

Rize Industries, LLC.
2005/2006 Ford SuperDuty Installation Instructions
Suspension Lift Kit Part# 410-306-042 & 410-308-042

While this kit is an easy bolt-on system, Rize Industries, LLC. strongly recommends that a professional installation center be contracted to do the install. Rize Industries, LLC. also recommends using a hydraulic lift when performing this installation.

Before starting installation of kit on vehicle verify the kit inventory and thoroughly read and understand all instructions.

- 1) Position vehicle on lift, locate front lift post on the body mount behind the front wheel. **(Fig A)**. Locate the back lift post on the bottom of the frame rail, just before the rail curves up in front of the rear tire. **TIP:** Use the front of gas tank as a reference point **(Fig B)**
- 2) Raise vehicle up just enough to remove wheels and tires. **(Fig C)**
- 3) Raise vehicle up in relation to the height of the support jack stands you are using. Support the front axle with jack stands and then lower vehicle just enough to slightly weight the stock coil springs and shocks.
- 4) Remove sway bar from vehicle, and retain factory hardware.
- 5) Remove front shocks and discard.
- 6) Remove the bolts (two per side) holding the brake line support brackets to the vehicle, one at the top front of the coil bucket and one at the bottom of the coil mount.
- 7) Disconnect / or re-route hub vacuum lines, and axle breather tube so there is enough slack to lower the front end down. Also make sure the brake lines have slack for the same purpose. **TIP:** On passenger side it is helpful to unclip brake line from bottom of frame **(Fig D)**
- 8) Unbolt the electric wire holders from both factory radius arms.
- 9) Disconnect drive shaft from the front axle and secure out of the way.
- 10) Remove and discard factory steering damper
- 11) Remove the drag link from pitman arm, and secure out of the way. **TIP:** An easy way to accomplish this is to use two hammers, and simultaneously strike the pitman arm on opposite sides with the hammers. Two to four blows will cause the pitman arm taper to release the drag link. **(Diagram 1)**
- 12) With the front axle supported by jack stands, raise vehicle up just enough to un-weight the factory coil springs. Make sure that the brake and vacuum lines do not get pulled tight.
- 13) Remove stock coil springs **(Fig E)**, retain rubber spring isolators for reuse.

- 14) With springs removed, lower vehicle down to appropriately stock ride height.
- 15) Unbolt panhard rod from stock bracket, retain factory hardware. Secure panhard rod out of the way.
- 16) Remove and discard stock panhard rod bracket, retain the two factory bolts in bottom of frame rail.
- 17) Remove large nut retaining pitman arm to steering box. **NOTE:** Observe and mark the spline index location of stock arm on the steering box shaft. Using a puller, remove stock pitman arm.
- 18) Install the Rize drop pitman arm with the same spline index location used on the stock arm. Torque large retaining nut to **Ford Factory Specification of 350 ft-lb.**
- 19) Install the Rize panhard rod drop bracket in the same manner as the factory bracket. Use the stock bolts in bottom frame rail location. Use the supplied hardware from **Bag #1** in the three-bolt location on the motor cross member. Tighten all bolts. **(Fig-F) & (Diagram 2a)**
- 20) Install the Rize panhard rod drop bracket support gusset. Use the supplied hardware from **Bag #1** in the two-bolt location on the drop bracket and the one bolt location on the engine cross member. Tighten all bolts. **(Fig G) & (Diagram 2b)**
- 21) While still supporting the front axle on each end, use a third jack stand to support the pinion.
- 22) At this time remove the stock radius arms. **TIP:** It may be helpful to tilt the pinion up or down slightly to aid in radius arm removal. **(Fig H & I)**
- 23) If vehicle is equipped with factory skid plate under the transfer case, remove and disregard at this time.
- 24) The next step is installation of the quad link drop brackets. To ease installation we recommend you follow this procedure exactly.
 - 1st Start with the drivers side, locate the six factory holes in the bottom of the frame rails that are directly in line with the transfer case. **(Fig J)**
 - 2nd Locate the rear most hole of this six hole group. **(Fig K)**
 - 3rd With the quad link drop bracket(s) sitting upright and in the installed position, locate the rear most bolt hole on the top of brackets. **(Fig L)**
 - 4th With drivers drop bracket held up against the frame, line up the rear frame hole shown in **(Fig K)** with the quad link drop bracket top rear bolt hole from **(Fig L)**.
 - 5th With these two holes lined up, and holding the drop bracket tight up, and against the frame the remaining quad link drop bracket bolt holes will line up with the corresponding frame holes.
 - 6th At this time loosely install all supplied hardware from **Bag #2** through drop bracket and into frame with the exception of the rear upper side bolt. **(Diagram 3a & 3b)**
 - 7th Tighten installed hardware

24) Continued

8th With hardware tight, go back and install and tighten the rear upper side bolt. **NOTE:** Be patient when installing the quad link drop bracketry. We have designed this part to have a very precision fit. Take your time, follow this procedure with the hardware and it will be an easy install. When finished installation will look like this **(Fig M)**

9th Repeat the above procedure steps for the passenger side quad link drop bracket. The procedure is the same with the exception of not only leaving the upper rear side bolt out until hardware is tight, but leaving the middle side bolt out as well. **(Diagram 4)** When all hardware is tight install upper rear side bolt and tighten. Before installing middle side bolt the frame hole must be opened up slightly. This is easily accomplished by running a 7/16" drill bit through quad link bracket and matching frame hole. With frame hole enlarged install and tighten remaining hardware.

25) Install spherical bearings into the Rize upper quad link bars (short bars). Thread supplied jam nuts from **Bag #3** onto bearings, then thread spherical bearings into link bars. Leave 3/8" of thread showing between the bearing end and the jam nut when tightened. **(Fig N) & (Diagram 5)** For custom lifts, or fine tuning of lift the bearings can be adjusted in or out. Maximum thread showing between the bearing and jam nut **MUST NOT EXCEED 5/8"**. Install bearing misalignment spacers **(Diagram 6)**

26) Install driver upper quad link bar into vehicle. Slide link bar over the top of factory radius arm mounting point on front axle. Reinstall factory bolt and nut. Snug but do not tighten. **NOTE:** (On driver side use factory nut from the rear radius arm mounting bolt.) Lift spherical bearing end of link bar up into the stock radius arm pocket. **NOTE:** (Pocket may need to be opened up slightly due to being compressed into the stock radius arm from the factory.) Use supplied hardware from **Bag #3**, snug but do not tighten. **(Diagram 6)** **TIP:** Axle may need to be rotated up or down slightly to align hole in pocket with spherical bearing. Repeat on passenger link bar.

27) Install spherical bearings in lower quad link bars in the same manner as described in Step #25. Install bearing spacer into bearings.

28) Install lower link bar. Lift bearings end of link bar up into the Rize link bar drop bracket. Push link bar all the way to the back of the pocket. Lift front of the lower link bar up on to the bottom of factory radius arm mount and install the factory bolts & nuts along with the supplied alignment eccentric. One on each side of the link bar. **(Diagram 7)** Set alignment eccentrics so that the square hole is on the bottom. Snug but do not tighten. Align the spherical bearings with the hole in the drop bracketry, use supplied hardware from **Bag #3**. Snug but do not tighten. **TIP:** (Axle may have to be rotated up or down slightly to help align bolt holes. Repeat process on passenger side.

29) Before tightening hardware on upper & lower quad link bars you can set the base axle caster by setting the driver outside quad link alignment eccentric so the square hole is in the 5 o'clock position **(Diagram 7)**. Set remaining three eccentrics to match outside driver eccentric. Once base caster is set completely tighten all quad link hardware.

- 30) Reinstall electric wire mounting tabs on outside of upper link bar using supplied hardware from **Bag #2**. Push wire plugs into hole in the top front of upper link bar. **NOTE:** You may have to adjust wire in mounting tab to get the correct length at full suspension droop.
- 31) Completed installation of upper and lower quad link bars should look like this. **(Fig O & P)**
- 32) Install panhard rod up into the Rize panhard rod drop bracket. Use factory nut and bolt along with the supplied adjustment shims from **Bag #1**. Use the shim with the hole centered **(Fig Q) & (Diagram 2a)** Tighten hardware to **Ford Factory Specification of 406 ft-lb**. **NOTE:** Offset shims are also supplied in hardware **Bag #1**, these are for custom lifts or fine tuning.
- 33) Install driver and passenger limit strap brackets on side of frame rail just to the rear of the coil buckets. The bracket should be installed with the tab bending away from the rail. Use supplied hardware from **Bag #4**. **(Fig R) & (Diagram 8)** As shown in Diagram 8 the hole in the frame used for the limit strap bolt must be enlarged to 1/2". **NOTE:** When installing a 6" kit Part# 410-306-042, the limit strap bracket is not used, and the limit strap is connected directly to the frame in the hole shown in Diagram 8.
- 34) Install the Rize skid plate between link bar drop brackets. Use supplied hardware from **Bag #2** and tighten. **(Fig S) & (Diagram 3b)**
- 35) Install the Rize coil springs in reverse order of Steps #12 & #13, the removal of stock springs. Reuse the rubber spring isolators on the top of the springs. **NOTE:** Remember to properly support the front axle with stands while raising vehicle just enough to fit the coil springs between the coil bucket and the bottom axle hat. Be sure coil spring is rotated against stops on both the axle hats and the rubber spring isolators are seated properly against the coil. Check brake / vacuum / electric line tension. Make sure they have enough slack when the axle is dropped for spring installation to avoid any possible damage. **(Fig T)**
- 36) With spring in correct location, lower vehicle SLOWLY TO SLIGHTLY load coil springs. **NOTE:** Use caution as not to load springs so much as to raise vehicle off the vehicle lift.
- 37) Install the Rize sway bar drop brackets using factory hardware and tighten. **NOTE:** The opening in one end of the sway bar drop bracket goes up against the frame. **(Diagram 9)**
- 38) Install sway bar onto drop brackets. Then install the sway bar back onto vehicle exactly like factory. Use supplied hardware from **Bag #5** and tighten. Be sure the slit in the rubber bushing is positioned towards the front of the vehicle. **(Fig U) NOTE: DO NOT INSTALL SWAY BAR LINKS ONTO AXLE AT THIS TIME.**
- 39) Reinstall steering link into pitman arm. Use factory nut with new cotter pin.
- 40) Install driver and passenger brake line drop brackets onto front of coil spring buckets. Use factory hardware.

41) Install brake lines on drop brackets using supplied hardware from **Bag #5 (Fig V)**
NOTE: A slight re-rotating of the brake lines is necessary. Use caution when re-rotating as not to damage lines.

42) Install front shocks of your choice along with supplied limiting straps (**Fig W**)

IF LIMIT STRAPS ARE NOT INSTALLED, WARRANTY IS NULL AND VOID, AND RIZE INDUSTRIES, LLC. IS EXEMPT OF ANY AND ALL LIABILITY!!!

43) Reconnect drive shaft to front axle.

44) Install rear lift kit. If using Rize Industries Rear Lift Kit refer to the instructions supplied with the kit. **NOTE:** The front kit does include the rear E-Brake cable extension bracket.

45) Rize Industries recommends having the caster and toe angles checked and if necessary adjusted to factory specifications.

46) Test drive vehicle. Check for correct operation. After 500 miles it is strongly recommended to check all hardware and retighten if necessary.

If you have any questions, comments, or concerns please contact us immediately.

Thank you for choosing Rize Industries, LLC.

Rize Industries, LLC.

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