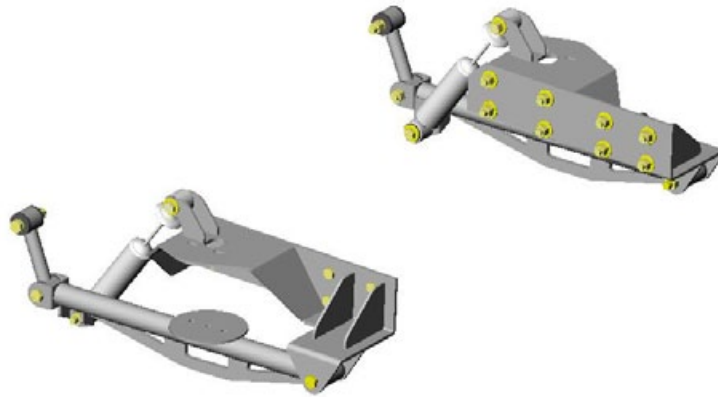


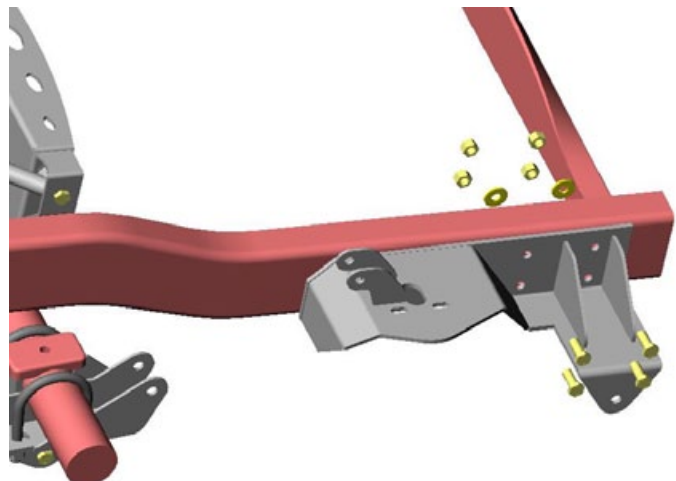
INSTALLATION INSTRUCTIONS

1983-2005 FORD RANGER BOLT-ON CANTILEVER SYSTEM



NOTE: YOU MUST HAVE ALREADY INSTALLED A KP COMPONENTS BOLT ON 4-LINK TO BE ABLE TO UTILIZE THIS CANTILEVER SYSTEM.

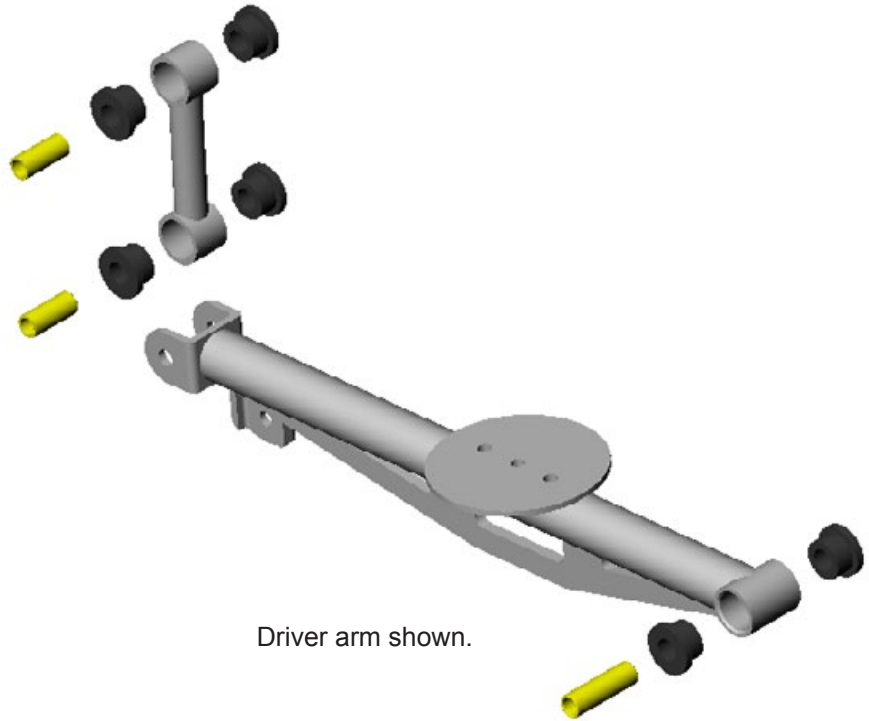
1. Jack your truck and secure it with jack stands under the frame on all four corners.
TIP: If you are installing this Cantilever system at the same time as our bolt on 4-link, your bed should already be removed. If your bed is installed, it is not necessary to remove it, but it sure is easier.
2. Next you will have to remove the factory rivets securing the factory aft leaf spring hangers to the frame. We have found that the best method to accomplish this is to cut an X into the rivet head using a cutoff wheel on a die grinder, chisel off the head and punch the rivet out. You will need to enlarge these holes to $\frac{1}{2}$ inch with a drill.
3. Temporarily bolt the left and right Cantilever brackets to the frame by matching the rear four holes in each bracket with the four rivet holes you just enlarged in step 2, and installing four $\frac{1}{2}$ inch by $1 \frac{1}{4}$ inch bolts and $\frac{1}{2}$ inch locking nuts in each bracket.
4. Using our bracket as a template, mark and drill the remaining four holes in each frame rail to $\frac{1}{2}$ inch.
5. Permanently install the left and right Cantilever brackets on the frame rails using eight $\frac{1}{2}$ inch by $1 \frac{1}{4}$ inch bolts, sixteen $\frac{1}{2}$ inch flat washers and eight $\frac{1}{2}$ inch locking nuts in each bracket. The washers are to go



between the nuts and the inner frame rails.

6. Assemble all of the Cantilever bars, dogbone links, bushings and sleeves.

CAUTION! IF YOU ARE INSTALLING OUR 4-LINK AND CANTILEVER AT THE SAME TIME, USE CAUTION. THE STEEL BUSHING SLEEVES ON THE 4-LINK HAVE AN INSIDE DIAMETER OF $\frac{1}{2}$ INCH. THE BUSHING SLEEVES ON THE CANTILEVER HAVE AN INSIDE DIAMETER OF $\frac{9}{16}$ INCH. DO NOT MIX THEM.

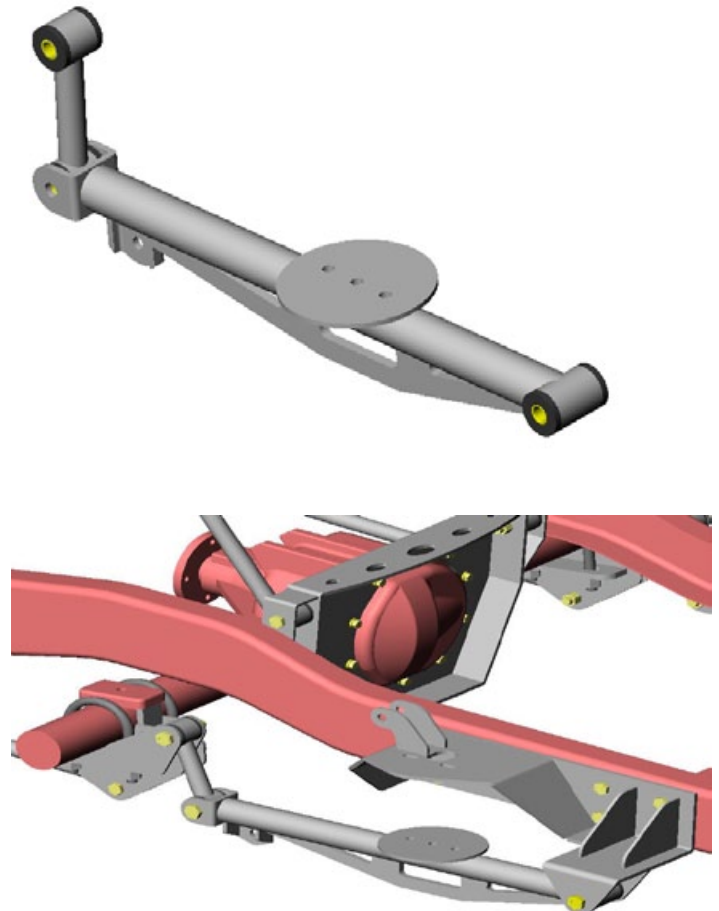


Driver arm shown.

7. Connect the dog bone links to the Cantilever bars using $\frac{9}{16}$ inch by 3 inch bolts and $\frac{9}{16}$ inch Self locking nuts.

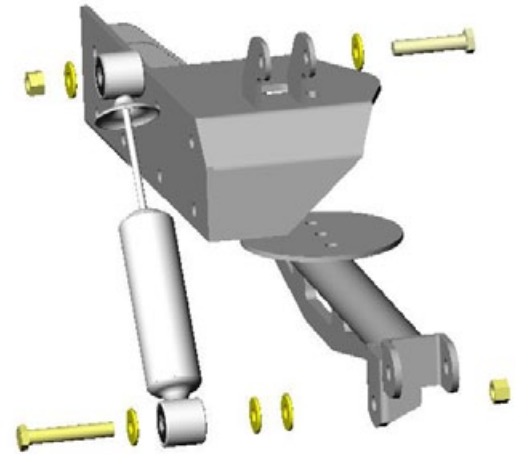
8. Attach the now assembled driver and passenger Cantilever arms to the Cantilever brackets using $\frac{9}{16}$ inch by 4 inch bolts and $\frac{9}{16}$ inch locking nuts. Then attach the dogbone links to the axle pads of the 4-link using $\frac{9}{16}$ inch by 3 inch bolts with $\frac{9}{16}$ inch self locking nuts.

NOTE: There is a driver and passenger arm. The shock mounting tab must face inward.



9. Now install the shock absorbers as shown in the illustration. The tops mount use two ½ inch by 3 inch bolts, two ½ inch flat washers, and two ½ inch locking nuts. The bottoms mount use two ½ inch by 3 inch bolts, six ½ inch flat washers, and two ½ inch locking nuts.

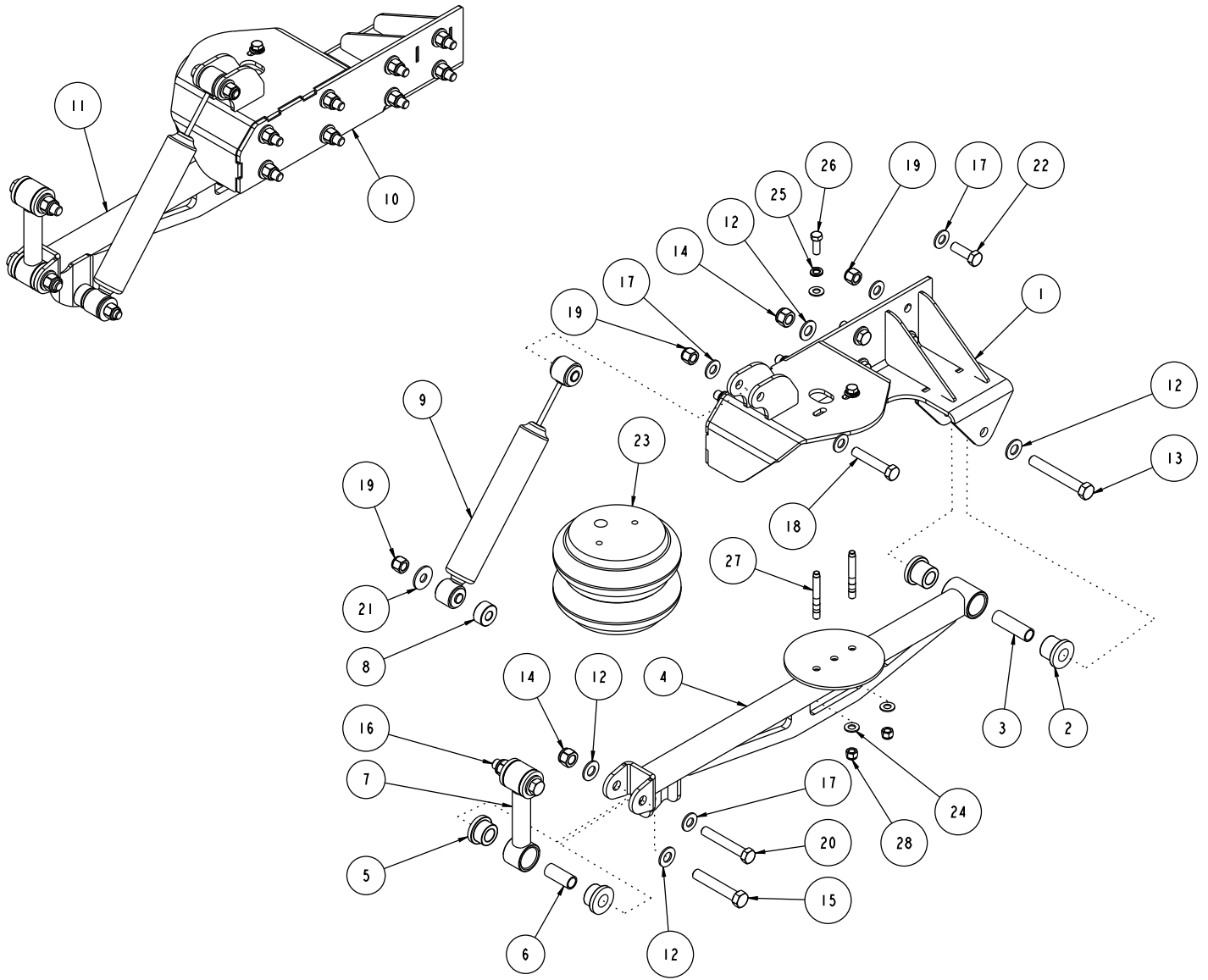
NOTE: Washer placement is very important here. For shock clearance you must install two ½ inch washers between the shock mount and the shock as well as one between the bolt head and the shock as shown.



10. Your bags can now be mounted in the Cantilever.
The only bag mounting hardware supplied is the two 3/8 inch by 2 13/16 inch studs and two 3/8 inch nuts needed to extend through the Cantilever bars into the bags. Install the shorter threaded ends of the studs into the bags until they bottom out. FINGER TIGHT ONLY!!! Then slide the stud and bag onto the Cantilever arm and install the 3/8 inch locking nut.

NOTE: If the bags you are using have more than one threaded hole in the bottom, more studs are available from us. We recommend using all of the mounting holes your bag supplies.

11. Go back and make certain you have tightened all attaching hardware.. The bed may have to be trimmed to clear the new components. Re-install your bed. Your Cantilever installation is complete.



ITEM	QTY	PART NO.	DESCRIPTION
1	1	7931-065	FRAME BRACKET #65 WELDMENT, DRV, CANTILEVER, 83-05 RANGER
2	4	3141-2440-1.19	POLYURETHANE BUSHING 1.63 x .750 x .938
3	2	3140-1824-080	SLEEVE, POLY BUSHING \varnothing 9/16 x 3/4 x 2 1/2
4	1	7931-063	CANTILEVER BAR, 26" CENTERS, DRIVER, 3" SHOCK MOUNT
5	8	3141-2440-0.88	POLYURETHANE BUSHING 1.63 x .750 x .750
6	4	3140-1824-056	SLEEVE, POLY BUSHING, \varnothing 9/16 x 3/4 x 1 3/4
7	2	7931-005	DOG BONE LINK WELDMENT, 20 RIM
8	2	7931-083	SPACER, \varnothing 1 1/4 OD x \varnothing 1/2 ID x .600 LONG
9	2	KPC SANS-RC	STEEL BODY SHOCK, RANGER, NO DUST COVER
10	1	7931-066	FRAME BRACKET #66 WELDMENT, PSGR, CANTILEVER, 83-05 RANGER
11	1	7931-064	CANTILEVER BAR, 26" CENTERS, PASSENGER, 3" SHOCK MOUNT
12	12	3157-056S-C	WASHER, 9/16 SAE, ZINC PLATED, 19/32 ID x 1 5/32 OD x 3/32 THICK
13	2	3100-056C4.00Y	HEX BOLT, 9/16-12 x 4, GRADE 8, YELLOW ZINC
14	6	3101-056-12C	LOCKNUT, 9/16-12, GRADE C, NYLON INSERT, CLEAR ZINC
15	2	3100-056C3.25Y	HEX BOLT, 9/16-12 x 3 1/4, GRADE 8, YELLOW ZINC
16	2	3100-056C3.00Y	HEX BOLT, 9/16-12 x 3, GRADE 8, YELLOW ZINC
17	38	3157-050S-C	WASHER, 1/2 SAE, ZINC PLATED, 1/2 ID x 1 1/16 OD x 3/32 THICK
18	2	3100-050C2.75Y	HEX BOLT, 1/2-13 x 2 3/4, GRADE 8, YELLOW ZINC
19	20	3101-050-13C	LOCKNUT 1/2-13, GRADE 5, NYLON INSERT, CLEAR ZINC
20	2	3100-050C3.25Y	HEX BOLT, 1/2-13 x 3 1/4, GRADE 8, YELLOW ZINC
21	2	899-044.51-1.36	STEEL WASHER \varnothing 1.360 x .510 ID x .105 THICK
22	16	3100-050C1.50Y	HEX BOLT, 1/2-13 x 1 1/2, GRADE 8, YELLOW ZINC
23	2	3470-RE7	AIR BAG, 200 PSI, 7" DIAMETER
24	8	3157-038S-C	WASHER, 3/8 SAE, ZINC PLATED, 13/32 ID x 13/16 OD x 1/16 THICK,
25	4	3108-038L-C	LOCK WASHER, HELICAL SPRING \varnothing 3/8, STEEL, ZINC
26	4	3100-038C1.00Y	HEX BOLT, 3/8-16 x 1, GRADE 8, YELLOW ZINC
27	4	3163-06C-3.00B	STUD 3/8-16 x 3.0 OAL 7/16 THREAD - 1 3/8 THREAD, 1/4 NOSE
28	4	3101-038-16C	LOCKNUT 3/8-16, GRADE 5, NYLON INSERT, CLEAR ZINC

DESCRIPTION		CANTILEVER SYSTEM, BOLT-ON 83-05 FORD RANGER	
Chris Alston's CHASSISWORKS INC. 8661 YOUNGER CREEK DRIVE SACRAMENTO, CA 95828 (916) 388-0288 FAX 388-0295		PART NO.	KPC CBO-R11
		3/24/09	DWG: 7927-CBO-R11

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