

			MK7 GTI			Mk7 GolfR		
			Normal Expected Behavior			Normal Expected Behavior		
			Idle	Light Throttle	Heavy Throttle	Idle	Light Throttle	Heavy Throttle
What is it?		What Can it Tell Me?						
Accelerator Pedal Position	Accelerator pedal opening angle percentage as determined by the accelerator position sensor.	The position of the accelerator pedal for reference against the TPS data. This data should closely match.						
AFR / AFR Setpoint	Actual AFR (AFR) as read by the wide-band o2 sensor vs the ECU's requested AFR (AFR setpoint) after compensations.	This can help to diagnose failing o2 sensors or errors in fuel targeting.				Both monitors should trend the same and be within .2- .6 points depending on conditions.		
Air Mass Intake Manifold Per Stroke	This is a measure of intake manifold volume/load achieved by the ECU it is used as an axis reference.	This can help to diagnose load requests, ignition table data etc.				Varies with map.		
Air Mass Intake Manifold Per Stroke Setpoint	This is the ECU requested of intake manifold volume/load to be achieved by the ECU.	This can help to diagnose load boost leaks or errors in load requests / turbo modeling.				Varies with map but deviance should remain around 50 points and they should trend together.		
Boost	This is a measure of intake manifold pressure.	This can help to diagnose failing turbos, and help make sure boost levels are appropriate.				Varies with map. See map notes.		
Charge Air Temperature	Modeled Temperature of the charge air entering the engine.	A modeled measurement of compressed air temperature entering the engine. This is a modeled value and not derived from an actual sensor. The car can alter timing, fueling, boost (WG) and load at different temperatures. This data is used as an X axis in Final Ignition Angle CAT .	Varies on condition, 150-600 degree F. (Ya, 600 deg charge air temp is insane) Average WOT pull on stage3 yields a 350-400 deg value around 6000 Rpm.			Varies on condition, 150-600 degree F. (Ya, 600 deg charge air temp is insane) Average WOT pull on stage3 yields a 350-400 deg value around 6000 Rpm.		
Coolant Temp	Temperature of the engine coolant.	A measurement of engine temperature. The car can alter timing, fueling, boost (WG) and load at different engine temperatures, it can also let you know if the car is overheating or not actually warming up indicating issues in the cooling system or a faulty sensor.	< 212-216 F			< 220-225 F		
Driver Requested Torque	This is the output after compensations from the Maximum Torque tables. This data is used as an X axis in the Mass Air setpoint tables. This data is can be manipulated b	This data can be use to verify torque requests and will show if the request is being manipulated or reduced due to other factors (Air temp, Coolant Temp, DSG torque request reduction)	Varies with map.			Varies with map.		
Engine/Vehicle Speed Ratio	Ratio of input vs. output speed of the engine/ transmission. (Engine RPM(MPH))	This monitor will show slippage of clutches on both manual and DSG vehicles. This value will change per gear as it is a ratio of engine speed vs vehicle speed.	Varies by gear. Each gears data should remain static and stable. +/-			Varies by gear. Each gears data should remain static and stable. +/-		
Intake Air Temp	Temperature of the air charge going into the intake	As atmospheric conditions change, engine efficiency and operation are affected. The ECU attempts to correct for temperature changes in various ways. Knowing the temperature reading the ECU was given provides context for other readings such as boost. This data can be used in exchange for <u>Charge Air temperature</u> by the switch located in the miscellaneous folder name <u>Switch for charge air temperature source</u> .	Varies on atmospheric and driving condition, ~40<-170+ degree F.			Varies on atmospheric and driving condition, ~40<-180+ degree F.		
Ignition Correction from Temperature	Calculated correction due to temperature compensations.	Current Ignition corrections derived from temperature compensations. This data will allow you to see the amount the ECU is reducing (or in some cases adding) ignition from the base value.	+3 deg to -12.75 deg			+1.88 deg to -11.25 deg		
Ignition Timing (Final)	Final ignition timing after compensations.	This monitor will show the final ignition timing value (cly 1) after all compensations, corrections and reductions from knock events. This can show any unexpected changes due to torque reduction requests Etc.	Varies with map.			Varies with map.		
Intake Manifold Pressure	Intake Manifold Pressure .	This can help to diagnose failing turbos, and help make sure boost levels are appropriate compared to the monitor Intake Manifold Pressure Set Point. The two should trend closely.	Varies with map.			Varies with map.		
Knock Retard Cyl. 1-4	Current Knock Events	This is a measure of the ECU's response to knock at the current time. This can be an indication of a few different things. The knock sensors will sometimes pick up noise caused by drivetrain movements under hard driving or if you're having issues with your clutch or engine and transmission mounts. Sometimes it will even pick up the air conditioning clutch engaging. Alternatively, the knock may be real, so your car may need better fuel, maintenance, it may have incorrect parts for the map being used, or you may have a loose bolt on your engine. It is not uncommon for the higher compression direct injected engines to be prone to larger and more frequent knock readings during normal operation.	0	0 to -3.0	0 to -3.0	0	0 to -3	0 to -3
Rail Pressure	Fuel rail pressure as measured.	Readings outside of the normal range indicate the fuel system could be above its flow capacity or starting to fail when compared to the requested pressure.	0	0 to -2.8	0 to -2.8	0	0 to -4	0 to -4
Gear	Current Transmission Gear	Helps to double-check per-gear tuning items and helps to provide a context of how the car is being driven during a datalog.						
RPM	Engine Revolutions Per Minute	This is a measure of how fast your engine is spinning. Inconsistencies at idle can indicate faulty sensors or vacuum/boost leaks. When looking at a datalog or graph under acceleration, seeing erratic values can be an indication of misfiring due to spark plug, coil pack, or grounding issues, a fuel supply issue, or even a clutch or transmission slipping.						