

# INSTALLATION INSTRUCTIONS FOR 2005-07 FORD 4WD SUPER DUTY F250-350 4 1/2" COIL SPRING SUSPENSION SYSTEM

Requires the following parts (sold separately) for a complete installation:

- KIT PART NUMBER (6345 W/RADIUS ARMS) REQUIRES P/N 6245B, 6300H, 6300A
- KIT PART NUMBER (6245) REQUIRES P/N 6245B AND 6100H

## WARNING!!! READ AND UNDERSTAND ALL INSTRUCTIONS BEFORE PROCEEDING. MAKE SURE THAT YOU HAVE ALL TOOLS AND PARTS BEFORE BEGINNING THE INSTALLATION.

#### **SPECIAL TOOLS REQUIRED:**

- STEERING (PITMAN) ARM PULLER
- TIE ROD SEPARATING TOOL
- TORQUE WRENCH
- FORD SERVICE MANUAL

# **REVTEK SUSPENSION RECOMMENDS THAT RED LOCTITE BE USED ON ALL FASTENERS UNLESS OTHERWISE NOTED. IT IS ALSO RECOMMENDED TO HAVE THE FRONT END ALIGNMENT CHECKED AFTER INSTALLATION.**

#### **GENERAL NOTES:**

- 1. THIS SYSTEM SHOULD ONLY BE INSTALLED BY A PROFESSIONAL.
- 2. Compare all contents of the boxes to the parts list before starting to insure all components are included.
- 3. Prior to installing the suspension system, inspect the vehicle's suspension components, alignment, and frame for damage, corrosion, or cracks. Correct any worn or damaged parts before beginning install.
- 4. Always wear safety glasses during installation
- 5. Unless otherwise noted, tighten all bolts to the torque specifications listed in the Torque Specification table included in these instructions. Use a torque wrench.
- 6. Estimated time to install this system is 4 hours.
- 7. Suspension components that use rubber or urethane bushings should be tightened with the vehicle at normal ride height. This will prevent premature failure of the bushing and maintain ride comfort.
- 8. Check off the step number at the beginning of each step when you finish it. Then when you stop during the installation, it will be easier to find where you need to continue from.

## **<u>KIT CONTENTS INCLUDE:</u>**

- Instructions including parts list
- Product Safety Label (orange)
- Decals
- Warranty Information

STANDARD BOLT TORQUE & IDENTIFICATION							
INCH SYSTEM			METRIC SYSTEM				
Bolt Size	Grade 5	Grade 8	Bolt Size	Class 9.8	Class 10.9	Class 12.9	
5/16	15 ft. lbs.	20 ft. lbs.	M6	5 ft. lbs.	9 ft. lbs.	12 ft. lbs.	
3/8	30 ft. lbs.	35 ft. lbs.	M8	18 ft. lbs.	23 ft. lbs.	27 ft. lbs.	
7/16	45 ft. lbs.	60 ft. lbs.	M10	32 ft. lbs.	45 ft. lbs.	50 ft. lbs.	
1/2	65 ft. lbs.	90 ft. lbs.	M12	55 ft. lbs.	75 ft. lbs.	90 ft. lbs.	
9/16	95 ft. lbs.	130 ft. lbs.	M14	85 ft. lbs.	120 ft. lbs.	145 ft. lbs.	
5/8	135 ft. lbs.	175 ft. lbs.	M16	130 ft. lbs.	165 ft. lbs.	210 ft. lbs.	
3/4	185 ft. lbs.	280 ft. lbs.	M18	170 ft. lbs.	240 ft. lbs.	290 ft. lbs.	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$							
G= Grade Marking (bolt strength)       L= Length (inches)       P= Property Class (bolt strength)       L= Length (millimeters)         D= Nominal Diameter (inches)       X= Description (hex head cap screw)       D= Nominal Diameter (millimeters)       X= Description (hex head cap screw)         T= Thread Pitch (threads per inch)       T= Thread Pitch (thread width, mm)       T= Thread Pitch (thread width, mm)					rew)		

#### HARDWARE KIT

# BOX 1 OF 2

<b>DUATOF</b> 2	
<u>6100H</u>	<u>QTY</u>
TRACK BAR BRACKET	1
PITMAN ARM	1
SWAY BAR END LINK	2
LEFT RADIUS ARM BRACKET	2
RIGHT RADIUS ARM	2
BRACKET	
RADIUS ARM SLEEVE	4
3/4"X 5" NF BOLT GRADE 8	4
GRADE "C" ALL METAL	4
LOCKNUT 3/4"	
3/4" FLAT WASHER ZINC	8
5" BLOCKS – FLAT	2
5/8 X 3 5/8 X 16" ROUND TOP	4
U-BOLT	
5/8" H/NUTS – PLAIN	8
5/8" FLAT WASHER – PLAIN	8
CARRIER BEARING DROP	1
BRACKET	
SHOCK – rear	2
shock – front	2
zip tie	2

<u>BOX KIT</u>	
BOX 2 OF 2	
6245B	<u>Qty</u>
F250-350 SPRING	2
1/2" SPRING PLATE	2
CENTER PIN	2
CENTER PIN NUT	2
SPACER	2
EXTENSION BRACKET	2
m8 X 1.25 X 16mm BOLT	2
M8 X 1.25 X 35MM HEX	2
(ZINC)	
m8 X 1.25 LOCK NUT	2
7/16-14 X 2" GRADE 8 HEX	2
(ZINC)	
SAE 7/16 FLAT WASHER	2
(ZINC)	
<b>INSTRUCTION SHEET &amp;</b>	1
SAFETY LABEL	
6.25 X 2 CLEAR MYLAR	4
ITEM #705	

HARDWARE BOX	
BOX 1 OF 3	
<u>P/N 6300H</u>	<u>QTY</u>
TRACK BAR BRACKET	1
PITMAN ARM	1
SWAY BAR END LINK	2
5" BLOCKS – FLAT	2
5/8 X 3 5/8 X 16" ROUND TOP	4
U-BOLT	
5/8" H/NUTS – PLAIN	8
5/8" FLAT WASHER – PLAIN	8
CARRIER BEARING DROP	1
BRACKET	
SHOCK – REAR	2
SHOCK – FRONT	2
ZIP TIE	2

RADIUS ARM BOX	
BOX 3 OF 3	
<u>P/N 6300A</u>	QTY
RADIUS ARMS	2
RADIUS ARM BUSHING	2
18 X 20MM NYLOCK NUT	1

MAIN BOX KIT	
<b>BOX 2 OF 3</b>	
<u>P/N 6245B</u>	QTY
F250-350 SPRING	2
1/2" SPRING PLATE	2
CENTER PIN	2
CENTER PIN NUT	2
SPACER	2
EXTENSION BRACKET	2
M8 X 1.25 X 16MM BOLT	2
M8 X 1.25 X 35MM HEX	2
(ZINC)	
M8 X 1.25 LOCK NUT	2
7/16-14 X 2" GRADE 8 HEX	2
(ZINC)	
SAE 7/16 FLAT WASHER	2
(ZINC)	
INSTRUCTION SHEET &	1
SAFETY LABEL	
6.25 X 2 CLEAR MYLAR	4
ITEM #705	

#### FRONT OF VEHICLE – DISASSEMBLY AND ASSEMBLY

- 1. Park vehicle on level, hard (concrete) surface.
- 2. Block the rear wheels of the vehicle to prevent vehicle from moving and set parking brake.
- 3. Remove the track bar bolt 30 mm (save for later use) on the driver side of the frame mount (**Fig.1**), and the tie rod end from the pitman arm. Use 15/16 "wrench.
- 4. Raise the front of vehicle and support with jack stands on the frame behind the front radius arm hangers. Fig.2
- 5. Remove the front wheels.
- 6. Support the front axle with a floor jack.
- 7. Remove lower sway bar end link nuts (save for later use) on both sides using 21mm deep socket. Fig. 3.
- 8. Remove front shocks (saving lower bolts for reinstallation).
- 9. Remove brake line bracket from upper spring bucket. 10mm socket. Fig 4
- 10. Remove the brake line bracket from the lower spring bucket. 10mm socket. Fig 5
- 11. Remove the front differential breather hose from the front differential (pull carefully, do not tear the hose).
- 12. Remove the vacuum line from the front differential bracket (carefully unwind) then bend the bracket so that it is vertical instead of horizontal. Fig 6
- 13. Remove the lines attaching to the sides of each radius arm. 13mm socket. Fig 7
- 14. Remove the vacuum lines from the mounting bracket that holds the lines to the inner fender liner (pull carefully). Fig 8
- 15. Remove the track bar bracket. 21mm deep socket on passenger side (3 spots). 18mm socket on driver side (2 spots).
- 16. Remove pitman arm from sector shaft on steering box. 1-13/16" socket and special pitman arm puller.
- 17. While supporting front differential, lower the axle with a floor jack, then remove the driver and passenger side coil springs.
- 18. Install sway bar end link extensions to the OEM sway bar end links using Red Locktite. 3/4" open end wrench. Torque 59 ft lbs. **Fig. 9 NOTE: DO NOT OVERTIGHTEN**.
- 19. Install new pitman arm using Red Locktite. 1-13/16" impact socket Torque to 350 ft. lbs. Fig 10
- 20. Install new track bar bracket. Install all of the frame mounting hardware before you tighten any. This will help insure proper alignment and save you some frustration. Passenger side 21mm deep socket (3 ea.). Torque 120 Ft. lbs. Driver side 18mm socket (2 ea). Torque 120 ft. lbs. Fig.10 NOTE: THE NEW TRACK BAR BRACKET INSTALLS TO THE BACK SIDE OF THE CROSSMEMBER.

#### **SKIP TO #25 FOR 6245**

- 21. While the frame is still being supported by jack stands also support the front axle with jack stands. Now use a floor jack to support the radius arms while removing the rear radius arm bolt (save for reinstallation) using 24mm wrench and socket.
- 22. Remove front bolts attaching the radius arm to the front axle and remove factory radius arm. (Save OEM bolts for re-installation).
- 23. Replace OEM Radius arm with new Revtek Tubular radius arm. Insert factory bolts and nuts in all spots on radius arm. (Use new supplied Revtek all metal locknut on the upper driver's side only). Do not tighten at this time.
- 24. Repeat this process on the other side of the vehicle.

- 25. While the frame is still being supported by jack stands also support the front axle with jack stands. Now use a floor jack to support the radius arms while removing the rear radius arm bolt (save for reinstallation) using 24mm wrench and socket. Now carefully lower the back of the radius arms down "**one side at a time**" about 4.5" and slide the new hangers in place
- 26. Install the sleeves between the hanger plates and install the new 3/4"x 5" bolts with nuts and washers (do not tighten). Fig. 11
- 27. Install the OEM radius arms to the new hangers using OEM hardware saved in step 25 using 24mm socket and wrench. DO NOT TIGHTEN. Fig 12
- 28. Tighten the radius arm hanger bolts to 221 ft. lbs. using 1 1/8" socket & wrench.
- 29. Please use new zip ties to re-attach the factory line that was on the OEM radius arm.
- 30. Install the new coil springs (leave the rubber isolator on the spring) and place the entire assembly into the lower spring bucket making sure the spring end at the bottom of the spring touches the stop on the bucket. Raise the axle until the springs are trapped in their location.
- 31. Install the new R2515S Revtek front shocks using 3/4" ratchet wrench top, 18mm socket bottom. Torque to 111 ft. lbs.
- **32.** Secure the sway bar to the front axle. 21mm deep sockets. **DO NOT OVER TIGHTEN!!!. DO NOT CRUSH THE RUBBER BUSHINGS!!!.**
- 33. Install the draglink to the small end of the pitman arm using 15/16" socket or wrench and reinstall cotter key. Torque to 85 ft lbs.
- 34. Install the factory upper brake line hanger to the new Revtek supplied bracket (P/N PVB-2) using M8 X 1.25 X 16MM bolt and nut then mount the bracket back to the factory location using the new M8 x 35MM bolt and supplied aluminum spacer (P/N PVBS-2). Torque to 13 ft lbs.. **Fig 13**
- 35. Install the lower brake line bracket to the lower spring bucket; you may have to manipulate the shape of the bracket a bit. You will need to slide the brake line up inside the OEM bracket a bit for extra length. 10mm socket, Torque to 13 ft. lbs.
- 36. Re-install front breather line to front axle.
- 37. Re-install vacuum line to front axle
- 38. Re-install the vacuum lines to the sides of the radius arms. 13mm socket, Torque to 13 ft. Lbs.
- 39. Install the vacuum line to the inner fender liner by running a zip tie through the OEM bracket and around the vacuum line. **Fig 14**
- 40. Install track bar into the track bar bracket using the OEM bolt (30mm). You may have to jog the steering wheel a bit to get the hole to line up. Torque to 406 ft. lbs.
- 41. Install tires. Set vehicle on ground and torque wheels to factory specs.
- 42. Now tighten the radius arm bolts using 24mm socket & wrench. Torque to 221 ft lbs.
- **43.** Make sure you have adequate clearance between tires & brake lines.

#### **REAR OF VEHICLE – DISASSEMBLY AND ASSEMBLY**

- 1. Block front wheels to prevent vehicle from moving in either direction.
- 2. Lift the vehicle from the center of the rear differential housing, leaving the jack in place to support the differential.
- 3. Support the frame with jack stands forward of the rear springs.
- 4. Remove rear wheels and shocks.
- 5. Remove the U-bolts and anchor plate on driver side only.

- 6. Carefully bend brake line bracket down at frame and relocate vent tube clip to lower part of frame.
- 7. Carefully lower the floor jack, while watching for brake line extension.
- 8. Clamp the spring assembly together securely with two C-clamps or a large bench vise.
- 9. Loosen the nut and remove the center bolt. If necessary, hold the head of the center bolt with locking pliers.
- 10. Insert the new lower spring plate into the spring pack, placing it on the bottom of the pack.
- 11. Install the NEW center bolt and nut with the pin side at the bottom of spring pack.
- 12. Tighten the center bolt to 20 ft-lbs and cut off excess threads.
- 13. Align the center bolt with the hole in the new 5" lift block. (**NOTE**: The realignment of center pin may require slight loosening of opposite side U-bolts.)
- 14. Install the anchor plate and the new U-bolt hardware. Torque U-bolts to specs.
- 15. Repeat steps 5 through 14 for the other side.
- 16. Bend emergency brake cable bracket down to a horizontal plane. Fig. 15
- 17. Reinstall emergency brake cable bracket back to rear U-bolt pate (opposite from factory). Fig 16
- 18. Install Revtek shocks P/N R3319 and torque hardware to specs.
- 19. Cut off excess U-bolt to prevent body damage, if applicable.
- 20. Install tires and lower vehicle to ground. Torque wheels to factory specs.
- 21. Tighten both front and rear spring pivot bolts, and the shackle bolts to 80 ft-lbs.
- 22. Install (1) carrier bearing drop bracket with supplied 7/16"x 2" bolt and washers. (**NOTE**: Some vehicles may require major driveshaft modifications or more or less shimming to correct vibrations.)
- 23. CHECKS AND ADJUSTMENTS:
  - Check all hardware for tightness after 100 miles and after off road use.
  - Headlights should be adjusted.
  - ☐ Vehicle must be aligned.

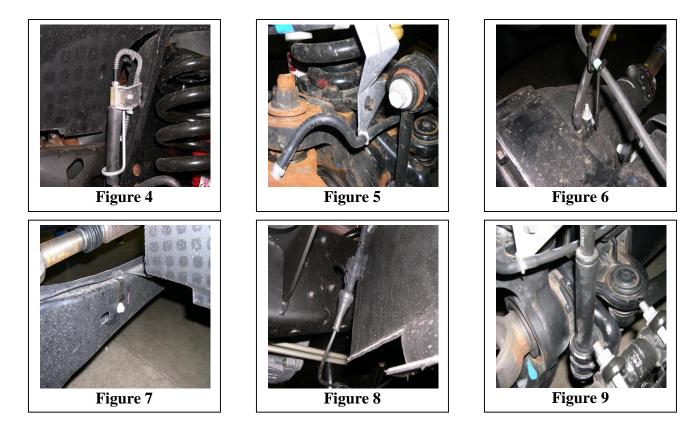
# PRODUCT SAFETY LABEL MUST BE INSTALLED INSIDE CAB IN PLAIN VIEW OF ALL OCCUPANTS



Figure 2



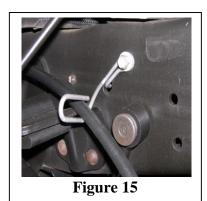
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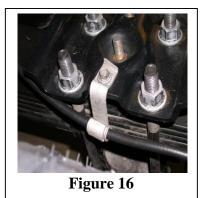












# **Important Installation Notes:**

- Manufacturing tolerances do create certain variations that we cannot fully account for. At times you may
  need to use a punch, or pry bar to get holes to line up. Also you may need to slightly enlarge a hole to create
  a proper alignment. These are all normal situations.
- Altering your suspension may change the way your vehicle handles. Care must be taken to operate your vehicle safely.
- Adding large wheels and tires, will change how your suspension operates. It may put extra strain on certain components causing them to wear sooner than normal.
- While every effort is made to design our kits to work within factory geometry, there are situations where additional alignment tools like adjustable or replacement components may be needed. This is normal.
- It is possible when changing the driveline angles that a vibration may occur, and require an adjustment to repair this situation.
- Other modifications may be needed due to optional equipment on the vehicle or other prior modifications that have been made.
- All fasteners should be checked and retightened after 500 miles. After the initial recheck, they should be checked and tightened as needed with every following service.
- Once the installation is complete a thorough road test should be performed to verify proper clearance of all items.
- Revtek Suspension kits are designed for race applications.
- Altering the suspension on your vehicle may change the characteristics of some systems such as: fuel economy, transmission shift points, etc.
- While Revtek systems are designed to work within all factory specifications and tolerances, there are some situations where exceeding the capability of the vehicle such as load capacity or speed will result in some undesirable results. If you overload your vehicle it will not handle correctly. If you drive or turn with excessive speed your vehicle will handle differently and some onboard vehicle systems may detect this and take appropriate action.
- Our tire and wheel fitments are only a guideline. Different production times or tolerances will vary and this sizes should only be used as a starting point. Each vehicle is different and will need to be treated as such.
- Our lift heights can vary slightly based on manufacturing tolerances. Some vehicles will exhibit slightly
  different amounts of lift heights and different final heights. Every vehicle is not identical and every vehicle
  will not be perfectly the same at all four corners.
- Once your vehicle is lifted components may wear faster, this is normal. A lifted vehicle is exerting more stress on most components and therefor causing them to wear faster.
- After altering the height of your vehicle, you should aim the headlights for proper coverage.
- The use of Loctite on fasteners is highly recommended.



# **Limited Lifetime Warranty**

Revtek Suspension products are warranted to be free from material and workmanship defects for as long as the original retail purchaser owns the vehicle upon which such products were originally installed (proof of purchase required). The consumer will be responsible for removing from the vehicle and returning any defective item, freight prepaid, and for reinstallation. This warranty is non-transferable. Revtek Suspension's limit of liability under this warranty is to repair or replace the product at Revtek Suspension's option. Consequential costs such as, but not limited to labor fees, loss of use, loss of time or freight charges are not covered. Any product that has been abused, altered incorrectly installed, or used in competition is not covered. Product finish is excluded from this warranty. Items that are subject to wear are not considered defective when worn and are not covered. The warranty is void if the "Warning to Driver" decal is not properly displayed on the vehicle. No other warranties are expressed or implied. We reserve the right to make changes in design, materials, and specifications without prior notice.

This warranty gives you specific legal rights and you may also have other rights which may vary from state to state. Some states do not allow limitations on how long an implied warranty lasts or allow the exclusion or limitation of incidental or consequential damages, the above limitation or exclusion may not apply to you.

Other than stated above, there are no warranties.

## SELLER DISCLAIMS ANY IMPLIED WARRANTY OF MERCHANTABILITY

## SELLER DISCLAIMS ANY IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE

This warranty to be free from material and workmanship defects shall not apply to any product which has been improperly installed modified or customized and does not apply to any components used for racing purposes or racing type activities.

To make a claim under this warranty to be free from material and workmanship defects, contact Revtek Suspension about the problem prior to removing any parts from the vehicle. If it appears that the part is warrantable, you will be given a Return Authorization (RA) number and asked to return the part freight prepaid. If the part is found to be warrantable, it will be repaired or replaced and returned to you. All freight charges are the customer's responsibility. If a replacement part is needed before the part in question can be returned, you must first purchase the replacement part. Then if the part in question is deemed warrantable, you will be credited / refunded.

Shocks and bushings are considered to be wear items. As such, they will be covered for a period of 12 months from the original installation. Any failure outside of 12 months will be considered typical wear.

REVTEK SUSPENSION, LLC 503-659-1650 2800 Taylor Way BLDG 2A, Forest Grove, OR 97116