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PRO COMP SUSPENSION

Suspension Systems that Work!

Part # 52289
86'-96' Ford Ranger 2WD
IFS
"Stage 1" Suspension
System

This document contains very important information that includes warranty information and instructions for resolving problems you may encounter. Please keep it in the vehicle as a permanent record.

Part #	Description	Qty.	Illus.	Page
90-1232	Radius Arm Drop Bracket, Drvr.	1	1	4
90-1228	Radius Arm Drop Bracket, Pass.	1	1	4
90-1220	Drvr. Axle Pivot Drop Bracket	1	2	5
90-1224	Pass. Axle Pivot Drop Bracket	1	3	6
90-6115	Hardware Pack Containing:			
70-0501251800	1/2" x 1 1/4" USS Gr. 8 Hex Bolt	12	1	4
73-05000034	1/2" SAE Hardened Flat Washer	24	1	4
72-05000100816	1/2" USS Gr. 8 Stover Nut	12	1	4
70-0563501800	9/16" x 3 1/2" USS Gr. 8 Hex Bolt	2	2,3	5,6
70-0561501800	9/16" x 1 1/2" USS Gr. 8 Hex Bolt	1	2	5
70-0431251800	7/16" x 1 1/4" USS Gr. 8 Hex Bolt	3	2	5
73-05600034	9/16" SAE Hardened Flat Washer	6	1,2,3	4,5,6
73-04300034	7/16" SAE Hardened Flat Washer	6	2	5
72-05600100816	9/16" USS Gr. 8 Stover Nut	3	1,2,3	4,5,6
72-04300100816	7/16" USS Gr. 8 Stover Nut	3	2	5
70-0431251801	3/8" x 1" USS Gr. 8 Hex Bolt	2	4	7
73-03700030	3/8" SAE Flat Washer	2	4	7
72-03700100512	3/8" USS Gr. 5 Nyloc Nut	2	4	7
90-6119	Hardware Pack Containing:			
90-2107	Sway Bar Extension	2	5	7
51792	Sleeve	4	5	7
45359	Bushing, Hour Glass	4	5	7
90-6116	Hardware Pack Containing:			
90-1310	"J" Clip Short	1	4	7
90-1309	"J" Clip Long	1	4	7
90-6029	Brake Line Kit	1	6	8
90-6377	Hardware Pack: Sway Bar			
90-2107	Sway Bar Link	2	5	7
51792	5/8" X 1/2" X 1.37 Sleeve	4	5	7
45359	5/8" Rubber Hourglass Bushing	4	5	7

The following parts are used in conjunction with this kit and must be purchased separately.

Coil Spring 24513 (for standard and xtra cab)

Pitman Arm (Power Steering Only) FD400

Rear Block Kit	2.5"	22250
	3.5"	22251

Stainless Steel Brake lines	86-88	7315
	89-96	7310

Shock Absorbers

Front **321510 or 921510**

Rear 2.5" **325509 or 925509**

Rear 3.5" **326500 or 926500**

Introduction:

- ◆ **This installation requires a professional mechanic!**
- ◆ We recommend that you have access to a factory service manual for your vehicle to assist in the disassembly and reassembly of your vehicle. It contains a wealth of detailed information.
- ◆ Prior to installation, carefully inspect the vehicle's steering and driveline systems paying close attention to the tie rod ends, ball joints, wheel bearing preload, pitman and idler arm. Additionally, check steering-to-frame and suspension-to-frame attaching points for stress cracks. The overall vehicle must be in excellent working condition. Repair or replace all worn or damaged parts!
- ◆ Read the instructions carefully and study the illustrations before attempting installation! You may save yourself a lot of extra work.
- ◆ Check the parts and hardware against the parts list to assure that your kit is complete. Separating parts according to the areas where they will be used and placing the hardware with the brackets before you begin will save installation time.
- ◆ Check the special equipment list and ensure the availability of these tools.
- ◆ Secure and properly block vehicle prior to beginning installation.
- ◆ **ALWAYS** wear safety glasses when using power tools or working under the vehicle!
- ◆ Use caution when cutting is required under the vehicle. The factory undercoating is flammable. Take appropriate precautions. **Have a fire extinguisher close at hand.**
- ◆ Foot pound torque readings are listed on the Torque Specifications chart at the end of the instructions. These are to be used unless specifically directed otherwise. Apply thread lock-retaining compound where specified.
- ◆ *Please note that while every effort is made to ensure that the installation of your Pro Comp lift kit is a positive experience, variations in construction and assembly in the vehicle manufacturing process will virtually ensure that some parts may seem difficult to install. Additionally, the current trend in manufacturing of vehicles results in a frame that is highly flexible and may shift slightly on disassembly prior to installation. The use of pry bars and tapered punches for alignment is considered normal and usually does not indicate a faulty product. However, if you are uncertain about some aspect of the installation process, please feel free to call our tech support department at the number listed on the cover page. We do not recommend that you modify the Pro Comp parts in any way as this will void any warranty expressed or implied by the Pro Comp Suspension company.*

Please Note:

- ⇒ Front suspension and head light realignment is necessary!
- ⇒ Speedometer and ABS recalibration will be necessary if larger tires (10% more than stock diameter) are installed.
- ⇒ **IT IS ADVISABLE THAT YOU HAVE HELP AVAILABLE WHEN INSTALLING THIS KIT. SOME COMPONENTS ARE HEAVY AND AWKWARD. AN ADDITIONAL SET OF HANDS IS GOOD INSURANCE AGAINST INJURY!**

Important!

Tire and wheel choice is crucial in assuring proper fit performance and the safety of your Pro Comp equipped vehicle. For this application a wheel not to exceed 8" in width with a maximum backsparing of 3.5" must be used. Diameter of wheel must be 15". Any other diameter, either smaller or larger, will not be endorsed as acceptable by Explorer Pro Comp and will void any and all warranties, written or implied. In addition, a quality tire of radial design, not to exceed 30" tall x 9.50" wide for 86-92 vehicles and 31" tall x 10.50" wide for 93-97 vehicles is recommended.

Before You Begin:

- ⇒ Read the instructions and study the illustrations before attempting the installation.
- ⇒ Separation the parts according to the areas where they will be used and placing the hardware with the brackets before you begin will save installation time.
- ⇒ Check the parts and hardware against the parts list to assure that your kit is complete.
- ⇒ ALWAYS wear safety glasses when using power tools or working beneath your vehicle.
- ⇒ A pitman arm removal tool and tie rod separating tool are required to perform the installation. See the special tools at the bottom of page 2.
- ⇒ Always use NEW cotter pins on re-assembly! (These items are NOT supplied)

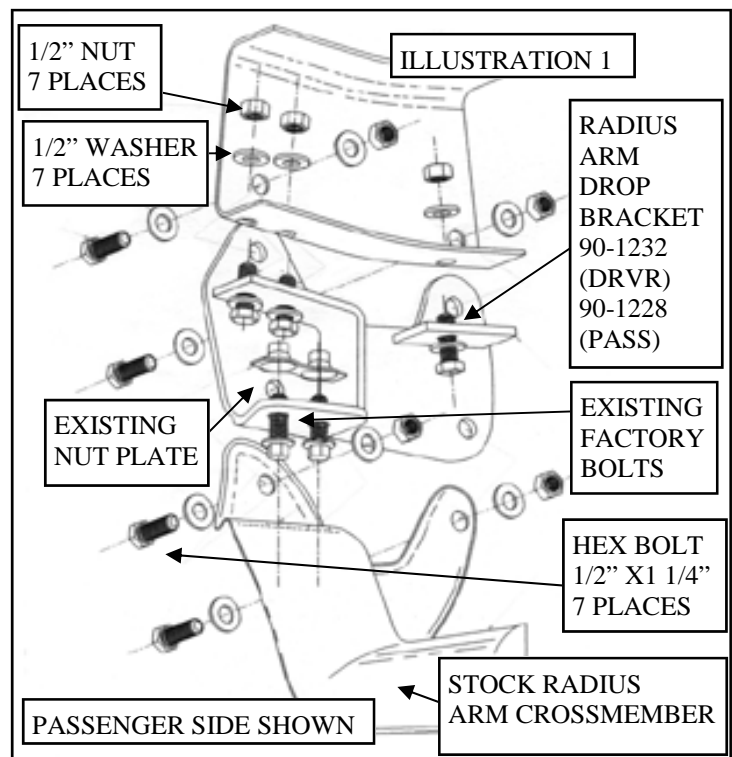
FRONT DISASSEMBLY AND ASSEMBLY PROCEDURES:

SPECIAL NOTES:

Be sure your vehicle is in good working condition; repair or replace worn parts. Pay special attention to the steering and driveline systems including the tie rod/drag link ends, ball joints and wheel bearing preload. Also, check for stress cracks in areas where steering and suspension attach to frame.

INSTALLATION INSTRUCTIONS:

- 1) Place floor jacks under both ends of the axle and raise approximately 12". Place jack stands under the frame about 4" behind the radius arm brackets. Lower the frame onto the stands until there is just a slight load on the coil springs.
- 2) Remove the wheels. Remove the cotter pin and nut to disconnect the drag link from the pitman arm.

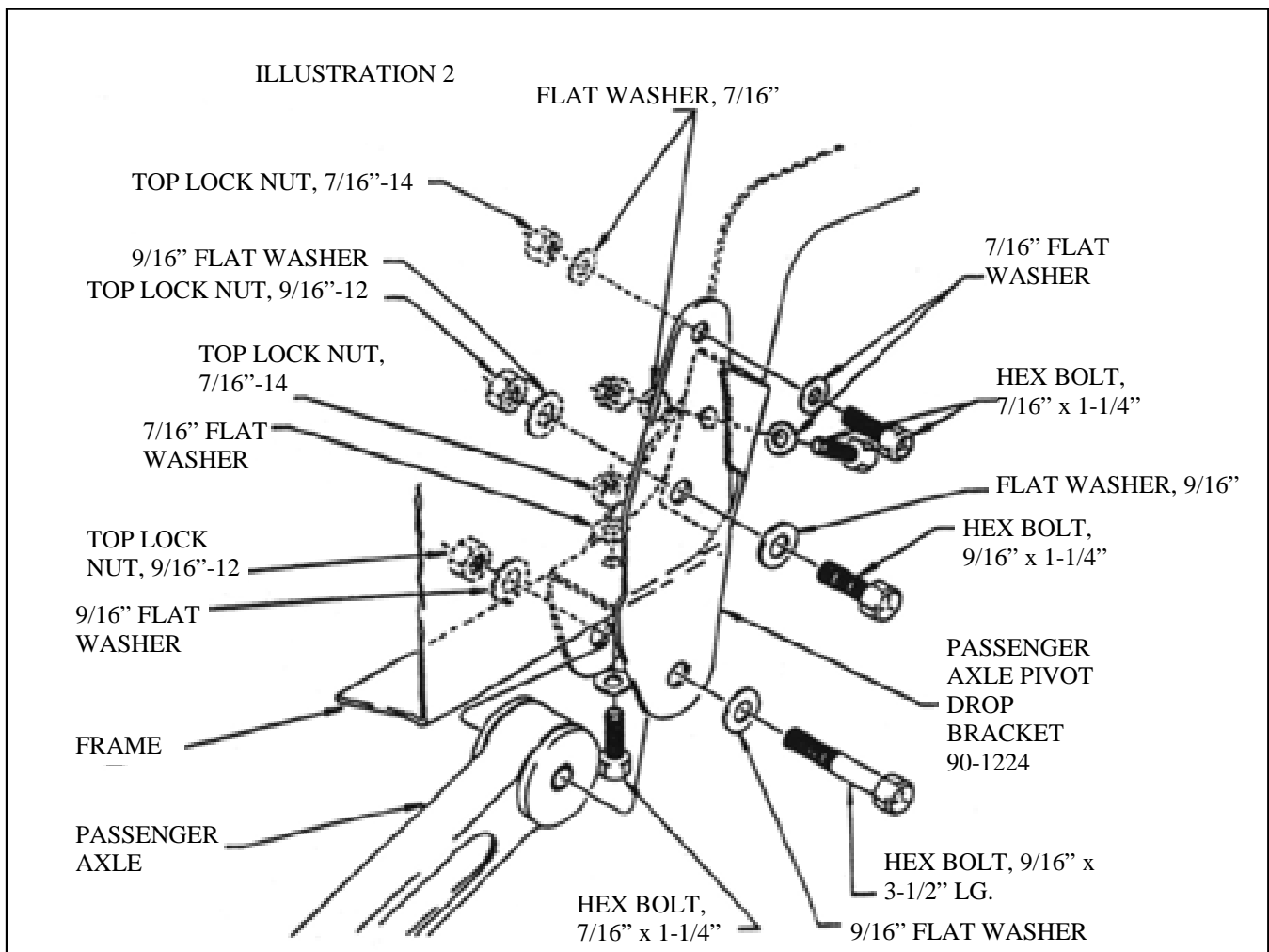


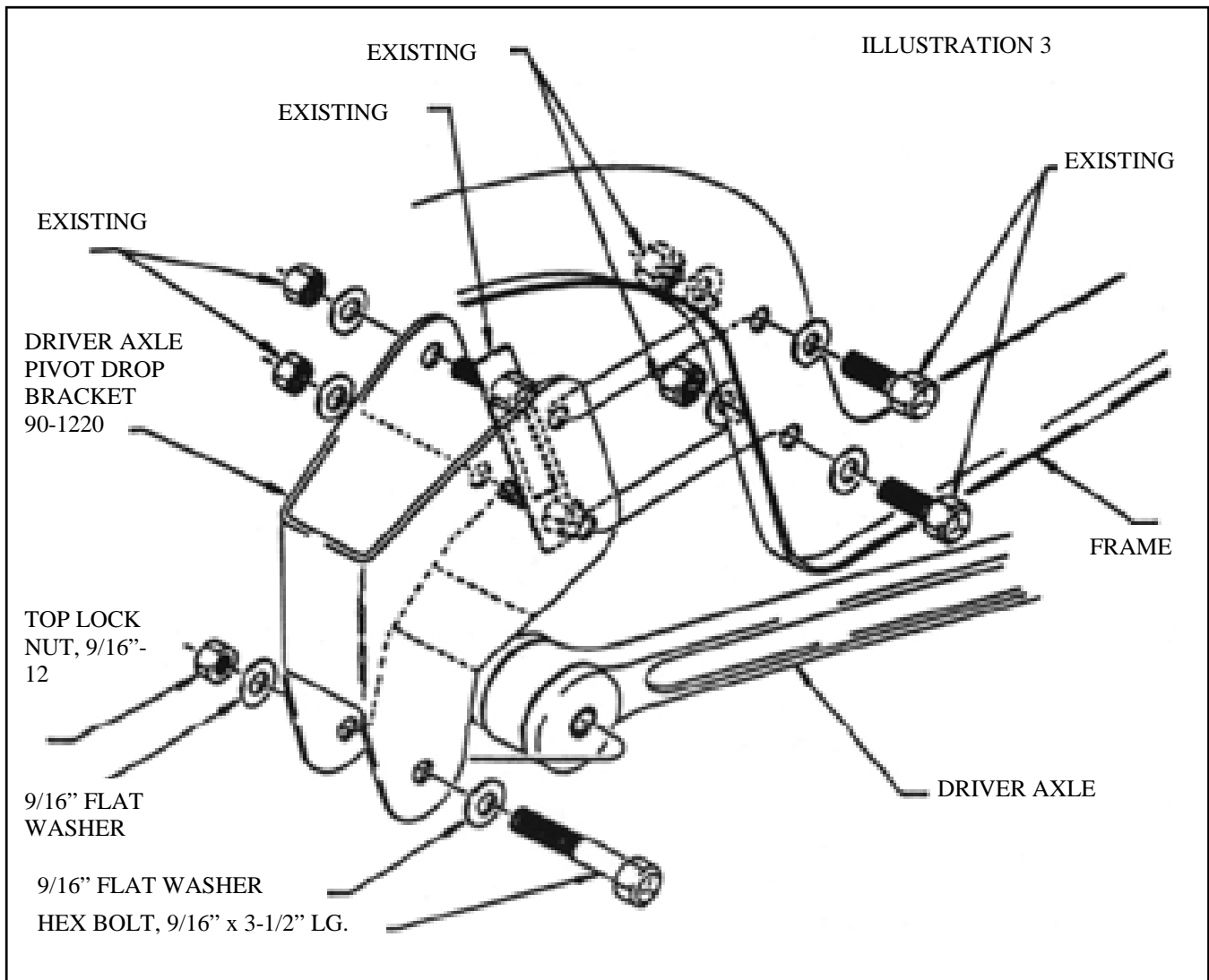
3) Loosen the bolts that attach the anti-sway bar to the radius arm brackets, if so equipped. Place a jack under the center of the crossmember. Raise jack until it touches the crossmember, but do not put a load on it. Remove the rivets and bolts that attach the radius arm brackets to the frame. See ILLUSTRATION 1. If a torch is used to remove the rivets, be careful not to damage the brackets, rubber body mounts, wiring or hoses located inside the frame.

4) Using a small hydraulic jack, positioned horizontally, spread the radius arm approximately 1/2". The holes connecting the radius arm brackets are elongated. Lower the radius arm assembly approximately 7". Be careful not to overextend the rubber brake hoses.

5) Install the radius arm drop brackets, 96-1232 and 96-1228, using the existing hardware where the bracket bolts to the bottom of the frame rail and the supplied 1/2" hardware in the other holes. See ILLUSTRATION 1. Make sure the bracket is flush against the frame rail and check for obstructions before drilling the 1/2" holes. Apply loctite and tighten bolts.

6) Remove the shocks. The stock rubber shock grommets can be reused. Remove the passenger axle pivot bracket bolt and lower the axle. Drill out the rivets securing the bracket to the crossmember. Remove stock bracket and discard. Be cautious to not damage the crossmember when removing the stock bracket. Install the passenger axle pivot drop bracket, 90-1224, using the supplied 9/16" x 1-1/2" bolt and 9/16" washers and nuts. Install these in the original axle



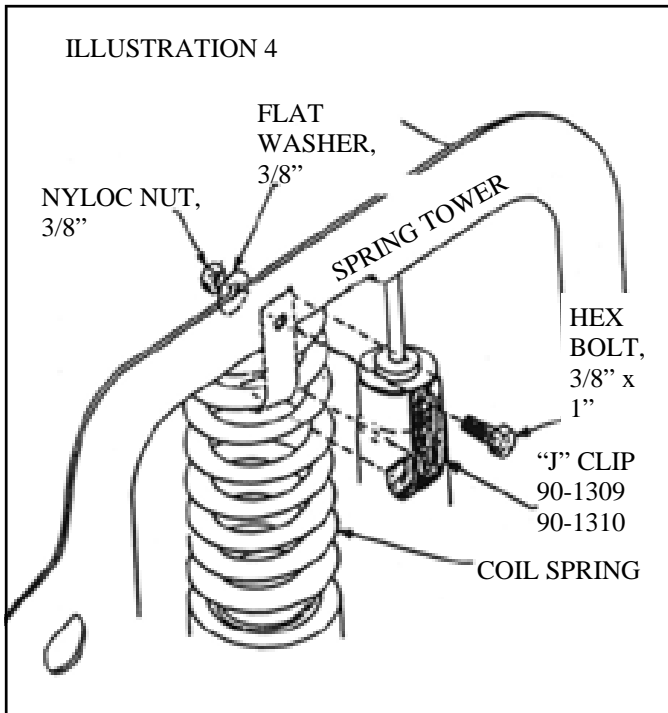


pivot hole as shown in ILLUSTRATION 2. Use the supplied 7/16" x 1-1/4" bolts and 7/16" washers and nuts in the remaining 3 holes. Apply loctite and tighten bolts. Attach passenger axle to axle pivot drop bracket using supplied 9/16" x 3-1/2" bolt and 9/16" washer and nut.

7) Remove the driver axle pivot bolt. Remove and discard the stock axle pivot bracket, but save the mounting hardware. Install the driver axle pivot drop bracket, 90-1220, using the existing hardware as shown in ILLUSTRATION 3. Apply loctite and tighten bolts. Attach the driver axle to the axle pivot drop bracket using the supplied 9/16" x 3-1/2" bolt and 9/16" washer and nut.

8) Install new springs coil spring 24513, as follows:

- a) Remove the springs lower retaining nut and washer, lower the jack and remove the spring.
- b) The spring retaining prongs, stamped into the spring tower, may need to be bent out of the way to accommodate the increased coil size.
- c) Install the spring. Put a slight load on the jack to keep the coil in its upper seat; tighten nut. Center coil properly to prohibit the upper portion from rubbing the spring tower.



- d) Install the coil spring "J" clip as shown in ILLUSTRATION 4.
- e) Install new shock. Torque bottom bolt

only. Tighten upper stem just until bushing swells slightly.

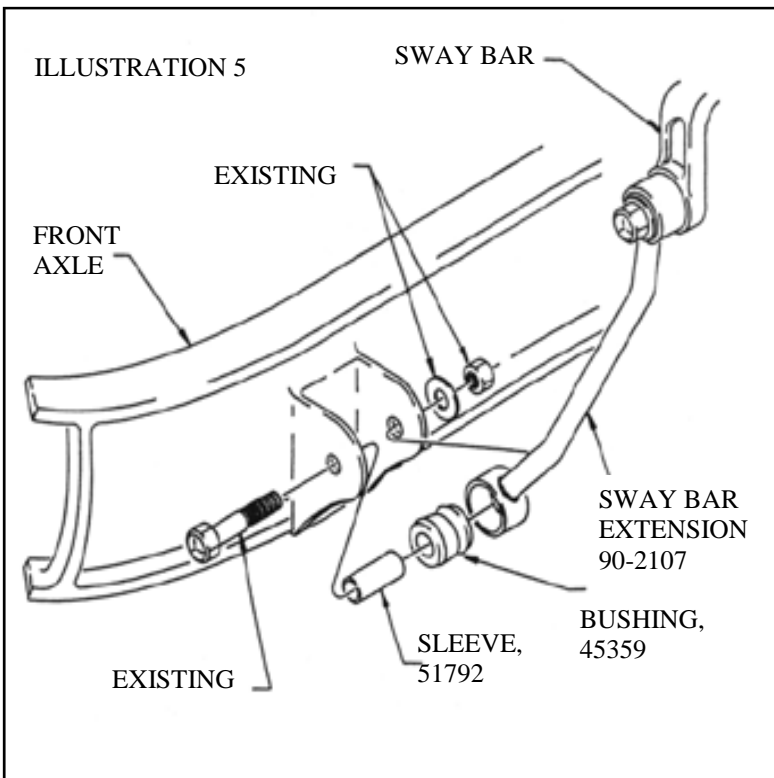
- 9) Install the sway bar extensions, 90-2107 (2) as shown in ILLUSTRATION 5. Apply loctite and tighten bolts.
- 10) Reinstall the nut and cotter pin to connect the drag link to the pitman arm. Install the wheels. Remove the jack stands and lower the vehicle.

BRAKE LINE LOCATION INSTALLATION:

- 11) Using the Pro Comp brake line kit (90-6029), position the grommet on the existing sway bar approximately 3-1/2" from the sway bar link (ILLUSTRATION 6). Check all hoses for length and proper clearance from any moving parts.

AFTER INSTALLATION IS COMPLETE:

⇒ Recheck and tighten/torque all fasteners. See torque specification chart below.



⇒ Recheck brake/steering systems. Be sure all hoses are long enough. Make sure there are no clearance/binding problems.

⇒ Using the brake line hose kit (90-6029) position brake lines so they do not make contact with any moving parts. Hoses must be able to slide unrestricted through the grommets provided.

⇒ Readjust headlights.

⇒ "Seat" the front axle/steering assembly by driving back and forth about 25 ft. several times with your wheels pointed straight. Then follow these alignment settings:

TOE-IN: 1/32" a temporary setting may be required before driving to alignment shop.

CAMBER: Initial driver side - 7/8 to 5/8 degrees positive
Initial passenger side - 5/8 to 1/2 degrees positive

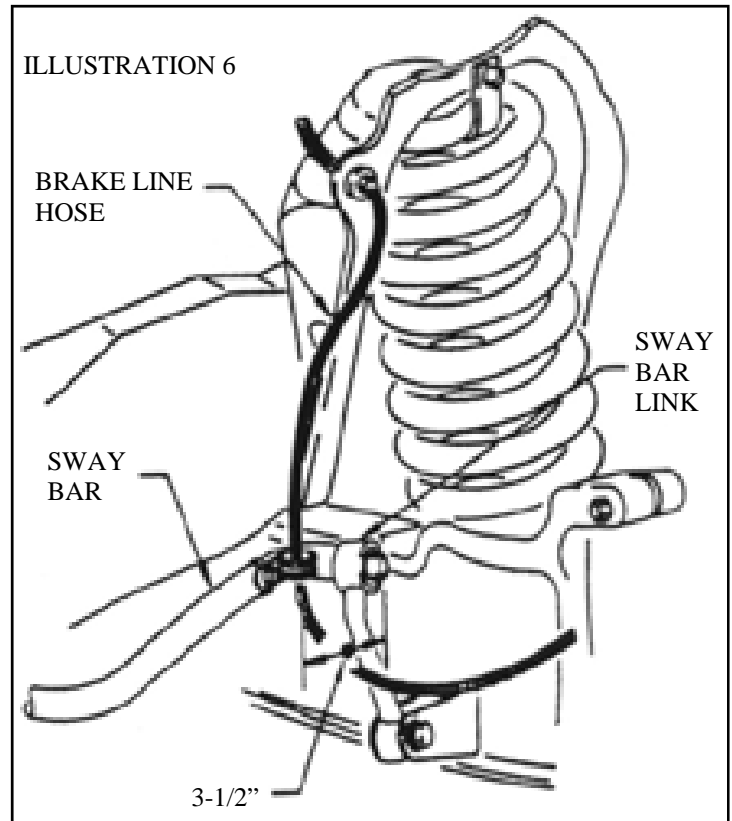
CASTER: A 4 degree positive is preferred with roughly a 3 degree plus/minus tolerance. Caster is non-adjustable and present by radius arm drop brackets included in this kit.

MAXIMUM SIDE-TO-SIDE VARIATIONS:

Caster - 1 1/2 degrees
Camber - 23/32 degrees

TORQUE SPECIFICATIONS:

7/16" Bolts.....	50' lbs.
9/16" Bolts.....	105" lbs.
Shock, Bottom Bolt.....	42-72' lbs.
Existing Bolts, ILLUSTRATION 3.....	55-65' lbs.
Existing Bolts, ILLUSTRATION 1.....	35-50' lbs.
Existing Bolts, ILLUSTRATION 5.....	26' lbs.



Use this only as a guide for hardware without a called out torque specification in the instruction manual.

Bolt Torque and ID						
Decimal System			Metric System			
All Torques in Ft. Lbs. Maximums						
Bolt Size	Grade 5	Grade 8	Bolt Size	Class 9.8	Class 10.9	Class 12.9
5/16	15	20	M6	5	9	12
3/8	30	45	M8	18	23	27
7/16	45	60	M10	32	45	50
1/2	65	90	M12	55	75	90
9/16	95	130	M14	85	120	145
5/8	135	175	M16	130	165	210
3/4	185	280	M18	170	240	290

1/2-13x1.75 HHCS **Grade 5** **Grade 8**
(No. of Marks + 2)

D T L X

G = Grade (Bolt Strength)
D = Nominal Diameter (Inches)
T = Thread Count (Threads per Inch)
L = Length (Inches)
X = Description (Hex Head Cap Screw)

M12-1.25x50 HHCS

D T L X

P = Property Class (Bolt Strength)
D = Nominal Diameter (Millimeters)
T = Thread Pitch (Thread Width, mm)
L = Length (Millimeters)
X = Description (Hex Head Cap Screw)

Notice to Owner operator, Dealer and Installer:

Vehicles that have been enhanced for off-road performance often have unique handling characteristics due to the higher center of gravity and larger tires. This vehicle may handle, react and stop differently than many passenger cars or unmodified vehicles, both on and off-road. You must drive your vehicle safely! Extreme care should always be taken to prevent vehicle rollover or loss of control, which can result in serious injury or even death. Always avoid sudden sharp turns or abrupt maneuvers and allow more time and distance for braking! Pro Comp reminds you to fasten your seat belts at all times and reduce speed! We will gladly answer any questions concerning the design, function, maintenance and correct use of our products.

Please make sure your Dealer/Installer explains and delivers all warning notices, warranty forms and instruction sheets included with Pro Comp product.

Application listings in this catalog have been carefully fit checked for each model and year denoted. However, Pro Comp reserves the right to update as necessary, without notice, and will not be held responsible for misprints, changes or variations made by vehicle manufacturers. Please call when in question regarding new model year, vehicles not listed by specific body or chassis styles or vehicles not originally distributed in the USA.

Please note that certain mechanical aspects of any suspension lift product may accelerate ordinary wear of original equipment components. Further, installation of certain Pro Comp products may void the vehicle’s factory warranty as it pertains to certain covered parts; it is the consumer’s responsibility to check with their local dealer for warranty coverage before installation of the lift.

Warranty and Return policy:

Pro Comp warrants its full line of products to be free from defects in workmanship and materials. Pro Comp’s obligation under this warranty is limited to repair or replacement, at Pro Comp’s option, of the defective product. Any and all costs of removal, installation, freight or incidental or consequential damages are expressly excluded from this warranty. Pro Comp is not responsible for damages and / or warranty of other vehicle parts related or non-related to the installation of Pro Comp product. A consumer who makes the decision to modify his vehicle with aftermarket components of any kind will assume all risk and responsibility for potential damages incurred as a result of their chosen modifications. Warranty coverage does not include consumer opinions regarding ride comfort, fitment and design. Warranty claims can be made directly with Pro Comp or at any factory authorized Pro Comp dealer.

IMPORTANT! To validate the warranty on this purchase please be sure to mail in the warranty card.

Claims not covered under warranty-

- Parts subject to normal wear, this includes bushings, bump stops, ball joints, tie rod ends and heim joints
 - Discontinued products at Pro Comp’s discretion
- Bent or dented product
- Finish after 90 days
- Leaf or coil springs used without proper bump stops
- Light bulbs
- Products with evident damage caused by abrasion or contact with other items
- Damage caused as a result of not following recommendations or requirements called out in the installation manuals
- Products used in applications other than listed in Pro Comp’s catalog
- Components or accessories used in conjunction with other manufacturer’s systems
- Tire & Wheel Warranty as per Pro Competition Tire Company policy
- Warranty claims without “Proof of Purchase”
- Pro Comp Pro Runner coil over shocks are considered a serviceable shock with a one-year warranty against leakage only. Rebuild service and replacement parts will be available and sold separately by Pro Comp. Contact Pro Comp for specific service charges.
- Pro Comp accepts no responsibility for any altered product, improper installation, lack of or improper maintenance, or improper use of our products.

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<u>PLACE</u>
<u>WARRANTY REGISTRATION</u>
<u>NUMBER</u>
<u>HERE:</u> _____