

1	0 (lsb)	0	AFR 5 Ready	Boolean
	1	2	AFR 5 Heater Open Error	Boolean
	2	4	AFR 5 VM Error	Boolean
	3	8	AFR 5 VM Error	Boolean
	4	16	AFR 5 IP Error	Boolean
	5	32	AFR 5 Heater Time-Out Error	Boolean
	6	64	AFR 5 Heater Short Error	Boolean
7 (msb)	128		AFR 5 Overtemp Error	Boolean
2	0 (lsb)	0	AFR 6 Ready	Boolean
	1	2	AFR 6 Heater Open Error	Boolean
	2	4	AFR 6 VM Error	Boolean
	3	8	AFR 6 VM Error	Boolean
	4	16	AFR 6 IP Error	Boolean
	5	32	AFR 6 Heater Time-Out Error	Boolean
	6	64	AFR 6 Heater Short Error	Boolean
7 (msb)	128		AFR 6 Overtemp Error	Boolean
3	0 (lsb)	0	UEGO Low Voltage Error	Boolean
	1	2	EBP sensor ready	Boolean
	2	4	EBP sensor Error Low Volt	Boolean
	3	8	EBP sensor detected	Boolean
	4	16	CAN Config Mode	Boolean
	5	32	CAN Config Mode	Boolean
	6	64	CAN Config Mode	Boolean
7 (msb)	128		CAN Config Mode	Boolean
4	0 (lsb)	0	---	---
	1	2	5	32
	2	4	6	64
	3	8	7 (msb)	128
	4	16	Sensor 6 Heating up	Boolean
	5	32	Sensor 5 Heating up	Boolean
	6	64	Sensor 4 Heating up	Boolean
7 (msb)	128		Sensor 4 Heating up	Boolean
6-7			Exhaust Pressure 2	16 bit unsigned

Message ID: 0x0000160
Sources: DynoShaft (P/N 30-485X)
65ms continuous (15hz)

Byte	Bit	Bitmask	Label	Data Type
0-1			Driveshaft RPM	16 bit unsigned
2-3			Driveshaft Torque	16 bit signed
4-5			Driveshaft Power	16 bit signed
6			Torque Fraction	8 bit unsigned
7			Power Fraction	8 bit unsigned

Scaling	Offset	Range	DBC Unit Type
1 rpm/bit	0	0 to 65,535 RPM	angular_speed:rpm
1.35882 Nm/bit	0	-44,426.1 to +44,426 Nm	torque:N.m
0.7456999 kW/bit	0	-24,434.3 to +24,434.3 kW	power:kw
.00529616 Nm/bit	0	0 to 1.350445 Nm	torque:N.m
.00291289 kW/bit	0	0 to 0.742787 kW	power:kw

Scaling	Offset	Range	DBC Unit Type
1 ft-lb/bit	0	-32,767 to +32,767 ft-lb	torque:ft.lb
1 HP/bit	0	-32,767 to +32,767 HP	power:hp
0.00390625 ft-lb/bit	0	0 to 0.99609375 ft-lb	torque:ft.lb
0.00390625 HP/bit	0	0 to 0.99609375 HP	power:hp

Message ID: 0x0000161
Sources: DynoShaft (P/N 30-485X)
65ms continuous (15hz)

Byte	Bit	Bitmask	Label	Data Type
0-1			Driveshaft RPM	16 bit unsigned
2-3			Driveshaft Torque (Low Range)	16 bit signed
4-5			Driveshaft Power (Low Range)	16 bit signed
6			---	---
7			---	---

Scaling	Offset	Range	DBC Unit Type
1 rpm/bit	0	0 to 65,535 RPM	angular_speed:rpm
0.00529616 Nm/bit	0	-173,539 to +173,539 Nm	torque:N.m
0.00291289 kW/bit	0	-95,446.6 to +95,446.6 kW	power:kw

Scaling	Offset	Range	DBC Unit Type
1 ft-lb/bit	0	-127,996 to +127,996 ft-lb	torque:ft.lb
0.00390625 HP/bit	0	-127,996 to +127,996 HP	power:hp

Message ID: 0x0000162
Sources: DynoShaft (P/N 30-485X)
65ms continuous (15hz)

Byte	Bit	Bitmask	Label	Data Type
0			System Voltage	8 bit unsigned
1			Tank Voltage	8 bit unsigned
2			Sensor Voltage	8 bit unsigned
3			Power Level	8 bit unsigned
4			Sensor Temp	8 bit unsigned
5			Drive Frequency	8 bit unsigned
6			System Temp	8 bit unsigned
7 (msb)	0 (lsb)	0	1	2
			Auto Zero Active	Boolean
			LED Aligned	Boolean
			Got Good Calibration	Boolean
			Got Good Zero Offset	Boolean
			Sensor Comms Active	Boolean
			Heartbeat	Boolean
7 (msb)	128		Sensor Firmware Error	Boolean

Scaling	Offset	Range	DBC Unit Type
0.1 V/bit	0	0 to 25.5 Volts	voltage:V
0.1 V/bit	0	0 to 25.5 Volts	voltage:V
0.1 V/bit	0	0 to 25.5 Volts	voltage:V
1%/bit	0	0 to 100 %	fraction:%
0.555556 Deg C/bit	0	-17,777.8 to +17,777.8 C	temperature:C
50 Hz/bit	18,000	18,000 to 30,750 Hz	frequency:Hz
0.555556 Deg C/bit	10	10 to 151.667 C	temperature:C

Scaling	Offset	Range	DBC Unit Type
1 Deg F/bit	0	0 to 255 F	temperature:F
1 Deg F/bit	50	50 to 305 F	temperature:F

Message IDs: 0x0000180 to 0x000018F (up to 16)
Sources: AEM X-Series UEGO (30-03XX)
10ms continuous (100hz)

Byte	Bit	Bitmask	Label	Data Type
0-1			Lambda	16 bit unsigned
2-3			Oxygen	16 bit signed
4			System Volts	8 bit unsigned
5			Heater Volts	8 bit unsigned
6 (lsb)	0	2	3	4
			Bosch LSU4.2 Sensor Detected	Boolean
			Bosch LSU4.9 Sensor Detected	Boolean
			NTK UTA Sensor Detected	Boolean
			Heater PID Locked	Boolean
			Using Free-Air Cal	Boolean
			Free-Air Cal Valid	Boolean
7 (msb)	128		Lambda Data Valid	Boolean
7 (lsb)	0	1	2	3
			Sensor State	5 bit unsigned
			---	Boolean
			Sensor Fault	Boolean
7 (msb)	128		Free Air Error	Boolean

Scaling	Offset	Range	DBC Unit Type
.0001 Lambda/bit	0	0 to 6.5535 Lambda	af:LA
0.001%/bit	0	-32.768% to 32.767%	fraction:%
0.1 V/bit	0	0 to 25.5 Volts	voltage:V
0.1 V/bit	0	0 to 25.5 Volts	voltage:V
0 = false, 1 = true	0	0/1	unitless:
0 = false, 1 = true	0	0/1	unitless:
0 = false, 1 = true	0	0/1	unitless:
0 = false, 1 = true	0	0/1	unitless:
0 = false, 1 = true	0	0/1	unitless:
0 = false, 1 = true	0	0/1	unitless:
0 = false, 1 = true	0	0/1	unitless:
0 = false, 1 = true	0	0/1	unitless:
0 = false, 1 = true	0	0/1	unitless:

Scaling	Offset	Range	DBC Unit Type
.001465 AFR/bit	0	0 to 96.0085 AFR	af:AFR Gasoline

Message ID: 0x000A000
Sources: AEM GPS Gauge (P/N 30-0313)
50ms continuous (20hz)

Byte	Bit	Bitmask	Label	Data Type
0-3			GPS Latitude	32 bit float
4-7			GPS Longitude	32 bit float

Scaling	Offset	Range	DBC Unit Type
Degrees reference WGS-84 datum North is positive	0	+90.00 (north) to -90.00 (south) Degrees	angle:deg
Degrees reference WGS-84 datum East is positive	0	+180.00 (east) to -180.00 (west) Degrees	angle:deg

Scaling	Offset	Range	DBC Unit Type
0.01 mph/bit	0	0 to 655.35 MPH	speed:mph
1 ft/bit	0	-32,768 to 32,767 Feet	distance:ft

Message ID: 0x000A001
Sources: AEM GPS Gauge (P/N 30-0313)
50ms continuous (20hz)

Byte	Bit	Bitmask	Label	Data Type
0-1			GPS Speed	16 bit unsigned
2-3			GPS Altitude	16 bit signed
4-5			GPS True Course	16 bit unsigned
6			GPS Satellites in Use	8 bit unsigned
7			GPS Valid	8 bit unsigned

Scaling	Offset	Range	DBC Unit Type
0.01609344 kph/bit	0	0 to 1054.684 kph	speed:km/h
0.3048 meter/bit	0	-9,987.7 to 9,987.4 meters	distance:m
0.01 deg/bit	0	0 to 655.35 degrees	angle:deg
1	0	0 to 255	unitless:
0 = N/G, 1 = OK	0	0 to 255	unitless:

Scaling	Offset	Range	DBC Unit Type
0.01 mph/bit	0	0 to 655.35 MPH	speed:mph
1 ft/bit	0	-32,768 to 32,767 Feet	distance:ft

Message ID: 0x000A030
Sources: AEM Pressure Gauge 100psig (30-0301)

Scaling	Offset	Range	DBC Unit Type
0.0689476 kPa/bit	0	0 to 4,518.48 kPa	pressure:gauge:kPa(g)
.01 psig/bit	0	0 to 655.35 psig	pressure:gauge:psig(g)

4	16	---	Boolean
5	32	---	Boolean
6	64	---	Boolean
7 (msb)	128	---	Boolean

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Message ID: 0x0000027

Sources: AEM WB Ethanol/Boost Gauge (30-4910)
10ms continuous (100hz)

Byte	Bit	Bitmask	Label	Data Type
0-1			Lambda Upper Limit	16 bit unsigned
2-3			Lambda Lower Limit	16 bit unsigned
4-5			Alarm Delay Limit	16 bit unsigned
6-7			Alarm Delay Counter	16 bit unsigned

Contained in CAN DBC Files*		TBD	
		SI Units (C / kPa / kph / Lambda)	
Scaling	Offset	Range	DBC Unit Type
.0001 Lambda/bit	0	0 to 6.5535 Lambda	afr:LA
.0001 Lambda/bit	0	0 to 6.5535 Lambda	afr:LA
1 mS/bit	0	0 to 65,535 mS	time:ms
1 mS/bit	0	0 to 65,535 mS	time:ms

Contained in CAN DBC Files*		TBD	
		US Units (F / PSI / MPH / AFR)	
Scaling	Offset	Range	DBC Unit Type
.001465 AFR/bit	0	0 to 96.0088 AFR	afr:AFR Gasoline
.001465 AFR/bit	0	0 to 96.0088 AFR	afr:AFR Gasoline
<==	<==	<==	<==
<==	<==	<==	<==

Message ID: 0x0000028

Sources: AEM WB Ethanol/Boost Gauge (30-4910)
10ms (100hz) only in alarm mode

Byte	Bit	Bitmask	Label	Data Type
0-1			Alarm Lambda	16 bit unsigned
2-3			Alarm Pressure	16 bit unsigned
4-5			Alarm Reset Limit	16 bit unsigned
6-7			Alarm Reset Counter	16 bit unsigned

Contained in CAN DBC Files*		TBD	
		SI Units (C / kPa / kph / Lambda)	
Scaling	Offset	Range	DBC Unit Type
.0001 Lambda/bit	0	0 to 6.5535 Lambda	afr:LA
0.00689476 kPa/bit	-2.09636	-2.09636 to 449.752 kPa	pressure:kPa
1 mS/bit	0	0 to 65,535 mS	time:ms
1 mS/bit	0	0 to 65,535 mS	time:ms

Contained in CAN DBC Files*		TBD	
		US Units (F / PSI / MPH / AFR)	
Scaling	Offset	Range	DBC Unit Type
.001465 AFR/bit	0	0 to 96.0088 AFR	afr:AFR Gasoline
.001 PSI/bit	-15	-15 to 50.535 PSI	pressure_gauge:psi(g)
<==	<==	<==	<==
<==	<==	<==	<==

* ECU, VDM, Air/Fuel Sensor/Devices, DBC files can be found at <http://aemelectronics.com/?q=forum/dbc-files-can-configuration-downloads-requests-share>