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



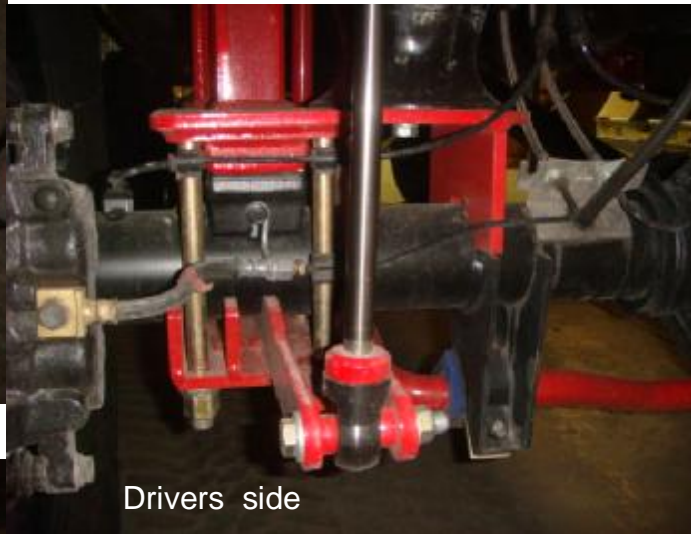
1. Before you remove anything off the truck, measure the pinion angle on the bottom of the differential. Make sure to record the measurement here \_\_\_\_\_. Once the kit is installed, it is required to put the axle back to this measurement. This will keep the correct pinion angle and should keep shutter upon take off and driveline vibration to a minimum.
2. Raise the truck, enough to remove the leaf springs. Remove the bolts that hold the leaf spring/shackle in place. The leaf springs and the shackles will not be reused. Remove the u bolts, shocks and factory sway bar if it has one. Remove the bump stop off the bottom of the frame right above the axle. Open this hole up enough for a half inch bolt. (9/16"). This is the locating hole for the upper bag mount/ cross member.
3. Locate the upper bag mount/cross member (part# 20157). Use the 1/2x1 1/2" bolts (part# 12007) to fasten the cross member to the bottom of the frame. This hole is the one you drilled out to 9/16" in step 2. Once the cross member is fastened in place. Next drill out the 2 side holes in each side of the frame and install the two 1/2x1 1/2" bolts. Torque these bolts to 75ft/lb.



3. Locate the lower bag brackets (part # 20155 ds and 20156 ps). Fasten into place with the lower axle clamps (part#20151 ds and 20152 ps) and the 5/8" x 9" bolts (part #12467). 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.



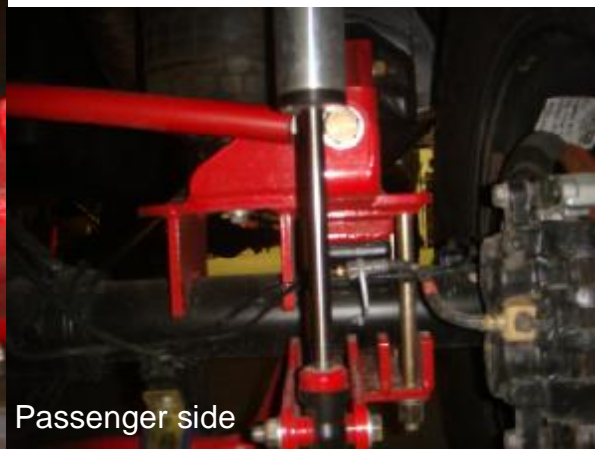
Drivers side



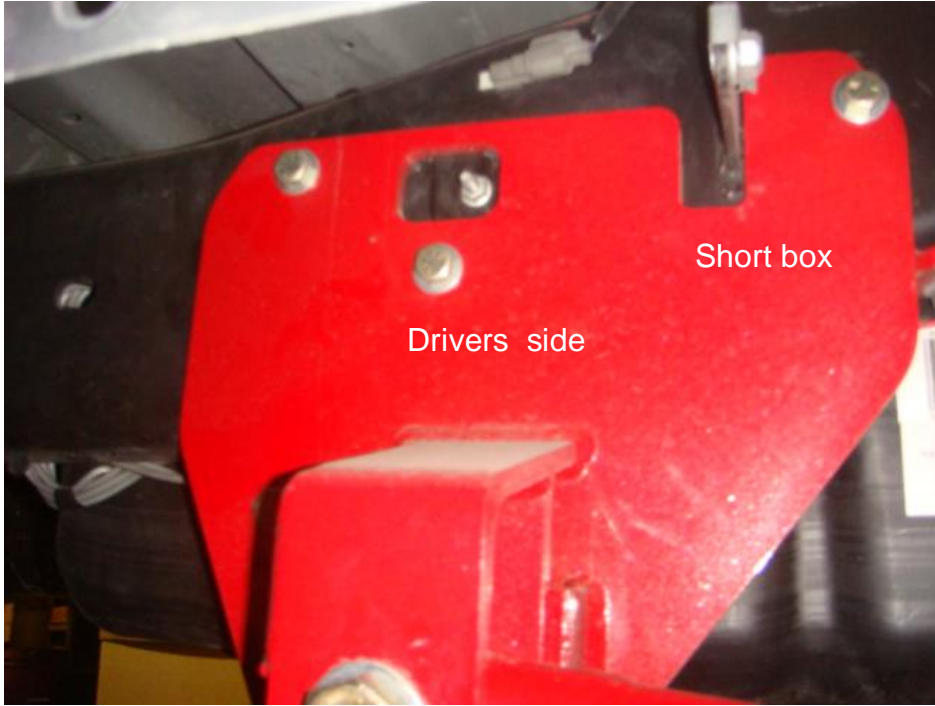
Drivers side



Passenger side

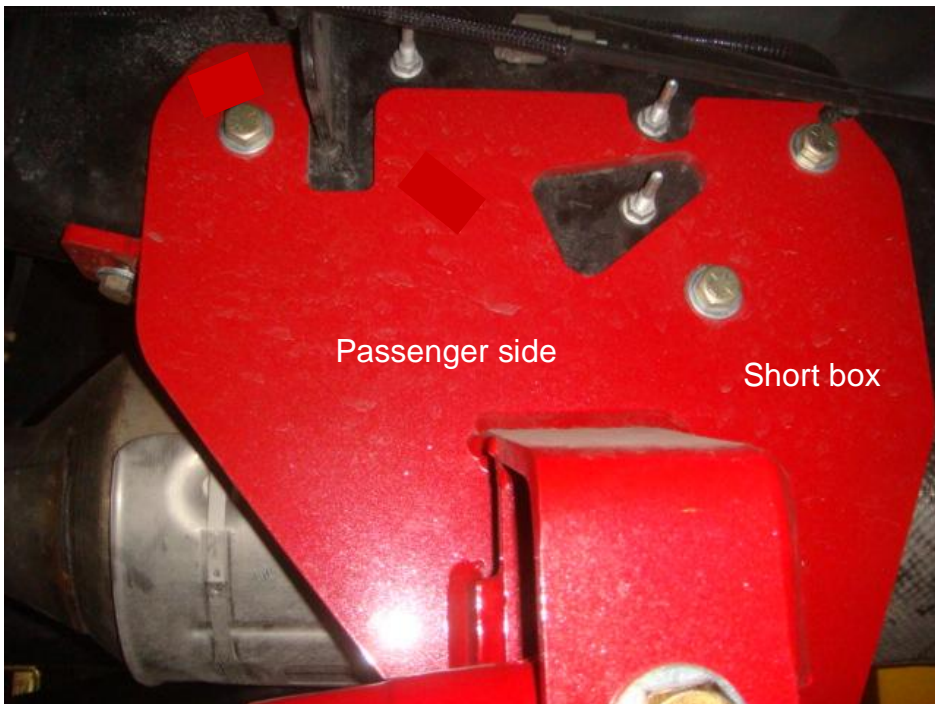


Passenger side



4. Locate side trailing arm frame mounts (part# 20153 ds and 20153 ds). 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 (one in the side of the frame

and 2 on the bottom of the frame) 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. If the truck has a tank cover, that cover will be removed and not reused. 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. The forward fuel tank will bolt to the trailing arm mount with the 7/16x1 1/2" bolt. (picture on next page.) Torque all the 1/2" bolts to 75 lb/ft.

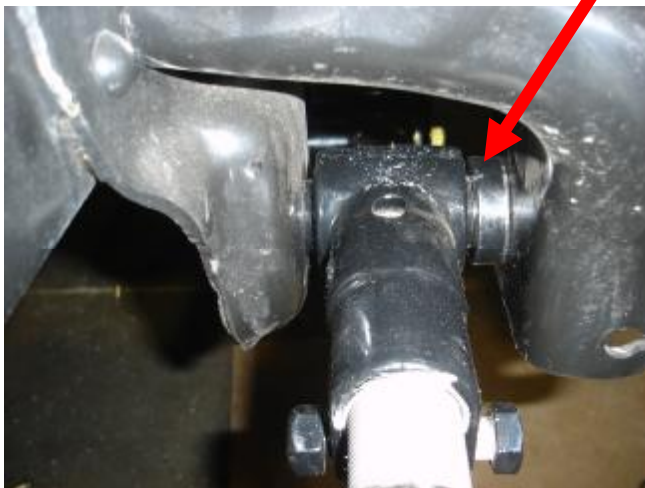




5. Locate the trailing arms (part# 10016 upper and 10515 lower). The upper trailing arm goes into the original leaf spring perch. Set the distance between the knuckles to 17 1/4". The original hole in the trailing arm perch will need to be opened up about 1/16". Use a die grinder to open up the hole. Use the 7/8x5 1/2" bolts (part #12633) and 9/16" (part# 20274) 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" (part# 12629) bolt to fasten the trailing arms into the air bag axle mounts. Locate the bottom trailing arms. Set the distance between knuckles to 36 1/2". Use the 7/8" x 7" bolts on the trailing arm frame mount and the 7/8x5" on the lower bag mounts. Flat washers go on each side of the 7/8 bolt.

NOTE: The 7/8x5" bolts on the lower bag mounts go so the nuts are towards the tires. Tighten these bolts to 200 lb/ft.



6. Locate the 8979 (part #10580) air bags. Fasten the bottom of the bag using the 1/2" x 4 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.

7. Locate the pan hard bar (part# 20270). Use the 3/4x 3 1/2" (part# 12525) bolt into the lower bag mount and use the 3/4x4" ( part# 12529) bolt on the cross member. 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. Torque the 3/4" bolts to 135 lb/ft.



8. 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 shock into the bottom axle clamp/lower shock mount using the 1/2" x 3 1/2" bolts, flat washers. Spacers and lock nuts. You will need to 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 before you drill the mounting holes for the upper shock mounts. 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.



10. Fasten sway bar to bottom of the factory shock mounts. Use the M12x40 bolts and adaptor plate in between the blue bushing and factory ford shock mounts.



11. Locate the sway bar end links (part# 20272) . You will need to open up the hole in the frame for the 1/2" bolt. Use the 1/2" x 3 1/2" bolt and large flat washer on the bottom of the end link and 1/2x 3" with large flat washer on the top hole. Tighten to 85 ft/lbs. Use the pictures on the next page.



Drivers side

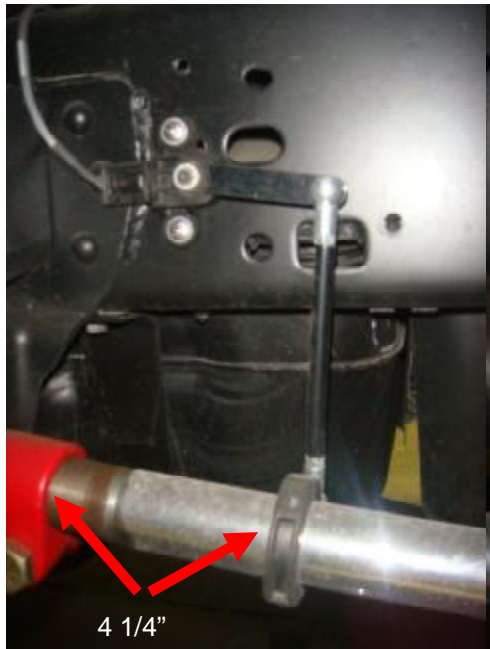


Passengers side

12. Locate the sensors. You will drill  $7/32$ " holes and tap them for  $1/4$ "x20 holes to fasten the sensors to the frame. Use the pictures below to locate where to drill the holes. They go right behind the leaf spring perch. After the sensor is installed, locate the

collar for the trailing arm. Fasten it to the arm with the screws so the ball is on the inside. Install the collar so it is  $4\ 1/4$ " inches from the end of the knuckle. The rod should be 6" long.

13. Air supply system. Use the installation instructions for whichever air system you are using. You can align the rear system with the bags on manual fill.



$4\ 1/4$ "



13. 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

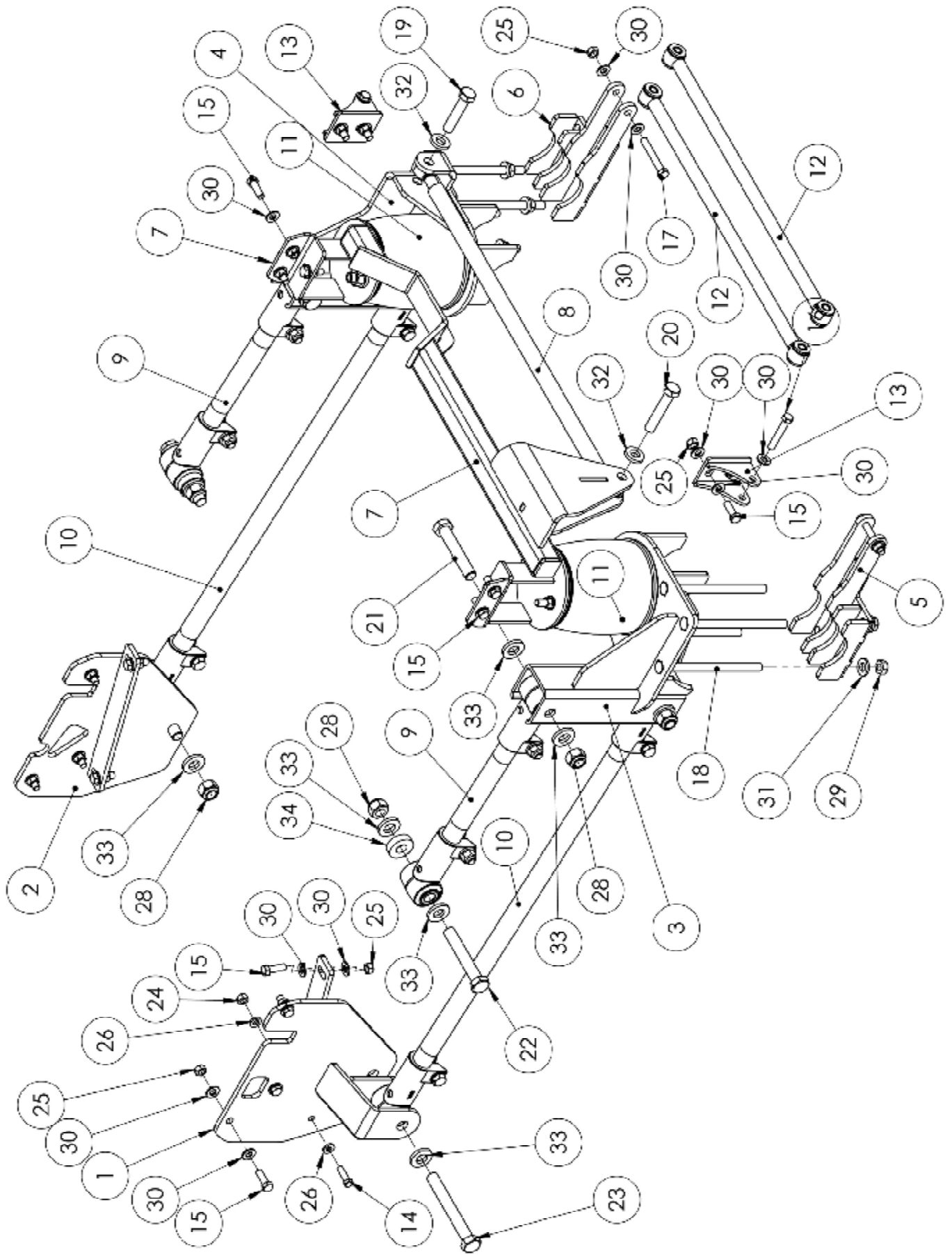
measurement from step one. Center the axle in the wheel well, use the pan hard bar to center the axle side to side and recheck the pinion angle when finished. The 4-link bars should turn by hand. If they don't, place a jack stand under the rear hitch and let the air out of the bags. This will take the weight off the axle and allow the arms to turn

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 king-pin. 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.

14. 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.



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