



Rancho **LEVEL IT** System RS66304R9

Fits 2013-2007 Chevrolet / GMC 1500 Pickup

Excludes Electronic Suspension.

READ ALL INSTRUCTIONS THOROUGHLY FROM START TO FINISH BEFORE BEGINNING INSTALLATION

This suspension system was developed using LT285/70R17 tires on a 5"backspacing wheel.

Before installing tires and wheels, consult your local tire and wheel specialist.

⚠ 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

Parts List

P/N	DESCRIPTION	QTY.
RS999785UMM	Rancho Monotube Strut	2
RS176782	Sway Bar Spacer	2
RS860804	Hardware Kit	1
RS7875	HHCS, 10MMX1.50X50MM GR 8.8	4
RS7755	Washer, 3/8 USS	4
RS770064	Washer, M10	4
RS89303	Instruction	1

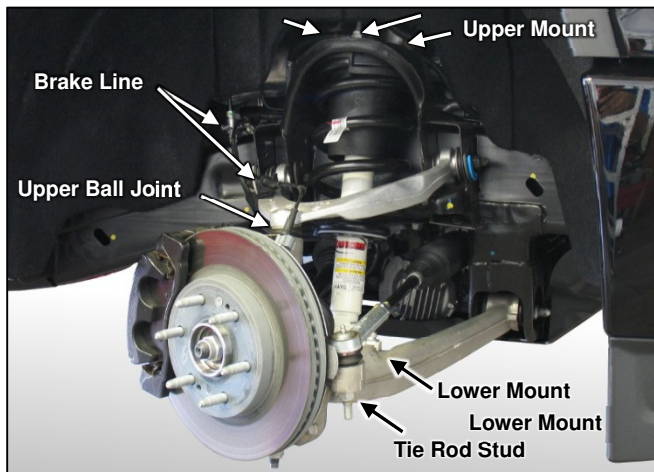


Illustration 1

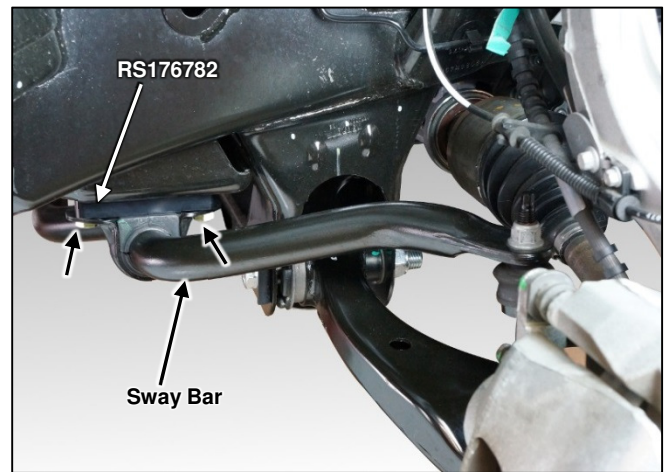


Illustration 2

STRUT REMOVAL

1) Park the vehicle on a level surface. Set the parking brake and chock rear wheels. Measure and record the distance from the center of each wheel to the top of the fender opening. See Illustration 3.

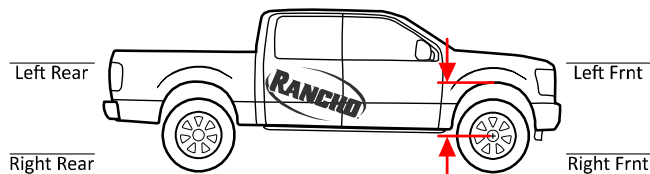


Illustration 3

2) Raise the front of the vehicle and support the frame with jack stands. Remove the front wheels and set them aside.

3) Remove sway bar at frame mount. Allow sway bar to hang from end links. See Illustration 2.

NOTE: It is best to work on only one side of the vehicle until you get to "SWAY BAR SPACER INSTALLATION". This way you can refer to the other side if questions arise about the way it was assembled.

4) Remove brake hose and ABS wire brackets from steering knuckle and frame. See Illustration 1.

5) Loosen outer tie rod stud nut. Using appropriate puller, separate then remove tie rod stud from steering knuckle. See Illustration 1.

6) Loosen but do not remove upper ball joint stud nut. If required, use puller to separate upper ball joint stud from steering knuckle. See Illustration 1.

⚠ WARNING: CONTROL ARM WILL SPRING UP WITH GREAT FORCE WHEN BALL JOINT SEPARATES FROM KNUCKLE. USE PRY BAR TO HOLD DOWN AND SLOWLY LIFT BALL JOINT STUD OUT OF KNUCKLE. WHEN REMOVING BALL JOINT STUD NUT.

7) Pry down on upper control arm, remove ball joint nut, and remove ball joint stud from knuckle.

8) Support lower control arm with jack.

9) Remove upper strut mounting nuts. Loosely re-install one of the upper strut mounting nuts.

CAUTION: Do not turn center strut rod nut!

10) Remove lower strut mounting bolts. See Illustration 1.

11) Remove strut from vehicle. Lower jack if required. If required pry strut out of lower mount.

CAUTION: Take care not to damage CV boot, or pull CV out of housing.

STRUT REPLACEMENT

1) Follow instructions supplied with strut to install supplied spring seat, isolator, and bump stop on new Rancho strut.

CAUTION: Follow instructions and warnings supplied with strut.

2) Reference mark top mount, coil spring and strut. See Illustration 4.

⚠ WARNING: SPRING IS UNDER COMPRESSION LOAD WHEN INSTALLED. ATTEMPTS TO REMOVE SPRING WITHOUT PROPERLY RESTRAINING THIS LOAD MAY RESULT IN INJURY. NEVER REMOVE THE CENTRAL LOCK NUT OF THE UPPER MOUNTING PARTS BEFORE THE SPRING IS COMPRESSED.

IF A SUITABLE SPRING COMPRESSOR TOOL IS NOT AVAILABLE, OR A QUALIFIED OPERATOR IS NOT AVAILABLE, MOST REPAIR SHOPS CAN SWAP THE COIL FOR A SMALL CHARGE.

3) Using a suitable spring compressor tool, compress spring slightly to relieve initial tension.

4) With initial spring tension relieved, loosen rod nut slightly. Compress spring until loose from lower spring seat and then completely remove nut.

5) Remove all upper mounting parts and spring from strut assembly; save for reuse. Note position of all parts as removed to ensure proper installation of replacement parts. Inspect all original parts as removed for wear and damage. Obtain replacements when necessary.

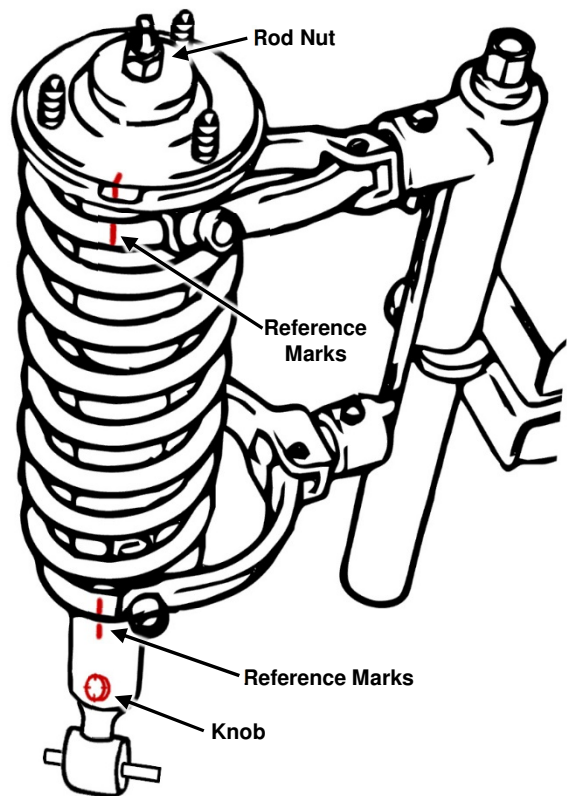


Illustration 4

6) Install new strut on spring and upper mount assembly using reference marks to align components. Spring may need to be compressed more to fit new Rancho strut. See Illustration 4 and Illustration 5. Torque center rod nut to 41 lb-ft.

NOTE: Knob faces to outside of vehicle.

⚠ WARNING: DO NOT OVER TIGHTEN ROD NUT. EXCESSIVE TORQUE CAN DAMAGE THE THREADS ON THE NUT OR PISTON ROD. USE TORQUE VALUE FROM OE MANUFACTURER.

7) Slowly release spring compressor checking for proper alignment of components.

8) Install strut in upper and lower mount on vehicle using OE hardware. Lower jack if required. Tighten hardware to OE specifications.

CAUTION: Take care not to damage CV boot, or pull CV out of housing.

9) Pry down upper control arm and attach upper ball joint stud to steering knuckle using OE hardware. Tighten hardware to OE specifications.

10) Attach outer tie rod end to steering knuckle with OE hardware. Tighten hardware to OE specifications.

11) Re-install brake hose and ABS wire brackets in original locations.



Illustration 5

SWAY BAR SPACER INSTALLATION

- 1) Loosely install driver side sway bar mount with spacer RS176782 between mount and frame. Use supplied M10-1.50X50MM bolts and smaller M10 washers. See Illustration 2.
- 2) Install passenger side sway bar mount with spacer RS176782 between mount and frame.
- 3) Torque hardware to OE specifications.

Vehicle Torque Specifications

	2013-2007	2015-2018
Strut Rod Nut	37 ft.-lb.	37 ft.-lb.
Upper Strut Mounting Nuts	37 ft.-lb.	37 ft.-lb.
Lower Strut Mounting Bolts	37 ft.-lb.	37 ft.-lb.
Tie Rod End Ball Stud Nut	44 ft.-lb.	26 ft.-lb.+90°*
Upper Ball Joint Nut	37 ft.-lb.	37 ft.-lb.+100°*
Sway Bar Mounting Bolts	37 ft.-lb	37 ft.-lb
Wheel Lug Nuts	140 ft.-lb	140 ft.-lb

* Torque fastener to specification, then turn nut specified amount

LOWER VEHICLE

- 1) Install front wheels.
- 2) Turn the front wheels completely left then right. Verify adequate tire, wheel, brake hose clearance. Check for proper CV axle operation and clearance. Inspect steering and suspension for tightness and proper operation.
- 3) Inspect and rotate all axles and drive shafts.
- 4) Lower vehicle to ground.
- 5) Torque lug nuts to 140 ft. lbs.

FINAL CHECKS & ADJUSTMENTS

- 1) Turn the front wheels completely left then right. Verify adequate tire, wheel, and brake hose clearance. Inspect steering and suspension for tightness and proper operation.
- 2) Ensure that the vehicle brake system operates correctly.
- 3) Readjust headlamps and have vehicle aligned at a certified alignment facility.

Recommended Alignment Specifications

Caster (degrees): $4.5^{\circ} \pm 1.0^{\circ}$

Camber (degrees): 0° - neg .3°

Sum Toe In (degrees): $.1^{\circ} \pm .2^{\circ}$ (.05"- .150")

- 4) Park the vehicle on a level surface. Set the parking. Measure and record the distance from the center of each wheel to the top of the fender opening. See Illustration 6.

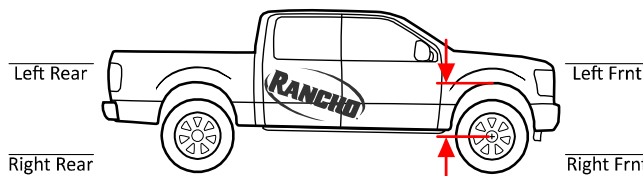


Illustration 6

Standard Bolt Torque and Identification

INCH SYSTEM			
Bolt Size	Grade 5	Grade 8	
5/16	15 LB-FT	20 LB-FT	
3/8	30 LB-FT	35 LB-FT	
7/16	45 LB-FT	60 LB-FT	
1/2	65 LB-FT	90 LB-FT	
9/16	95 LB-FT	130 LB-FT	
5/8	135 LB-FT	175 LB-FT	
3/4	185 LB-FT	280 LB-FT	
METRIC SYSTEM			
Bolt Size	Class 8.8	Class 10.9	Class 12.9
M6	5 LB-FT	9 LB-FT	12 LB-FT
M8	18 LB-FT	23 LB-FT	27 LB-FT
M10	32 LB-FT	45 LB-FT	50 LB-FT
M12	55 LB-FT	75 LB-FT	90 LB-FT
M14	85 LB-FT	120 LB-FT	145 LB-FT
M16	130 LB-FT	165 LB-FT	210 LB-FT
M18	170 LB-FT	240 LB-FT	290 LB-FT

1/2-13x1.75 HHCS

D TPI L X

M12-1.25x50 HHCS

D P L X

D = Nominal Diameter
TPI = Threads Per Inch
P = Pitch (Thread Width, mm)
L = Length
X = Description (Hex Head Cap Screw)