

Banks Density Analysis - Supercharger, Intercooler, Throttle

Location/Device	Required Inputs	Sensor	Group	Category	Red Para	Definition	Category	
Ambient	Ambient	AirMouse	Ambient Air Pressure	AAP	PSIA	AMBIENT CONDITIONS	PRESSURE	
			Ambient Air Temp	AAT	°F	AMBIENT CONDITIONS	TEMPERATURE	
			Relative Humidity - Ambient	RH	%	AMBIENT CONDITIONS	AIR DENSITY	
		Calculated	Density - Ambient Air	AAD	LB/1KFT3	AMBIENT CONDITIONS	AIR DENSITY	Ambient Air Pressure , Ambient Air Temp
			Density % - Ambient Air	AAD	%	AMBIENT CONDITIONS	AIR DENSITY	Ambient Air Pressure , Ambient Air Temp
			Ambient Air Pressure (inHg)	AAP	INHG	AMBIENT CONDITIONS	PRESSURE	Ambient Air Pressure
			Gas Correction Factor SAE	J1349		AMBIENT CONDITIONS	AIR DENSITY	Ambient Air Pressure , Ambient Air Temp
			Grains Water per Pound Air	GR-H2O		AMBIENT CONDITIONS	AIR DENSITY	Ambient Air Pressure , Ambient Air Temp , Relative Humidity - Ambient
			Density Altitude	DN-ALT	FT	AMBIENT CONDITIONS	AIR DENSITY	Ambient Air Pressure , Ambient Air Temp
			Pressure Altitude	PR-ALT	FT	AMBIENT CONDITIONS	AIR DENSITY	Ambient Air Pressure
			Saturation Pressure	SAT-P	INHG	AMBIENT CONDITIONS	AIR DENSITY	Ambient Air Temp
			Vapor Pressure	VAP-P	INHG	AMBIENT CONDITIONS	AIR DENSITY	Ambient Air Pressure , Ambient Air Temp , Relative Humidity - Ambient
			Dew Point	DEW-P	°F	AMBIENT CONDITIONS	AIR DENSITY	Ambient Air Temp , Relative Humidity - Ambient
			Ambient Gas Power Potential	HPG-1K	HP/1k	ENGINE PERFORMANCE	ENGINE PERFORMANCE AIR	Ambient Air Pressure , Ambient Air Temp , Relative Humidity - Ambient
			Ambient Diesel Power Potential	HPD-1K	HP/1k	ENGINE PERFORMANCE	ENGINE PERFORMANCE AIR	Ambient Air Pressure , Ambient Air Temp , Relative Humidity - Ambient
			Ambient Methanol Power Potential	HPM-1K	HP/1k	ENGINE PERFORMANCE	ENGINE PERFORMANCE AIR	Ambient Air Pressure , Ambient Air Temp , Relative Humidity - Ambient
			Ambient E85 Power Potential	HPE-1K	HP/1k	ENGINE PERFORMANCE	ENGINE PERFORMANCE AIR	Ambient Air Pressure , Ambient Air Temp , Relative Humidity - Ambient
			Ambient Custom Fuel Power Potential	HPC-1K	HP/1k	ENGINE PERFORMANCE	ENGINE PERFORMANCE AIR	Ambient Air Pressure , Ambient Air Temp , Relative Humidity - Ambient
	Ambient & MAF	CFM Ambient	CFMAMB	CFM	ENGINE AIR PROCESS	ENGINE PERFORMANCE AIR	Mass Air Flow , Ambient Air Pressure , Ambient Air Temp , Relative Humidity - Ambient	
Air Intake Analysis	Ambient & Throttle Inlet	Calculated	Delta Pressure Intake Air System	IAS-DP	PSI	AIRBOX PERFORMANCE	PRESSURE	Ambient Air Pressure , Throttle Inlet Pressure
			Delta Temperature Intake Air System	IAS-DT	°F	AIRBOX PERFORMANCE	TEMPERATURE	Ambient Air Temp , Throttle Inlet Temperature
			Delta Density - Intake Air System	IAS-DD	LB/1KFT3	AIRBOX PERFORMANCE	AIR DENSITY	Ambient Air Pressure , Ambient Air Temp , Throttle Inlet Pressure , Throttle Inlet Temperature
			Delta Density % - Intake Air System	IAS-DD	%	AIRBOX PERFORMANCE	AIR DENSITY	Ambient Air Pressure , Ambient Air Temp , Throttle Inlet Pressure , Throttle Inlet Temperature
			Pressure Ratio - Intake Air System	IAS-PR		AIRBOX PERFORMANCE	PRESSURE	Ambient Air Pressure , Throttle Inlet Pressure
			Density Ratio - Intake Air System	IAS-DR		AIRBOX PERFORMANCE	AIR DENSITY	Ambient Air Pressure , Ambient Air Temp , Throttle Inlet Pressure , Throttle Inlet Temperature
Throttle Inlet (Air Intake Outlet)	Throttle Inlet (Air Intake Outlet)	Temperature Sensor	Throttle Inlet Pressure	THR-IP	PSIA	THROTTLE INLET CONDITIONS	PRESSURE	
		Psia Pressure	Throttle Inlet Temperature	THR-IT	°F	THROTTLE INLET CONDITIONS	TEMPERATURE	
		Calculated	Density - Throttle Inlet	THR-ID	LB/1KFT3	THROTTLE INLET CONDITIONS	AIR DENSITY	Throttle Inlet Pressure , Throttle Inlet Temperature
			Density % - Throttle Inlet	THR-ID	%	THROTTLE INLET CONDITIONS	AIR DENSITY	Throttle Inlet Pressure , Throttle Inlet Temperature
Throttle Analysis	Throttle Inlet & Compressor Inlet	Calculated	Delta Pressure Throttle	THR-DP	PSI	THROTTLE PERFORMANCE	PRESSURE	Throttle Inlet Pressure , Compressor Inlet Pressure
			Delta Temperature Throttle	THR-DT	°F	THROTTLE PERFORMANCE	TEMPERATURE	Throttle Inlet Temperature , Compressor Inlet Pressure
			Delta Density - Throttle	THR-DD	LB/1KFT3	THROTTLE PERFORMANCE	AIR DENSITY	Throttle Inlet Pressure , Throttle Inlet Temperature , Compressor Inlet Pressure , Compressor Inlet Pressure
			Delta Density % - Throttle	THR-DD	%	THROTTLE PERFORMANCE	AIR DENSITY	Throttle Inlet Pressure , Throttle Inlet Temperature , Compressor Inlet Pressure , Compressor Inlet Pressure
			Pressure Ratio - Throttle	THR-PR		THROTTLE PERFORMANCE	PRESSURE	Throttle Inlet Pressure , Compressor Inlet Pressure
			Density Ratio - Throttle	THR-DR		THROTTLE PERFORMANCE	AIR DENSITY	Throttle Inlet Pressure , Throttle Inlet Temperature , Compressor Inlet Pressure , Compressor Inlet Pressure
Compressor Inlet (Throttle Outlet)	Compressor Inlet (Throttle Outlet)	Temperature Sensor	Compressor Inlet Pressure	CMP-IP	PSIA	COMP INLET CONDITIONS	PRESSURE	
		15 Psia Pressure	Compressor Inlet Temperature	CMP-IT	°F	COMP INLET CONDITIONS	TEMPERATURE	
		Calculated	Density - Compressor Inlet	CMP-ID	LB/1KFT3	COMP INLET CONDITIONS	AIR DENSITY	Compressor Inlet Pressure , Compressor Inlet Temperature
			Density % - Compressor Inlet	CMP-ID	%	COMP INLET CONDITIONS	AIR DENSITY	Compressor Inlet Pressure , Compressor Inlet Temperature
Compressor 1 Analysis	Turbo Speed	Turbo Speed Sensor	Turbo RPM	TURBO	KRPM	COMPRESSOR PERFORMANCE	SPEED AND VELOCITY	
	Compressor Inlet & Intetcooler Inlet	Calculated	Delta Pressure Compressor	CMP-DP	PSI	COMPRESSOR PERFORMANCE	PRESSURE	Compressor Inlet Pressure , Intercooler Inlet Pressure
			Delta Temperature Compressor	CMP-DT	°F	COMPRESSOR PERFORMANCE	TEMPERATURE	Compressor Inlet Temperature , Intercooler Inlet Temperature
			Delta Density - Compressor	CMP-DD	LB/1KFT3	COMPRESSOR PERFORMANCE	AIR DENSITY	Compressor Inlet Pressure , Compressor Inlet Temperature , Intercooler Inlet Pressure , Intercooler Inlet Temperature
			Delta Density % - Compressor	CMP-DD	%	COMPRESSOR PERFORMANCE	AIR DENSITY	Compressor Inlet Pressure , Compressor Inlet Temperature , Intercooler Inlet Pressure , Intercooler Inlet Temperature
			Pressure Ratio - Compressor	CMP-PR		COMPRESSOR PERFORMANCE	PRESSURE	Compressor Inlet Pressure , Intercooler Inlet Pressure
			Density Ratio - Compressor	CMP-DR		COMPRESSOR PERFORMANCE	AIR DENSITY	Compressor Inlet Pressure , Compressor Inlet Temperature , Intercooler Inlet Pressure , Intercooler Inlet Temperature
Intercooler Inlet 1 (Compressor Outlet 1)	Intercooler Inlet 1 (Compressor Outlet 1)	Temperature Sensor	Intercooler Inlet Pressure	IC-IP	PSIA	INTERCOOLER INLET CONDITIONS	PRESSURE	
		Psia Pressure	Intercooler Inlet Temperature	IC-IT	°F	INTERCOOLER INLET CONDITIONS	TEMPERATURE	
		Calculated	Density - Intercooler Inlet	IC-ID	LB/1KFT3	INTERCOOLER INLET CONDITIONS	AIR DENSITY	Intercooler Inlet Pressure , Intercooler Inlet Temperature
			Density % - Intercooler Inlet	IC-ID	%	INTERCOOLER INLET CONDITIONS	AIR DENSITY	Intercooler Inlet Pressure , Intercooler Inlet Temperature
Intercooler Analysis	Intercooler Inlet & Manifold	Calculated	Delta Pressure Intercooler	IC-DP	PSI	INTERCOOLER PERFORMANCE	PRESSURE	Intercooler Inlet Pressure , Manifold Absolute Pressure
			Delta Temperature Intercooler	IC-DT	°F	INTERCOOLER PERFORMANCE	TEMPERATURE	Intercooler Inlet Temperature , Manifold Air Temp
			Delta Density - Intercooler	IC-DD	LB/1KFT3	INTERCOOLER PERFORMANCE	AIR DENSITY	Intercooler Inlet Pressure , Intercooler Inlet Temperature , Manifold Absolute Pressure , Manifold Air Temp
			Delta Density % - Intercooler	IC-DD	%	INTERCOOLER PERFORMANCE	AIR DENSITY	Intercooler Inlet Pressure , Intercooler Inlet Temperature , Manifold Absolute Pressure , Manifold Air Temp
			Pressure Ratio - Intercooler	IC-PR		INTERCOOLER PERFORMANCE	PRESSURE	Intercooler Inlet Pressure , Manifold Absolute Pressure
			Density Ratio - Intercooler	IC-DR		INTERCOOLER PERFORMANCE	AIR DENSITY	Intercooler Inlet Pressure , Intercooler Inlet Temperature , Manifold Absolute Pressure , Manifold Air Temp
			Intercooler Inlet & Manifold & Ambient Temp	Calculated	Intercooler Effectiveness Air to Air	IC-EFT	%	INTERCOOLER PERFORMANCE
	Intercooler Efficiency Air to Air	IC-EFF			%	INTERCOOLER PERFORMANCE	ENGINE PERFORMANCE AIR	Intercooler Inlet Pressure , Intercooler Inlet Temperature , Manifold Absolute Pressure , Manifold Air Temp , Ambient Air Temp
Manifold Conditions	Manifold	Temperature Sensor	Manifold Absolute Pressure	MAP	PSIA	MANIFOLD CONDITIONS	PRESSURE	
		Psia Pressure	Manifold Air Temp	MAT	°F	MANIFOLD CONDITIONS	TEMPERATURE	
		Calculated	Density - Manifold Air	MAD	LB/1KFT3	MANIFOLD CONDITIONS	AIR DENSITY	Manifold Absolute Pressure , Manifold Air Temp
			Density % - Manifold Air	MAD	%	MANIFOLD CONDITIONS	AIR DENSITY	Manifold Absolute Pressure , Manifold Air Temp
Air System Analysis	Ambient & Manifold	Calculated	Boost Pressure	BOOST	PSIG	ENGINE PERFORMANCE	PRESSURE	Ambient Air Pressure , Manifold Absolute Pressure
			Delta Temperature System	SYS-DT	°F	ENGINE PERFORMANCE	TEMPERATURE	Ambient Air Temp , Manifold Air Temp
			Density - Boost Air	BAD	LB/1KFT3	ENGINE PERFORMANCE	AIR DENSITY	Ambient Air Pressure , Ambient Air Temp , Manifold Absolute Pressure , Manifold Air Temp
			Density % - Boost Air	BAD	%	ENGINE PERFORMANCE	AIR DENSITY	Ambient Air Pressure , Ambient Air Temp , Manifold Absolute Pressure , Manifold Air Temp
			Pressure Ratio - System	P-RAT		ENGINE PERFORMANCE	PRESSURE	Ambient Air Pressure , Manifold Absolute Pressure
Exhaust/Turbine								
Exhaust	Exhaust	Temperature Sensor	Exhaust Gas Temp	EGT	°F	EXHAUST SYSTEMS	TEMPERATURE	
		Psia Pressure	Exhaust Back Pressure	EXH P1	PSIA	EXHAUST SYSTEMS	PRESSURE	