

PRO COMP SUSPENSION

Suspension Systems that Work!

PN# 62220K 2003-2009 Ford Expedition 2WD & 4WD 3" Front & 2" Rear Spacer Kit

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		
94-2834m	FRONT STRUT SPACER: (2003-2009)	2	
90-6317m .100FNFLZ	HARDWARE PACK: Front & Rear Spacer (2003-2009) 10mm-1.25 SERRATED FLANGE NUT	2 6	
94-8124	REAR STRUT SPACER: (2003-2009)	2	

NOTE: All part images may vary from catalog and instructions.

NOTE: For 2003-2007 model instructions, see pages 4 through 9.

NOTE: For 2008-2009 model instructions, see pages 10 through 14.

Call for shock applications



Equipment Available from your Pro Comp Distributor!



Lights, Wheels, Tires

Call for Applications

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

Introduction:

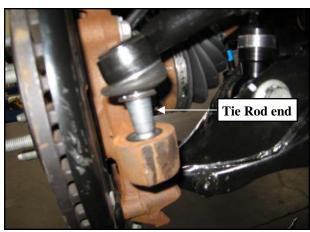
- This installation requires a professional mechanic!
- We recommend that you have access to a factory service manual for your vehicle to assist in the disassembly and reassembly of your vehicle. It contains a wealth of detailed information.
- Prior to installation, carefully inspect the vehicle's steering 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.

FRONT INSTALLATION:

 Measure the vehicle from the center of the hub to the fender lip and record this measurement below.

LF <u>:</u>	RF:
•	
LR _:	RR:

- 2. Be sure you are working on a level surface. Block the rear tires and raise the front of the vehicle. Support the frame with jack stands under the front crossmember.
- 3. Remove the front wheels.
- 4. Work on one side of the vehicle at a time.
- 5. Remove the tie rod end nut and separate from the knuckle using the appropriate tool.



6. Unbolt the sway bar from the sway bar end links. Save hardware for reinstallation.



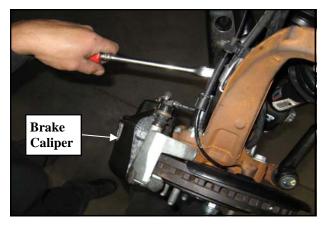
Complete steps 7 Through 13 On 4WD models
ONLY!:

- 7. Remove the dust cap from the hub.
- 8. Unbolt the **OE** brake line, ABS line and brackets from the side of the knuckle. Save the hardware for reinstallation.



- 9. Remove the vacuum line from the back of the hub.
- 10. Remove the front caliper and bracket assembly from the front knuckle by removing the(2) retaining bolts.

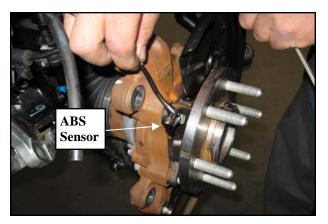
NOTE: Make sure you do not let the calipers hang on the brake lines or damage will occur.



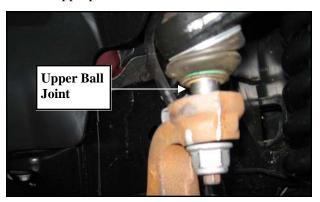
- 11. Remove the front rotors from the front hub.
- 12. Remove the backing plate bolt from the knuckle to access the ABS sensor.



13. Unbolt the ABS sensor from the hub. Remove the CV axle end nut. Save for reinstallation.



14. Unbolt the upper ball joint nut, but do not remove it from the knuckle. Separate using the appropriate tool.



- 15. Remove upper ball joint nut and carefully lower the A-arm assembly. Save hardware for reinstallation.
- 16. <u>4WD ONLY!</u>: Carefully remove the CV axles from the hub.



17. Remove the lower strut bolt from the lower control arm. Save the hardware for reinstallation. Be sure to note the direction of the bolt for reinstallation.

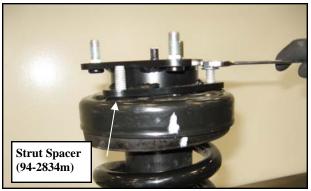


18. Remove (3) upper strut tower nuts holding the strut assembly to the strut tower. Save the hardware for reinstallation.



- 19. Remove the strut assembly from the vehicle.
- 20. Install the strut spacer (94-2834m) onto the **OE** strut mounting studs. Secure with the previously removed **OE** nuts. Torque the nuts to factory specifications.

NOTE: Be sure to use thread locker on the OE nuts.



21. Install the strut assembly into the strut tower and start the (3) upper 10mm flange nuts. (Make sure that the bottom of the strut is aligned as well) Torque the upper strut tower 10mm nuts to 60 ft./lbs.

NOTE: Be sure to use thread locker on the OE nuts.



22. Install the lower strut bolt in the original position and torque to manufacturers specifica-

NOTE: Be sure to use thread locker on the OE bolt.

23. **2WD ONLY!:** Reinstall the knuckle to the upper ball joint and secure using the OE nut. Torque the upper ball joint nut to factory specifications.

NOTE: It may help to use (2) wrenches to tighten the upper ball joint nut. One to tighten the nut and one to keep the ball joint stud from spinning.



Complete steps 24 Through 31 On 4WD models ONLY!:

24. Carefully guide the CV axle through the hub and reinstall the upper ball joint nut. Torque the upper ball joint nut to factory specifications.

NOTE: It may help to turn the wheel to aid in reinstallation of the CV axle into the hub.

NOTE: It may help to use (2) wrenches to tighten the upper ball joint nut. One to tighten the nut and one to keep the ball joint stud from spinning.

- 25. Reinstall the ABS sensor to the hub using the previously removed hardware.
- 26. Reinstall the backing plate bolt to the knuckle using the previously removed **OE** bolt.
- 27. Install the front rotors on to the front hub.
- 28. Install the front calipers on to the front rotors by reinstalling the retaining bolts. Torque to factory specifications.

NOTE: Use thread locker on the OE caliper mounting bolts.

- 29. Reconnect the ABS lines and brake lines to the knuckle using the previously removed hardware.
- 30. Reconnect the hub vacuum line to the back of the hub.
- 31. Reinstall the CV end nut and dust cap. Torque the nut to factory specifications. NOTE: Be sure to use thread locker on the OE bolt.
- 32. Reconnect the sway bar to the end links using the previously removed **OE** hardware.
- 33. Reinstall the tie rod end to the knuckle. Torque to factory specifications.
- 34. Repeat steps 5 through 33 on the remaining side of the vehicle.
- 35. Reinstall the front wheels.
- 36. Now would also be a good time to inspect the rear shocks for damage or fluid leakage. Replace if necessary.

NOTE: For improved performance Pro Comp rear shocks are recommended. See the chart on page 2 for applications.

IMPORTANT! BE SURE TO BRING THE VEHICLE IMMEDIATELY TO A REPU-TABLE ALIGNMENT SHOP TO BE 6 ALIGNED!

37. Torque all bolts to factory specifications. Retorque all bolts after 500 miles.

- ⇒ On completion of the installation, have the suspension and headlights re-aligned.
- ⇒ After 100 miles recheck for proper torque on all newly installed hardware.
- \Rightarrow 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. Work on one side of the vehicle at a time.
- 4. Remove the lower strut bolt from the lower control arm. Save the hardware for reinstallation. Be sure to note the direction of the bolt for reinstallation.
- 5. Support the lower control arm with a floor jack. Loosen but <u>DO NOT</u> remove the rear lower control arm mounting bolt.
- 6. Support the lower control arm with a floor jack. Loosen but <u>DO NOT</u> remove the rear lower control arm mounting bolt.
- 7. Push down on the lower control arm in order to dislodge the strut from the lower mount.
- 8. Remove the tie rod end nut and separate from the knuckle using the appropriate tool.
- 9. Remove (3) upper strut tower nuts holding the strut assembly to the strut tower. Save the hardware for reinstallation.
- 10. Carefully remove the strut assembly from the vehicle.
- 11. Install the strut spacer (94-8124m) onto the **OE** strut mounting studs. Secure with the previously removed **OE** nuts. Torque the nuts to 30 ft./lbs.

NOTE: Be sure to use thread locker on the OE nuts.

12. Rotate the strut assembly 180 degrees and install the strut assembly into the strut tower. Secure using the supplied (3) upper **10mm** flange nuts. **DO NOT** tighten at this time. (Make sure that the bottom of the strut is aligned as well)

NOTE: Be sure to use thread locker on the OE nuts.

- 13. Install the lower strut bolt in the original position **<u>DO NOT</u>** tighten at this time.

 NOTE: Be sure to use thread locker on the OE holt.
- 14. Reinstall the tie rod end to the knuckle. Torque to 41 ft./lbs..
- 15. Torque the upper strut mounting hardware to 26 ft./lbs.
- 16. Repeat steps 4 through 15 on the remaining side of the vehicle.
- 17. Reinstall the front wheels. Lower the vehicle to the ground and torque the lug nuts according to manufacturers specifications.
- 18. With the vehicle on the ground torque the rear upper and lower control arm bolts to 184 ft./lbs.
- 19. Torque the lower strut mounting hardware to 332 ft./lbs.
- 20. Torque all bolts to factory specifications. Re-torque all bolts after 500 miles.

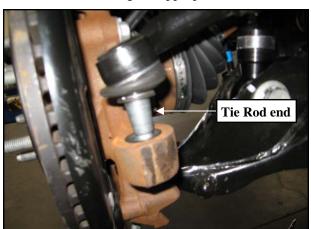
- ⇒ On completion of the installation, have the suspension and headlights realigned.
- ⇒ After 100 miles recheck for proper torque on all newly installed hardware.
- ⇒ Recheck all hardware for tightness after off road use.

FRONT INSTALLATION:

 Measure the vehicle from the center of the hub to the fender lip and record this measurement below.

LF:______RF:_____ LR: RR:

- 2. Be sure you are working on a level surface. Block the rear tires and raise the front of the vehicle. Support the frame with jack stands under the front crossmember.
- 3. Remove the front wheels.
- 4. Work on one side of the vehicle at a time.
- 5. Remove the tie rod end nut and separate from the knuckle using the appropriate tool.



6. Unbolt the sway bar from the sway bar end links. Save hardware for reinstallation.



7. Unbolt the **OE** brake line brackets from the frame and the side of the knuckle. Save the

- hardware for reinstallation.
- 8. Unclip the ABS line and from the brake line bracket, the brake line support and the coil bucket.



Unbolt the upper ball joint nut, but <u>DO NOT</u> remove it from the knuckle. Separate using the appropriate tool.



10. Remove the lower strut bolt from the lower control arm. Save the hardware for reinstallation. Be sure to note the direction of the bolt for reinstallation.



11. Support the lower control arm with a floor

jack. Unbolt and remove the lower control arm mounting bolts and hardware.



- 12. Push down on the lower control arm in order to dislodge the strut from the lower mount.
- 13. Remove (3) upper strut tower nuts holding the strut assembly to the strut tower. Save the hardware for reinstallation.



14. Carefully remove the strut assembly from the vehicle.



15. Install the strut spacer (94-2834m) onto the OE strut mounting studs. Secure with the previously removed OE nuts. Torque the nuts to factory specifications.

NOTE: Be sure to use thread locker on the OE nuts.



16. Install the strut assembly into the strut tower and start the (3) upper 10mm flange nuts.

Leave the bolts loose at this time. (Make sure that the bottom of the strut is aligned as well)

NOTE: Be sure to use thread locker on the OE nuts.

17. Install the lower strut bolt in the original position and torque to manufacturers specifications.

NOTE: Be sure to use thread locker on the OE bolt.

- 18. Carefully raise the lower control arm back into position in the frame mounts.
- 19. Reconnect the sway bar to the end links using the previously removed **OE** hardware.
- 20. Secure the lower control arm into the frame pockets using the previously removed **OE** bolts and hardware. **DO NOT** tighten at this time.
- 21. Reinstall the knuckle to the upper ball joint and secure using the **OE** nut. Torque the upper ball joint nut to factory specifications.

NOTE: It may help to use (2) wrenches to tighten the upper ball joint nut. One to tighten the nut and one to keep the ball joint stud from spinning.



- 22. Reinstall the tie rod end to the knuckle. Torque to factory specifications.
- 23. Torque the upper strut mounting hardware to 60 ft./lbs. and lower strut mounting hardware according to factory specifications.
- 24. Reconnect the brake line to the frame and the knuckle using the previously removed hardware.
- 25. Re-clip the ABS lines to the brake line bracket, brake line support and the coil bucket.
- 26. Repeat steps 5 through 25 on the remaining side of the vehicle.
- 27. Reinstall the front wheels. Lower the vehicle to the ground and torque the lug nuts according to manufacturers specifications.
- 28. With the vehicle on the ground torque the lower control arm bolts according to manufacturers specifications.
- 29. Torque all bolts to factory specifications. Retorque all bolts after 500 miles.

- ⇒ On completion of the installation, have the suspension and headlights re-aligned.
- ⇒ After 100 miles recheck for proper torque on all newly installed hardware.
- ⇒ 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. Work on one side of the vehicle at a time.
- 4. Remove the lower strut bolt from the lower control arm. Save the hardware for reinstallation. Be sure to note the direction of the bolt for reinstallation.
- 5. Unbolt the **OE** brake line brackets and unhook it from the strut tower. Save the hardware for reinstallation.
- Support the lower control arm with a floor jack. Unbolt and remove the lower control arm to frame mounting bolt and hardware.
- 7. Push down on the lower control arm in order to dislodge the strut from the lower mount.
- 8. Remove (3) upper strut tower nuts holding the strut assembly to the strut tower. Save the hardware for reinstallation.
- 9. Carefully remove the strut assembly from the vehicle.
- 10. Install the strut spacer (94-8124m) onto the **OE** strut mounting studs. Secure with the previously removed **OE** nuts. Torque the nuts to 30 ft./lbs.

NOTE: Be sure to use thread locker on the OE nuts.

11. Install the strut assembly into the strut tower and start the (3) upper 10mm flange nuts. **DO NOT** tighten at this time. (Make sure that the bottom of the strut is aligned as well)

NOTE: Be sure to use thread locker on the OE nuts.

12. Install the lower strut bolt in the original position. **<u>DO NOT</u>** tighten at this time. **NOTE:** Be sure to use thread locker on the OE bolt.

13. Carefully raise the lower control arm back

into position in the axle mount. Secure using the previously removed **OE** hardware.

NOTE: Be sure that the tab on the OE nut is properly located in the hole on the mounting pocket to ensure it is properly secured.

- 14. Torque the upper strut mounting hardware to 60 ft./lbs.
- 15. The brake line frame bracket will need to be relocated. Using the bracket as a guide, place the bracket against the frame in it's new lowered position and use it to drill (2) new mounting holes. The lower hole will need to be tapped to accommodate the previously removed **OE** bolt.

IMPORTANT!: When relocating the bracket <u>BE SURE</u> that the brake lines are not stretched, pinched or rubbing in their new mounting position. Also be sure not to drill into any fuel lines, brake lines, or electrical wiring.

- 15. Repeat steps 5 through 14 on the remaining side of the vehicle.
- 16. Reinstall the front wheels. Lower the vehicle to the ground and torque the lug nuts according to manufacturers specifications.
- 17. With the vehicle on the ground torque the lower control arm bolts to 221 ft./lbs.
- 18. Torque the lower strut mounting hardware to 350 ft./lbs.
- **16.** Torque all bolts to factory specifications. Re-torque all bolts after 500 miles.

- ⇒ On completion of the installation, have the suspension and headlights realigned.
- ⇒ After 100 miles recheck for proper torque on all newly installed hardware.
- ⇒ Recheck all hardware for tightness after off road use.

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

Bolt Torque and ID									
Decimal	Metric System								
All Torques in Ft. Lbs. Maximums									
Bolt Size	Grade 5	Grade8	BoltSize	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			
1/2-13x 1.75 HHCS	OHHCS								
G = Grade (Bolt Strength)	P = Property Class (Bolt Strength)								
D = Nominal Diameter (Inc	D = Nominal Diameter (Millimeters)								
T = Thread Count (Threads	T = Thread Pitch (Thread Width, mm)								
L = Length (Inches)	L = Length (Millimeters)								
X = Description (Hex Head Cap Screw) 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.