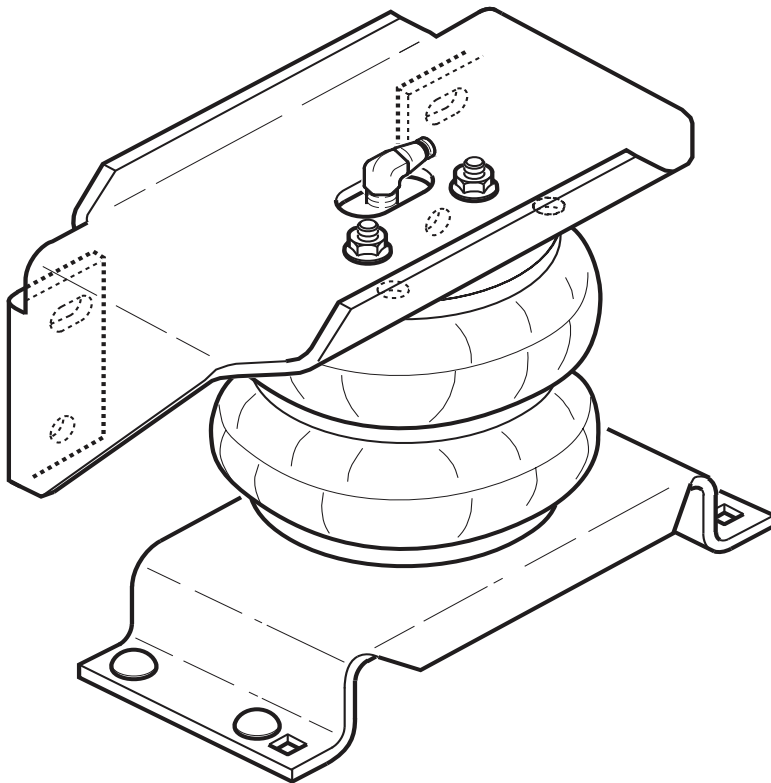




81223017 05-22 Ford F450 2WD/4WD COMMERCIAL

Congratulations - your new TowPro Helper Springs are quality products capable of improving the handling and comfort of your vehicle. As with all products, proper installation is the key to obtaining all of the benefits your kit is capable of delivering. Please take a few minutes to read through the instructions to identify the components and learn where and how they are used. It is a good idea to start by comparing the parts in your kit with the parts list below.



Components	Part#	QTY
267C AIR SPRING	6781	2
UPPER BRACKETS	5223	2
LOWER BRACKETS	5092	2
BRACKET STRAP/SHIM 1/2"	5086	6
BRACKET STRAP/SHIM 1"	5093	2
BRAKE LINE BRACKET	5427	1
BACK STRAP	5137	2

Hardware

3/8"-16 FLANGE HEX NUT	21
3/8"-16 X 1" HEX BOLT	1
3/8"-16 X 3/4" FLANGE HEX BOLT	2
3/8"-16 x 7" CARRIAGE BOLTS	8
3/8"-16 x 3" CARRIAGE BOLTS	8
3/8" LARGE FLAT WASHER	14
3/8"-16 X 1 1/2 HEX BOLTS	8
5/16" FLAT WASHER	4
THERMAL SLEEVE	2
NYLON TIE	6
AIRLINE TUBING	2

WARNING!

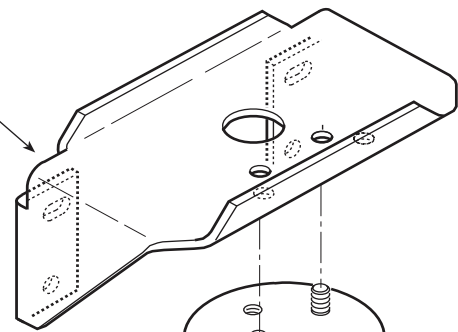
Do not inflate this assembly when it is unrestricted. The assembly must be restricted by the suspension or other adequate structure. Do not inflate beyond 100 P.S.I. Improper use or over inflation may cause property damage or severe personal injury.

FIGURE "A"

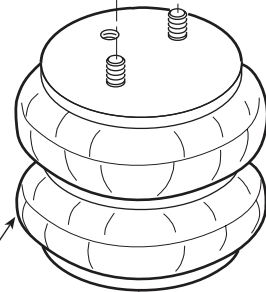
NOTE: Both illustrations are of the left, or driver's side, of the vehicle. Reverse any orientations when assembling and installing the right, or passenger's side of the vehicle.

KIT ASSEMBLY

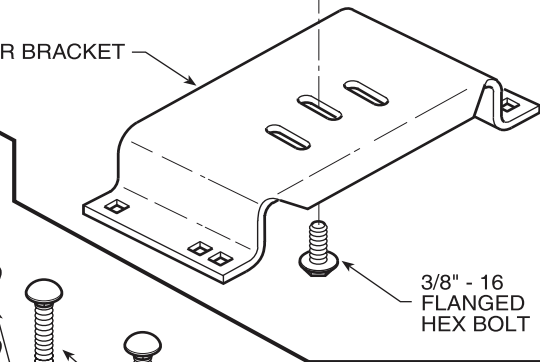
UPPER BRACKET



AIR SPRING 267C

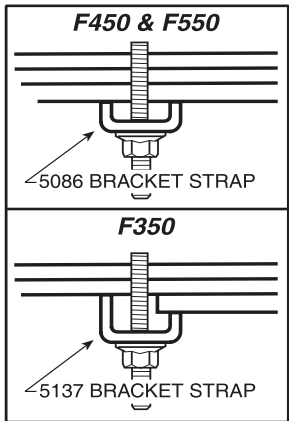
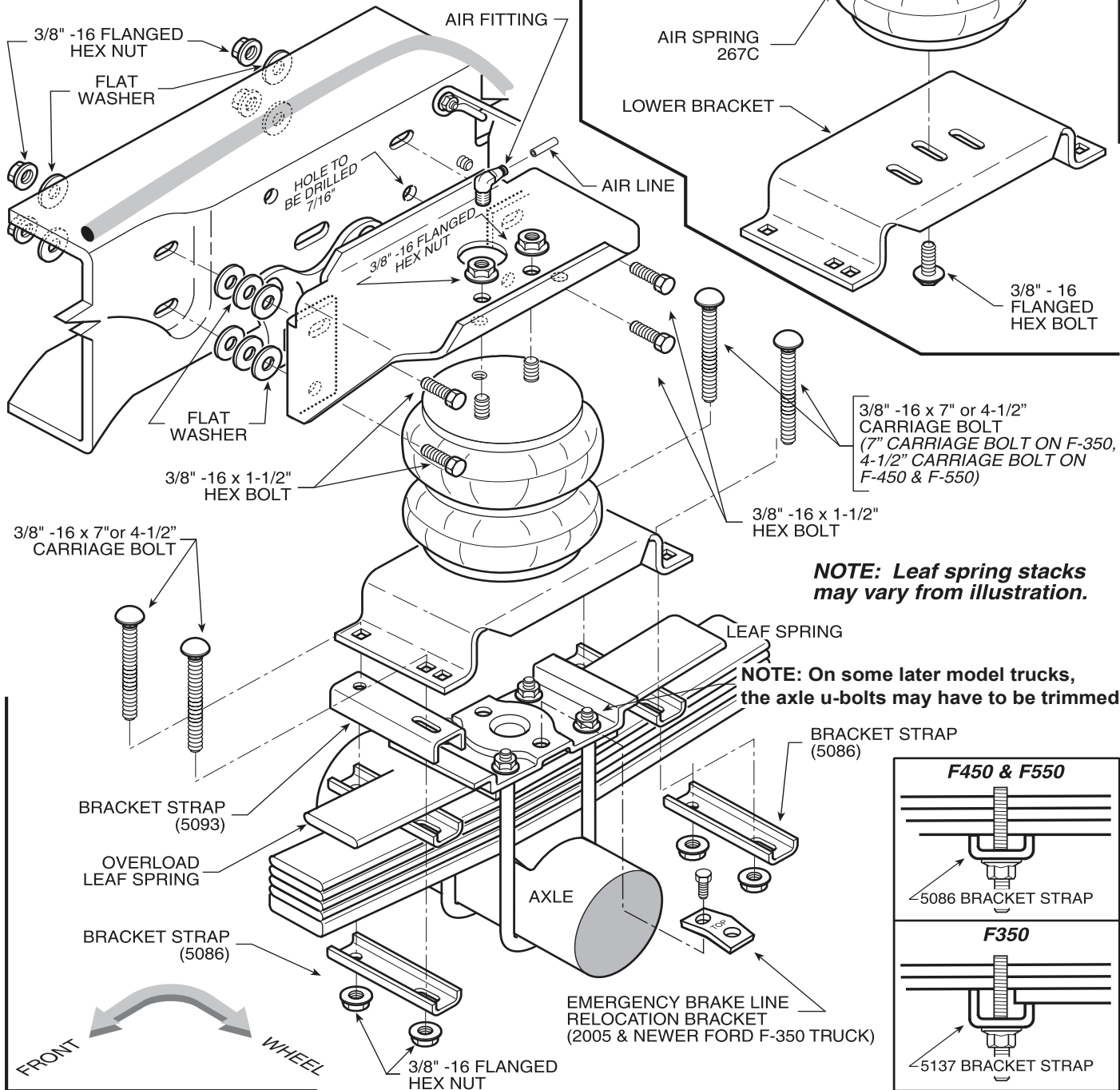


LOWER BRACKET



3/8" - 16
FLANGED
HEX BOLT

KIT TO FRAME ASSEMBLY



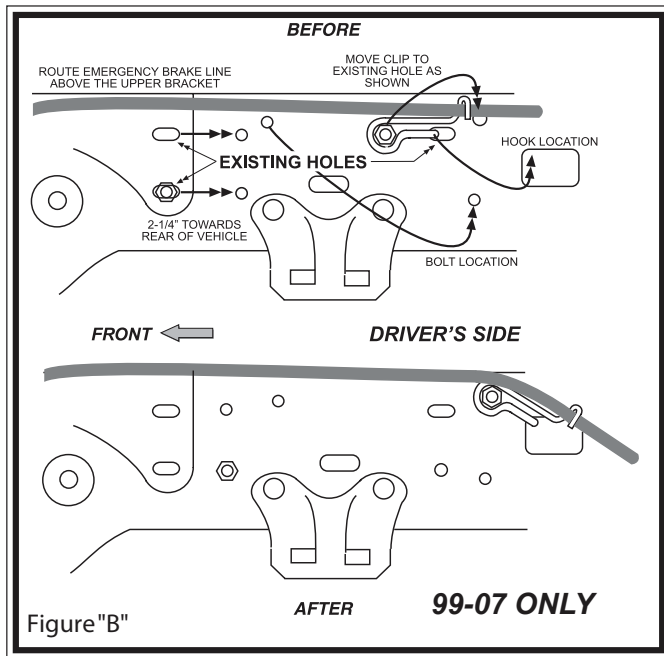


Figure "B"

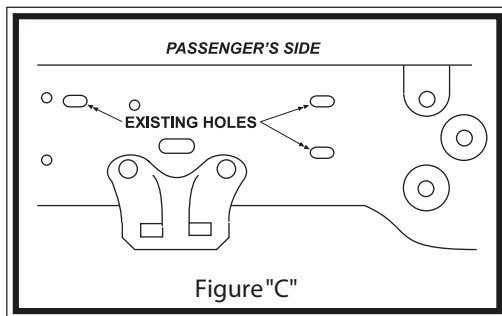


Figure "C"

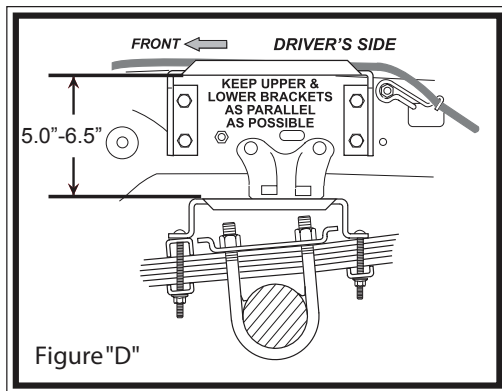


Figure "D"

STEP 1 - PREPARE THE VEHICLE

With the vehicle is on a solid level surface, chock the front wheels. This vehicle does not have to be raised up to install the kit. Remove the negative battery cable. *This installation assumes that there is no load on the vehicle.*

On 2005 and newer F-350 vehicles the emergency brake line bracket must be relocated. Remove the screw holding the brake line. Install the relocating bracket with the screw previously removed. **NOTE: the bracket is marked top.** Next, fasten the emergency brake line bracket to the relocation bracket using the 3/8" X 1" bolt and a 3/8" nut.

STEP 2 - PREASSEMBLE THE KIT

Select one air helper spring and a lower bracket from your kit. Fasten the lower bracket to the air helper spring using a 3/8" -16 x 3/4" flanged hex bolt through the center slot in the lower bracket (*finger tight*) see **Figure "A"**.

STEP 3 - PREPARE THE FRAME

The frame rail on the driver's side of the vehicle will require the relocation of three items that will interfere with the upper bracket and air spring. This is accomplished by relocating the existing nuts, bolts, and clips on the frame rail that fall between the upper bracket flanges.

- 1.) The emergency brake line clip will be moved toward the rear of the vehicle see **Figure "B"**.
- 2.) The plastic line harness located on the inside of the frame rail will be moved 2-1/4" toward the rear of the vehicle. Two 3/8" holes will have to be drilled to relocate the line harness see **Figure "B"**.
- 3.) The ground strap bolt must be relocated to fall outside the upper bracket flanges see **Figure "B"**. Please note that the nuts, bolts and clips may be placed in various locations depending upon your specific model.

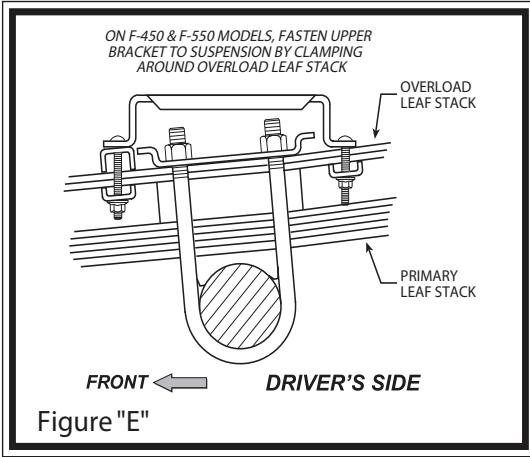
STEP 4 - ATTACH THE ASSEMBLY TO THE FRAME

The three existing slots in the frame rail will be used in addition to one hole drilled in the frame rail to attach the upper bracket to the frame rail. The slots will have to be enlarged to allow the bolts to pass through. Place the upper bracket on the outside of the frame rail, aligning the holes in the bracket with the slots in the frame see **Figure "A"**. Using the upper bracket as a template, mark the hole to be drilled in the frame rail with a center punch. Remove the upper bracket and drill a hole on the center mark using a 7/16" drill bit. **Before drilling, make sure that all electrical, brake, and fuel lines are cleared from the path of the drill bit.** Damaging the lines can be avoided by inserting a piece of wood between the frame rail and any lines in the path of the drill bit.

Attach the upper bracket to the frame rail using the drilled hole and a 3/8" -16 x 1-1/2" hex bolt, 3/8" -16 flanged hex nut, and large washer, making sure that the remaining holes in the bracket are aligned with the slots in the frame rail see **Figure "A"**. With the upper bracket secured in place, drill through the three holes in the upper bracket and through the slots in the frame rail with a 7/16" drill bit. Using the supplied 3/8" -16 x 3/4" hex bolts, 3/8" -16 flanged hex nuts, and large washers, attach the bracket to the frame rail. Note that three large washers will be placed between the forward bracket flange and the frame rail on both flange attaching locations **on the left side of the vehicle only**. This allows the air spring assembly to mount flush with the frame rail see **Figure "A"**. Next, install the elbow fitting into the air spring. Tighten the air fitting securely to engage the orange thread sealant. Position the fitting to point to the anticipated location of the air inflation valves, see **Figure "A" & "F"**.

STEP 5 - ATTACH THE LOWER BRACKET TO THE VEHICLE

Place the lower bracket and air spring on the leaf stack. Insert the studs on the upper plate of the air spring through the holes in the upper bracket. Attach the air spring to the upper bracket using two 3/8"-16 flanged hex nuts. Install the 1/2" or 1" spacer between the lower bracket and the leaf stack on the forward end of the assembly to align the upper and lower brackets as close to parallel as possible see **Figures "A" & "D"**. Insert the carriage bolts through the square holes in the lower bracket. **Use 7" carriage bolts for F-350's and use 4-1/2" carriage bolts for F-450's & F-550's. If the lower bracket does not rest on the leaf spring, the axle u-bolts may have to be trimmed. See Figure "A"**.



Slide the bracket straps onto the carriage bolts as to clamp the lower bracket to the leaf stack *see Figures "A" & "D"*. Fasten the bracket strap to the carriage bolts using two 3/8"-16 flanged hex nuts. The F-350's will use a staggered bracket strap (one leg is longer than the other) behind the axle *see Figure "A"*. *Note:* F-350's will clamp around the entire leaf stack, F-450's & F-550's will clamp around the overload springs only *see Figures "D" & "E"*. Slide the lower bracket forward or backward to align the air spring as close to vertical as possible. Tighten the 3/8"-16 flanged hex bolt that holds the air spring to the lower bracket.

STEP 6-INSTALL THE PASSENGER'S SIDE ASSEMBLY

Reverse any orientations when assembling and installing the right, or passenger's, side of the vehicle. Note that the installation on the passenger's side does not require the flat washers between the upper bracket and the frame rail *see Figure "C"*. The passenger's side installation will not require the relocation of any existing hardware on the frame rail.

Important:

In order for the air spring to function properly, there must be a minimum of 1/2" of clearance around the air spring.

STILL HAVE QUESTIONS?

Tech line hours

Monday - Friday

8Am - 6PM (EST) 812-482-2932

