

PID	PID Name	Data type	Length (Bytes)	Unit	Explain
0x0026	Fuel Level 2	Float	4	%	
0x0054	Wheel-Based Vehicle Speed	U8	1	km/h	E.g.: 89 means 89 km/h
0x005b	Accelerator Pedal Position	Float	4	%	E.g.: 30 means accelerator pedal position is 30%
0x0060	Fuel Level 1	Float	4	%	
0x006a	Engine Air Inlet Pressure	U16	2	kPa	
0x00a8	Battery Potential / Power Input 1	Float	4	V	The accuracy can be up to 0.05V
0x00b1	Transmission Oil Temperature	Float	4	°C	Accurate to 3 digits after the decimal point
0x00b6	Engine Trip Fuel	Float	4	L	
0x00b7	Engine Fuel Rate	Float	4	L/H	
0x00be	Engine Speed	U16	2	rpm	E.g.: 2400 means 2400R/min
0x00f5	Total Vehicle Distance	Float	4	km	The accuracy can be up to 0.125KM
0x00f8	Total Power Takeoff Hours	Float	4	h	The accuracy can be up to 0.05h
0x00fa	Engine Total Fuel Used	Float	4	L	
0x0253	Cruise Control Enable Switch	U8	1		switch(x1&0x03) 0x00 means stop to cruise control 0x01 enable cruise control 0x02 error 0x03 invalid
0x0255	Brake Switch	U8	1		switch(x1&0x30) 0x00:y=Brake pedal released; 0x10:y=Brake pedal depressed; 0x20:y=Error; 0x30:y=Not available;

0x0256	Clutch Switch	U8	1		switch(x1&0xc0) 0x00:y=Clutch pedal released; 0x40:y=Clutch pedal depressed; 0x80:y=Error; 0xc0:y=Not available;
0x0084	Engine Inlet Air Mass Flow Rate	Float	4	kg/h	
0x0392	Service Distance	S32	4	km	
0x0396	High Resolution Trip Distance	Float	4	km	The accuracy can be up to 0.005KM
0x03d0	PTO State	U8	1		switch(x1&0x1f) 0x00: y=Off/Disabled; 0x01: y=Hold; 0x02: y=Remote Hold; 0x03: y=Standby; 0x04: y=Remote Standby; 0x05: y=Set; 0x06: y=Decelerate/Coast; 0x07: y=Resume; 0x08: y=Accelerate; 0x09: y=Accelerator Override; 0x0a: y=Preprogrammed set speed 1; 0x0b: y=Preprogrammed set speed 2; 0x0c: y=Preprogrammed set speed 3; 0x0d: y=Preprogrammed set speed 4; 0x0e: y=Preprogrammed set speed 5; 0x0f: y=Preprogrammed set speed 6; 0x10: y=Preprogrammed set speed 7; 0x11: y=Preprogrammed set speed 8; 0x12: y=PTO set speed memory 1; 0x13: y=PTO set speed memory 2; 0x1f: y=Not available; default: y=Not defined;
0x0664	Engine Intake Manifold 1 Air Temperature (High Resolution)	Float	4	°C	Accurate to 3 digits after the decimal point
0x0665	Engine Coolant Temperature (High Resolution)	Float	4	°C	Accurate to 3 digits after the decimal point
0x022e	Accelerator Pedal 1 Low Idle Switch	U8	1		switch(x&0x03)

					0x00:y=Accelerator pedal 1 not in low idle condition; 0x01:y=Accelerator pedal 1 in low idle condition; 0x02:y=Error; 0x03:y=Not available; Note: 3
0x022f	Accelerator Pedal Kickdown Switch	U8	1		switch(x&0x0c) 0x00:y=Kickdown passive; 0x04:y=Kickdown active; 0x08:y=Error; 0x0c:y=Not available; Note: 3
0x059d	Road Speed Limit Status	U8	1		switch(x&0x30) 0x00:y=Active; 0x10:y=Not Active; 0x20:y=Error; 0x30:y=Not available; Note: 3
0x0b9a	Accelerator Pedal 2 Low Idle Switch	U8	1		switch(x&0xc0) 0x00:y=Accelerator pedal 2 not in low idle condition; 0x40:y=Accelerator pedal 2 in low idle condition; 0x80:y=Error;0xc0:y=Not available; Note: 3
0x005c	Engine Percent Load At Current Speed	U8	1	%	
0x03ce	Remote Accelerator Pedal Position	Float	4	%	
0x001d	Accelerator Pedal Position 2	Float	4	%	
0x0ba3	Vehicle Acceleration Rate Limit Status	U8	1		switch(x&0x03) 0x00:y=Limit not active; 0x01:y=Limit active; 0x02:y=Error;0x03:y=Not available; Note: 3
0x0d1d	Actual Maximum Available Engine - Percent Torque	Float	4	%	
0x0383	Engine Torque Mode	U8	1		switch(x&0x0f){ 0x00: Low idle speed output /no request (

					default) 0x01: accelerator pedal / The operator selection 0x02: Cruise Control 0x03: PTO governor 0x04: Road speed governor 0x05: ASR control 0x06: Transmission control system 0x07: ABS control 0x08: torque limitation 0x09: High speed governor 0x0a: braking system 0x0b: remote accelerator 0x0c: un-definition 0x0d: un-definition 0x0e: others 0x0f: not available }
0x0200	Driver's Demand Engine - Percent Torque	S8	1	%	
0x0201	Actual Engine - Percent Torque	S8	1	%	
0x05cb	Source Address of Controlling Device for Engine Control	U8	1		
0x068b	Engine Starter Mode	U8	1		switch(x&0x0f) 0x00:y=start not requested; 0x01:y=starter active, gear not engaged; 0x02:y=starter active, gear engaged; 0x03:y=start finished; starter not active after having been actively engaged (after 50ms mode goes to 0000); 0x04:y=starter inhibited due to engine already running; 0x05:y=starter inhibited due to engine not ready for start (preheating); 0x06:y=starter inhibited due to driveline engaged or other transmission inhibit; 0x07:y=starter inhibited due to active immobilizer; 0x08:y=starter inhibited due to starter over-temp; 0x0c:y=starter inhibited - reason unknown;

					0x0d:y=error (legacy implementation only, use 1110); 0x0e:y=error; 0x0f:y=not available; default: y=Reserved Note: 3
0x0980	Engine Demand - Percent Torque	S8	1	%	
0x006e	Engine Coolant Temperature	S8	1	°C	
0x00ae	Engine Fuel Temperature 1	S16	2	°C	
0x00af	Engine Oil Temperature 1	S16	2	°C	
0x00b0	Engine Turbocharger Oil Temperature	S16	2	°C	
0x0034	Engine Intercooler Temperature	S16	2	°C	
0x046e	Engine Intercooler Thermostat Opening	Float	4	%	
0x005e	Engine Fuel Delivery Pressure	U16	2	kPa	
0x0016	Engine Extended Crankcase Blow-by Pressure	Float	4	kPa	
0x0062	Engine Oil Level	Float	4	%	
0x0064	Engine Oil Pressure	U16	2	kPa	
0x0065	Engine Crankcase Pressure	S16	2	kPa	
0x006D	Engine Coolant Pressure	U16	2	kPa	
0x006F	Engine Coolant Level	Float	4	%	
0x0045	Two Speed Axle Switch	U8	1		switch(x&0x03) 0x00:y=Low speed range; 0x01:y=High speed range; 0x02:y=Error; 0x03:y=Not available; Note: 3
0x0046	Parking Brake Switch	U8	1		switch(x&0x0c) 0x00:y=Parking brake not set; 0x04:y=Parking brake set; 0x08:y=Error;

					0x0c:y=Not available; Note: 3
0x0661	Cruise Control Pause Switch	U8	1		switch(x&0x30) 0x00:y=Off; 0x10:y=On; 0x20:y=Error; 0x30:y=Not available; Note: 3
0x0254	Cruise Control Enable Switch	U8	1		switch(x&0x0c) 0x00:y=Cruise control disabled; 0x04:y=Cruise control enabled; 0x08:y=Error; 0x0c:y=Not available;
0x0257	Cruise Control Set Switch	U8	1		switch(x&0x03) 0x00:y=Cruise control activator not in the position set; 0x01:y=Cruise control activator in position set; 0x02:y=Error; 0x03:y=Not available; Note: 3
0x0258	Cruise Control Coast (Decelerate) Switch	U8	1		switch(x&0x0c) 0x00:y=Cruise control activator not in the position coast; 0x04:y=Cruise control activator in position coast; 0x08:y=Error; 0x0c:y=Not available; Note: 3
0x0259	Cruise Control Resume Switch	U8	1		switch(x&0x30) 0x00:y=Cruise control activator not in the position resume; 0x10:y=Cruise control activator in position resume; 0x20:y=Error; 0x30:y=Not available; Note: 3
0x025a	Cruise Control Accelerate Switch	U8	1		switch(x&0xc0) 0x00:y=Cruise control activator not in the position accelerate; 0x40:y=Cruise control activator in position accelerate; 0x80:y=Error; 0xc0:y=Not available; Note: 3

0x0056	Cruise Control Set Speed	U8	1	km/h	
0x020f	Cruise Control States	U8	1		switch(x&0xe0) 0x00: y=Off/Disabled; 0x20: y=Hold; 0x40: y=Accelerate; 0x60: y=Decelerate; 0x80: y=Resume; 0xa0: y=Set; 0xc0: y=Accelerator Override; 0xe0: y=Not available; Note: 3
0x03c8	Engine Idle Increment Switch	U8	1		switch(x&0x03) 0x00:y=Off; 0x01:y=On; 0x02:y=Error; 0x03:y=Not available; Note: 3
0x03c7	Engine Idle Decrement Switch	U8	1		switch(x&0x0c) 0x00:y=Off; 0x04:y=On; 0x08:y=Error; 0x0c:y=Not available; Note: 3
0x03c6	Engine Test Mode Switch	U8	1		switch(x&0x30) 0x00:y=Off; 0x10:y=On; 0x20:y=Error; 0x30:y=Not available; Note: 3
0x04d5	Engine Shutdown Override Switch	U8	1		switch(x&0xc0) 0x00:y=Off; 0x40:y=On; 0x80:y=Error; 0xc0:y=Not available; Note: 3
0x0051	Engine Particulate Trap Inlet Pressure	U8	1	kPa	
0x0066	Engine Intake Manifold #1 Pressure	U16	2	kPa	
0x0069	Engine Intake Manifold 1 Temperature	S16	2	°C	
0x006b	Engine Air Filter 1	Float	4	kPa	

	Differential Pressure				
0x00ad	Engine Exhaust Gas Temperature	S16	2	°C	
0x0070	Engine Coolant Filter Differential Pressure	Float	4	kPa	
0x00ba	Power Takeoff Speed	U16	2	Rpm/min	
0x0203	Engine's Desired Operating Speed	U16	2	Rpm/min	
0x0209	Brake Pedal Position	Float	4	%	
0x0395	High Resolution Total Vehicle Distance	Float	4	KM	The accuracy can be up to 0.005KM
0x00f4	Trip Distance	Float	4	KM	The accuracy can be up to 0.125KM
0x00a1	Transmission Input Shaft Speed	U1	2	Rpm/min	
0x00f7	Engine Total Hours of Operation	Float	4	h	
0x00f9	Engine Total Revolutions	U32	4	1000 rounds	
0x059c	Engine Actual Ignition Timing	S16	2	Degree	
0x0bfd	Distance Traveled while MIL is activated	U16	2	km	
0x0c47	Distance Since Diagnostic Trouble Codes Cleared	U16	2	km	
0x0c48	Minutes Run by Engine While MIL activated	U16	2	min	
0x0c49	Time Since DTCs Cleared	U16	2	min	
0x0c4e	Time Since Engine Start	U16	2	sec	
0x0c4f	Number of Warm-Ups Since DTC Cleared	U16	2		
0x00b8	Engine Instantaneous fuel consumption	Float	4	Km/L	
0x00b9	Engine average fuel consumption	Float	4	Km/L	

0x00ec	Engine total idling fuel consumption	Float	4	L	
0x03e9	Use of fuel-driven trip	Float	4	L	
0x03ea	mobile trip for fuel power output	Float	4	L	
0x03eb	Trip Power output apparatus non-working fuel consumption	Float	4	L	
0x03ec	trip idle fuel consumption	Float	4	L	
0x03ed	Cruise trip fuel consumption	Float	4	L	
0x03ee	trip economy fuel consumption	Float	4	Km/L	
0x0404	The total fuel consumption of the engine power output	Float	4	Km/L	
0x0405	Trip average fuel consumption	Float	4	L/h	
0x1081	Brake System Air Pressure Low Warning Switch Status-Emergency reservoir	U8	1		00 Off/Normal 01 On/Warning 10 Error condition 11 Not available
0x1082	Brake System Air Pressure Low Warning Switch Status-Service reservoir	U8	1		00 Off/Normal 01 On/Warning 10 Error condition 11 Not available
0x1083	Brake System Air Pressure Low Warning Switch Status-Secondary reservoir	U8	1		00 Off/Normal 01 On/Warning 10 Error condition 11 Not available
0x1084	Brake System Air Pressure Low Warning Switch Status-Primary reservoir	U8	1		00 Off/Normal 01 On/Warning 10 Error condition 11 Not available
0x1091	Axle Lift Status-Axle	U8	1		00 Down

	lift position				01 Up 10 Error condition 11 Not available
0x1092	Axle Lift Status-Axle lift switch status	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x10a1	Axle Slider Status-Axle slider lock status	U8	1		00 Unlocked 01 Locked 10 Error condition 11 Not available
0x10a2	Axle Slider Status-Axle slider lock switch status	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x10d0	Entry Assist Position/Deployment	U8	1	%	
0x10e0	Entry Assist Motor Current	Float	4	A	
0x10f0	Fuel Supply Pump Inlet Pressure	U16	2	kPa	
0x1100	Suction Side Fuel Filter Differential Pressure	U16	2	kPa	
0x1110	Engine Oil Level Remote Reservoir	U8	1	%	
0x1120	Extended Range Fuel Pressure	U32	4	KPa	
0x1130	Extended Range Engine Oil Pressure	U32	4	KPa	
0x1140	Extended Range Engine Coolant Pressure	U16	2	KPa	
0x1150	Engine ECU Temperature	Float	4	 F	
0x1160	Extended Crankcase Blow-by Pressure	Float	4	KPa	
0x1170	Generator Oil Pressure	Float	4	KPa	
0x1180	Generator Coolant Temperature	U8	1	 F	

0x1191	Air Conditioner System Status #2-Compressor discharge side	U8	1		00 = Not at high pressure 01 = Is at high pressure 10 = Error 11 = Not available/not applicable
0x1192	Air Conditioner System Status #2-Compressor discharge side	U8	1		00 = Not at very high pressure 01 = Is at very high pressure 10 = Error 11 = Not available/not applicable
0x1193	Air Conditioner System Status #2-Compressor suction side	U8	1		00 = Not at low pressure 01 = Is at low pressure 10 = Error 11 = Not available/not applicable
0x1194	Air Conditioner System Status #2-Evaporator temperature	U8	1		00 = Evaporator thermostat signal is above the low temperature set point 01 = Evaporator thermostat signal is below the low temperature set point 10 = Error 11 = Not available/not applicable
0x11a0	Estimated Percent Fan Speed	U8	1	%	
0x11b0	Percent Exhaust Gas Recirculation Valve #1 Position	U8	1	%	
0x11c0	Percent Accelerator Position #3	U8	1	%	
0x11d0	Percent Accelerator Position #2	U8	1	%	
0x11e0	Crankcase Blow-by Pressure	S8	1	KPa	
0x11f0	Transmission Range Position	U8	1	%	
0x1200	Transmission Splitter Position	U8	1	%	
0x1210	Clutch Cylinder Position	U8	1	%	
0x1221	Clutch Cylinder Actuator Status-Coarse engagement actuator status	U8	1		00 Off 01 On 10 Error Condition 11 Not available
0x1222	Clutch Cylinder	U8	1		00 Off

	Actuator Status-Fine engagement actuator status				01 On 10 Error Condition 11 Not available
0x1223	Clutch Cylinder Actuator Status-Coarse disengagement actuator status	U8	1		00 Off 01 On 10 Error Condition 11 Not available
0x1224	Clutch Cylinder Actuator Status-Fine disengagement actuator status	U8	1		00 Off 01 On 10 Error Condition 11 Not available
0x1231	Shift Finger Actuator Status #2-Gear actuator #3 status	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x1232	Shift Finger Actuator Status #2-Rail actuator #3 status	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x1240	Clutch Plates Wear Condition	U8	1	%	
0x1250	Transmission Tank Air Pressure	Float	4	Kpa	
0x1260	Second Fuel Level (Right Side)	U8	1	%	
0x1270	Tire Pressure Check Interval	U8	1	min	
0x1281	Engine Retarder Switches Status-Engine retarder level switch	U8	1		0 = 0 cylinders 1 = 1 cylinders 2 = 2 cylinders 3 = 3 cylinders 4 = 4 cylinders 5 = 5 cylinders 6 = 6 cylinders 7 = 7 cylinders 8 = 8 cylinders 9-13 = reserved—to be assigned 14 = error 15 = not available
0x1282	Engine Retarder Switches	U8	1		00 = off 01 = on

	Status-Engine retarder switch				10 = error 11 = not available
0x1291	Cruise Control Switches Status-Cruise control on/off switch status	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x1292	Cruise Control Switches Status-Cruise control set switch status	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x1293	Cruise Control Switches Status-Cruise control resume switch status	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x12a0	Pressure Switch Status	U8	1		00 Below set pressure 01 At or above set pressure 10 Error condition 11 Not available
0x12b1	Ignition Switch Status-Start aid contacts status	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x12b2	Ignition Switch Status-Crank contacts status	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x12b3	Ignition Switch Status-Run contacts status	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x12b4	Ignition Switch Status-Accessory contacts status	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x12c1	Attention/Warning Indicator Lamps Status-Protect lamp status	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x12c2	Attention/Warning Indicator Lamps Status-Amber lamp status	U8	1		00 Off 01 On 10 Error condition 11 Not available

0x12c3	Attention/Warning Indicator Lamps Status-Red lamp status	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x12d1	Inlet Air Heater Status-Wait to Start Lamp	U8	1		00 Off 01 On 10 Error Condition 11 Not available
0x12d2	Inlet Air Heater Status-Heater 2 status	U8	1		00 Off 01 On 10 Error Condition 11 Not available
0x12d3	Inlet Air Heater Status-Heater 1 status	U8	1		00 Off 01 On 10 Error Condition 11 Not available
0x12e0	Vehicle Wet Tank Pressure	U32	4	KPa	
0x12f0	Retarder Status	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x1300	Extended Range Barometric Pressure	U8	1	KPa	
0x1311	ABS Control Status-ABS off-road function switch	U8	1		00 Off/Not active 01 On/Active 10 Error condition 11 Not available
0x1312	ABS Control Status-ABS retarder control	U8	1		00 Off/Not active 01 On/Active 10 Error condition 11 Not available
0x1313	ABS Control Status-ABS brake control	U8	1		00 Off/Not active 01 On/Active 10 Error condition 11 Not available
0x1314	ABS Control Status-ABS warning lamp	U8	1		00 Off/Not active 01 On/Active 10 Error condition 11 Not available
0x1321	Air Conditioner System	U8	1		00=No request 01=Fan is requested

	Status/Command #1-Engine fan request				10=Error 11=Not available/not applicable
0x1322	Air Conditioner System Status/Command #1-Air Conditioning Request Input	U8	1		00=No request 01=A/C is requested 10=Error 11=Not available/not applicable.
0x1323	Air Conditioner System Status/Command #1-Request temporary clutch disengagement sense	U8	1		00=No request 01=Clutch disengagement requested 10=Error 11=Not available/not applicable.
0x1324	Air Conditioner System Status/Command #1-Clutch engagement status	U8	1		00=Off (disengaged) 01=On (engaged) 10=Error 11=Not available/not applicable
0x1330	Throttle Position	U8	1	%	
0x1340	Engine Intercooler Temperature	U8	1	 F	
0x1350	Transmission Synchronizer Clutch Value	U8	1	%	
0x1360	Transmission Synchronizer Brake Value	U8	1	%	
0x1371	Shift Finger Positional Status-Center rail sense	U8	1		0 Off 01 On 10 Error condition 11 Not available
0x1372	Shift Finger Positional Status-Fore/aft sense	U8	1		0 Off 01 On 10 Error condition 11 Not available
0x1373	Shift Finger Positional Status-Neutral sense	U8	1		0 Off 01 On 10 Error condition 11 Not available

0x1381	Transmission Range Switch Status-Low range sense	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x1382	Transmission Range Switch Status-High range sense	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x1391	Transmission Actuator Status #2-Inertia brake actuator status	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x1392	Transmission Actuator Status #2-Defuel actuator status	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x1393	Transmission Actuator Status #2-Lockup clutch actuator status	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x1394	Transmission Actuator Status #2-Clutch actuator status	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x13a1	Shift Finger Actuator Status-Gear actuator #2 status	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x13a2	Shift Finger Actuator Status-Rail actuator #2 status	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x13a3	Shift Finger Actuator Status-Gear actuator #1 status	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x13a4	Shift Finger Actuator Status-Rail actuator #1 status	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x13b0	Shift Finger Gear Position	U8	1	%	

0x13c0	Shift Finger Rail Position	U8	1	%	
0x13d1	Parking Brake Actuator Status-Parking brake off actuator status	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x13d2	Parking Brake Actuator Status-Parking brake on actuator status	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x13e0	Retarder Inhibit Status	U8	1		00 Off (Retarder inhibit not active) 01 On (Retarder inhibit is active) 10 Error condition 11 Not available
0x13f1	Transmission Actuator Status #1-Splitter indirect actuator status	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x13f2	Transmission Actuator Status #1-Splitter direct actuator status	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x13f3	Transmission Actuator Status #1-Range low actuator status	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x13f4	Transmission Actuator Status #1-Range high actuator status	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x1401	Direction Switch Status-Forward switch status	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x1402	Direction Switch Status-Neutral switch status	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x1403	Direction Switch Status-Reverse switch status	U8	1		00 Off 01 On 10 Error condition 11 Not available

0x1411	Brake Switch Status-Brake system switch status	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x1412	Brake Switch Status-Service brake switch status	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x1421	Vehicle Enabling Component Status-Power connect device status	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x1422	Vehicle Enabling Component Status-Start enable device status	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x1423	Vehicle Enabling Component Status-Ignition switch status	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x1431	Shift Request Switch Status-Downshift switch status	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x1432	Shift Request Switch Status-Upshift switch status	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x1440	Torque Limiting Factor	U8	1	%	
0x1450	Two Speed Axle Switch Status	U8	1		0=high range is commanded 1=low range is commanded
0x1460	Parking Brake Switch Status	U8	1		1=active 0=inactive
0x1471	Idle Shutdown Timer Status-Idle shutdown timer status	U8	1		1=active 0=inactive
0x1472	Idle Shutdown Timer Status-Idle shutdown timer function	U8	1		1=enabled in calibration 0=disabled in calibration
0x1473	Idle Shutdown Timer	U8	1		1=active

	Status-Idle shutdown timer override				0=inactive
0x1474	Idle Shutdown Timer Status-Engine has shutdown by idle timer	U8	1		1=yes 0=no
0x1475	Idle Shutdown Timer Status-Driver alert mode	U8	1		1=active 0=inactive
0x1480	Blower Bypass Valve Position	U8	1	%	
0x1490	Auxiliary Water Pump Pressure	U32	4	KPa	
0x14a0	Maximum Road Speed Limit	U8	1	Km/h	
0x14b0	Steering Axle Temperature	U16	2	 F	
0x14c0	Axle #1 Lift Air Pressure	U32	4	KPa	
0x14d0	Forward Rear Drive Axle Temperature	U16	2	 F	
0x14e0	Rear Rear Drive Axle Temperature	U16	2	 F	
0x14f0	Road Surface Temperature	S32	4	 F	
0x1500	Washer Fluid Level	U8	1	%	
0x1510	Particulate Trap Inlet Pressure	Float	4	KPa	
0x1520	Air Start Pressure	U32	4	KPa	
0x1530	Road Speed Limit Status	U8	1		1=active 0=not active
0x1540	Road Speed	U8	1	km/h	
0x1551	Cruise Control Status-cruise mode	U8	1		1=active 0=not active
0x1552	Cruise Control Status-clutch switch	U8	1		1=on 0=off
0x1553	Cruise Control Status-brake switch	U8	1		1=on 0=off
0x1554	Cruise Control Status-accel switch	U8	1		1=on 0=off

0x1555	Cruise Control Status-resume switch	U8	1		1=on 0=off
0x1556	Cruise Control Status-coast switch	U8	1		1=on 0=off
0x1557	Cruise Control Status-set switch	U8	1		1=on 0=off
0x1558	Cruise Control Status-cruise control switch	U8	1		1=on 0=off
0x1560	Cruise Control Set Speed	U8	1	km/h	
0x1570	Cruise Control High Set Limit Speed	U8	1	km/h	
0x1580	Cruise Control Low Set Limit Speed	U8	1	km/h	
0x1591	Power Takeoff Status-PTO mode	U8	1		1=active 0=not active
0x1592	Power Takeoff Status-clutch switch	U8	1		1=on 0=off
0x1593	Power Takeoff Status-brake switch	U8	1		1=on 0=off
0x1594	Power Takeoff Status-accel switch	U8	1		1=on 0=off
0x1595	Power Takeoff Status-resume switch	U8	1		1=on 0=off
0x1596	Power Takeoff Status-coast switch	U8	1		1=on 0=off
0x1597	Power Takeoff Status-set switch	U8	1		1=on 0=off
0x1598	Power Takeoff Status-PTO control switch	U8	1		1=on 0=off
0x15a0	Power Takeoff Oil Temperature	U16	2	degF	
0x15b0	Percent Accelerator Pedal Position	U8	1	%	
0x15c0	Percent Engine Load	U8	1	%	
0x15d0	Output Torque	S32	4	N.m	
0x15e0	Fuel Delivery Pressure	U32	4	KPa	

0x15f0	Fuel Filter Differential Pressure	Float	4	KPa	
0x1600	Fuel Level	U8	1	%	
0x1610	Water in Fuel Indicator	U8	1		1=yes 0=no
0x1620	Engine Oil Level	U8	1	%	
0x1630	Engine Oil Filter Differential Pressure	Float	4	KPa	
0x1640	Engine Oil Pressure	Float	4	KPa	
0x1650	Crankcase Pressure	S8	1	KPa	
0x1660	Boost Pressure	U8	1	KPa	
0x1670	Turbo Speed	U32	4	rpm	
0x1680	Turbo Oil Pressure	Float	4	KPa	
0x1690	Intake Manifold Temperature	U8	1	 F	
0x16a0	Air Inlet Pressure	U16	2	KPa	
0x16b0	Air Filter Differential Pressure	Float	4	KPa	
0x16c0	Barometric Pressure	U8	1	KPa	
0x16d0	Coolant Pressure	U8	1	KPa	
0x16e0	Engine Coolant Temperature	U8	1	 F	
0x16f0	Coolant Level	U8	1	%	
0x1700	Coolant Filter Differential Pressure	Float	4	Kpa	
0x1710	Governor Droop	U16	2	rpm	
0x1720	Net Battery Current	Float	4	A	
0x1730	Alternator Current	Float	4	A	
0x1740	Brake Application Pressure	Float	4	KPa	
0x1750	Brake Primary Pressure	Float	4	KPa	

0x1760	Brake Secondary Pressure	Float	4	KPa	
0x1770	Hydraulic Retarder Pressure	Float	4	KPa	
0x1780	Hydraulic Retarder Oil Temperature	U16	2	 F	
0x1791	Engine Retarder Status	U8	1		1=on 0=off
0x1792	Engine Retarder Status-8 cylinder	U8	1		1=active 0=not active
0x1793	Engine Retarder Status-6 cylinder	U8	1		1=active 0=not active
0x1794	Engine Retarder Status-4 cylinder	U8	1		1=active 0=not active
0x1795	Engine Retarder Status-3 cylinder	U8	1		1=active 0=not active
0x1796	Engine Retarder Status-2 cylinder	U8	1		1=active 0=not active
0x17a0	Engine Retarder Percent	U8	1	%	
0x17b0	Clutch Pressure	Float	4	KPa	
0x17c0	Transmission Oil Level	U8	1	%	
0x17d0	Transmission Oil Level High/Low	S8	1	L	
0x17e0	Transmission Filter Differential Pressure	U16	2	KPa	
0x17f0	Transmission Oil Pressure	Float	4	KPa	
0x1810	Injector Metering Rail #2 Pressure	U8	1	KPa	
0x1820	Power Specific Fuel Economy	Float	4	kW·h/L	
0x1830	Exhaust Back Pressure	Float	4	KPa	
0x1840	Mass Air Flow	Float	4	kg/min	
0x1850	"Average Fuel Rate	Float	4	L/s	
0x1861	Wheel Speed Sensor Status-Wheel sensor ABS axle: 1 left	U8	1		00 Off/Not active (Sensor present/No active signal) 01 On/Active (Sensor present/Active signal)

					10 Error condition (Sensor present/Error condition detected) 11 Not available (Sensor not present)
0x1862	Wheel Speed Sensor Status-Wheel sensor ABS axle: 2 left	U8	1		00 Off/Not active (Sensor present/No active signal) 01 On/Active (Sensor present/Active signal) 10 Error condition (Sensor present/Error condition detected) 11 Not available (Sensor not present)
0x1863	Wheel Speed Sensor Status-Wheel sensor ABS axle: 3 left	U8	1		00 Off/Not active (Sensor present/No active signal) 01 On/Active (Sensor present/Active signal) 10 Error condition (Sensor present/Error condition detected) 11 Not available (Sensor not present)
0x1864	Wheel Speed Sensor Status-Wheel sensor ABS axle: 4 left	U8	1		00 Off/Not active (Sensor present/No active signal) 01 On/Active (Sensor present/Active signal) 10 Error condition (Sensor present/Error condition detected) 11 Not available (Sensor not present)
0x1865	Wheel Speed Sensor Status-Wheel sensor ABS axle: 1 right	U8	1		00 Off/Not active (Sensor present/No active signal) 01 On/Active (Sensor present/Active signal) 10 Error condition (Sensor present/Error condition detected) 11 Not available (Sensor not present)
0x1866	Wheel Speed Sensor Status-Wheel sensor ABS axle: 2 right	U8	1		00 Off/Not active (Sensor present/No active signal) 01 On/Active (Sensor present/Active signal) 10 Error condition (Sensor present/Error condition detected) 11 Not available (Sensor not present)
0x1867	Wheel Speed Sensor Status-Wheel sensor ABS axle: 3 right	U8	1		00 Off/Not active (Sensor present/No active signal) 01 On/Active (Sensor present/Active signal) 10 Error condition (Sensor present/Error condition detected) 11 Not available (Sensor not present)
0x1868	Wheel Speed Sensor Status-Wheel sensor ABS axle: 4 right	U8	1		00 Off/Not active (Sensor present/No active signal) 01 On/Active (Sensor present/Active signal)

					10 Error condition (Sensor present/Error condition detected) 11 Not available (Sensor not present)
0x1870	Extended Range Fuel Delivery Pressure (Absolute)	Float	4	KPa	
0x1880	Auxiliary Vacuum Pressure Reading	Float	4	KPa	
0x1890	Auxiliary Gage Pressure Reading #1	Float	4	KPa	
0x18a0	Auxiliary Absolute Pressure Reading	Float	4	KPa	
0x18b1	Tire Pressure Control System Channel Functional Mode-#1 Steer channel mode	U8	1		0000 Maintain 0001 InFloatate 0010 DeFloatate 0011 Confirm 0100 InFloatate wait—system will inFloatate when conditions allow 0101 DeFloatate wait—system will deFloatate when conditions allow 0110 Pressure check 0111-1101 Reserved 1110 Error condition 1111 Not available
0x18b2	Tire Pressure Control System Channel Functional Mode-#2 Drive channel mode	U8	1		0000 Maintain 0001 InFloatate 0010 DeFloatate 0011 Confirm 0100 InFloatate wait—system will inFloatate when conditions allow 0101 DeFloatate wait—system will deFloatate when conditions allow 0110 Pressure check 0111-1101 Reserved 1110 Error condition 1111 Not available
0x18b3	Tire Pressure Control System Channel Functional Mode-#2 Trailer/tag channel mode	U8	1		0000 Maintain 0001 InFloatate 0010 DeFloatate 0011 Confirm 0100 InFloatate wait—system will inFloatate when conditions allow

					0101 DeFloatate wait—system will deFloatate when conditions allow 0110 Pressure check 0111-1101 Reserved 1110 Error condition 1111 Not available
0x18c1	Tire Pressure Control System Solenoid Status-#1 PCU steer solenoid status	U8	1		00 Off 00 On 10 Error condition 11 Not available
0x18c2	Tire Pressure Control System Solenoid Status-#1 PCU drive solenoid status	U8	1		00 Off 00 On 10 Error condition 11 Not available
0x18c3	Tire Pressure Control System Solenoid Status-#2 PCU trailer, tag, or push solenoid status	U8	1		00 Off 00 On 10 Error condition 11 Not available
0x18c4	Tire Pressure Control System Solenoid Status-#2 PCU supply solenoid status	U8	1		00 Off 00 On 10 Error condition 11 Not available
0x18c5	Tire Pressure Control System Solenoid Status-#2 PCU control solenoid status	U8	1		00 Off 00 On 10 Error condition 11 Not available
0x18c6	Tire Pressure Control System Solenoid Status-#2 PCU deflate solenoid status	U8	1		00 Off 00 On 10 Error condition 11 Not available
0x18d0	Trailer #1, Tag #1, or Push Channel #1 Tire Pressure Target	Float	4	KPa	
0x18e0	Drive Channel Tire Pressure Target	Float	4	Kpa	
0x18f0	Steer Channel Tire Pressure Target	Float	4	Kpa	
0x1900	Trailer #1, Tag #1, or Push Channel #1 Tire	Float	4	Kpa	

	Pressure				
0x1910	Drive Channel Tire Pressure	Float	4	Kpa	
0x1920	Steer Channel Tire Pressure	Float	4	Kpa	
0x1930	Average Fuel Economy (Natural Gas)	Float	4	km/kg	
0x1940	Instantaneous Fuel Economy (Natural Gas)	Float	4	km/kg	
0x1950	Mass Flow Rate (Natural Gas)	Float	4	kg/h	
0x1961	PTO Engagement Control Status-PTO #2 engagement control switch status	U8	1		00 Off/Not active 01 On/Active 10 Error condition 11 Not available
0x1962	PTO Engagement Control Status-PTO #1 engagement control switch status	U8	1		00 Off/Not active 01 On/Active 10 Error condition 11 Not available
0x1963	PTO Engagement Control Status-PTO #2 engagement actuator status	U8	1		00 Off/Not active 01 On/Active 10 Error condition 11 Not available
0x1964	PTO Engagement Control Status-PTO #1 engagement actuator status	U8	1		00 Off/Not active 01 On/Active 10 Error condition 11 Not available
0x1971	ATC Control Status-ATC spin-out signal detection	U8	1		00 Off/Not active 01 On/Active 10 Error condition 11 Not available
0x1972	ATC Control Status-ATC engine control	U8	1		00 Off/Not active 01 On/Active 10 Error condition 11 Not available
0x1973	ATC Control Status-ATC brake control	U8	1		00 Off/Not active 01 On/Active 10 Error condition 11 Not available
0x1974	ATC Control	U8	1		00 Off/Not active

	Status-ATC status lamp				01 On/Active 10 Error condition 11 Not available
0x1975	ATC Control Status-ATC deep snow/mud function switch	U8	1		00 Off/Not active 01 On/Active 10 Error condition 11 Not available
0x1980	Number of ECU Resets	U16	2		No unit
0x1990	Crankcase Pressure	Float	4	kPa	
0x19a1	Auxiliary Input and Output Status #2-Auxiliary input #8	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x19a2	Auxiliary Input and Output Status #2-Auxiliary input #7	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x19a3	Auxiliary Input and Output Status #2-Auxiliary input #6	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x19a4	Auxiliary Input and Output Status #2-Auxiliary input #5	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x19a5	Auxiliary Input and Output Status #2-Auxiliary output #8	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x19a6	Auxiliary Input and Output Status #2-Auxiliary output #7	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x19a7	Auxiliary Input and Output Status #2-Auxiliary output #6	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x19a8	Auxiliary Input and Output Status #2-Auxiliary output #5	U8	1		00 Off 01 On 10 Error condition 11 Not available

0x19b1	Auxiliary Input and Output Status #1-Auxiliary input #4	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x19b2	Auxiliary Input and Output Status #1-Auxiliary input #3	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x19b3	Auxiliary Input and Output Status #1-Auxiliary input #2	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x19b4	Auxiliary Input and Output Status #1-Auxiliary input #1	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x19b5	Auxiliary Input and Output Status #1-Auxiliary output #4	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x19b6	Auxiliary Input and Output Status #1-Auxiliary output #3	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x19b7	Auxiliary Input and Output Status #1-Auxiliary output #2	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x19b8	Auxiliary Input and Output Status #1-Auxiliary output #1	U8	1		00 Off 01 On 10 Error condition 11 Not available
0x19c0	Injector Timing Rail Pressure	Float	4	KPa	
0x19d0	Injector Metering Rail Pressure	Float	4	KPa	
0x19e0	Battery Potential (Voltage)—Switched	Float	4	V	
0x19f0	Gas Supply Pressure	Float	4	KPa	
0x1a00	Main Shaft Speed	U16	2	rpm	

0x1a10	Input Shaft Speed	U16	2	rpm	
0x1a40	Injection Control Pressure	Float	4	MPa	
0x1a50	Compass Bearing	Float	4	degree	
0x1a60	Rated Engine Power	U16	2	kW	
0x1a70	Alternator Potential (Voltage)	Float	4	V	
0x1a80	Battery Potential (Voltage)	Float	4	V	
0x1a90	Cargo Ambient Temperature	Float	4	 F	
0x1aa0	Cab Interior Temperature	Float	4	 F	
0x1ab0	Ambient Air Temperature	Float	4	 F	
0x1ac0	Air Inlet Temperature	Float	4	 F	
0x1ad0	Exhaust Gas Temperature	Float	4	 F	
0x1ae0	Fuel Temperature	Float	4	 F	
0x1af0	Engine Oil Temperature	Float	4	 F	
0x1b00	Turbo Oil Temperature	Float	4	 F	
0x1b10	Transmission #1 Oil Temperature	Float	4	 F	
0x1b20	Front Axle Weight	U32	4	N	
0x1b30	Rear Axle Weight	U32	4	N	
0x1b40	Trailer Weight	U32	4	N	
0x1b50	Cargo Weight	U32	4	N	
0x1b60	Trip Fuel	Float	4	L	
0x1b70	Fuel Rate (Instantaneous)	Float	4	L/s	
0x1b80	Instantaneous Fuel Economy	Float	4	km/L	

0x1b90	Average Fuel Economy	Float	4	km/L	
0x1ba0	Power Takeoff Speed	U16	2	rpm	
0x1bb0	Power Takeoff Set Speed	U16	2	rpm	
0x1bc0	Idle Engine Speed	U16	2	rpm	
0x1bd0	Rated Engine Speed	U16	2	rpm	
0x1be0	Engine Speed	U16	2	rpm	
0x1bf0	Transmission Output Shaft Speed	U16	2	rpm	
0x1d11	ABS Control Status, Trailer-ABS brake control Status, Trailer # 1	U8	1		00 Off/Not Active 01 On/Active 10 Error condition 11 Not available
0x1d12	ABS Control Status, Trailer-ABS warning lamp, Trailer # 1	U8	1		00 Off/Not Active 01 On/Active 10 Error condition 11 Not available
0x1d13	ABS Control Status, Trailer-Trailer ABS Control Status	U8	1		00 Off/Not Active 01 On/Active 10 Error condition 11 Not available
0x1d14	ABS Control Status, Trailer-Tractor Mounted Trailer ABS Lamp	U8	1		00 Off/Not Active 01 On/Active 10 Error condition 11 Not available
0x1d15	ABS Control Status, Trailer-ABS brake control Status, Trailer # 3	U8	1		00 Off/Not Active 01 On/Active 10 Error condition 11 Not available
0x1d16	ABS Control Status, Trailer-ABS warning lamp, Trailer # 3	U8	1		00 Off/Not Active 01 On/Active 10 Error condition 11 Not available
0x1d17	ABS Control Status, Trailer-ABS brake control Status, Trailer # 2	U8	1		00 Off/Not Active 01 On/Active 10 Error condition 11 Not available
0x1d18	ABS Control Status,	U8	1		00 Off/Not Active

	Trailer-ABS warning lamp, Trailer # 2				01 On/Active 10 Error condition 11 Not available
0x1d19	ABS Control Status, Trailer-ABS brake control Status, Trailer # 5	U8	1		00 Off/Not Active 01 On/Active 10 Error condition 11 Not available
0x1d1a	ABS Control Status, Trailer-ABS warning lamp, Trailer #5	U8	1		00 Off/Not Active 01 On/Active 10 Error condition 11 Not available
0x1d1b	ABS Control Status, Trailer-ABS brake control Status, Trailer # 4	U8	1		00 Off/Not Active 01 On/Active 10 Error condition 11 Not available
0x1d1c	ABS Control Status, Trailer-ABS warning lamp, Trailer # 4	U8	1		00 Off/Not Active 01 On/Active 10 Error condition 11 Not available
0x1d20	Tire Temperature (By Sequence Number)	U16	2	 F	
0x1d30	Tire Pressure (By Sequence Number)	U16	2	KPa	
0x1d40	Tire Pressure Target (By Sequence Number)	U16	2	KPa	
0x1e40	Speed Sensor Calibration	U32	4	ppkm	
0x1e50	Total Fuel Used (Natural Gas)	U32	4	Kg	
0x1e60	Total Idle Fuel Used (Natural Gas)	U32	4	Kg	
0x1e70	Trip Fuel (Natural Gas)	U32	4	Kg	
0x1eb0	Total Idle Hours	U32	4	h	
0x1ec0	Total Idle Fuel Used	U32	4	L	
0x1f40	Trip Distance	Float	4	km	
0x1f50	Total Vehicle Distance	Float	4	km	

0x1f60	Total Vehicle Hours	Float	4	h	
0x1f70	Total Engine Hours	Float	4	h	
0x1f80	Total PTO Hours	Float	4	h	
0x1f90	Total Engine Revolutions	U32	4	r	
0x1fa0	Total Fuel Used	Float	4	L	
0x1fb1	Clock-Seconds	U8	1	s	
0x1fb2	Clock-Minutes	U8	1	Min	
0x1fb3	Clock-Hours	U8	1	h	
0x1fc1	Date-Day	U8	1	day	
0x1fc2	Date-Month	U8	1	Month	
0x1fc3	Date-Year	U8	1	year	
0x1fd1	Elapsed Time-Seconds	U8	1	s	
0x1fd2	Elapsed Time-Minutes	U8	1	min	
0x1fd3	Elapsed Time-Hours	U8	1	h	
0x1fd4	Elapsed Time-Days"	U8	1	day	
0x9ffe	One DTC	U16	2		E.g.: 0x0102 It will show like SPN 258
0x9fff	Ready State	U8	8		Byte 1 Active Trouble Codes Byte 2 Previously Active Diagnostic Trouble Codes Byte 3 OBD Compliance 0x00 Reserved for assignment by SAE 0x01 OBD II 0x02 OBD 0x03 OBD and OBD II 0x04 OBD I 0x05 Not intended to meet OBD II requirements 0x06 EOBD 0x07 EOBD and OBD II

				0x08 EOBD and OBD 0x09 EOBD, OBD and OBD II 0x0A JOBD 0x0B JOBD and OBD II 0x0C JOBD and EOBD 0x0D JOBD, EOBD and OBD II 0x0E Heavy Duty Vehicles (EURO IV) B1 0x0F Heavy Duty Vehicles (EURO V) B2 0x10 Heavy Duty Vehicles (EURO EEC) C (gas engines) 0x11 Engine Manufacturer Diagnostics (EMD) 0x12 Engine Manufacturer Diagnostics Enhanced (EMD+) 0x13 Heavy Duty/On-Board Diagnostics Partial (CARB CCR 1971.1) 0x14 Heavy Duty/On-Board Diagnostics (CARB CCR 1971.1) 0x15 World Wide Harmonized OBD 0x16 OBD II (California Air Resources Board 2007/2008 revisions) 0x17 Heavy Duty Vehicles (EURO IV/V, revisions specified in 2005 and 2006) 0x18-0xFA To be assigned by SAE/ISO 0xFB-0xFF Per J1939-71 definition Byte4 Continuously Monitored Systems Support/Status bit 8 Reserved for assignment by SAE bit 7 Comprehensive component monitoring status bit 6 Fuel System monitoring status bit 5 Misfire monitoring status Where each status bit (bits 7, 6, 5) is interpreted: 0 = test complete, not supported 1 = test not complete bit 4 Reserved for assignment by SAE bit3 Comprehensive component monitoring support bit 2 Fuel system monitoring support bit 1 Misfire monitoring support Where each supported bit (bits 3, 2, 1) is
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				interpreted: 0 = test not supported by this controller 1 = test supported by this controller Byte 6-5 Non-continuously Monitored Systems Support Byte 5 bit 8 EGR system monitoring Support bit 7 Oxygen sensor heater monitoring Support bit 6 Oxygen sensor monitoring Support bit 5 A/C system refrigerant monitoring Support bit 4 Secondary air system monitoring Support bit 3 Evaporative system monitoring Support bit 2 Heated catalyst monitoring Support bit 1 Catalyst monitoring Support Byte 6 bit 8-6 Reserved for assignment by SAE bit 5 NMHC converting catalyst bit 4 NOx converting catalyst and/or NOx adsorber bit 3 Diesel Particulate Filter (DPF) bit 2 Boost pressure control system bit 1 Cold start aid system monitoring Support Where each bit is interpreted: 0 = test not supported by this controller 1 = test supported by this controller Byte 8- 7 Non-continuously Monitored Systems Status Byte 7 bit 8 EGR system monitoring Status bit 7 Oxygen sensor heater monitoring Status bit 6 Oxygen sensor monitoring bit 5 A/C system refrigerant monitoring Status bit 4 Secondary air system monitoring Status bit 3 Evaporative system monitoring Status bit 2 Heated catalyst monitoring Status bit 1 Catalyst monitoring Status Byte 8 bit 8-6 Reserved for assignment by SAE bit 5 NMHC converting catalyst
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					bit 4 NOx converting catalyst and/or NOx adsorber bit 3 Diesel Particulate Filter (DPF) bit 2 Boost pressure control system bit 1 Cold start aid system monitoring Status Where each bit is interpreted: 0 = test complete, or not supported 1 = test not complete
0x3001	TerMinal 15 status after debouncing	U8	1		
0x3002	Variable	U8	1		
0x3003	Accelerator Pedal 1 raw value in volt	Float	4	V	
0x3004	Accelerator Pedal 2 raw value in volt	Float	4	V	
0x3005	Accelerator pedal position	Float	4	%	
0x3006	Brake switch state	U8	1		
0x3007	Debounced value of Engine Brake switch signal	U8	1		
0x3008	Commanded value from appli-cation SW	Float	4	%	
0x3009	Clutch switch raw value	U8	1		
0x300a	Gearbox neutral position status signal	U8	1		
0x300b	Debounced value of Hand Brake switch	U8	1		
0x300c	Battery Voltage	Float	4	V	
0x300d	Vehicle Speed	Float	4	Km/h	
0x300e	Control value for the power sta-ge for intake air heater	U8	1		
0x300f	Raw status of cruise control plus key	U8	1		
0x3010	Raw status of cruise control Minus key	U8	1		
0x3011	Raw status of cruise control Off key	U8	1		
0x3012	Raw status of cruise control Resume key	U8	1		
0x3013	Adjustable Maximum vehicle S-peed limitation button status	U8	1		
0x3014	Power Take-off switch's current state for a specific input voltage	U8	1		

0x3015	Debounced value of fuel filter water level sensor signal	U8	1		
0x3016	Status of Diagnostic Request Switch after debouncing	U8	1		
0x3017	The engine speed limitation re-requested from TSC1 CAN messages. This engine speed limit is given to the speed governor	Float	4	rpm	
0x3018	The desired/control engine speed requested from TSC1 CAN messages. This desired/control engine speed is given to the speed governor	Float	4	rpm	
0x3019	Torque request to Engine (Eng) intervention -Decrement (Max)	Float	4	Nm	
0x301a	Torque request to Engine (Eng) intervention -Increment (Min)	Float	4	Nm	
0x301b	Inner torqueset valueafter monitoring limitation	Float	4	Nm	
0x301c	Engine speed	Float	4	rpm	
0x301d	Actual Engine Temperature	Float	4	V	
0x301e	Coolant Temperature	Float	4	Deg C	
0x301f	Raw value of voltage from the ADC	Float	4	V	
0x3020	Oil_pSensPSwmp	Float	4	bar	
0x3021	Filtered Fuel pressure value	Float	4	Kpa	
0x3022	metering unit duty cycle for HWE	Float	4	%	
0x3023	Raw value of rail pressure	Float	4	V	
0x3024	Maximum rail pressure of last 10ms	Float	4	Mpa	
0x3025	Setpoint rail pressure	Float	4	Mpa	
0x3026	Actual Injection Quantity	Float	4	mg/hug	
0x3027	Desired Pilt injection quantity	Float	4	mg/hug	
0x3028	Desired Pilt injection quantity	Float	4	mg/hug	

0x3029	Desired Pil1 injection quantity	Float	4	mg/hug	
0x302a	Desired Pil1 injection quantity	Float	4	mg/hug	
0x302b	Desired Pil1 injection quantity	Float	4	mg/hug	
0x302c	Desired Pil1 injection quantity	Float	4	mg/hug	
0x302d	Desired angular component for Pil1 start of energizing	Float	4	deg CrS	
0x302e	Desired reference angle for the start of MI1	Float	4	CA	
0x302f	Atmospheric pressure sensor	Float	4	V	
0x3030	Current atmospheric pressure	Float	4	Kpa	
0x3031	Raw ADC value of air pressure upstream of the intake valve	Float	4	V	
0x3032	Intake valve upstream pressure	Float	4	Kpa	
0x3033	Actual Intake Air Temperature	Float	4	V	
0x3034	Charged air temperature	Float	4	Deg C	
0x3035	Odometer	Float	4	km	
0x3036	UDC_mRdcAgDosQnt	U16	2	g	
0x3037	Status of output stage pressu-re-heater	U16	2		
0x3038	Status of output stage tank-hea-ter	U16	2		
0x3039	Powerstage feedback of back-flow line heater	U16	2		
0x303a	Digital output to the actuator SM heater	U16	2		
0x303b	Powerstage feedback of suction line	U16	2		
0x303c	Actual status of actuation for urea heater relay	U16	2		
0x303d	Raw voltage value from Urea Catalyst upstream Temperature Sensor read from ADC	Float	4	V	
0x303e	Raw signal from the continous and the 2 pin urea level sensors	Float	4	V	
0x303f	Raw Tank temperature	Float	4	V	
0x3040	Sensed physical value of the Urea catalyst upstream Temperature	Float	4	Deg C	
0x3041	Received NOx Concentration quantity	U16	2	ppm	

	over the CAN				
0x3042	计算载荷	Float	4	%	
0x3043	Total Fuel consumption	Float	4	L	
0x3044	当前档位	U8	1		
0x3045	远程油门使能开关	U8	1		
0x3046	支腿开关	U8	1		
0x3047	远程油门第1路踏板电压	Float	4	mv	
0x3048	远程油门开度	Float	4	%	
0x3049	远程油门状态(判断是在PTO状态还是支腿状态)	U8	1		
0x3101	Engine Oil Temperature	U8	1	DegC	$Y=x1 - 40$
0x3102	Engine Reference Torque	U16	2	Nm	$Y=(x1*0x100+x2)$
0x3103	Engine speed	Float	2	rpm	$Y=(x1*0x100+x2)/4$
0x3104	Fuel Level Input	Float	1	%	$Y=(x1 / 255) * 100$
0x3105	Fuel Pressure (Gauge)	Float	1	Kpa	$Y=(x1 / 255) * 765$
0x3106	Odometer	Float	4	km	$Y=(x1*0x1000000+x2*0x10000+x3*0x100+x4)/200$
0x3107	Total Fuel Consumption Trip Data	Float	4	L	$Y=(x1*0x1000000+x2*0x10000+x3*0x100+x4)/2$
0x3108	Total Time Trip Data	Float	4	H	$Y=(x1*0x1000000+x2*0x10000+x3*0x100+x4)/20$
0x3109	Vehicle Speed Sensor	U8	1	km/h	$Y=x1$
0x06e1	Ad blue DEF Level	U8	1	%	$Y=x1 * 0.4$
0x3260	Fuel Level	U16	2	L	

Note:

1. All are hex format if there is no special instruction, the byte is BIT1-BIT8
2. x means the corresponding raw data which to participate in the calculation, y means the results

Change History :

1. V1.0.2

Modified some error data types, e.g.: U166, U322

2. V1.0.3

Modified the name of PID 0x0066, 0x0980

The algorithm for 0x0253 0x0256 0x0255 0x03D0 is updated

3. V1.0.4

Added the algorithm for PID 0x0383

Added PID 0x0395, 0x00f4, 0x00BA, 0x0203, 0x0209

Modified name of PID 0x0396, 0x00f5, 0x0664, 0x0665

Modified name of PID 0x0d1d

4. V1.0.5

Modified PID 0x006a: data type changed from U8 to U16, the length changed from 1 to 2

Changed the length of PID 0x0664, 0x0665 from 1 to 4

Modified PID 0x0034, 0x00ad, 0x00ae, 0x00af, 0x00b0, 0x0069: data type changed from S8 to S16, the length changed from 1 to 2

The length of PID 0x00ba 0x0203 is 2

Added PID 0x00a1

5. V1.0.6

Modified algorithm for PID 0x0383

Modified the unit of PID 0x15a0 to degF

Modified PID 0x1b60, 0x1b70, 0x1f40, 0x1f50, 0x1f60, 0x1f70, 0x1f80, 0x1fa0: data type changed from u32 to float

Modified PID 0x9ffff to 0x9fff

6. V1.0.7

Added PID 0x00f7, 0x00f9

7. V1.0.8

Added PID 0x059c, 0x0bfd, 0x0c47, 0x0c48, 0x0c49, 0x0c4e, 0x0c4f

8. V1.0.9

Added PID 0x00b8, 0x00b9, 0x00ec, 0x03e9, 0x03ea, 0x03eb, 0x03ec, 0x03ed, 0x03ee, 0x0404, 0x0405

9. V1.1.0

Added PID 0x3001, 0x3002, 0x3003, 0x3004, 0x3005, 0x3006, 0x3007, 0x3008, 0x3009, 0x300a, 0x300b, 0x300c, 0x300d, 0x300e, 0x300f, 0x3010, 0x3011, 0x3012, 0x3013, 0x3014, 0x3015, 0x3016, 0x3017, 0x3018, 0x3019, 0x301a, 0x301b, 0x301c, 0x301d, 0x301e, 0x301f, 0x3020, 0x3021, 0x3022, 0x3023, 0x3024, 0x3025, 0x3026, 0x3027, 0x3028, 0x3029, 0x302a, 0x302b, 0x302c, 0x302d, 0x302e, 0x302f, 0x3030, 0x3031, 0x3032, 0x3033, 0x3034, 0x3035, 0x3036, 0x3037, 0x3038, 0x3039, 0x303a, 0x303b, 0x303c, 0x303d, 0x303e, 0x303f, 0x3040, 0x3041, 0x3042, 0x3043, 0x3044, 0x3045, 0x3046, 0x3047, 0x3048, 0x3049

10. V1.1.1

Added PID 0x00a8, 0x00f8

11. V1.1.2

Added PID 0x0026

12. V1.1.3

Added PID 0x3101, 0x3102, 0x3103, 0x3104, 0x3105, 0x3106, 0x3107, 0x3108, 0x3109

13. V1.1.4

Added PID 0x06e1, 0x3260

14. V1.1.5

Modified PID 0x3043 Data type s32-> Float

15. V1.1.6

Added PID 0x00b1

16. V1.1.7

Modified PID 0x1B60 to 4 bytes