

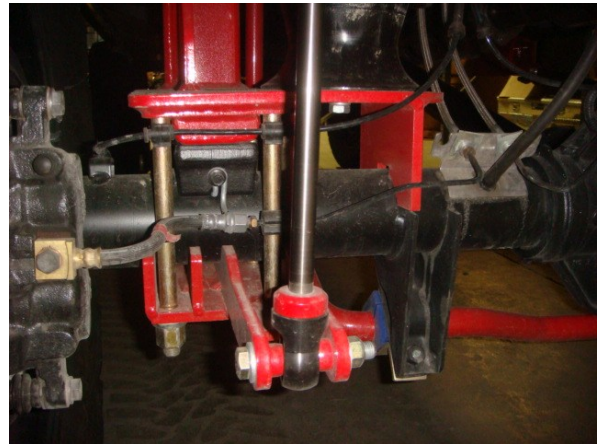
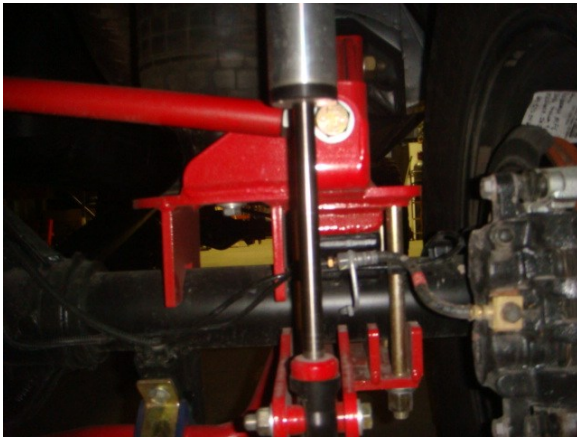


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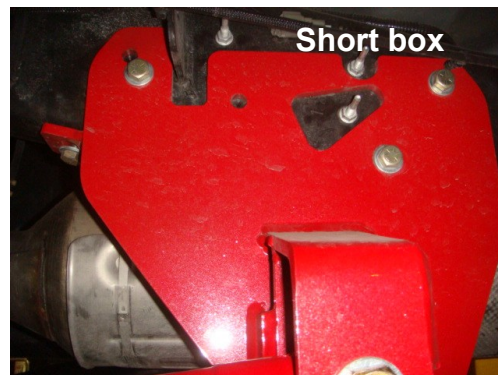
2011 Ford SD
Rear 8-10" Lift Kit
Installation Instructions



1. Before you remove anything off the truck, measure the pinion angle on the bottom of the differential. Make sure to record the measurement here _____. Once the kit is installed, it is required to put the axle back to this measurement. This will keep the correct pinion angle and should keep shutter upon take off and driveline vibration to a minimum.
2. Raise the truck, enough to remove the leaf springs and shocks. Remove the bolts that hold the front leaf spring and rear shackle in place as well as the u bolts that hold the leaf spring to the axle. These parts will not be reused.
3. Locate the lower bag brackets. Fasten into place with the lower axle clamps and the 5/8" x 9" bolts. Make sure the bolts go from the top down. Use the extended nuts and thick washers. Torque to 150 lb/ft. Make sure that the shock mounts on the lower axle clamps are mounted towards the inside of the frame.



4. Locate side trailing arm frame mounts. They bolt against the side and bottom of the frame. There will be a couple of existing holes on each side of the frame that will have to be drilled out to accept the 1/2x1 1/2" bolts. Use the other holes in the mounting bracket as a template to drill out the remaining bolts in the frame. On the drivers side we recommend lowering the fuel tank to access the back side of the frame. Be careful to not drill holes into the brake or fuel lines. Put the fuel tank back in the factory location after the trailing arm mounts are installed. Torque all the 1/2" bolts to 75 lb/ft.



5. Locate the trailing arms (part # 10016 upper) and part# 10515 lower). **Upper** The top trailing arm goes into the original leaf spring perch. The original hole in the trailing arm perch will need to be opened up about 1/16". Use a die grinder to open up the hole. To prevent any "popping" noises while driving, we recommend welding the washer to the spring perch. Use the 7/8x5 1/2" bolts and spacers to fasten the trailing arm into the spring perch. The spacer goes on the outside of the link. Use the 7/8" x 5" bolt to fasten the trailing arms into the air bag axle mounts. **Lower** Use the 7/8" x 8" bolts and spacers on the front trailing arm mount. The spacers go in between the knuckle inside of the mount closest to the truck frame. Try and keep the top arms close to the same length as well as the bottom arms similar in length. This will allow the final adjustment to be easier. If the arms get more than 1/4" off in length (top left compared to top right and bottom left compared to bottom right) they will bind when adjusting. Use the supplied flat washer on each side of the 7/8 bolt. Tighten these bolts to 200 lb/ft.

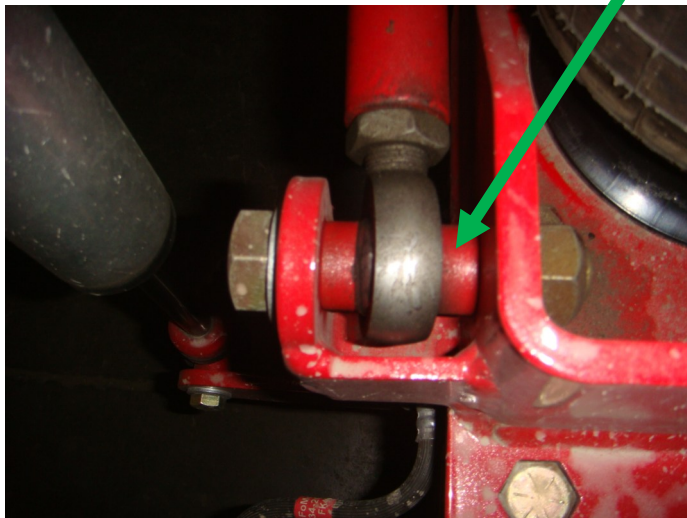




6. Remove the factory bump stops from the bottom of the frame. Open up the bottom hole in the frame to 1/2". Locate the top cross member (part # 11177). Hold the bracket up to the bottom of the frame and fasten into place with the 1/2x 2" bolts. Once the cross member is in place, drill the two holes on each side of the frame and fasten to the frame with the 1/2x2" bolts. Torque the six 1/2" x 2" bolts to 75 lb/ft.

1/2x2" bolts Two in side of frame and one in the bottom
PASSENGER SIDE PICTURED

Heim end with spacers. Bolt points away from air bag on passenger side, while bolt points towards air bag on drivers side lower bag mount.



7. Locate the pan hard bar (part # 11885). Use the 3/4" bolts to fasten into place. Put a spacer on each side of the heim end in order to center the pan hard bar. Make sure that the threads of the bolts go away from air bag on passengers side. Torque the 3/4" bolt to 135 lb/ft.

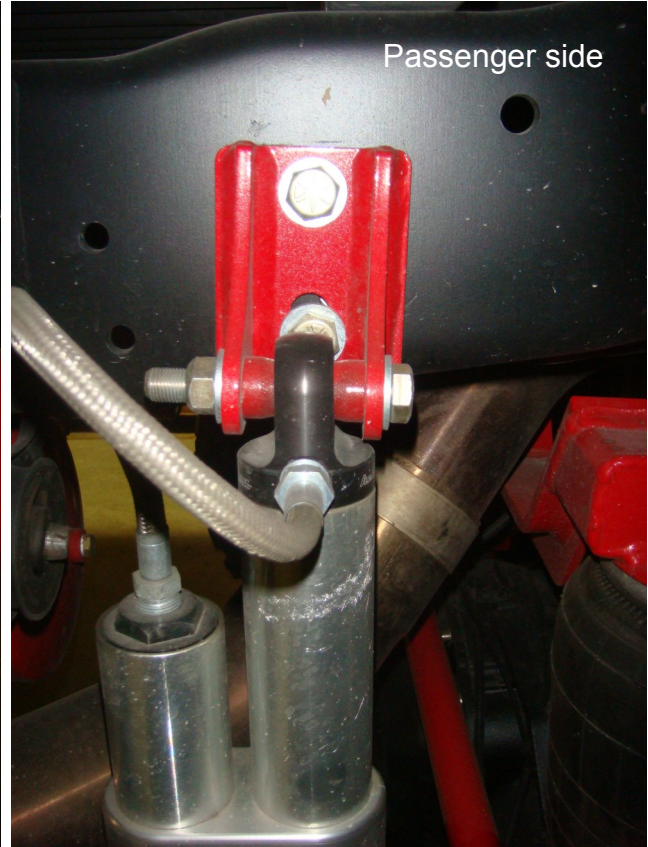


8. Locate the 8979 (part #10580) air bags. Fasten the bottom of the bag using the 1/2" x4 1/2" bolts, lock washers, and flat washers. Use the 3/4" and 1/2" lock washers and nuts to fasten the top of the air bag in place. Insert the air line fitting in the top of the air bag.

9. Locate the upper shock mounts (part #10399) and shocks. On the drivers side frame rail, use a rivet buster or torch to remove the factory upper shock mount. Fasten the bottom eyelet of the



Drivers side



Passenger side

shock into the bottom axle clamp/lower shock mount using the 1/2" x 3 1/2" bolts, flat washers, spacers and lock nuts. With the airbags at ride height, (around 12"), position the shock straight up and down and hold the upper shock mount against the frame. Use a center punch to mark where to drill the holes and drill them out to 9/16" Use the 1/2" x 1 1/2" bolts, flat washers and lock nuts to fasten the bracket to the frame. Check to make sure that when all the air is removed from the bags there is still about 1/2" of travel on the shock.

10. Locate the rear sway bar. It fastens into the factory spot on the original shock mounting brackets on the axle. Use the sway bar d rings, black bushings and m10x35 bolts to fasten in place. It is recommended to use blue or red Loctite on the bolts.



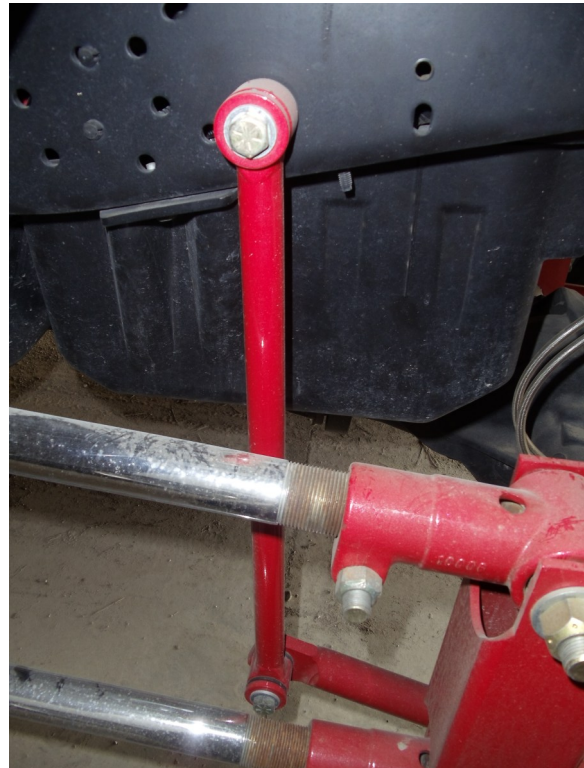
Drivers side

Passenger side



11. Locate the sway bar end links and the large machined washers. The lower end fastens to the sway bar with the 1/2x3" bolts, flat washers and nuts. Make sure that the machined end is used on the outside of the poly bushings.

Passenger side Machined washer



12. The drive shaft will have to be lengthened before driven. The best way to do this is after you align the truck in step 13, let all the air out of the truck, unhook the driveshaft from the axle, push the driveshaft into the transfer case and measure how much space you have. Typically they have to be lengthened 2". Whatever your measurement is make sure you have about 3/8" of an inch to make sure if the truck is loaded heavy and air is lost that the driveshaft does not compress into the back of the transfer case.

13. Short box trucks can skip this step. Locate the 2x3" carrier bearing drop bracket and the kicker plate. Take out the bolts on the carrier bearing to the frame. Insert the spacer using the 3" drop and put the kicker plate in between the 3" drop and carrier bearing. The tab on the kicker plate goes towards the rear of the truck. This "kicks" the carrier bearing at an angle similar to the driveshaft.

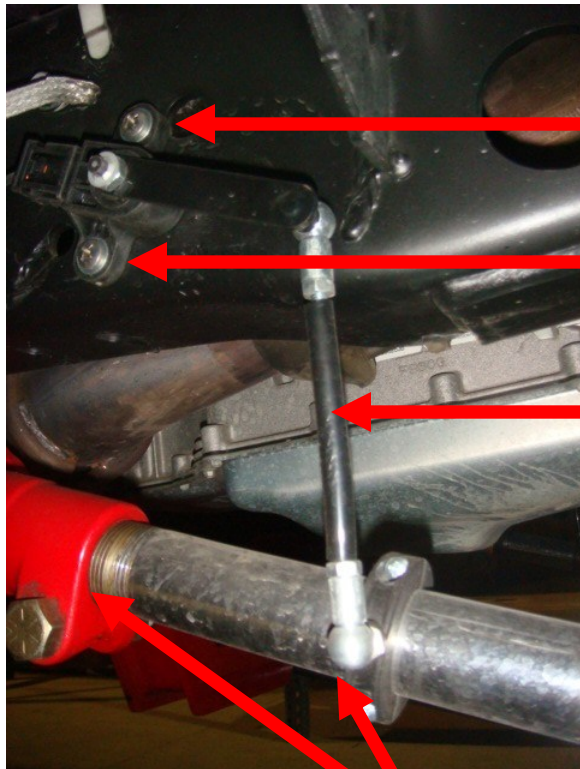
14. Air supply system. Use the installation instructions for whichever air system you are using. Locating the tanks and compressors are custom between trucks. Kelderman usually mounts the tanks and compressors where the spare tire used to be.

15. Alignment. Inflate the bags to 11-12". When measuring the bags, measure between the mounting brackets to calculate the ride height. Refer back to the original pinion angle measurement from step one. Center the axle in the wheel well, use the pan hard bar to center the axle side to side and recheck the pinion angle when finished. The 4-link bars should turn by hand. If they don't, place a jack stand under the rear hitch and let the air out of the bags. This will take the weight off the axle and allow the arms to turn easier. Also try to keep the top arm within an 1/8" of each other as well as the bottom arms close to each other. The most accurate way of setting the axle square in the wheel well is to measure from the front of the rear axle housing to the front axle kingpin. Check to make sure the front axle is square with the frame. This will ensure that the axles are perfectly parallel. Once the alignment is complete, tighten the pinch bolts on the trailing arms and tighten the jam nuts on the pan hard bar.

16. Recheck all bolts for tightness. If you have not installed the front system, go ahead and do the front before test driving. If the front is already installed, the truck should be ready for a test drive. If the truck shudders upon take-off, then the pinion angle is off. If the truck has a driveline howl, then the carrier bearing is not correct or the pinion angle is off.

Sensor mounting instructions

Front sensors they mount on an angle drill and tap the frame



Top of sensor touches hole in frame

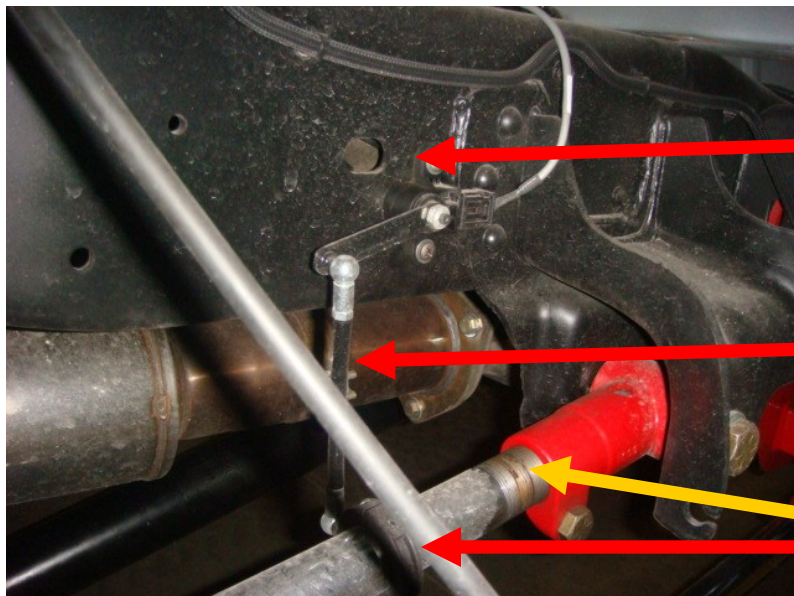
Bottom hole is 1/4" from bottom hole in frame

5 3/4" linkage (center to center)

Passenger side

4 1/2" between knuckle and collar

Rear sensors mount straight up and down drill and tap for sensor or drill a hole and fasten with bolt

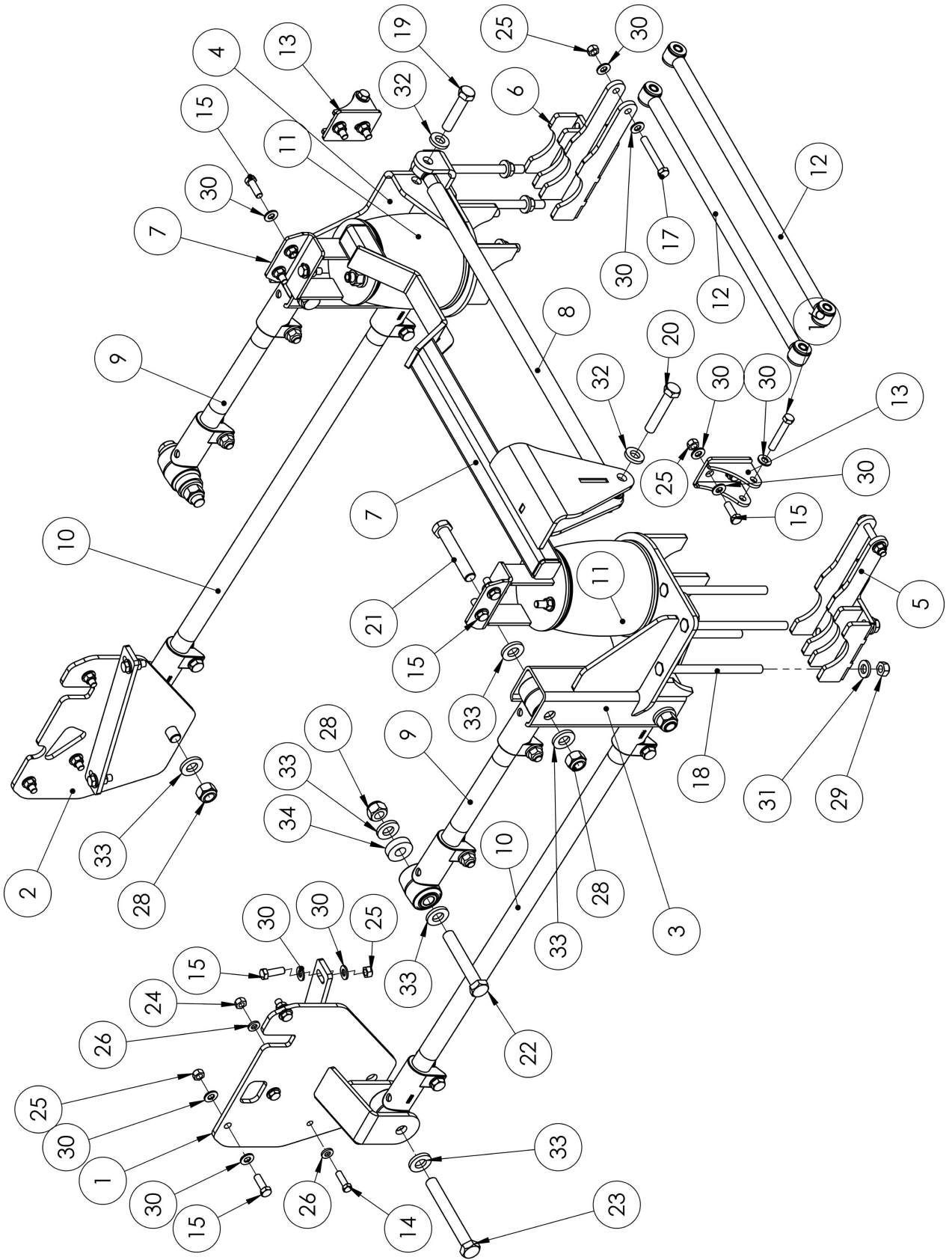


Top of sensor is 5/8" forward of the hole

6 1/4" linkage (center to center)

4" between knuckle and collar





ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	20153	DS 4-LINK SIDE PLATE ASSEMBLY	1
2	20154	PS 4-LINK SIDE PLATE ASSEMBLY	1
3	20155	DS LOWER BAG MOUNT	1
4	20156	PS LOWER BAG MOUNT	1
5	20151	AXLE CLAMP MOUNT	1
6	20152	AXLE CLAMP MOUNT	1
7	20157	CROSSMEMBER - REAR	1
8	20270	30 1/2" PHB	1
9	10016	TRAILING ARM - 22"	2
10	10515	TRAILING ARM - 41.00	2
11	8979	8979	2
12	20272	27.5" ENDLINKS	2
13	10399	MOUNT - SINGLE SHOCK	2
14	13411	BOLT - 7/16"-20 X 1 1/2" GR8	1
15	12007	BOLT - 1/2"-20 X 1 1/2" GR8	20
16	12021	BOLT - 1/2"-20 X 3" GR8	2
17	12025	BOLT - 1/2"-20 X 3 1/2" GR8	2
18	12467	BOLT - 5/8"-18 X 9" GR8	8
19	12525	BOLT - 3/4"-16 X 3 1/2" GR8	1
20	12529	BOLT - 3/4" - 16 X 4"-GR8-YZ	1
21	12629	BOLT - 7/8"-14 X 5" GR8	4
22	12633	BOLT - 7/8"-14 X 5 1/2" GR8	2
23	12645	BOLT - 7/8"-14 X 9" GR8	2
24	13103	NUT-TLHEX-.4375-13-C-YZ	1
25	13104	NUT-TLHEX-.50-13-C-YZ	26
26	13003	7/16" FLAT WASHER	2
27	13108	NUT-TLHEX-.75-10-C-YZ	4
28	13110	NUT-TLHEX-.88-9-C-YZ	8
29	13106	NUT-TLHEX-.63-11-C-YZ	8
30	13004	1/2" FLAT WASHER	49
31	13006	5/8" FLAT WASHER	8
32	13008	3/4" FLAT WASHER	6
33	13010	7/8" FLAT WASHER	16
34	20274	7/8"x2"x9/16" BUSHING	2