

Source: Leece-Neville Heavy Duty Systems Division - Arcade, NY USA  
 Date: June 27, 2017  
 Bulletin No: TSB-1007  
 Models: All Alternators  
 Subject: Understanding Output Curves

**UNDERSTANDING OUTPUT CURVES**

To determine the output of an alternator on a customers' vehicle, you need to know the pulley ratio.

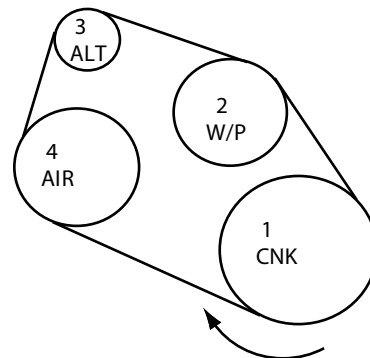
$$\frac{\text{Crankshaft pulley dia.}}{\text{Alternator pulley dia.}}$$

equals the ratio

$$\text{Pulley Ratio} = \frac{\text{Drive Pulley Diameter}}{\text{Alternator Pulley Diameter}}$$

$$\text{Pulley Ratio} = \frac{9 \text{ inches}}{3.6 \text{ inches}}$$

$$\text{Pulley Ratio} = 2.5$$



**PULLEY RATIO  
ALTERNATOR RPM'S**

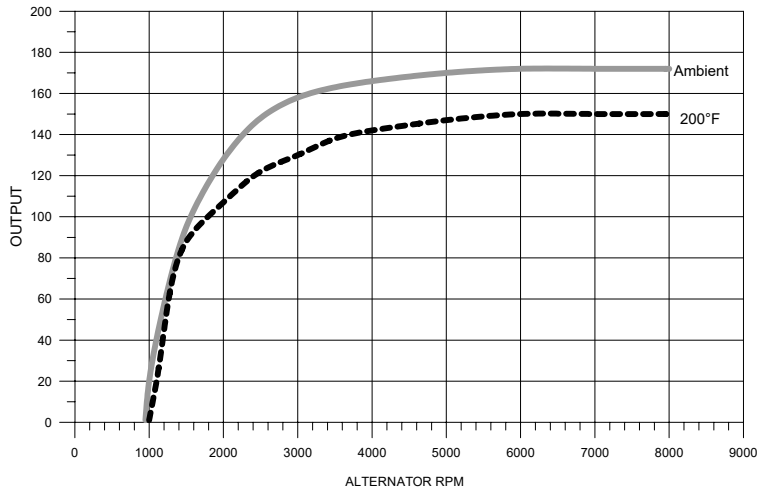
Eng. RPM	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0
600	1500	1560	1620	1680	1740	1800	1860	1920	1980	2040	2100	2160	2220	2280	2340	2400
650	1625	1690	1755	1820	1885	1950	2015	2080	2145	2210	2275	2340	2405	2470	2535	2600
700	1750	1820	1890	1960	2030	2100	2170	2240	2310	2380	2450	2520	2590	2660	2730	2800
750	1875	1950	2025	2100	2175	2250	2325	2400	2475	2550	2625	2700	2775	2850	2925	3000
800	2000	2080	2160	2240	2320	2400	2480	2560	2640	2720	2800	2880	2960	3040	3120	3200
900	2250	2340	2430	2520	2610	2700	2790	2880	2970	3060	3150	3240	3330	3420	3510	3600
1000	2500	2600	2700	2800	2900	3000	3100	3200	3300	3400	3500	3600	3700	3800	3900	4000
1100	2750	2860	2970	3080	3190	3300	3410	3520	3630	3740	3850	3960	4070	4180	4290	4400
1200	3000	3120	3240	3360	3480	3600	3720	3840	3960	4080	4200	4320	4440	4560	4680	4800
1300	3250	3380	3510	3640	3770	3900	4030	4160	4290	4420	4550	4680	4810	4940	5070	5200
1400	3500	3640	3780	3920	4060	4200	4340	4480	4620	4760	4900	5040	5180	5320	5460	5600
1500	3750	3900	4050	4200	4350	4500	4650	4800	4950	5100	5250	5400	5550	5700	5850	6000
1600	4000	4160	4320	4480	4640	4800	4960	5120	5280	5440	5600	5760	5920	6080	6240	6400
1700	4250	4420	4590	4760	4930	5100	5270	5440	5610	5780	5950	6120	6290	6460	6630	6800
1800	4500	4680	4860	5040	5220	5400	5580	5760	5940	6120	6300	6480	6660	6840	7020	7200
1900	4750	4940	5130	5320	5510	5700	5890	6080	6270	6460	6650	6840	7030	7220	7410	7600
2000	5000	5200	5400	5600	5800	6000	6200	6400	6600	6800	7000	7200	7400	7600	7800	8000
2100	5250	5460	5670	5880	6090	6300	6510	6720	6930	7140	7350	7560	7770	7980	8190	8400
2200	5500	5720	5940	6160	6380	6600	6820	7040	7260	7480	7700	7920	8140	8360	8580	8800

For additional information about pulleys, see Form 125-28

Important: The information contained in this bulletin is intended for use by trained, professional technicians who have the proper tools, equipment, and training to perform the required maintenance described above. This information is NOT intended for 'do-it-yourselfers'; and you should not assume that this information applies to your equipment. If you have any questions regarding this information please visit our website at [www.prestolite.com](http://www.prestolite.com), or contact our technical service department at:

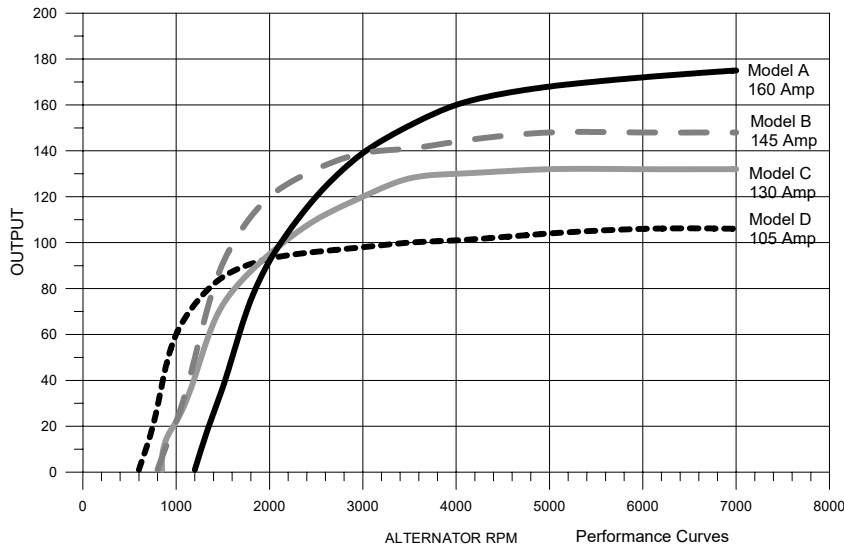
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The vertical column on left shows Amps.  
The horizontal column across bottom shows alternator speed.



Maximum Continuous Speed - 8000 rpm  
Stabilized Output @ 24 C

Please solve this problem:  
Customer has a 3:1 ratio. Customer spends all his time at idle (Fire Truck).  
Customer is interested in the four alternators shown below.  
Which alternator will give him the most output at idle? (idle is 700 RPM)



Maximum Continuous Speed - 8000 rpm  
Stabilized Output @ 24 C

Performance Curves  
Established at  
Room Temperature

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