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2005-2008 Ford SD Rear 6-8" Lift Kit Installation Instructions



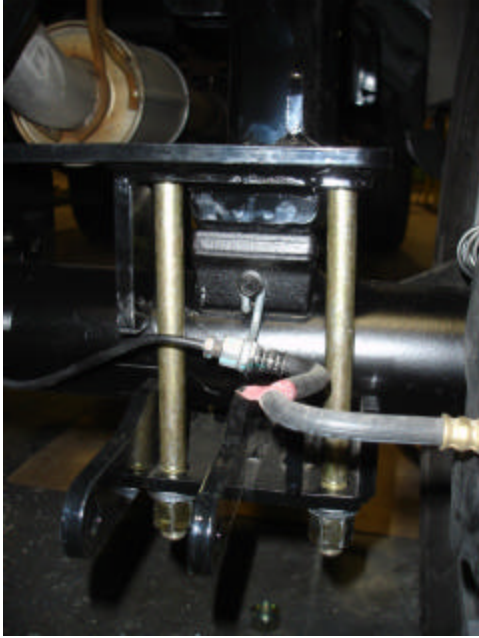
Step 1. Measure the rear pinion angle. Record this angle as you will need it to align the rear axle after the kit is installed.

Step 2. Jack up the rear of the truck so the rear wheels are just barely off the ground. Put a motorcycle strap over the differential to the frame. Remove the rear leaf springs, sway bar, shocks, and the rubber bump stops located on the bottom of the frame. You will reuse the bolts that hold the front of the leaf spring in the spring perch, so set them aside. Use a torch to cut the factory shock mounts off the axle housing. Next, grind the axle smooth and paint the axle with some chassis black paint.

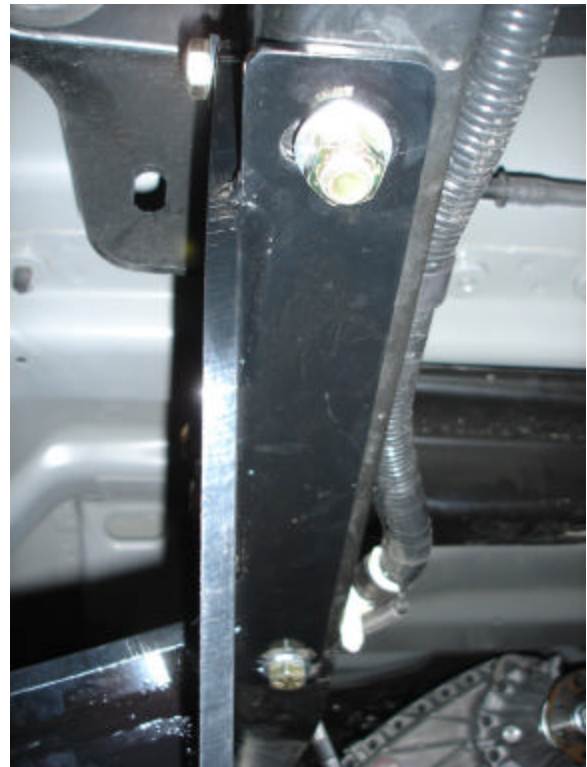
Step 3. Locate the brake line extension and install.



Step 4. Locate the lower air bag mount and the lower axle clamps. The passenger side lower air bag mount is the one with the two tabs welded to it. The bottom axle clamps are also the lower shock mounts. Place the lower bag mounts on the top of the axle leaf spring perches. Use the 5/8" x 8 1/2" bolts to fasten components into place. Make sure to run the bolts in from the top down (nuts on the bottom). The bottom shock mounts should be mounted so the ears are toward the inside of the frame. Torque the 5/8" bolts to 150 ft/lbs. Make sure to tighten in a criss-cross pattern to make sure the lower bag mount sits flush on the leaf spring pad. NOTE: You will have to slightly bend the metal brake lines that run across the back of the axle. Be careful and don't kink the brake



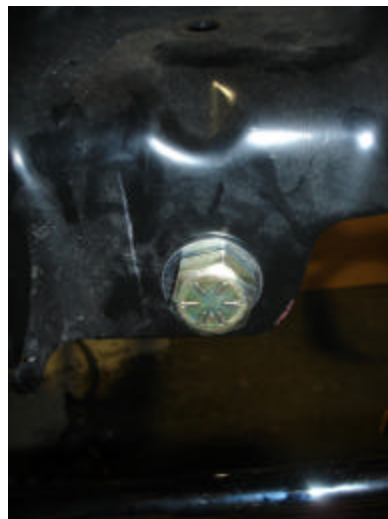
Step 5. Locate the front lower trailing arm mount. Hold the mount against the side of the frame and match up the holes. Most of the holes will be smaller will be necessary to drill the holes in the bottom and sides of the frame. Use a 1/2" drill or slightly larger. On the drivers side, it is required to lower the fuel tank and slide it over towards the center of the truck. NOTE: Be sure to use extreme caution when drilling around the fuel and brake lines. Once you have the holes all drilled, tighten the 1/2" bolts. Torque the 1/2" bolts to 75 ft/lbs.





Step 6. THIS STEP IS FOR 2005-2007 TRUCKS ONLY! IF YOU HAVE A 2008, GO TO STEP 7. Locate the trailing arms. The short ones go on top. Locate the step bushing and slide it into the end of the trailing arm that goes into the factory leaf spring perch. The step side of the bushing goes against the outside, away from the frame. Use the factory bolt to fasten into place. Use the 7/8" x 5" bolt to fasten the other end in the bottom air bag axle mount. Locate the bottom trailing arms and fasten them into place. The spacer goes on the frame side. Use the 7/8" by 8" bolt on the front mounting bracket and the 7/8" x 5" on the bottom bag mount.

Step 7. Locate the upper trailing arm, 7/8" x 5 1/2" bolt and 9/16" thick spacer. The front of the trailing arm mounts in the factory front leaf spring perch. The factory hole is about 1/32" to small for the 7/8" bolt, so you will need a die grinder to open up the factory hole. If you open up the hole to much, it is recommended to weld the washer to the outside of the spring perch. When installing the trailing arm, make sure to put the 9/16" spacer towards the outside of the frame. Use the 7/8" x 5" bolts to fasten the other end to the bottom air bag mount. Do not tighten all trailing arm bolts until the installation is complete.



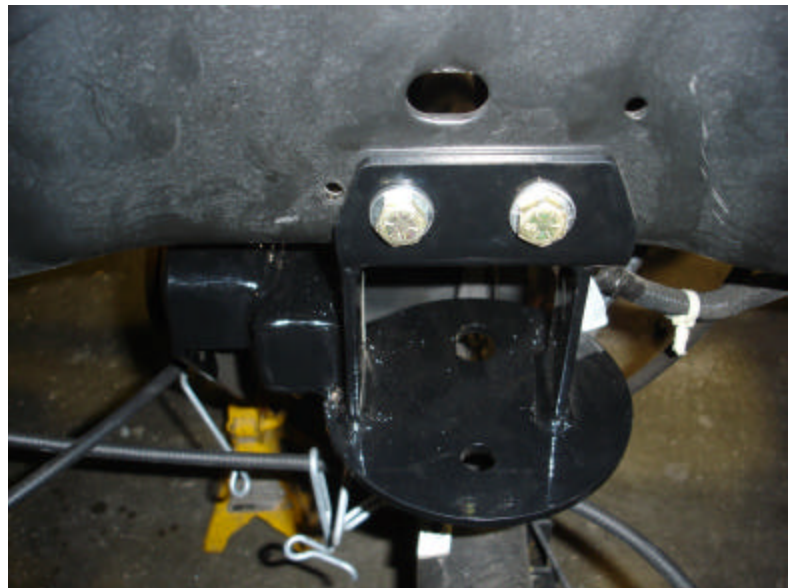
Step 8. Locate the lower trailing arms. The front of the trailing arms mount into the mount that you bolted to the frame in step 4. Make sure to put the 1 3/4" spacer on the inside of the mount.

Step 9. Locate the top air bag mount. This mount fits right above the axle where the factory bump stops were. You should be able to line up the original bump stop hole in the frame with the hole in the bottom of the air bag mount. Once you have the bottom bolts in each side of the mount, you will need to drill the two holes on the outside of the frame. Fasten the (6) 1/2" x 2" bolts into the holes where the rubber bump stop was located. The pan hard bar anchor goes on the driver's side next to the fuel tank.

Step 10. Locate the airbags. Fasten into place using the 1/2" by 4 1/2" bolt (8979 bags) in the bottom and the 1/2" coarse nut and 3/4" fine thread nut. Insert the air fitting into the bag.



Step 11. Locate the pan hard bar. Use the 3/4" x 3 1/2" bolts to fasten into place. Put a spacer on each side of the heim end in order to center the pan hard bar. **NOTE: Make sure that the bolt threads do not get close to the air bags.**



Step 12. Locate the sway bar mounting brackets. These U-bolt to the bottom of the axle. On the 2008 models, you will need to drill the hole in the bottom of the axle perch. Use the 7/16" x 1" bolt to fasten together. Next locate the sway bar, blue bushings and sway bar clamp. Figure out where the blue bushings will locate on the sway bar, lube the inside of the blue bushing and slide the blue bushing over the sway bar. Next slide the clamp over the blue bushing and fasten the sway bar to the sway bar mount. Use the extended nuts and washers to fasten into place. You install the end links once the truck is aligned.



Step 13. Inflate the bags to 12". The easiest way to measure the bag height is to measure the distance between the upper bag mount and the lower bag mount. Now that the bags are at ride height, take a jack stand and place it under the rear hitch. Let the air out of the bags. This will keep the truck at ride height while you are dialing it in and will take the pressure off the trailing arms. First adjust the upper arms so they are the same length. Now set the bottom bars to the same length. Find a hole on the frame that is the same on each side. Use that as a reference point as you are squaring up the axle. While you are adjusting the axle, try to keep the pinion angle close to the original measurement. It is easier to adjust the trailing arms by turning each one $\frac{1}{2}$ a turn and then going to the opposite arm and turning it $\frac{1}{2}$ a turn. You want to have the bag sitting straight up and down when the Once you get the ride height established, axle squared up, and pinion angle set, adjust the pan hard bar side to side. You should only have about $\frac{1}{4}$ " of threads showing on the heim end against the jam nut. After everything is lined up, go over and retorque all the bolts. NOTE: Do not be alarmed if the bottom of the bags are angled. This will not affect the ride or life of the system.



Step 14. Locate the sway bar end links. Use the $\frac{1}{2}$ " x 3" and large flat washer to fasten the end of the end link to the outside of the sway bar. Make sure to put the large flat washer on the outside of the red bushing. Next locate a

Step 15. Keeping the truck at ride height, locate the shocks and upper shock mounts. Use the $\frac{1}{2}$ " x 3 $\frac{1}{2}$ " bolts to fasten the bottom of the shock in place. If you are using the 7100 Bilsteins, use the supplied spacer on each side of the heim end in order to

keep the shock centered. Next, locate the upper shock mount. It will be required to drill two holes (single shock) into the side of the frame or four holes (dual shocks) into the frame. When locating where to mount the upper shock mount, make sure the tabs are up and the shock is straight up and down. Use a center punch to locate the holes and then drill them out to 1/2" inch. Use the 1/2" x 1 1/2" to fasten. Next fasten the top of the shocks into the shock mounts with the 1/2" x 3 1/2" bolts. NOTE: Make sure there is no brake lines or wiring on the inside of the frame that could be damaged when drilling.

Step 16. Again keeping the truck at ride height, put the sway bar level with the ground. Set the endlink so that it is straight up and down. Look for a hole in the frame that can be drilled out to accept a 1/2" hole. If there is none in the location desired, use a center punch to locate where to drill on the frame. NOTE: Make sure there is no brake lines or wiring on the inside of the frame that could be damaged when drilling. Fasten the endlink to the frame with the 1/2" x 3 1/2" bolt. Make sure to put the thick flat washer on the outside of the bushing.

Step 17. Now that the rear axle is square, you will want to make sure the front axle is square with the rear axle. Take a tape measure and have a helper hold the end of the tape on the front side of the rear axle. Measure forward to the kingpin on top of the front axle. Record this measurement. Measure the other side. Try and get this measurement within 1/8". You should have the front airbags setting pretty square when all is done. Be sure to recheck the front pan hard bar to make sure the front axle is square.

Step 18. The carrier bearing on the driveshaft will need to be spaced down. Use the 2x3 tube or supplied shims to space the carrier bearing down. Start with the 2" side of the tube and use the 1/4" kicker plate. Try and get the driveshaft as straight as possible.



Step 19. Plumb up the air lines to the bags according to the instructions supplied with whatever air control system you are using.

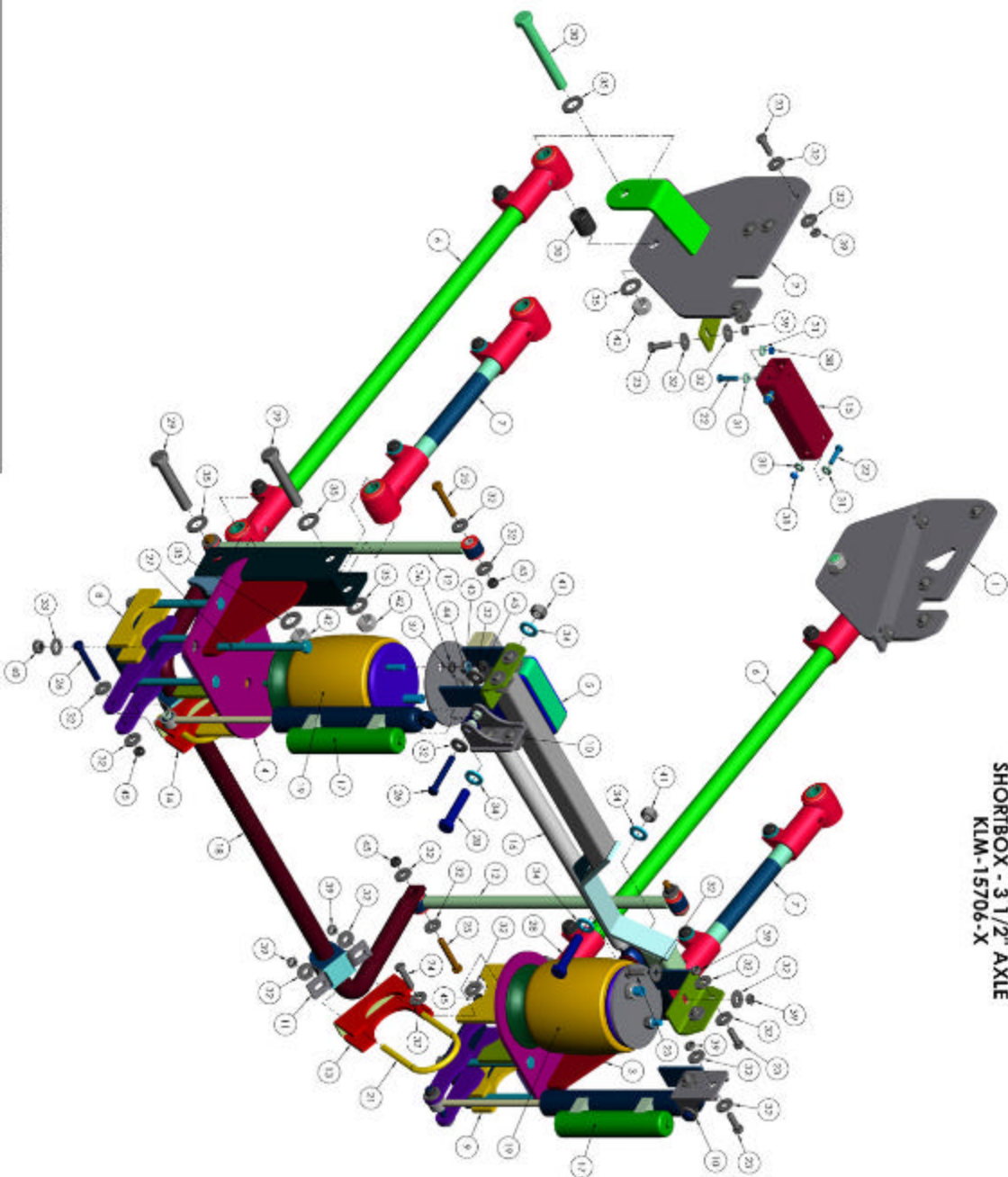
Step 20. Test drive. CAUTION: Make sure all the bolts you have installed in the kit are torqued before test drive. The truck should drive straight down the road. If you have a vibration upon take-off, that means your pinion angle is off and needs to be adjusted. Start by adjusting it one degree at a time. If you have driveline “droan”, that means your carrier bearing is spaced incorrectly. Add or subtract shims 1/4” at a time.

Step 21. It is recommended to retorque all the suspension bolts at 500 miles and thereafter at regular service intervals.



Dual shock mount pictured

2008 - *****
FORD F250/350 4X4
4-LINK - 6-8" REAR LIFT
SHORTBOX - 3 1/2" AXLE
KLM-15706-X



REV.	DESCRIPTION	REVISIONS	DATE	DRAWN	APPROVED
---	CREATED		8/7/007	TJ	TL

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	14433	RIGHT SIDE 4-LINK SIDE PLATE ASSEMBLY	1
2	14434	LEFT SIDE 4-LINK SIDE PLATE ASSEMBLY	1
3	14629	W/OINT - 5/8" BAG-5/17 PS	4
4	14630	W/OINT - 5/8" BAG-5/17 DS	1
5	11183	CROSSMEMBER - REAR	1
6	10615	TRAILING ARM - 41"	2
7	10016	TRAILING ARM - 22"	2
8	10619	CLAMP - LOWER 3.50" AXLE	2
9	10621	CLAMP - LOWER 3.50" AXLE	2
10	10399	W/OINT - SINGLE SHOCK	2
11	11895	FORD SWAY BAR BUSHING	2
12	11862	END LINK - 24.00"	2
13	14378	RIGHT SIDE LOWER AXLE CLAMP / SWAY BAR BUSH ASSY	1
14	14377	LEFT SIDE LOWER AXLE CLAMP / SWAY BAR BUSH ASSY	1
15	14890	CARRIER BEARING SPACER	1
16	10427	PAN 1/4" OD BAR 26.41799221"	1
17	10449	SHOCK - BLITZEN 7100 SERIES (287)	2
18	11702	1 1/2" SWAY BAR	2
19	10023	AIR BAG - 8779	2
20	11160	TUBE - SPACER	2
21	13806	1/2" - 17" X 3.50" - 9" CMB	4
22	12217	BO-T - 3/8" - 24 X 1 1/2" CMB	2
23	12007	BO-T - 1/2" - 20 X 1 1/2" CMB	2
24	12011	BO-T - 1/2" - 20 X 2 1/2" CMB	2
25	12021	BO-T - 1/2" - 20 X 3 1/2" CMB	4
26	12025	BO-T - 1/2" - 20 X 3 1/2" CMB	4
27	12459	BO-T - 5/8" - 9 X 1 1/2" SHU	0
28	12925	BO-T - 3/4" - 6 X 3 1/2" SHU	2
29	12629	BO-T - 7/8" - 4 X 3 1/2" SHU	2
30	12645	BO-T - 7/8" - 4 X 3 1/2" SHU	2
31	13022	5/8" FLAT WASHER - 13/16" O.D X 13/16" O.D X 3/16" THK	8
32	13024	1/2" FLAT WASHER - 17/32" O.D X 1 1/16" O.D X 3/16" THK	60
33	13026	5/8" FLAT WASHER - 25/32" O.D X 1 5/16" O.D X 1/16" THK	8
34	13028	3/4" FLAT WASHER - 13/16" O.D X 1 1/16" O.D X 3/16" THK	4
35	13030	7/8" FLAT WASHER - 29/32" O.D X 1 3/4" O.D X 1/16" THK	12
36	13030	1/2" LOCK WASHER - 17/32" O.D X 7/8" O.D X 7/8" THK	2
37	13036	3/4" LOCK WASHER - 49/64" O.D X 1 1/16" O.D X 3/16" THK	2
38	13162	1/2" NUT - 3/8" - 16 (400)	2
39	13161	1/2" NUT - 3/8" - 16 (400)	26
40	13166	1/2" NUT - 3/8" - 16 (400)	2
41	13166	1/2" NUT - 3/8" - 16 (400)	2
42	13170	1/2" NUT - 7/16" - 14 (200)	2
43	13204	1/2" NUT - 1/2" - 20 (300)	2
44	13206	1/2" NUT - 3/4" - 8 (200)	2
45	13124	HEX LOCK NUT - 1/2" - 20 (300)	10