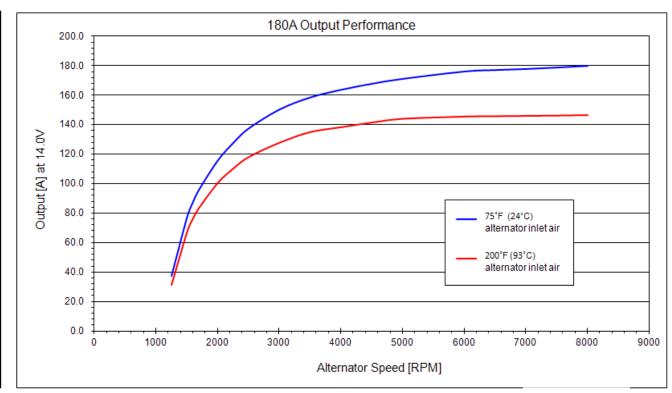


## 180A ALTERNATOR OUTPUT CURVES - SALES CODE BAD

Temperature	75°F (24°C) 200°F (93°C)		
ALT speed [RPM]	Output [A]	Output [A]	
1000	0	0	
1250	37.6	31.3	
1500	77.2	67.0	
1600	87.9	76.5	
1700	96.4	83.8	
2000	115.9	100.5	
2250	127.8	110.2	
2500	137.6	118.0	
3000	150.5	127.8	
3500	158.7	135.0	
4000	163.9	138.3	
4500	168.0	141.5	
5000	171.3	144.0	
6000	176.3	145.5	
6500	177.3	145.8	
7000	178.0	146.0	
7500	179.0	146.2	
8000	180.1	146.5	

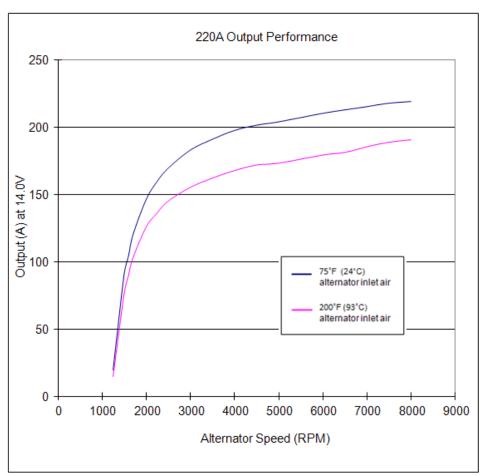


Pulley Ratio V8 Gas - 2.78:1



## 220A ALTERNATOR OUTPUT CURVES - SALES CODE BAJ

Temperature	75°F (24°C)	200°F (93°C)	
ALT speed [RPM]	Output [A]	Output [A]	
1250	19.5	14.5	
1500	90.6	76.3	
1600	104.4	89.9	
1700	120.0	102.8	
2000	146.5	125.9	
2250	159.9	136.4	
2500	169.7	145.2	
3000	183.2	155.4	
3500	191.2	162.3	
4000	197.8	167.9	
4500	201.7	172.0	
5000	204.2	173.4	
6000	210.5	179.4	
6500	213.1	181.4	
7000	215.5	185.6	
7500	218.1	189.0	
8000	219.3	190.8	



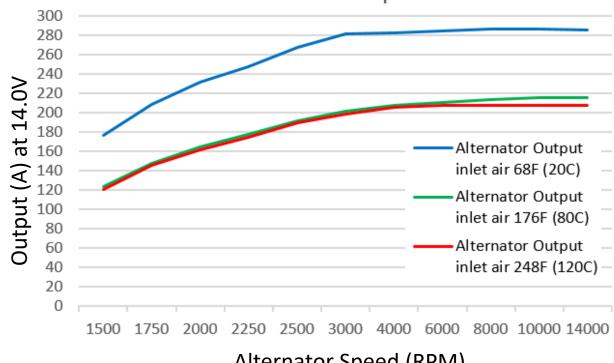
12/10/2012

Pulley Ratio V8 Gas - 2.78:1



Aternator Speed	Alternator Output [Amps]		
[RPM]	at 20C [68F]	at 80 [176F]	at 120C [248F]
1500	135.1	88.1	85
1750	177	124	121.2
2000	208.7	147.7	145.5
2250	231.7	165.1	162.2
2500	247.5	177.5	175.2
3000	267.2	191.8	189.7
4000	281.3	202.1	198.7
6000	282.9	208.2	205.3
8000	284.9	210.5	207.6
10000	286.2	213.3	208.1
14000	286.9	216	208
18000	286	215.9	208

## 250A Alternator Output Curves



Alternator Speed (RPM)

**Pulley Ratio** V6 Diesel - 3.16:1



## eTorque Engines

The eTorque engines use a DC to DC convertor to charge the 12V system. The DC to DC convertor output is independent of the vehicle engine RPM as long as the RPM is sufficient to maintain the higher voltage 48 volt system. Here are output numbers for the 12 volt convertor output

Voltage set point 13.3V-14.7V depending on temperature.

- 3000W No system deration constraints
- 1850W Extreme hot continuous idle generation