

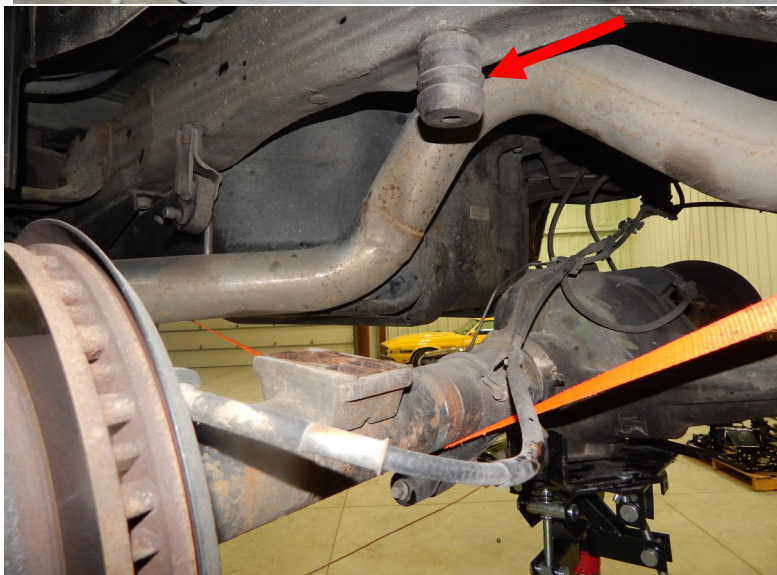


1999-2005 Ford Excursion
12-14" 4-Link Rear Instructions

NOTE: Rear driveshaft must be lengthened



1. Before removing any of the suspension, record the pinion angle here _____ .
2. NOTE: The stock rear driveshaft is too short for this size of a lift. It is recommended to have a new driveshaft built with a CV on the transfer case end. If you go this route, the factory pinion angle measurement will not be used. The driveshaft will run nearly straight into the axle. A CV driveshaft is not required if you are running the kit closer to 10-11" of lift rather than the 12-14" maximum ride height. The best way to determine the driveshaft requirements is after the kit is installed. This can be done by letting the air out of the bags and run the driveshaft into the transfer case to where it bottoms out. Then measure the distance between the end of the flange on the driveshaft and axle yoke. Take that measurement and subtract 1/4". That is how much you need length you will need to add to the driveshaft. Once the new driveshaft is installed, raise the truck all the way up and check to make sure there is sufficient amount of splines still in the transfer case.
3. Remove the rear leaf springs, shocks, sway bar and rubber bump stops of the bottom of the frame. Use ratchet straps, transmission jack or tall jack stands to hold the axle in place during installation.
4. Locate the longer brake lines and install. *Installing new brake lines will require you to bleed the brake system before moving the vehicle.*



Remove bump stop

5. Drill a 9/16" hole where the bump stop was mounted onto the bottom of the frame.



6. Locate the upper air bag crossmember (Part # 11966). The pan hard bar mount goes on the drivers side. Use the 1/2 x 1 1/2" bolts to fasten the crossmember to the bottom of the frame with the holes that held the bump stops on. Tighten these bolts to 85 ft./lbs., Drill two 1/2" holes into the side of the frame. Make sure not to drill into the fuel lines, brake lines or wiring harness. Use four 1/2x 1 1/2" bolts to finish attaching the crossmember. Torque the bolts to 85 ft./lbs. Aftermarket exhausts may have to be modified if they rub on the crossmember. Dual exhausts and 5" exhausts almost always require some modification to fit around the crossmember, so keep that in mind.



6. Remove the emergency brake cables where they attach to the OEM mounting bracket on the drivers side frame rail. Locate the side plates (Part # 11968 DS and 11967 PS). They mount to the side of the frame around the body mount with 5/8 x 2" and 1/2 x 1 1/2" bolts. Clamp the bracket in position and drill out the holes. Do not torque the bolts until after the crossmember brace is installed.

NOTE: There are brake lines, wiring harnesses and air conditioning lines that have to be pulled away from the frame before you drill holes.



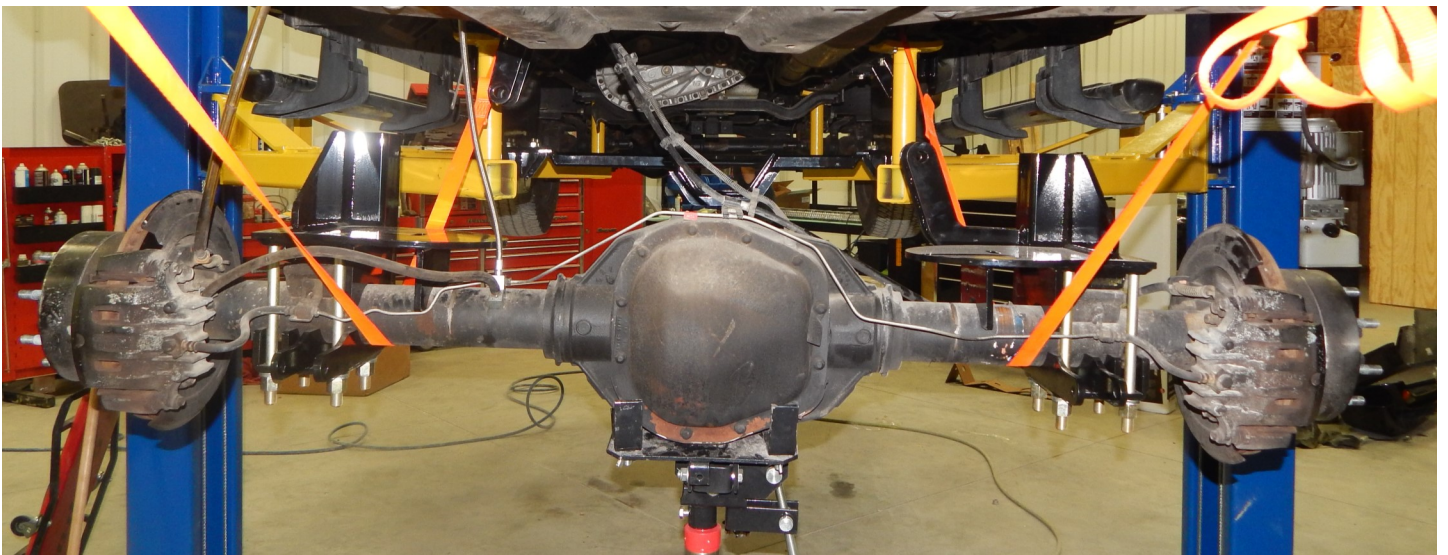
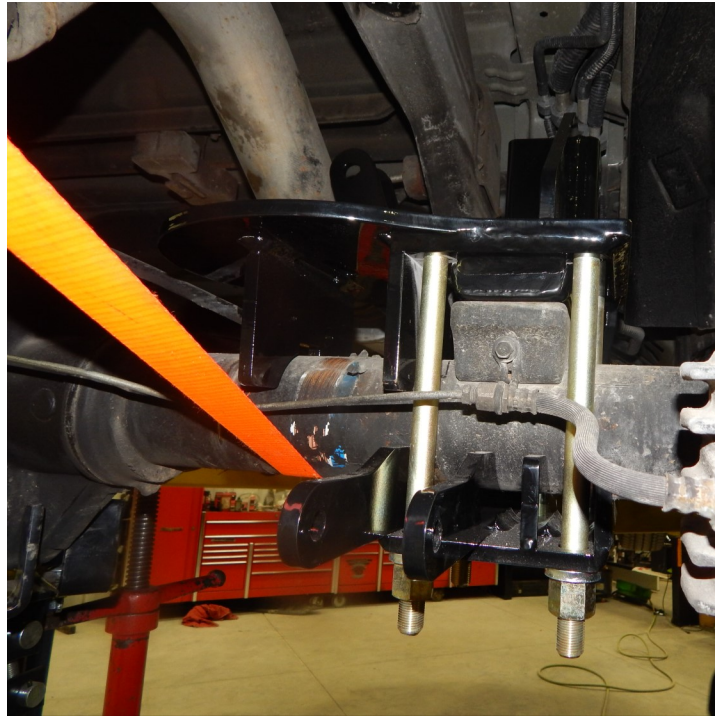
No need drill this hole (your side plate may not even have the hole there). You will not use a bolt here as it may catch on the emergency brake cable assembly and not fully release the brake.



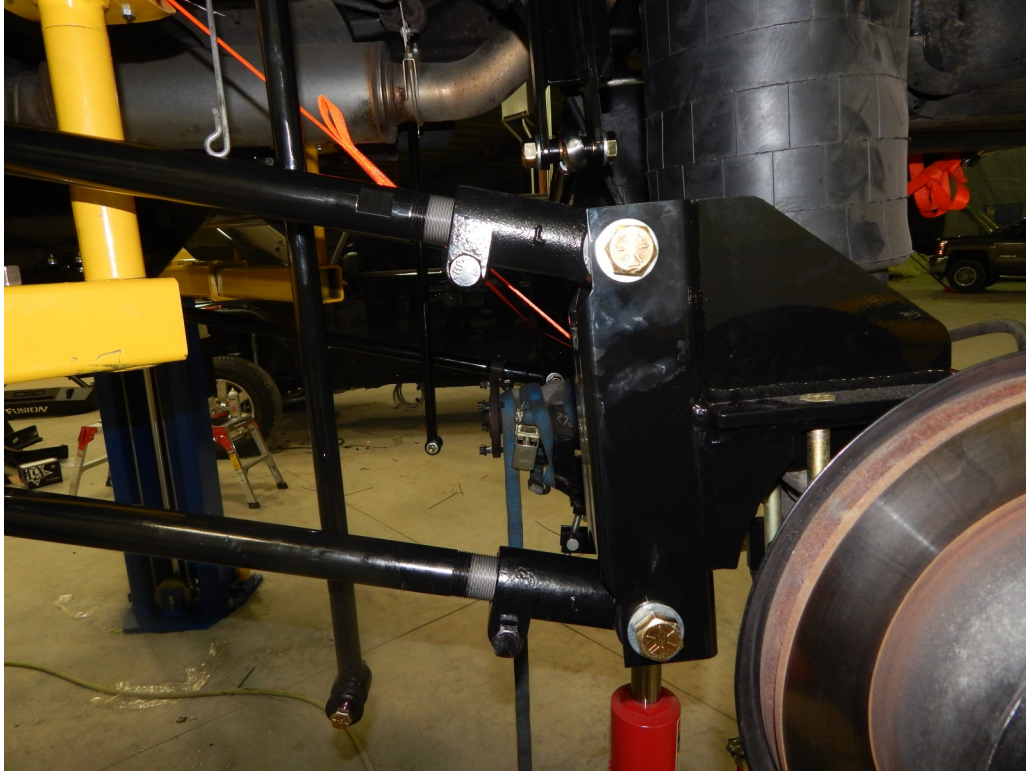
7. Once the side plates are installed, locate the crossmember (part # 10429). Use the four 1/2 x 1 1/2" bolts to attach the crossmember to the side plates. Once the bolts are installed, tighten all the bolts in the assembly to 85 ft./lbs. Put the wires, brake lines and air conditioner lines back in place.



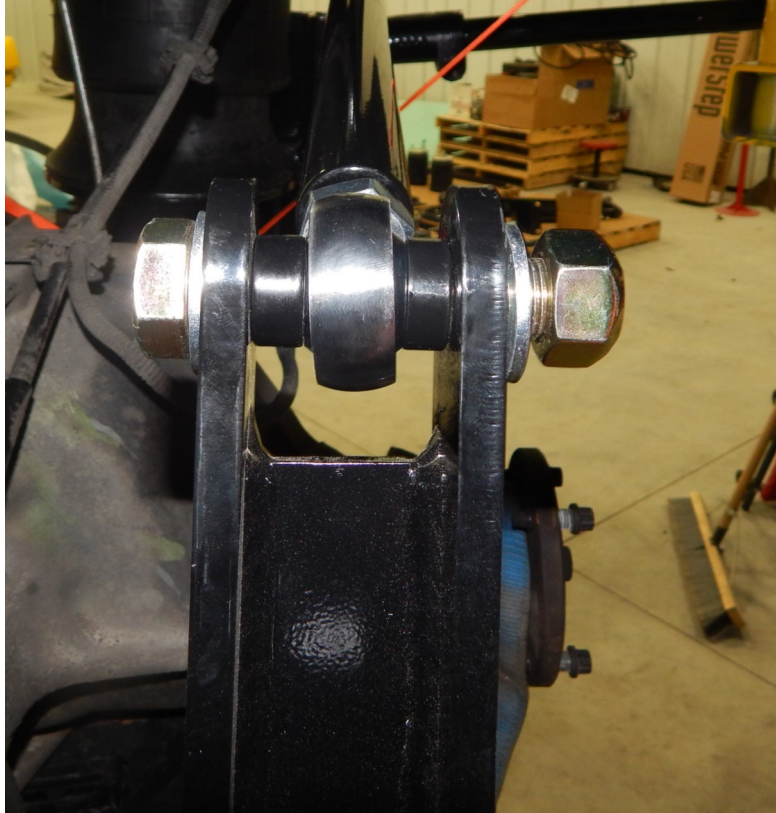
8. Locate the lower air bag mounts (part # 10409 DS and 10408 PS—> has pan hard bar ears) and the lower axle clamps (part # 10619 DS and 10621 PS). The lower axle clamps will feature the lower shock mounts. Place the lower bag mounts on top of the leaf spring perch. Drop the four 5/8 x 9 bolts down through the lower airbag mounts and slide the axle clamps up. Make sure the shock ears are away from the brake caliper and face towards the rear of the truck. Torque these bolts to 150 ft./ lbs.



9. Locate the trailing arms. Adjust the distance between the knuckles to 33" on the two top bars and 32.5" on the bottom bars. This will provide a good starting point for installation of the kit. Depending on if you are running a CV driveshaft or not, the pinion angle will change dramatically. Adjust the bars accordingly. Use the 7/8 x 5" bolts to fasten the trailing arms into the lower bag mounts. Use the 7/8 x 7" bolts and the 1 3/4" spacers on the side plates. The spacers go between the knuckle and the side plate (see pic below). Once the install is complete and the trailing arms are adjusted, torque the 7/8" bolts to 275 ft./lbs.

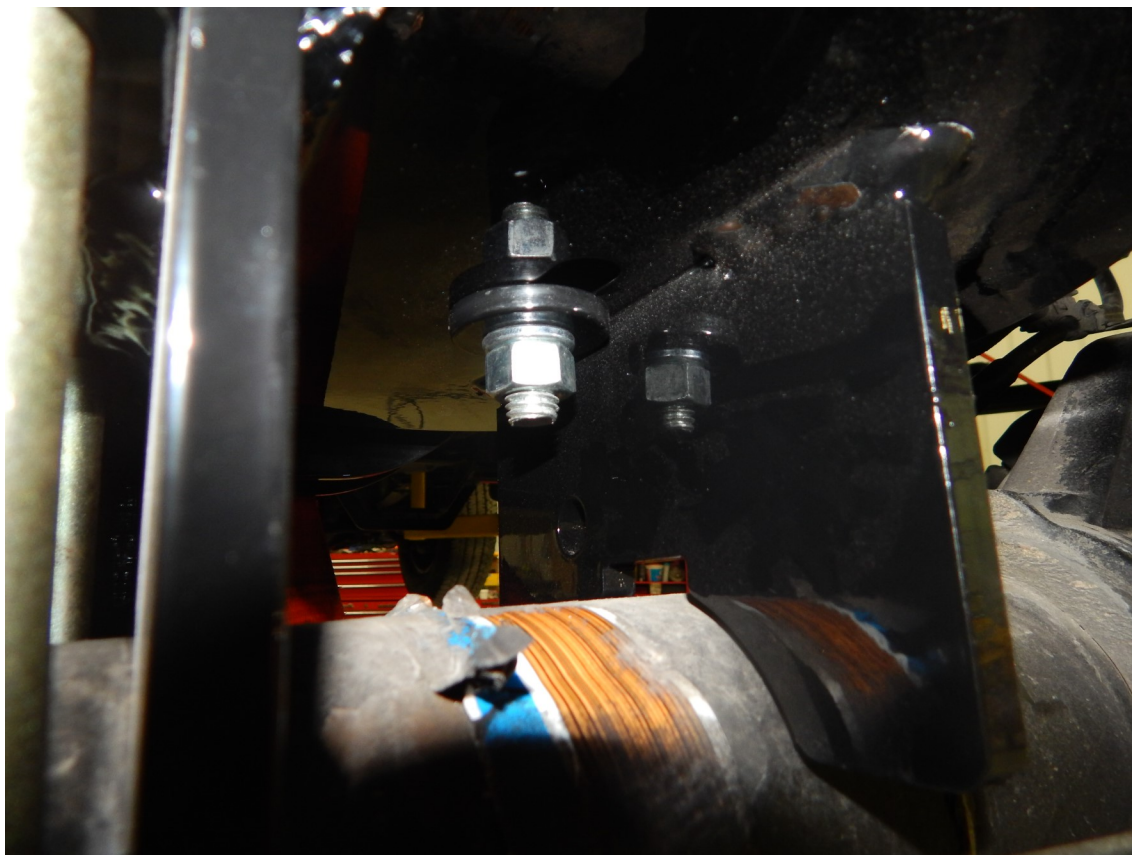


10. Locate the panhard bar (part # 22.75). Use the 3/4 x 4" bolts and spacers to center the heim ends in the panhard bar mounts on the passenger side lower bag mount and on the upper crossmember. Torque these bolts to 175 ft./lbs. Make sure to place the bolts facing the rear of the truck. Installing the bolts facing towards the front of the truck may result in the air bags rubbing on the bolt which will result in immediate failure of the air bag. Once the install is complete, you will use the panhard bar to center the axle side to side.

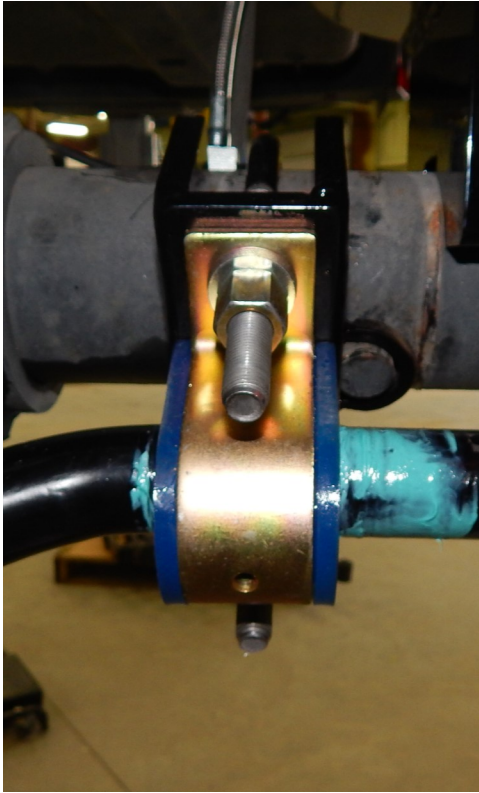


Bolts face away from the air bags

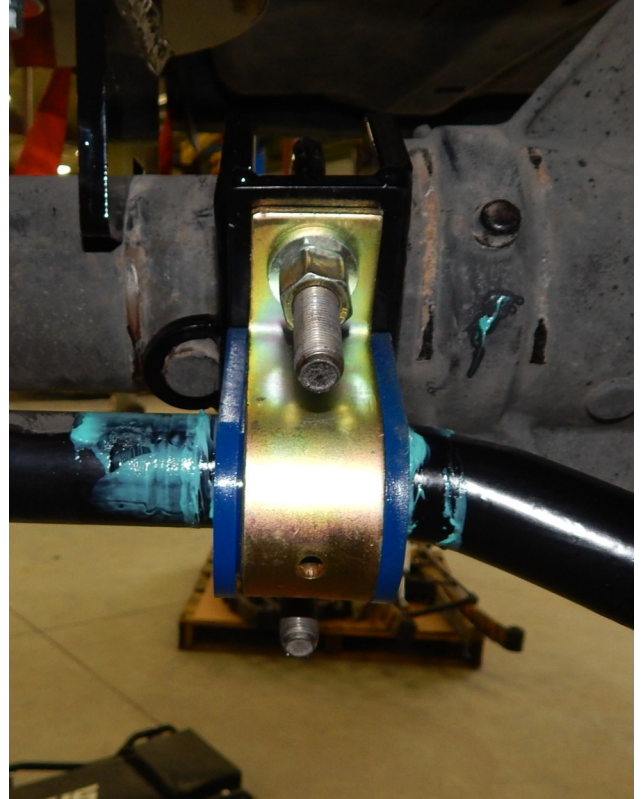
11. Locate the 9619 air bags. They fasten to the upper crossmember with the 3/4" jam nut, flat washer and lock washer. The bottom fastens with the 1/2" nut, lock washer and flat nut. Torque the nuts to 35 ft./lbs.



12. Locate the rear sway bar (part # 1139-154KLD) and sway bar axle clamps (part # 11901). The sway bar mount attaches to the front side of the axle. There are right and left sides. Locate the stub shafts (they are about 1" round and 3/4" tall) that protrude out of the axle tube. Slide the ears on the sway bar mounting brackets over the round steel pieces. Slide the u-bolts over the back side of the axle and fasten the mounting brackets in place. Slide the poly bushings over the sway bar using the supplied grease between the poly bushing and sway bar so it doesn't squeak). Slide the D ring over the poly bushing and slide the assembly over the U bolt. Torque the nuts on the U bolt to 65 ft./lbs.



Drivers side



Passenger side



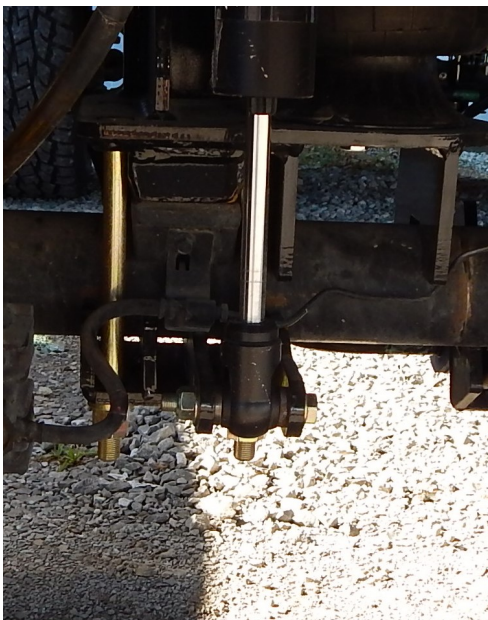
13. Locate the sway bar end links (part # 52038). The top of the end links fasten to the side of the frame. Locate the body mount that is attached to the frame with 3 rivets. Drill out the top rivet with a 1/2" drill bit. Attach the top of the end link to the frame with the 1/2 x 3" bolt. Make sure the thick flat washer is on the outside of the bolt head against the poly bushing. Torque to 85 ft./lbs. The bottom of the end link also fastens to the sway bar with a 1/2 x 3" bolt. Use the large flat washer on the bolt head side against the poly bushing just like the top. Torque this bolt to 85 ft./lbs.

Large flat washer

Drill this rivet out



14. Locate the shocks and upper shock mounts (part # 19042). Depending on what shock you are running, the shock mount tabs go down like the picture below or the opposite direction. You just need to run the air bags all the way down and then measure your shocks collapsed length. Make sure you have 1/2" min shaft showing on the shock when dumped. They will mount on the side of the frame about 1/4" off of center (towards the bottom of the frame). Set the air bags at around 18" tall (in between mounting brackets). Make sure the shock is straight up and down. You will need to drill the 1/2" holes in the frame for the shock mounts. Use the four 1/2 x 1 1/2" bolts to attach the shock mounting brackets. Torque all the 1/2" bolts to 85 ft./lbs.



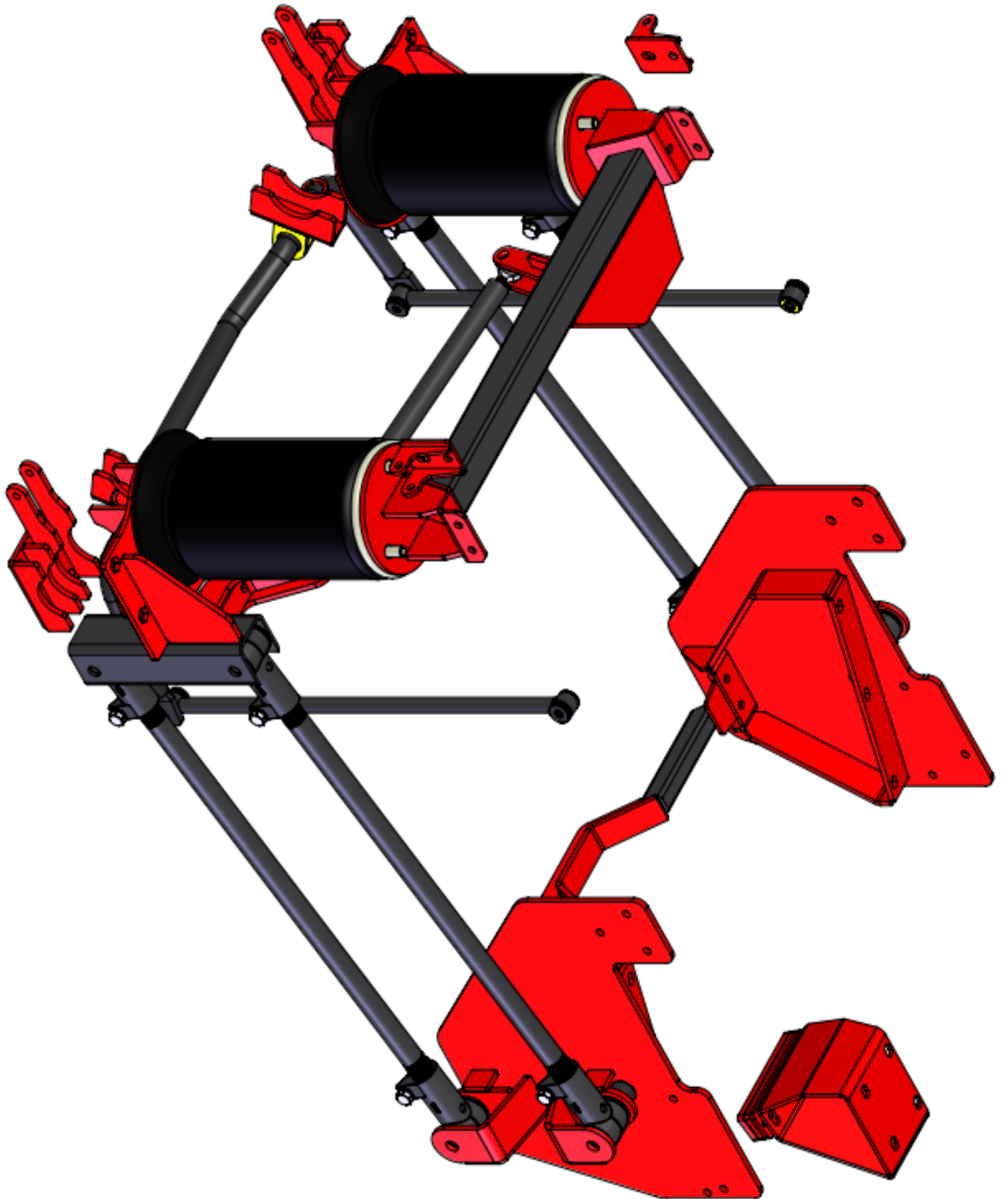
15. Locate the air control system sensors. The sensors shown in the picture below are a different style than the current version. Different sensors will mount the same way with different arms. The most important thing in mounting the sensor and getting the desired length of the linkage is to have the sensor with the arm straight out from the pivot point at ride height. If you are attaching the sensor to the frame of the vehicle, this may require clocking the sensor a bit. There are several videos on our YouTube that explain how to mount the sensor. Search for 'Kelderman Manufacturing to see the videos



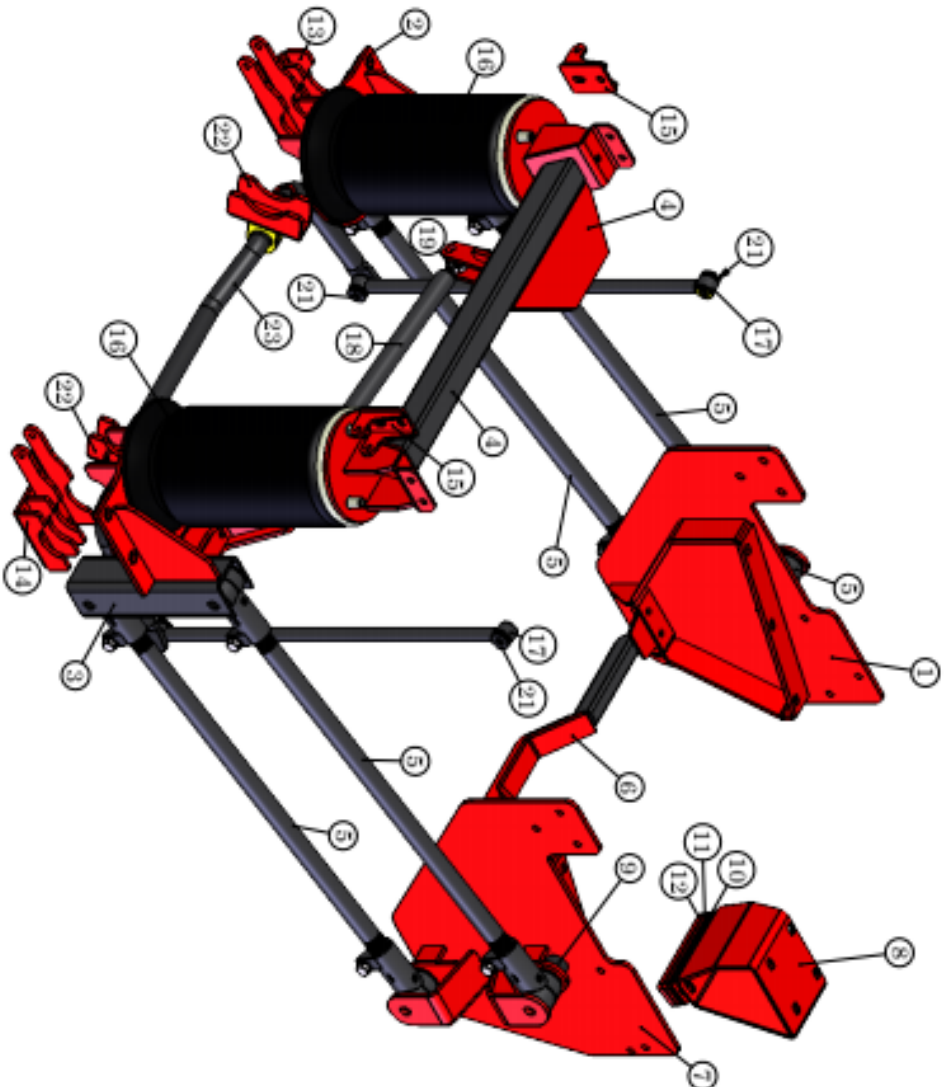
The picture above is the front (early style) sensor. The linkage and collar are the same for the current sensor. The collar will just be mounted to the trailing arm 3-4 inches further down the bar closer to the axle. The bottom picture shows the linkage collar attached to the top trailing arm.



Collar attached to the top trailing arm.



| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|---|------|
| 1 | 11237 | (DS) Side Plate | 1 |
| 2 | 10409 | (DS) Lower Bog Mount (1.4" Tube) | 1 |
| 3 | 10408 | (PS) Lower Bog Mount | 1 |
| 4 | 10419 | Crossmember / (PHB) Mount / Upper Bog Mount | 1 |
| 5 | 10515 | 41" Trailing Arm | 4 |
| 6 | 11776 | CROSSMEMBER - STRAIGHT | 1 |
| 7 | 11236 | (PS) Side Plate | 1 |
| 8 | 10295 | MOUNT - CARRIER BEARING | 1 |
| 9 | 18774 | Side Plate Spacer | 4 |
| 10 | 10579 | (CB) Shim - 1/4" | 1 |
| 11 | 11927 | (CB) Shim - 3/8" | 1 |
| 12 | 11928 | (CB) Shim - 1/2" | 1 |
| 13 | 10619 | Axle Clamp w/ Shock Mount (3.5) | 1 |
| 14 | 10621 | Axle Clamp w/ Shock Mount (3.5) | 1 |
| 15 | 19042 | (FOX) Shock Mounting Bracket | 2 |
| 16 | 80012-9619 | Frestone 9619 | 2 |
| 17 | 52038 | 32" End Link | 2 |
| 18 | 11524 | 22.75" Panhard Bar | 1 |
| 19 | 80109 | (RH) Ball Joint Rod End 3/4-1.6 x 3/4" | 1 |
| 20 | 80110 | (LH) Ball Joint Rod End 3/4-1.6 x 3/4" | 1 |
| 21 | 11551 | 1.5"OD x .53" ID x 1/4" | 4 |
| 22 | 11854 | CLAMP - LOWER AXLE(3.50) | 2 |
| 23 | 1139-154KLD | Sway Bar Kit | 1 |



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|--|------------------------------|--|
| UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES, Unless Specified FRACTIONAL ± 1/32" ANGULAR MATCH ± .5° TWO PLACE DECIMAL ± .03 THREE PLACE DECIMAL ± .010 | DESIGN BY ZPB | Thursday, August 31, 2017 11:45:25 AM |
| MATERIAL | NEW DXF | Project: 1999-2004 F250-350 Pickup / Harley Truck |
| RUN QTY | PROPRIETARY AND CONFIDENTIAL | TITLE Link (Rear) 12-14" LH - 3.5" Axle - Short Box |
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