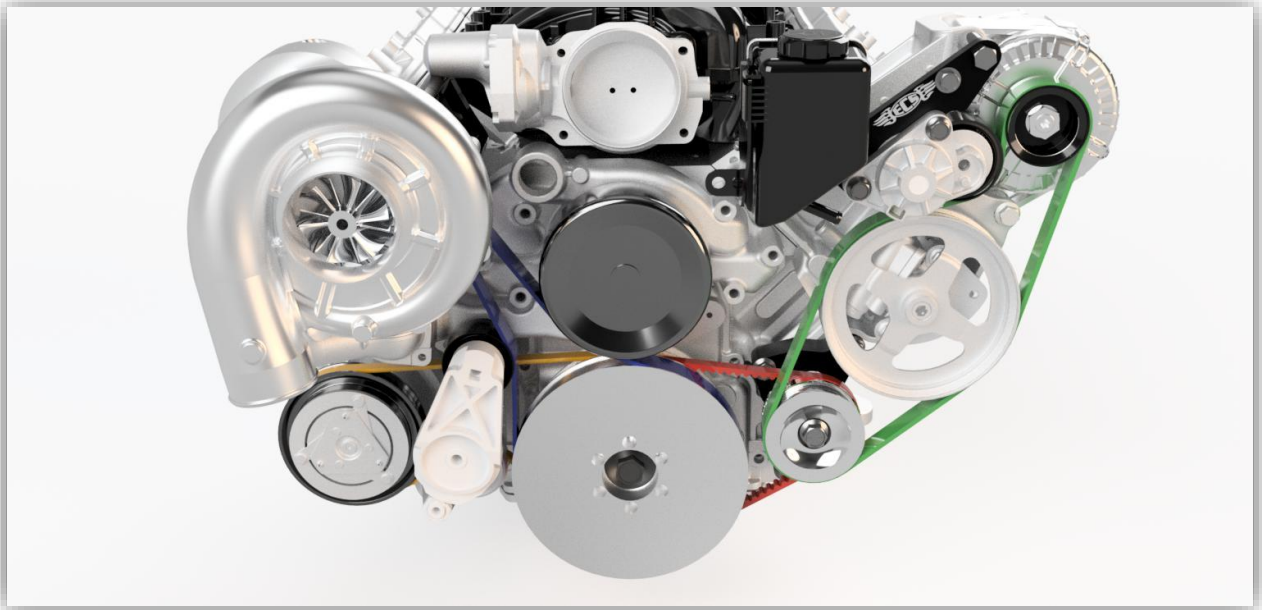
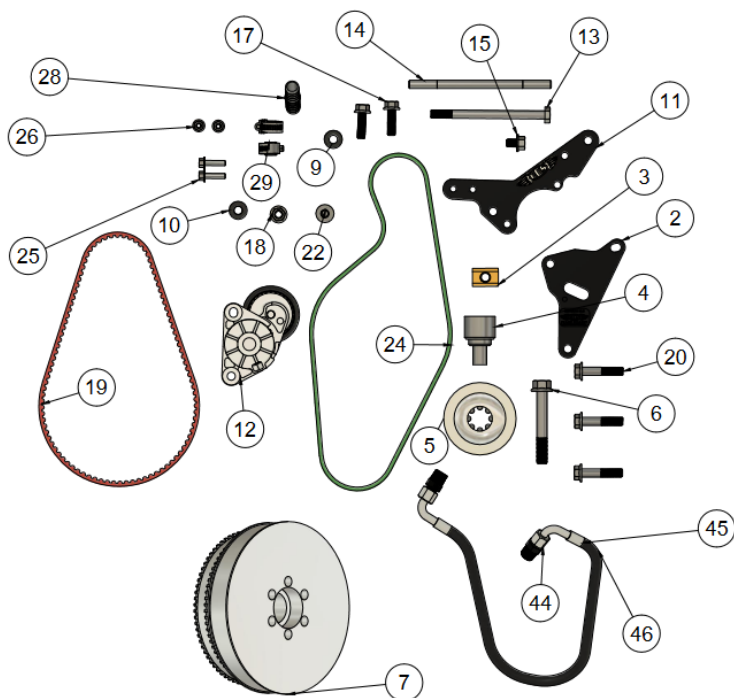


ECS C5/C6 Direct Drive Belt System



Introducing the new East Coast Supercharging Direct Drive Belt System™. Using our proprietary Cog Drive design, we can efficiently transfer power from the balancer to the accessory drive using the latest in cog belt technology from our partners at Gates® with their Poly Chain® GT® Carbon™ reinforced polyurethane cog belts. This eliminates ALL belt slip from the secondary drive!

Unlike all secondary systems currently on the market that rely on either the AC belt or an individual small 4 rib belt to drive the secondary drive pulley and relies solely on the tension and friction of the 4-rib belt to drive all your accessories. We have seen time and time again the 4-rib belts end up slipping possibly losing alternator voltage at higher RPMs or affecting the power steering at slower speeds and causing a loud belt squeal. We found the 4-rib belt systems to be prone to stretching and slip thus needing constant maintenance or replacement. We do away with that main problem by using a proven method of power transmission, the COG BELT! From timing belts to oil pumps, superchargers, alternators etc have been driven by a type of cog drive to great success.



PARTS LIST		
ITEM	PART NAME	QTY
2	COG BRACKET V8	1
3	STAINLESS STEEL 1-SLOT NUT 90642A384 V1	1
4	COG PULLEY BUSHING V1	1
5	COG ASSEMBLY ECS-500-004 V7	1
6	1/2-13 X 3-1/2 GRADE 8 STEEL SCREW 90602A239 V1	1
7	INW BALANCER MACHINED V4	1
9	ECS-500-010 1.632 875 OD V4	1
10	ECS-500-011 2.305 V3	1
11	ECS ALTERNATOR BRACKET	1
12	ALT BELT TENSIONER ASSEMBLY	1
13	M10-1.50 X 140MM TOP ALTERNATOR BOLT	1
14	M10-1.5 X 175 MM STUD 93275A047 V1	1
15	3/8-18 X 1/2 GRADE 8 SCREW 92323A450	1
17	3/8-18 X 1-1/4 GRADE 8 BOLT 90198A128	2
18	M10-1.50 SERRATED LOCK NUT 94520A800	1
19	800MM GOG BELT	1
20	M10-1.50 X 50MM GRADE 8 BOLT 93474A226	3
22	M10-1.50 X 30MM GRADE 8 BOLT 93474A223	1
24	25-080370 8-RIB ALTERNATOR BELT	1
25	1/4-20 X 1.00 STAINLESS BOLT 97646A115	2
28	1/4-20 FLANGED NUTS	2
28	5/8 HOSE BARB 91355K88	1
29	WORM-DRIVE CLAMP 45945K83	2
44	O-RING TO -SAN FITTING	2
45	800642 V1	2
46	ECS -8 PS HOSE	1

ECS C5/C6 Driect Drive System

V1.2

READ COMPLETE INSTRUCTIONS BEFORE YOU START!!

Disassembly:

- As always make sure the battery is disconnected before you work on any car.
- Begin by removing the supercharger belt if already installed. Followed by the stock balancer and replace with the modified ECS Balancer by Innovators West. **Follow IW instructions for installation.**
- Unbolt, drain and remove the power steering reservoir. Leave the lower drain hose in place. Clamps will be re-used. Remove the power steering hose from the pump to the steering rack.
- Next you will have to modify the power steering/alternator bracket as shown in the pictures below. To remove the power steering pump you will need to remove the power steering pulley of C5 cars without an upgraded C6 style PS pulley. For C6 you will be able to access the power steering pump bolts through the pulley openings.

-Cut off the section shown below off the alternator bracket using a bandsaw or airsaw. Make sure to smooth out and file down any sharp edges.

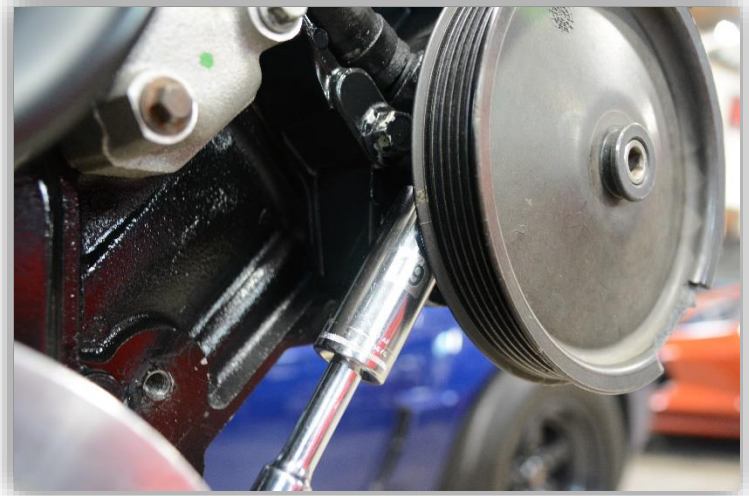
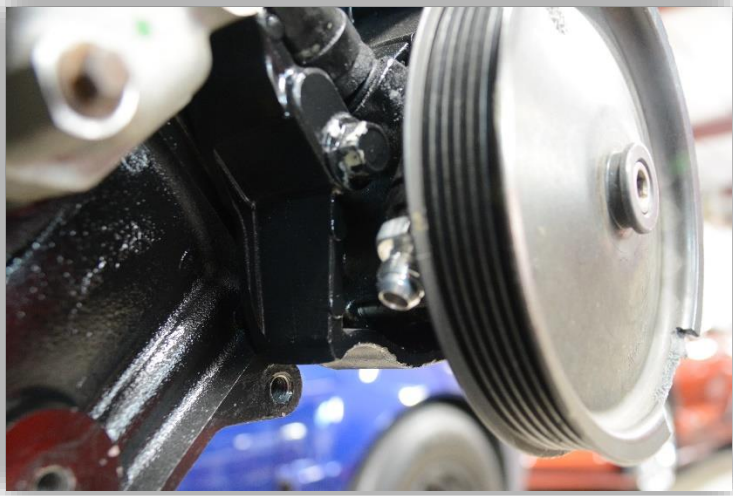


-Re-install the alternator bracket on to the engine.



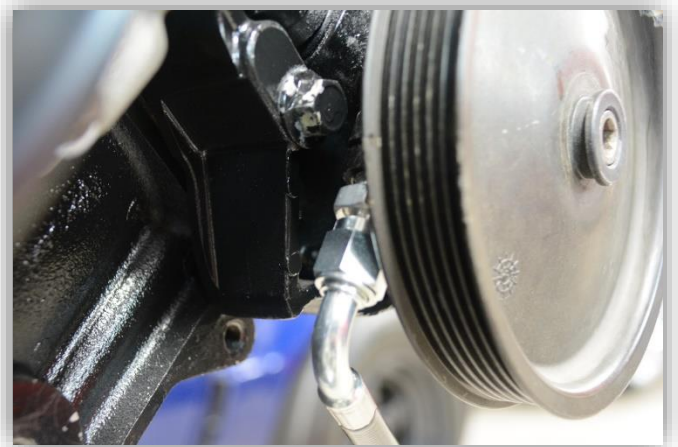
-Now is a good time to install the smaller of the two supplied power steering hose -6AN adapter on to the power steering pump pressure outlet as shown on the pictures. Use a deep 19mm socket to tighten. (be aware of the o-ring remaining in place as you install the fitting.)





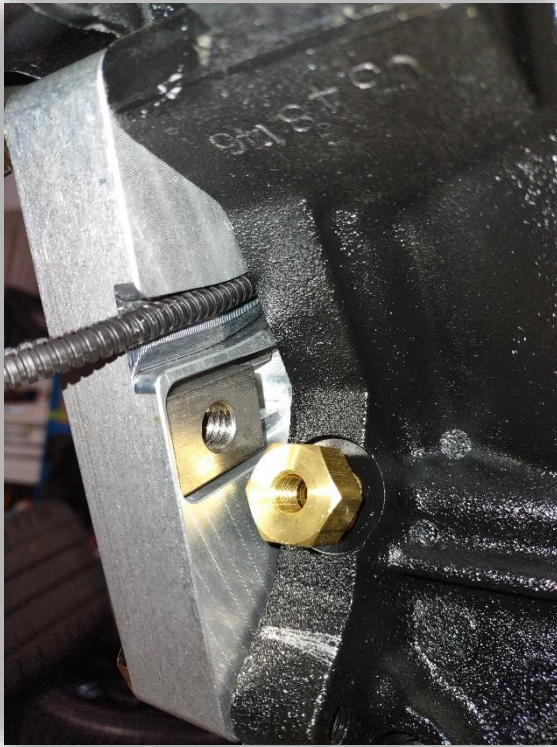
-Once you have the -6AN fitting installed on the power steering pump you can install the -6AN power steering hose on to the pump, when you go to tighten the fitting make sure the hose is angled towards the block slightly to help route the rest of the hose towards the steering rack.

-If you have a C5 power steering pulley you can re-install it on the PS pump.



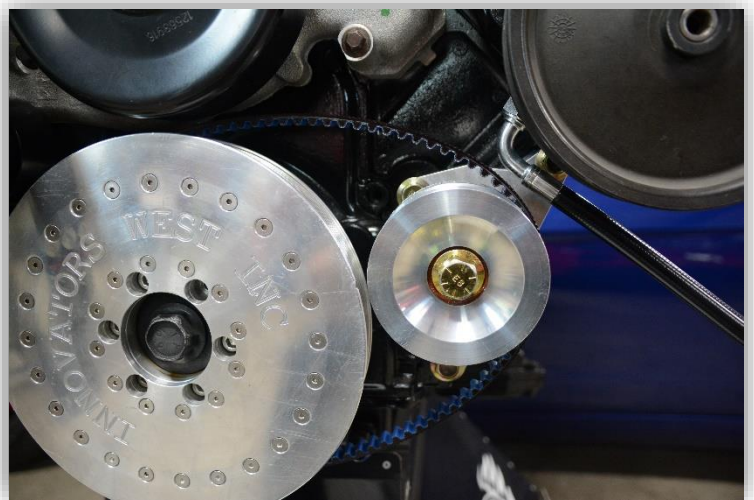
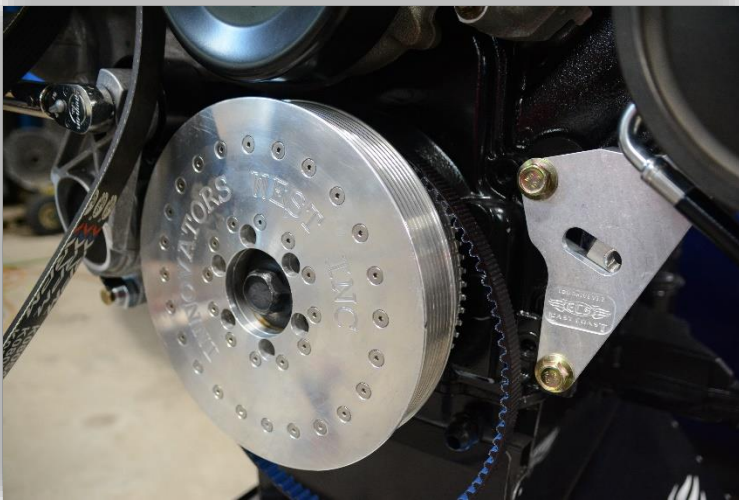
-Using the supplied M10 x 50mm Flanged bolts go ahead and install the main mounting bracket on to the block. (Iron blocks use the two available bolt holes) tighten to 35 ft-lbs.

-For vehicles equipped with a front cam position sensor we have provided a notch on our mounting bracket to allow the wiring harness to be routed safely away from the belt and eliminate the need to notch your block or extend the harness.

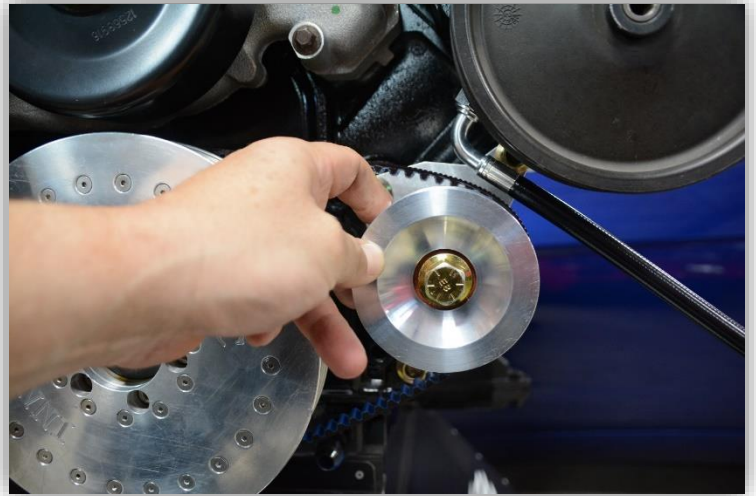
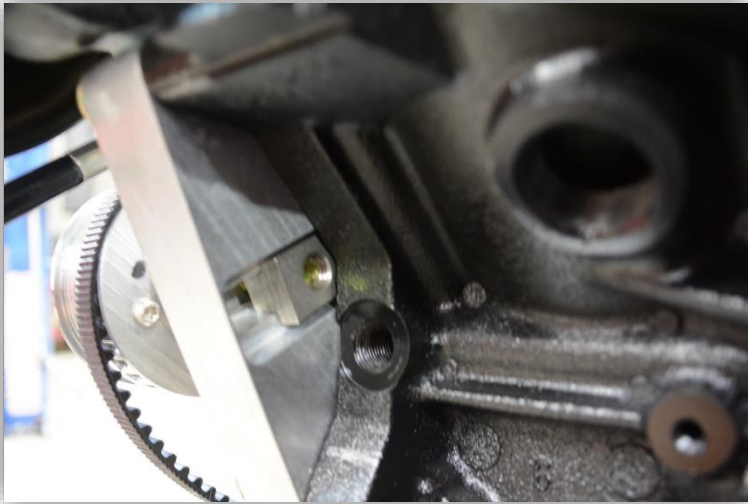


Install the provide T-Nut in preparation for the cog pulley assembly. For the C6s we provide a M10 x 1.50 bolt hole for the factory ground you have to relocate to mount the bracket.

-Next you will want to slide the supplied cog belt over the balancer followed by the cog pulley assembly and bushing, loosely bolted to the t-nut on the bracket (you will have to slide the t-nut towards the balancer to line up the 1/2 bolt. Make sure to line up the cogs on the balancer and the ECS drive pulley.



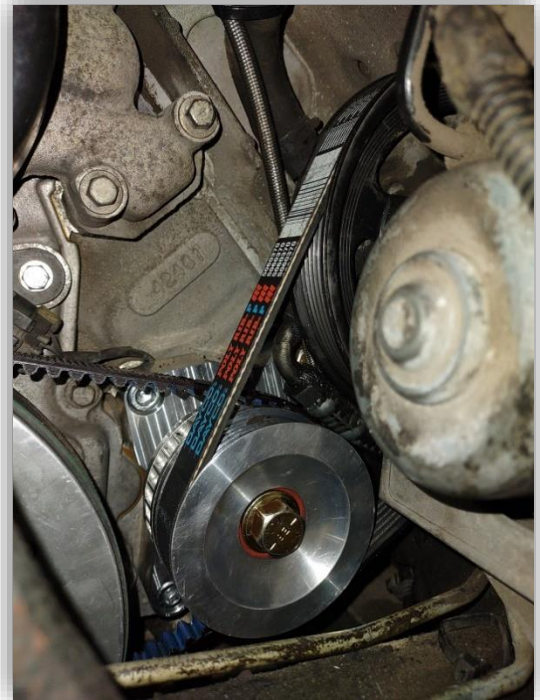
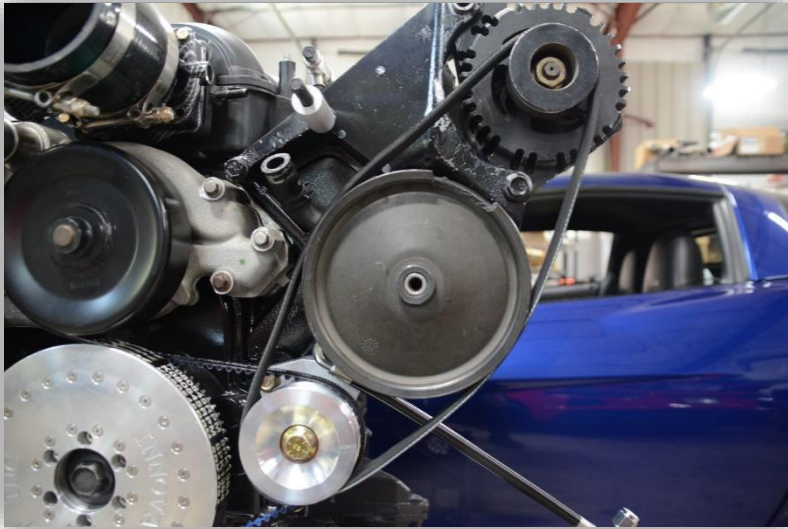
-One of the most critical concepts of setting up the cog belt is that the cog belt does NOT need to be super tight to function. Cog belts rely on the mechanical engagement of the cog teeth NOT on belt tension and friction like ribbed belts. To properly set the tension of the cog belt you will slide the drive pulley assembly away from the balancer using your hand only DO NOT USE ANY TOOLS OR PRY BARS TO SET BELT TENSION! Secure the bolt using a 3/4" socket and tighten to at least 40 ft-lbs.



-The proper amount of tension on the cog belt should allow you to twist the straight section of the belt ¼ turn. Tension should NOT exceed this amount.



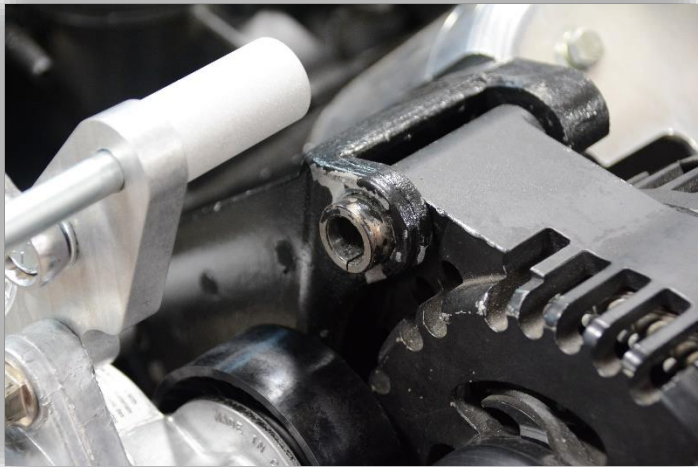
-Once the cog pulley is secure you can slide the 6-rib 37" belt over the cog pulley up around the power steering pulley and over on to the alternator. Due to the various alternator options some alternators may need the top bolt removed to get the belt over the alternator pulley. The top bolt will have to be replaced in the following step.



-Next remove the top and second from the top alternator bracket bolts. On the lower bolt install the supplied M10 Stud and tighten by hand. Slide the longer 2.305" spacer over the stud. Next slide the Alternator bracket assembly over stud so it pivots. Thread the flanged M10 nut to the point it touches the alt bracket. The alternator tensioner should be resting against the 6-rib belt ready to be tensioned.

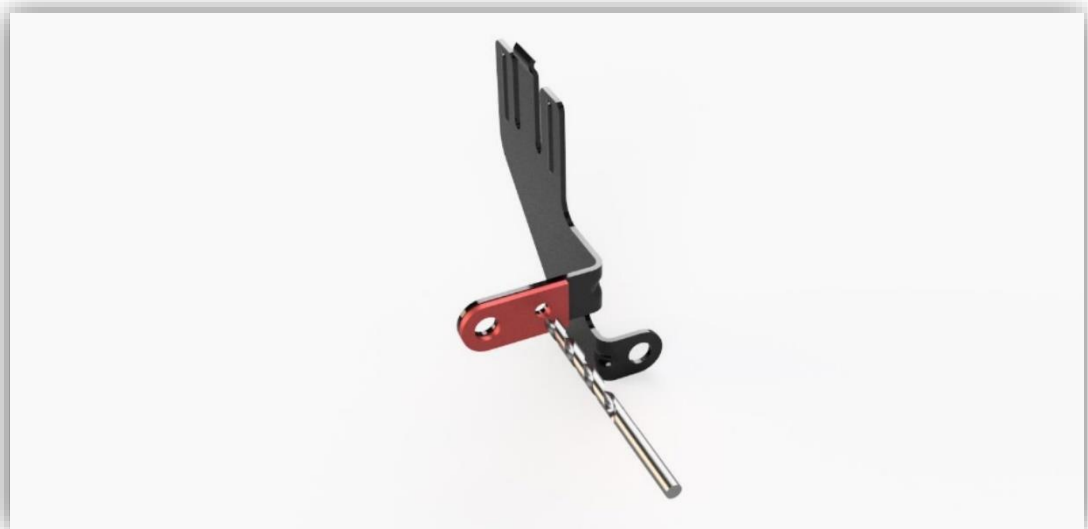


-To set the alternator tensioner you will need a 9/16 wrench or socket to be used on the adjustment bolt. You will setup the M10 x 140mm bolt with the small 1.632 recessed spacer that will line up with the alignment bushing on the alternator mount. When Ready rotate the whole assembly clockwise until the M10 bolt and spacer line up with the top bolt hole on the alternator bracket and secure to 35 ft-lbs.

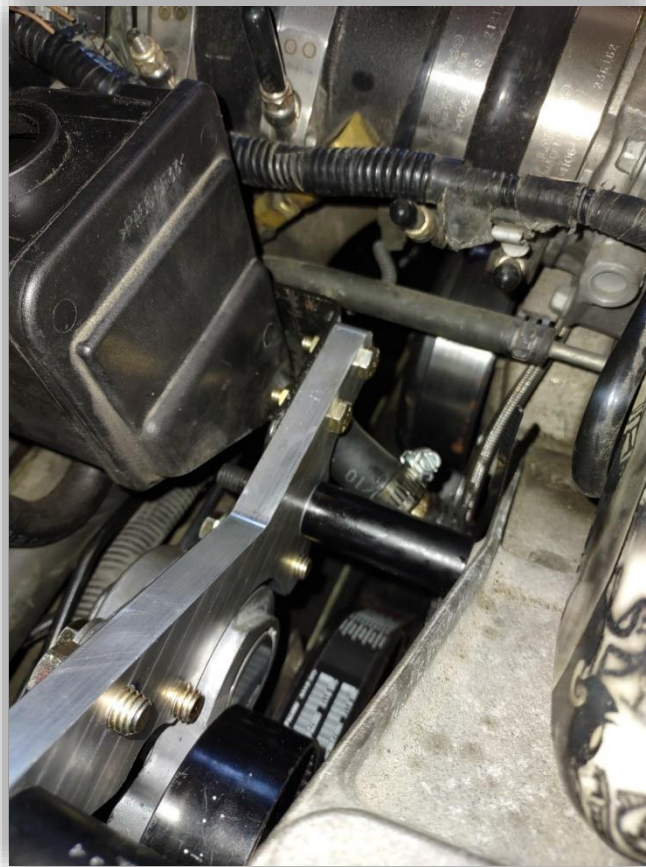
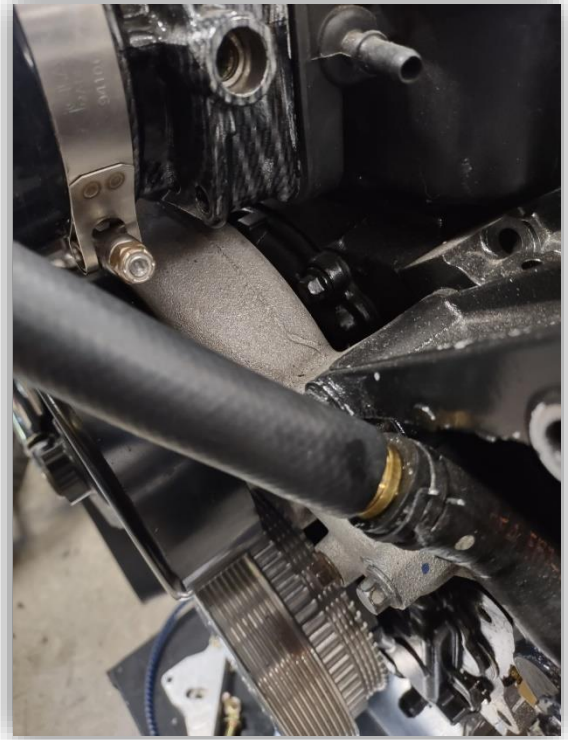
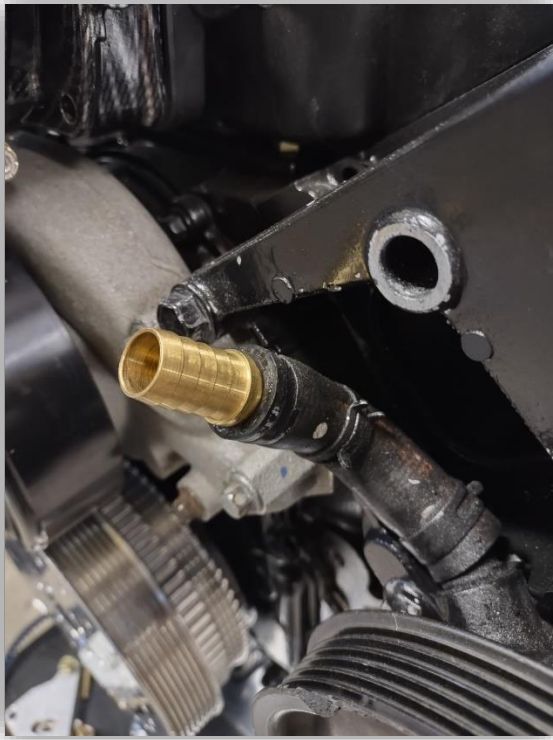


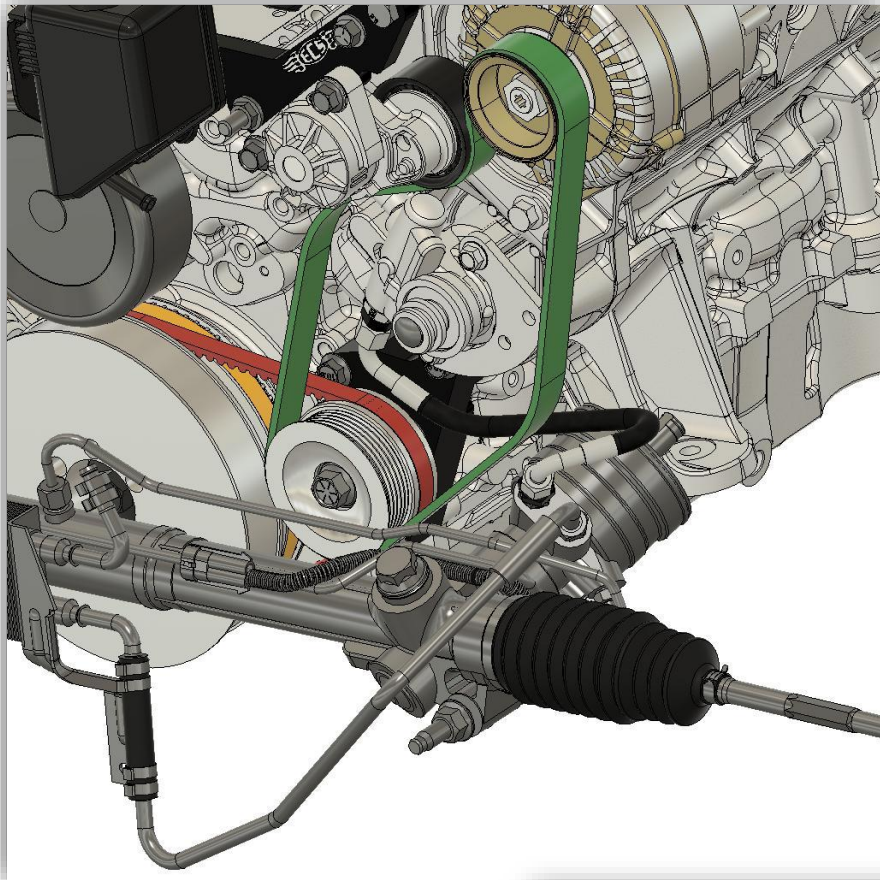


-Next you will be installing the power steering reservoir on to the alternator bracket with the supplied hardware. You will use the included plastic template to locate and drill a $\frac{1}{4}$ hole on the factory reservoir mount as shown in the pictures.



-Next install the supplied 5/8 hose barb on to the factory supply hose and secure with the factory clamp. Followed by the power steering reservoir and mount assembly on to the alternator bracket using the ¼ hardware and using the supplied 5/8 power steering hose trim to fit to connect the reservoir to the 5/8 barb and secure with the provided worm clamps.





-The final step is to install the large o-ring to -6AN fitting on to the steering rack keeping in mind the o-ring that must be installed along with the fitting into the rack. Tighten and install the other end of the power steering hose routed as shown in the pictures below. Top off the reservoir and check for leaks. Any questions please give us a call 609-752-0321 or send us an email to sales@eastcoastsupercharging.com

