

Carrier Bearing Alignment / Drive Line Drop Forward CV System (DLD FCV 3.500 0001 02)

For Drivelines with the CV in place of the Transercase U-Joint in the shaft.

Fits 1999-2008 Fords F250/F350, Works Best with Spicer Carrier Bearing Part # 210866-1x.

2003-2008 Dodge 2500/3500, May not work with the OE bearing, Will work with the Spicer Carrier Bearing Part # 210866-1x.

Alignment is the #1 cause of premature failure of carrier bearings and isolators. This simple bracket allows a wide range of adjustment of drive line carrier bearing. Minimum carrier bearing drop is 1/2" Max is 3 1/4". Forward to aft adjustment range is 2". Angle adjustment maxes out at 10 degrees. This unit is only for 2 piece drive lines. Trucks lifted over 6" with a 2 piece rear shaft should have a CV installed in the shaft to eliminate angle problems. The pinion angle will need to be adjusted to line up with the rear shaft, +/- 2 degrees. If you have at least a 1/2" carrier bearing drop now but can see that the isolator is in a bind this will fix your alignment problem. If you have a clocking ring this unit will keep you from having to shorten your front driveline.

Notes.

This Unit was designed for the One Up Offroad Suspension systems to make the drivelines function better then stock at 16" & 20" of lift. We have found them to be useful on most any truck that is lifted. This part makes your shaft adjustment quick and easy. Yes, you can get the correct height of carrier bearing with an inexpensive shim kit. The problem is the isolator to bearing alignment is rarely straight. As the drop increases the alignment gets worse.

Your rear drive system is a 3 part system. All 3 parts need to work harmonious or you will have vibrations.

Part 1 is U-joint & Spline condition along with Shaft Balance, If it is worn or out of balance it will always shake. Worn U-Joints, Slip Splines, and bad balance can cause vibration at any and or all rpm ranges. This bracket is one part of a 3 part system. used alone it will not fix worn out parts. If you have been driving your truck with any shaking you could have done damage to your u joints, transfer case, pinion bearing, carrier bearing or isolator. **Be sure the shaft is balanced as a unit.** This is a really sensitive system. there is no room for any slop. Don't be frugal, do it right.

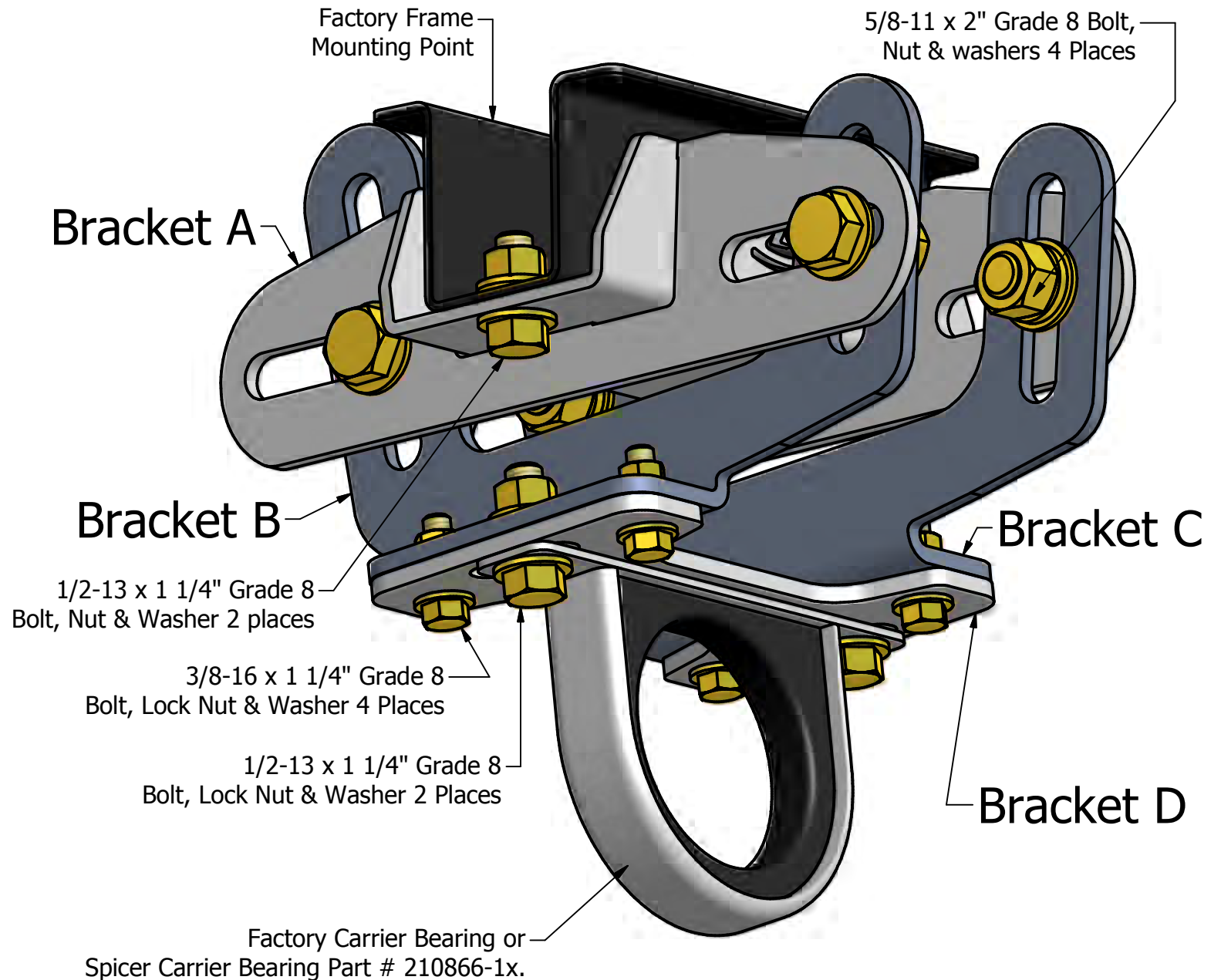
Part 2 is Angles. Your rear shaft is not forgiving on angles. When a U-joint is used at an angle, the angles need to be matched to at both joints on the shaft. Since a 2 piece shaft has 3 U-joints, it can be challenging to match angles. Our bracket lets you move the center mounting of the shaft without stacking shims. Any useable height and angle is easily achieved with a quick adjustment of the bracket. Every truck is different in shaft length, lift height & Pinion angle, so to say, set your drive shaft at "x" angle is not going to work on every truck. This bad alignment can cause vibration at any and or all rpm ranges.

Part 3 is Axle/Spring wrap. Leaf springs biggest weakness is that smooth riding springs do not control axle/spring wrap. When the axle/spring wrap is uncontrolled, the operating angles are changing under torque loads causing the phasing of the U-joints to move past the acceptable range. Be sure your axle/spring wrap is controlled, we also have Traction Systems to resolve these issues. Check out our Traction Blocks and Axle Mountings for our Bars for your truck. This axle/spring wrap will cause vibration at take off, backing up or high torque loading. This bracket is one part of a 3 part system. used alone it will not fix drive line shaking commonly felt at take off and during lows speeds while pulling heavy loads. If you have this symptom and you know your drive shaft is perfect shape and you know your angles are correct then you need functioning traction bars. These bars will cure the axle/spring wrap shakes. You want soft springs for good ride and good articulation but soft springs can not control axle wrap. Traction bars keep your smooth ride and stop your shudder at take off. Pulling trailers off road without traction bars could destroy your U joints & slip spline in seconds from wheel hop. We feel trucks with more then 300 hp need traction bars.

If you only fix one or two of the three parts, you will still have vibrations that will cause accelerated drive shaft failure.

We have found that some 2008 Ford trucks have bad drivelines and they are not in balance from the factory. We have taken the shafts out of the trucks at stock height and checked the balance and it has been way off, like the driveline was assembled off on the splines during the build of the truck. We balanced the shaft, then reinstalled the correctly balanced shaft and the shaking stopped. Slip splines when dry they will cause major vibrations. Some slip splines are not grease-able with a zirk fitting, you have to take them a part to grease them. Keep them greased and you will reduce your driveline wear and deterioration. If you have bigger tires then stock and do not match the gear ratio in the axles it will cause drive line vibration at take off to the torque load at low speeds. Your driveline is a complex system not even understood by many driveline shops.

Do not think you can put in this unit and your shaking will magically disappear. This is more of a tool to help fine tune the angles in your system. If you try to cure your take off load shudder caused by axle/spring wrap by lowering your carrier bearing and do not run traction bars your shudder will get worse. If you try to fix your take off load shudder with this bracket and it does not work then we will assume that you did not read this. So when you contact us and complain that it still shakes at when you take off you will be asked if you read this before you purchased the part. Tell us the password "critical speed" so we know you understand what this bracket is for.



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QA		One Up Offroad		
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APPROVED		SIZE	DWG NO	REV
		B	Drive Line Drop Install	
		SCALE	SHEET 4 OF 6	

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Installation.

It is a challenge to get the carrier bearing to the correct angle at the driveline and at the bearing. This bracket will make this alignment much easier.

First you bolt bracket A (with the OUO logo) to the factory carrier bearing mounting location on the frame with 1/2-13 Grade 8 hardware. Torque these 2 fasteners to 100 ft-lbs. Bolt Bracket B to the drivers side of D then bolt Bracket C to the Passenger side of D with 3/8-16 hardware, Tighten this hardware to 40 ft lbs. Next slide subassembly of B, C & D up to Bracket A and install 5/8" hardware in slots. Then bolt the carrier bearing to bracket D & Bracket B & Bracket C with 1/2" Grade 8 hardware. when installing this hardware, leave hardware loose enough to slide the two parts but tight enough to quickly sung up when in position.

Then bolt the carrier bearing & driveline to Bracket D & thru Bracket B & Bracket C with 1/2" Grade 8 hardware. when installing this hardware, leave 1/2" hardware loose enough to slide the two parts but tight enough to quickly sung up when in position, but don't completely tighten hardware until the last step.

Using an angle finder, adjust the driveline angles to best match your setup. This set up should have the pinion shaft angle, the axle end of the rear shaft angle and the transmission end of the rear shaft drive shaft angle all within 2 degrees of the of each other with all of the angle compensated for the CV at the transfer case.

Snug a 5/8" fastener up to hold the position. Check the carrier bearing for alignment, be sure the metal cover is straight with the rubber isolator. The floating slot system should allow for front to back length changes from a clocking ring. Double check angles and alignment and tighten all hardware 1/2" hardware to 100 ft-lbs, 5/8" hardware to 180 ft-lbs. Drive the truck, triple check angles and alignment and recheck all hardware. All truck builds are different, no 2 are the same. what works on one truck might not work on another.

1 Qty Bracket A , 1 Qty Bracket B, 1 Qty Bracket C, 1 Qty Bracket D

4 Qty 1/2-13 x 1 1/4" Grade 8 Bolts ,

8 Qty 1/2" Grade 8 Washers

4 Qty 1/2-13 Grade 8 Nuts

4 Qty 3/8-16 x 1 1/4" Grade 8 Bolts

8 Qty 3/8" Grade 8 Washers

4 Qty 3/8-16 Grade 8 Nuts

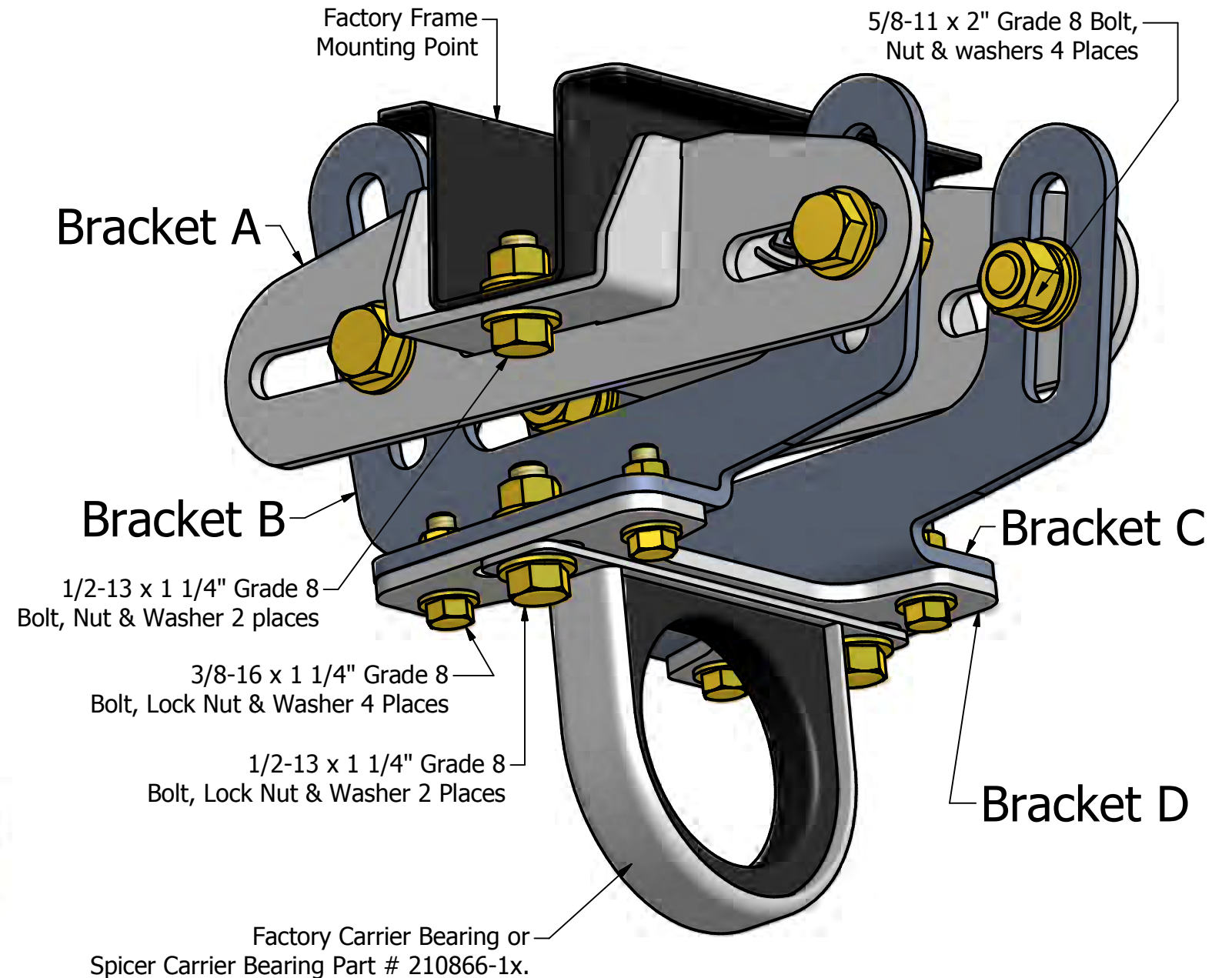
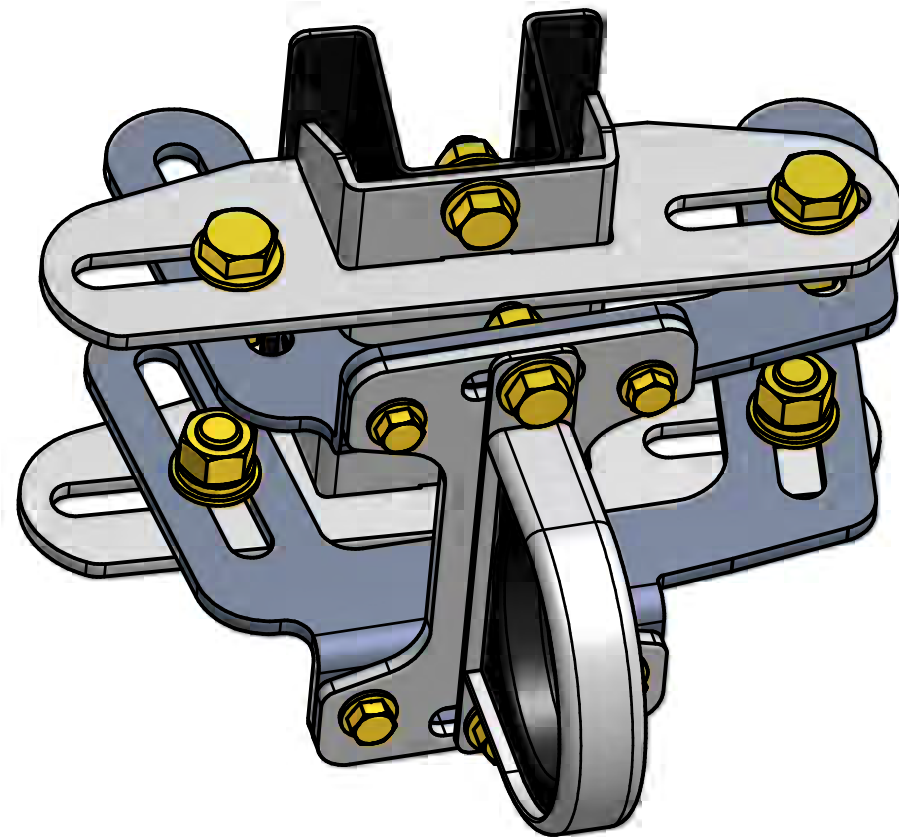
4 Qty 5/8-11 x 2" Grade 8 Bolts

8 Qty 5/8-11 Grade 8 Washers

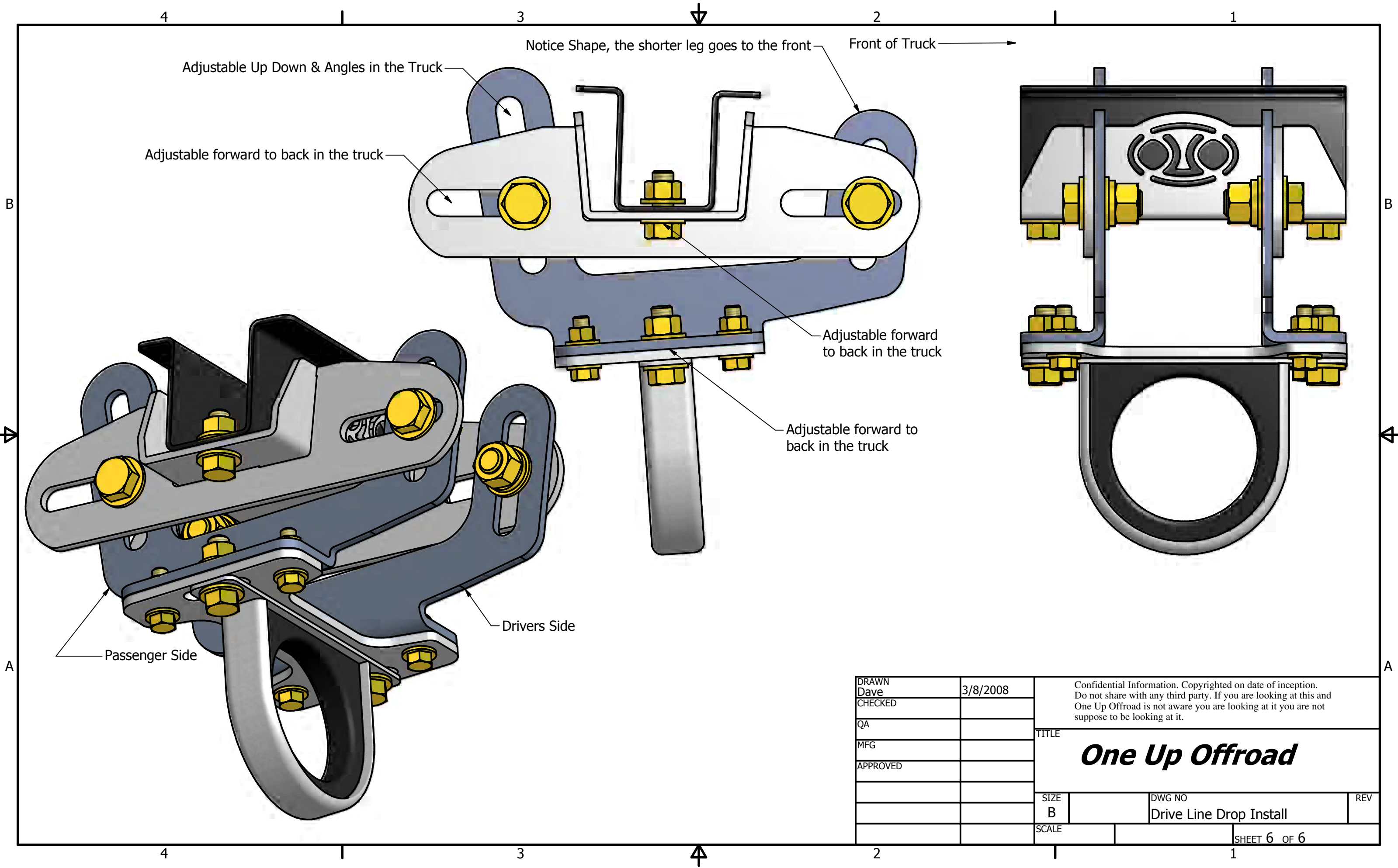
4 Qty 5/8-11 Grade 8 Lock Washers

4 Qty 5/8-11 Grade 8 Nuts

Comes Powder Coated Black,
Packed nicely in a box so it will show up like new,
This is a really heavy duty unit, ships at 18 lbs.



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QA		SIZE B	DWG NO Drive Line Drop Install	REV
MFG		SCALE	SHEET 5 OF 6	
APPROVED				



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TITLE <h2 style="text-align: center;">One Up Offroad</h2>		
SIZE	DWG NO	REV
B	Drive Line Drop Install	
SCALE	SHEET 6 OF 6	