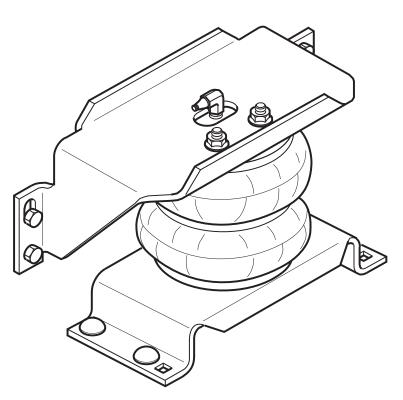


81223021 2000-2002 Ford F450 2WD/4WD

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# Q11
267C AIR SPRING	6781 2
UPPER BRACKETS	5187 2
LOWER BRACKETS	5092 2
BRACKET STRAP/SHIM	<i>I</i> 1/2" 5086 2
BRACKET STRAP/SHIM	<i>I</i> 1" 5093 2
BACK STRAP	5137 2

Part# OTV

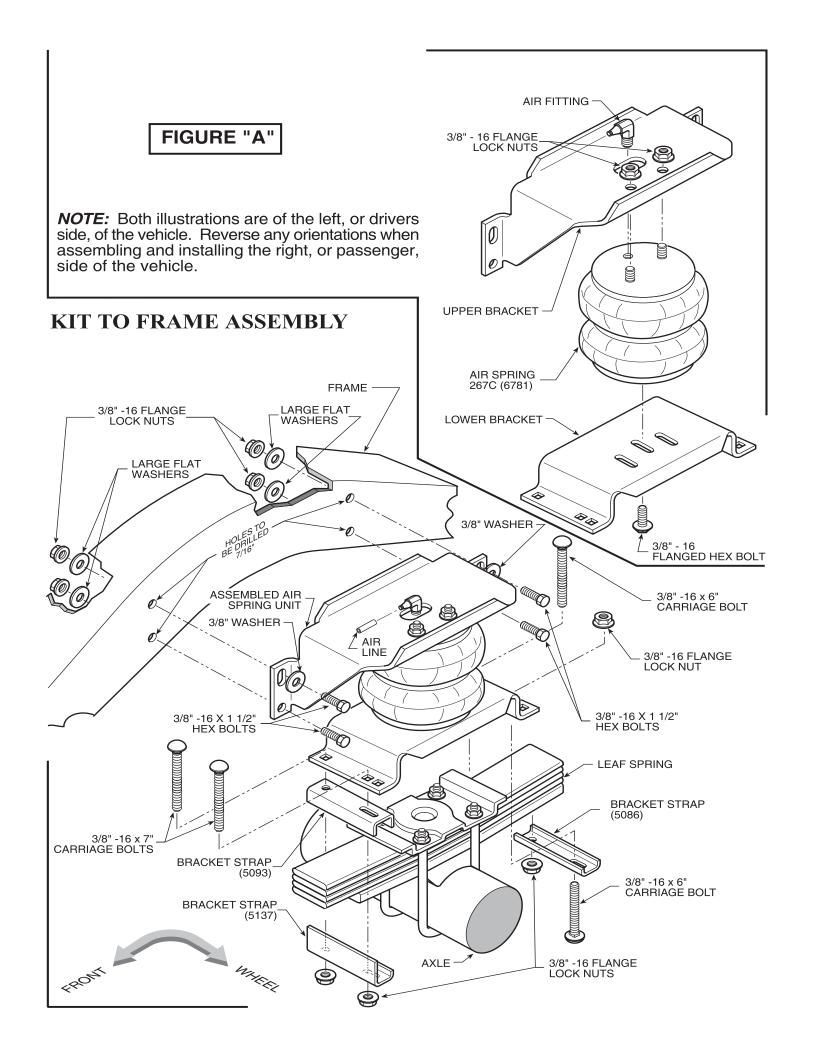
Hardware

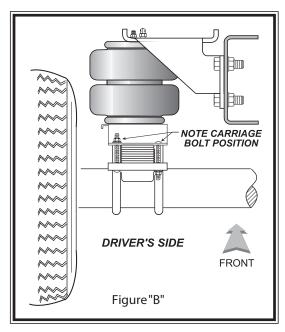
Components

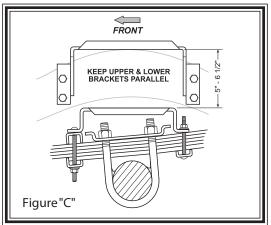
3/8"-16 FLANGE HEX NUT	20
3/8"-16 X 3/4" FLANGE HEX BOLT	2
3/8"-16 x 7" CARRIAGE BOLTS	4
3/8"-16 x 6" CARRIAGE BOLTS	4
3/8" LARGE FLAT WASHER	8
3/8" WASHER	4
3/8"-16 X 1 1/2 HEX BOLTS	8
5/16" FLAT WASHER	4
THERMAL SLEEVE	2
NYLON TIE	6
AIRLINE TUBING	2

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.







Important:

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

STEP 1 - PREPARE THE VEHICLE

With the vehicle on a solid, level surface chock the front wheels. Raise the vehicle by the rear axle and remove the rear wheels. After the removal of the wheels lower the vehicle so the axle rests on jack stands rated for your vehicles weight. Make sure the negative battery cable is disconnected from the battery.

STEP 2 - PREASSEMBLE THE KIT

Select one air helper spring from your kit and an upper bracket. Align the studs on the air spring with the holes on the upper bracket making sure the air inlet hole can be seen through the slot in the upper bracket se&igure "A". Use the 3/8"-16 flange lock nuts to secure the upper bracket to the air spring. Install the air fitting as shown in Figure "A". Tighten the air fitting securely to engage the orange thread sealant. Point the elbow fitting in the direction of the inflation valve location. Position the lower bracket as shown in Figure "A" & "C" and fasten the lower bracket to the air helper spring using a 3/8"-16 flange bolt(finger tight). The lip on the lower bracket will face towards the tiresee Figure "A" & "B".

STEP 3 - PRE-FIT MARK AND DRILL HOLES

Place the assembly on the driver's side on top of the leaf stack stradling the leaf spring retainer and inserting the 1" spacer as shown in Figure "A" & "C" . Visually align the air spring so that it is as vertical as possible refer to Figure "A" & "B" . Place the upper bracket against the frame rail and use the holes in the bracket as a template to mark the holes to be drilled in the frame rail. The distance between the upper and lower bracket should be 5"-6 1/2" as shown in Figure "C" . Mark holes to be drilled with a center punch and remove the air spring assembly. Before drilling the holes make sure all electrical, brake and fuel lines are cleared from the path of the drill. Damage to lines can be avoided by inserting a piece of wood between the frame rail and any lines in the path of the drill. Drill the four holes in the frame rail using a 13/32" drill bit see Figure "A" .

STEP 4- INSTALLATION TO THE VEHICLE

After drilling the holes in the frame rail place the assembled air spring back on the leaf stack making sure the lower bracket is placed over the retainer (see Figure "A" & "C") . Install the 3/8"- $16 \times 11/2$ " hex bolts and 3/8" washers through the upper bracket holes and the holes that were drilled in the frame rail. Next fasten the upper bracket to the frame rail using the 3/8"-16 flange lock nuts and special flat

washers to the back side of the framerail refer to Figure "A" and "B". The next step is to attach the lower bracket to the leaf spring assembly. Notice that the lower bracket is angled with the arc of the suspension. Use the 1" spacer placed between the lower bracket and the leaf spring towards the front of the vehicle as shown in Figure "A" & "C". Insert (2) of the 7" carriage bolts capturing both the 1" spacer and the lower bracket (see Figure "A"). The carriage bolts should stradle the leaf stack refer to Figure "A" & "B". The 6" carriage bolts will be used on the right side towards the rear of the vehicle of the lower bracket were no spacer is used. The 6" carriage bolt closest to the tire will be reversed to avoid contact with the brake caliper as shown in Figure "A", "B" & "C". Slide the even bracket strap onto the rear carriage bolts as to clamp the lower bracket. Slide the un-even bracket onto the front carriage bolts as to clamp the lower bracket to the leaf stack. Fasten using the 3/8"-16 flange lock nuts. Adjust the air spring to achieve vertical alignment. Tighten the 3/8"-16 flange bolt that holds the air spring to the lower bracket using an open end wrench. Follow steps 1-4 for assembly and installation of the passenger's side assembly.