INSTALLATION INSTRUCTIONS 88031

REV B

FOR SUSPENSION SYSTEMS RS6485, RS6488 & RS6489: 97 FORD F-SERIES 4X4

READ ALL INSTRUCTIONS THOROUGHLY FROM START TO FINISH BEFORE BEGINNING INSTALLATION

PARTS LIST

P/N	DESCRIPTION	QTY
15100	Riser Block	2
170076	Left Brake Line	1
170077	Right Brake Line	1
176001	Left Knuckle	1
176002	Right Knuckle	1
176013	Front Diff. Drop Bracket, L. Side	1
176014	Front Diff. Drop Bracket, R. Side	1
176016	Right Diff. Drop Bracket	1
176020	Subframe	1
176021	Left Fwd Drop Bracket	1
176022	Right Fwd Drop Bracket	1
176023	Left Aft Drop Bracket	1
176024	Right Aft Drop Bracket	1
176031	Left Bump Stop Bracket	1
176032	Right Bump Stop Bracket	1
176041	Left Torsion Bar Bracket	1
176042	Right Torsion Bar Bracket	1
176043	Transmission Crossmember[1]	1
740012	U-Bolt[2]	4
7402	U-Bolt[3]	4
8103	U-Bolt Nut and Washer Kit	1
	5/8-18 Nyloc Nut	8
	5/8 SAE Washer	8
860077	Front Subframe Mount Hardware Kit	1
	M16-2.00x160 HHCS	4
	M16-2.00 Stover Nut	4
	SAE Washer	8
	1/2-13x1.50 HHCS	3
	1/2-13 Stover Nut	3
	1/2 SAE Washer	5
	1/2 USS Washer	1
860078	Rear Pocket Hardware Kit	1
	M16-2.00x140 HHCS	4
	M16-2.00 Stover Nut	4
	SAE Washer	8
860079	Spacer Kit	1
	Front Pocket Spacer, Large	2
	Front Pocket Spacer, Small	2
	Front Diff. Drop Spacer	1
860080	Right Side Diff. Mount Hardware Kit	1
	M12-1.75x100 HHCS	1
	1/2-13x1.25 HHCS	1
	M12-1.75 Stover Nut	1
	1/2-13 Stover Nut	1
	1/2 SAE Washer	1
	SAE Washer	2
	1/2 Flat Washer	1
860081	Front Diff. Mount Hardware Kit	1
	M12-1.75x110 HHCS	2
	M12-1.75 Stover Nut	2
	SAE Washer	4
860082	Rear Diff. Mount Hardware Kit	1
	M12-1.75x100 HHCS	1
	M12-1.75 Stover Nut	1
	USS Washer	2
860083	Front Bump Stop Hardware Kit	1
	3/8-16x1.5 Self Tapping Screw	2
	3/8 SAE Washer	2
	3/8 Lock Washer	2
860085	Torsion Bar Mount Hardware Kit	1
	1/2-13x1.25 HHCS	2
	1/2-13 Stover Nut	2
	1/2 USS Washer	2
	1/2 SAE Washer	2
	7/16-14x1.25 HHCS	4
	7/16-14 Stover Nut	4
	7/16 USS Washer	4
	7/16 SAE Washer	4
	3/8-16x1.25 HHCS	6
	3/8-16 Stover Nut	6
	3/8 SAE Washer	12
860086	Brake Line Gasket Kit	1
	Gasket	4
860087	Pin Kit	1
	.656" x 1.00" Riser Block Pin	2
	Thread Lock	4
860089	End Link Hardware Kit	1
	End Link Spacer	2
	3/8-16x11.00 HHCS	2
	3/8-16 Stover Nut	2
	3/8 USS Washer	8
88031	Instructions	1
94140	Consumer Information Pack	1

[1] Included in Kits RS6485 & RS6489 only
[2] Included in Kits RS6488 & RS6489 only
[3] Included in Kit RS6485 only

RANCHO SUSPENSION®
PO BOX 5429 LONG BEACH, CA USA 90805
§ 1-800-5*SHOCKS* §

IMPORTANT NOTES!

BEFORE BEGINNING INSTALLATION READ AND/OR PERFORM THE FOLLOWING:

A. The alignment of the vehicle must be within factory specifications before installing this system. Have the alignment checked at a state approved facility.

B. Check for any damage or severe corrosion to the frame of the vehicle. If there is any structural damage, do not install this system.

C. Do not install a body lift kit with Rancho's suspension system or interchange parts from this system with components from another manufacturer. Use the appropriate Rancho shock absorbers. Contact your local Rancho representative for the correct application.

D. Compare the contents of this system with the parts list in these instructions. If any parts are missing, including fasteners, contact the Rancho Technical Department at 1-800-5*SHOCKS*. Each hardware kit in this system contains fasteners of high strength and specific size. Do not substitute a fastener of lesser strength or mix one hardware kit with another. Rancho is not responsible for damage, failure, or injury due to improper part's substitution.

E. Apply THREAD LOCKING COMPOUND to all bolts during installation. One drop on the exposed threads of each bolt before installing the nut is sufficient to provide an adequate bond. CAUTION: Thread locking compound may irritate sensitive skin. Read warning label on container before use.

F. Install all nuts and bolts with a flat washer. When both SAE (small OD) and USS (large OD) washers are used in a fastener assembly, place the USS washer against the slotted hole and the SAE washer against the round hole.

G. Unless otherwise specified, tighten all bolts to the standard torque specifications listed at the end of the note's section. Do not use an impact wrench to tighten any of these bolts. They tend to over tighten smaller bolts and under tighten larger bolts. USE A TORQUE WRENCH!!!

H. Rancho parts come with a protective coating. Do not chrome, cadmium, or zinc plate any of the components in this system. If you wish to change the appearance of components, enamel paint can be applied over the original coating.

I. Do not weld anything to these components, and do not weld any of these components to the vehicle. If any component breaks or bends, contact your local Rancho dealer or Rancho for replacement parts.

J. Some of the service procedures require the use of special tools designed for specific procedures. The following tools and supplies are recommended for proper installation of this system.

- ❑ Ford Service Manual
- ❑ Pitman Arm Puller T64P-3590-F
- ❑ Torsion Bar Unloading Tool T95T-5310-A
- ❑ Torsion Bar Tool Adapters T96T-5310-A
- ❑ Right Angle Drill
- ❑ Drills: 1/4", 19/64" and 3/8"
- ❑ Torque Wrench (250 FT-LB capacity)
- ❑ 1/2" Drive Ratchet and Sockets
- ❑ 1/2" Drive Breaker Bar
- ❑ Combination Wrenches
- ❑ Heavy Duty Jack Stands
- ❑ Hydraulic Floor Jack
- ❑ Wheel Chocks (wooden blocks)
- ❑ Center Punch
- ❑ Round File
- ❑ Large "C" Clamps and or Bench Vise
- ❑ Hacksaw
- ❑ Hammer
- ❑ Wire Brush (to clean bracket mounting surfaces)
- ❑ Tape Measure
- ❑ Brake fluid
- ❑ **Safety Glasses**--Wear safety glasses at all times

K. It is extremely important to replace torsion bars, CV flanges, and front drive shaft/pinion relationships as original. Be sure to mark left/right, front/rear, and indexing of mating parts before disassembly. A paint marker or light colored nail polish is handy for this.

L. Suspension components that use rubber or urethane bushings should be tightened with the vehicle at normal ride height. This will prevent premature failure of the bushing and maintain ride comfort.

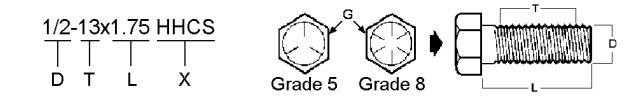
M. The required installation time for this system is approximately 10 hours. Check off the box ( ) at the beginning of each step when you finish it. Then when you stop during the installation, it will be easier to find where you need to continue from.

N. Important information for the end user is contained in the consumer information pack. If you are installing this system for someone else, display the information pack by hanging it from the rear view mirror.

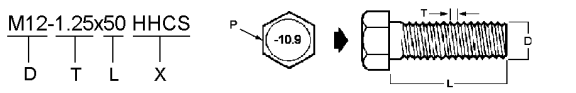
O. Thank you for purchasing the best suspension system available. For the best installed system, follow these instructions. If you do not have the tools or are unsure of your abilities, have this system installed by a certified technician. RANCHO SUSPENSION IS NOT RESPONSIBLE FOR DAMAGE OR FAILURE RESULTING FROM AN IMPROPER OR MODIFIED INSTALLATION.

STANDARD BOLT TORQUE SPECIFICATIONS						
INCH SYSTEM			METRIC SYSTEM			
Bolt Size	Grade 5	Grade 8	Bolt Size	Class 9.8	Class 10.9	Class 12.9
5/16	15 FT-LB	20 FT-LB	M6	5 FT-LB	9 FT-LB	12 FT-LB
3/8	30 FT-LB	35 FT-LB	M8	18 FT-LB	23 FT-LB	27 FT-LB
7/16	45 FT-LB	60 FT-LB	M10	32 FT-LB	45 FT-LB	50 FT-LB
1/2	65 FT-LB	90 FT-LB	M12	55 FT-LB	75 FT-LB	90 FT-LB
9/16	95 FT-LB	130 FT-LB	M14	85 FT-LB	120 FT-LB	145 FT-LB
5/8	135 FT-LB	175 FT-LB	M16	130 FT-LB	165FT-LB	210 FT-LB
3/4	185 FT-LB	280 FT-LB	M18	170 FT-LB	240FT-LB	290 FT-LB

BOLT IDENTIFICATION



G = Grade Marking (bolt strength)
D = Nominal Diameter (inches)
T = Thread Pitch (threads per inch)
L = Length (inches)
X = Description (hex head cap screw)



P = Property Class (bolt strength)
D = Nominal Diameter (millimeters)
T = Thread Pitch (thread width, mm)
L = Length (millimeters)
X = Description (hex head cap screw)

FRONT SUSPENSION

Vehicle Preparation & Torsion Bar Removal

WARNING: Make sure jack and jack stands are properly located to prevent vehicle from falling!

1. ☒ Park the vehicle on a level surface. Set the parking brake and chock rear wheels. Raise the front of the vehicle and support the frame with jack stands.

2. ☒ Remove the front wheels and set them aside.

3. ☒ Mark torsion bars as either driver side front or passenger side front. Make alignment marks on the torsion bars and the torsion bar crossmember. Measure and record the length of each adjuster bolt from nut to bolt head. See illustration 1.

4. ☒ Install torsion bar adjusting tool. Remove the torsion bar adjuster bolt and adjuster nut. See illustration 2. Relieve the torsion bar tension. Repeat for other side.

5. ☒ Slide torsion bars forward until free of crossmember. Remove the six crossmember support bolts and remove crossmember. Remove the torsion bars.

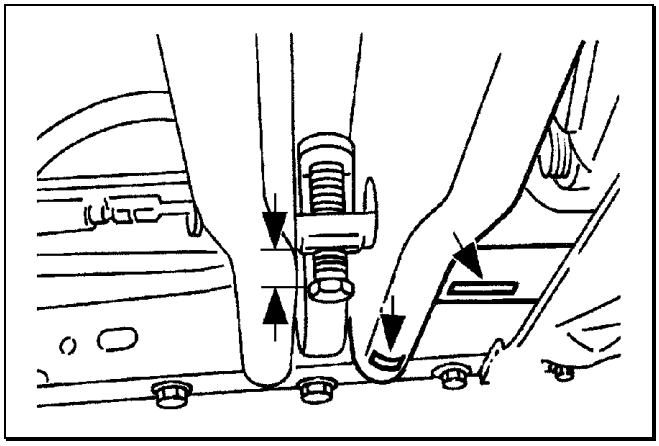


Illustration 1

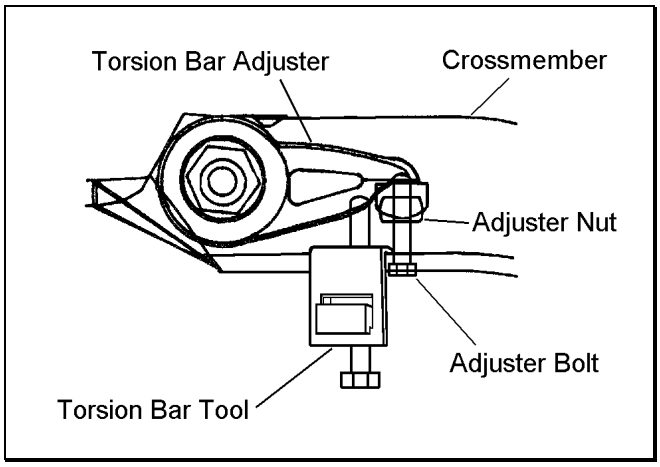


Illustration 2

Front Wheel Hub Removal

1. ☒ Remove the front brake caliper anchor plate bolts. Remove the caliper and its anchor plate from the steering knuckle. Secure the caliper up and out of the way.

2. ☒ Remove the front disc brake rotor and disk brake shield.

3. ☒ Remove the front brake anti-lock sensor bolt and sensor. Remove the sensor cable from the steering knuckle and brake hose.

4. ☒ Remove the front axle hub cotter pin, retainer and hub nut.

NOTE: The CV joint is a slip fit into the wheel hub and bearing. A puller will not normally be required.

CAUTION: Do not over extend CV joint and boots when removing the hub and bearing assembly.

7. ☒ Remove the three wheel hub bolts. Push the CV joint inboard and remove the wheel hub.

8. ☒ Repeat steps 1 through 7 for other side.

Steering Knuckle & Lower Arm Removal

1. ☒ Remove front shock absorber.

2. ☒ Remove the outer tie rod end cotter pin and castellated nut. Use pitman arm puller T64P-3590-F to separate the tie rod end from the front wheel knuckle.

3. ☒ Remove the sway bar link assembly. Save insulators.

4. ☒ Remove the upper ball joint cotter pin and castellated nut.

5. ☒ Support the lower control arm with a hydraulic jack. Use Pitman Arm Puller T64P-3590-F to separate the front wheel knuckle from the upper ball joint. Carefully slide the driveshaft and joint assembly out of the knuckle and support it from the upper control arm.

6. ☒ Remove the lower ball joint cotter pin and castellated nut.

7. ☒ Use Pitman Arm Puller T64P-3590-F to Separate the front wheel knuckle from the lower ball joint. Remove the knuckle.

8. ☒ Remove the seal from the knuckle and install it into a new Rancho knuckle (176001 or 176002).

9. ☒ Remove the front suspension lower arm nuts and bolts. Remove the front suspension lower arm.

10. ☒ Repeat steps 1 through 9 for other side.

Differential Crossmember Removal

1. ☒ Remove the four bolts that hold the differential crossmember to the frame. Remove differential carrier bolt. Remove the crossmember. See Illustration 3. Crossmember will not be reused.

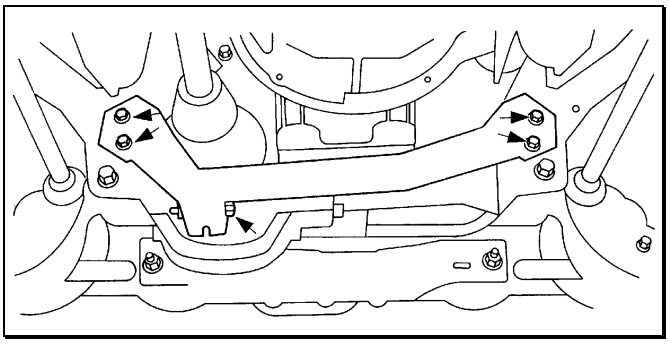


Illustration 3

Subframe & Bump Stop Bracket Installation

1. ☒ Raise and install subframe 176020 into rear mounting pockets of lower control arms. Install one 16mm bolt from kit 860078 in each side. Do not use nuts at this time.

2. ☒ Install drop brackets 176021,176022, 176023, and 176024 to subframe using hardware from kit 860077. Do not tighten. See Illustration 4

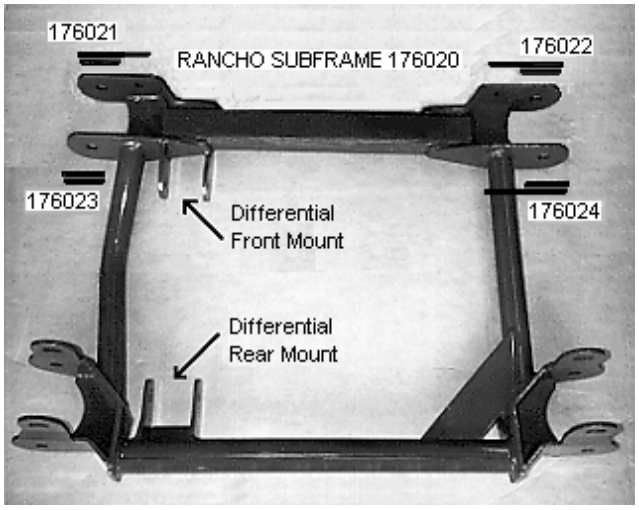


Illustration 4

3. ☒ Align front drop brackets to vehicle crossmember. Insert one long spacer, and one short spacer from kit 860079. Install a new 16mm bolt, washer and nut from hardware kit 860077. See Illustration 5. Repeat for the other side.

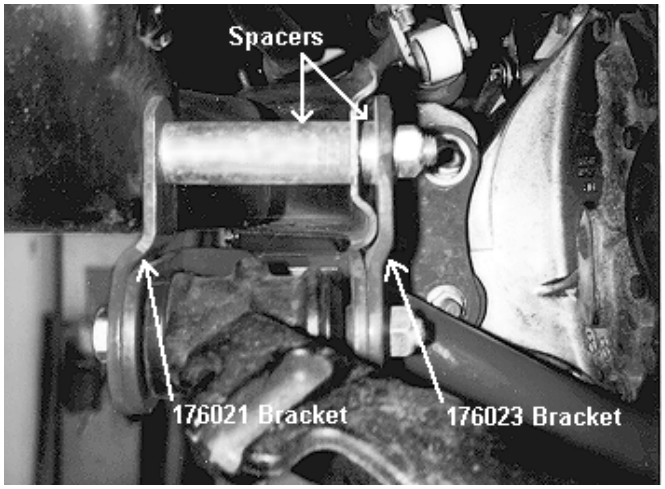


Illustration 5

4. ☒ Install additional hardware from kit 860077 into front drop brackets 176021 & 176022 and crossmember. Do not tighten bolts at this time.

5. ☒ Remove previously installed left rear subframe bolt and install left bump stop bracket 176031. Reinstall bolt and rotate bracket up against original stop. Using the new bracket as a template, mark hole onto original stop. Remove bracket and drill 19/64 hole. Reinstall bump stop bracket and hardware. Install new self tapping 3/8 screw, one lock washer, and one flat washer from kit 860083. See Illustration 6.

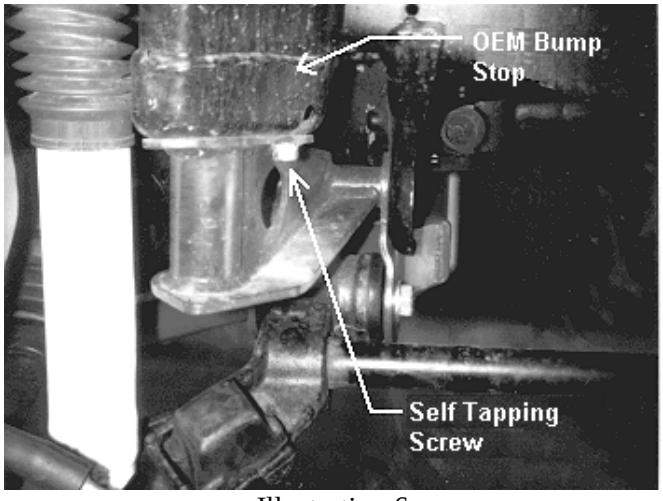


Illustration 6

6. ☒ Repeat step 5 for other side using bump stop bracket 176032.

7. ☒ Once bump stop brackets are installed, center the rear of the subframe from side to side. Tighten the 16mm nuts and bolts that go through the subframe and bump stop brackets to 135 FT-LBS.

Differential Drop Bracket Installation

1. ☒ Support the front differential with a hydraulic jack. Remove the differential right axle tube bushing bolt. Remove the differential front cover bushing bolt. Lower differential down into rear mounting bracket of Rancho subframe. Install new hardware from kit 860082. Do not tighten nut and bolt at this time.

NOTE: Adjust differential vacuum lines and axle vent tube if necessary.

2. ☒ Position new Rancho right differential drop bracket 176016 into right axle tube frame pocket and reinstall original hardware. Arm coming off bracket should go towards the rear of the truck and line up with a hole in the right rear lower A-arm pocket. Install the 1/2" bolt, washer and nut from kit 860080. Align differential right axle tube up into new bracket and install the 12mm hardware from kit 860080. See Illustration 7. Snug nuts and bolts down evenly then tighten to 57—75 FT-LBS.

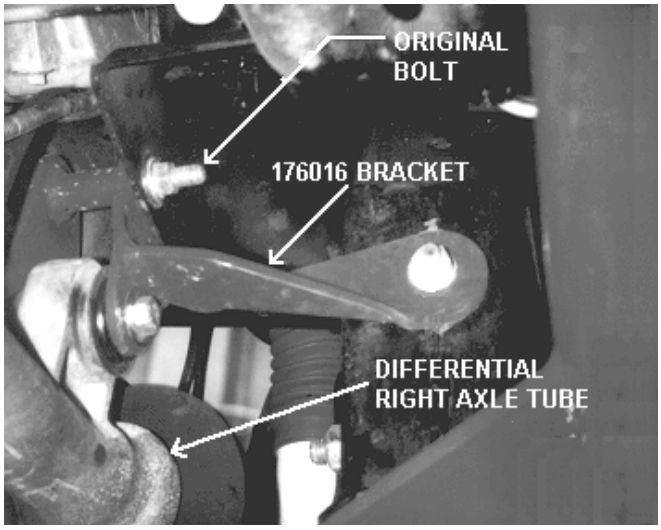


Illustration 7

3. ☒ Insert spacer from kit 860079 into original front differential mount. Place bracket 176013 on left side of mount, and bracket 176014 on right side of mount. Attach brackets to subframe mount and differential with the 12mm hardware from kit 860081. See illustration 8. Tighten the front and rear differential mounting nuts and bolts to 57—75 FT-LBS.

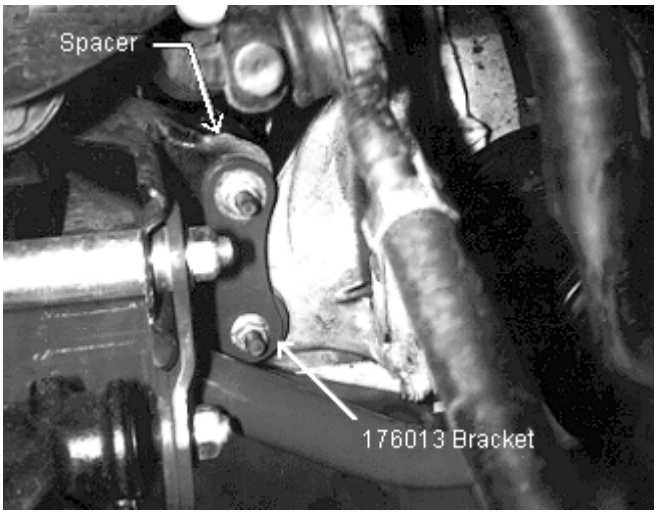


Illustration 8

Lower Arm & Steering Knuckle Installation

1. ☒ Remove previously installed front lower control arm pocket bolt and insert lower control arm into subframe. Reinstall the 16mm hardware in the front and attach the rear with the remaining 16mm hardware from kit 860078 (Face the bolts towards the center of the control arm.). Tighten the front subframe to frame hardware to specifications. Do not tighten the lower control arm bolts at this time.

2. ☒ Support the lower control arm. Carefully insert axle shaft through knuckle and attach knuckle to lower and upper control arm ball joints. Install castellated nuts and torque upper nut to 56—77 FT-LBS and lower nut to 83—113 FT-LBS. Install NEW cotter pins.

3. ☒ Repeat steps 1 and 2 for other side.

Front Wheel Hub Installation

1. ☒ Modify the left disk brake shield before installing it to the left knuckle. Mark and cut shield as shown in illustration 9. Temporarily install the shield on the knuckle and mark the additional 1/4" mounting hole. Remove shield and drill hole.

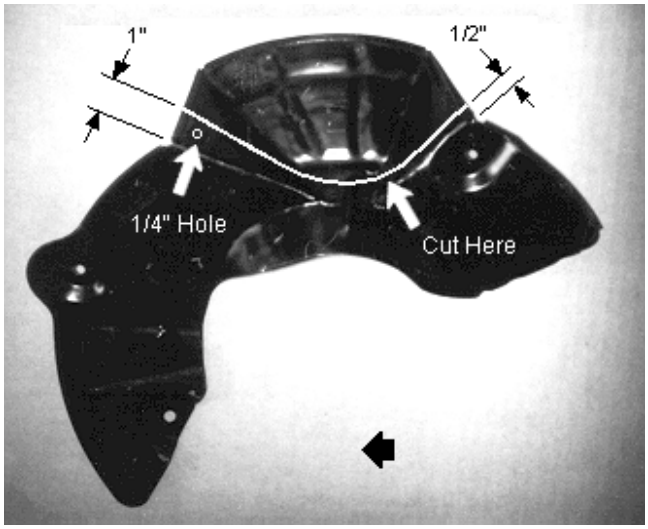


Illustration 9

2. ☒ Position the wheel hub on the left front drive shaft and into the steering knuckle. Make sure ABS brake wire hole is aligned with groove in knuckle and install the 3 wheel hub bolts. Tighten the bolts to 110–148 FT-LBS.

3. ☒ Install sensor and disk brake shield. Attach ABS wire to steering knuckle and install front axle hub nut. See illustration 10.

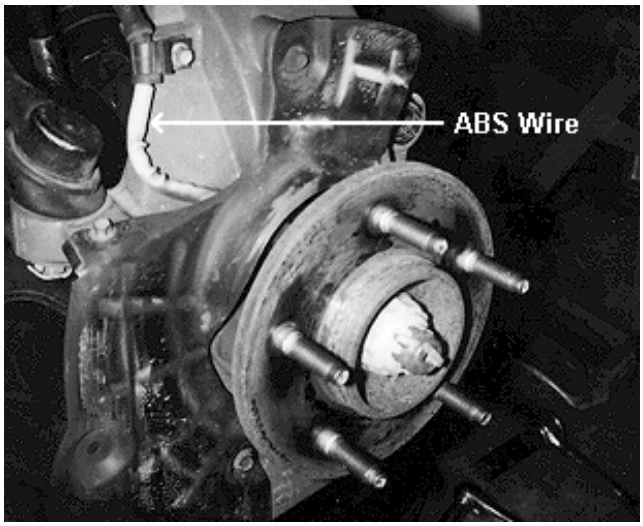


Illustration 10

NOTE: Torque axle hub nuts after wheels are mounted and vehicle is on the ground.

4. ☒ Install tie rod end and castellated nut. Torque to 57–76 FT-LBS. Install NEW cotter pin.

5. ☒ Using the original insulators, attach the sway bar to the lower control arm with the spacer and hardware from kit 860089. Insert bolt from the top and tighten the nut to 16–21 FT-LBS. See Illustration 11.

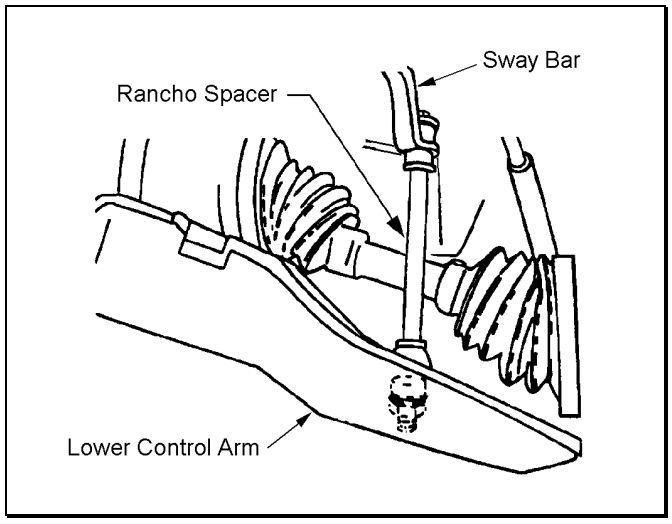


Illustration 11

6. ☒ Install rotor and brake caliper. Tighten the caliper anchor plate bolts to 125–169 FT-LBS.

7. ☒ Install new Rancho front shock.

8. ☒ Repeat steps 1 through 7 for the right side.

Brake Hose Replacement

1. ☒ Remove the right front brake hose. Seal brake line to prevent fluid leakage.

2. ☒ Attach RIGHT Rancho brake hose 170077 to the right front caliper with new copper washers from kit 860086. If applicable, remove the plug from the original hose and install it into the new Rancho hose.

3. ☒ Route brake hose between the control arms and attach it to the brake line. Attach the hose clamp to the frame and reattach the ABS wire. See Illustration 12.

4. ☒ Repeat steps 1 through 3 for left side using LEFT brake hose 170076. Bleed front brakes following manufacturer's instructions.

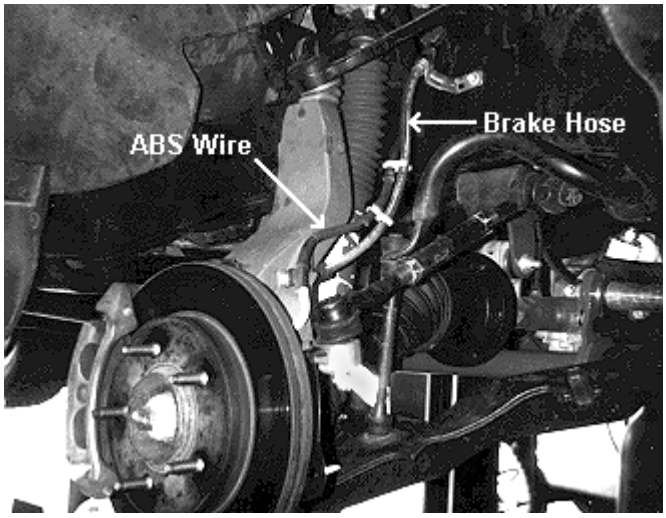


Illustration 12

Transmission Crossmember Replacement

NOTE: Transmission crossmember replacement is required on the F150 with a 5.4 liter engine and the F250. The new crossmember is included in kits RS6485 and RS6489.

1. ☒ Support transmission with Hi-Lift jack 014-00210 or equivalent.

2. ☒ Remove the two transmission mount nuts located at center of crossmember. Remove the two self-tapping heat shield bolts. Remove the six bolts attaching the crossmember to the frame. Remove the crossmember.

3. ☒ Install the new Rancho crossmember 176043. Align holes in crossmember with transmission mount and frame. Reinstall the six mounting bolts, the two mount nuts, and the self-tapping heat shield bolts. Tighten hardware to specifications (See notes.).

Torsion Bar & Crossmember Installation

1. ☒ Align indexing marks, front/back marks, and left/right marks on torsion bars and install through the hex openings in the lower control arms. Temporarily push them forward of the normal position to provide clearance for installing the crossmember.

2. ☒ Create a crossmember subassembly by fastening the left and right torsion bar drop brackets (176041 and 176042) to the ends of the torsion bar crossmember. Reuse original hardware, but do not tighten. See illustration 13.

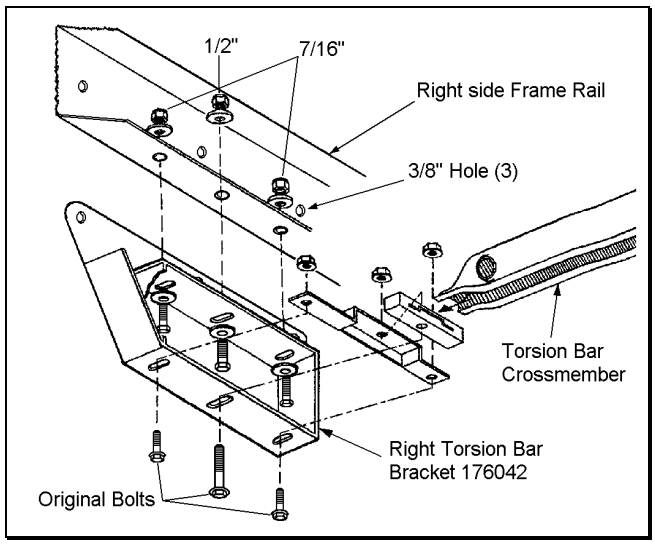


Illustration 13

3. ☒ Raise the crossmember subassembly with a floor jack until the horizontal faces of both drop brackets contact the frame rails. Line up holes in brackets with original mounting holes in frame. Install the 7/16" and 1/2" hardware from kit 860085. See illustration 13.

4. ☒ Using the drop brackets as guides, centerpunch and drill the three 3/8" holes through the side of each frame rail. CAUTION: Check for wires and hoses inside of frame rail prior to drilling.

5. ☒ Install the 3/8" hardware from kit 860085. Snug all nuts and bolts down evenly then tighten to specifications.

6. ☒ Slide torsion bar rearward through the crossmember while holding the adjustment arm in proper position. Be sure the reference mark on the adjustment arm matches the mark on the end of the torsion bar.

7. ☒ Install torsion bar tool and load torsion bar. Install the adjuster nut and bolt.

8. ☒ Remove torsion bar tool and turn adjustment bolt to its original depth as previously marked.

9. ☒ Repeat steps 6 through 8 for other side.

10. ☒ Install front wheels and lower vehicle to ground. Tighten lug nuts to 83—113 FT-LBS and lower control arm pivot bolts to 121—147 FT-LBS.

11. ☒ Tighten front axle hub nuts to 187—254 FT-LBS. Install retainers and new cotter pins.

REAR SUSPENSION

Riser Block Installation

1. ☒ Chock front wheels. Raise the rear of the vehicle, and support the frame with jack stands. Remove rear tires and set them aside.

2. ☒ For the F150 only, move the left rear parking brake cable to the outside of the leaf spring as follows:

- Fully release parking brake control.
- Remove left rear parking brake cable from equalizer. See illustration 14.
- Compress retainer and release cable from bracket.
- Remove cable from clip and reroute between wheel hub and leaf spring.
- Reinstall cable to clip, bracket and equalizer.
- Install a tie wrap LOOSELY around brake cable and leaf spring.

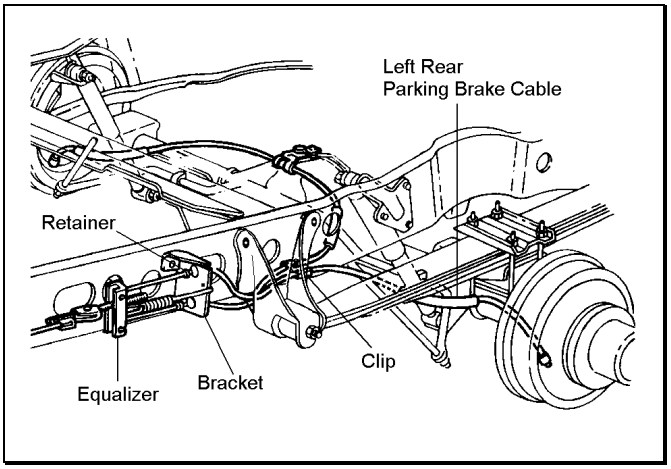


Illustration 14

3. ☒ Bend upper brake hose bracket down 1 inch. Bracket is located on left side frame rail above rear axle. See Illustration 15.

4. ☒ Support the rear axle assembly with a hydraulic jack. Remove both rear shock absorbers. **Do not reuse OEM shock absorbers.**

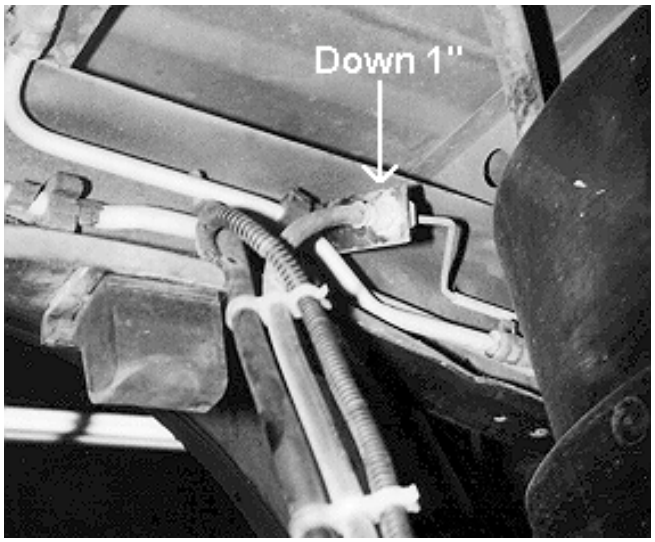


Illustration 15

4. ☒ Loosen the rear leaf spring U-bolts on both sides of the vehicle but do not remove.

5. ☒ Remove the two U-bolts attaching the rear axle to the left leaf spring. Remove the spring plate.

6. ☒ If necessary, elongate the four holes in the spring plate to accommodate the new Rancho U-bolts. See Illustration 16.

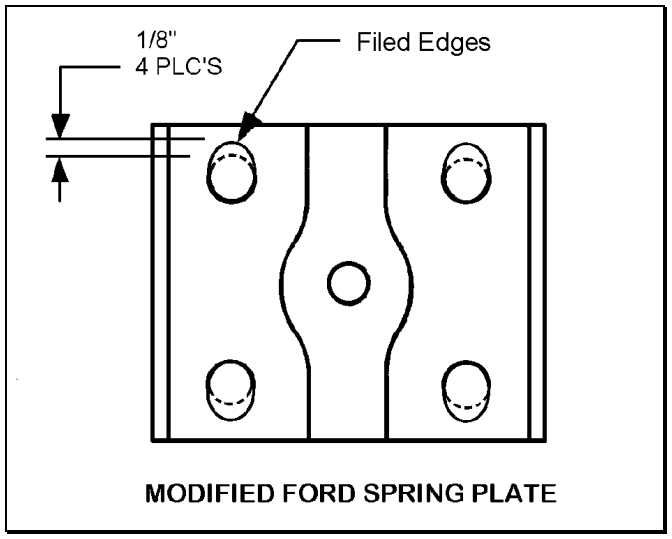


Illustration 16

8. ☒ Carefully lower the rear axle and remove the spring spacer.

9. ☒ Insert a block pin from kit 860087 into a new Rancho riser block. Install riser block onto axle pad and place OEM spacer on top of riser block. Make sure pins are aligned with holes. See illustration 17.

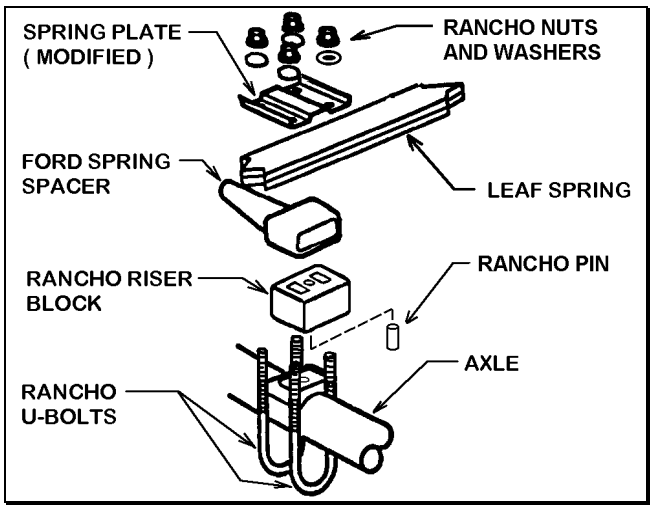


Illustration 17

10. ☒ Carefully raise rear axle until spacer makes contact with leaf spring.

11. ☒ Attach leaf spring to axle with the new Rancho U-bolts, and original spring plate. Tighten U-bolt nuts to 85—110 FT-LBS. See Illustration 17.

12. ☒ Repeat steps 5 through 11 for right side.

13. ☒ Install new Rancho rear Shock absorbers.

14. ☒ Install rear wheels and lower vehicle. Tighten lug nuts to 83—113 FT-LBS.

FINAL CHECKS & ADJUSTMENTS

1. ☒ Remove wheel chocks. Jounce suspension to normalize the ride height. Adjust torsion bars to reach proper spindle to fender lip height of 26 1/2". See illustration 18.

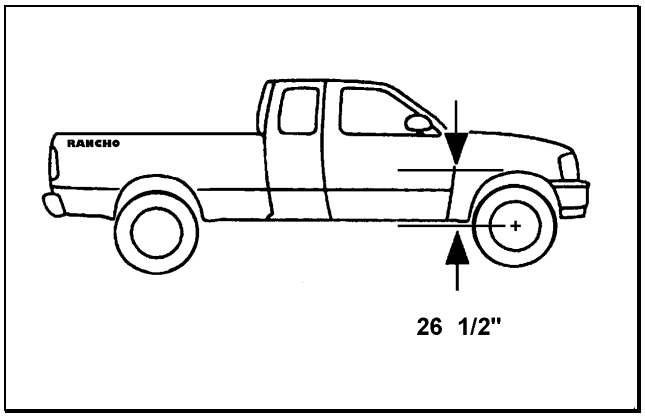


Illustration 18

2. ☒ 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.

3. ☒ Readjust headlamps. Have vehicle Aligned to manufacturer's specifications.

ALIGNMENT SPECIFICATIONS

Caster: $4.8^{o} \pm 1.0^{o}$
Camber: $-.1^{o} \pm .7^{o}$
(total) Toe-In: $.20^{o} \pm .25^{o}$

✍ NOTES:

RANCHO INDUSTRIES USA LIMITED WARRANTY

ABOUT OUR WARRANTY

Rancho Industries USA, warrants the listed products for the listed time period and/or mileage to the original retail purchaser against defect and wear-out when used on passenger cars and light trucks under normal operating conditions. The warranty does not apply to Rancho products which have been improperly applied or installed. The consumer will be responsible for removing from the vehicle and returning any defective item(s), transportation costs prepaid, to the dealer from which it was purchased or a Rancho Authorized Installer, and for reinstallation of the part upon return. A copy of the sales receipt is required for all warranty adjustments. Rancho Industries will, without charge, repair or replace at its option, defective products or component part(s).

In the case that the customer is unable to return to the original place of purchase or an Authorized Installer, the consumer may contact Rancho Industries at 1-800-5*SHOCKS* to obtain a Return Authorization Number prior to shipping. The consumer will be responsible for removing from the vehicle and returning any defective item(s), transportation cost pre-paid, to the following address: 6925 Atlantic Avenue, Long Beach, Ca 90805. A copy of the sales receipt is required for any warranty adjustments. Rancho Industries will, without charge, repair or replace at its option, defective products or component part(s). Such item(s) will be returned with transportation costs prepaid within the United States from Rancho Industries. The customer will be responsible for reinstallation.

Exclusions from this warranty are sales outside of the United States, the finish, any condition(s) caused by abnormal use or service, and product-specific limitations, if any, listed below.

THE LOSS OF USE OF THE PRODUCT, LOSS OF TIME, INCONVENIENCE, COMMERCIAL LOSS OR CONSEQUENTIAL DAMAGES ARE NOT COVERED. RANCHO INDUSTRIES RESERVES THE RIGHT TO CHANGE THE DESIGN OF ANY PRODUCT WITHOUT ASSUMING ANY OBLIGATION TO MODIFY ANY PRODUCT PREVIOUSLY MANUFACTURED.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH MAY CARY FROM STATE TO STATE. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS OE ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

THERE ARE NO WARRANTIES, EXPRESSED OR IMPLIED INCLUDING ANY IMPLIED WARRANTIED OF MERCHANTABILITY AND FITNESS, WHICH EXTEND BEYOND THIS WARRANTY PERIOD. THERE ARE NO WARRANTIED THAT EXTEND BEYOND THE FACE HEREOF. SELLER DIECLAIMS IMPLIED WARRANTY OF MERCHANTABILITY.

THIS WARRANTY SHALL NOT APPLY TO ANY RANCHO PRODUCT WHICH HAS BEEN MODIFIED, CUSTOMIZED OR IMPROPERLY INSTALLED. WARRANTY DOES NOT APPLY TO ANY RANCHO COMPONENTS USED FOR RACING PURPOSED, OR RACE TYPE ACTIVITIES. WARRANTY DOES NOT APPLY TO ANY RANCHO INDUSTRIES RACING PRODUCTS.

The product, time periods and/or mileage under this warranty are as follows:

RS1000 / RS5000 / RS5600 / RS7000 / RS9000
LIMITED LIFETIME WARRANTY

Limited lifetime warranty on these Rancho shock absorbers. Rancho Industries warrants each new shock against factory defects in material and workmanship (except for finish, including the shock boot) for as long as the original retail purchaser owns the vehicle on which the units were originally installed.

RS4000 / AIR RANCHO / RC9000 REMOTE CONTROL
LIMITED 2 YEAR, 24,000 MILE WARRANTY

Limited 2 year, 24,000 mile warranty on these Rancho products. Rancho Industries warrants each new RS4000, Air Rancho shock and RC9000 Remote Control System against factory defects in material and workmanship (except for finish, including shock boot) for the first to occur of 2 years or 24,000 miles after the date of purchase.

SUSPENSION COMPONENTS
LIMITED LIFETIME WARRANTY

Limited lifetime warranty on all of Rancho's suspension products. Rancho Industries warrants each new Suspension Component against factory defects in material and workmanship (except finish) for as long as the original retail purchaser owns the vehicle on which the products were originally installed.

PERFORMANCE BRAKES
LIMITED LIFETIME WARRANTY

Limited lifetime warranty on all of Rancho's performance brake products. Rancho Industries warrants each of its new brake pad and lining or remanufactured shoe and lining against factory defects in material and workmanship (except finish) for as long as the original retail purchaser owns the vehicle on which the products were originally installed. In addition, if during the ownership of your vehicle the Rancho Performance Brake friction material lining thickness wears to less than 1/32" of usable life the product will be exchanged. THIS LIMITED WARRANTY DOES NOT COVER THE FOLLOWING:

- Brake pads or shoes subjected to misuse, accident, neglect or lack of brake maintenance
- Police or taxi vehicles, race vehicles, any trailer towing applications, or vehicles used for governmental or commercial purposes
- Light trucks or vans over 8000 pounds gross vehicle weight
- Any part that is obsolete and is no longer available or supplied by Rancho

POWERFLOW EXHAUST
LIMITED LIFETIME WARRANTY

Limited lifetime warranty on all of Rancho's PowerFlow exhaust products. Rancho Industries warrants each of its exhaust products against factory defects in material and workmanship (except finish) for as long as the original retail purchaser owns the vehicle on which the products were originally installed. THIS LIMITED WARANTY DOES NOT COVER THE FOLLOWING:

- Exhaust system parts that rust or are blown-out by faulty engine conditions
- Any component that has been modified, customized, or improperly installed
- Any part that is obsolete and is no longer available or supplied by Rancho

RIGHTS RESERVED

Rancho Industries reserves the right to make changes in design, material and specifications or to make product changes as deemed necessary without prior notice. Obligations or liabilities will not be assumed with respect to similar products previously advertised.

WARRANTY DOES NOT APPLY TO ANY RANCHO COMPONENTS USED FOR RACING PURPOSES, OR RACING TYPE ACTIVITIES. WARRANTY DOES NOT APPLY TO ANY RANCHO INDUSTRIES RACING PRODUCTS.

PRINTING ERRORS

Every effort has been made to avoid printing errors in our literature. However, if there are any specification or application errors, we must disclaim responsibility.