NEW C6 SECONDARY DRIVE INSTRUCTIONS 9-23

The new Secondary Drive for 2023 is simpler, has 2 spring tensioners, and offers unparalleled belt grip.

The A&A Secondary Drive is unique in that it does NOT drive the accessories via the air conditioning belt. The Secondary Drive shaft pulley is driven by its own dedicated belt. This allows full belt wrap around the crankshaft pulley as well as the accessory shaft pulley and the ability to tension this belt separately. This eliminates accessory belt slip that plagues other systems. Our system utilizes a spring tensioner on the alternator / power steering belt and on the transfer shaft belt, which allows proper belt wrap and tension.

This system MUST be used with our INCLUDED proprietary balancer. A stock balancer or a standard 8 rib balancer from ATI or Innovators West will not work.

The kit comes complete with our proprietary SFI spec balancer (10% overdrive), all belts, hoses, pulleys, tensioners, and brackets needed.

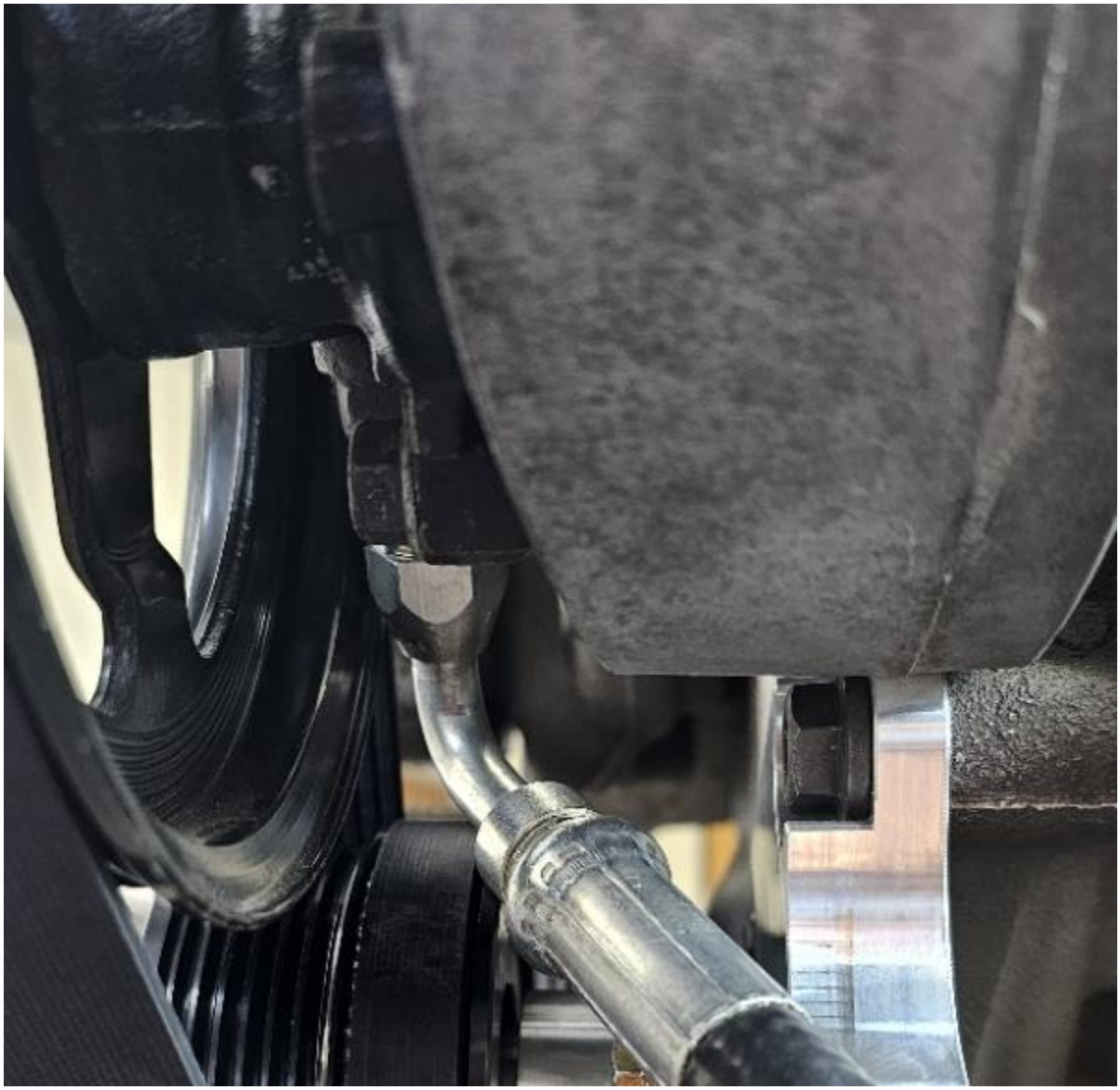
Using our Secondary Drive allows the use of a much shorter belt to drive the supercharger which eliminates stretch and belt whip. This is the ultimate belt drive system for street driven C5 and C6 Corvettes as well as dedicated race cars without air conditioning.

GETTING STARTED

Remove the stock balancer with the appropriate puller. Remove the alternator and power steering pump. You can remove the pump and reservoir together and pour the fluid into a clean container. Remove the reservoir mounting bracket. Remove the alternator bracket. Modify the stock alternator bracket by cutting off the section indicated by the black line. A bandsaw works best but any sort of saw or cutting tool will do. **Alternatively, we can supply you with a NEW alternator bracket that has been properly modified with the kit.** Bolt the modified alternator bracket back in its original position. Leave the upper left bolt out of the bracket for now.

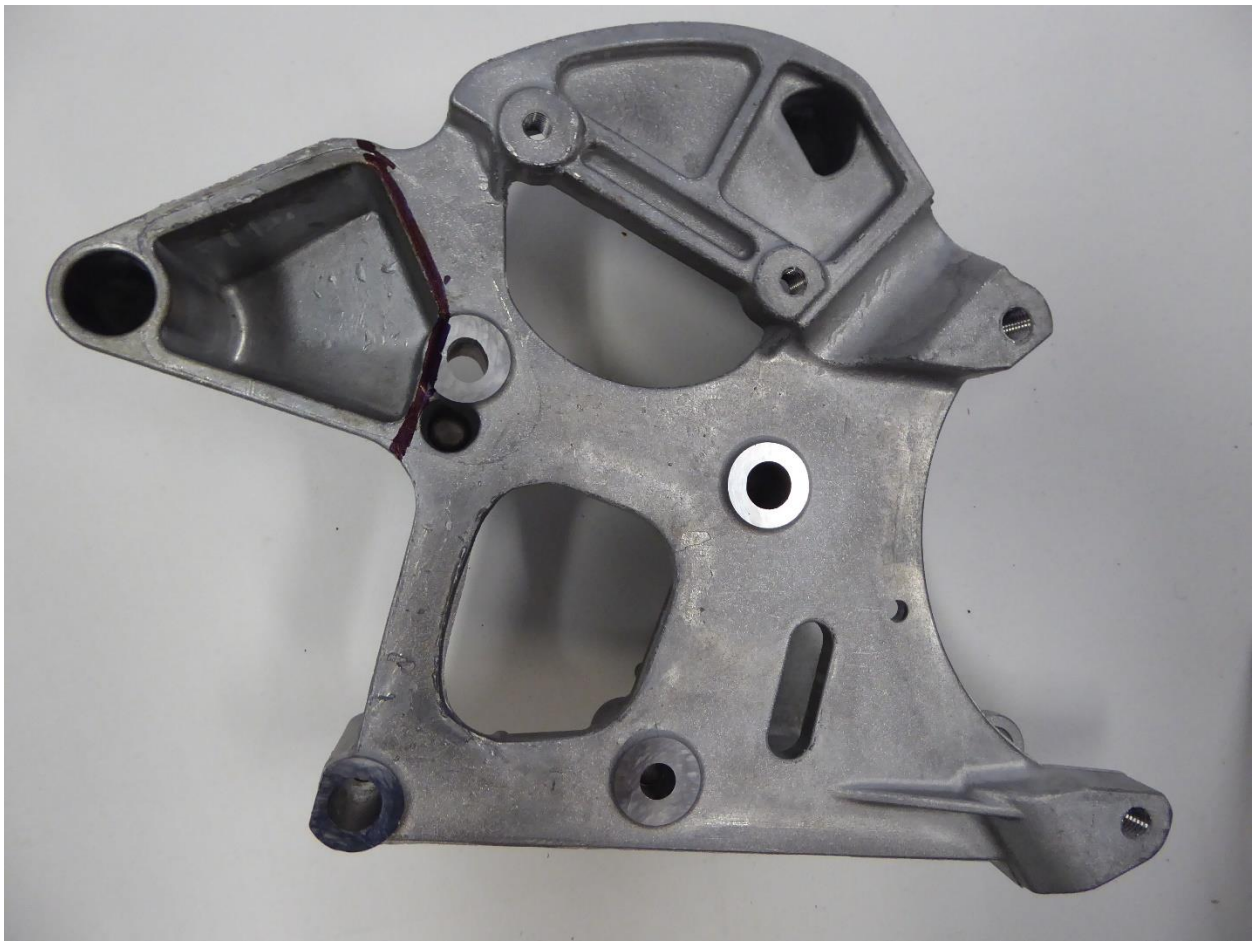
INSTALLING THE POWER STEERING HOSE AND RESERVOIR

Install our custom fittings in the power steering pump and steering rack. There are two fittings. The16MM threaded fitting goes in the pump and the 18MM threaded one goes in the steering rack closest to the frame. The 90- degree end of the hose with the beveled fitting goes on the pump. The corner is beveled to clear the pulley. Angle the hose slightly towards the engine. Install the power steering pulley and check for clearance between the pulley and hose fitting. Install the pump assembly back in the bracket. Install the hose on the steering rack by routing in under from the back and up to the outboard fitting.



POWER STEERING PUMP HOSE CONNECTION

POWER STEERING RACK HOSE CONNECTION



MODIFIED ALTERNATOR BRACKET

INSTALL THE NEW BALANCER

Install the supplied balancer using the appropriate installation tool. If your crankshaft doesn't have a keyway, pin the balancer using the supplied pin kit. Bolt the mandrel in place using the long bolt. Using the mandrel as a guide, drill through the ¼" hole in the mandrel into the balancer and crankshaft. You must try to drill straight in and not let the drill bit wander off course. You are basically cutting a half-moon out of each. The end of the crankshaft is recessed below the lip of the balancer. That is normal. Measure the supplied pin and mark your drill bit so that it drills into the crankshaft by that amount. A small zip tie on the drill bit works great for that. Once drilled blow the hole out and insert the pin with a tiny bit of silicone applied to keep it in place. Once you drive the car, the pin will tighten up in the hole. Install the balancer retaining bolt and tighten it to spec.

INSTALLING THE LOWER TENSIONER / PULLEY ASSEMBLY

Temporarily remove the transfer pulley and spring tensioner from the lower tensioner plate. The lower tensioner plate bolts to the block using the 3 existing bolt holes. If the cam sensor bracket is in the way, remove it. On dry sump cars, move the oil lines out of the way. Reinstall the spring tensioner. You'll see there is a temporary pin in the tensioner to hold it in the slack position. That will be removed after the belt is installed. Slip the 4-rib belt over the balancer, making sure it is seated in the 4 middle grooves.

Slip the transfer pulley through the loop in the belt, making sure the belt is seated in the rear grooves. Move the transfer pulley assembly over to the threaded hole and put the bolt in by hand. Tighten the bolt to 45# before releasing the spring tensioner. Rotate the tensioner slightly and remove the pin. The bottom section is done.

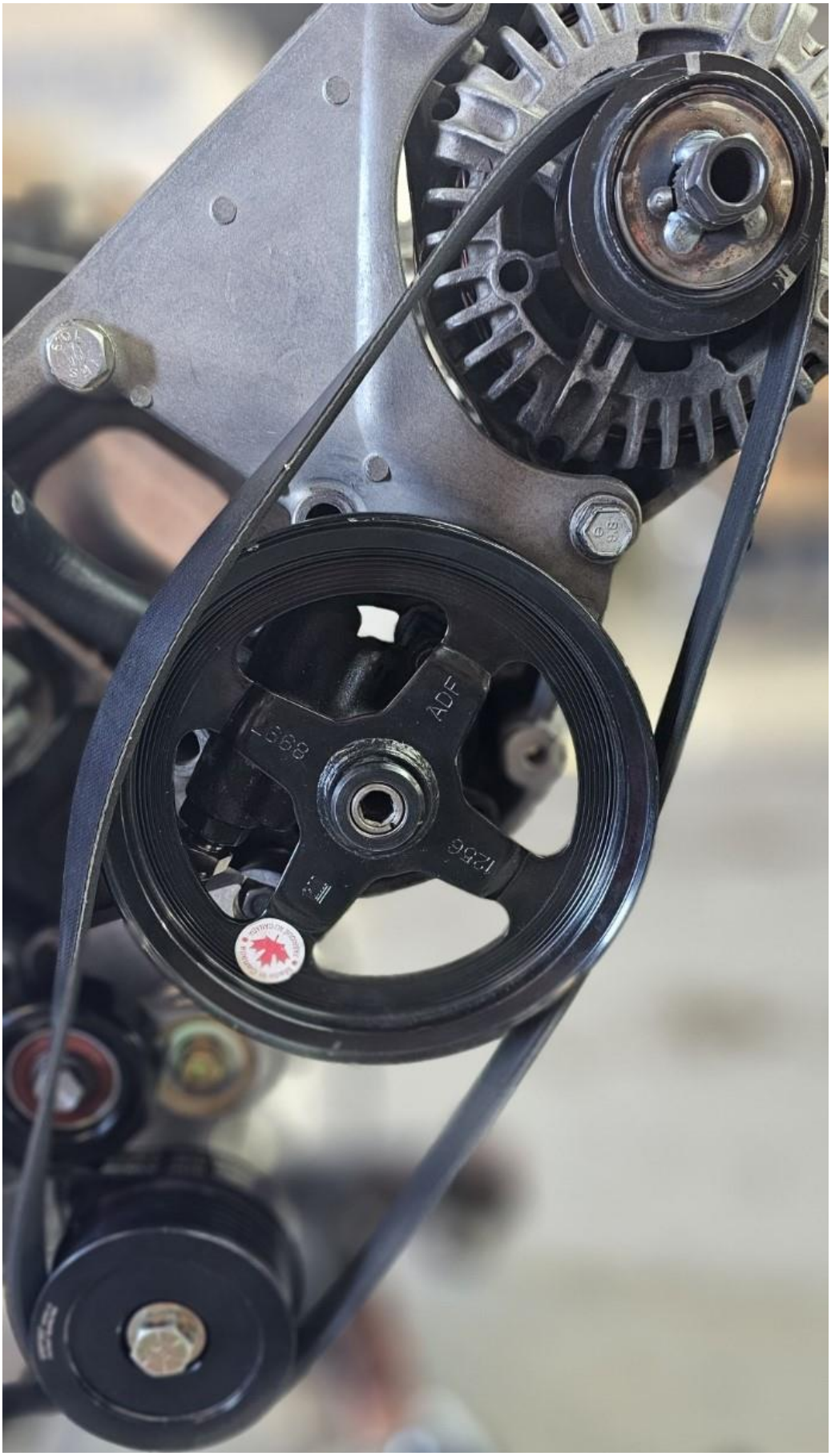
TRANSFER PULLEY ASSEMBLY READY TO BOLT ON

BOTTOM SECTION- FINISHED

Install the alternator and lower bolt. Just snug it up for now. Temporarily install one of the long metric bolts in the upper hole to line it up. Tighten the lower bolt and remove the upper one. Mount the upper tensioner bracket using the long metric bolt and long spacer in the open alternator bracket hole going through to the cylinder head. Leave it loose for now. Swing the assembly over to the left, out of the way.

UPPER TENSIONER ASSEMBLY INSTALLED LOOSELY

Slip the remaining belt over the transfer pulley, one side of the power steering pulley and the alternator pulley. Pop it over the other side of the power steering pulley last.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ALTERNATOR BELT INSTALLATION

INSTALLING THE UPPER TENSIONER ASSEMBLY

The remaining spacer has a recess in it to fit over the bushing on the alternator. The first mounting bolt was left loose to give you room for this recess to pop over the bushing. Put the bolt through the bracket and spacer. Rotate the bracket clockwise with a 9/16” socket until you can install the bolt through the alternator hole. (some brackets will have a square hole you can put the ratchet in directly) You’ll be compressing the spring tensioner while you are doing this, so there will be some resistance. There is some adjustment to the bracket, but in the middle is usually just fine.

SPACER TOWARDS ALTERNATOR BRACKET

TIGHTENING UPPER TENSIONER BRACKET

Bolt the new reservoir bracket to the tensioner assembly. The holes in the bracket are large enough so you can tilt the bracket to level the reservoir. Install the supplied reservoir hose extension and clamps to the reservoir and mount it in the bracket, refill with the proper fluid.

RESERVOIR BRACKET INSTALLED

BELT SIZES

The proper belt sizes for this setup are Gates #s K040310 and K060410. The belts from previous generations will not fit.