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PRO COMP SUSPENSION

Suspension Systems that Work!

Part #52205 / 52205MX
2004 FORD F-150 2WD

Attention: New Ford spindle nuts, part number 4L3Z-3C294-AA are required.

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.

Box 1 of 4-PN 52205-1

Part #	Description	Qty.	Illus.	Page
90-3226	2004 FORD F150 REAR CROSSMEMBER	1	4,5	8
90-2319	COMPRESSION STRUT	2	10	11
13-90390	U BOLT	4	C	13
20-65302	9/16" HARDWARE PACK: U-BOLTS	1	C	13
90-2144	REAR BUMP STOP EXTENSION	2	-	-
95-300F	3" ALUMINUM BLOCK	2	C	13
90-6299	HARDWARE PACK: FRONT BRAKE LINE DROP	1	-	-
70-0311001500	5/16" X 1" GR 5 HEXBOLT	2	-	-
72-03100100512	5/16" NYLOCK NUT	2	-	-
73-03100030	5/16" SAE FLAT WASHER	4	-	-
90-3058	SWAY BAR DROPS	2	7	9
90-1955	2004 F150 EMERGENCY BRAKE BRACKET	1	B	13
90-3272	2006 EMERGENCY BRAKE BRACKET	1	-	-
90-6422	HARDWARE PACK: E– BRAKE BRACKET	1	-	-
70-0501501500	1/2” X 1 1/2” HEX BOLT	1	-	-
73-05000530	1/2” SAE WASHERS	2	-	-
72-050100512	1/2” NYLOC NUT	1	-	-

Box 2 of 4-PN 52205-2

90-4104	SPINDLE DRIVER 2WD	1	-	-
90-4105	SPINDLE PASSENGER 2WD	1	-	-

Box 3 of 4-PN 52205-3

90-6263	HARDWARE PACK: COMPRESSION STRUT BUSHINGS	1	10	11
15-11148	BUSHING, URETHANE	8	10	11
90-2109	SLEEVE, COMPRESSION STRUT	4	10	11
90-6314	HARDWARE PACK: REAR BRAKE LINE DROP /BUMP EXT	1	-	-
70-0311001800	5/16-18 x 1 HEX CAP SCREW GR. 8 Z-YELLOW	1	A	12-
72-031100816	5/16-18 UNITORQUE NUT GR. C Z	1	-	-
73-03100838	5/16 USS FLAT WASHER ZINC	2	-	-
70-0371501800	3/8-16 X 1 1/2 HEX CAP SCREW GR. 8 Z-YELLOW	2	-	-
72-037100816	3/8-16 UNITORQUE NUT GR. C Z	2	-	-
73-03700034	3/8 HARDENED FLAT WASHER F436 SAE Z-YELLOW	4	-	-
90-6315	HARDWARE PACK: SWAY BAR DROP	1	7	9

Part #	Description	Qty.	Illus.	Page
70-0431751800	7/16-14 x 1 3/4" HEX CAP SCREW GR. 8 Z-YELLOW	4	-	-
72-043100816	7/16-14 UNITORQUE NUT GR. C Z	4	-	-
73-04300830	7/16 SAE FLAT WASHER ZINC	8	-	-
90-1915	2004 F150 COMPRESSION STRUT NUT PLATE	2	10	11
90-6313	HARDWARE PACK: 2004 F150 CROSSMEMBER	1	6	9
.180CNUCZ	18MM STOVER	4	-	-
.180NWHDZ	18MM WASHERS	4	-	-
90-6324	HARDWARE PACK:	1	-	-
90-1974	ECCENTRIC CAM BOLT	4	6	9
90-6234	HARDWARE PACK: COMPRESSION STRUTS	1	10	11
70-0501251800	1/2"-13 X 1 1/4" GR 8 HEX BOLT	2	-	-
70-0504001800	1/2"-13 X 4" GR 8 HEX BOLT	4	-	-
72-050100816	1/2"-13 GR 8 STOVER NUT	4	-	-
73-05000034	1/2" SAE HARDENED FLAT WASHER	10	-	-
90-6317	HARDWARE PACK: SPACER MOUNT	1	8a,8b,9	10
72-043200810	7/16-20 GR. 8 PLATED HEX NUT	6	-	-
73-04300830	7/16 SAE FLAT WASHER ZINC	6	-	-
73-04300836	7/16 SPLIT LOCK WASHER	6	-	-
90-6319	HARDWARE PACK: ZIP TIES	1	-	-
10999	ZIP TIE, 11", BLACK	12	-	-
90-6361	HARDWARE PACK:	1	-	-
73-07500834	3/4" HARDENED FLAT WASHER		1	B 13
90-1083	REAR BRAKE LINE DROP	1	A	12
90-55089-3	FRONT BRAKE LINE EXTENSION (PASS)	1	-	-
90-55089-4	FRONT BRAKE LINE EXTENSION (DRIVER)	1	-	-
90-1104	COMPRESSION STRUT MOUNT	2	10	11
90-3230	F150 FRONT CROSSMEMBER	1	3,5	7,8
90-6393	HARDWARE PACK: BRAKE LINE DROP (2005 MODEL)	1	-	-
90-3202	BRAKE LINE DROP	-	-	-

Box 4 of 4-PN 52205-4

927504	9000 SERIES SHOCK (REAR)	2	-	-
90-2473	COIL SPACER	2	8b	10

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.**
- If you use traction bars, MX6 shocks may hit the traction bar mount, if it does a ES9000 Series shock should be used.

Important!

Due to differences in manufacturing, dimensions and inflated measurements, tire and wheel combinations should be test fit prior to installation. 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 minimum backspacing of 4.5” to a maximum 5”, additionally, a quality tire of radial design, not exceeding 35” tall X 13.5” wide is recommended. Please note that the use of a 35” X 13.5” tire may require fender modification. Violation of these recommendations will not be endorsed as acceptable by Pro Comp Suspension and will void any and all warranties either written or implied.

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.
* Always use NEW cotter pins on re-assembly! (These items are NOT supplied)
* **IT IS ADVISABLE THAT YOU HAVE HELP AVAILABLE WHEN INSTALLING THIS KIT. SOME COMPONENTS ARE HEAVY AND AWKWARD. ADDITIONAL HELP IS GOOD INSURANCE AGAINST INJURY!**
* New Ford spindle nuts, part number 4L3Z-3C294-AA are required.

Special Tools:

Please refer to your service manual for more information.
A special removal tool is required for safe removal of the tie rods. (PN T64P-3590-F).
These tool may be purchased at your local Ford dealer.
You may be able to rent any of these tools at your local parts store.

Equipment Available from your Pro Comp Distributor!

Traction Bars (X-tra cab 4WD):	**Mounting kit: 72095, Bars: 72500**
Traction Bars (Super Crew cab):	**Mounting kit: 72096, Bars: 72500**
Coil over front shock kit:	**52207MX (2WD)**
Add a leaf kit	**13134**
Ford Spindle Nut (PACK OF TWO)	**90-4116b**
Rear End Shin Kit	**52700**
MX6 Rear shock:	**MX6079 (2WD)**
MX-6R Reservoir Rear shock:	**MX6066R (2WD)**
MX-6R Reservoir Mounting Kit:	**63012 and 63013**

Also, Check out our outstanding selection of Pro Comp tires to compliment your new installation!

Front Installation:

1. Prior to installing this kit, with the vehicle on the ground. Measure the height of your vehicle. This measurement can be recorded from the center of the wheel, straight up to the top of the inner fender lip. Record the measurements below.

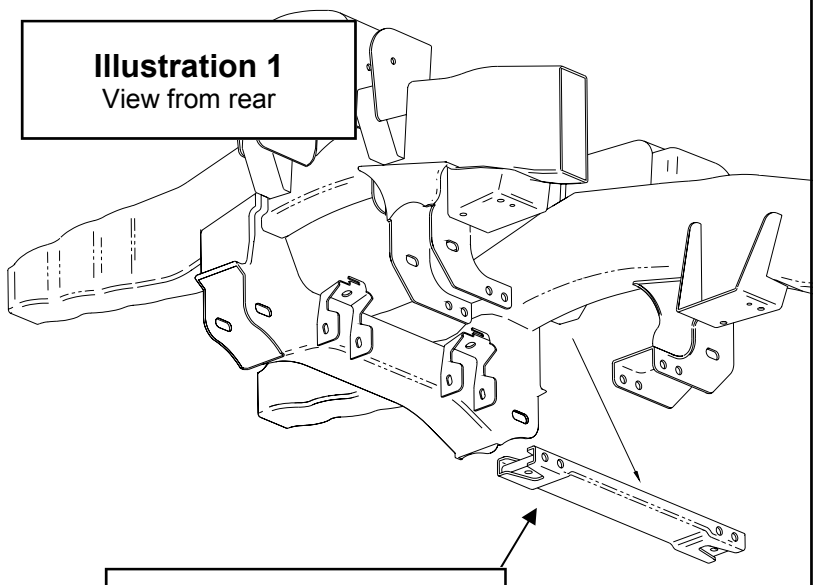
LF:_____ **RF**:_____

LR:_____ **RR**:_____

2. Ensure that your work space is of adequate size and the work surface is level. Place your floor jack under the front cross member and raise vehicle. Place jack stands under the frame rails behind the front wheel wells and lower the frame onto the stands. Remove the jack and set the emergency brake, and place blocks both in front of and behind the rear wheels. Remove the front wheels.
3. Remove any skid plates and debris shields as necessary.
4. Work on one side of the vehicle at a time.
5. Remove the front calipers from the front disks by removing the 2 retaining bolts.

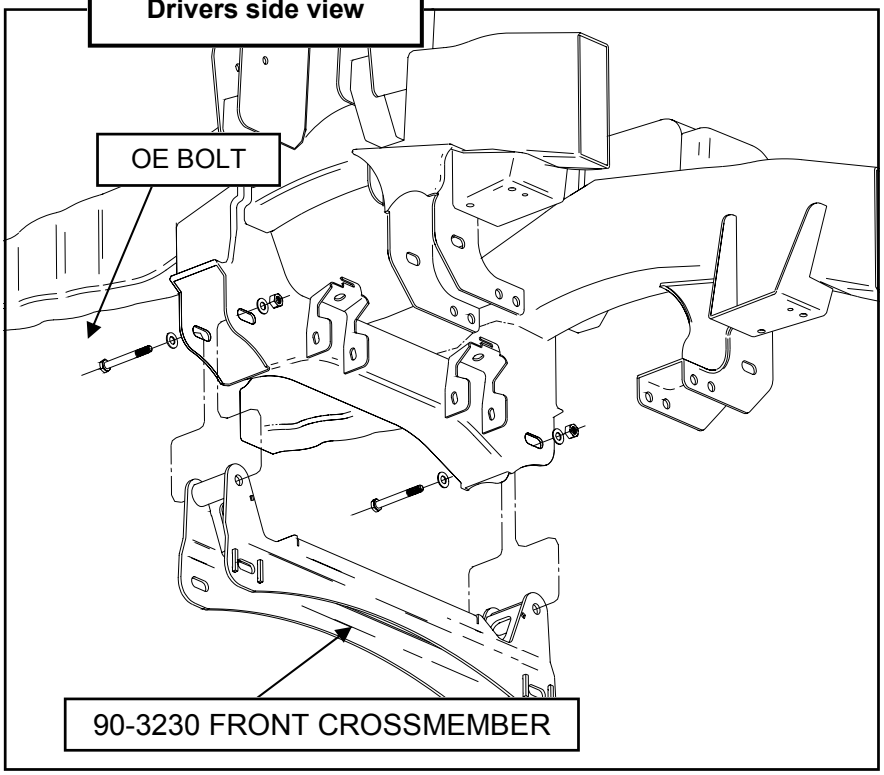
   NOTE: Make sure you do not let the calipers hang on the brake lines or damage will occur.
6. Remove the cotter pin, retainer and nut from the spud. Remove the front rotor and set aside.
7. Remove the anti-lock wiring and sensor from the spindle if applicable.
8. Remove the dust shields from the spindle.
9. Using the appropriate tool, remove the tie rod end nut and carefully separate from the spindle.
10. Remove the upper ball joint nut from the spindle and carefully separate using the appropriate tool.
11. Remove the lower ball joint nut, carefully separate using the appropriate tool. Remove the spindle from the vehicle set the spindle aside.
12. Remove the nuts from the sway bar links on the lower a arm.
13. Remove the three nuts from the top of the coil over assembly and the one large nut and bolt on the bottom. Remove the coil from the vehicle.
14. Remove the two bolts that retain the lower a-arms and remove them from the truck.
15. Repeat on the other side of the vehicle.
16. Mark the orientation in the truck and remove the sway bar and brackets.

Illustration 1
View from rear



17. Remove the rear cross member brace; retain the bolts and nuts for reuse. See **illustration 1**.
18. Remove the oil filter drip tray.
19. Install the front cross member 90-3230 into original front A-arm mounting locations, using the factory bolts with the heads to the front, leave loose. Make sure the cam guides face the rear of the truck. See **illustration 3**.
20. Install the rear cross member 90-3226 into the frame with the factory bolts. The heads will face the rear of the truck. See **illustration 4**.
21. Install the lower a-arms into the new cross members with the supplied cam bolts 90-1974, washers and nuts. The cams should fit between the cam guides on the cross members. Center the cams in the guides. You will torque the bolts at the end of the install when the vehicle is on the ground. See **illustration 6**.
22. Torque the front and rear cross member mounting bolts to 135 ft./lbs.
23. Tighten all of the remaining hardware to factory specifications.
24. Install the front sway bar drop brackets 90-3058 to the frame using the factory sway bar mounting hardware. Leave loose. See **illustration 7.**
25. Insert the 7/16" bolts, head up, with the washers from pack 90-6315 into the sway bar drops. See **illustration 7.**
26. Flip the sway bar over from its original orientation and attach the factory sway bar and mounts to the new drop brackets.
27. Swing the sway bar ends up into position and loosely connect them to the a-arms, do not tighten until the truck is on the ground.
28. Torque the sway bar mount hardware to 60 ft./lbs.
29. **WITH THE COIL OVERS** install the new Pro-Comp coil over shock to the upper bracket 90-1977 with the supplied 1/2" X 2 3/4" hardware from pack 90-6318. Fasten upper bracket to truck using the supplied 7/16" hardware on the top. See **illustration 8a and 9.**
30. **WITH THE COIL SPACERS.** Attach the spacer 90-2473 to the top of the shock using the factory hardware. Torque to factory specifications. With the notch in the bottom ring facing the outside of the truck. Fit the shock and spacer into the stock mounting locations. Fasten using

Illustration 3
Drivers side view



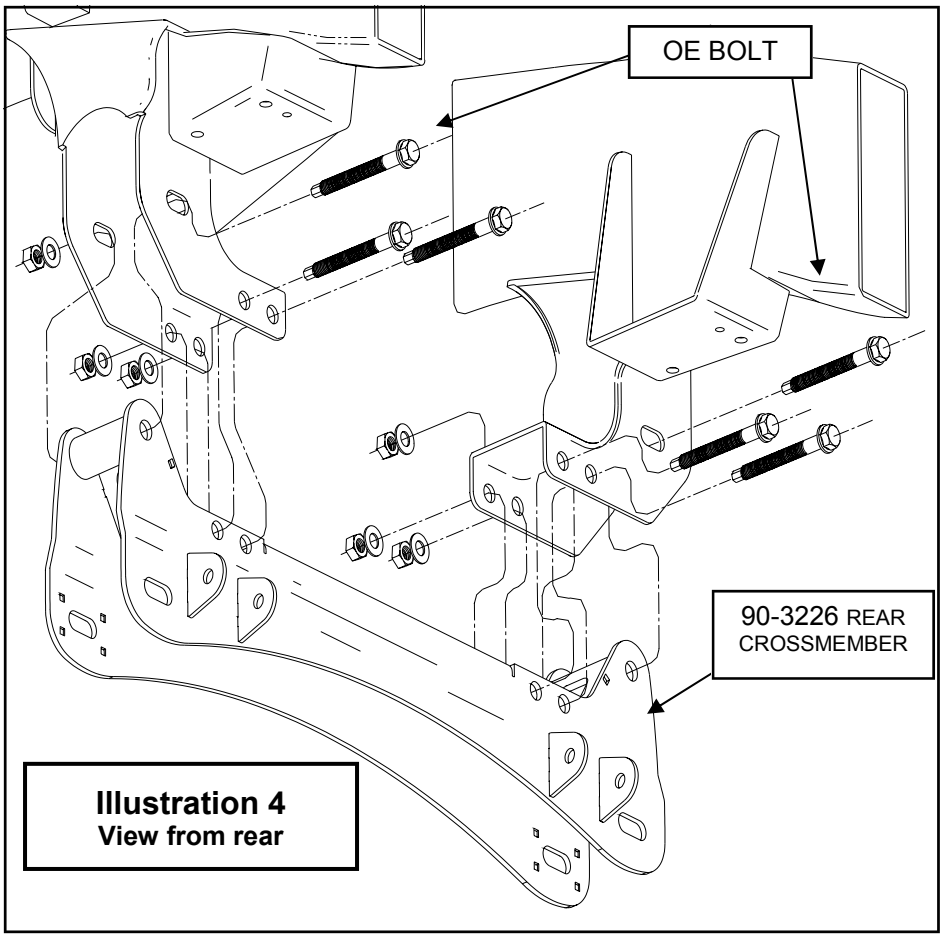


Illustration 4
View from rear

the supplied 7/16" hardware from pack 90-6317. See **illustration 8b.**

31. Install the OE bolt through the lower shock mount and a-arm. Torque to factory specifications.
32. Torque the 7/16" hardware.
33. Transfer all the parts from the factory spindles to the supplied Pro-Comp spindles. Carefully torque all of the hardware to factory specifications and replace any necessary O.E. hardware.
34. Support lower A-arms. Position new front spindles. Attach spindle to lower ball joint. Torque to 111 ft/lbs.
35. Attach the spindle to the upper ball joint. Torque to 85 ft/lbs.
36. Turn tie rod end 180 degrees and fasten tie rod end to the spindle and Torque to 111 ft/lbs.
37. Connect the anti-lock wiring harness and sensor to the spindle if applicable.
38. Repeat the installation on the other side of the vehicle.
39. Install the front rotors on to the front hub. Install the retainer nut and cotter pin. Torque to 295 ft./lbs.
40. Install the front calipers on to the front rotors by reinstalling the retaining bolts. Torque to factory specifications.
41. Remove stock brake line bracket from frame. Remount bracket with the

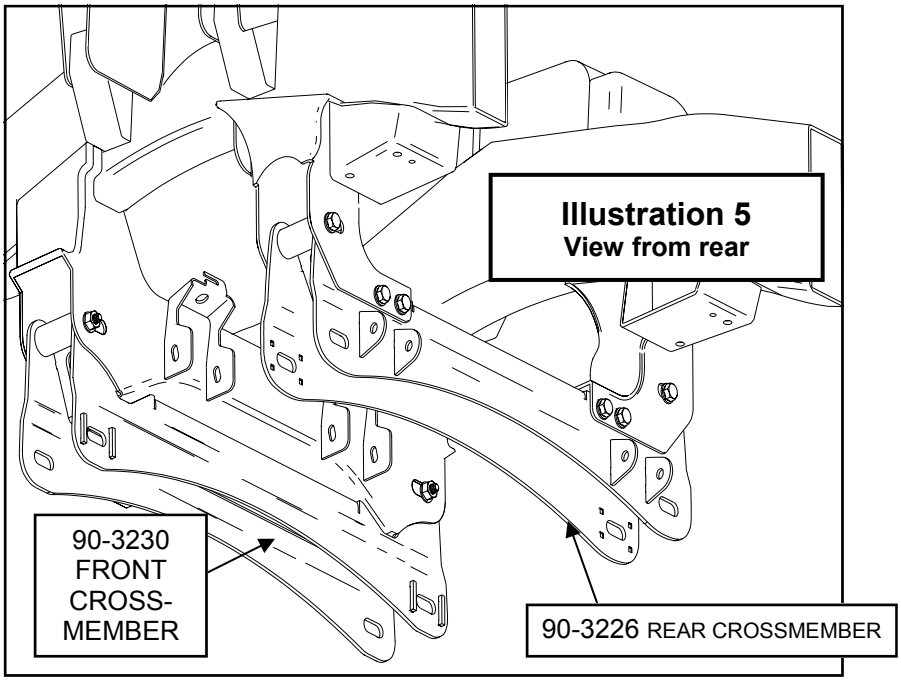
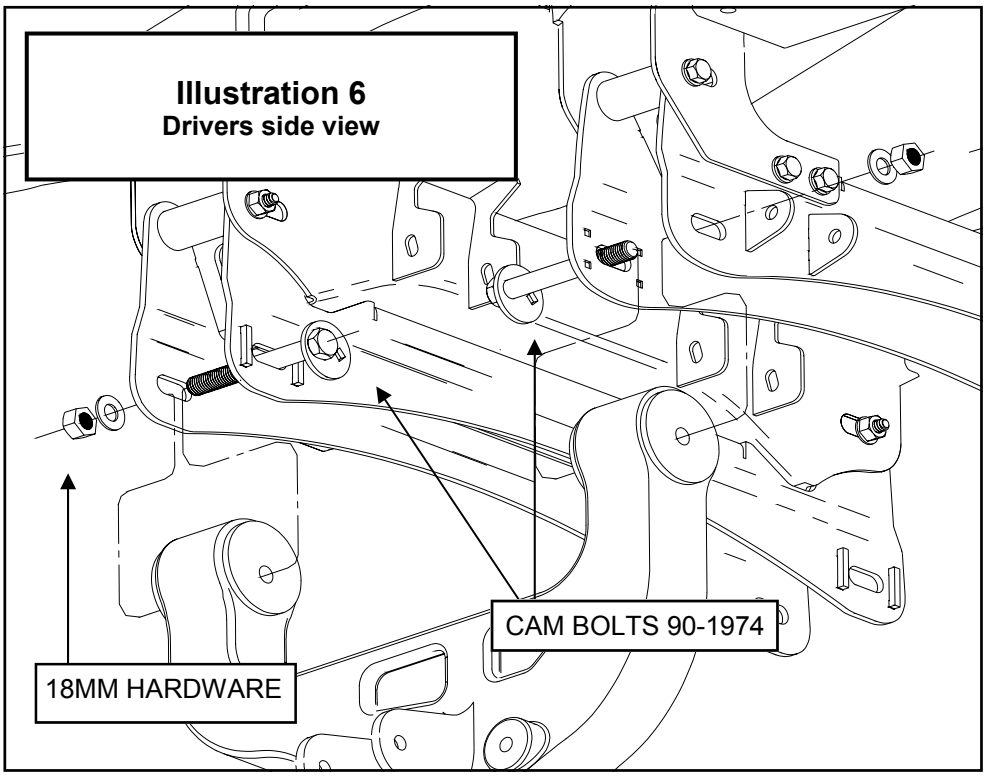


Illustration 5
View from rear



the inside of the frame and that they are not resting against any moving parts.

42. Install the bushings and sleeves from hardware pack 90-6263 into the compression struts 90-2319. See **illustration 10.**

43. Install compression struts into mounts on the rear cross member using supplied 1/2" X 4" hardware. See **illustration 10.**

44. Place the supplied nut plates 90-1915 inside the transmission cross member and attach mounts 90-1104 using the supplied supplied brake line drops 90-55089-3 (PASS) and 90-55089-4(DVR) in between bracket and frame. Use factory hardware to fasten the shorter end of the bracket to the frame. Position the drops, best for your application. Use the supplied hardware from pack 90-6299 to fasten OE bracket to the new brake line drop.

NOTE: 2005 models produced after 11/04 may require the use of longer brake line drops 90-3202 from hardware pack 90-6393. ***Carefully*** unbolt and bend the factory metal brake lines to allow them to be bolted to the bottom of the brake line drops 90-3202.

WARNING:Make sure the brake lines that you just modified are still in the Ford factory plastic retainers attached to

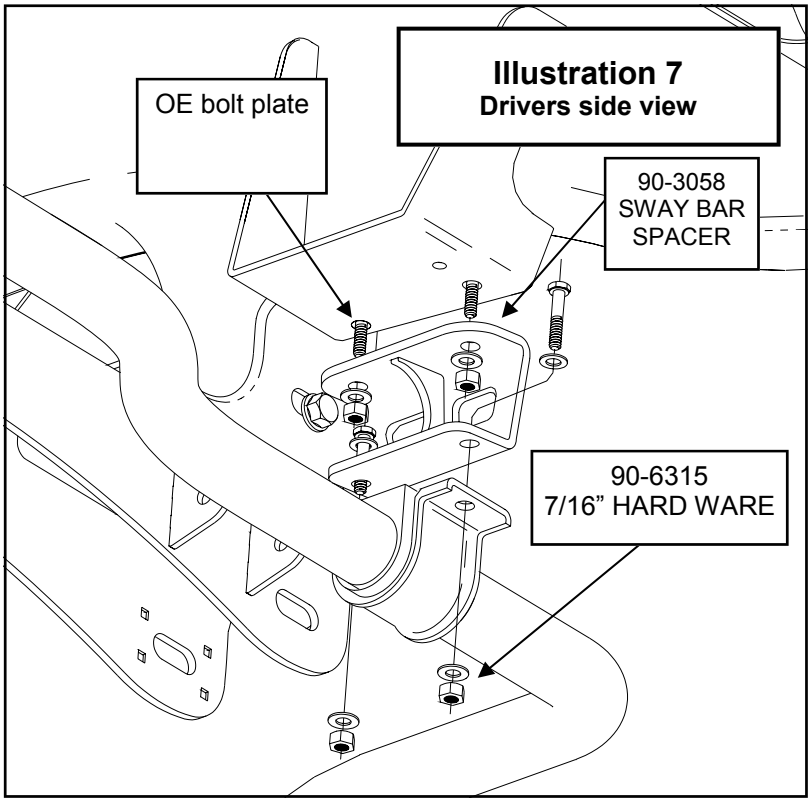


Illustration 8a
With coil over

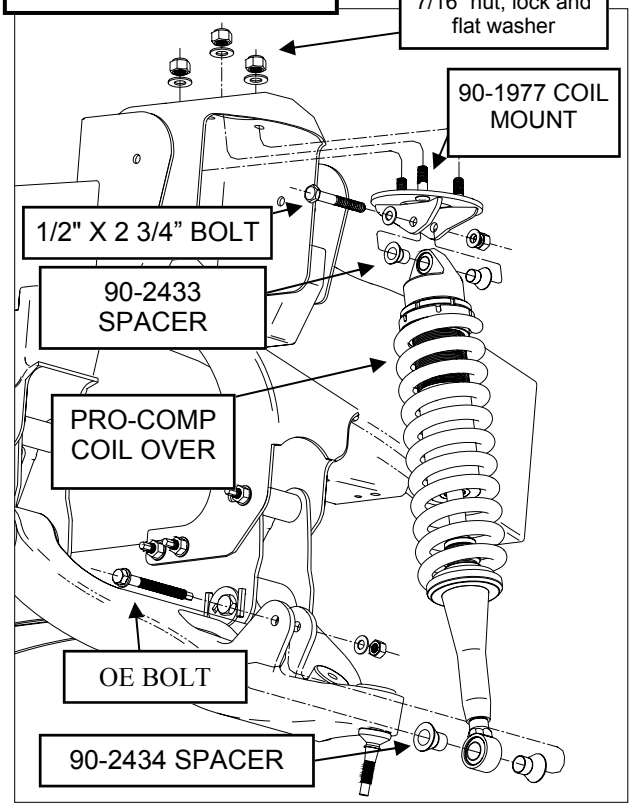


Illustration 8b
With coil spacer

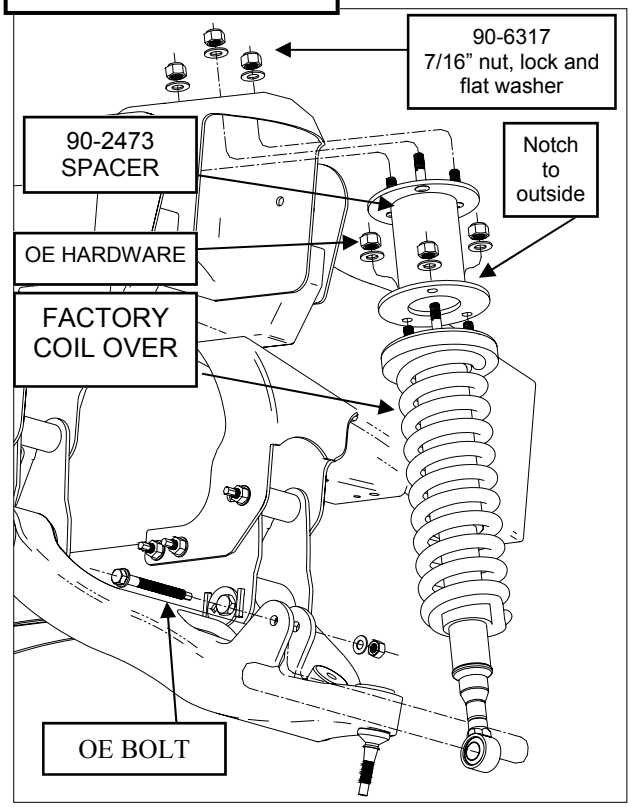
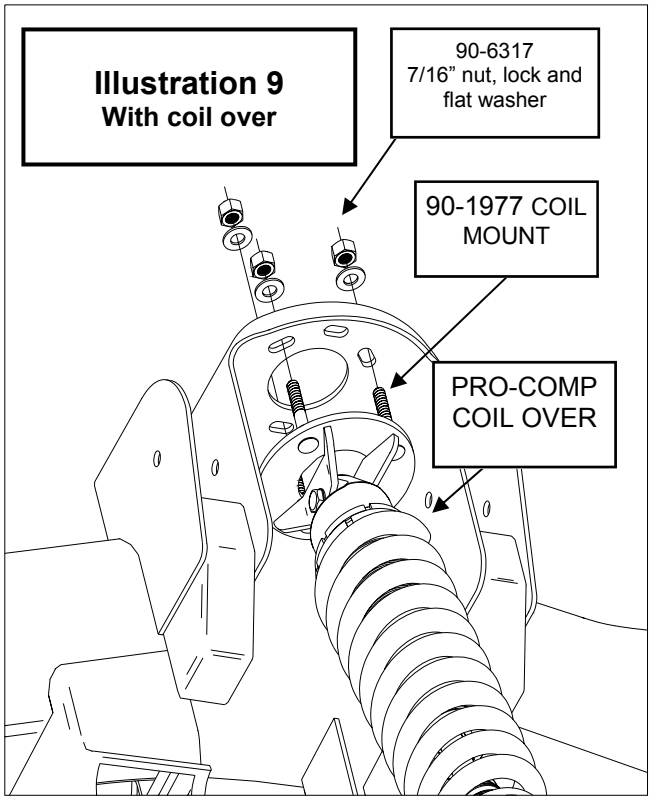
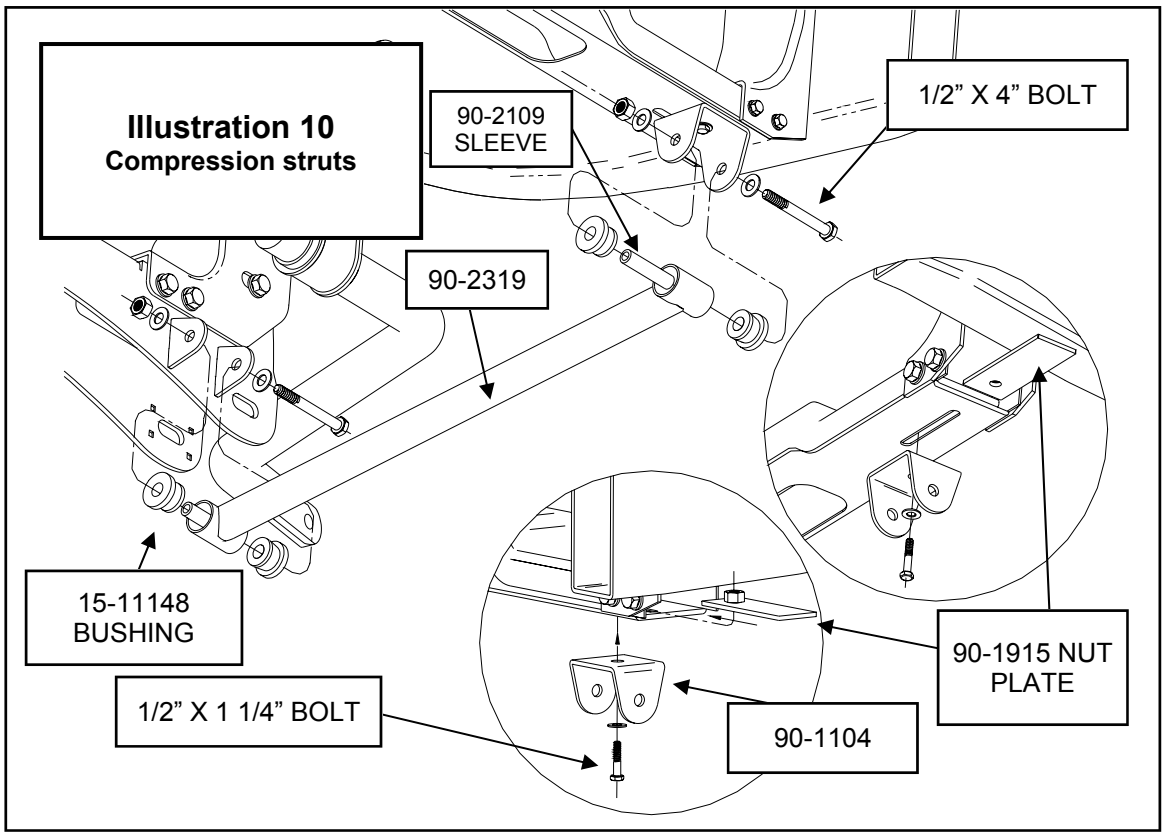


Illustration 9
With coil over



1/2" X 1 1/4" hardware. See **illustration 10.**

45. Rotate the compression struts up and secure them to the mounts using the supplied 1/2" X 4" hardware.
46. Recheck all hardware for proper installation and torque at this time.
47. Reinstall the wheels and tires and lower the vehicle to the ground. Torque the factory wheels to 150 ft/lbs. If you are using aftermarket wheels follow the manufacturers recommended specifications.
48. Torque sway bar end links to the lower control arm to 66 ft/lbs.
49. Torque the 18MM cam bolts to 180-200 ft/lbs.
50. Recheck the wheel lug torque on all four wheels at this time.



51. On both sides of the vehicle, check the routing of the brake lines and the ABS wire harnesses. There must be no pinching, rubbing, or stretching of either component. Use zip ties to secure these items to the steering components. At full droop, cycle the steering from lock to lock while observing the reaction of these components. Reposition them if needed.
52. On completion of the installation, have the suspension and headlights re-aligned.
53. After 100 miles recheck for proper torque on all newly installed hardware.
54. Recheck all hardware for tightness after off road use.

Rear Installation:

1. Block the front tires and raise the rear of the vehicle. Support the frame with jack stands forward of the rear springs.

2. Remove the rear wheels.

3. Remove the shocks on both sides of the vehicle. It may be necessary that you slightly raise the axle to unload the shocks for removal.

4. On drivers side, unbolt the existing brake line bracket from the inside of the frame.

5. Install the supplied brake line extension bracket, 90-1083, to the frame using the OE hardware. Then bolt the factory bracket to the new bracket using the supplied 5/16" hardware from hardware pack 90-6314. See **Illustration A**.

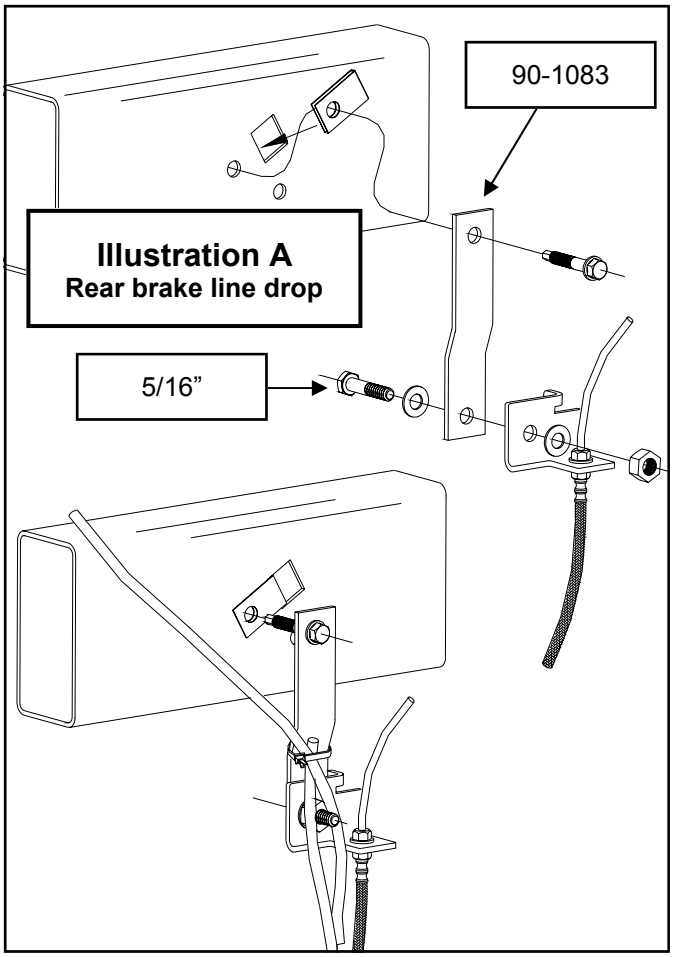


Illustration A
Rear brake line drop

6. Reroute rear ABS as necessary use the supplied zip ties to secure lines.

7. Support the rear axle with a floor jack and remove the U-bolts on the driver side. Loosen the U-bolts on the passenger side.

8. Install the lift block **(95-300F)** under the leaf spring on the axle pad, making sure the pins are fitted into the holes on the spring perch. Use your floor jack to raise the axle to the spring making sure the tabs on the factory leaf fit into the holes on the new lift block.

8. Secure the assembly with the supplied U-bolts (13-90390) and new high-nuts and washers from hardware pack 20-65302. Do not tighten the U-bolts at this time. See **Illustration C.**

NOTE: Make sure the block sits flush on the axle perch.

9. Repeat the installation on the other side of the vehicle.✪

10. When the installation of the remaining side is complete, torque the U-bolts to 95 ft. lbs. If desired, excess of 1" can be trimmed from the u-bolt.

11.Remove the factory bump stops.

12.Locate PN 90-2144, rear bump stop extension. Install this extension into the originals location using factory bolts. Using the bump stop previously removed, install it to the bump stop extension bracket using supplied 3/8" hardware from pack 90-6314 .

NOTE: You may need to trim off the factory location tab on the bump stop.

13. Insert the supplied 60859 sleeves in both end of the shocks. (They will be located in the shock boxes.)

14. Install your new Pro Comp shocks **(MX6079 either way or the 927504 w/ shaft end up)** and torque this hardware to 66 ft. lbs.

15. Remove the factory emergency brake bracket from the truck by removing the OE hardware. Unhook emergency brake cable and remove from factory bracket by pinching the tangs on the line.

16.Slip the cable through new bracket PN 90-1955 for **2004/2005 model** and reconnect the emergency brake cable. Attach the supplied brake line drop bracket to the frame using OE hardware with the supplied 3/4" washer from hardware pack 90-6323 under the bracket. Torque the retaining nut to 222 ft. lbs. See **Illustration B**. For the **2006 model** attach the supplied brake line drop bracket PN 90-3272 to the frame using the OE retaining nut with the supplied 3/4" washer from hardware pack 90-6323 under the bracket. Secure the rear hole in the bracket using the 1/2" X 1 1/2" bolt and hardware from pack PN 90-6422 Torque the retaining nut to 222 ft. lbs.

17. Reinstall the wheels and tires and lower the vehicle to the ground. Torque the factory wheels to 150 ft/lbs. If you are using aftermarket wheels follow the manufacturers recommended specifications.

18. Recheck the wheel lug torque on all four wheels at this time.

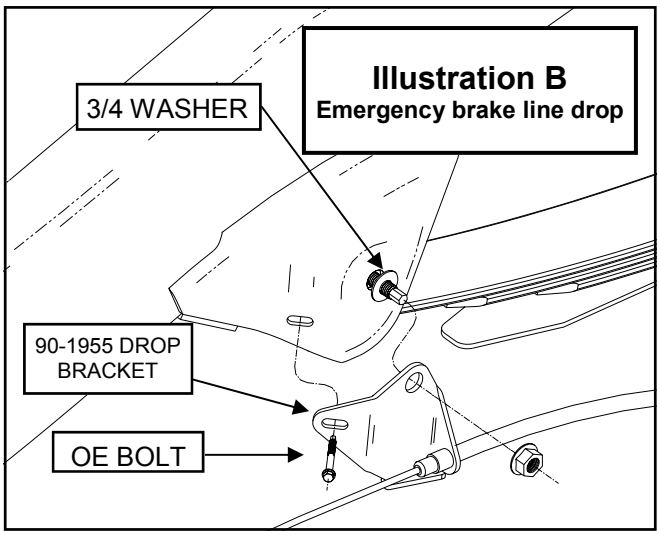


Illustration B
Emergency brake line drop

19. Recheck all hardware for proper installation and torque at this time.

20. On completion of the installation, have the suspension and headlights realigned.

21. After 100 miles recheck for proper torque on all newly installed hardware.

22. Recheck all hardware for tightness after off road use.✪

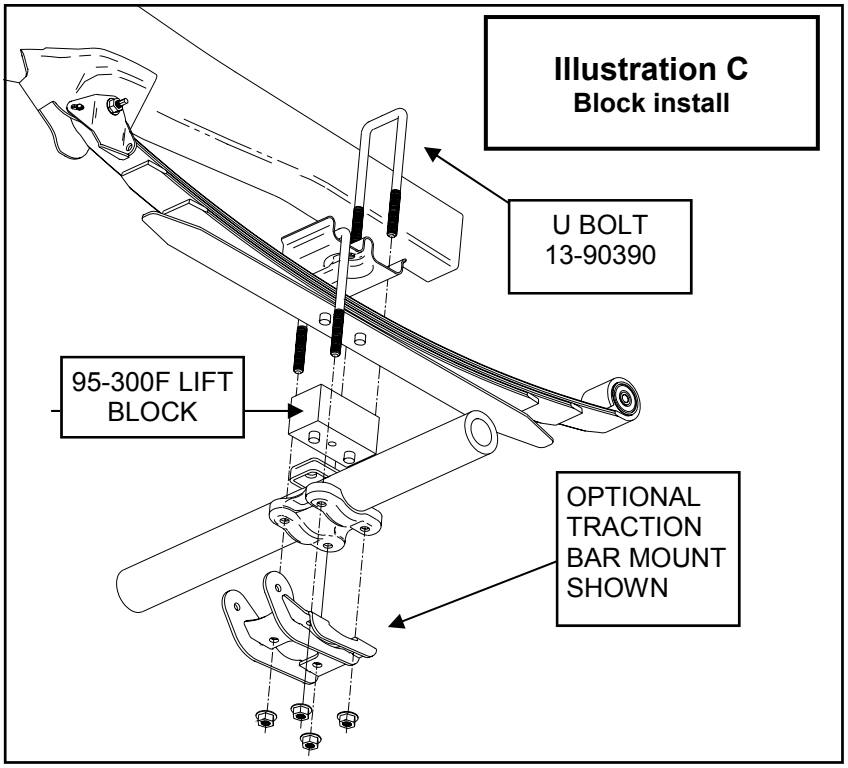


Illustration C
Block install

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

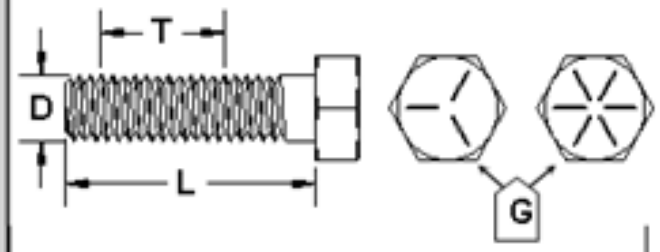
Bolt Torque and ID

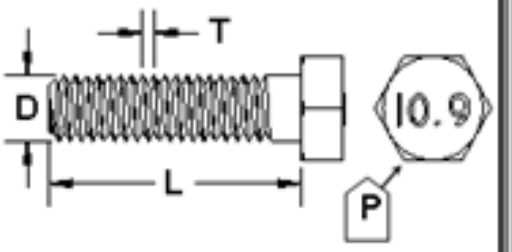
Decimal System

Metric System

All Torques in Ft. Lbs. Maximums

Bolt Size	Grade 5	Grade8	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

D T L X

Grade 5 **Grade 8**

(No. of Marks + 2)

M12-1.25x50 HHCS

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)

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 warranties 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.

E-Mail: tech@explorerprocomp.com
Website: www.explorerprocomp.com
Fax: (619) 216-1474
Ph: (619) 216-1444

PLACE

WARRANTY REGISTRATION NUMBER

HERE: _____