



Installation Instructions

AOR-1000-0001, AOR-1000-0002, & AOR-1000-0006
Front Jeep JK Coilover & Air Bump Kits

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Warranty

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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	Grinder & Appropriate Consumables
Basic Hand Tools (Wrenches, Sockets, Ratchets, Etc)	Sawzall & Appropriate Consumables
Torque Wrench	Welder
Jack & Jack Stands	Zip Ties

Parts List – Coilover Kit (AOR-1000-001)

P/N	Description	QTY
AOR-2000-002-1L	Shock Tower, 07-17 Jeep JK, Welded, Left	1
AOR-2000-002-1R	Shock Tower, 07-17 Jeep JK, Welded, Right	1
AOR-2000-004	Shock Tab, 07-17 Jeep JK, Front Lower, 2.0	2
AOR-2000-005	Shock Tab, 07-17 Jeep JK, Front Lower, 2.5	2
AOR-2000-009-1L	Reservoir Mount, 07-17 JK, Front Left	1
AOR-2000-009-1R	Reservoir Mount, 07-17 JK, Front Right	1
AOR-3000-009-036	Hose Clamp, SS, 0.50" W, Up To 2.75" ID	4
AOR-3000-008-038-100	Screw, Self Threading, Zinc Plated, 3/16-16 x 1.00	6
AOR-3000-001-050-0275	Screw, Hex Cap, Fine Thread, Grade 8, 1/2"-20 x 2.75 "	4
AOR-3000-007-050	Nut, Locking, Stover, Fine Thread, Grade C, 1/2-20	4
AOR-3000-010-050	Washer, SAE, Grade 8, Gold Zinc, 1/2"	8

Parts List – Air Bump Kit (AOR-1000-002)

P/N	Description	QTY
AOR-2000-003-1L	Air Bump Mount, 07-17 Jeep JK, Welded, Left	1
AOR-2000-003-1R	Air Bump Mount, 07-17 Jeep JK, Welded, Right	1
AOR-2000-003-3	Air Bump Mount, 07-17 Jeep JK, Gusset, Each	2
AOR-2000-006	Bump Stop Plate, 07-17 Jeep JK, Front Axle	2

Other Modifications or Parts Required & Not Included

Longer brake lines suitable for your lift height & wheel travel
Sway Bar links suitable for your lift height & wheel travel
Wheels with 4" backspacing minimum
Aftermarket driveshaft
Lift kit components for desired lift height (control arms, steering, etc)
Skid plate & exhaust modifications
Shocks require 1.50" wide spacers
2.5 shocks require 90 deg fittings
DOES NOT WORK WITH STOCK INNER FENDERS

These instructions cover installation of the AccuTune Off-Road JK Front Coilover Kit (AOR-1000-001) & Air Bump Kit (AOR-1000-002) at the same time on stock axles. These products are sold separately but designed to work together. If you are not installing both kits some custom fabrication may be required and is not covered by any instructions.

Take Before Measurements & Prepare Brackets

1. Install final wheel/tire combo
2. With weight on the vehicle measure height of lower link bolts off the ground (both sides). This will be referenced later so you know where ride height is and can measure up travel.

Remove Lift Kit & OE Brackets

3. Jack up the vehicle and place chassis at new desired ride height. Ensure vehicle is stable.

For a 4" lift there should be 8" between the axle spring perch and bottom of the frame. See Fig 1.

4. Remove wheels/tires. Remove coil springs and shocks. Remove Bump Stops & Spacers. Remove Sway Bar Links From Axle. Remove brake line retaining tabs.

5. Zip tie brake lines, wheel speed sensors, wiring, and other components away from oem brackets.

6. Remove steering box. This is not required but makes cleaning up the frame easier.



Fig 1: Front Measurement at 3" of Lift (will measure 8" for 4" lift)

7. Cut off OEM shock tower by cutting lines in Fig 2 & Fig 3.
8. Cut upper bump stop mount shorter to make access to brackets behind.
9. Cut off OEM upper spring perch welds on the side of the frame as shown in Fig 2 & Fig 3.
10. Bend spring perch up and carefully cut top side welds. Be sure to avoid the steering box, brake lines, and wiring.
11. Clean up frame, grind flat, remove paint from surrounding areas.
12. Cut off lower shock mounts. See Fig 4.
13. If you are running 2.5 coilovers it may be necessary to trim the back of the stock spring perch for clearance. See Fig 4.
14. If your axle has knuckle gussets you will need to notch them for the new lower shock mount. The new mount will be flush with the outside of the spring perch. See Fig 4.
15. Remove paint from top of axle bump stop pad. See Fig 4.
16. Grind axle smooth and remove paint in surrounding areas.

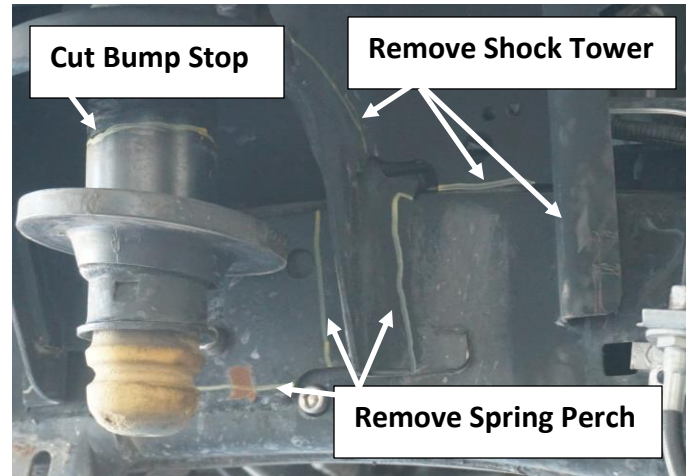


Fig 2. Where to cut upper OEM brackets

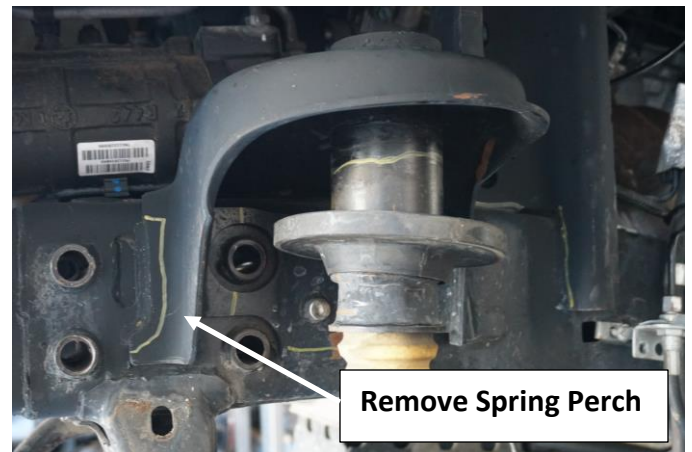


Fig 3. Where to cut upper OEM brackets



Fig 4. Where to lower shock mounts, knuckle gussets and spring perch.

Install New Brackets

17. Hold the upper air bump mount and coilover bracket into place. The key on the air bump mount fit into the frame slot. Note where the coilover bracket fits so you can work with it alone. See Fig 5.

18. If required, grind coilover brackets as necessary to fit flat on the frame with minimal gap. The frame brackets should be far forward so the air bump key is at or near the end of the frame slot. On the back side the coilover brackets should split the frame hole for the brakeline tab.

19. On both sides the engine mount welds may require minor grinding to clear the corner of the bracket. On the passenger side the battery tray ribbing will require trimming, we recommend using a cut off wheel.

20. Note where the upper coilover bracket welds to the frame and air bump mount. Remove the coilover bracket, mask areas to be welded, and paint.

21. Tack on axle bump pad plate so that the outer most edges are flush.

22. Put the upper brackets back into place and tack.

23. Let the pressure out of the coilover and air bump. Install both into place. Collapse the shock most of the way. See Fig 6. Set the air bump to a starting measurement:

OEM Fit Fox & King Threaded Air Bumps:

37's With Tube Fenders – 3.75" *

40's With Tube Fenders – 5.25"

*Usually min setting with raised track bar

* Equals 3" Bump Stop Spacer

Universal Fit Air Bump:

37's With Tube Fenders – 2.25" *

40's With Tube Fenders – 0.75"

*Usually min setting with raised track bar

* Equals 3" Bump Stop Spacer

Universal mounts can be flipped side to side and upside down for more adjustment range.

Set the axle at ride height as previously measured and check up travel between air bump mount and air bump pad - 5" is recommended, 4" is minimum for off-road use. Raise or lower the chassis as necessary.

24. Jack the axle up until it is firm against the bump stops. Make sure there is sufficient clearance everywhere including frame to track bar mount.



Fig 5. Frame location for upper brackets



Fig 6A. Air Bump Initial Setting Measurement – OEM Fit

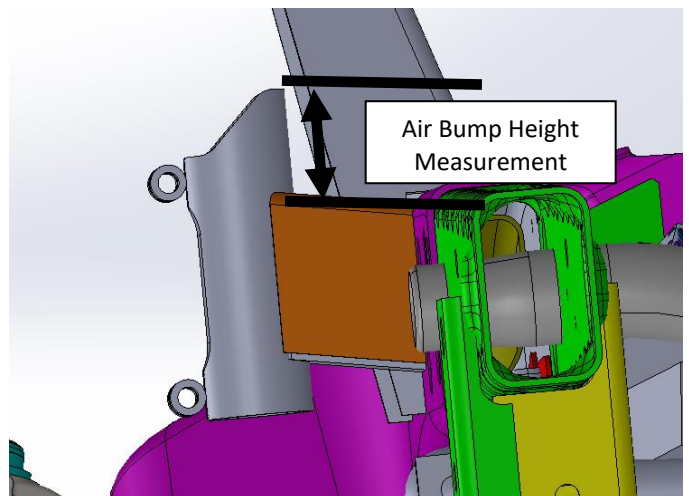


Fig 6B: Air Bump Initial Measurement: - Universal

25. Collapse the shock until there is 3/8" between the rubber bumper and aluminum cap – we recommend sticking some spare metal in there. If you are installing King or Sway-A-Way shocks make sure the spring perch is installed. Select the lower shock mount which fits the best. Starting recommendation:

2.0's- Straight Mount

2.5's with 3.75" bump stop – Bent Mount

2.5's with 5.25" bump stop – Straight Mount

26. With 3/8" of shaft still exposed on the shock, mock up the axle mount bracket. **It is critical the outer edge of the new bracket lines up with the outer edge of the spring perch.** Tack the lower shock mount into place. (Be sure to ground to the axle while welding on the axle).

27. Install one spring and the spring slider onto each shock. The spring slider should be on the bottom. Bolt shocks back on. Install a tire on the passenger side.

28. Droop the driver side all the way. Make sure the passenger side shock is fully collapsed. Check that the spring and slider both clear the frame on the driver side. The slider is larger OD than the spring and it's normal for it to be a very close fit. Check tire and fender clearance as you sweep the steering through its full range. If you want to increase or decrease the clearance note how much.

29. Repeat the previous step with the tire on the driver side at full bump and passenger side at full droop.

30. If you change the clearance move the air bump by the amount you noted earlier. Break the tacks and move the lower coilover mount to retain the 3/8" clearance. Repeat the articulation steps until clearances are good.

31. Measure the final air bump height. Remove shocks and air bumps. Fully weld all the mounts. Paint.

32. Reinstall brake lines, ABS Sensors, and air bumps per manufacturer recommendations. Reinstall shocks without springs. Check brake line clearance at full droop.

Fox 2.0 Reservoir Shocks – Hose Faces Forward

Fox 2.5 Performance Series – Hose Faces Back

Fox 2.5 Factory Series – Hose Faces Back

Fox 2.5 IBP – Hose Faces Back

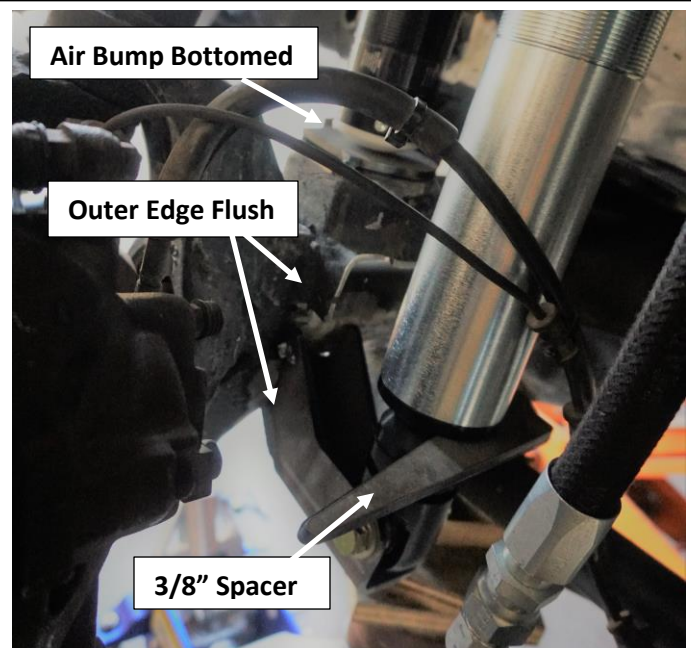


Fig 7. How to mock up lower shock mount

Reservoir Mounting

33. Paint reservoir brackets.

34. Hold up brackets around tube with edges vertical. Center punch hole locations and pre-drill to 21/64. Install brackets.

2.0 Diameter Shocks:

The reservoir hose faces the mount and no special mounting is required. Be sure the hose isn't rubbing on anything. Use supplied hardware to gently clamp the reservoir.

2.5 Diameter Shocks:

2.5 Diameter shocks require the reservoir hose to run behind the mount.

We recommend wrapping the reservoir in painters tape before starting.

On the driver side remove the bolts holding the washer fluid bottle, computer and abs unit.

With the shocks depressurized lightly loosen the reservoir hose fittings (too loose will allow oil to leak).

Pull the fender assembly up and feed the reservoir behind the mount. Re-install fender assembly & tighten bolts to OEM specs.

Mount the reservoir gently using the supplied hose clamps. Make sure the hose is not hitting anything. **Retighten the fittings.**

35. Flex the suspension each way (as done before) to check clearance on the reservoir.

Check Ride Height & Spring Rates

36. Take axle to full droop. Remove shock, install springs, charge shocks (150 PSI King, 200 PSI Fox & Sway-A-Way). Charge air bumps (100 psi). Reinstall shocks.

**If you don't want to remove the reservoir you can just remove the lower shock bolt and install the springs that way.

37. **Torque shock bolts to 90 ft-lb. Tighten shock rotating remote reservoir if equipped.**



Hose Routing For:

Fox 2.0 With DSC

Fox 2.0 With Rotating Remote Reservoir

Fox 2.5 Factory Series

Fox 2.5 IBP With Rotating Remote Reservoir

King 2.0 & 2.5 (Requires 90 Deg Fitting)



Hose Routing For:

Fox 2.0 Remote Reservoir

38. With the axle at full droop add 1" of preload to the springs. (Tighten upper spring nut until the nut touches the springs and they stop rattling, thread the nut down 1" more).

39. Install tires & wheels, torque to factory specs, remove jack stands. Re-install sway bar and torque to factory specs. Rock vehicle or drive a short distance to settle the suspension.

40. Measure shock shaft showing (aluminum cap to rod end), Measure up travel (bump stop shaft showing plus bump stop clearance). Thread the upper spring nut up or down to achieve desired ride height. If you move the nuts more than ½" call with your measurements and we'll swap springs.

For more information on how to measure preload and springs please refer to AccutuneOFFROAD.com/Articles

Make sure brake lines and other wires do not interfere with the wheel, springs or shocks. Recheck torque on all fasteners after 100 miles.