



Rancho Suspension System — RS66164B
Front Upper Adjustable Control Arm Upgrade — Black
Fits 2018 Jeep Wrangler JL / JLU

⚠ WARNING: Carefully read, understand and follow the instructions provided in this manual, and keep it in a safe place for future reference. If you have any doubt whatsoever regarding the installation or maintenance of your Rancho suspension system, please see your retailer for assistance or advice. Failure to follow the warnings and instructions provided herein can result in the failure of the suspension system, or can cause you to lose control of your vehicle, resulting in an accident, severe personal injury or death.

These instructions should remain in the vehicle glove box for future reference.

Rancho Adjustable Control Arms may increase articulation and wheel travel.

Do not install without appropriate extended length shocks, brake lines, brake line brackets, bump stop extensions, sway bar end links, track bars, and drive shafts.

Failure to install these Rancho Adjustable Control Arms along with appropriate components can result in the failure of the suspension system, or can cause you to lose control of your vehicle, resulting in an accident, severe personal injury or death.

This suspension system will enhance the off-road performance of your vehicle. It will handle differently; both on and off-road, from a factory equipped passenger car or truck. Failure to drive this vehicle safely may result in serious injury or death to the driver and passengers. ALWAYS WEAR your seat belts, REDUCE your speed, and AVOID sharp turns and other abrupt maneuvers.

Parts List

PART #	DESCRIPTION	QTY
RS881031B	Front Upper Control Arm	2
RS86164	Instructions	1

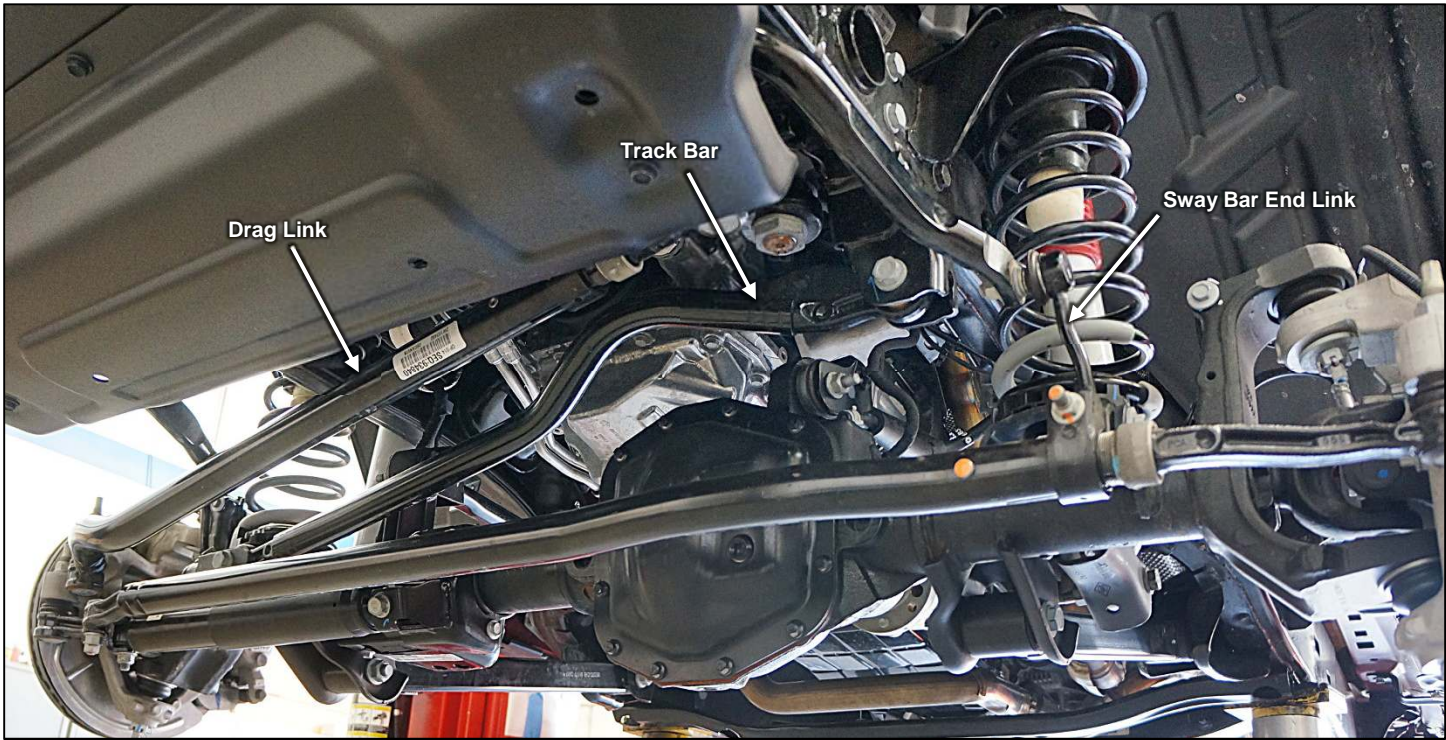


Illustration 1

- 1) ☐ Park vehicle on a level surface. Set the parking brake and chock front wheels.
- 2) ☐ Measure and record the distance from the center of each wheel to the top of the fender opening. See Illustration 2.

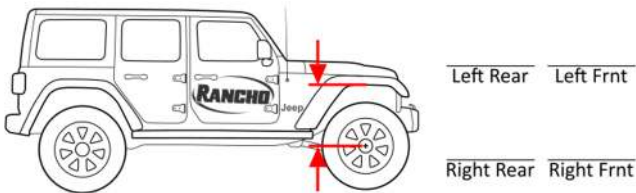


Illustration 2

COIL SPRING REMOVAL – (SEE NOTE BELOW)

Control arms can be replaced with the vehicle at ride height on the ground, or with vehicle raised on jack stands or vehicle hoist. To perform installation with vehicle on the ground, skip to next section “CONTROL ARM REPLACEMENT”.

- 1) ☐ Remove the track bar to frame bracket nut and bolt. See Illustration 1.
- 2) ☐ Raise the front of the vehicle and support the frame with jack stands. Remove the front wheels and set them aside.
- 3) ☐ Support the front axle with a floor jack.
- 4) ☐ Remove the sway bar end links at axle mount.
- 5) ☐ Remove the shock absorber lower nut and bolt.
- 6) ☐ Remove nut and separate the brake hose bracket from the lower control arm. See Illustration 3.



Illustration 3

- 7) ☐ Remove bolt and separate the brake hose bracket from the axle.
- 8) ☐ Disconnect any vent hoses.
- 9) ☐ Disconnect any electrical wiring from the axle by sliding out the plug lock and pulling plug out. Detach wire clips from axle and upper control arms. See Illustration 4.

CAUTION: DO NOT PULL BY WIRES!

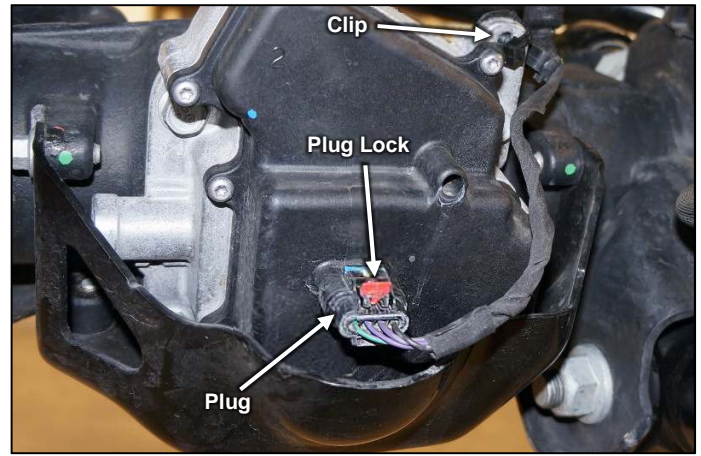


Illustration 4

- 10) ☐ Reference mark the drive shaft to the front pinion flange (at axle). Disconnect the drive shaft from the pinion flange. Support drive shaft with a tie wrap or wire. See Illustration 6.
- 11) ☐ Remove any bump stop spacer attached to axle.
- 12) ☐ Carefully lower the front axle and remove the coil springs. Push down on axle if necessary.

⚠ WARNING: Do not allow the axle to hang by any hoses or cables. You could damage the hose or cable, without this damage being visible to you, resulting in sudden and unexpected failure and an accident.

CONTROL ARM REPLACEMENT

- 1) ☐ Adjust Rancho upper control arms to desired length.

TIP: a good starting point is the length of the arm on the vehicle. Adjust from there to achieve desired caster and pinion angle. Adjustable control arms can also be used to center axle in wheel well when used with Rancho adjustable lower control arm kit RS66165B.

CAUTION: Do not exceed maximum length of 24-3/8" Exposed thread must be 1-3/16" (1.188") or less.

TIP: Measure from edge to edge of holes See Illustration 5.

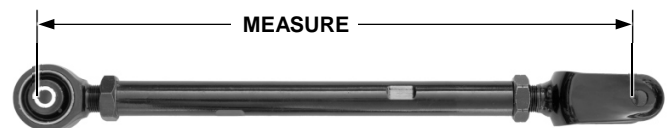


Illustration 5

- 2) ☐ Remove heat shields on upper control arm frame mount. See Illustration 6.
- 3) ☐ Loosen but do not remove all upper control arm mounting hardware.
- 4) ☐ If working on lift /jack stands, raise axle up 4-5 inches.
- 5) ☐ Remove the driver side upper control arm from the frame and axle brackets.

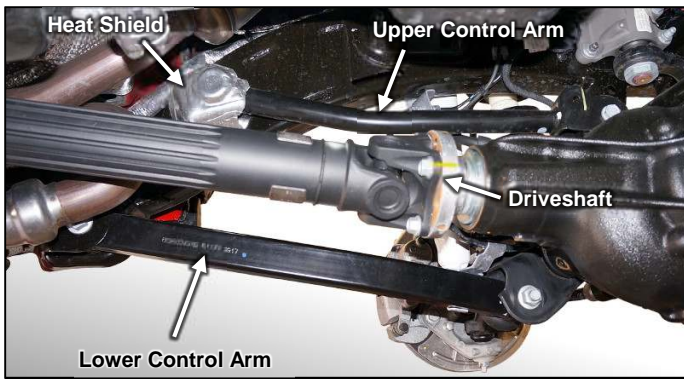


Illustration 6

NOTE: Do not tighten control arm hardware until the end of the installation procedure. The upper front axle mount must be tightened with vehicle on the ground at ride height.

- 6) ☐ Attach the adjustable end of the lower control arm to the frame bracket with original hardware. See Illustration 7.



Illustration 7

- 7) ☐ Attach the non-adjustable side of the lower control arm to the driver side axle bracket with the original hardware.
- 8) ☐ If control arm cannot be lined up with mounting hole, use jack under pinion to rotate axle slightly.
- 9) ☐ Repeat steps 5 through 7 to install control arm on the passenger side.
- 10) ☐ Torque upper arm at frame mount to 80 lb-ft. Torque jam nuts to 150 lb-ft.

Do not tighten upper arm to axle mount bolts until vehicle is at normal ride height.

- 1) ☐ Re-install heat shields to upper control arm frame mounts.

COIL SPRING INSTALLATION

- 1) ☐ Install original rubber isolator in driver side upper coil mount. Align and insert the isolator's alignment pins in the holes in the upper mount.
- 2) ☐ If required, place bump stop spacer inside the coil spring.
- 3) ☐ Lower axle if required and insert the bump stop spacer into the upper pocket and onto the axle pad. Align pigtail with groove in lower isolator. See Illustration 8.

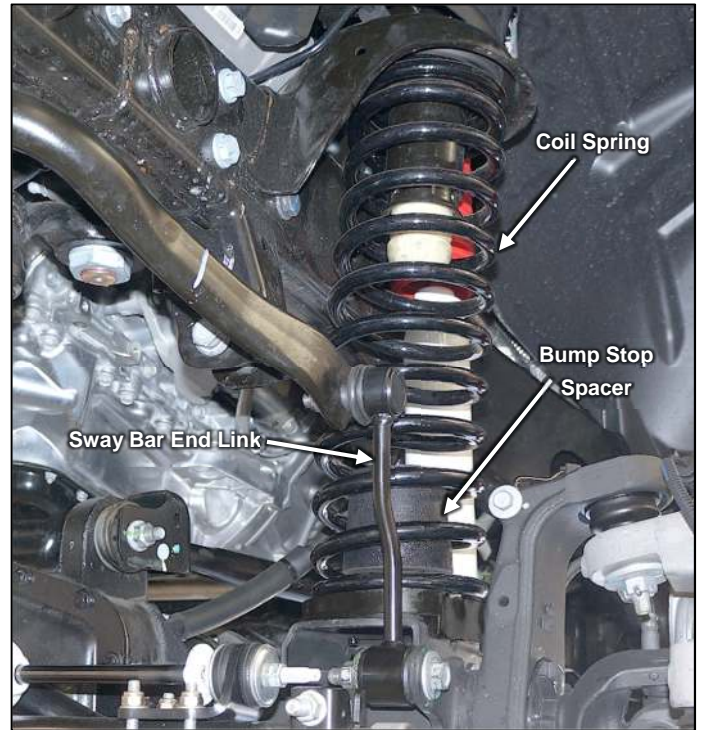


Illustration 8

⚠ WARNING: Do not allow the axle to hang by any hoses or cables. You could damage the hose or cable, without this damage being visible to you, resulting in sudden and unexpected failure and an accident.

- 4) ☐ Attach the bump stop spacer to the axle pad.
- 5) ☐ Repeat steps 1 through 4 for the passenger side.
- 6) ☐ Raise front axle and re-attach the brake line bracket to the axle.
- 7) ☐ Attach shock lower mounts to axle brackets. Torque to 75 lb-ft.
- 8) ☐ Reattach drive shaft to pinion flange using blue Loctite. Torque to 81 lb-ft.
- 9) ☐ Reattach vent hose and electrical wiring if necessary.

LOWER VEHICLE

1) ☐ With the suspension at maximum extension (full droop), inspect and rotate all axles and drive shafts. Check for binding and proper slip yoke insertion. The slip yoke should be inserted a minimum of one inch into the transfer case and/or transmission.

2) ☐ Install front wheels and lower vehicle to the ground. Torque lug nuts to 130 lb-ft.

3) ☐ Attach track bar to frame mount using OE hardware.

Note: If track bar does not align with bracket, have an assistant slowly turn steering wheel to align holes.

4) ☐ Torque upper track bar bolt to 110 lb-ft. Torque Jam nut to 150 lb-ft.

Periodically check track bar mounting bolts and jam nut for tightness.

5) ☐ Torque upper control arm at axle mount to 80 lb-ft.

6) ☐ Repeat step 5 with suspension at ride height and full articulation.

7) ☐ Ensure that the vehicle brake system operates correctly. Verify that each hose and wire allows for full suspension movement.

8) ☐ Readjust headlamps.

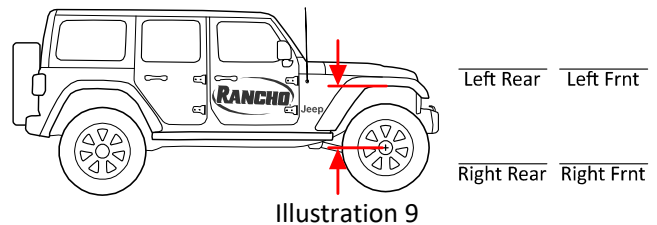
9) ☐ Center steering wheel and axle.

10) ☐ Have vehicle aligned to manufacturer's specifications.

Alignment Specifications:

Caster	$4.8^{\circ} \pm 1.0^{\circ}$
Camber (fixed angle)	$-0.25^{\circ} \pm 0.37^{\circ}$
Toe-In, Each Wheel	$0.0^{\circ} - 0.12^{\circ}$
Toe-In, Total	$0.0^{\circ} - 0.20^{\circ}$
Thrust Angle	$0^{\circ} - 0.25^{\circ}$

11) ☐ Park the vehicle on a level surface. Measure and record the distance from the center of each wheel to the top of the fender opening. See Illustration 9.



Periodically check control mounting bolts and jam nuts for tightness.

Torque Specs

Upper Control Arm	80 lb-ft
Control Arm Adjuster Jam Nut	150 lb-ft
Shock Absorber Upper Mount	80 lb-ft
Shock Absorber Lower Mount	75 lb-ft
Front Drive Shaft to Pinion Flange	81 lb-ft
Sway Bar End Link	60 lb-ft
Track Bar	110 lb-ft
Track Bar Jam Nut	150 lb-ft
Wheels (Lug Nuts)	130 lb-ft.



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