

#### Thank you for choosing Rough Country for all 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 product layout on the last page on 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 question exist we will be happy to answer any questions concerning the design, function, and correct use of our products.

This suspension system was developed using a Maximum tire size of 33X12.50 on 8" wheel with 3.75" back spacing. **Note** if wider tires are used, offset wheels will be required and/or trimming may be required.

A NOTICE Please note that a variation in the rear block and u-bolts exists for this application. 1986-96 short bed standard cab models require part #s 1733BOX1 & 1734BOX1. All other pickup applications require 1733BOX1 & 1733BOX2. Please verify that the correct box kits are present before beginning the installation process. If you have any question please call technical assistance at 731-285-9000.

# A NOTICE NOTICE TO DEALER AND VEHICLE OWNER

Flat Head Screwdriver

Thread Locker

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.

INSTALLING DEALER - it is your responsibility to install the warning decal and forward these installation instructions on

Tools Needed:		Torque Specs:			Class 8.8		Class 10.9	
22mm Wrench 21mm Wrecnch 12mm Wrench	1/2" Wrench	Size 5/16" 3/8" 7/16" 1/2" 9/16" 5/8" 3/4"	Grade 5 15 ft/lbs 30 ft/lbs 45 ft/lbs 65 ft/lbs 95 ft/lbs 135 ft/lbs 185 ft/lbs	Grade 8 20 ft/lbs 35 ft/lbs 60 ft/lbs 90 ft/lbs 130 ft/lbs 175 ft/lbs 280 ft/lbs	6MM 8MM 10MM 12MM 14MM 16MM 18MM	5 ft/lbs 18ft/lbs 32ft/lbs 55ft/lbs 85ft/lbs 130ft/lbs 170ft/lbs	9 ft/lbs 23 ft/lbs 45ft/lbs 75ft/lbs 120ft/lbs 165ft/lbs	



# FRONT INSTALLATION INSTRUCTIONS

- 1. Chock the rear tires and lift the front of the truck with a floor jack. Place jack stands under the frame rails . Lower the vehicle on the jack stands. Never work under an unsupported vehicle.
- 2. Remove the tires and wheels.
- 3. Remove the stock shock absorbers using a 21 & 22 wrench.
- 4. Remove the brake caliper bolts from the knuckle using a 17mm wrench and secure out of way. Do not let the brake caliper hang by the brake line. Doing so could cause damage to the brake line.
- 5. Remove sway bar from the frame rail using a 12mm wrench and from the factory lower control arm using a 14mm wrench. See PHOTO 1 & 2. Remove the front skid plate. (if equipped).





- 6. Remove the cotter pin on the tie rod and remove nut using a 19mm wrench. Strike the end of the knuckle to dislodge the tie rod. Retain the hardware for reuse
- Remove the cotter pins from the upper and lower ball joint castle nuts and loosen the lower ball joint nuts using a 22mm wrench, but do not remove. Using a hammer, strike the knuckle as shown in PHOTO 3 & 4 to dislodge the ball joint on the upper and lower ball joints.





- 8. Using a 17mm wrench remove the 6 nuts that secure the front half shaft to the differential. **See PHOTO 5**.
- 9. Remove the tie rod mount from the knuckle by removing the two bolts as shown in **PHOTO 6**. Using a 19mm wrench.
- 10. Remove the axle/knuckle assembly from the vehicle.





11. Loosen and remove lower control arms using a 22mm & 24mm wrench as shown in **PHOTO 7 & 8**. Retain the hardware for reuse. Remove the lower control arms from the vehicle.





- 12. On the front cross-member, remove the 4 bolts securing the cross-member to the frame using a 17mm wrench as shown in **PHOTO 9**. Retain hardware for reuse.
- 13. Remove the differential bolt as shown in **PHOTO 10** using a 15mm wrench. Retain hardware for reuse. Remove the factory cross-member and retain for reuse.





14. Remove driveshaft from the differential as shown in **PHOTO 11** using a 13mm wrench. Retain hardware for reuse. Secure driveshaft out of harms way.





- 15. Remove the two factory bump-stops from the frame using a 14mm wrench as shown in PHOTO 12 & 13.
- 16. Support the differential with a floor jack and remove the hardware on the drivers side as shown in **PHOTO 14** using a 17mm wrench.





17. With the differential still supported, remove the passenger side hardware securing the differential to the frame as shown in **PHOTO 15 & 16** using a 17mm wrench. Retain hardware for reuse. Remove the differential from the vehi cle.





- 18. Install the new Rough Country drop brackets on the differential as shown in **PHOTO 17** using the stock hardware and a 17mm wrench. Do not fully tighten at this time.
- 19. Reinstall the differential in the vehicle and install the supplied 2- 7/16" x 1 1/4" bolts on the driver side. Install the 1-7/16" x 1 1/2" & 1-7/16 x 1 1/4" bolt in the passenger side. See PHOTO 18. The longer 1 1/2" bolt will install on the Passenger side upper bracket forward hole.



- 20. Install the 1– 7/16" x 1 1/4" bolt as shown in **PHOTO 19** on the passenger side bracket. Do not tighten at this time.
- Install the new rear cross-member brackets as shown in PHOTO
  20 in the stock mounts with the supplied 5/8" x 4" hardware / square washers using a 24mm wrench.
- 22. Install the center tube in the drop down brackets using the supplied 14MM X 85MM bolts/washers & nuts. Tighten using a 19mm socket /wrench at this time. **See Photo 21.**









- 23. Install the new front cross-member brackets in the factory location with supplied 5/8" x 4" hardware / square washers. Do not tighten at this time.
- 24. Install the factory cross-member section removed in step 13 with the factory hardware using a 17mm wrench. Also install the factory hardware on the differential mount using a 15mm wrench. See PHOTO 22.A straight edge must be used on the bottom of the two new brackets and the factory center bracket to assure the brackets are straight. Tighten the 4 factory center cross-member bolts. The cross-member must be straight to allow the vehicle to be realigned.
- 25. Install the factory lower control arms in the drop brackets with factory hardware and using a 22mm & 24mm wrench. Do not tighten at this time.
- 26. Install the factory bump-stops on the new bump-stop extension brackets as shown in **PHOTO 23** with the factory hardware and install on the stock location using the supplied 3/8" x 1" bolts / hardware. Tighten using 14mm wrench.





- 27. Install the knuckle adapter on the stock knuckle as shown in **PHOTO 25** using the stock hardware. Do not tighten the two knuckle bolts at this time. The brake line bracket will be installed in a later step after the knuckle is installed on the truck. Insert the supplied 5/8" x 2.5" bolt through the stock upper ball joint location and tighten using a 24mm wrench.
- 28. Install the lower ball joint on knuckle assembly into the lower control arm as shown in PHOTO 26 with the factory hardware and using a 22mm wrench. Make sure the cv shaft is on the studs on the differential. Tighten shaft to differential with factory nuts using a 17 wrench. Install the brake line bracket on the knuckle with stock hardware and using a 19mm wrench. Tighten knuckle hardware ,ball joint nut and install the cotter pin.







- 29. Install the factory sway bar on the new drop brackets as shown in **PHOTO 26** with the supplied 5/16" x1" bolts, washers, & nuts. Install the factory sway bar links onto the lower control arm in the stock location with factory hardware. Tighten hardware.
- 30. Install the tie rod into the knuckle with factory hardware and tighten using a 19mm wrench.
- 31. Install the knuckle on the upper ball joint with factory hardware and tighten using a 22mm wrench. Install cotter pin.
- 32. Tighten all cross-member hardware and differential hardware at this time. Note: Tighten the alignment bolts making sure the cams are center. An alignment will be needed as soon as installation is completed. NOTE: For alignment, both sides inner and outer tie rod ends may need to be trimmed approximately 1/2" to allow tie rod end to be threaded into the alignment sleeve for proper adjust



rod end to be threaded into the alignment sleeve for proper adjustment. Please note this may not have to be performed on all vehicles.

33. Remove the brake line clip securing the brake line to the frame. Using a hacksaw or cutoff wheel, carefully cut a groove in the stock bracket to allow the brake line to be removed. Install the new brake line extension brackets as shown in PHOTO 27 with the supplied 3/8" x 1" bolts and hardware. The large washer will install on top of the stock mount. Carefully reroute the metal line taking caution not to damage the line.





- 34. Install the new Rough Country shock absorbers as shown in **PHOTO 28** in the stock location with stock hardware and tighten using a 22mm ,21mm wrench & 9/16 wrench for the upper nut.
- 35. Install the tires/wheels.
- 36. Jack up the front of the vehicle and remove the jack stands. Lower the vehicle to the floor.
- 37. Double check all hardware to ensure all fasteners are tight.

# **REAR BLOCK INSTALLATION INSTRUCTIONS**

- 1. Chock the front wheels.
- 2. If the vehicle being lifted, is a short bed standard cab pickup, please use instructions on next page.
- Jack up the rear of the vehicle and place jack stands under the frame rails just forward of the front spring hangers. Never work under an unsupported vehicle.
- 4. Remove the tires/wheels and stock shock absorbers. Retain stock hardware.
- Using a floor jack, place the jack under the differential and apply slight pressure to the axle.
- 6. Remove the stock u-bolts and lower the axle with the floor jack.
- 7. Install the Rough Country block on the axle making sure the center pin is centered in the spring seat.
- 8. Jack up the axle and center the block on the leaf spring pin. Install u-bolts and tighten.
- 9. Install the bushings from bags # 140169 in the new Rough Country shock absorber part # 650462 and install on the vehicle with the factory hardware.
- 10. Install the tires/wheels and jack up to remove the jack stands. Lower the vehicle to the ground.
- 11. Remove the brake valve bracket located on the axle. (If equipped) Retain stock hardware for reuse.



12. Install the supplied brake valve bracket on the axle with the factory hardware as shown in PHOTO 30.Install the stock brake valve bracket on the new extension bracket with the supplied 5/16" x 1" bolts, washers and nuts. Tighten hardware.

## REAR BLOCK INSTALLATION INSTRUCTIONS FOR SHORT BED STANDARD CAB VEHICLE

- 1. Jack up the rear of the vehicle and place jack stands under the rear frame rails of the vehicle.
- 2. Lower the vehicle onto the jack stands and lower the floor jack but do not fully remove the jack.
- 3. Remove the tires/wheels.
- 4. Remove the shock absorbers. Retain the factory hardware.
- 5. Remove the factory u-bolts.
- 6. Using a flat head screwdriver, bend the tabs out as shown in PHOTO 1 to separate the factory bump-stop bracket.



- 7. Remove the clip and remove the pin as shown in **PHOTO 2** that secures the emergency brake cable to the brake drum assembly. Retain for reuse.
- 8. Lower the axle with the floor jack and separate the bump-stop bracket with a flat head screwdriver. See PHOTO 3.
- 9. Reinstall the lower half of the bump-stop bracket onto the axle as shown in PHOTO 4.





- 10. Jack up the axle and install the lifted blocks with the flat side of the block on the leaf spring, the taper on the axle with the taper facing forward. **See PHOTO 5**. Install the new u-bolts and tighten.
- 11. Reroute the emergency brake cable underneath the leaf spring with factory hardware as shown in **PHOTO 6** and install with factory hardware.
- 12. Install the tires/wheels.
- 13. Jack up the vehicle and remove jack stands. Lower the vehicle to the ground.
- 14. Install shock absorbers with factory hardware.





# POST INSTALLATION INSTRUCTIONS

- 1. Check all fasteners for proper torgue. Check to ensure there is adequate clearance between all rotating, mobile, fixed and heated members. Check steering gear for interference and proper working order. Test brake system.
- 2. Perform steering sweep. Check to ensure brake hoses have sufficient slack and will not contact rotating, mobile, or fixed members, adjust lines/brackets to eliminate interference and maintain proper working order. Failure to perform inspections may result in component failure.
- Bump stops and extensions must be in place on all vehicles! Note: allowing suspension to over extend by neglecting to install or maintain stops and extensions may cause serious damage to OE and related components.
- 4. Re torgue all fasteners after 500 miles. Visually inspect components and re torgue fasteners during routine vehicle service.
- 5. Readjust headlights to proper settings if applicable.
- 6. Check turning clearances. Making sure all parts allow for full turning radius.
- 7. For alignment, both sides inner and outer tie rod ends may need to be trimmed approximately 1/2" to allow tie rod end to be threaded into the alignment sleeve for proper adjustment. Please note this may not have to be performed on all vehicles.

#### FINAL RIDE HEIGHT ADJUSTMENT INSTRUCTIONS

Jack up the front of the vehicle and adjust the torsion bar adjuster bolt and set ride height by turning the bolt clockwise. Be sure to grease the adjuster bolt before adjusting. Lower the vehicle to the ground and manually bounce the vehicle. Check ride height. If more list is desired to Level the vehicle front to back repeat the process above until desired height is achieved.



**Diff. Drop Fasteners** 4-7/16" 1.25" Bolts 1-7/16" 1.5" Bolt 5-7/16" Lock Nuts 10-7/16" Washers

Cross Mbr Fasteners 4- 5/8" x 4" Bolts 4-5/8" Nuts 8-Square washers 4-14MM bolts 4-14mm nuts 8-Flar Washers

Knuckle Fasteners 2—5/8" 2 1/2"" Bolt 2-5/8" Nuts 2-Cotter pins

Sway Bar Fasteners Brake Line Fast. 4 - 5/16" 1" Bolts 4\_ -5/16" Nuts 8-5/16" Washer

2 - 3/8" 1" Bolts 2-3/8" Nut Brake Valve Brkt 2-5/16" 1" Bolt 2--5/16" Nut 4-5/16 Washer

**Bump Stop Fast** 4-3/8" 1" Bolt -3/8" Nuts 8-3/8" Washer

By purchasing any item sold by Rough Country, LLC, the buyer expressly warrants that he/she is in compliance with all applicable, State, and Local laws and regulations regarding the purchase, ownership, and use of the item. It shall be the buyers responsibility to comply with all Federal, State and Local laws governing the sales of any

items listed, illustrated or sold. The buyer expressly agrees to indemnify and hold harmless Rough Country, LLC for all claims resulting directly or indirectly from the purchase, ownership, or use of the items.

