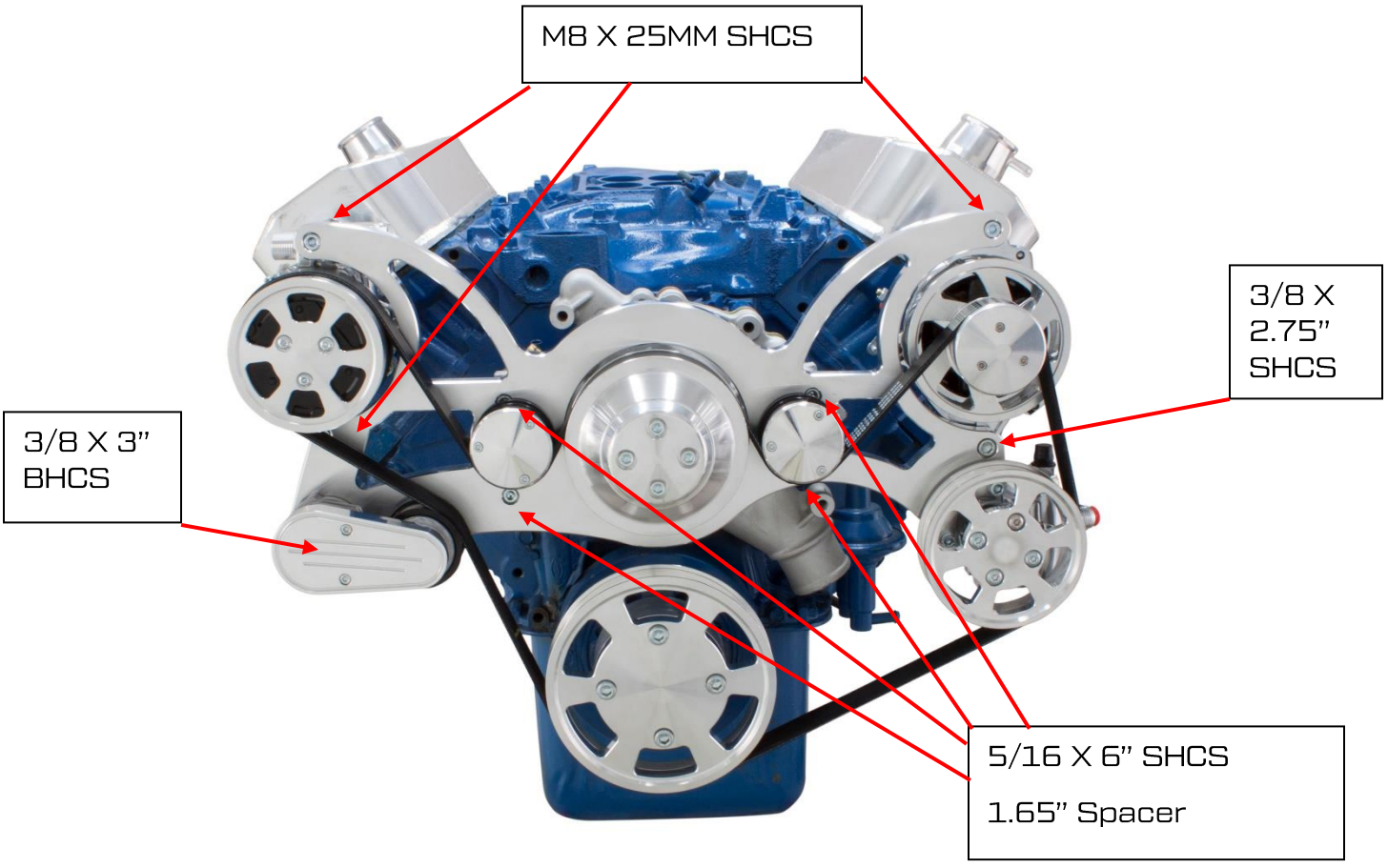
460-BRACKET-KIT-WR INSTALL INSTRUCTIONS

PART	QTY	APPLICATION
3/8-16 X 2.75" SHCS	1	Bottom alternator bolt
3/8-16 X 3.0" BHCS	1	Bolt holding TENSIONER-KIT
3/8-16 X 2.5” HHS	2	Bolt holding SERP-IDLER-WR
3/8” SAE Washer	2	Washer for idler
3/8-16 X .468 Lock Nut	4	Bottom alternator bolt, tensioner, & idler
M8-1.25 X 25mm SHCS	3	Top ALT Bolt and Top AC Bolt
M8-1.25 X 40mm SHCS	2	Power steering to main bracket
5/16 X 6” SHCS	4	Bracket to water pump
7507722-165 Spacer	4	Spacers between WP and Plate
Total	23	



460-BRACKET-KIT-WR INSTALL INSTRUCTIONS

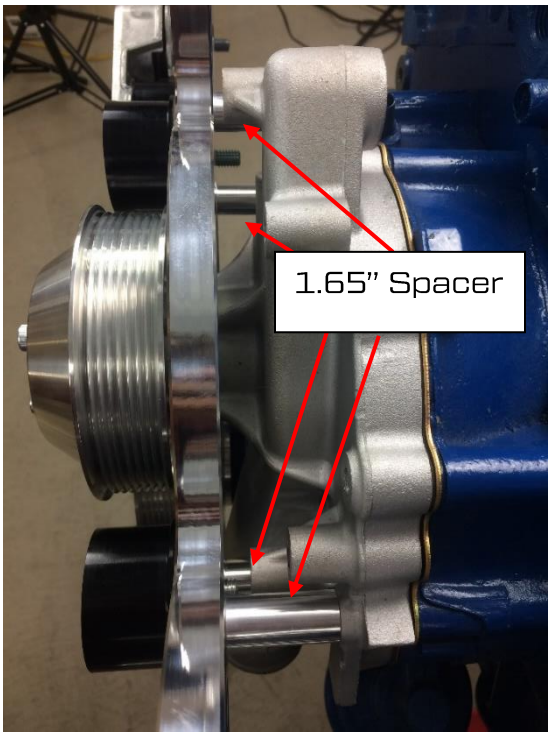
Step 1: Remove old brackets, pulleys, water pump, and accessories.

Tech Tip: We recommend thread chasing the water pump mounting holes. Loose debris in the holes can cause slight spacing issues and/or bolts not fully securing.

Step 2: Apply RTV Blue or similar gasket sealer to both sides of the water pump gaskets.

Step 3: Install the water pump and main bracket (460-WR). 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. Use (4) 5/16 X 6" SHCS and the spacers. When looking at the front of the engine, all 4 bolts will use a 1.65" spacer. Do not fully tighten any bolts until all have been started. Secure in an alternating pattern.

Tech Tip: Step 3 can be done with one person, use a spare bolt to hold one end of the water pump on while you get the assembly started.



Step 4: Install the alternator to the right side of the bracket. The CVF logo should face towards the fender. Use a M8 X 25MM SHCS on top and a 3/8 X 2.75 on the bottom. Secure the bottom bolt with a locknut.

Tech Tip: If 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

460-BRACKET-KIT-WR INSTALL INSTRUCTIONS

Step 5: Install the Peanut Compressor to the left side of the bracket. The CVF logo will face towards the fender and the fittings will face up. Use (2) M8 X 25 MM. **The compressor does come pre-charged with 4.75 oz pag100 oil.**

Variation: If you are running without AC, you can install the AC Idler at this time (AC-DELETE). It will install similarly to the compressor. Instructions can be found in that box.

Step 6: Install the spring-loaded tensioner (TENSIONER-KIT). Leave the decorative cap off until the belt is installed. Use the 3/8 X 3" BHCS and secure on the back with a locknut.

Step 7: Install the crank pulley and hub spacer with their provided hardware. They will install as one assembly with the bolts going through the crank pulley and hub adapter. Leave the decorative cap off the crank pulley until you are done installing. This cap allows for correcting timing without removing the entire crankshaft pulley.

Step 8: Install the power steering pump. Instructions for each pump are as follows:

GM T2 Pumps: bolt directly onto the bracket with (2) M8 X 40MM SHCS

KRC Hydroboost Pumps: require the use of HYDRO-BRACKET-KIT-WR, see instructions inside that box.

Saginaw Pumps: Require the use of FORD-WRAPTOR-SAGINAW-KIT. Instructions can be found inside that box.

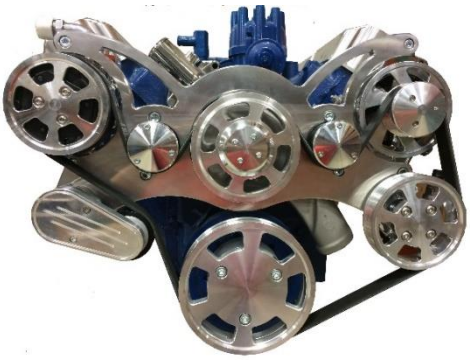
Step 9: Install the power steering pump. Most applications will use S-LS11PS; however, Saginaw applications use S-SBC4PS).

Step 10: Install the water pump pulley using the provided hardware.

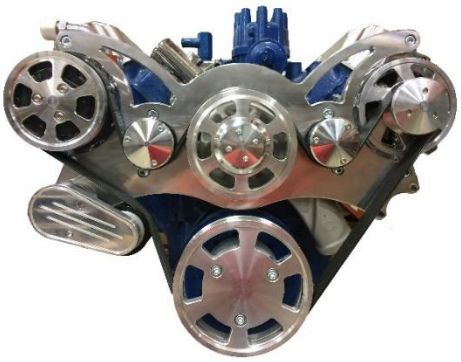
Step 11: Install the SERP-IDLER-WR (S) in the bottom right hole of the bracket near the power steering pump. The hole near the three open holes on the main bracket. The boss will go into the hole. Do not put the caps on until the belt has been routed. Secure on the back with a locknut.

Step 12: Use a ½" ratchet to apply tensioner to the spring-loaded tensioner and install the belt as shown on the next page.

460-BRACKET-KIT-WR INSTALL INSTRUCTIONS



With Power Steering



Without Power Steering

Step 13: Route the belt based on your configuration above. Recommended belts for proper tension are as follows:

AC & PS: K080751; No PS: K080716

Tech Tip: To ensure lasting performance, we recommend the tensioner be in a similar position to the picture below. 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 alternator pulley cap and 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. A properly installed belt will keep the outside line on the tensioner within the 3 positional lines as seen below.

Step 14: Once the belt is installed, all decorative caps can be installed.

460-BRACKET-KIT-WR INSTALL INSTRUCTIONS

Step 15: If you are going to be running a mechanical fan, you will need to install FAN-SPACER-WR onto your water pump shaft.

Step 16: Install and plumb the remote reservoir. Directions for this can be found in the box REMOTE-PS-RES. The fittings on the bottom of the reservoir are 3/8" NPT.

Tech Tip: After initial start-up, you will need to bleed air from your power steering system. To do this, you want to put the front of the car on jack stands and steer into the left stops and then into the right stops repeatedly. Check fluid level frequently and add as needed.

Further instructions regarding power steering set up can be found at CVFracing.com.

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.

Note: Metric Socket Head Bolts are not listed. Use the recommended torque specs for 5/16 when tightening M8 bolts and 3/8 torque specs when tightening M10.

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.

Looking to upgrade further? Contact us to upgrade your system! Most can be added with little to no modification of your installed kit.

- Add AC
- Upgrade to a Hydro boost Brake System
- Upgrade to 300 Amp Alternator from Mechman
- Hood Hinges

460-BRACKET-KIT-WR INSTALL INSTRUCTIONS

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)

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