

INSTALLATION INSTRUCTIONS

88023

FOR FORD SUSPENSION SYSTEMS 6470, 6471, 6480, 6486

REV. A

READ ALL INSTRUCTIONS THOROUGHLY FROM START TO FINISH BEFORE BEGINNING INSTALLATION

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DO NOT USE A BODY LIFT KIT WITH THESE SUSPENSION SYSTEMS

PARTS LIST

THESE PARTS ARE CONTAINED IN ALL KITS

P/N	DESCRIPTION	QTY
1765	Left Radius Arm	1
1766	Right Radius Arm	1
1767	Lt.Beam Lowering Bracket	1
1768	Rt.Beam Lowering Bracket	1
1769	Doubler Plate	1
1770	Bumpstop Spacer	2
7730	Pitman Arm	1
8967	Instructions	1
8355	5/16" Sub-Assembly	1
	5/16-1.25" Bolt	2
	5/16 Nylock Nut	2
	5/16 Washer	4
	Thread Locking Compound	3
8360	7/16" Sub-Assembly	1
	7/16 - 1.25" Bolt	12
	7/16 Toplock Nut	12
	7/16 Washer	24
8362	9/16" Sub-Assembly	1
	9/16-3.50" Bolt	1
	9/16 Toplock Nut	1
	9/16 Washer	2
	3/4 O.D. -1.80" Sleeve	1
8363	C-Bolt Sub-Assembly	1
	7/16" Nut	2
	7/16" C-Bolt	2
8377	1/2" Sub-Assembly	1
	1/2-1.50" Bolt	11
	1/2 Toplock Nut	11
	1/2 Washer	22

ADDITIONAL PARTS LIST FOR KIT# 6470

314	Add-A-Leaf	2
506	Add-A-Leaf	2
1763	3" U-Clamp, Spring	4
1764	3" U-Clamp, Cap	4
8358	3/8" Sub-Assembly	1
	3/8-1.25" Bolt	2
	3/8 Toplock Nut	2
	3/8 Washer	4

P/N DESCRIPTION QTY

8540	Sub-Assembly Steering stop	1
	Spacer, "Wedding Band"	2
	3/8 Steering Stop Bolt	2
	3/8 Jam Nut	2
	5/16" washers	6

ADDITIONAL PARTS LIST FOR KIT# 6480

319	Add-A-Leaf	2
10600	2 1/2" U-Clamp, Spring	4
10610	2 1/2" U-Clamp, Cap	4

8518	3/8" Sub-Assembly	1
	3/8-1.25" Bolt	2
	3/8 Toplock Nut	2
	3/8 Washer	4
	Spacer, "Wedding Band"	2
	Spacer, Radius Arm	4

ADDITIONAL PARTS LIST FOR KIT# 6486

314	Add-A-Leaf	2
506	Add-A-Leaf	2
1763	3" U-Clamp, Spring	4
1764	3" U-Clamp, Cap	4

8358	3/8" Sub Assembly	1
	3/8-1.25" Bolt	2
	3/8 Toplock Nut	2
	3/8 Washer	4

8541	Sub-Assembly Steering Stop	1
	Spacer, "Wedding Band"	2
	Steering Stop	1
	Steering Stop	1

ADDITIONAL PARTS LIST FOR KIT# 6471

329	Add-A-Leaf	2
1763	3" U-Clamp, Spring	4
1764	3" U-Clamp, Cap	4

8358	3/8" Sub-Assembly	1
	3/8-1.25" Bolt	2
	3/8 Toplock Nut	2
	3/8 Washer	4

8540	Sub-Assembly Steering stop	1
	Spacer, "Wedding Band"	2
	3/8 Steering Stop Bolt	2
	3/8 Jam Nut	2
	5/16" washers	6

NOTES: Before beginning installation, read and perform the following

- A. This kit is intended to provide better ride and more control off-road. This may permit the user to travel faster than a "stock" vehicle over the same terrain. The user assumes all liability for this increased speed. Remember that simply installing this kit does not magically reinforce the stock frame, nor does it improve the rollover protection built into the passenger compartment by the manufacturer. The energy available to damage components increases as with the square of the speed. In other words, there is twice the kinetic energy available to damage your vehicle (and you) at 30mph than there is at 20mph. Enjoy your Rancho suspension system, but also operate your vehicle responsibly.
- B. If you will be installing a kicker shock kit in your vehicle, U-bolt kit #722 will be required. In some rare cases, this U-bolt will be required for proper installation of the rear Add-A-Leaf system on F-150 vehicles, even without kicker shocks.
- C. Check the frame of the vehicle for any damage or severe corrosion. If there is any question as to the straightness or soundness of the chassis, have the vehicle checked by a State approved alignment specialist. **If there is any structural damage, do not install this kit.**
- D. Have the alignment of the vehicle checked to insure that it falls within factory specifications. The installation of this kit will not change the alignment of the vehicle more than $\pm 1/2^\circ$ from factory specifications. If the vehicle alignment can not be brought to within factory specifications, do not install this kit.

NOTE: RANCHO recommends having your vehicle aligned after the installation of any suspension system. Some model Fords using the RANCHO suspension with the 4" coil springs cannot be aligned to within $\pm 1/2^\circ$ of factory specs using common eccentric bushings. Ingalls Alignment Products manufactures alignment eccentrics which should be able to correct most alignment concerns. They can be reached at 1-800-641-9795.

- E. Compare the contents of this kit with the hardware list in these instructions. If any hardware is missing, contact the Rancho Suspension Technical Department at (310) 630-0700. **NOTE:** The hardware supplied is high quality, high grade material, and must not be replaced by lower grade material or failure may result. Rancho is not responsible for damage,

failure, or injury due to improper installation or parts substitution.

- F. Do not interchange parts of this kit with components from another manufacturer. This kit must be used with **RANCHO** shock absorbers. For the correct application, Refer to the current **RANCHO** catalog.
- G. Included in the hardware kit are several tubes of thread locking compound, to be used on all the bolts during the installation. One drop on the exposed threads of each bolt before installing the nut is sufficient to provide an adequate bond. Unless otherwise specified, all bolts in the kit will be installed with a flatwasher at both ends (one under the head, and one under the nut) and thread locking compound, then torqued to the following values:

3/8"	Bolts	28 - 32 ft.-lbs.
7/16"	Bolts	30 - 35 ft.-lbs.
1/2"	Bolts	65 - 80 ft.-lbs.
9/16"	Bolts	75 - 90 ft.-lbs.

Radius arm to frame bracket nut 80 - 120 ft./lbs.

Spring retainer to upper spring seat 13 - 18 ft./lbs.

Radius arm to axle beam (stud or bolt) 180 - 220 ft./lbs.

Lower spring retainer to radius arm 30 - 70 ft./lbs.

DO NOT USE AN IMPACT WRENCH TO TIGHTEN ANY OF THESE FASTENERS!! USE A TORQUE WRENCH.

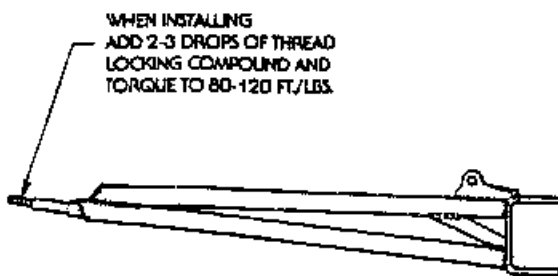
CAUTION: Thread locking compound may irritate sensitive skin. Wash skin after contact. Do not swallow, avoid contact with eyes. Keep away from children. Read warning on container before use.

IMPORTANT HINT:

Rancho Suspension Installation instructions (88023) clearly state "thread locking compound needs to be used on all bolts during installation" (installation note "G"). Thread locking compound (Rancho #42702) has been included with each kit. This compound also provides thread lubrication during the installation of the fasteners.

Installation of all-metal "crimped" style locknuts also requires the use of the thread locking compound provided. The supplied 3/4"-10 "toplock" nuts mount the radius arms to the frame brackets. **FAILURE TO USE** thread locking compound may result in thread damage to the radius arm stud. Without locking compound in place, thread damage may also occur upon removal of the nut. After torquing the 3/4-10 locknuts, 3-4 complete threads should be exposed on the radius arm stud. (SEE FOLLOWING ILLUSTRATION)

RANCHO SUSPENSION WILL NOT WARRANTY ANY RADIUS ARM WHEN THREAD LOCKING COMPOUND HAS NOT BEEN USED.



- H. The following tools will be required for the proper installation of this kit.

Pittman Arm Puller
Right Angle Drill and Bits
1/2" Drive Ratchet and Assorted Sockets
1/2" Drive Breaker Bar
Assorted Combination Wrenches
Heavy Duty Jackstands
Hydraulic Floor Jack
Centerpunch
File
Hammer
Wire Brush
1/4" allen wrench
Torque Wrench
Tape Measure

Safety Glasses: Always wear safety glasses when working underneath vehicle and when using a hammer and punch.

Rancho Suspension also recommends that you purchase new radius arm bushings from your Ford Dealer. **We do not recommend urethane radius arm bushings with this kit.**

- I. It will be necessary to use a right angle drill to get into some of the more restricted areas underneath your vehicle. This can be rented from most tool rental shops for a modest fee.

- J. Do not plate (i.e. chrome, cadmium, zinc, etc.) any of the components in this kit, or alter their finish in any way. This may weaken the structural strength of these components. These parts come with a protective coating already. You may if you wish, paint them using an enamel based paint.
- K. This kit is supplied as a bolt-on assembly. Do not weld anything to these components, and do not weld any of these components to the vehicle. If any of your components break or bend, contact Rancho for replacement parts. Replace components with Rancho Suspension parts only.
- L. The installation of this kit will require approximately 10-14 hours. It may take you more or less time depending on your degree of mechanical aptitude. Proper use of the appropriate power tools and the use of a shop hoist can greatly reduce the time required.
- M. Make sure you park the vehicle on a level concrete or asphalt surface, and set the parking brake before you begin the installation.
- N. Steam cleaning or pressure washing the suspension and frame of the vehicle will make the installation cleaner and more trouble free.
- O. Required wheel sizes: 15" or 16" diameter, maximum width 8", maximum backspacing 3-5/8". Maximum tire size 33" x 12.50".
- P. These instructions have been written with concern for your safety and ease of installation. If you have any questions or problems, please contact Rancho so that we may assist you. Following these instructions explicitly will result in the safe, proper installation of this kit.
- Q. If you are installing this system on a **1994 or newer Super Cab**, it will be necessary to install the **RANCHO** carrier bearing spacer kit P/N 6645. This will help reduce the driveline vibration associated with the 2-part drive shaft.
- R. If you are installing this system on a **1994 or newer Bronco**, it will be necessary to install 5116 or 9116 rear shocks and **RANCHO** rear bumpstop spacer kit P/N 6647.
- S. If the I-Beam pivot brackets on your vehicle are welded to the crossmember, **STOP**. do not install this kit.

Again, Rancho Suspension is not responsible for damage or failure resulting from improper installation of this kit.

Front Suspension Removal

1. Block the rear wheels of the vehicles. Raise the front of the vehicle and support the frame with jackstands. Remove the wheels and set them aside. Remove both front brake calipers and place them on top of the coil towers.
2. Separate the relay rod from the Pitman Arm. If your vehicle has a front anti-sway bar, remove the brackets that hold it to the frame.
3. **(This step applies to 4WD models only)** Mark the front driveshaft and the front differential yoke so that the driveshaft can be reconnected in its original position. Failure to do so may result in a driveline imbalance and subsequent vibration. Disconnect the front driveshaft at the U-joint, and tape the caps to prevent them from falling off. Be very careful not to pull the rear end of the driveshaft forward out of its splines, or damage may occur to the transfer case due to improper reinstallation. Tie the driveshaft end up and out of the way. SEE FIGURE #1.

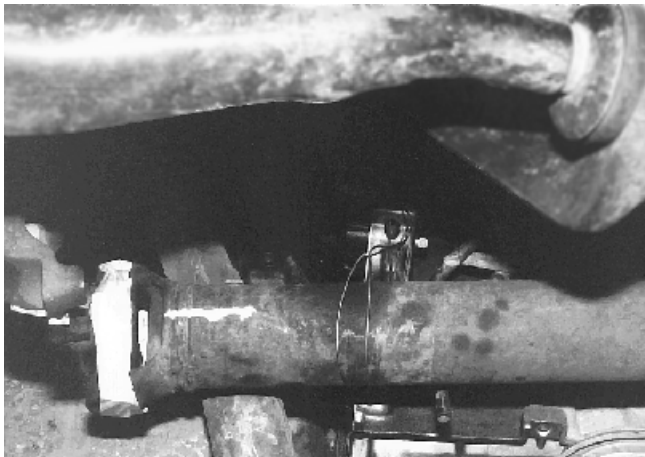


FIGURE #1

4. **(4wd only)** Disconnect the vent hose from the front differential housing.
5. Support the passenger side beam with the floor jack near the spindle and remove the shock absorber. You should be careful to support the beam at more than one point to prevent it from tipping or falling over. The beam assemblies are very heavy and Rancho recommends that you exercise extreme caution when removing them to avoid any possibility of injury. On the passenger side of the vehicle, remove the spring retaining nut and washer from the lower end of the spring, then remove the small retaining strap that holds

the spring to the coil tower. Lower the jack enough to remove the spring. SEE FIGURE #2.

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FIGURE #3

NOTE: On 2wd models, the passenger side and driver side I-beams are removed separately.

6. Remove the pivot bolt from the passenger side beam. Next remove the nut from the end of the radius arm towards the rear of the vehicle, and carefully lower the passenger side beam to the floor. SEE FIGURE #3.
7. Support the front differential with a floor jack. In order to keep the beam from tipping to one side or another during removal, you must either chain the beam to the floor jack, or use a second jack to support the beam near the spindle. On 2WD models support the left axle beam instead of the front differential. SEE FIGURE #4.

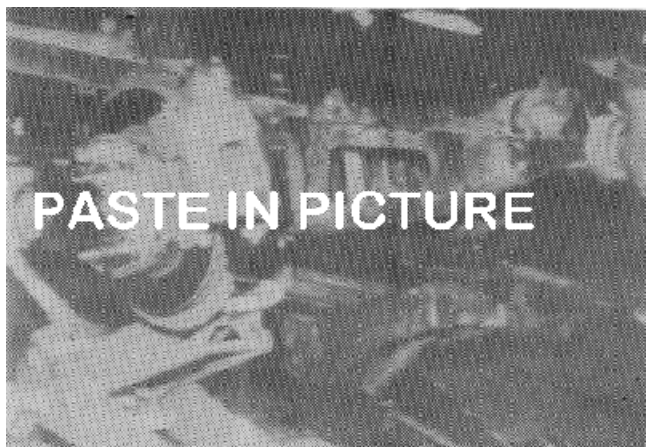


FIGURE #4

8. Repeat the procedures in steps 5 and 6 on the driver's side to lower the left beam out of the vehicle. **(4WD ONLY)** The entire front suspension and drivetrain may now be removed from the vehicle as a unit. SEE FIGURE #5.

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FIGURE #5

9. Remove the two bolts holding the power steering cooler to the front of the forward crossmember, if so equipped. Gently move the cooler out of the way. SEE FIGURE #6.

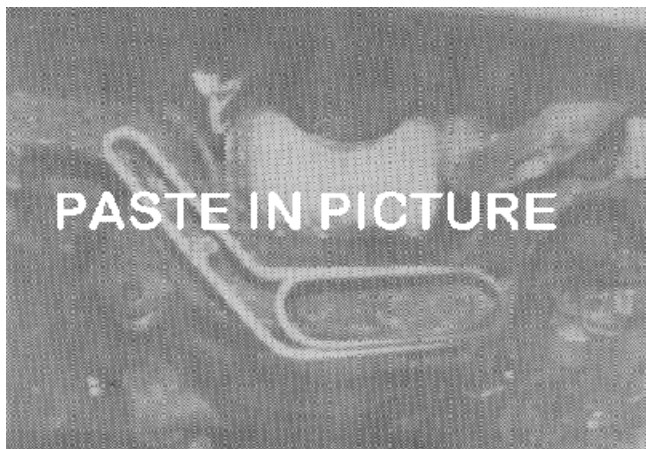


FIGURE #6

Factory I-Beam Bracket Removal

10. Note the brackets that held the pivot end of the front beams to the front crossmember. Some of these brackets are bolted to the frame, some are riveted. These brackets must be removed from the front crossmember by unbolting or drilling the rivet heads. A right angle drill may be necessary.

NOTE: If these brackets are welded to the crossmember, **STOP**. Do not install this kit.

RIVET REMOVAL PROCEDURE

- A. Center punch rivet head. SEE FIGURE #7A
 B. Drill 1/4" pilot hole in the center of approximately 1/4" deep. *9SEE FIGURE #7B
 C. Drill rivet head off using a 7/16" bit, being careful not to drill into frame.
 D. Drive body of rivet out. SEE FIGURE #7C

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FIGURE #7A

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FIGURE #7B

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FIGURE #7C

Rear Radius Arm Bracket Removal & Installation

11. Next, remove the brackets that held the radius arms to the frame. Again, rivets will have to be drilled to be removed. Be careful not to damage the brackets because you will be re-using them. SEE FIGURE #8.

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FIGURE #8

12. The radius arm brackets removed in step 11 will be relocated exactly 15" toward the rear of the vehicle from their original location. Some vehicles will have a small hole on the lower leg of the frame channel exactly 15" behind the second forward-most hole of the original mounting bracket. If so, you may use this hole to locate the brackets. (SEE FIGURE #9) Otherwise you will have to carefully locate the brackets exactly 15" behind their original locations.

NOTE: On 94 and later F-Series pickups and Broncos there is a small plate holding the gas lines in place where they leave the frame to go inward toward the engine. It is located about a foot behind the driver side radius arm rear mount on the inside of the frame rail. The rear mounting bolt will have to be trimmed flush with the outside of the frame rail. This leaves enough of the bolt to locate in the rear hole. The front mounting bolt should be left installed.

13. After locating the brackets, mark the mounting hole locations on the frame using a transfer punch or centerpunch, and carefully drill the mounting holes using a 7/16" drill bit. **Be sure that there is nothing on the other side of the frame before drilling.** Use a wire brush to remove any undercoating. The bracket must be installed on a clean surface. It may be necessary to reroute vacuum lines or insulate them with rubber hose on certain model vehicles if they interfere with the relocated mounting brackets or bolts.

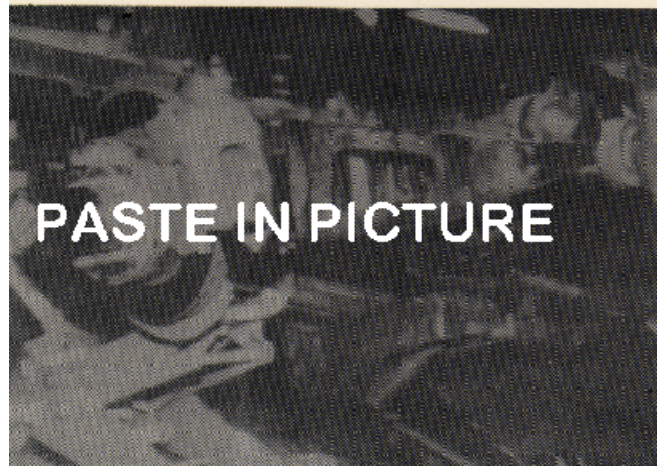


FIGURE #10

NOTE: Be sure to check for interference of fuel lines on the inside of the frame rail on the driver side when installing the bolts. It may be necessary to slightly reroute or insulate the fuel lines with a small piece of rubber hose to prevent the fuel line from chaffing on the bolts.

14. Use a file to remove any raised edges around the hole caused by drilling. Mount the brackets using the 1.25" long bolts, washers, locking nut, and thread locking compound in kit #8360. Torque the fasteners to the specified value. **NOTE:** on later model vehicles, it may be necessary to grind slight reliefs in the forward edge of the driver's side bracket to provide clearance for the fuel filter retaining bolts. Be sure to gently radius the relief and remove all sharp edges or notches to prevent cracks from forming. SEE FIGURE #10.

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FIGURE #10

Rancho I-Beam Bracket Installation

- 15.** Next install the Rancho beam pivot brackets (1768, 1769) . The bracket that mounts on the passenger side of the vehicle uses a doubler plate that mounts on the forward face of the crossmember while the bracket mounts on the opposite side. (SEE FIGURE #11) This bracket will use some of the existing holes that the original bracket used. Locate the bracket and doubler plate on the crossmember, and hold it in place with some nuts and bolts, but do not attach at this time.

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FIGURE #11

- 16.** Using the bracket as a template, carefully mark all holes that will need to be drilled. This bracket uses a total of (7) 1/2" bolts (3 that go through the doubler plate and bracket, 3 that hold the leg of the bracket to the inside top surface of the crossmember and 1 that holds the two brackets together on the forward lip of the crossmember), and (2) 3/8" bolts (one on the lip, and one on the end of the assembly nearest the center of the crossmember).
- 17.** Use a centerpunch to mark the hole centers, and remove the brackets from the frame. Carefully drill the necessary sized holes. File any raised edges. Again, clean the surface of any undercoating, loose paint, dirt, etc. Install the bolts, nuts, and washers using locking compound, and carefully torque them to the specified values. SEE FIGURE #12.

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FIGURE #12

- 18.** Next you will install the other beam pivot bracket (1767) . This bracket installs on the driver's side of the crossmember, on the inside back surface. This bracket can also be located on the existing holes in the crossmember. To attach this bracket to the frame you will use a total of (4) 1/2" bolts (2 in the holes closest to the center of the crossmember, and 2 in the uppermost holes of the upper side leg of the bracket), (1) 9/16" bolt that goes through the original beam pivot hole and both sides of the bracket, with the 1.8" long spacers (provided in kit# 8362) used on this bolt between the two sides of the bracket (SEE FIGURE #13), and (4) 7/16" bolts used in the remaining holes that hold the bracket to the crossmember.



FIGURE #13

- 19.** Again, carefully mark and drill the necessary holes. File any raised edges, clean the mounting surface, and install the bracket using the nuts, bolts, and washers with locking compound, torquing them to the specified values. SEE FIGURE #14.

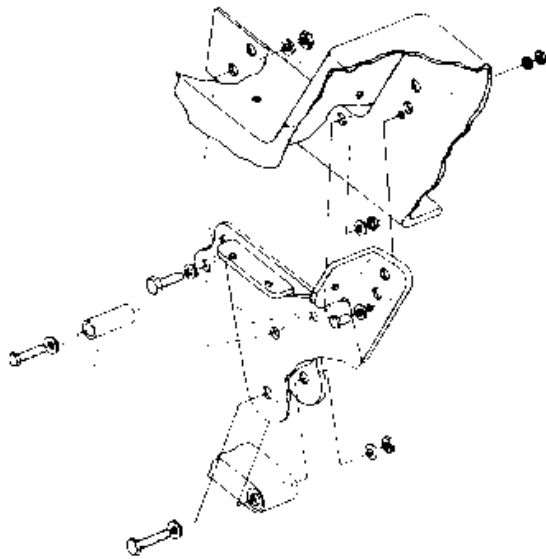


FIGURE #14

Radius Arm Removal & Installation

20. Next, on 4WD models remove the original radius arms from the front beams by removing the stud from the top of the beams and the bolt from the bottom of the beams as shown in the FIGURE #15. Install the new radius arms (1765 D/S & 1766 P/S). Make sure the notches in the new radius arms line up with notches in the beams brackets.

On 2WD models remove the original radius arms from the front beams by removing the through bolt as seen in FIGURE #16. If the new radius arms do not line up properly, make sure you are installing the arms on the proper side, with the proper end up (SEE FIGURE #15). Re-install the studs or bolts using thread locking compound, and torque them to 180-220 ft./lbs.

NOTE: On the 2WD F-150 it will be necessary to install the 4 radius arm spacers (provided in kit# 8518) at this time. SEE FIGURE #17

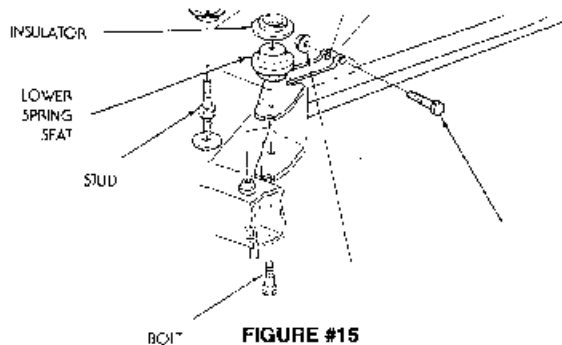


FIGURE #15

FIGURE #15

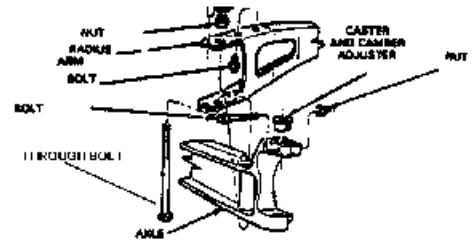


FIGURE #16

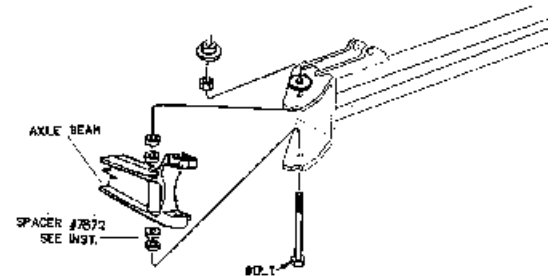


FIGURE #17

21. If you have the short style radius arm bushings (SEE FIGURE #18) install the "wedding band" spacers provided. If you have the long style, do not use the spacers. Now install the Ford bushings.

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FIGURE #18

IMPORTANT NOTICE:

Rancho Suspension recommends the use of new Ford replacement radius arm bushings when installing this kit, as stated in installation instructions Note "K". The required bushings are normally stocked parts at authorized Ford dealers. Use ONLY genuine Ford replacement parts, as these bushings affect vehicle ride and handling characteristics. Bronco and 4WD F-150

vehicles have been built with various bushing components. **ONLY** those described above (FIGURE #18) are acceptable for use with Rancho kit #'s 6470, 6471, 6480, and 6486.

Pitman Arm Removal & Installation

22. Remove the original Pitman arm from the steering box using a Pitman arm puller. Failure to use the proper tool can result in damage to the steering mechanism. Carefully note any indexing marks, and install the Pitman arm included in this kit in the proper position. Torque the nut to 200-250 ft.-lbs. SEE FIGURE #19.

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FIGURE #19

Front Bumpstop Removal & Installation

23. Remove the factory bumpstop from the frame. Install the bumpstop on the spacer provided as shown, then mount the assembly on the frame in the original location (SEE FIGURE #22) using the 5/16" nuts, bolts and washers.

Front Suspension Installation

24. Move the front drive line assembly into place under the vehicle. Slide the ends of the radius arms with bushings into the relocated brackets. Install the rest of the bushings, and washers, and install the nuts. Do not fully tighten at this time. SEE FIGURE #20.
25. Using a floor jack, carefully raise the beams into place, one at a time, and insert the original pivot bolts through the new brackets and the beams. Install the nuts, but do not tighten at this time. SEE FIGURE #21.
26. Check to see that all radius arm bushings and spacers are installed correctly as in figure #18. Apply locking compound, and torque the radius arm nuts to 80-120 ft.-lbs. Torque the beam pivot bolts to 75-90 ft.-lbs.

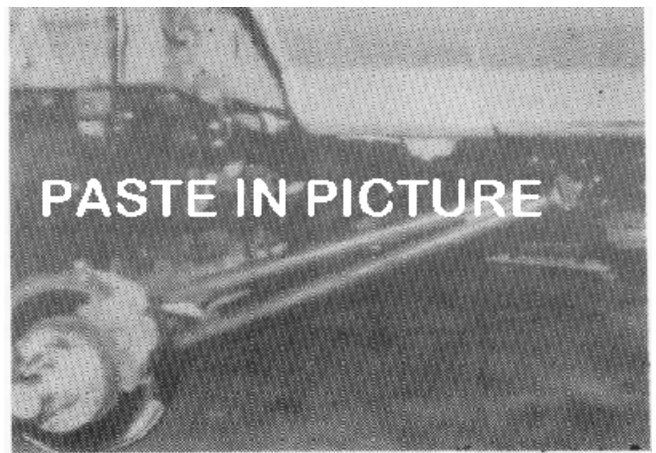


FIGURE #20

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FIGURE #21

27. If applicable, reinstall the power steering cooler, and make sure that the cooler lines are not rubbing or contacting any metallic surfaces that may damage them (bolts, bracket edges, etc.). It may be necessary to insulate the lines with some rubber hose. **(4WD only)** Reinstall front driveshaft and torque U-bolts to 12-15 ft.-lbs. Re-check the torque values of all nuts and bolts you have installed.

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FIGURE #22

28. Place the new Rancho coil spring in position and slowly raise the front axle. Ensure that springs are indexed correctly in the upper spring seats. There is a step in the seat for the end of the coil.

29. Position the lower spring retainer over the stud and lower seat and install the attaching nut. Torque to 30-70 ft.-lbs, then position the upper retainer over the coil spring and install the attaching screws. Torque to 13-18 ft.-lbs. (REFER TO FIGURE #2)

NOTE: The shock on the front of this vehicle is the "Droop - Limiter" and controls the amount of down travel. The stock lower spring seat is used for positioning purposes of the coil and is not intended to be a spring retainer.

30. At this time raise the axle beam and attach the shocks.

30a. Repeat steps 28-30 on the other side.

31. Reinstall the front brake calipers.

Steering Stop Installation & Adjustment

32. 4WD models: Remove the original equipment steering stop bolts. Install the Rancho steering stop bolts with the jam nuts as shown. The installed length of the bolt should be 1.14" measured from the top of the bolt head to the point where the bolt enters the spindle (SEE FIGURE #23A & #23B). **NOTE:** On some late model 4WD's, the steering stops (part #7845) supplied in bagged sub-assembly #8540 will not fit in place of the stock steering stops. On these vehicles use two or more of the 5/16" spacers (washers) in bagged sub-assembly #8540 under the factory steering stop - **ignore the 1.14" measurement.** NOTE: a different number of spacers may be required on each side. Tighten the nut against the spindle.

2WD F-150 & F-250 models only: Depending on the wheels and the tires that you install, and your driving habits, it may be necessary to weld the supplied steering stops in sub-assembly #8541 onto the machined steering stops located on the axle beams. SEE FIGURE #24.

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FIGURE #23A

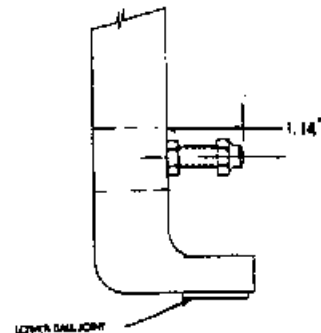


FIGURE #23B

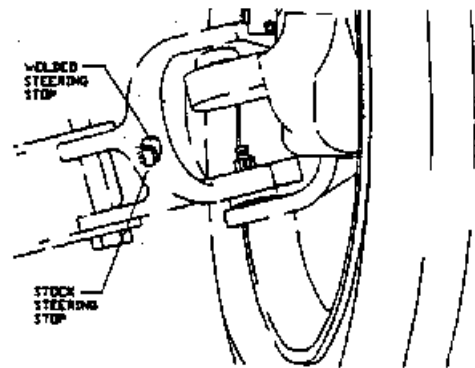


FIGURE #24

33. If your vehicle has the anti-sway bar mounted to a crossmember instead of the frame rails, it will be necessary to do some minor trimming of the crossmember. Included in these instructions are full scale templates to be used to mark the crossmember for trimming. Cut out the templates and trace the outlines onto the crossmember as shown in figure 25A & B. Remove sway bar from crossmember and trim away the marked areas using a scroll saw with a metal cutting blade or a die grinder. Remove any sharp or raised edges with a file, and reinstall sway bar.

ADD-A-LEAF INSTALLATION

Please read all instructions from start to finish **before** you begin the installation.

NOTE: To perform the installation properly, you must use two large C-clamps or a large vise to contain the elastic potential energy stored in a leaf spring when the center bolt is removed.

1. Raise the rear of the vehicle, support the frame with jackstands, and remove the rear wheels.
2. With a floorjack, raise the rear axle enough to relieve tension on the shock absorbers and remove them. Disconnect the axle vent hose from the axle housing. Remove the vent tube bolt from brake line junction block to allow the brake lines to move. Disconnect anti-sway bar ends if applicable.
3. Making sure the axle is well supported, remove the axle U-bolts and hardware. Now remove the spring eye bolts and/or shackles, and remove the springs from the vehicle. (See fig. #1)

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fig. #1

4. Using C-clamps or a large bench vise, hold the spring assembly securely together. (See fig #2)

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fig. #2

5. If applicable, remove any spring leaf alignment clamps. Then, using vise-grips to hold the head of the center bolt, loosen and remove it. If the bolt has rusted, a hammer and drift punch may be used to drive it out.

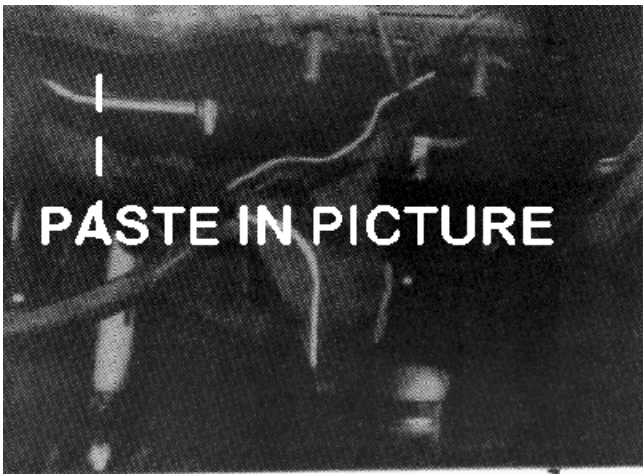


FIGURE #25A

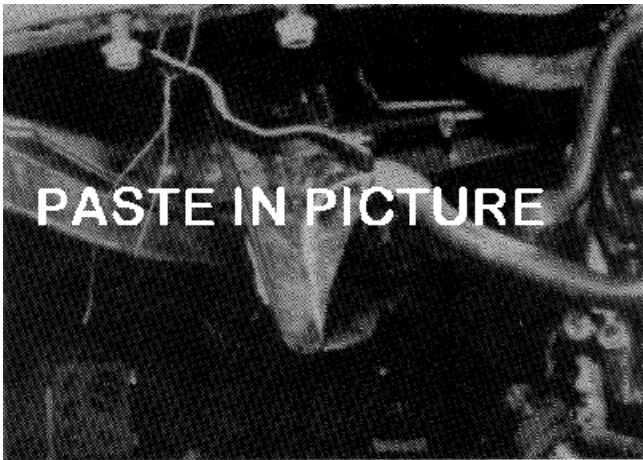


FIGURE #25B

34. Reconnect the relay rod to the Pitman arm, and make sure the anti-sway bar is reinstalled. Install wheels at this time and check all bolts and nuts to be sure they are tight. Lower the vehicle to the ground.
35. Cycle the steering from lock to lock, and check for any binding or interference. There should be 1" of clearance (minimum) between the tires and the radius arms at full lock to both sides. If there is less than 1" clearance, check to make sure you have the proper wheel offset and size. If necessary, the factory steering stops may be adjusted out to 1.25" (SEE FIGURE 23A & B) but do not go any further. If you still have clearance problems, contact Rancho for assistance.
36. Install rear add-a-leaf kit per following instructions.
37. Before driving, check the brakes to make sure they operate properly.
38. Periodically inspect components for tightness and for any damage, especially after off-road use.

6. Carefully remove C-clamps or open the vise and lay the disassembled spring aside.

NOTES: Your new add-a-leaf(s) will be installed in the spring assembly in a progressive fashion.
Example: If your #1 leaf is 32" long and #2 leaf is 25" long and your add-a-leaf is 28" long, the add-a-leaf is installed between leaves 1 and 2. Install the leaves with the shorter ends toward the front of the vehicle.

1981-93 4WD MODELS: Disassemble spring and remove leaf #2. The long add-a-leaf will be installed in place of the factory #2 leaf, and the shorter add-a-leaf will be installed in the #3 position. (See fig. #3)

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fig. #3

1994-95 4WD MODELS: Install the single add-a-leaf (p/n 329) between the factory #2 and factory #3 leaves. It is not necessary to remove any factory leaves when using the RANCHO p/n #329 add-a-leaf. See fig. #4

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fig. #4

7. With a small amount of grease applied to both ends of each add-a-leaf, re-assemble leaf springs with add-a-leaves in place as described in step #6.

8. With assembly in C-clamps or vise, insert the new centerbolt and torque to following values: 3/8" bolt 35-40 ft.-lbs., 7/16" bolt 40-45 ft.-lbs. If applicable. Cut off excess centerbolt, leaving 2 to 3 threads showing.

NOTE: Do not use the centerbolt to draw the leaves together. Failure of any component can cause an explosive disassembly and possible injury.

9. At this time install the leaf alignment clamps. Cover as many leafs as possible, allowing enough room to bend over the ends. (SEE FIGURE #5)
Do not include your overload spring in the alignment clamp if your vehicle is so equipped.

10. Loosely assemble the completed spring assemblies into their respective axle mounts. Replace the U-bolts, nuts and washers and torque to 75-90 ft.-lbs. Now re-install spring eye bolts and/or shackles and torque to them 75-80 ft.-lbs. (See fig. #1)

11. Re-connect axle vent hose and vent tube from brake line junction block. Install shock absorbers.

12. Lower the vehicle.

13. If applicable, loosen the U-bolts that hold the anti-sway bar to the axle and re-align the sway bar so it is not binding on the end links at ride height. Tighten the sway bar end links and U-bolts at ride height.

14. Periodically inspect the assembly for tightness.

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fig. #5

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