Turbocharger Calculations

Engine Capacity		1293
Ambient Pressure		1000
Ambient Temperature		25
Intercooler Efficiency		80
Compressor Efficiency		70
Engine Volumetric Efficiency		80
		Max
Boost Pressure	kPAg	1650
Rpm	rpm	7000
Pressure Loss thro Air Filter	kPAg	50
Compressor Inlet Pressure	kPAa	950
Compressor Inlet Temp Abs	Deg K	298
Compressor Outlet Pressure Abs	kPAa	2650
Compressor Outlet Temp	Deg C	168.4
Compressor Pressure Ratio		2.789
Density Ratio		1.883
Theo Engine Air Flow	CFM	160
Actual Engine Air Flow nat asp	CFM	128
	Lbs/Min	8.8
Compressor Air Flow Turboed	CFM	241
	Lbs/Min	16.6
Intercooler		
Intercooler Inlet Temp	Deg C	168
Intercooler Outlet Temp		54
Intercooler Pressure Loss	kPA	75
Intercooler Density Ratio		1.313
Comp Air Flow Turboed & Int Cooled	CFM	316
	Lbs/Min	21.81
Approx.Power	hp	237
	kW	174
Approx.Torque	FtLbs	178
Total Density Ratio		2.47
Air flow ratio		1.98