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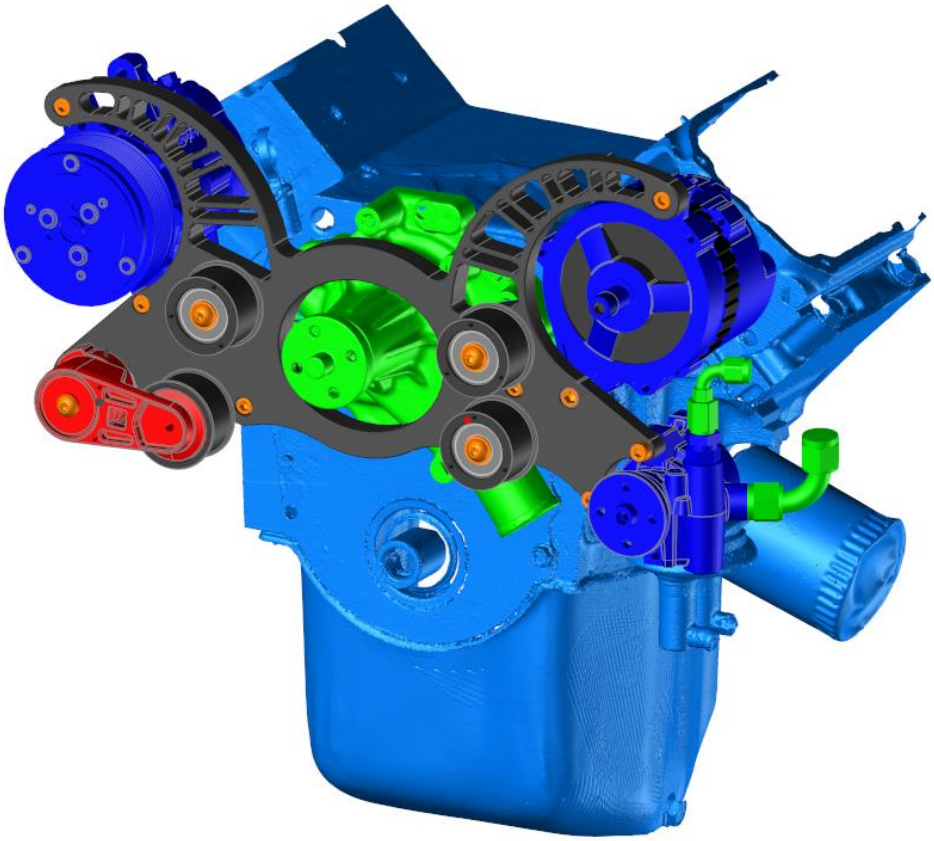
Item	QTY	Application
SS 3/8-16 X 2.75 SHCS	1	Bottom ALT Bolt
SS 3/8-16 X 3.5 BHCS	1	Tensioner Bolt
SS 3/8-16 X .468 Lock Nut	5	Tensioner, Idler, and ALT
SS M8-1.25 X 25mm SHCS	3	AC and Top ALT
SS M8-1.25 X 40mm SHCS	2	Power Steering
SS 5/16-18 X 4.0" SHCS	4	Bracket Bolts
C-/B-7517722-62	1	Spacer between water pump & bracket (CLEAR OR BLACK)
C-/B-7517722-85	1	Spacer between water pump & bracket (CLEAR OR BLACK)
C-/B-7517722-190	1	Spacer between water pump & bracket (CLEAR OR BLACK)
C-/B-7517722-195	1	Spacer between water pump & bracket (CLEAR OR BLACK)
SS 3/8-16 X 2.75 BHCS	3	Idler Bolt
SS 3/8 SAE WASHER	3	Idler washer
SS 5/16-18 X 0.50 SHCS	2	Adjustment Puck Bolts
B-ADJ-PUCK	1	Adjustment Puck (ONLY COMES IN BLACK)
Total	29	**SHCS** = Socket Head **BHCS** = Button Head **HHS** = Hex Head



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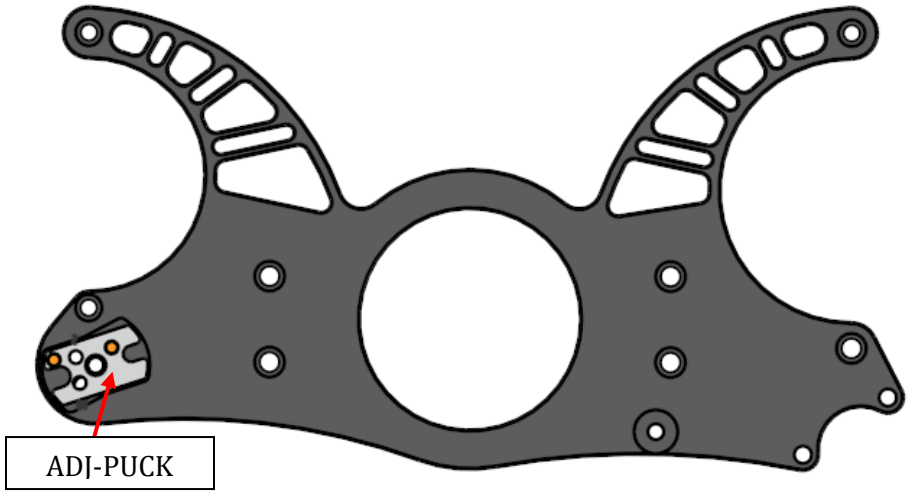
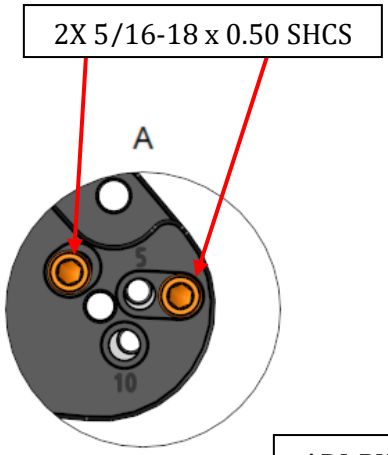
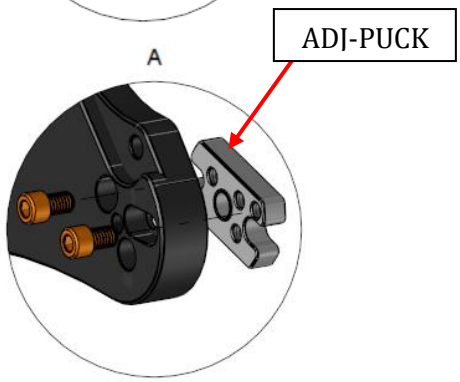
1. Assemble the Adjustment Puck to the main bracket. Note the orientation of the puck in the below picture. There is a small register on the puck that engages with the bracket. Fully tighten both bolts. To adjust the tensioner position post installation, please see the **Post-Install Tensioner Adjustment** at the end of the manual.







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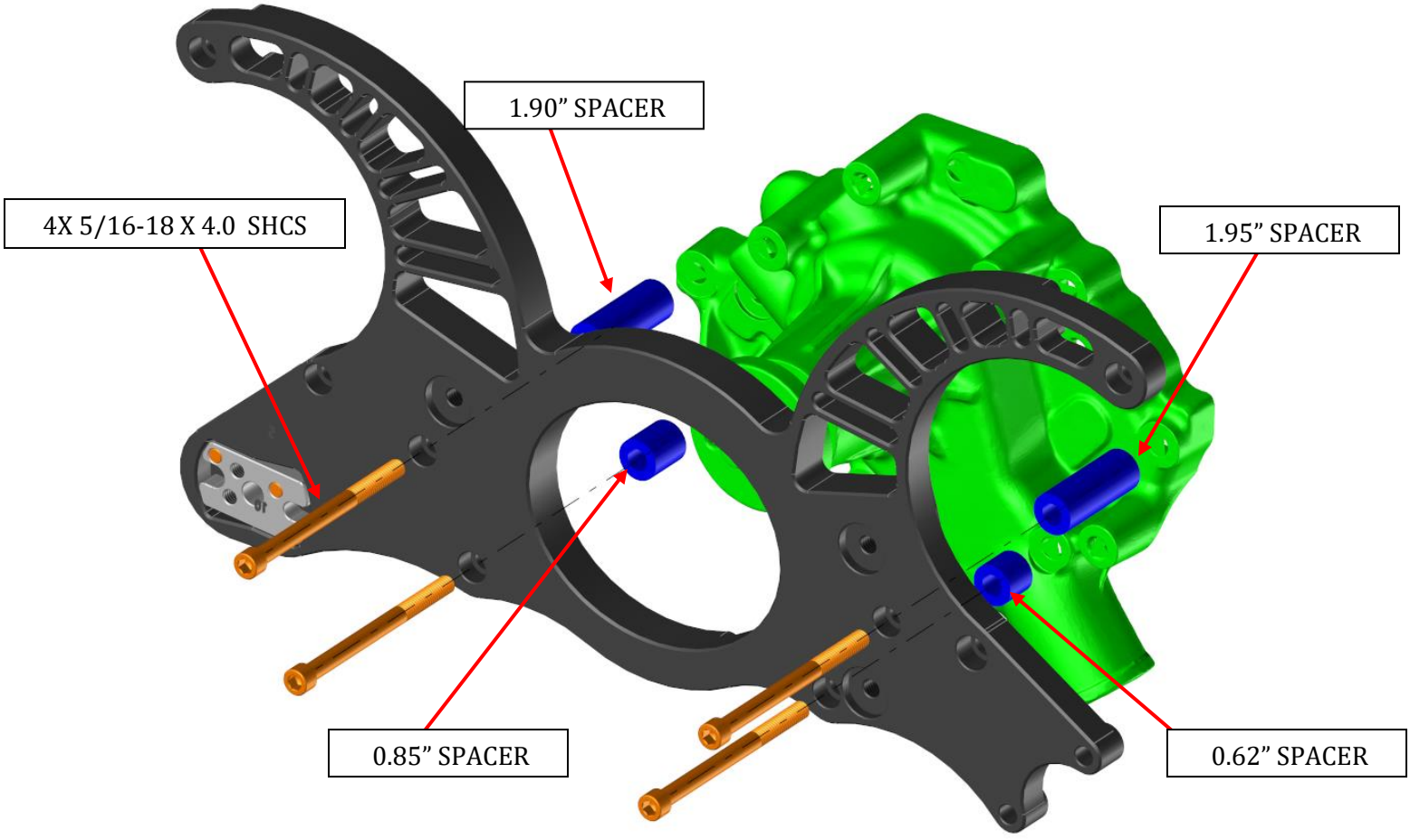
2. Install the water pump and main bracket. Apply RTV Blue or similar gasket sealer to both sides of the water pump gaskets. It is recommended to do this all at once. It may be beneficial to have someone help with this step. Everything from here on out will attach directly to the main bracket. Tighten the bolts in an alternating pattern



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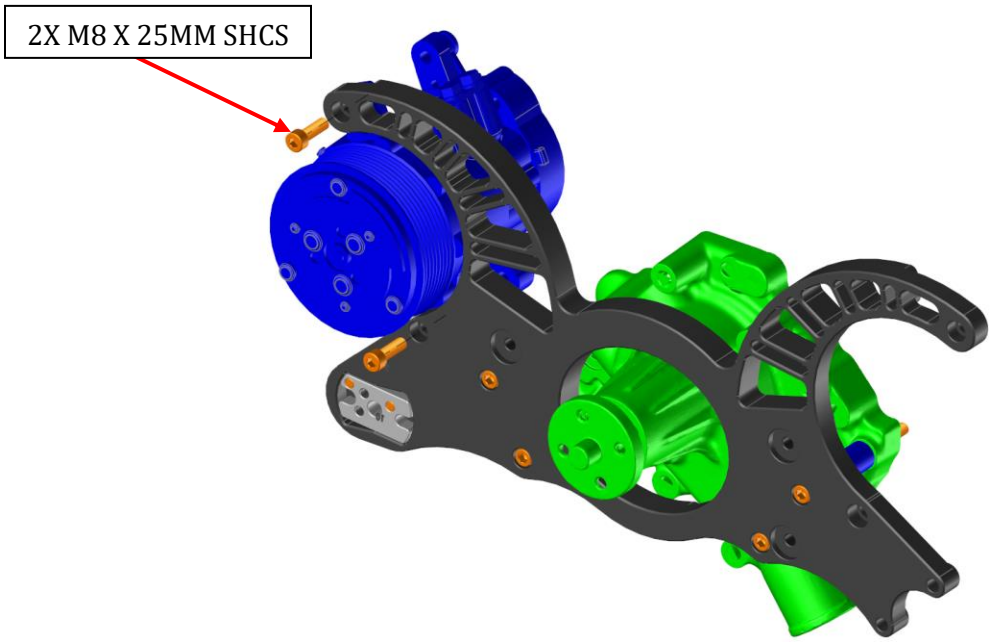
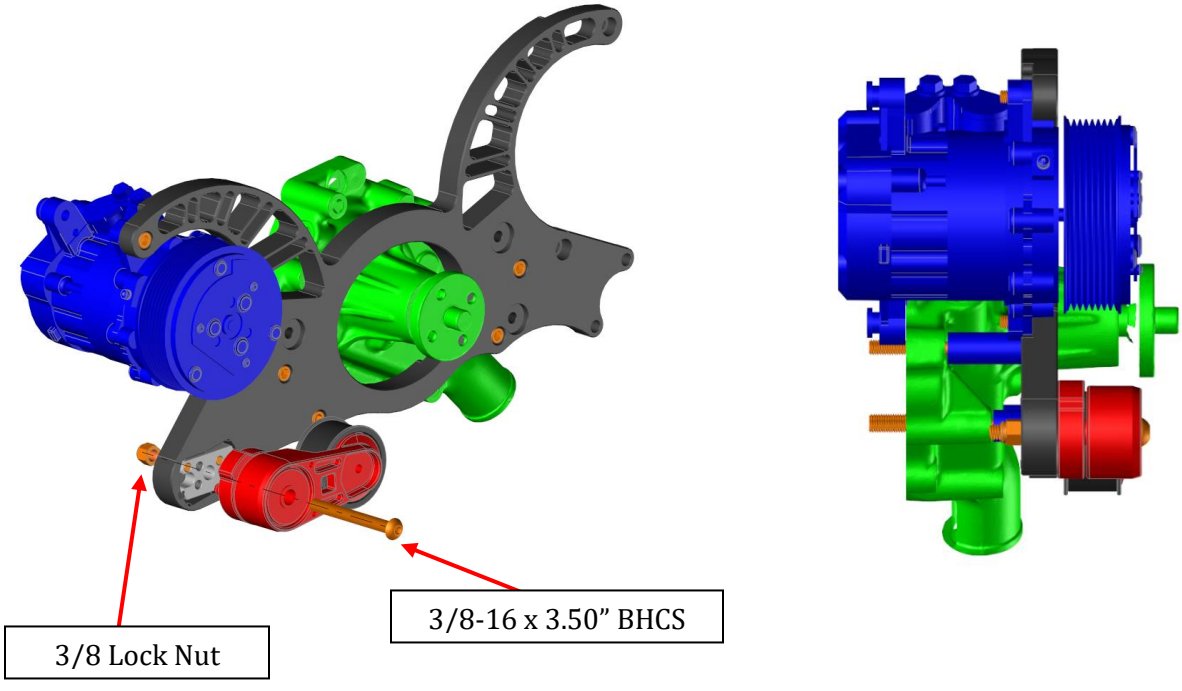
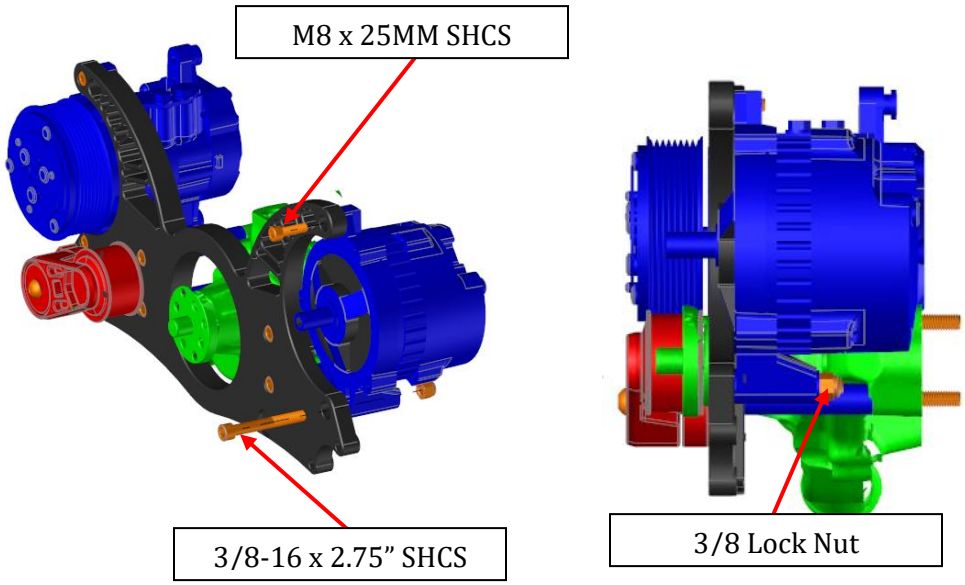
3. Install the AC compressor to the Main Bracket. **The compressor does come pre-charged with 4.75 oz pag100 oil.** If you are not running AC, install the AC delete pulley in its' place.



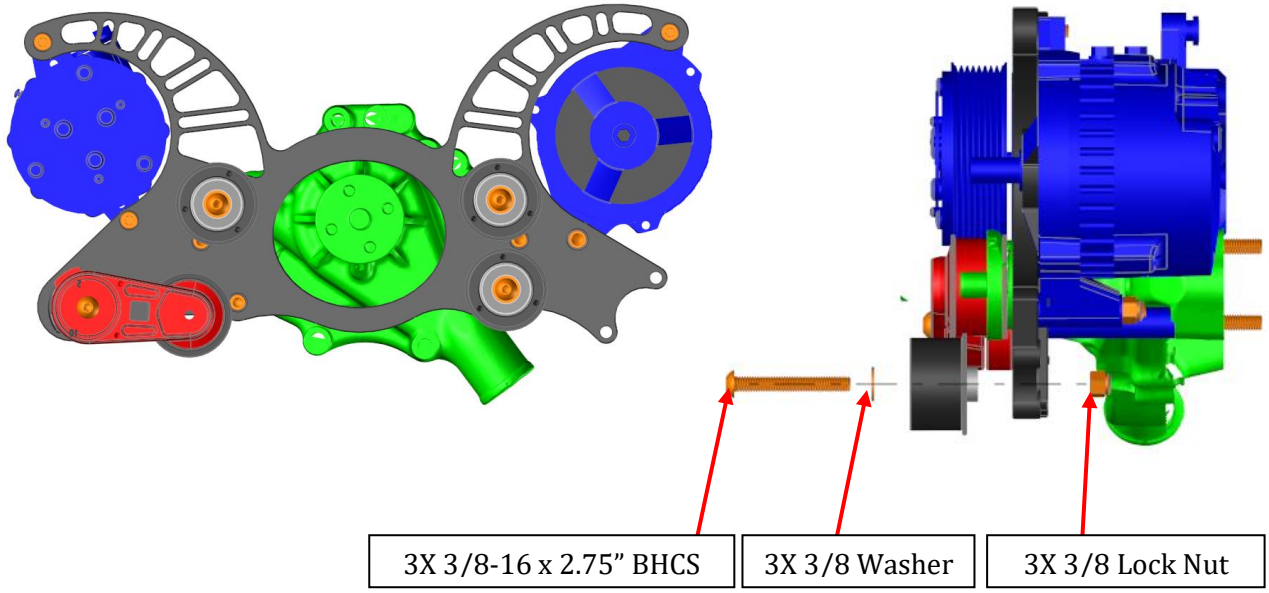
4. Install the Tensioner to the Main Bracket



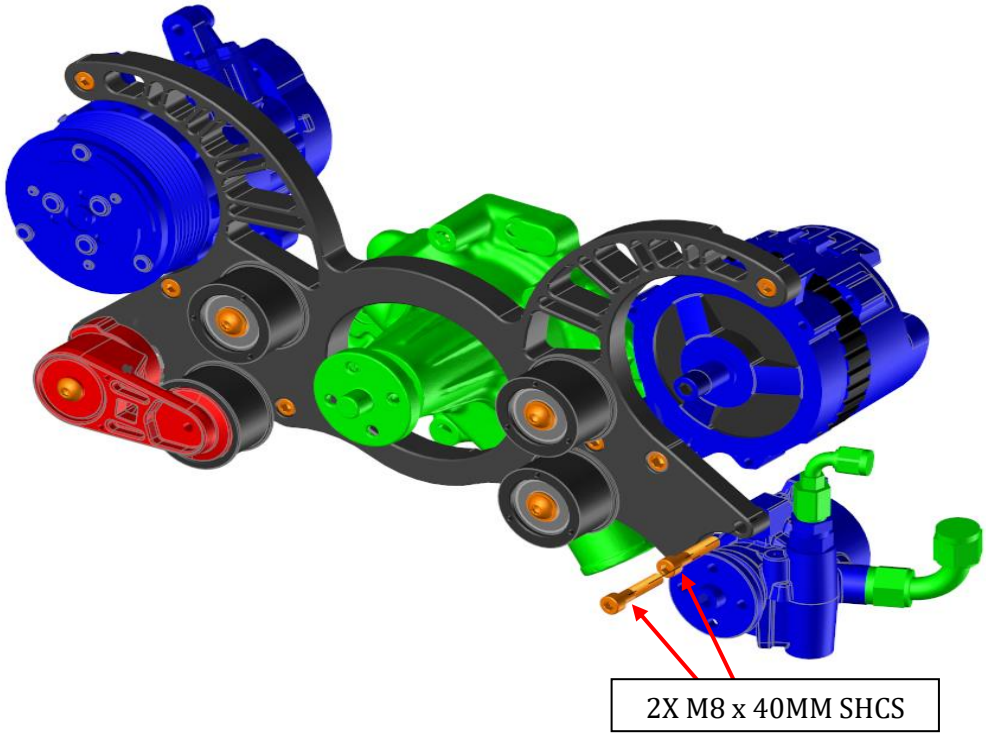
5. Install the Alternator. If the side post of alternator is not in a desired location, you can carefully unbolt the back housing of the alternator and rotate to a preferred location. DO NOT REMOVE the back housing completely or you will have to re-install the bushings. CVF Alternators are 1-Wire and will not use the pin plug. You will need to run a dedicated ground. Alternator pig tails are not included. If you want to avoid a 1-Wire install, look for part #30700 at CVFracing.com to purchase a high amperage wiring kit. Further instructions and tips can be found at support.cvfracing.com



6. Install the Idlers



7. Install the Power Steering Pump.



8. Install the remaining pulleys. Install hardware is in the pulley boxes.
9. Install the belt. Below are the 2 different belt routings. Installing the belt may be difficult, we recommend completing this step with 2 people. In most cases when installing the belt, the belt can be too tight to fit over the pulley. If you remove the nut that holds the pulley onto the alternator, place belt around alternator pulley as shown in the pictures below. Release tension on the tensioner and slide alternator pulley onto the shaft of the alternator using the pulley as additional leverage. See pictures below

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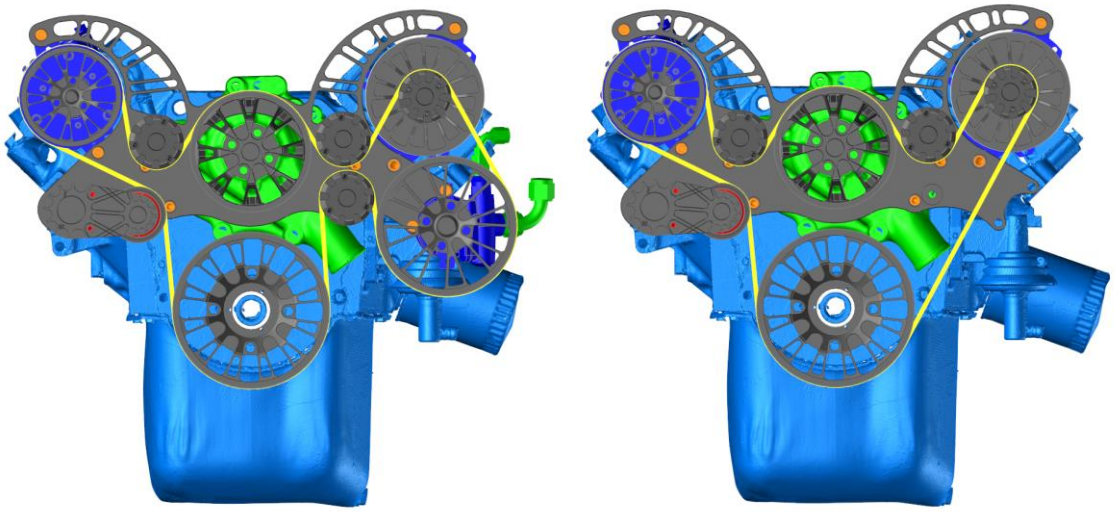

Belt Install with alternator pulley

10. Install the remaining Caps with the hardware provided in the pulley boxes.

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Post-Install Tensioner Adjustment

Tensioner Position:

Below is the correct tensioner position once the belt is installed. This is perfect with the two lines lining up with each other. Slightly off center is also acceptable (shown in Red). The tensioner can be adjusted +5 degrees or +10 degrees with the ADJ-PUCK. If your tensioner position line is too far towards the bottom line, this adjustment will bring the tensioner position line closer to the center. If your tensioner position line is too close the upper line, please review the belt routing and ensure that the belt is properly seated in each pulley. If the belt is routed and seated properly and the position line is still not close to centered, please call customer service for help.

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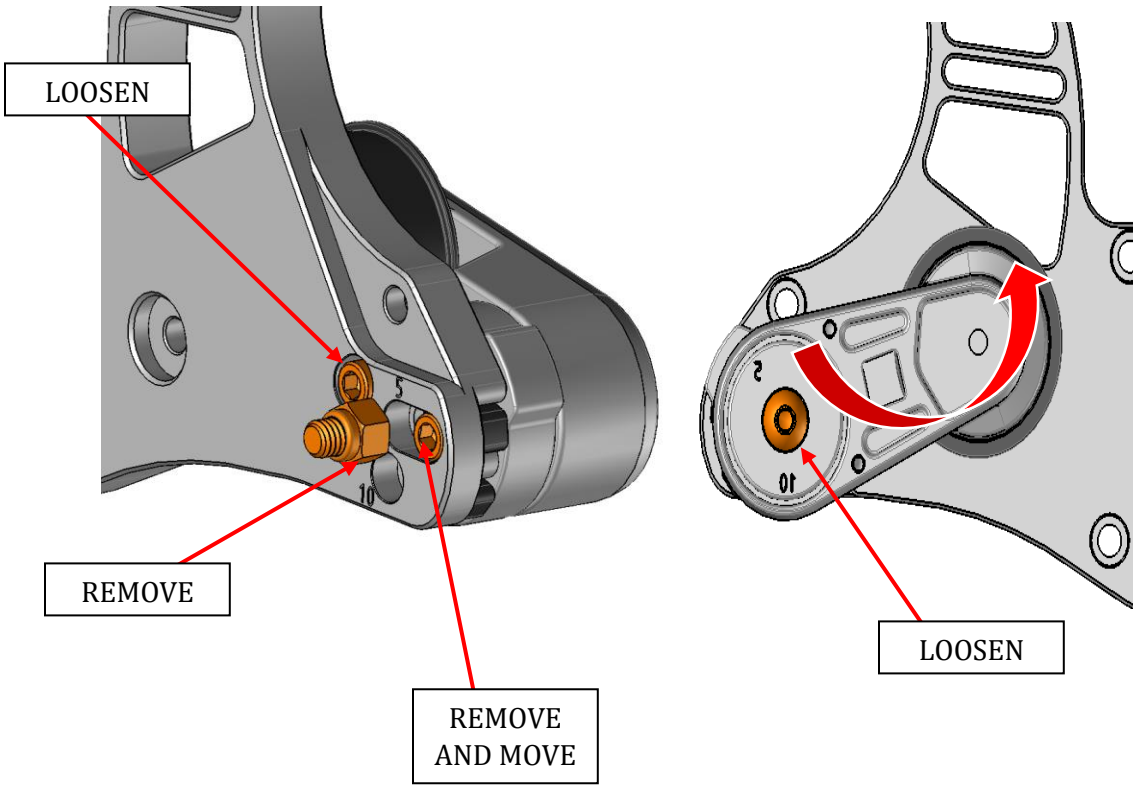
Tensioner Adjustment:

1. Remove tensioner cover and remove belt from tensioner.
2. Move to the rear of the bracket. Remove the 3/8" lock nut with a 9/16" socket or wrench
3. Go back to the front of the bracket, loosen the 3/8" BHCS on the front of the tensioner, 1-2 turns
4. Move to the rear of the bracket. Loosen the 5/16 SHCS bolt, on the left, with a ¼" hex key, see photo below.
5. Remove the 5/16" SHCS, on the right, see photo below
6. Put the 5/16" SHCS in the 5 degree or 10 degree hole, rotate the tensioner up until the screw engages the threaded hole. Tighten screw
7. Retighten the loose 5/16" SHCS, on the left
8. Retighten the 3/8" BHCS on the front of the tensioner
9. Retighten the 3/8" Locknut on the back of the bracket
10. Reassemble belt, verify belt is seated and routed properly.
11. Reassemble tensioner cover.



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Torques Specs**:**

All torque specs can be found on the last page of this instruction packet provided by Fastenal. We have highlighted all CVF bolts inside the table. Feel free to keep the page and use it for reference in your garage.

Thank you for your purchase from CVF Racing! If you have any questions about your install, check out our support center for install guides, videos, and other helpful tips. If you need further help, our tech staff can be reached M-F from 8-5 PM CST via phone, email, or chat.

TORQUE-TENSION RELATIONSHIP FOR A307A, GRADE 5, 8 & 9 BOLTS

Nominal Dia. (in.)	Threads per inch	307A ASTM A307 Grade A				SAE J429 Grade 5					SAE J429 Grade 8					FNL Grade 9				
		Clamp Load (Lbs.)	Tightening Torque			Clamp Load (Lbs.)	Tightening Torque				Clamp Load (Lbs.)	Tightening Torque				Clamp Load (Lbs.)	Tightening Torque			
			K = 0.15	K = 0.17	K = 0.20		Ecoguard™	K = 0.15	K = 0.17	K = 0.20		Eco-guard™	K = 0.15	K = 0.17	K = 0.20		Eco-guard™	K = 0.15	K = 0.17	K = 0.20
Coarse Thread Series																				
1/4	20	859	32 in-lbs	37 in-lbs	43 in-lbs	2029	61 in-lbs	76 in-lbs	86 in-lbs	10 1in-lbs	2864	86 in-lbs	107 in-lbs	122 in-lbs	143 in-lbs	3357	101 in-lbs	126 in-lbs	143 in-lbs	168 in-lbs
5/16	18	1416	66	75	88	3342	125	157	178	209	4719	177	221	251	295	5531	207	259	294	346
3/8	16	2092	10 ft-lbs	1 1 ft-lbs	13 ft-lbs	4940	19 ft-lbs	23 ft-lbs	26 ft-lbs	31 ft-lbs	6974	26 ft-lbs	33 ft-lbs	37 ft-lbs	44 ft-lbs	8174	31 ft-lbs	38 ft-lbs	43 ft-lbs	51 ft-lbs
7/16	14	2870	16	18	21	6777	30	37	42	49	9568	42	52	59	70	11214	49	61	70	82
1/2	13	3831	24	27	32	9046	45	57	64	75	12771	64	80	90	106	14969	75	94	106	125
9/16	12	4912	35	39	46	11599	65	82	92	109	16375	92	115	130	154	19193	108	135	153	180
5/8	11	6102	48	54	64	14408	90	113	128	150	20340	127	159	180	212	23840	149	186	211	248
3/4	10	9030	85	96	113	21322	160	200	227	267	30101	226	282	320	376	35281	265	331	375	441
7/8	9	12467	136	155	182	29436	258	322	365	429	41556	364	455	515	606	48707	426	533	604	710
1	8	16355	204	232	273	38616	386	483	547	644	54517	545	681	772	909	63899	639	799	905	1065
1-1/4	7	26166	409	463	545	53786	672	840	952	1121	87220	1090	1363	1545	1817	102229	1278	1597	1810	2130
1-3/8	6	31182	536	607	715	64096	881	1102	1249	1469	103939	1429	1768	2025	2382	121826	1675	2094	2373	2792
1-1/2	6	37942	711	806	949	77991	1170	1462	1657	1950	126473	1897	2371	2688	3162	148237	2224	2779	3150	3706
Fine Thread Series																				
1/4	28					2319	70 in-lbs	87 in-lbs	99 in-lbs	116 in-lbs	3274	98 in-lbs	123 in-lbs	139 in-lbs	164 in-lbs	3837	115 in-lbs	144 in-lbs	163 in-lbs	192 in-lbs
5/16	24					3702	139	174	197	231	5226	196	245	278	327	6125	230	287	325	383
3/8	24					5599	21 ft-lbs	26 ft-lbs	30 ft-lbs	35 ft-lbs	7905	30 ft-lbs	37 ft-lbs	42 ft-lbs	49 ft-lbs	9265	35 ft-lbs	43 ft-lbs	49 ft-lbs	58 ft-lbs
7/16	20					7568	33	41	47	55	10684	47	58	66	78	12523	55	68	78	91
1/2	20					10197	51	64	72	85	14396	72	90	102	120	16873	84	105	120	141
9/16	18					12940	73	91	103	121	18268	103	128	146	171	21412	120	151	171	201
5/8	18					16317	102	127	144	170	23036	144	180	204	240	27000	169	211	239	281
3/4	16					23776	178	223	253	297	33566	252	315	357	420	39343	295	369	418	492
7/8	14					32479	284	355	403	474	45853	401	502	568	669	53743	470	588	666	784
1	14					43343	433	542	614	722	61190	612	765	867	1020	71720	717	896	1016	1195
1-1/4	12					59548	744	930	1055	1241	96565	1207	1509	1710	2012	113182	1415	1768	2004	2358
1-3/8	12					72967	1003	1254	1421	1672	118324	1627	2034	2305	2712	138686	1907	2384	2701	3278
1-1/2	12					87747	1316	1645	1865	2194	142292	2134	2668	3024	3557	166778	2502	3127	3544	4169

METRIC FASTENERS

Nominal Dia. (mm)	Pitch	4.6 Class 4.6				8.8 Class 8.8				10.9 Class 10.9				12.9 Class 12.9			
		Clamp Load (lbs)	Tightening Torque			Clamp Load (lbs)	Tightening Torque			Clamp Load (lbs)	Tightening Torque			Clamp Load (lbs)	Tightening Torque		
			K = 0.15	K = 0.17	K = 0.20		K = 0.15	K = 0.17	K = 0.20		K = 0.15	K = 0.17	K = 0.20		K = 0.15	K = 0.17	K = 0.20
4	0.7	333	7.9 in-lbs	8.9 in-lbs	10.5 in-lbs	858	20.3 in-lbs	23 in-lbs	27 in-lbs	1228	29 in-lbs	32.9 in-lbs	38.7 in-lbs	1436	33.9 in-lbs	38.4 in-lbs	45.2 in-lbs
5	0.8	538	15.9	18.0	21.2	1387	40.9	46.4	54.6	1985	58.6	66.4	78.1	2319	68.5	77.6	91.3
6	1	763	27.0	30.7	36.1	1968	69.7	79.0	92.9	2816	99.8	113.1	133.0	3291	116.6	132.1	155.4
7	1	1095	45.3	51.3	60.3	2822	116.6	132.2	155.5	4039	167	189	223	4720	195	221	260
8	1.25	1389	65.6	74.4	87.5	3580	169.1	191.6	225.4	5123	242	274	323	5987	283	320	377
10	1.5	2200	10.8 ft-bs	12.3 ft-lbs	14.4 ft-lbs	5671	27.9 ft-lbs	31.6 ft-lbs	37.2 ft-lbs	8115	39.9 ft-lbs	45.2 ft-lbs	53.2 ft-lbs	9484	46.7 ft-lbs	52.9 ft-lbs	62.2 ft-lbs
12	1.75	3197	18.9	21.4	25.2	8240	48.7	55.1	64.9	11792	69.6	78.9	92.8	13781	81.4	92.2	108.5
14	2	4379	30.2	34.2	40.2	11289	77.8	88.1	103.7	16154	111.3	126.1	148.4	18879	130.0	147.4	173.4
16	2	5943	47	53	62	15320	121	137	161	21924	173	196	230	25622	202	229	269
18	2.5	7301	65	73	86	18822	167	189	222	26934	239	270	318	31477	279	316	372
20	2.5	9286	91	104	122	23938	236	267	314	34256	337	382	449	40034	394	446	525
22	2.5	11509	125	141	166	29669	321	364	428	42457	460	521	613	49619	537	609	716
24	3	13372	158	179	211	34471	407	461	543	49329	582	660	777	57649	681	771	908
27	3	17428	232	262	309	44924	597	676	796	64288	854	968	1139	75132	998	1131	1331
30	3.5	21266	314	356	419	54819	809	917	1079	78448	1158	1312	1544	91680	1353	1534	1804
33	3.5	26310	427	484	570	67821	1101	1248	1468	97055	1576	1786	2101	113425	1842	2087	2455
36	4	30982	549	622	732	79866	1415	1603	1886	114291	2024	2294	2699	133569	2366	2681	3154

* Tightening Torque (in-lbs through M8; M10 & over ft-lbs)