

# Olson Kustom Works

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## REVISION 5.3.8 8 Rib LSA Balancer Variant

Thank you for your purchase from OKW. If you have any questions about your products feel free to call or email!

A full color copy of this manual is available on our website, [www.OKW-Inc.com](http://www.OKW-Inc.com) under the Product Support page.

This front drive system was designed with every aspect covered. Fitment, performance, and appearance have all been a high priority from conception to shipping! Please read this manual completely before starting this install. There are a few special tools needed, and you may have to borrow or rent them before disassembling your vehicle. Everything this kit uses is a factory removed or factory replacement part. Any wear item is available at any parts store.

**If you are using an LSA blower with no head spacers or adapters, you will need to use a Gen4 (2008+) truck water pump, with the short outlet, not the long curved outlet!!! (the belt routing pic shows the correct pump)**

### Parts List:

- 1 Main Bracket Assembly
- 2 Idlers Continental PN 49111 or Equivalent
- 2 M8x125mm Hex Bolt (Water Pump)
- 2 M10x130mm Hex Bolt (Main Bracket)
- 1 M10x80mm Hex Bolt (Outer Alternator)
- 2 M10x70mm Hex Bolt (Idlers)
- 2 M10x40mm Hex Bolt (PS Long)
- 1 M10x30mm Hex Bolt (PS Short)
- 10 M10 Washers
- 2 M8 Washers
- 2 M10 or 3/8" Fender Washer (Yellow) (Lower Idler)
- 3 M10 Nyloc Nut
- 2 0.635" M10 Spacer (Idler Spacers, one is undercut)
- 1 0.260" M10 Spacer (PS Short)
- 2 0.650" M10 Spacers (PS Long, One is reduced shank)
- 1 3.760" M10 Spacer (Main Bracket to Block, .140" shorter for LSA Balancer)
- 1 1.710" M10 Spacer (Alternator Inboard, .140" shorter for LSA Balancer)
- 2 1.310" M8 Spacers (Water Pump, .140" shorter for LSA Balancer)

All M10 Bolts will be torqued to 37 Ft Lbs, and all M8 Bolts will be torqued to 18 Ft Lbs AT THE END OF THE INSTRUCTIONS unless otherwise specified.

First, the 2 special tools you will need are a power steering pulley removal/installation tool, and if your vehicle has a mechanical fan, you will need a fan clutch wrench to remove it from the water pump pulley, or a large Crescent Wrench and a BFH.

- If you have a mechanical fan, break it loose while the belt is still installed to help hold the pulley.
- Remove belt, fan assembly/mechanical fan if equipped, along with the shroud if included.
  - Remove alternator, upper idler pulley, and power steering pulley from pump.



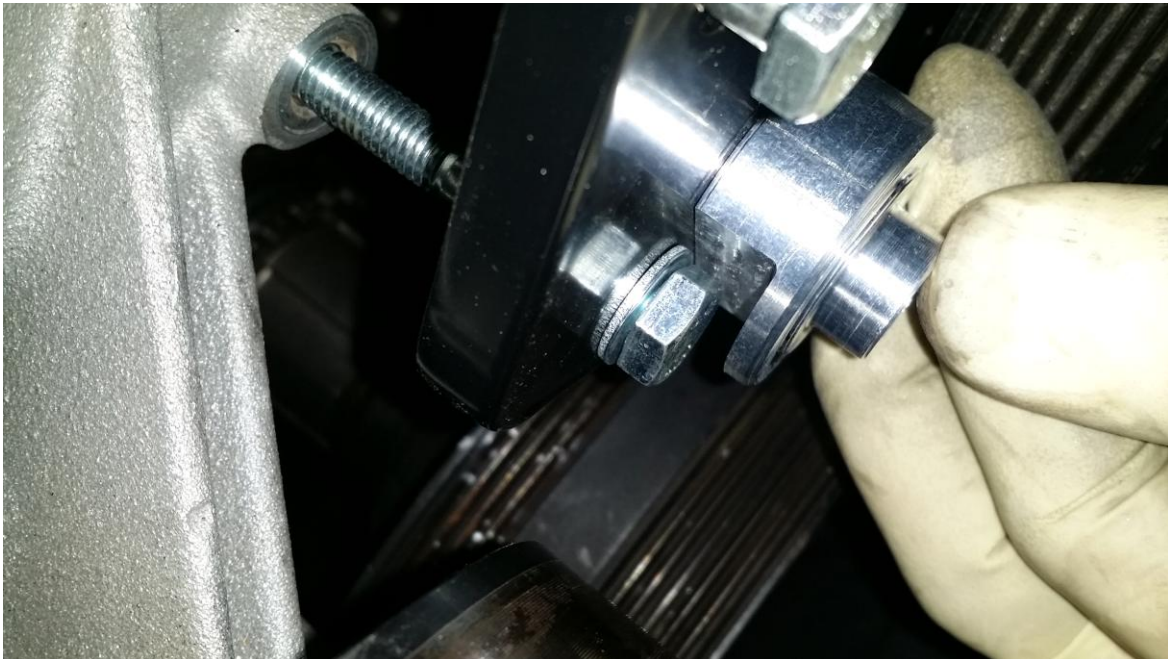
- BEFORE removing the PS pump from the bracket, you need to bend the lines slightly to clear the new locations. The high pressure line that points towards the drivers headlight needs to be bent to point forward, directly at the radiator. If this isn't done now, its very hard to bend with the pump loose, and will cause the pump to not bolt into the new bracket, or you will need to remove the lines and bend them before reinstalling them in the pump.
- Remove the 3 bolts from the front of the power steering pump to the aluminum bracket (**Marked 1**), and the 2 nuts on the back holding the steel support bracket. Also remove the bolt going to the block on that same support bracket. This bracket will be reused later. (**Arrows**)
- Tie the power steering pump out of the way.
- Remove the main aluminum front drive bracket using the 4 15mm bolts at the front (**Marked 2**). Some models have a jump start point on the side, this will just be zip tied out of the way at the end. There are 2 8mm bolts holding it on.
- Remove the 2 lower drivers side water pump bolts, leaving the very top one in place (**Marked 3**).
- This is what you should be left with (left pic on next page): (This was done on a mock up block, hopefully you have an oil pan and timing cover in place!!)



- In some versions of the bracket there are additional holes other than the ones listed in the picture above, disregard these. We try to minimize any waste products and some brackets fit multiple applications.
- See above for these next steps. All bolts will have a washer on them under the head, AND ALL SPACERS GO BEHIND THE BRACKET!!!!
- Next we put the power steering pump back on the bracket. YELLOW HOLES. There are 3 spacers and 2 different length bolts. The shorter bolt and spacer go on the outward side of the pump towards the alternator. The long, cut down spacer goes on the top, inner bolt with the large side facing the bracket, and the straight longer spacer goes on the very bottom bolt. There are 2- 40mm and 1- 30mm bolt. Go ahead and torque these to 37 Ft Lbs. Don't install the pulley yet.



- Take a 10MMx130 bolt and washer, and place it through the RED hole on the bracket, with the 3.760" spacer, into hole 2 on the block. Snug these bolts but DO NOT TIGHTEN COMPLETELY UNTIL THE END!
- The other 10MMx130mm bolt goes through the left PURPLE hole in the bracket, through the alternator, through the 1.710" spacer, and into hole 5 on the head.
- 2 8MMx130mm bolts with washers go through the BLUE holes, with the 2 8MM 1.310" spacers, then through the water pump bolt holes.
- The 10MMx80mm bolt with a washer goes through the outer PURPLE hole, through the alternator, and has a washer and Nyloc on the back side.
- Now, on the front of the bracket, rock the bracket back and forth to center it on the bolts, and torque all M10 bolts to 37 Ft Lbs, then tighten the 2 M8 water pump bolts to 18 Ft Lbs.
- You can put the power steering pulley on at any time now.
- Install one of the 49111 idlers with the non-notched .635" spacer into the UPPER GREEN threaded hole. Install the other 49111 idler with the notched .635" spacer into the LOWER GREEN threaded hole, so that the notch clears the head of the 8mm bolt. Both idlers use a large Grade 8 washer, and a 10MMx70mm bolt. Both idlers will be torqued to 37 Ft Lbs AFTER THE BELT HAS BEEN INSTALLED. After the belt is installed and the idler bolts are tight, install the last 2 10mm washers and Nyloc nuts on the BACK side of the bracket, as extra force put on the system with the 8 rib belt may need additional support.
- Leave the Idler bolts loose for now. The holes in the idler spacers have been left large, so that the idlers can move around a little bit. They are very close together, and the belt will rub itself if they are simply installed and tightened. This also helps with dialing in the perfect belt length when needed. Once the belt is on, and there is tension on the belt, pulling the idlers away from themselves, then tighten the bolts to 37lb-ft. NOW is when you want to add the nuts on the back side of the bracket.



- Note: Some models with Hydroboost will have fittings or lines that need to be turned or bent to fit correctly. Verify that nothing hits the steering shaft or exhaust after install.
- Once your blower is installed, you need to measure for a belt. Belt routing is pictured below. The easiest way to measure is using wire or string. The part number of a belt is the key to getting the right one. There are 2 formats. The "K" is the belt profile, the 6 is the number of ribs, and the number after that is either the length in inches or CM. For EXAMPLE ONLY A 1010K6 is a 6 rib K belt 101.0 inches long. Same belt is also a 6PK2565 or 265.5cm.

- **THERE IS A LINK ON OUR WEBSITE TO FIND CORRECT BELT PART NUMBERS BY LENGTH AND ANY PARTS STORE CAN INTERCHANGE THESE NUMBERS WITH ALL BRANDS. IF YOU MESSAGE ME ASKING ABOUT BELT LENGTHS I WILL ASSUME YOU WERE DROPPED AS A CHILD AND CANT READ SIMPLE INSTRUCTIONS!!!!**

- Now for the measuring:
- Take a string or wire and wrap the pulleys following the picture below. Mark or cut the string/wire where they meet. Since belts are measured from the BACK of the belt, and you are measuring in the groove, this will give you the closest measurement. Leave the tensioner alone while measuring with the string, since it will throw off your measurement.
- **This is IMPORTANT: Get a belt that BARELY fits on. To the point where it almost wont fit. Or you even have to loosen an idler to get it on. The belt will stretch about 1" after the first 100 miles or so. Once it stretches it will be closer to the correct length. Getting a belt that is "correct" by OEM standard will stretch out and be too long, and will get kicked off the pulleys or slip. If you cant find a belt that is close to what you need, replace the upper idler with the same 89052 as the lower idler, it will help change the overall belt length enough to get a belt that will work. Most installs use between a 104-106" belt depending on options.**

