frame/belly pan installed during step# 24 to 75 ft. lbs.
29. Lower the jack or support at the transmission. Align the transmission mount bolts while lowering the transmission. The nuts removed in step 9 should be installed and fully tightened. The bolts loosened at the transmission should be retightened.

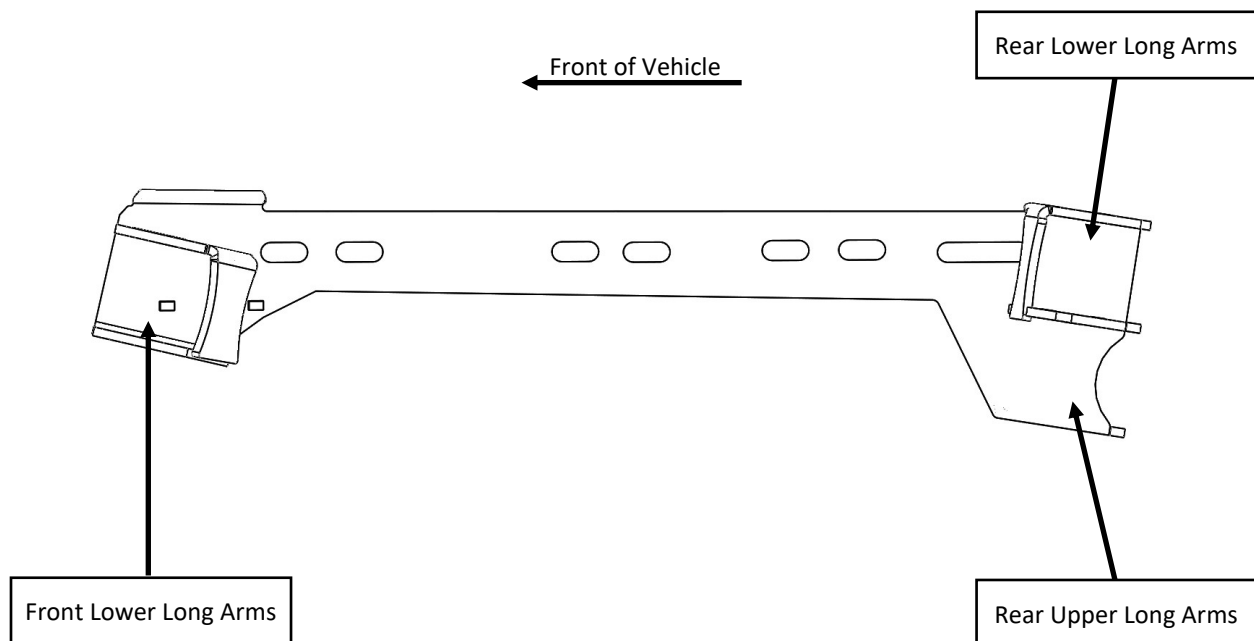
## Rear Installation Instructions

Note: Save all factory components and hardware for reuse, unless noted.

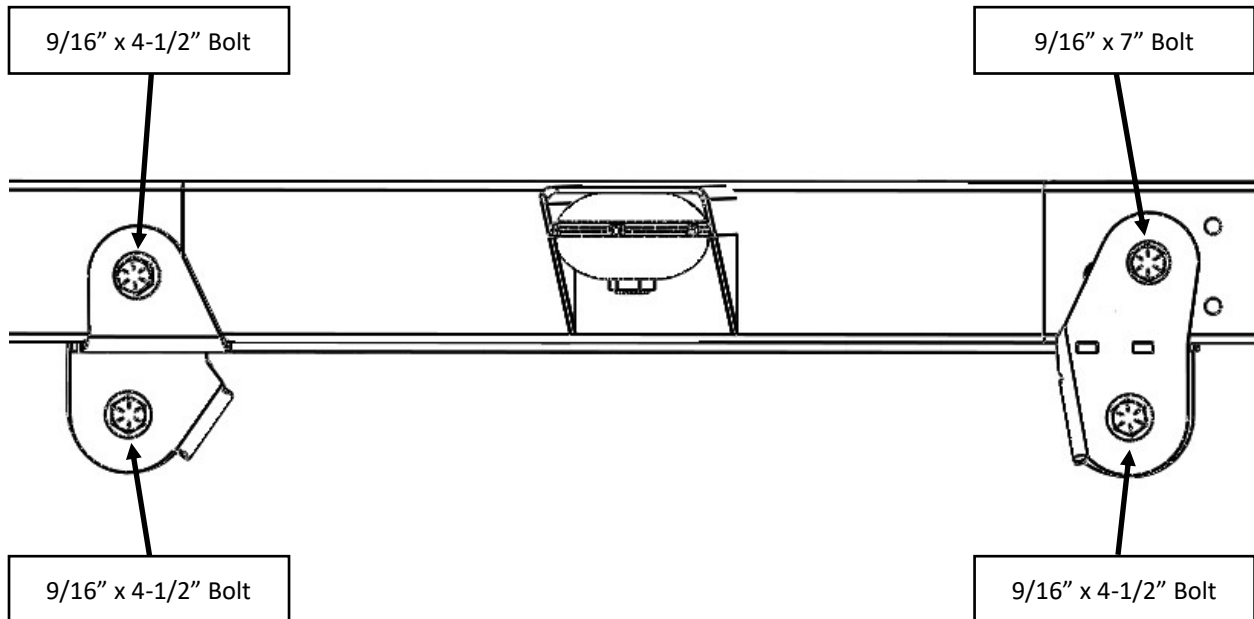
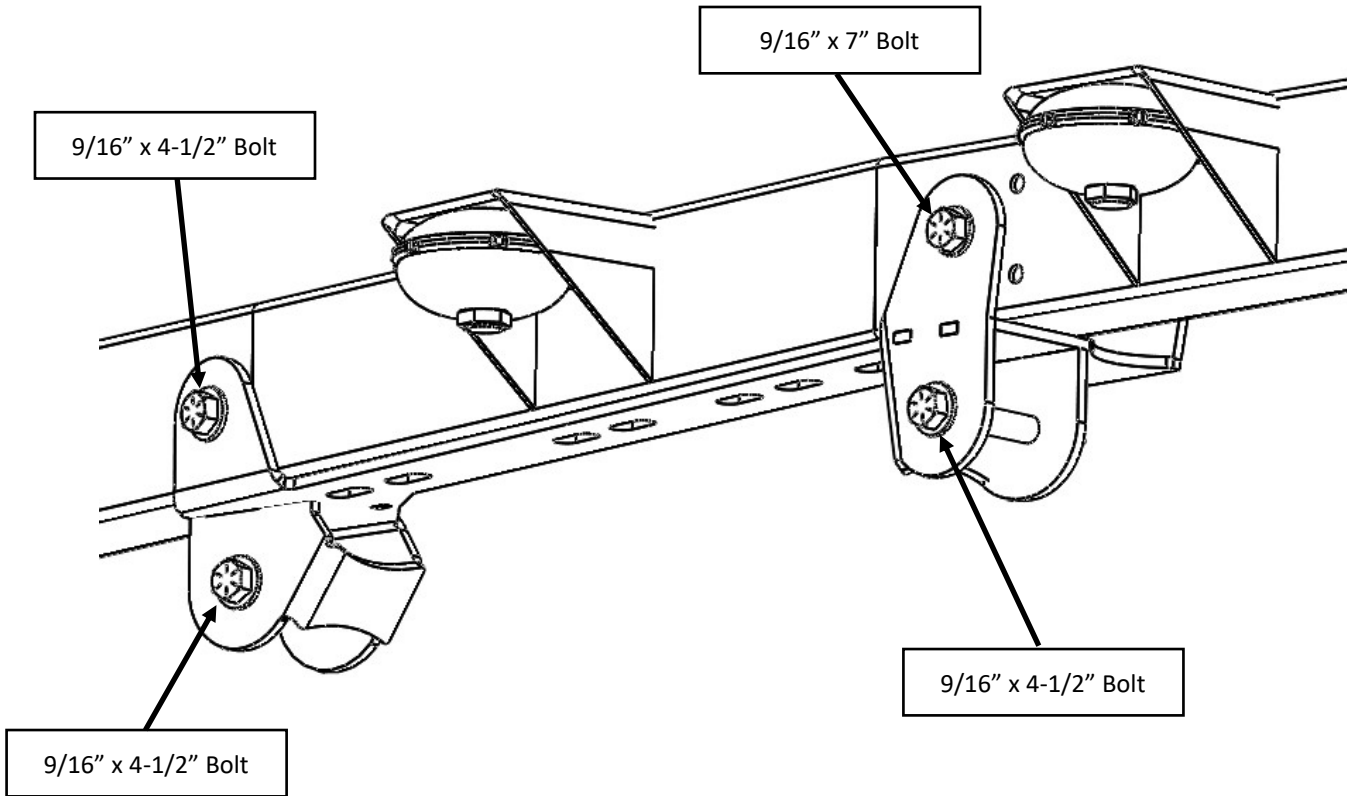
30. The two mounting frame points will be drilled to 9/16". Insure the drill is level to correctly align with the inside frame tabs.



31. Install the front frame mounting points: 9/16" x 4-1/2" hex bolts/washers/nyloc nuts.
32. Locate the rear upper control arms to the rearward inside frame mounting points illustrated in the image below. Use an assistant to hold the control arm in place and from the outside of frame install the 9/16" x 7" hex bolt/washers/nyloc nuts. (This will go through the frame flex joint completing the assembly).  
Torque to 120 ft. lbs.



## Sub Frame Control Arm Mounting Brackets Hardware Location Guide



**Rear Installation Instructions**

33. The rear upper control arms should be now aligned at the axle mounting point. Reinstall the factory bolts/nuts and torque to 50 ft. lbs. Adjust to the correct length.

<b>Rear Upper Long Arm Length Chart</b>		
<b>Lift Height</b>	<b>TJ Wrangler</b>	<b>LJ Wrangler</b>
3" Lift Height	28-3/8" Center - Center	37-1/2" Center - Center
4.5" Lift Height	28-7/16" Center - Center	37-5/8" Center - Center
5.5" Lift Height	28-7/16" Center - Center	37-3/4" Center - Center

34. Locate the lower control arms. The flex joint will be placed at the sub frame mounting point. Install the 9/16" x 4 1/2" hex bolts/washers/nuts. Torque to 130 ft. lbs.

35. Adjust to the correct length.

<b>Rear Lower Long Arm Length Chart</b>		
<b>Lift Height</b>	<b>TJ Wrangler</b>	<b>LJ Wrangler</b>
3" Lift Height	28-1/8" Center - Center	37-1/4" Center - Center
4.5" Lift Height	28-3/16" Center - Center	37-3/8" Center - Center
5.5" Lift Height	28-3/16" Center - Center	37-1/2" Center - Center

36. Once the rear lower control arm is set to the correct length, install at the axle mounting points. Start the bolt/nut only. DO NOT TORQUE!

**Front Installation Instructions**

37. Locate the front lower long arms. Place the flex joint end of the control arms at the sub frame. Install the 9/16" x 4-1/2" hex bolts/washers/nuts. Torque to 130 ft. lbs.
38. Adjust to the correct length:

<b>Front Lower Long Arm Length Chart</b>		
<b>Lift Height</b>	<b>TJ Wrangler</b>	<b>LJ Wrangler</b>
3" Lift Height	35-1/2" Center - Center	35-1/2" Center - Center
4.5" Lift Height	35-5/8" Center - Center	35-5/8" Center - Center
5.5" Lift Height	35-3/4" Center - Center	35-3/4" Center - Center

39. Place the front lower long arms to the axle mounting points. Install the hardware. Start the bolt/nut only. DO NOT TORQUE!
40. Locate the front radius upper control arm. Place at the lower long arm and install the 7/16" x 3-1/2" hex bolts/washers/nuts. Torque to 80 ft. lbs.
41. Locate the u-bracket closest to the axle upper control arm mounts. Set the length of the arms according to the chart below. This measurement will be taken on the outside of the point where the upper control arm attaches to the lower long arm. Once set to the correct length, install the supplied 10mm x 3-1/4" hex bolt/nut. Torque to 50 ft. lbs.

<b>Front Upper Radius Arm Length Chart</b>		
<b>Lift Height</b>	<b>TJ Wrangler</b>	<b>LJ Wrangler</b>
3" Lift Height	15-1/2" Center - Center	15-1/2" Center - Center
4.5" Lift Height	15-5/8" Center - Center	15-5/8" Center - Center
5.5" Lift Height	15-3/4" Center - Center	15-3/4" Center - Center

### Front Installation Instructions

42. Install the supplied front coil springs on the driver and passenger side.
43. Attach the front shocks to the upper frame mounts. The nuts can be accessed between the plastic inner fender well and the shock bracket. Tighten the nut until the shock bushings swell slightly.
44. Install the front tires/wheels and lower the vehicle to the ground. The vehicle should be at normal ride height for the following steps.
45. Attach the front shocks to the lower axle mounts using the factory hardware. Fully tighten the driver and passenger sides to factory specifications.
46. Install supplied track bar by attaching the fixed end to the axle side mounting bracket.
47. The front axle will now need to be centered. To center the axle, measure the distance from the frame to the center point of the tire, both the driver and passenger side. The measurements should be the same. You will have to push/pull the body over the axle to get the same measurements on both sides. This must be done with the vehicle on the ground.
48. With the axle centered under the body, adjust the adjustable end (frame side) until its mounting points align. Install the factory hardware at the axle end. Torque to 35 ft. lbs. With vehicle centered over axle, install tie rod in frame mount and tighten castle nuts to 35 to 45 ft. lbs. and install cotter pin.
49. Locate the locking jam nut on the front track bar at the adjustable end. Apply three drops of red label Loctite to the exposed thread then tighten the jam nut (this is left hand thread). **THIS SHOULD BE TIGHT!**
50. Remove the factory drop pitman arm with the use of a pitman arm removal tool. Install the supplied drop pitman arm at this time by reversing the same steps used to remove the pitman arm.
51. If the kit purchased includes front sway bar disconnects, they should be installed at this time. Refer to the instructions with the disconnects at this time. If the kit purchased includes fixed extended front sway bar links, install them at the time. The factory 12mm hardware will be reused at the axle and the supplied ½" x 3" bolts/nuts will be used at the sway bar mounting point. Tighten the factory bolts to factory specs and the ½" hardware to 57 ft. lbs.
52. The 14mm front lower long arm hardware at the axle should be torqued to 100 ft. lbs. All of the long arm/ radius arm/ cross member bolts should be torqued at this time. Double check all bolts at this time to make sure nothing is overlooked.



## Front Installation Instructions (Continued)

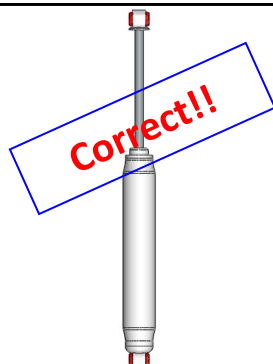
53. Install the supplied front brake lines using the supplied instructions.

## Rear Installation Instructions

54. Install the rear coil springs; be sure to reinstall the rubber isolator at the frame end.
55. The tires/wheels should now be installed on the vehicle. Lower the vehicle off the lift rack/jack stand. The vehicle should be at ride height for the next steps.
56. Tighten the rear lower long arm mounting points at the axle, driver & passenger side. Torque to 100 ft. lbs.
57. Locate the supplied rear adjustable track bar. The fixed end of the track bar will mount at the frame end. The bend in the track bar should be positioned to clear the rear differential.
58. Center the rear axle. To center the axle, measure the distance from the frame to the center point of the tire, both driver and passenger side. The measurements should be the same. You will have to push/pull the body over the axle to get the same measurements on both driver & passenger side.
59. With the axle centered under the body, adjust the adjustable end of the rear track bar until its mounting points line up with the axle mount. Mount using the supplied hardware. Torque both mounting points  $\frac{1}{2}$ " x 3- $\frac{1}{2}$ " hex bolts to 120 ft. lbs.
60. Locate the locking jam nut on the adjustable end of the track bar. Apply 3 drops of the red label Loctite to the exposed threads and then tighten the jam nut (this is left hand thread). THIS SHOULD BE TIGHT!!
61. Install the rear extended sway bar links. The frame mounting side will require the use of the supplied sleeve. The sway bar mounting point may have a shoulder bolt, if so do not use the supplied sleeve. If the bolt is standard the supplied sleeve will be used. Fully tighten both mounting points.
62. Install the bushings and sleeves in the new Rusty's shocks. Install them on the vehicle with the factory hardware. (Torque upper bolts to 18 ft. lbs. and lower bolts to 40 ft. lbs.) (Note: Please note the orientation of the rear shocks.

### CORRECT:

Mount RX-100 series shocks with the body down and shaft pointing up.



### INCORRECT:

DO NOT MOUNT RX-100 Series Shocks with the Shaft pointing towards the ground. This will cause poor handling and ride quality.



### Rear Installation Instructions (Continued)

63. Install the supplied rear brake line using the supplied instructions.
64. Step 65 & 66 will require the use of Loctite. The correct procedure for this is to expose the threads where the jam nut will set to the control arm. Apply 3-4 drops and then tighten the nut.
65. Locate the rear upper and lower long arms. Back off the single jam nuts on the lower end dual jam nuts on the upper enough to expose the threads closest to the end of the arms. Apply Loctite to the threads, set the jam nuts, and fully tighten.
66. Locate the front long arms/radius arms. Back off the jam nuts on the upper and lower radius arms enough to expose the threads closest to the ends of the arms. Apply Loctite to the threads, seat the jam nuts, and fully tighten.
67. If extended brake lines were installed, bleed the brake system now following the procedure found in the factory service manual.
68. Double check all fasteners for proper torque.
69. Start the vehicle. Have an assistant cycle the steering lock-to-lock while inspecting all components for proper clearance and operation.
70. Have an assistant cycle the suspension while visually checking all components for proper operation and clearance.
71. Installation is now complete!

### Final Notes

At this point there should be no parts left but installing the stickers. The vehicle will need to have an alignment as soon as possible, if you don't you may get the "death wobble", poor tire wear or just a bad handling vehicle.

### Alignment Recommended Specifications

- Toe: Should be set at 0 to 1/32" Toe Out
- Castor: 7.5 Degrees Positive
- Camber: 0

## WARNING

It is the owners' responsibility to inspect all Rusty's products for proper torque specs to prevent loosening of components. Seat belts and shoulder harnesses should be worn at all times. Re-check all bolts and nuts after the first 300 miles and after any off-road usage during the first 300 miles. Although all of our products are made from the highest quality materials possible, they are not a substitute for Safe and Careful driving. In other words, have good safe on-road / off-road sense. Know the terrain, the speed limitations, and any obstacles that may lie ahead. Please remember to preserve our right to enjoy public land through the proper use of off-road vehicles. Thank you for choosing Rusty's Off Road Products.

## Rusty's Extended Stainless Steel Front and Rear Brake Hoses

### RB-SBL10-UV

## INSTALLATION INSTRUCTIONS

Last Revised: 5/21/2017

#### Parts List:

**Note:** Please be sure that you have all the provided parts listed below before continuing with the installation.

#### RB-SBL10F-UV Parts List:

<u>Part #</u>	<u>DESCRIPTION:</u>	<u>Quantity</u>
RB-SBL10F-UV	Rusty's Front Extended Stainless Steel Brake Hose	2
RB-SBL10-CW	3/8" Copper Crush Washer	4
RB-SBL10-MB	Brake Hose Frame Mounting Bracket	2
RB-SBL10-RC	Brake Hose Mounting Bracket Retaining Clip	2
67378927	5/16" -18 x .625" Length Hex Head Thread Cutting Screw	2

#### RB-SBL10F-UV Installation Instructions

**Note:** Save all factory components and hardware for reuse, unless noted.

1. The installation of these brake lines can be installed with the vehicle on the ground. You need to park the vehicle on level ground and set the parking brake/chock the tires to prevent any movement.
2. Turn the tires in order to gain better access to the calipers and the brake lines.
3. Inspect all of the brake components and repair or replace components as necessary.
4. Disconnect the factory soft line from the hardline connection at the frame rail. Retain the factory hardware for reuse.
5. Remove the factory banjo bolt from the caliper, make sure to remove the factory crush washers as well. Retain or replace the banjo bolt for installation of the new brake hoses.
6. Clean and inspect all of the mounting surfaces before continuing.
7. Mount the supplied brake hose mounting bracket to the frame rail in the factory mounting hole with the original hardware. (**Note:** If needed use the supplied 5/16" -18 x .625" Length Hex Head Thread Cutting Screws to mount brake hose mounting brackets to the frame rail if you need to relocate the lines for any reason.)

**RB-SBL10F-UV Installation Instructions (Continued)**

8. Insert the supplied brake hose through the mounting bracket opening then insert the supplied retaining clip to secure the line.
9. Attach the brake hose to the factory hard line by starting the threaded fitting on the factory hard line by hand then tighten to factory specifications.
10. Attach the brake hose to the caliper using the factory banjo bolt and the supplied copper crush washers. Position a crush washer on each side of the fitting at the bottom of the brake hose. Tighten to factory specifications.
11. Position the brake line in order to make sure that it will not get caught or damaged by the suspension or tire when in use.
12. Repeat steps 2-11 on the opposite side of the vehicle.
13. If only installing the front brake hoses at this time you may go ahead and bleed the brake lines using standard brake system bleeding procedures. (Note: If installing the rear brake hose, you can wait to bleed

**RB-SBL10R-UV Parts List:**

<u>Part #</u>	<u>DESCRIPTION:</u>	<u>Quantity</u>
RB-SBL10R-UV	Rusty's Rear Extended Stainless Steel Brake Hose	1
RB-SBL10-MB	Brake Hose Frame Mounting Bracket	1
RB-SBL10-RC	Brake Hose Mounting Bracket Retaining Clip	1
67378927	5/16" -18 x .625" Length Hex Head Thread Cutting Screw	1

**RB-SBL10R-UV Installation Instructions**

Note: Save all factory components and hardware for reuse, unless noted.

1. The installation of the rear brake line can be installed with the vehicle on the ground. You need to park the vehicle on level ground and chock the tires to prevent any movement.
2. Inspect all of the brake components and repair or replace components as necessary.
3. Disconnect the factory soft line from the hardline connection at the frame rail. Retain the factory hardware for reuse.
4. Remove the bolt that attaches the factory soft line to the frame rail. Retain the factory hardware for reuse.
5. Disconnect the two hard lines at the brake line fitting on the rear axle.

### RB-SBL10R-UV Installation Instructions (Continued)

7. Clean and inspect all of the mounting surfaces before continuing.
8. Mount the supplied brake hose mounting bracket to the frame rail in the factory mounting hole with the original hardware. (**Note:** If needed use the supplied 5/16" -18 x .625" Length Hex Head Thread Cutting Screws to mount brake hose mounting brackets to the frame rail if you need to relocate the lines for any reason.)
9. Insert the supplied brake hose through the mounting bracket opening then insert the supplied retaining clip to secure the line.
10. Attach the brake hose to the factory hard line at the frame by starting the threaded fitting on the factory hard line by hand then tighten to factory specifications.
11. Attach the brake hose fitting to the axle tube using the fitting that the rear axle breather tube is attached with.
12. Connect both of the factory hard lines on the axle tube to the threaded fittings on the rear brake hose junction block by starting the threaded fittings on the factory hard lines by hand then tighten to factory specifications.
13. Connect both of the factory hard lines on the axle tube to the threaded fittings on the rear brake hose junction block by starting the threaded fittings on the factory hard lines by hand then tighten to factory specifications.
14. If only installing the rear brake hose at this time you may go ahead and bleed the brake lines using standard brake system bleeding procedures.

### Important Safety Notes

**CAUTION!!!** Failure to properly bleed the brake system will cause your brakes not to work properly. Before the vehicle is ready to drive you will need to refill the brake reservoir with brake fluid and bleed any air out of the brake lines. If you have any reservations or not experienced in this procedure please do not attempt the installation and seek professional assistance or help in order to ensure the effectiveness of your brake system.

### WARNING

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