

## 07 & UP 4WD AVALANCHE 3.5" LIFT KIT

## Thank you for choosing Rough Country for your suspension needs.

Rough Country recommends a certified technician install this system. In addition to these instructions, professional knowledge of disassemble/reassembly procedures as well as post installation checks must be known. Attempts to install this system without this knowledge and expertise may jeopardize the integrity and/or operating safety of the vehicle.

Please read instructions before beginning installation. Check the kit hardware against the parts list on the rear cover of these instructions. Be sure you have all needed parts and know where they go. Also please review tools needed list and make sure you have needed tools.

## **PRODUCT USE INFORMATION**

**AWARNING** As a general rule, the taller a vehicle is, the easier it will roll. Seat belts and shoulder harnesses should be worn at all times. Avoid situations where a side rollover may occur.

Generally, braking performance and capability are decreased when larger/heavier tires and wheels are used. Take this into consideration while driving. Do not add, alter, or fabricate any factory or after-market parts to increase vehicle height over the intended height of the Rough Country product purchased. Mixing component brands is not recommended.

Rough Country makes no claims regarding lifting devices and excludes any and all implied claims. We will not be responsible for any product that is altered. If questions exist we will be happy to answer any questions concerning the design, function, and correct use of our products.

# **A NOTICE** This kit does NOT fit vehicles equipped with electric power steering. This kit does NOT fit vehicles equipped with Auto Ride or Rear Auto Leveling suspension.

This suspension system was developed using a 285/75/17 tire with factory wheels. **Note** if wider tires are used, offset wheels will be required and trimming may be required.

## **A NOTICE** NOTICE TO DEALER AND VEHICLE OWNER

Any vehicle equipped with any Rough Country product should have a "Warning to Driver" decal installed on the inside of the windshield or on the vehicle's dash. The decal should act as a constant reminder for whoever is operating the vehicle of its unique handling characteristics.

INSTALLLING DEALER - it is your responsibility to install the warning decal and forward these installation instructions on to the vehicle owner for review. These instructions should be kept in the vehicle for its service life.

Tools Needed: 18MM Wrench 17MM Wrench 15MM Wrench 21MM Wrench 10MM Wrench 10MM Allen Wrench Floor Jack Jack stands Thread Locker	Torque Specs:		
	Size 3/8" 7/16" 1/2" 9/16" 5/8"	Grade 5 30 ft/lbs 45 ft/lbs 65 ft/lbs 95 ft/lbs 135 ft/lbs	Grade 8 35 ft/lbs 60 ft/lbs 90 ft/lbs 130 ft/lbs 175 ft/lbs
	8MM 10MM 12MM 14MM 16MM 18MM	Class 8.8 18ft/lbs 32ft/lbs 50ft/lbs 85ft/lbs 130ft/lbs 170ft/lbs	Class 10.9 23 ft/lbs 45ft/lbs 75ft/lbs 120ft/lbs 165ft/lbs 240ft/lbs



## FRONT INSTALLATION

- 1. Park the vehicle on a level surface and chock the rear wheels.
- 2. Jack up the front of the vehicle. Place jack stands under the frame rails and lower onto jack stands letting the front suspension hang.
- 3. Remove the tires and wheels. Remove the upper and lower factory skid plates using a 15mm wrench. Retain factory hardware and front skid plate for reuse.
- 4. Using a 21mm wrench, remove the tie-rod nut as shown in **Photo 1**. Strike the side of the mount to dislodge the tie rod end. Remove from the knuckle.
- 5. Remove the sensor wire from the plastic clip. Remove the bracket from the control arm using a 10mm wrench. See Photo 2.





- 6. Remove and unplug the ABS sensor wire from the frame as shown in **Photo 3**.
- 7. Remove the upper ball joint nut using a 18mm wrench. **See Photo 4**. Strike the knuckle as shown to dislodge the ball joint. Separate the upper control arm from the knuckle.





- 8. Using a 18mm wrench, remove the upper strut nuts as shown in **Photo 5**. Retain factory hardware for reuse.
- 9. Using a 15mm wrench, remove the 2 bolts securing the lower strut mount to the lower control arm and remove the strut from the vehicle. Remove and discard the factory lower retainer clips. New hardware will be used. **See Photo 6.**





Mark location of alignment cams on upper control arms to allow installation of new arm to same position. Using a 21mm wrench and 21mm socket, remove the upper control arms from the vehicle. See Photo 7. Retain the hardware 11. Using a 11mm wrench, remove the drive shaft bolts. See Photo 8. Retain hardware for reuse.



- 12. Using a 18mm socket and wrench remove the four bolts holding in the factory cross member. Retain factory hardware.
- 13. Place a floor jack under the differential assembly to provide support for following steps.
- 14. Using a 15mm wrench, remove the 6 axle shaft bolts and secure axle shafts out of the way. See Photo 9 Repeat on opposite side. Retain the factory hardware for reuse. Unplug the electrical connector on differential as shown in Photo 10 and unplug the diff vent hose. Photo 11
- 15. Using a 18mm socket remove the 4 differential bolts (2 each side) securing the differential to the frame. **See Photo 9.**
- 16. Slowly lower differential assembly to the ground.
- 17. Using a hand grinder. Grind away marked portion of the cooling fin as shown in **Photo 12** and **Photo 13**. Grind until flush with casing.













- 18. Using 15mm and 18mm wrench remove the bolts holding the factory differential brackets on the driver and passenger sides.
- 19. Place the 4 supplied aluminum differential spacers between the frame mounts and the factory differential brackets. See Photos 13 & 14.



20. Using the supplied 7/16" x 4.5" bolts, nuts and washers from 275BAG6, attach the diff. mounts and drop brackets to the frame and tighten using a 5/8" wrench See Photos 15 & 16.





- 21. Reinstall the differential to the diff brackets with the factory bolts on the drive side and factory nuts on the passenger side. Tighten using a 18mm socket.
- 22. On the driver side of the factory cross member measure from the end of the tube and make marks at 4.5" and 8" on the front side as shown in **Photo 17**. Measure 1/4" for the bottom, and 2" from the back side and mark.
- 23. Using a die grinder and cut across the marks as shown in **Photo 18.** Hold the cross member into place and check clearance between the cross member and front diff.







- 24. Reconnect the connector plug on the differential & pull the vent hose down slightly and reinstall on the differential. The differential vent hose may be tapped to the electrical loom. If so separate and slightly pull for slack.
- 25. Reinstall the axle shafts to the differential with the factory hardware using a 15mm socket as removed in Step 15.
- 26. Install the new control arm as shown in **Photo 18** in the factory mount making sure the 1/4" stud for mounting the brake line bracket is toward the rear with the factory hardware. Tighten using mark made as a reference in Step 10 and using a 21mm wrench & socket. **Passenger side shown.**
- 27. Locate the supplied strut spacer and install the supplied 10mm stud extensions. Using a 17mm socket snug the stud in the new spacer as shown in **Photo 19**.





Install the strut spacer on the factory strut with factory hardware and using a 18mm wrench. See Photo 20.
Install the strut assembly in the factory mount with the supplied 10mm nuts/washers &l ock-washers on the upper mount. Tighten using a 17mm wrench. Note: Flat washer must be installed on studs. See Photo 21.





- 30. Install the strut in the lower control arm using the supplied 3/8" 2 1/4" bolts /washers & nuts using a 9/16" wrench. **See Photo 22.** It may be necessary to jack up the lower control arm with a floor jack to align lower strut holes.
- 31. Reinstall the sway bar on the lower control arm using a15mm wrench.
- 32. Reinstall the knuckle to the upper control arm with the supplied castle nuts/cotter pins. Tighten using 3/4" wrench to 50 ft/lbs. DO NOT OVER-TORQUE THE CASTLE NUT. Reinstall the tie rod end into the knuckle with factory hardware and using a 21mm wench.
- 33. Reinstall the driveshaft with the factory hardware using a 11mm wrench.
- 34. Install the brake line bracket on the new control arm with the supplied 1/4" lock nut / washer and using a 7/16" wrench. See Photo 23. Driver side shown.





- 35. Reconnect the ABS wire that was disconnected in Step 6.
- 36. Locate and install the new lower skid plate below the differential in the factory location (if equipped) with the factor hardware and using a 15mm wrench. See Photo 24. If not equipped with a factory skid plate, use the supplied 3/8" self tapping bolts to install the skid plate in the holes in cross-member.
- 37. Reinstall the wheels/tires.
- 38. Jack up the vehicle and remove the jack stands.
- 39. Lower the vehicle to the ground.





## **REAR INSTALLATION**

- 1. Chock the front wheels.
- 2. Place a floor jack under the differential and jack up the rear of the vehicle.
- 3. Place jack stands under the frame rails and lower onto the jack stands.
- 4. Remove the tires/wheels.
- 5. Locate and remove the ABS wire from the frame. See Photo 1.
- 6. Remove the upper and lower shock from the axle using a 21mm socket/ wrench. See Photo 2.





- 7. Remove the upper sway bar link using a 18mm socket/ wrench. See Photo 3.
- 8. Remove the e-brake mount mount using a13mm socket / wrench. See Photo 4.





- 9. Remove the brake line with a 13mm wrench. See Photo 5.
- 10. Remove the coil.
- 11. Install the spring spacer washer on top of the mount as shown in Photo 6.







- 12. Secure the spacer in the mount and washer using the supplied 3/8" x 3 3/4" bolts and lock nuts. See Photo 7.
- 13. Reinstall the coil spring.
- 14. Install the brake line spacer as shown in **Photo 8** with the supplied 8mm x 65mm bolt and locking nut. Tighten with a 13mm socket/ wrench.



- 15. Install the supplied sleeves in the sway bar link and install on the frame using the stock hardware.
- Place the supplied washer on the head of the supplied 12mm x 65mm bolt and install on the sway bar with the nut on the sway bar as shown in **Photo 9** using. Tighten using a 18mm & 19mm wrench.
- 17. Install the shock relocation bracket as shown in the factory shock location with the supplied 5/8" x 1 1/2" bolt, washers and lock nut on the bottom of the shock mount. **See Photo** 10.
- 18. Install the supplied 14mm x 75mm bolt, washers and lock nuts in the stock shock mount. **See Photo 11.**
- 19. Install the tires/wheels.
- 20. Jack up the vehicle to remove the jack stands. Remove the jack stands and lower the vehicle to the ground.









## POST INSTALLATION INSTRUCITONS

- 1. Lightly grease the ball joints. Do not over grease the ball joint as this could cause ball joint boot failure.
- 2. Have a qualified alignment center align the vehicle immediately.
- 3. Have headlights adjusted to proper settings.
- 4. Wheels must be retightened at 50 miles.
- 5. All kit components must be retightened at 500 miles and then every three thousand miles after installation. Periodically check hardware for tightness.
- 6. Install "Warning to Driver" decal on sun visor.
- 7. On some vehicles the front lower skirting will need to be trimmed if using certain wheel /tire combinations and with heavy offset wheels. Trim only as needed.





## Thank you for choosing Rough Country for your suspension needs.

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