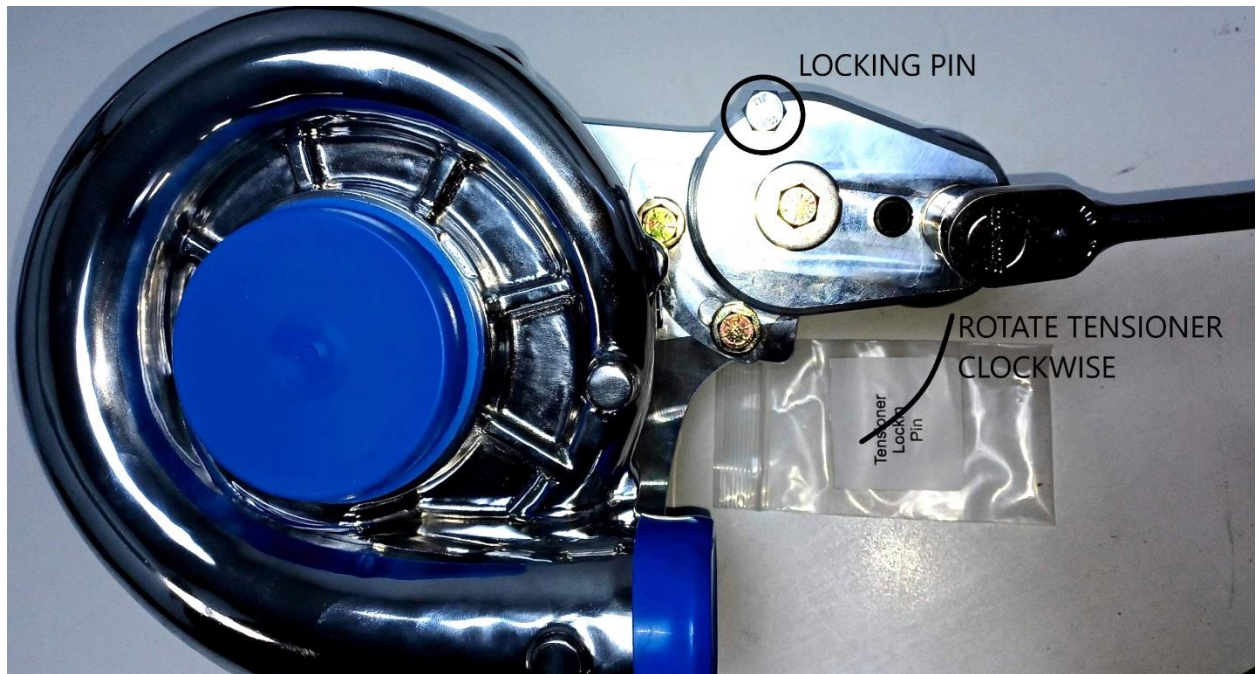


## **A&A SUPERCHARGER BRACKET WITH ADJUSTABLE BILLET TENSIONER FOR C6 CORVETTE**

### **INSTALLATION AND ALIGNMENT TIPS**

- 1 INSTALL THE MAIN BRACKET ON THE SUPERCHARGER** Locate the 5 “D” spacers. Install them between the bracket and supercharger using the 2 ¼” bolts and washers in holes 1, 2 and 3. **(PICTURE 1)** The flat side should go towards the gearcase. The remaining hole will use a longer bolt that comes all the way through the rear bracket. Put a “D” spacer under this hole and thread the long 3/8 bolt through it just to align the bracket and spacers. Tighten the 2 ¼” bolts, then remove the long bolt. The “D” spacers may or may not stay in place. If it falls out, don’t worry about it. It can be slipped in later.
- 2 SET THE BILLET TENSIONER:** Lay the assembly on a bench with the bracket facing vertically and the tensioner facing you. Get a long ratchet and a ¾” socket. Insert the 5/16” lock pin (or any 5/16” bolt) in the open hole in the face of the tensioner. Rotate the tensioner clockwise, using the ¾” bolt on the face of the tensioner, until you get to the point where the pin drops in about 3/8”. This locks the tensioner in the open (slack) position and makes installation easier.

**DO NOT TOUCH THE BLACK ALLEN BOLT** It is a travel limiter. If you take it out, the tensioner will unwind violently.



**PICTURE 2**

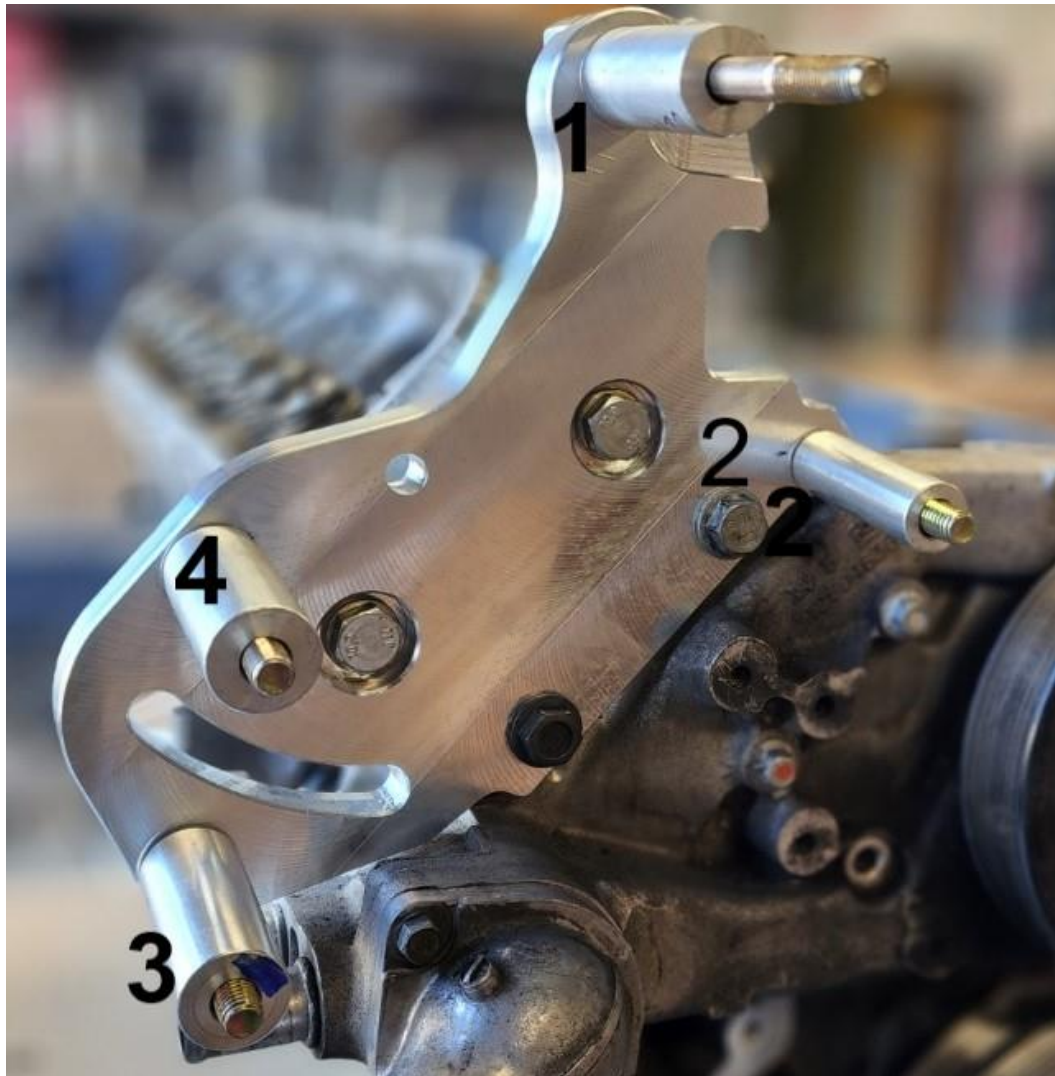
- 3** Route the belt over the top of the blower pulley. Thread the right side of the belt (when looking at it from the pulley side) between the ribbed idler and the smooth tensioner pulley.



- 4 **ASSEMBLE AND INSTALL HEAD BRACKET:** First, remove the sliding idler bracket from the rear (head) bracket and set it aside. You will need to insert the 3/8 X 5 3/4 bolt and washer through the back of the rear bracket in hole #2 and a 3/8 X 3 3/4 bolt and washer through hole #3. (See **PICTURE 3**) You need to do this first as you won't be able to install them after the bracket is mounted.
- 5 Loosely mount the rear bracket to the water pump, using the stock tensioner bolts.

- 6 Install the triangular brace in its slot and loosely install a 10MM X 90 MM bolt and washer through the rear bracket and brace into the cylinder head hole. Do the same with the 2.285" spacer. Now you can tighten the two water pump bolts ONLY. There is "fudge room" built into the bracket holes so that the bolts will line up with milled heads etc. That's why we want all four bolts installed before tightening the two water pump bolts.
  
- 7 **IMPORTANT ALIGNMENT CHECK:** Temporarily remove the two bolts going through the rear bracket, spacers and into the cylinder head. Check how the spacer and rear brace fit between the head and bracket. Try to slide the brace in and out and do the same with the spacer. Ideally, they should be snug, but you should be able to move them with some effort. If there is a big gap, (like the spacer will fall out) tightening the head bolts will pull the top of the bracket towards the engine and push the bottom forward. Conversely, if it is too tight, it will push the top of the bracket out and pull the bottom in. If the spacers don't appear to be pulling or pushing the rear bracket out of parallel, tighten the head bolts. **The rear bracket being out of parallel is the cause of nearly all belt issues. I'll add some tips at the end of this article to fix alignment problems.**

PICTURE 3

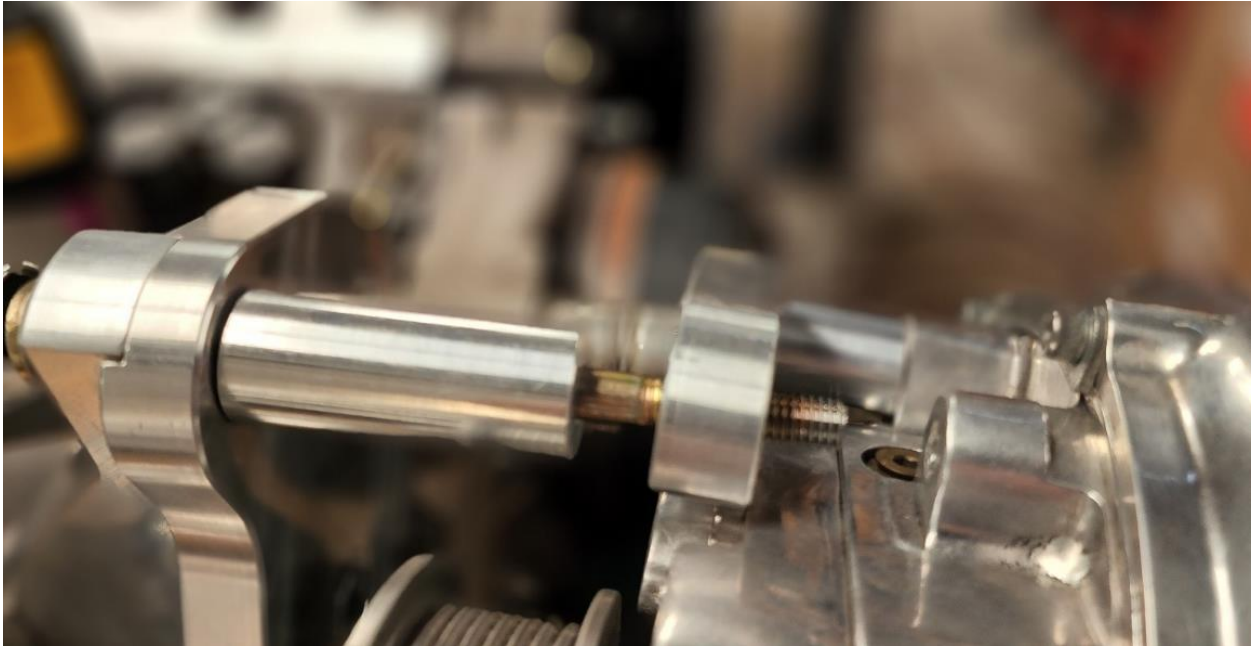


- 8 **INSTALL THE BLOWER AND BRACKET ASSEMBLY** Take the assembly to the car with the pulley side facing the engine. You'll need to feed the bottom loop of the belt between the steering rack and balancer to get it under the balancer. The upper side of the loop goes under the water pump. We find the easiest way to mount the bracket is to push bolts #2, 3 and 4 (**PICTURE 1**) back about an inch and hang the assembly from bolt #1. It's much easier to align just the one bolt to take the weight and then worry about lining up the others. (**PICTURE 4**) Once the blower assembly is hanging you can straighten out the



belt. Belt routing coming off the tensioner and under the balancer is shown in **PICTURE 5**. The belt is routed around the power steering and alternator pulleys just like stock. Leave the belt off the alternator pulley for now. A full belt routing diagram is shown in **PICTURE 6**.

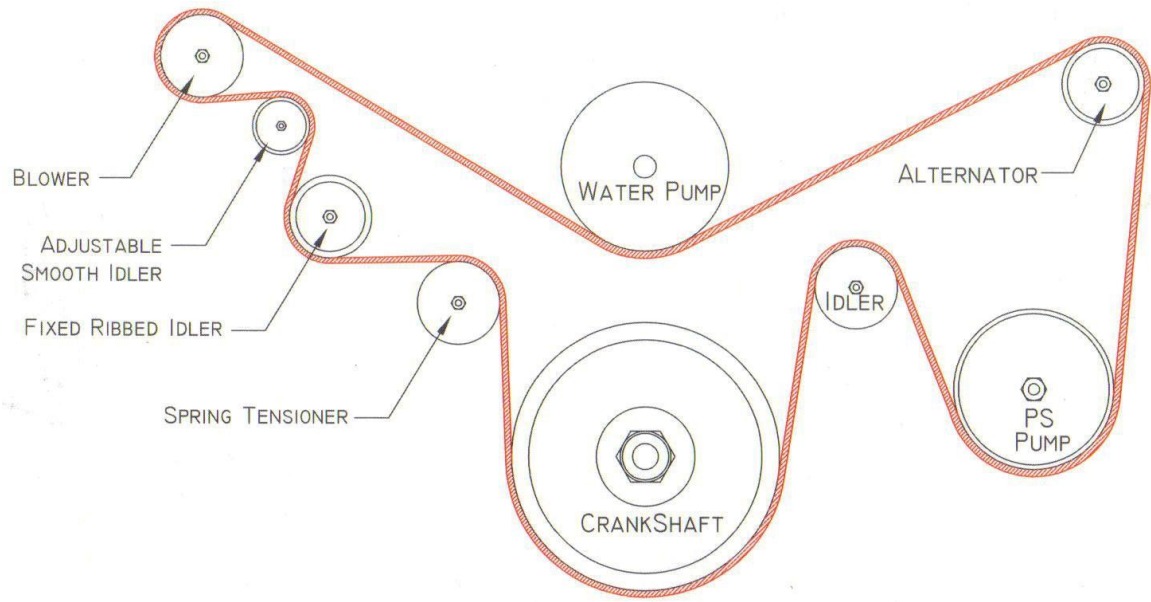
You can now line up the remaining bolts and thread them in. Bolts 1 and 2 will require that you put a “D” spacer between the bracket and the blower before tightening if they are not there already. You can remove and reinstall bolt #1 to install the spacer after the other bolts are installed.





**PICTURE 4** (JUST HANG THE BLOWER ASSEMBLY FROM THE TOP BOLT TO TAKE THE WEIGHT)



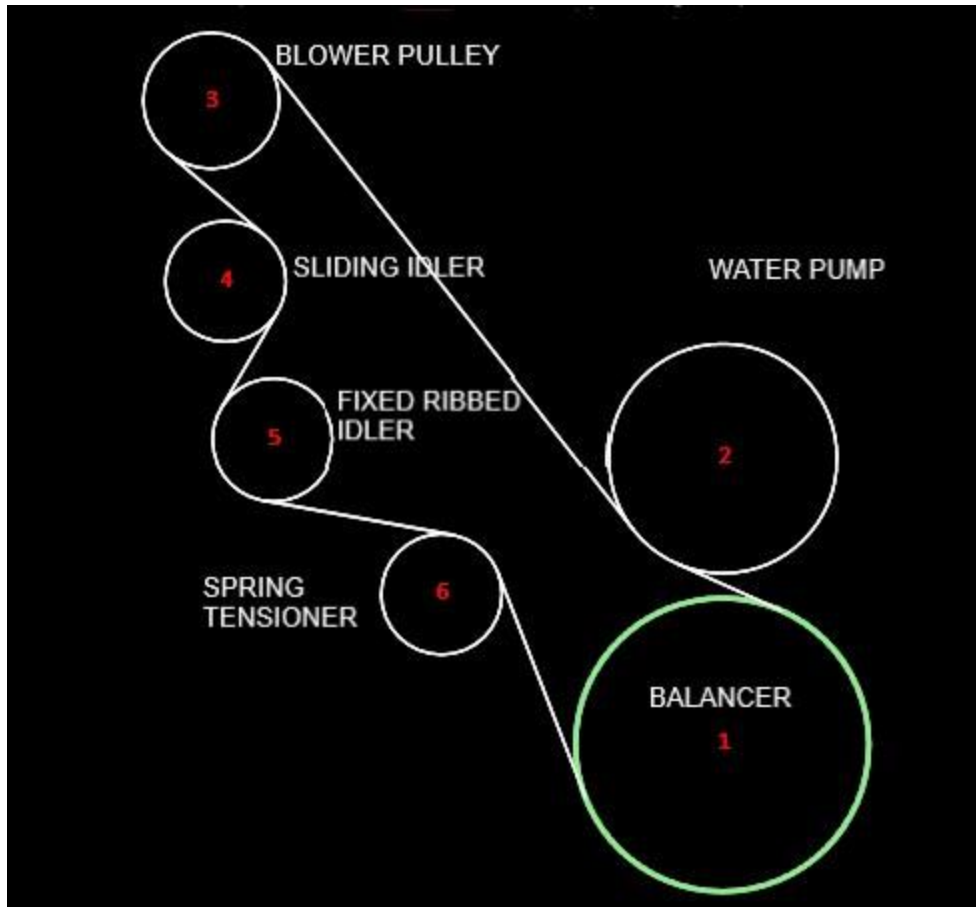
PICTURE 5



SCALE: 1/1	NEXT ASSY: N/A	NAME: BELT ROUTING DIAGRAM
DRAWN BY: AG	USED ON: N/A	
DATE: 11/21/05	UNIT: UNIT	PROJECTION: 
MAT'L: NOTED		
TOL: .XX± XXX± ANGLE±	N/A	REV: - DRAWING NUMBER: 09-001
 CORVETTE PERFORMANCE <small>OKLAHOMA, CA. 93036</small>		

**PICTURE 6- BELT ROUTING DIAGRAM WITH STANDARD 6 RIB DRIVE**





**PICTURE 7- BELT ROUTING DIAGRAM WHEN USING OUR 8 RIB SECONDARY DRIVE**

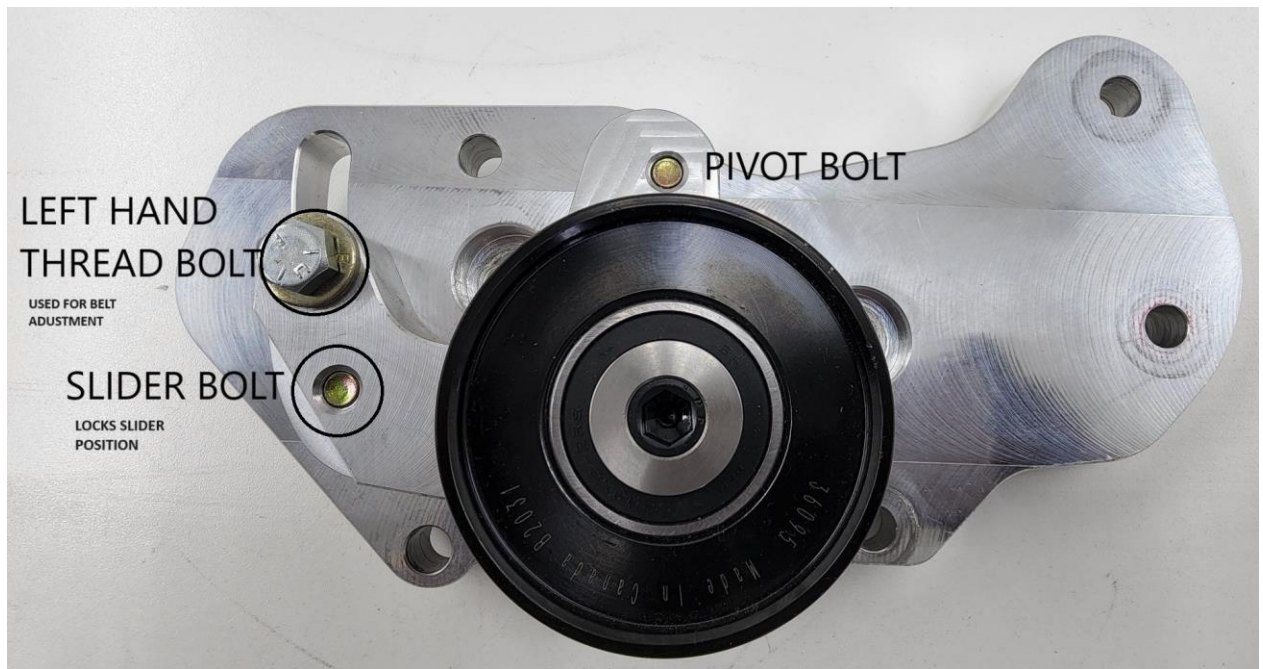
Reinstall the sliding idler on the head bracket, as it was before. **(PICTURE 8)**

(You may find it easier to slightly loosen a couple of bolts on the main bracket so you can temporarily remove spacer # 4 for access) Once the idler is in, reinstall spacer #4 and tighten all the bracket bolts.

The upper pivot bolt and the slider bolt should be just loose enough so you can slide the bracket through its arc.

**The left-hand thread bolt is used to push the sliding idler down to tighten the belt. DO NOT try to take it out.** Some newer brackets will have a square hole broached in the bracket in place of the bolt, so you can insert a ratchet for adjustment. Push down on the 9/16 bolt (or square hole) until the belt is tight enough that the locking pin becomes loose enough to turn by hand. Tighten the slider and pivot bolts. Go back to the spring tensioner, rotate it slightly, and remove the pin. The belt tension is now set properly. Extremely high horsepower builds may require our optional spring and extra tension. **REMEMBER TO RESET THE BELT TENSION AFTER RUNNING THE CAR FOR A WHILE** Just rotate the spring tensioner clockwise, using the ¾" bolt, until you can insert the locking

pin. Rotate the sliding idler until the pin becomes loose and lock the idler bracket down. Pull the pin and you're done.



**PICTURE 8**

#### **BELT ALIGNMENT TIPS**

**First, nearly all installations will line up without needing to go through the following procedures. This is just for the occasional build of mis-matched parts.**

**Nearly all alignment issues start at the water pump. We highly recommend using a genuine GM (Delco) pump. AFTERMARKET WATER PUMPS ARE NOTORIOUS FOR CAUSING BELT ALIGNMENT PROBLEMS!**

It's imperative that the rear bracket is parallel to the face of the cylinder head. GM made two water pump gaskets for the C5. 97-98 used paper gaskets that were about .030" thick. The later ones were aluminum and ran about .060" thick. Using a paper gasket on a late water pump, or an aluminum gasket on an early pump will surely cause alignment issues. Start with the correct gasket for your model!

If you needed to move the rear bracket in or out by .030", adding or swapping these gaskets would do it. You could add a paper gasket to your aluminum one to go out .030". You could take the aluminum one out and replace it with paper to go .030" closer to the head, etc.

For smaller adjustments, custom shims are available. Contact us if you need some. You want the rear head spacers to fit between the cylinder head and rear bracket without forcing the bracket forward or backward excessively when you tighten it up.

Feel free to contact us any time if you need help or clarification.

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