



Installation Instructions

Jeep JL Front 2.0 Coilover Kit
AOR-1000-0004

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the product and click on Specifications.

Warranty

No Warranty. There is no warranty, express or implied, other than as expressly set forth or referred to herein and, in particular, neither Party makes any warranties to each other or any other person or entity, whether express, implied or statutory, as to the description, quality, merchantability, completeness or fitness for any purpose of any services, products or information provided hereunder or described herein, or as to any other matter all of which warranties are hereby excluded and specifically disclaimed.. THE SAFETY, EFFECTIVENESS, AND PERFORMANCE OF THIS PRODUCT IS DIRECTLY RELATED TO THE MANNER IN WHICH IT IS INSTALLED, USED, AND/OR MAINTAINED. THE USER ASSUMES ALL RISK.

Notice

Vehicles that have been enhanced for off-road performance often have unique handling characteristics due to the higher center of gravity and larger tires. This vehicle may handle, react and stop differently than many passenger cars or unmodified vehicles, both on and off-road. You must drive your vehicle safely! Extreme care should always be taken to prevent vehicle rollover or loss of control, which can result in serious injury or even death. Always avoid sudden sharp turns or abrupt maneuvers and allow more time and distance for braking! AccuTune Off-Road reminds you to fasten your seat belts at all times and reduce speed! We will gladly answer any questions concerning the design, function, maintenance and correct use of our products.

Tools Required

Proper Safety Equipment	Jack & Jack Stands	Grinder & Flap Disks
Basic Hand Tools (Wrenches, Sockets, Ratchets, Etc)	Coil Spring Compressor (optional)	
Torque Wrench	Drill & Regular Drill Bits (13/32)	
Short 90 Deg Right Angle Drill (ex: Milescraft 1303 Drive90Plus)	Two 3" C-Clamps	
Stubby Drill Bits (ex: Neiko 11402A Stubby Drill Bit Set)	Rotary burr (optional)	

Parts List

P/N	Description	QTY
2000-041-L	Shock Mount, 18+ Jeep JL, Front Upper, EZ, Left	1
2000-041-R	Shock Mount, 18+ Jeep JL, Front Upper, EZ, Right	1
2000-039-L	Reservoir Mount, 08+ JL, Front Left	1
2000-039-R	Reservoir Mount, 08+ JL, Front Right	1
2000-046-L	Bracket, Brake Line Relocation, 18+ Jeep JL	1
2000-046-R	Bracket, Brake Line Relocation, 18+ Jeep JL	1
2000-040-L	Shock Relocation Bracket, 08+ JL, Front Axle, Left	1
2000-043-R	Shock Relocation Bracket, 08+ JL, Front Axle, Right	1
3000-001-050-0275	Screw, Hex Cap, Fine Thread, Grade 8, 1/2"-20 x 2.75"	4
3000-010-050	Washer, SAE, Grade 8, Gold Zinc, 1/2"	10
3000-007-050	Nut, Locking, Stover, Fine Thread, Grade C, 1/2-20	4
3000-013-12-0020	Screw, Hex Cap, Fine Thread, Grade 8.8, 12mm x 1.5mm x 20mm	2
3000-001-038-0100	Screw, Hex Cap, Fine Thread, Grade 8, 3/8"-24 x 1.00"	18
3000-010-038	Washer, SAE, Grade 8, Gold Zinc, 3/8"	36
3000-007-038	Nut, Locking, Stover, Fine Thread, Grade C, 3/8-24	18
3000-014-12-100	Screw, Hex Head, Self Drilling, Zinc Plated, 1/4"-14 x 1.00"	6
3000-009-036	Hose Clamp, SS, 0.50" W, Up To 2.75" ID	

Other Modifications or Parts Required & Not Included

Requires 68" wide axles (Rubicon Axles)

Bump Stop Spacers: Front 2.5", Rear 2.0"

Tires & Wheels:

Tire bulge must be 11.5" from outside of frame min

37x12.5R17 – 17" wheel, 8-9" wide, 4.0" backspacing min

40x12.5R17 – 17" wheel, 8-9" wide, 3.5" backspacing min

Lower short arm links should be 24.5" ($\pm 1/8"$)

Track bar length = 34.125" ($\pm 1/8"$)

NOTE: If your measurements are different you must cycle the suspension to verify tire to coilover & coilover to frame clearance. Fully articulate the suspension each direction and check the steering lock to lock.

Prepare the Vehicle

Jack the vehicle up and securely set the chassis and axles on jack stands. Remove wheels and tires.

**Instructions assume you already have a suspension kit capable of similar droop. If not check e-locker and diff breather hose and reroute as necessary.

Disassembly:

1. Disassemble front OEM components:

Inner fenders

Front springs (coil spring compressor can be helpful)

Front shocks

Brake line bracket at lower spring perch

Wiring from shock tower stud (passenger side)

To remove inner fender loosen 3 screws (see arrows in figure 1) and pop out all large OD clips. There are two options for the small plastic rivets holding the inner and outer fenders together.

Option 1: do not remove them and push the inner fender over. When re-installing the inner fender it will not be attached to the outer fender but there are plenty of clips to hold it in place (ours has been this way for over a year).

Option 2: drill out the center of each rivet to remove them, and replace them when the inner fender is reinstalled (replacing them is difficult).

2. Remove start/stop battery on passenger inner fender near the firewall by removing 3x 10mm head bolts and battery terminal clamps.

3. Cut off the outer portion of the upper shock mount. Cutting carefully along the edge of the main bracket will leave a nice finish and allow the outer bracket to be welded back on later if you want to return the vehicle to stock. See Figure 2 for a schematic on where to cut. Paint any raw metal (recommend flat black Duplicolor or black Steel-it)

Figure 1: Inner Fender Removal

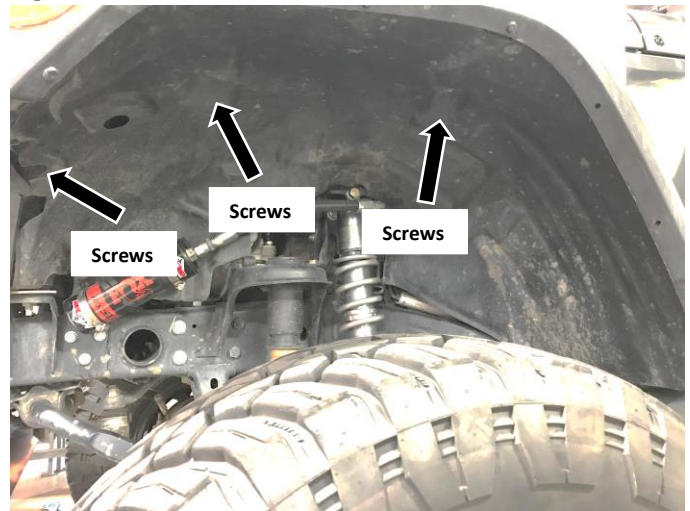
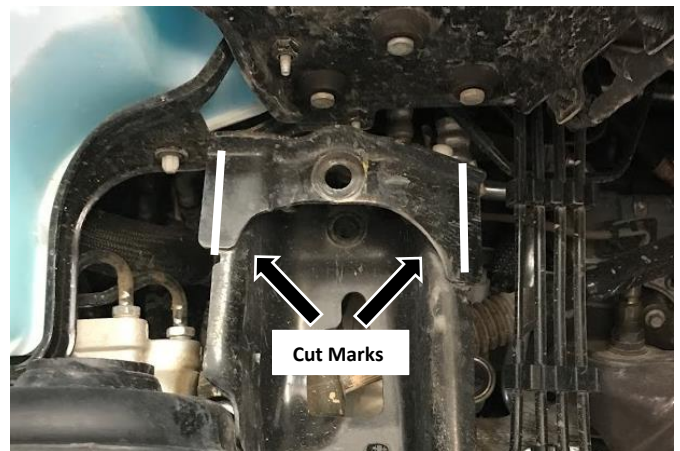


Figure 2: Cutting upper shock mount



Upper Coilover Mount Installation:

4. Place upper coilover mount into the oem shock mount. While holding the front edge tangent to the inside coil bucket radius install and tighten the rear bolt into oem nut. C-clamps may be necessary to hold everything in place (one on the oem coil bucket, one on the front edge)

NOTE: The driver side rear upper hole DOES NOT line up with the existing hole, if it did the hardware wouldn't fit.

5. Using the new bracket as a guide drill 5/16" holes through the coil bucket & shock tower.

NOTE: The driver side rear upper hole DOES NOT line up with the existing hole, if it did the hardware wouldn't fit.

NOTE: If the hole was misaligned and the studs on the front of the OEM towers were not drilled clean through, they will be cleaned up in the next step.

6. Remove the bracket and drill holes to 13/32. Clean and deburr all holes.

7. If you missed the studs on the OEM towers use a Sawzall and/or deburr tool to remove them completely and leave a flat surface.

8. Grind the back edge of the coil bucket until the lip is removed.

9. Paint the holes oem shock towers (Flat Black Duplicolor or Black Steel-It) and touch up any scratches in the powdercoat.

10. Reinstall tower with all the bolts loose.

Tighten bolts in the following order:

OEM back bolt: 80 ft-lb

Spring Perch Bolts: 37 ft-lb

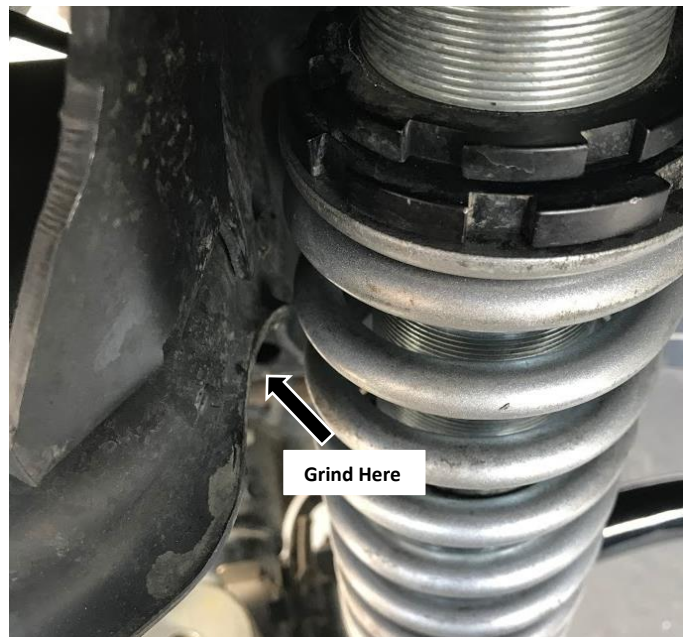
Front Tower Bolts: 37 ft-lb

Back Tower Bolts: 37 ft-lb

Figure 3: Bracket installed



Figure 4: Where to Grind Coil Bucket



Lower Coilover Mount Installation:

11. Drill OEM brake line bracket holes to 13/32. Trim ½" off the back edge of lower spring perch for coilover clearance. Deburr & paint.
12. Loosen any existing bump stop spacer and install brake line relocation bracket underneath with screw facing out. Re-install bump stop spacer & tighten to recommended spec.
13. Tighten all 3/8-24 bolts to 37 ft-lb

Remote Reservoir Bracket Installation:

13. Line the back edge of the reservoir mount with frame weld and align the reservoir mount bend with the top edge of the frame. Clamp in place and install self-tapping screws.
14. Install hose clamp as shown in Figure 6. 10" long reservoirs use lower holes in each set.

Figure 5: Lower Coilover Mount & Brakeline Tab Installation

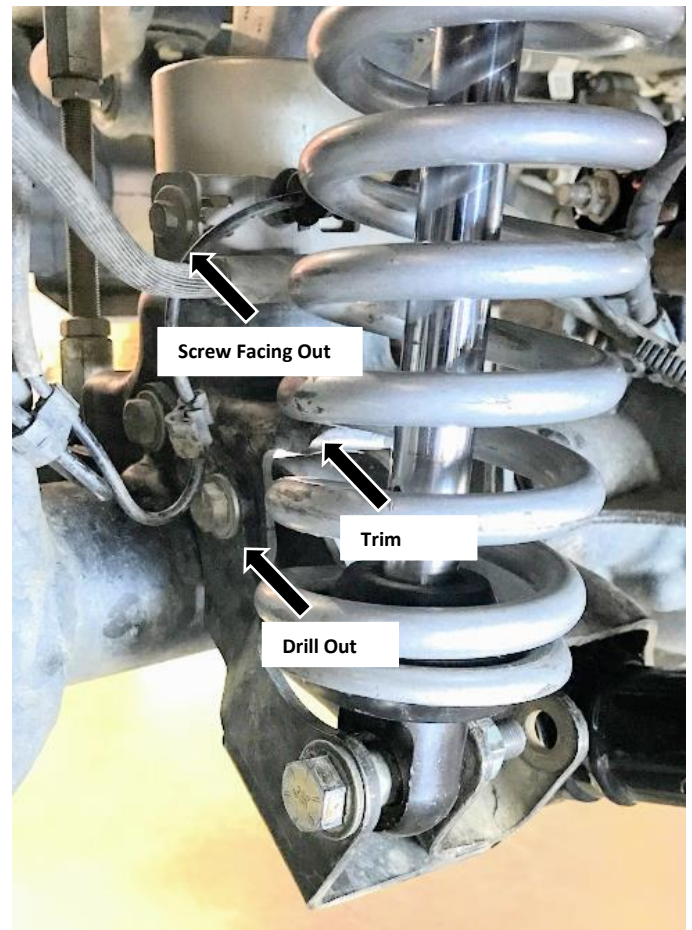
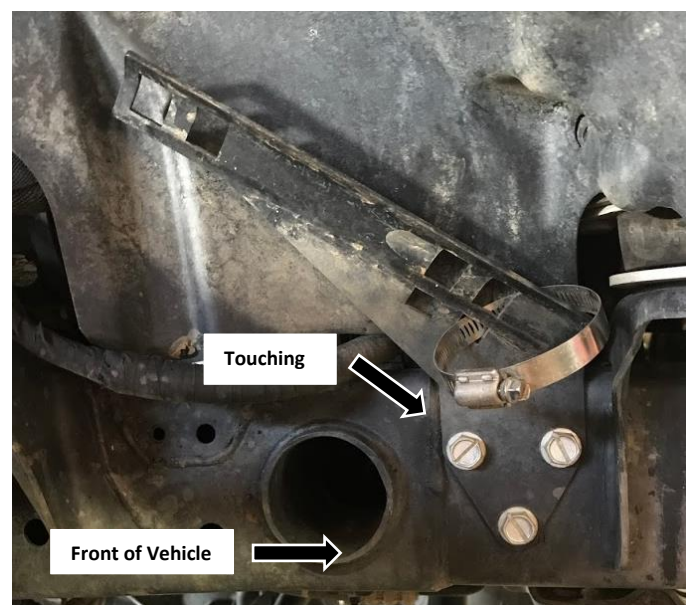


Figure 6: Reservoir Mount Installation



Coilover Installation:

15. Install springs on to the shocks, lighter rate springs on top, spring slider with long side up. Using a spring compressor will make it a lot easier. Set the upper nuts with the following amount of threads above the perch:

Fox 2.0 For 3" of Lift:

Zero preload when 0" of thread showing

JLR start with 1.00" of thread showing

JLUR start with 1.50" of thread showing

½ to 2.0" of thread showing is acceptable, swap springs if outside this range. Note, springs must be in new condition to swap.

King 2.0 For 3" of Lift:

TBD

16. Install coilover into upper & lower mounts using ½" x 2.75" long bolt, washers, and nuts. Torque to 80 ft-lb.

17. Install reservoirs using the lowest groove in each set.

Setting Ride Height:

18. Reinstall tires & wheels, torque to factory spec., set vehicle back on its own weight.

19. Adjust upper springs nuts until desired ride height is achieved. 1" of adjustment equals 1" of ride height. Sometimes it is easier to remove the coilover and use a spring compressor.

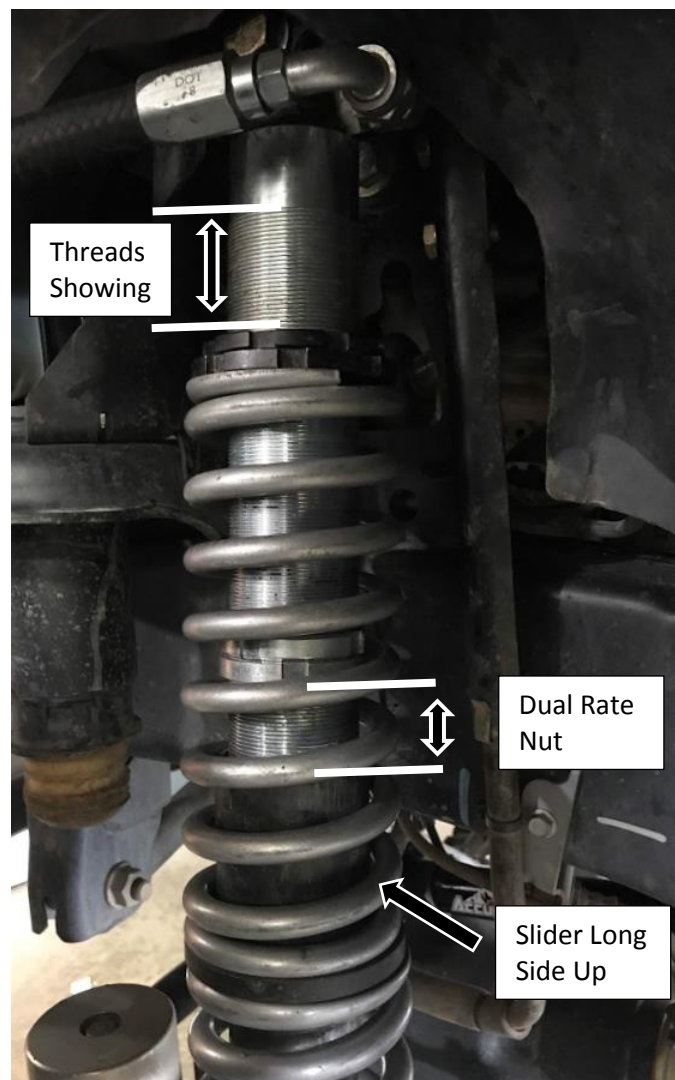
Note: wheels & tires do not need to be removed to take off the coilovers (if you have a lift).

20. Set the dual rate nuts to 1" away from the spring slider at ride height.

Bolt Check

After 500 miles or one off-road trip check the torque on all the bolts.

Figure 7: Coilover installation



How To Measure &
Set Coilover Spring Preload



Installation Instructions

Jeep JL Rear 2.0 Coilover Kit
AOR-1000-0005

For the latest version visit
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the product and click on Specifications.

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Tools Required

Proper Safety Equipment	Jack & Jack Stands
Basic Hand Tools (Wrenches, Sockets, Ratchets, Etc)	Coil Spring Compressor (optional)
Torque Wrench	Two 3" C-Clamps
Drill or Impact To Fasten Zip Screws	
Sharpie (Preferably Silver)	

Parts List

P/N	Description	QTY
2000-047-050	Spacer, 0.875 OD x 0.472 ID x 0.50 Long	2
2000-047-175	Spacer, 0.875 OD x 0.472 ID x 1.75 Long	2
2000-045-L	Reservoir Mount, 08+ JL, Rear Left	1
2000-045-R	Reservoir Mount, 08+ JL, Rear Right	1
3000-014-12-100	Screw, Hex Head, Self Drilling, Zinc Plated, 1/4"-14 x 1.00"	6
3000-009-036	Hose Clamp, SS, 0.50" W, Up To 2.75" ID	4

Other Modifications or Parts Required & Not Included

Requires 68" wide axles (Rubicon Axles)

Bump Stop Spacers: Rear 2.0"

Tires & Wheels:

Tire bulge must be 5.25" from outside of frame min

Measured on flat parts of frame just behind bump stop

37x12.5R17 – 17" wheel, 8-9" wide, 4.0" backspacing min

40x12.5R17 – 17" wheel, 8-9" wide, 3.5" backspacing min

Rear Sway Bar Links – 11.25" long

NOTE: If your measurements are different you must cycle the suspension to verify tire to coilover & coilover to frame clearance. Fully articulate the suspension each direction and check clearance

Prepare the Vehicle

Jack the vehicle up and securely set the chassis and axles on jack stands. Remove wheels and tires.

****Instructions assume you already have a suspension kit capable of similar droop. If not check e-locker and diff breather hose and reroute as necessary. See Figure 1.**

Disassembly:

1. Remove rear OEM components:

Rear springs (coil spring compressor can be helpful)

Rear shocks

Coilover Installation:

2. Install coilover into upper mounts using the OEM Bolt and 7/8" OD spacers. Narrow spacer goes on the outside of the upper mount. Torque to 80 ft-lb. Do not install springs at this time.

3. Install the coilover into the lower mount using oem bolt and supplied spacers. Install the bolt with nut towards the tire to protect the threads off-road.

Figure 1: Wiring and vent hose to re-route as necessary

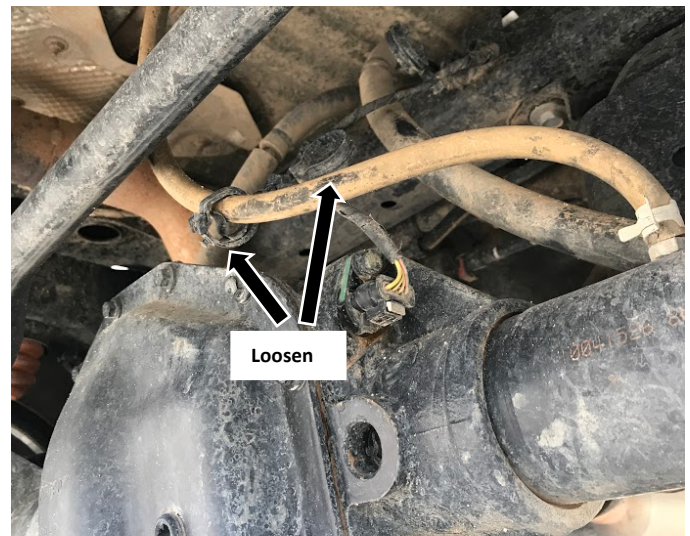
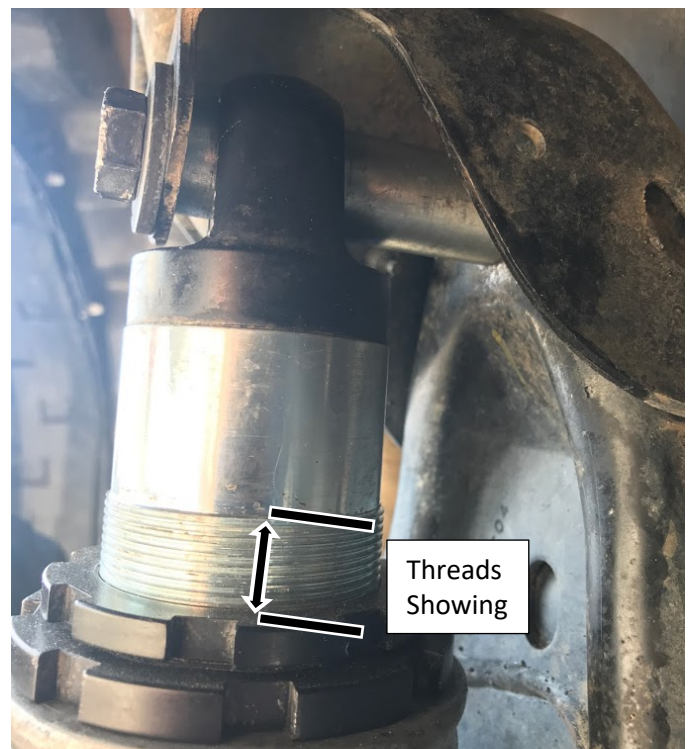


Figure 2: Spring preload and upper spacers



Remote Reservoir Bracket Installation:

4. Remove OEM frame bump stops by prying them out of the metal can. Jack axle up to full bump (metal to metal). Check that sway bar end links do not exceed 11.25" eye to eye.
5. Use the hose clamps to lightly clamp the reservoir and bracket together. **Be sure to mount the reservoir as high as possible on the frame to ensure sway bar end link clearance.** Clock the bracket so it sits flat against the frame. Trace the outside edge of the bracket using the sharpie.
6. Remove the bracket from the reservoir and hold it up to your marks. Use zip screws to fasten the bracket.

Setting Ride Height

7. Install springs on to the shocks, lighter/shorter springs on top, spring slider with short side up. Using a spring compressor will make it a lot easier. Set the upper nuts with the following amount of threads above the perch:

Fox 2.0 For 3" of Lift:

- 1" preload when 0" of thread showing
- JLR start with 0" of thread showing
- JLUR start with 1.0" of thread showing

0 to 1.5" of thread showing is acceptable, swap springs if outside this range. Note, springs must be in new condition to swap.

King 2.0 For 3" of Lift:

TBD

8. Reinstall tires & wheels, torque to factory spec., set vehicle back on its own weight.
9. Adjust upper springs nuts until desired ride height is achieved. 1" of adjustment equals 1" of ride height. Sometimes it is easier to remove the coilover and use a spring compressor.

Note: wheels & tires do not need to be removed to take off the coilovers (if you have a lift).

10. Set the dual rate nuts to 1.5" away from the spring slider at ride height.

Figure 3: Lower coilover spacer installation



Figure 4: Reservoir bracket installation



TORQUE SETTINGS

AccuTune Offroad
Jeep JL, Suspension Settings

JOINT	WRENCH SIZE	TORQUE
Front LCA to Axle	21mm/24mm	190 ft-lb
Front LCA to Frame	21mm/24mm	190 ft-lb
Front UCA to Axle	8mm/18mm	80 ft-lb
Front UCA to Frame	18mm/21mm	80 ft-lb
Front Track Bar to Axle	21mm/21mm	110 ft-lb
Front Track Bar to Frame	21mm/21mm	110 ft-lb
Front Brake Hose To LCA	15mm	15 ft-lb
Front Sway Bar Link To Axle	5/8"/3/4"	60 ft-lb
Front Sway Bar Link To Frame	5/8"/3/4"	60 ft-lb
Front UCA Heat Shield	10mm	40 in-lb
Front Bump Stop	9/16"	20 ft-lb
Front Shock To Frame	18mm	80 ft-lb
Front Shock To Axle	18mm	75 ft-lb
Rear LCA to Axle	21mm/21mm	90 ft-lb
Rear LCA to Frame	21mm/21mm	90 ft-lb
Rear UCA to Axle	21mm/21mm	95 ft-lb
Rear UCA to Frame	21mm/21mm	120 ft-lb
Rear Track Bar to Axle	21mm/21mm	90 ft-lb
Rear Track Bar to Frame	21mm/21mm	90 ft-lb
Rear Sway Bar Link To Axle	5/8"/3/4"	60 ft-lb
Rear Sway Bar Link To Frame	5/8"/3/4"	60 ft-lb
Rear Bump Stop	9/16"	20 ft-lb
Rear Shock To Frame	18mm	80 ft-lb
Rear Shock To Axle	18mm	75 ft-lb

FRONT SUSPENSION

SWAY BAR END LINK	LOWER CONTROL ARM LENGTH	UPPER CONTROL ARM LENGTH	TRACK BAR LENGTH
8.50"	24.125"	20.188"	34.125"

REAR SUSPENSION

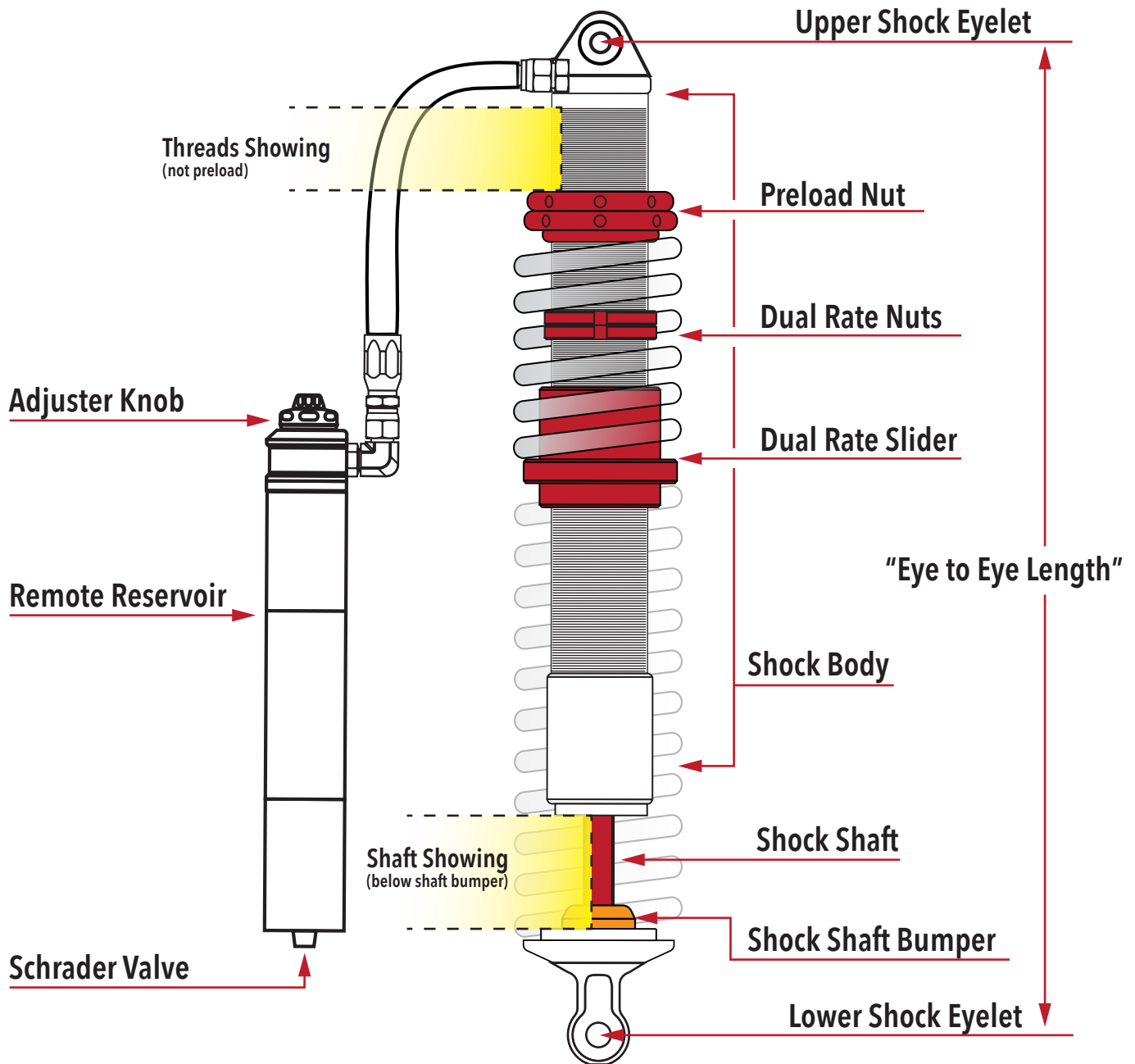
SWAY BAR END LINK	LOWER CONTROL ARM LENGTH	UPPER CONTROL ARM LENGTH	TRACK BAR LENGTH
8.50"	19.75"	17.43"	37.875"

TIRE/WHEEL SIZE & BUMP STOP REQUIREMENTS

MODEL	TIRE	WHEEL	FRONT BUMP STOP	REAR BUMP STOP
JLUR	37/12.5R17	17x8, 4.5" BS	2.50"	2.00"
JLUR	35/12.5R17	17x8, 4.5" BS	1.00"	1.00"
JLU	35/12.5R17	17x8.5, 4.75" BS	3.00"	2.00"

ALIGNMENT SPECIFICATIONS

SPEC	FRONT LEFT	FRONT RIGHT
Caster	4.80 +/- 1.0 Degree	4.80 +/- 1.0 Degree
Toe-In	0.0 - 0.12	0.0 - 0.12



Preload Nut: Allows you to adjust the preload on the coilover shock. For zero preload, extend shock completely and have the preload nut resting against the upper spring not allowing the springs to move up or down.

Dual Rate Nuts: Allows you to adjust the transition point between the softer upper spring and stiffer lower spring. For most applications, the stop nuts should be positioned about 1 inches above the Dual Rate Slider when the vehicle is at ride height and 2 inches in back.

Dual Rate Slider: Separates the upper and lower coilover springs.

Adjuster Knob: Fox Shocks will have either a Dual Speed Compression Adjuster (DSC) or a Low Speed Compression Adjuster (LSC). King Shocks will have one type of adjuster, which is a mid speed adjuster.