



Pressure Transmitter M01-CAN  
with SAE J1939

36615

# Manual


# M01-CAN

Pressure Transmitter  
with SAE J1939



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## 1 History

Version	Date	Name	Change
1.00r0	06.03.2008	MB	Document created
1.01r0	25.06.2008	AKR	Media temperature according to datasheet
1.02r0	17.09.2008	AKR	Some PGNs and SPNs added
1.03r0	25.03.2009	AKR	Some PGNs and SPNs added
1.04r0	08.04.2009	AKR	STW-specific PGNs, SPNs and Slots added
1.05r0	26.05.2011	AKR	PGN 61448 with SPN 1762 added
1.05r1	26.08.2011	AKR	Hint of additional settings in 5.2.2 added
1.05r2	20.02.2012	AKR	PGN 1792 removed
1.05r3	13.03.2012	AKR	TRR description in 5.2.2 corrected
1.06r0	14.04.2015	SCM	Added new PGNs, SPNs and Slots
1.06r1	07.04.2017	CKA	Added Declaration of Conformity
1.06r2	04.03.2019	SCM	Added new PGNs, SPNs and Slots
1.07r0	26.11.2019	SCM	Added new PGNs, SPNs and Slots from SAE J1939 Digital Annex 2019-04, Updated Declaration of Conformity

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## 2 General

The pressure transmitter M01-CAN is measuring the physical quantity pressure. The range depends on the sensor which is used in the transmitter and is 25...800 bar. The measured value is transmitted on the CAN-Bus with the J1939 protocol. The transmitter takes 1000 samples per second, does filtering and converts the raw value into the output format.

The CAN2.0B interface is able to run up to a speed of 1 Mbit/sec with 11-bit und 29-bit identifiers.

## 3 CAN Interface

The device includes a Full CAN controller specified to CAN 2.0B. The physical layer of the 2-wire interface is specified according to ISO 11898. The wires are protected against short-circuit. By adjusting the rise and fall times of the CAN signals the noise emission is minimized. A bus termination resistor is *not* included in the device.

## 4 M01-CAN Specification

### 4.1 Supply Voltage +Us

Supply voltage:	9...36 VDC, protected against reverse polarity
Current consumption at Us = 24 VDC:	I < 50 mA typical, I <sub>MAX</sub> < 100 mA

### 4.2 CAN Interface

Physical layer:	2-wire interface, 5 V level according to ISO 11898 Protected against short-circuit
Bitrate:	250 kBit/sec
Signal rise time:	Bitrate < 125 Kbit/sec 12 V/μsec (without bus) Bitrate ≥ 125 Kbit/sec >24 V/μsec (without bus)
Bus termination:	external
Protocol:	SAE J1939

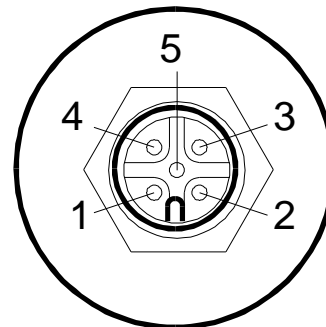
### 4.3 Environment

EMC:	noise emission	according to EN 50 081-2
	noise immunity	according to EN 50 082-2
Operating temperature:	-40...+125°C	
Media temperature:	-40...+150°C	

### 4.4 Connector Pin Assignment (CiA DR303-1)

The pin connection for the used 5 pole M12 connector is shown below (fig.: connector front view).

PIN	Assignment
1	CAN shield, PE
2	+U <sub>B</sub> , +24VDC
3	GND, 0V
4	CAN <sub>H</sub> , CAN+
5	CAN <sub>L</sub> , CAN-



## 5 J1939 Communication

### 5.1 Introduction

The Society of Automotive Engineers (SAE) developed the 1939 standard to be the preferred CAN for equipment used in industries ranging from agriculture, construction, and fire/rescue to forestry, materials handling as well as on and off-highway vehicles. It is a high-level protocol that defines how communication between nodes (modules) occurs on the bus. The 1939 network is a specific communication system, supporting specific sets of applications and a specific industry, rather than being generalized.

Any electronic control unit (ECU) using J1939 is permitted to transmit a message on the network when the bus is idle. Every message includes a 29-bit identifier, which defines the message priority, what data is contained within the 8-byte data array that follows the identifier, and which ECU sent the message.



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## 5.2 Supported PGN's and SPN's

### 5.2.1 Sorted by Slot

PGN	SPN	TRR <sup>*(2)</sup>	Data Position	Slot	Parameter Group Label	SPN Name
64976	2809	500 ms	1	SAEpr02	Intake/Exhaust Conditions 2	Engine Air Filter 2 Differential Pressure
64976	2810	500 ms	2	SAEpr02	Intake/Exhaust Conditions 2	Engine Air Filter 3 Differential Pressure
64976	2811	500 ms	3	SAEpr02	Intake/Exhaust Conditions 2	Engine Air Filter 4 Differential Pressure
65263	22	500 ms	2	SAEpr02	Engine Fluid Level/Pressure 1	Engine Extended Crankcase Blow-by Pressure
65270	107	500 ms	5	SAEpr02	Intake/Exhaust Conditions 1	Engine Air Filter 1 Differential Pressure
61703	8156	50 ms	1-2	SAEpr03	Well Stimulation Pump System 2	Well Stimulation Pump Gear Box Oil Pressure
61709	6885	100 ms	1-2	SAEpr03	Fuel Information 6 (Gaseous)	Engine Fuel Valve 2 Differential Pressure
64383	9814	OREQ	2-3	SAEpr03	Well Stimulation Pump System Filter Information	Well Stimulation Pump Gear Box Outlet Oil Pressure
64470	8619	100 ms	1-2	SAEpr03	Electronic Engine Controller 21	Engine Exhaust Manifold Absolute Pressure 1
64470	8620	100 ms	3-4	SAEpr03	Electronic Engine Controller 21	Engine Exhaust Manifold Absolute Pressure 2
64479	8477	500 ms	1-2	SAEpr03	Intake/Exhaust Conditions 3	Engine Mixer 1 Intake Pressure
64479	8607	500 ms	3-4	SAEpr03	Intake/Exhaust Conditions 3	Engine Mixer 2 Intake Pressure
64479	11731	500 ms	5-6	SAEpr03	Intake/Exhaust Conditions 3	Engine Intake Manifold 2 Absolute Pressure (High Resolution)
64479	12307	500 ms	7-8	SAEpr03	Intake/Exhaust Conditions 3	Desired Engine Intake Manifold Pressure High Limit
64500	8163	500 ms	1-2	SAEpr03	Aftertreatment 2 Diesel Oxidation Catalyst 2	Aftertreatment 2 Diesel Oxidation Catalyst Intake Pressure
64500	8164	500 ms	3-4	SAEpr03	Aftertreatment 2 Diesel Oxidation Catalyst 2	Aftertreatment 2 Diesel Oxidation Catalyst Outlet Pressure
64500	8165	500 ms	5-6	SAEpr03	Aftertreatment 2 Diesel Oxidation Catalyst 2	Aftertreatment 2 DOC Intake to DPF Outlet Delta Pressure
64501	8160	500 ms	1-2	SAEpr03	Aftertreatment 1 Diesel Oxidation Catalyst 2	Aftertreatment 1 Diesel Oxidation Catalyst Intake Pressure
64501	8161	500 ms	3-4	SAEpr03	Aftertreatment 1 Diesel Oxidation Catalyst 2	Aftertreatment 1 Diesel Oxidation Catalyst Outlet Pressure
64501	8162	500 ms	5-6	SAEpr03	Aftertreatment 1 Diesel Oxidation Catalyst 2	Aftertreatment 1 DOC Intake to DPF Outlet Delta Pressure
64528	7781	1000 ms	1-2	SAEpr03	Ambient Conditions 3	Barometric Absolute Pressure 2
64557	6787	500 ms	1-2	SAEpr03	Alternate Fuel 5	LNG Tank 1 Vapor Pressure
64557	6788	500 ms	3-4	SAEpr03	Alternate Fuel 5	LNG Tank 2 Vapor Pressure
64659	6571	OREQ	1-2	SAEpr03	Gaseous Fuel Pressure 2	Engine Main Chamber Fuel Absolute Pressure
64659	6572	OREQ	3-4	SAEpr03	Gaseous Fuel Pressure 2	Engine Main Chamber Fuel Desired Absolute Pressure
64659	6573	OREQ	5-6	SAEpr03	Gaseous Fuel Pressure 2	Engine Prechamber Fuel Absolute Pressure
64659	6574	OREQ	7-8	SAEpr03	Gaseous Fuel Pressure 2	Engine Prechamber Fuel Desired Absolute Pressure
64662	7470	100 ms	3-4	SAEpr03	Engine Information 2	Engine Oil Filter Intake Pressure (High Resolution/Extended Range)
64733	5590	500 ms	1-2	SAEpr03	Aftertreatment 2 Air Control 3	Aftertreatment 2 Secondary Air Absolute Pressure
64734	5589	500 ms	1-2	SAEpr03	Aftertreatment 1 Air Control 3	Aftertreatment 1 Secondary Air Absolute Pressure
64735	7595	500 ms	6-7	SAEpr03	Engine Fluid Level/Pressure 12	Engine Throttle Valve 2 Differential Pressure
64751	5430	500 ms	1-2	SAEpr03	Engine Fluid Level/Pressure 11	Engine Exhaust Gas Recirculation 1 Intake Absolute Pressure
64751	5431	500 ms	3-4	SAEpr03	Engine Fluid Level/Pressure 11	Engine Exhaust Gas Recirculation 1 Outlet Absolute Pressure (High Resolution)
64751	7468	500 ms	5-6	SAEpr03	Engine Fluid Level/Pressure 11	Engine Oil Pressure (High Resolution/Extended Range)



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PGN	SPN	TRR*2)	Data Position	Slot	Parameter Group Label	SPN Name
64751	7469	500 ms	7-8	SAEpr03	Engine Fluid Level/Pressure 11	Engine Fuel Delivery Pressure (High Resolution/Extended Range)
64752	7395	500 ms	4-5	SAEpr03	Engine Fuel/Lube Systems 2	Fuel Tank Transfer Pump Pressure
64768	5254	500 ms	4-5	SAEpr03	Engine Fluid Level/Pressure 10	Engine Exhaust Gas Recirculation 2 Outlet Absolute Pressure
64768	5429	500 ms	6-7	SAEpr03	Engine Fluid Level/Pressure 10	Engine Exhaust Gas Recirculation 2 Intake Absolute Pressure
64800	4767	500 ms	5-6	SAEpr03	Aftertreatment 1 Diesel Oxidation Catalyst 1	Aftertreatment 1 Diesel Oxidation Catalyst Differential Pressure
64801	4761	500 ms	5-6	SAEpr03	Aftertreatment 2 Gas Oxidation Catalyst	Aftertreatment 2 Gas Oxidation Catalyst Differential Pressure
64802	4755	500 ms	5-6	SAEpr03	Aftertreatment 1 Gas Oxidation Catalyst	Aftertreatment 1 Gas Oxidation Catalyst Differential Pressure
64825	4411	500 ms	1-2	SAEpr03	Aftertreatment 2 SCR Exhaust Gas Press- sures	Aftertreatment 2 SCR Differential Pressure
64825	6798	500 ms	6-7	SAEpr03	Aftertreatment 2 SCR Exhaust Gas Press- sures	Aftertreatment 2 SCR Intake Absolute Pressure
64831	4358	500 ms	1-2	SAEpr03	Aftertreatment 1 SCR Exhaust Gas Pressures	Aftertreatment 1 SCR Differential Pressure
64831	6797	500 ms	6-7	SAEpr03	Aftertreatment 1 SCR Exhaust Gas Pressures	Aftertreatment 1 SCR Intake Absolute Pressure
64836	4303	500 ms	1-2	SAEpr03	Aftertreatment 2 Fuel Control 2	Aftertreatment 2 Fuel Pressure 2
64837	4297	500 ms	5-6	SAEpr03	Aftertreatment 2 Three Way Catalyst	Aftertreatment 2 Three Way Catalyst Differential Pressure
64838	4291	500 ms	5-6	SAEpr03	Aftertreatment 1 Three Way Catalyst	Aftertreatment 1 Three Way Catalyst Differential Pressure
64869	4077	500 ms	1-2	SAEpr03	Aftertreatment 1 Fuel Control 2	Aftertreatment 1 Fuel Pressure 2
64876	3838	500 ms	7-8	SAEpr03	Aftertreatment 2 Air Control 2	Aftertreatment 2 Secondary Air Pressure
64877	3837	500 ms	7-8	SAEpr03	Aftertreatment 1 Air Control 2	Aftertreatment 1 Secondary Air Pressure
64900	3640	500 ms	1-2	SAEpr03	Engine Fluid Level/Pressure 9	Engine Intake Valve Actuation Oil Pressure for Cylinder #17
64900	3641	500 ms	3-4	SAEpr03	Engine Fluid Level/Pressure 9	Engine Intake Valve Actuation Oil Pressure for Cylinder #18
64900	3642	500 ms	5-6	SAEpr03	Engine Fluid Level/Pressure 9	Engine Intake Valve Actuation Oil Pressure for Cylinder #19
64900	3643	500 ms	7-8	SAEpr03	Engine Fluid Level/Pressure 9	Engine Intake Valve Actuation Oil Pressure for Cylinder #20
64901	3636	500 ms	1-2	SAEpr03	Engine Fluid Level/Pressure 8	Engine Intake Valve Actuation Oil Pressure for Cylinder #13
64901	3637	500 ms	3-4	SAEpr03	Engine Fluid Level/Pressure 8	Engine Intake Valve Actuation Oil Pressure for Cylinder #14
64901	3638	500 ms	5-6	SAEpr03	Engine Fluid Level/Pressure 8	Engine Intake Valve Actuation Oil Pressure for Cylinder #15
64901	3639	500 ms	7-8	SAEpr03	Engine Fluid Level/Pressure 8	Engine Intake Valve Actuation Oil Pressure for Cylinder #16
64902	3632	500 ms	1-2	SAEpr03	Engine Fluid Level/Pressure 7	Engine Intake Valve Actuation Oil Pressure for Cylinder #9
64902	3633	500 ms	3-4	SAEpr03	Engine Fluid Level/Pressure 7	Engine Intake Valve Actuation Oil Pressure for Cylinder #10
64902	3634	500 ms	5-6	SAEpr03	Engine Fluid Level/Pressure 7	Engine Intake Valve Actuation Oil Pressure for Cylinder #11
64902	3635	500 ms	7-8	SAEpr03	Engine Fluid Level/Pressure 7	Engine Intake Valve Actuation Oil Pressure for Cylinder #12
64903	3628	500 ms	1-2	SAEpr03	Engine Fluid Level/Pressure 6	Engine Intake Valve Actuation Oil Pressure for Cylinder #5
64903	3629	500 ms	3-4	SAEpr03	Engine Fluid Level/Pressure 6	Engine Intake Valve Actuation Oil Pressure for Cylinder #6
64903	3630	500 ms	5-6	SAEpr03	Engine Fluid Level/Pressure 6	Engine Intake Valve Actuation Oil Pressure for Cylinder #7
64903	3631	500 ms	7-8	SAEpr03	Engine Fluid Level/Pressure 6	Engine Intake Valve Actuation Oil Pressure for Cylinder #8
64904	3624	500 ms	1-2	SAEpr03	Engine Fluid Level/Pressure 5	Engine Intake Valve Actuation Oil Pressure for Cylinder #1



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64904	3625	500 ms	3-4	SAEpr03	Engine Fluid Level/Pressure 5	Engine Intake Valve Actuation Oil Pressure for Cylinder #2
64904	3626	500 ms	5-6	SAEpr03	Engine Fluid Level/Pressure 5	Engine Intake Valve Actuation Oil Pressure for Cylinder #3
64904	3627	500 ms	7-8	SAEpr03	Engine Fluid Level/Pressure 5	Engine Intake Valve Actuation Oil Pressure for Cylinder #4
64907	3611	500 ms	1-2	SAEpr03	Aftertreatment 2 Gas Parameters	Aftertreatment 2 Diesel Particulate Filter Intake Pressure
64907	3612	500 ms	3-4	SAEpr03	Aftertreatment 2 Gas Parameters	Aftertreatment 2 Diesel Particulate Filter Outlet Pressure
64908	3609	500 ms	1-2	SAEpr03	Aftertreatment 1 Gas Parameters	Aftertreatment 1 Diesel Particulate Filter Intake Pressure
64908	3610	500 ms	3-4	SAEpr03	Aftertreatment 1 Gas Parameters	Aftertreatment 1 Diesel Particulate Filter Outlet Pressure
64926	3499	500 ms	1-2	SAEpr03	Aftertreatment 2 Air Control 1	Aftertreatment 2 Supply Air Pressure
64926	3500	500 ms	3-4	SAEpr03	Aftertreatment 2 Air Control 1	Aftertreatment 2 Purge Air Pressure
64927	3485	500 ms	1-2	SAEpr03	Aftertreatment 1 Air Control 1	Aftertreatment 1 Supply Air Pressure
64927	3486	500 ms	3-4	SAEpr03	Aftertreatment 1 Air Control 1	Aftertreatment 1 Purge Air Pressure
64928	3494	500 ms	1-2	SAEpr03	Aftertreatment 2 Fuel Control 1	Aftertreatment 2 Fuel Pressure 1
64929	3480	500 ms	1-2	SAEpr03	Aftertreatment 1 Fuel Control 1	Aftertreatment 1 Fuel Pressure 1
64930	3466	500 ms	1-2	SAEpr03	Fuel Information 3 (Gaseous)	Engine Fuel Valve 2 Intake Absolute Pressure
64930	3469	500 ms	7-8	SAEpr03	Fuel Information 3 (Gaseous)	Engine Fuel Valve 2 Outlet Absolute Pressure
64943	3285	500 ms	5-6	SAEpr03	Aftertreatment 2 Intermediate Gas	Aftertreatment 2 Diesel Particulate Filter Differential Pressure
64946	3251	500 ms	5-6	SAEpr03	Aftertreatment 1 Intermediate Gas	Aftertreatment 1 Diesel Particulate Filter Differential Pressure
64961	5631	500 ms	7-8	SAEpr03	Engine Fluid Level/Pressure 3	Engine Throttle Valve 1 Differential Pressure
64976	4817	500 ms	6-7	SAEpr03	Intake/Exhaust Conditions 2	Engine Intake Manifold 1 Absolute Pressure (High Resolution)
64992	5685	1000 ms	7-8	SAEpr03	Ambient Conditions 2	Barometric Absolute Pressure (High Resolution)
65112	1725	100 ms	1-2	SAEpr03	Air Suspension Control 4	Bellow Pressure Front Axle Left
65112	1726	100 ms	3-4	SAEpr03	Air Suspension Control 4	Bellow Pressure Front Axle Right
65112	1727	100 ms	5-6	SAEpr03	Air Suspension Control 4	Bellow Pressure Rear Axle Left
65112	1728	100 ms	7-8	SAEpr03	Air Suspension Control 4	Bellow Pressure Rear Axle Right
65163	1390	100 ms	1-2	SAEpr03	Gaseous Fuel Pressure 1	Engine Fuel Valve 1 Intake Absolute Pressure
65163	1391	100 ms	3-4	SAEpr03	Gaseous Fuel Pressure 1	Engine Fuel Valve 1 Differential Pressure
65163	1392	100 ms	5-6	SAEpr03	Gaseous Fuel Pressure 1	Engine Air to Fuel Differential Pressure
65163	2980	100 ms	7-8	SAEpr03	Gaseous Fuel Pressure 1	Engine Fuel Valve 1 Outlet Absolute Pressure
64662	6384	100 ms	1-2	SAEpr04	Engine Information 2	Engine Exhaust Pressure 1 (Extended Range)
64916	5312	100 ms	7-8	SAEpr04	Electronic Engine Controller 7	Engine Intake Manifold Commanded Pressure
65190	1127	500 ms	1-2	SAEpr04	Intake Manifold Information 1	Engine Turbocharger 1 Boost Pressure
65190	1128	500 ms	3-4	SAEpr04	Intake Manifold Information 1	Engine Turbocharger 2 Boost Pressure
65190	1129	500 ms	5-6	SAEpr04	Intake Manifold Information 1	Engine Turbocharger 3 Boost Pressure
65190	1130	500 ms	7-8	SAEpr04	Intake Manifold Information 1	Engine Turbocharger 4 Boost Pressure
65269	108	1000 ms	1	SAEpr05	Ambient Conditions	Barometric Pressure
65270	81	500 ms	1	SAEpr05	Intake/Exhaust Conditions 1	Aftertreatment 1 Diesel Particulate Filter Intake Pressure (use SPN 3609)
65270	112	500 ms	8	SAEpr05	Intake/Exhaust Conditions 1	Engine Coolant Filter Differential Pressure
65276	99	1000 ms	4	SAEpr05	Dash Display 1	Engine Oil Filter Differential Pressure
61713	12302	100 ms	5-6	SAEpr06	Gaseous Fuel Pressure 3	Engine Gaseous Fuel Supply Filter Intake Pressure
64569	7067	500 ms	1-2	SAEpr06	Gaseous Fuel Supply Pressure 2	Plant Gaseous Fuel Supply Outlet Pressure





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PGN	SPN	TRR <sup>(*)2)</sup>	Data Position	Slot	Parameter Group Label	SPN Name
64569	7068	500 ms	3-4	SAEpr06	Gaseous Fuel Supply Pressure 2	Plant Inert Gas Supply Outlet Pressure
64570	7063	500 ms	1-2	SAEpr06	Gaseous Fuel Supply Pressure 1	Engine Gaseous Fuel Supply Pressure 2
64570	7064	500 ms	3-4	SAEpr06	Gaseous Fuel Supply Pressure 1	Engine Gaseous Fuel Supply Unit Intake Pressure
64570	7065	500 ms	5-6	SAEpr06	Gaseous Fuel Supply Pressure 1	Engine Gaseous Fuel Supply Shutoff Valve 1 Intake Pressure
64570	7066	500 ms	7-8	SAEpr06	Gaseous Fuel Supply Pressure 1	Engine Gaseous Fuel Supply Shutoff Valve 2 Intake Pressure
64766	5259	OREQ	3-4	SAEpr06	Electronic Engine Controller 10	Engine Exhaust Gas Recirculation 2 Cooler Intake Gas Absolute Pressure
64799	4773	500 ms	5-6	SAEpr06	Aftertreatment 2 Diesel Oxidation Catalyst 1	Aftertreatment 2 Diesel Oxidation Catalyst Differential Pressure
64817	1707	1000 ms	5-6	SAEpr06	Fan Drive #2	Hydraulic Fan 2 Motor Pressure
64879	4751	OREQ	5-6	SAEpr06	Electronic Engine Controller 8	Engine Exhaust Gas Recirculation 1 Cooler Intake Absolute Pressure
65143	136	OREQ	1-2	SAEpr06	Auxiliary Pressures	Auxiliary Vacuum Pressure Reading
65143	137	OREQ	3-4	SAEpr06	Auxiliary Pressures	Auxiliary Gage Pressure Reading 1
65143	138	OREQ	5-6	SAEpr06	Auxiliary Pressures	Auxiliary Absolute Pressure Reading
65145	141	OREQ	1-2	SAEpr06	Tire Pressure Control Unit Target Pressures	Trailer Tag Or Push Channel Tire Pressure Target
65145	142	OREQ	3-4	SAEpr06	Tire Pressure Control Unit Target Pressures	Drive Channel Tire Pressure Target
65145	143	OREQ	5-6	SAEpr06	Tire Pressure Control Unit Target Pressures	Steer Channel Tire Pressure Target
65146	144	OREQ	1-2	SAEpr06	Tire Pressure Control Unit Current Pressures	Trailer Tag Or Push Channel Tire Pressure
65146	145	OREQ	3-4	SAEpr06	Tire Pressure Control Unit Current Pressures	Drive Channel Tire Pressure
65146	146	OREQ	5-6	SAEpr06	Tire Pressure Control Unit Current Pressures	Steer Channel Tire Pressure
65167	1320	1000 ms	1-2	SAEpr06	Supply Pressure 2	Engine External Shutdown Air Supply Pressure
65213	4211	1000 ms	5-6	SAEpr06	Fan Drive #1	Hydraulic Fan Motor Pressure
65277	159	500 ms	2-3	SAEpr06	Alternate Fuel 1	Engine Gaseous Fuel Supply Pressure 1
65277	6814	500 ms	4-5	SAEpr06	Alternate Fuel 1	Engine Gaseous Fuel Vent Pressure
64469	8635	1000 ms	1	SAEpr07	Aftercooler and Oil Cooler Fluids 2	Alternator Bearing Header Intake Pressure
64469	8636	1000 ms	2	SAEpr07	Aftercooler and Oil Cooler Fluids 2	Alternator Oil Cooler Discharge Pump Pressure
64469	8637	1000 ms	3	SAEpr07	Aftercooler and Oil Cooler Fluids 2	Engine Oil Cooler Discharge Pump Pressure
64480	8472	1000 ms	8	SAEpr07	Aftercooler and Oil Cooler Fluids 1	Alternator Aftercooler Coolant Pump Outlet Pressure
64739	5541	100 ms	1	SAEpr07	Engine Exhaust Brake Control	Engine Turbocharger 1 Turbine Outlet Pressure
64739	5542	100 ms	2	SAEpr07	Engine Exhaust Brake Control	Engine Turbocharger 1 Turbine Desired Outlet Pressure
64739	5544	100 ms	4	SAEpr07	Engine Exhaust Brake Control	Engine Turbocharger 2 Turbine Outlet Pressure
64739	5545	100 ms	5	SAEpr07	Engine Exhaust Brake Control	Engine Turbocharger 2 Turbine Desired Outlet Pressure
64752	5417	500 ms	1	SAEpr07	Engine Fuel/Lube Systems 2	Engine Fuel Filter (Suction Side) Intake Absolute Pressure
64768	5253	500 ms	3	SAEpr07	Engine Fluid Level/Pressure 10	Engine Exhaust Gas Recirculation 2 Intake Pressure
64768	5708	500 ms	8	SAEpr07	Engine Fluid Level/Pressure 10	Engine Coolant Pressure 2
64938	3340	500 ms	1	SAEpr07	Engine Fluid Level/Pressure 4	Engine Charge Air Cooler 1 Intake Pressure
64938	3341	500 ms	2	SAEpr07	Engine Fluid Level/Pressure 4	Engine Charge Air Cooler 2 Intake Pressure
64938	2631	500 ms	8	SAEpr07	Engine Fluid Level/Pressure 4	Engine Charge Air Cooler Outlet Pressure
64961	3358	500 ms	3	SAEpr07	Engine Fluid Level/Pressure 3	Engine Exhaust Gas Recirculation 1 Intake Pressure
64961	5019	500 ms	6	SAEpr07	Engine Fluid Level/Pressure 3	Engine Exhaust Gas Recirculation 1 Outlet Pressure
64976	3562	500 ms	4	SAEpr07	Intake/Exhaust Conditions 2	Engine Intake Manifold #2 Pressure
64976	3563	500 ms	5	SAEpr07	Intake/Exhaust Conditions 2	Engine Intake Manifold #1 Absolute Pressure



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PGN	SPN	TRR <sup>(*)</sup>	Data Position	Slot	Parameter Group Label	SPN Name
64976	5422	500 ms	8	SAEpr07	Intake/Exhaust Conditions 2	Engine Intake Manifold 2 Absolute Pressure
65130	1381	500 ms	2	SAEpr07	Engine Fuel/Lube Systems	Engine Fuel Supply Pump Intake Absolute Pressure
65130	1382	500 ms	3	SAEpr07	Engine Fuel/Lube Systems	Engine Fuel Filter (suction side) Differential Pressure
65130	7104	500 ms	8	SAEpr07	Engine Fuel/Lube Systems	Engine Fuel Supply Pump Intake Pressure
65172	2435	500 ms	3	SAEpr07	Engine Auxiliary Coolant	Sea Water Pump Outlet Pressure
65172	8473	500 ms	6	SAEpr07	Engine Auxiliary Coolant	Engine Coolant Pump Coolant Outlet Pressure
65263	109	500 ms	7	SAEpr07	Engine Fluid Level/Pressure 1	Engine Coolant Pressure 1
65270	102	500 ms	2	SAEpr07	Intake/Exhaust Conditions 1	Engine Intake Manifold #1 Pressure
65270	106	500 ms	4	SAEpr07	Intake/Exhaust Conditions 1	Engine Intake Air Pressure
65272	126	1000 ms	3	SAEpr07	Transmission Fluids 1	Transmission Filter Differential Pressure
65276	95	1000 ms	3	SAEpr07	Dash Display 1	Engine Fuel Filter Differential Pressure
61448	1762	50 ms	1-2	SAEpr08	Hydraulic Pressure Governor Info	Hydraulic Pressure
61448	6708	50 ms	6-7	SAEpr08	Hydraulic Pressure Governor Info	Hydraulic Discharge Pressure Set Point
64576	7019	500 ms	4-5	SAEpr08	Engine Hydraulic Fuel 2 Pump Status	Engine Fuel 2 Pump Hydraulic Pressure
64577	7021	500 ms	1-2	SAEpr08	Alternate Fuel 4	Engine Fuel 2 Injector Metering Rail 1 Pressure
64577	7022	500 ms	3-4	SAEpr08	Alternate Fuel 4	Engine Fuel 2 Injector Metering Rail 2 Pressure
64577	7513	500 ms	7-8	SAEpr08	Alternate Fuel 4	Engine Fuel 2 Injector Metering Rail 1 Pressure 2
64383	9813	OREQ	1	SAEpr10	Well Stimulation Pump System Filter Information	Well Stimulation Pump Oil Filter Differential Pressure
64393	9653	500 ms	1	SAEpr10	Engine Fluid Level/Pressure 13	Engine Oil Pressure 2
64589	6876	500 ms	1	SAEpr10	Aftertreatment 2 SCR Dosing System Information 3	Aftertreatment 2 Diesel Exhaust Fluid Doser Pressure
64589	8153	500 ms	4	SAEpr10	Aftertreatment 2 SCR Dosing System Information 3	Aftertreatment 2 Diesel Exhaust Fluid Doser 2 Pressure
64590	6875	500 ms	1	SAEpr10	Aftertreatment 1 SCR Dosing System Information 3	Aftertreatment 1 Diesel Exhaust Fluid Doser Pressure
64590	8152	500 ms	4	SAEpr10	Aftertreatment 1 SCR Dosing System Information 3	Aftertreatment 1 Diesel Exhaust Fluid Doser 2 Pressure
64595	6837	500 ms	4	SAEpr10	Engine Gaseous Leakage Information	Gas Leakage Detection 1 Pressure
64595	6838	500 ms	5	SAEpr10	Engine Gaseous Leakage Information	Gas Leakage Detection 2 Pressure
64595	6839	500 ms	6	SAEpr10	Engine Gaseous Leakage Information	Gas Leakage Detection 3 Pressure
64600	6811	1000 ms	1	SAEpr10	Turbocharger Information 7	Engine Turbocharger 2 Lube Oil Pressure
64600	6812	1000 ms	2	SAEpr10	Turbocharger Information 7	Engine Turbocharger 3 Lube Oil Pressure
64600	6813	1000 ms	3	SAEpr10	Turbocharger Information 7	Engine Turbocharger 4 Lube Oil Pressure
64662	7720	100 ms	5	SAEpr10	Engine Information 2	Engine Common Rail Oil Pressure
64662	7721	100 ms	6	SAEpr10	Engine Information 2	Engine Common Rail Oil Absolute Pressure
64735	5578	500 ms	1	SAEpr10	Engine Fluid Level/Pressure 12	Engine Fuel Delivery Absolute Pressure
64735	5579	500 ms	2	SAEpr10	Engine Fluid Level/Pressure 12	Engine Filtered Fuel Delivery Pressure
64735	5580	500 ms	3	SAEpr10	Engine Fluid Level/Pressure 12	Engine Filtered Fuel Delivery Absolute Pressure
64752	9648	500 ms	6	SAEpr10	Engine Fuel/Lube Systems 2	Engine Fuel Pump Intake Oil Pressure
65130	3549	500 ms	5	SAEpr10	Engine Fuel/Lube Systems	Engine Oil Filter Outlet Pressure
65170	1208	100 ms	1	SAEpr10	Engine Information 1	Engine Oil Filter Intake Pressure
65172	1203	500 ms	1	SAEpr10	Engine Auxiliary Coolant	Engine Auxiliary Coolant Pressure
65172	20	500 ms	4	SAEpr10	Engine Auxiliary Coolant	Engine Coolant Pressure 1 (Extended Range)
65172	7313	500 ms	5	SAEpr10	Engine Auxiliary Coolant	Engine Coolant Pressure 2 (Extended Range)
65174	1192	100 ms	5	SAEpr10	Turbocharger Wastegate	Engine Turbocharger Wastegate Actuator Control Air Pressure
65179	1168	1000 ms	1	SAEpr10	Turbocharger Information 1	Engine Turbocharger Lube Oil Pressure 2



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PGN	SPN	TRR <sup>(*)</sup>	Data Position	Slot	Parameter Group Label	SPN Name
65245	104	1000 ms	1	SAEpr10	Turbocharger	Engine Turbocharger Lube Oil Pressure 1
65246	82	OREQ	1	SAEpr10	Engine Air Start Pressure	Engine Air Start Pressure
65246	6832	OREQ	3	SAEpr10	Engine Air Start Pressure	Engine Air Stop Pressure
65263	94	500 ms	1	SAEpr10	Engine Fluid Level/Pressure 1	Engine Fuel Delivery Pressure
65263	100	500 ms	4	SAEpr10	Engine Fluid Level/Pressure 1	Engine Oil Pressure 1
65268	241	10000 ms	2	SAEpr10	Tire Condition Message 1	Tire Pressure
65273	579	1000 ms	3	SAEpr10	Axle Information	Drive Axle Lift Air Pressure
65273	2613	1000 ms	5	SAEpr10	Axle Information	Drive Axle Lube Pressure
65273	2614	1000 ms	8	SAEpr10	Axle Information	Steering Axle Lube Pressure
65274	116	1000 ms	1	SAEpr10	Brakes 1	Brake Application Pressure
65274	117	1000 ms	2	SAEpr10	Brakes 1	Brake Primary Pressure
65274	118	1000 ms	3	SAEpr10	Brakes 1	Brake Secondary Pressure
64735	7472	500 ms	8	SAEpr11	Engine Fluid Level/Pressure 12	Engine Fuel Supply Pump Intake Absolute Pressure (Extended Range)
65197	1091	100 ms	1	SAEpr11	Wheel Application Pressure High Range Information	Brake Application Pressure High Range Front Axle Left Wheel
65197	1092	100 ms	2	SAEpr11	Wheel Application Pressure High Range Information	Brake Application Pressure High Range Front Axle Right Wheel
65197	1093	100 ms	3	SAEpr11	Wheel Application Pressure High Range Information	Brake Application Pressure High Range Rear Axle #1 Left Wheel
65197	1094	100 ms	4	SAEpr11	Wheel Application Pressure High Range Information	Brake Application Pressure High Range Rear Axle #1 Right Wheel
65197	1095	100 ms	5	SAEpr11	Wheel Application Pressure High Range Information	Brake Application Pressure High Range Rear Axle #2 Left Wheel
65197	1096	100 ms	6	SAEpr11	Wheel Application Pressure High Range Information	Brake Application Pressure High Range Rear Axle #2 Right Wheel
65197	1097	100 ms	7	SAEpr11	Wheel Application Pressure High Range Information	Brake Application Pressure High Range Rear Axle #3 Left Wheel
65197	1098	100 ms	8	SAEpr11	Wheel Application Pressure High Range Information	Brake Application Pressure High Range Rear Axle #3 Right Wheel
65276	7471	1000 ms	8	SAEpr11	Dash Display 1	Engine Oil Filter Differential Pressure (Extended Range)
1792 <sup>(*)</sup>	4086	100 ms	1-2	SAEpr12	General Purpose Valve Pressure	Valve Load Sense Pressure
1792 <sup>(*)</sup>	4088	100 ms	4-5	SAEpr12	General Purpose Valve Pressure	Valve Assembly Load sense Pressure
1792 <sup>(*)</sup>	4089	100 ms	6-7	SAEpr12	General Purpose Valve Pressure	Valve Assembly Supply Pressure
61702	8155	50 ms	3-4	SAEpr12	Well Stimulation Pump System 1	Well Stimulation Pump Discharge Pressure
64404	9379	OREQ	1-2	SAEpr12	Electronic Engine Controller 22	Engine Exhaust Gas Recirculation 1 Cooler Intake Pressure
64564	7096	500 ms	1-2	SAEpr12	Engine Fuel Injector Metering Rail Pressure Information 2	Engine Fuel 1 Injector Metering Rail 1 Pressure 1 (Extended Range)
64564	7097	500 ms	3-4	SAEpr12	Engine Fuel Injector Metering Rail Pressure Information 2	Engine Fuel 1 Injector Metering Rail 1 Pressure 2 (Extended Range)
64564	7098	500 ms	5-6	SAEpr12	Engine Fuel Injector Metering Rail Pressure Information 2	Engine Fuel 1 Injector Metering Rail 2 Pressure 1 (Extended Range)
64564	7099	500 ms	7-8	SAEpr12	Engine Fuel Injector Metering Rail Pressure Information 2	Engine Fuel 1 Injector Metering Rail 2 Pressure 2 (Extended Range)
64766	9380	OREQ	7-8	SAEpr12	Electronic Engine Controller 10	Engine Exhaust Gas Recirculation 2 Cooler Intake Pressure
61475	4334	50 ms	6	SAEpr13	Aftertreatment 1 SCR Dosing System Information 1	Aftertreatment 1 Diesel Exhaust Fluid Doser 1 Absolute Pressure
61478	4387	50 ms	6	SAEpr13	Aftertreatment 2 SCR Dosing System Information 1	Aftertreatment 2 Diesel Exhaust Fluid Doser 1 Absolute Pressure
64559	7350	1000 ms	4	SAEpr13	Fire Suppression Agent Status	Fire Suppression Compressed Air Foam System Air Pressure
64589	7464	500 ms	2	SAEpr13	Aftertreatment 2 SCR Dosing System Information 3	Aftertreatment 2 Diesel Exhaust Fluid Doser 2 Absolute Pressure



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PGN	SPN	TRR <sup>*2)</sup>	Data Position	Slot	Parameter Group Label	SPN Name
64590	7459	500 ms	2	SAEpr13	Aftertreatment 1 SCR Dosing System Information 3	Aftertreatment 1 Diesel Exhaust Fluid Doser 2 Absolute Pressure
64827	4388	500 ms	1	SAEpr13	Aftertreatment 2 SCR Dosing System Information 2	Aftertreatment 2 SCR Dosing Air Assist Absolute Pressure
64833	4335	500 ms	1	SAEpr13	Aftertreatment 1 SCR Dosing System Information 2	Aftertreatment 1 SCR Dosing Air Assist Absolute Pressure
65198	46	1000 ms	1	SAEpr13	Air Supply Pressure	Pneumatic Supply Pressure
65198	1086	1000 ms	2	SAEpr13	Air Supply Pressure	Parking and/or Trailer Air Pressure
65198	1087	1000 ms	3	SAEpr13	Air Supply Pressure	Service Brake Circuit 1 Air Pressure
65198	1088	1000 ms	4	SAEpr13	Air Supply Pressure	Service Brake Circuit 2 Air Pressure
65198	1089	1000 ms	5	SAEpr13	Air Supply Pressure	Auxiliary Equipment Supply Pressure
65198	1090	1000 ms	6	SAEpr13	Air Supply Pressure	Air Suspension Supply Pressure
65198	6305	1000 ms	8	SAEpr13	Air Supply Pressure	Powertrain Circuit Air Supply Pressure
1792 <sup>*1)</sup>	4087	100 ms	3	SAEpr14	General Purpose Valve Pressure	Valve Pilot Pressure
64705	5937	1000 ms	1	SAEpr14	Transmission Fluids 3	Transmission Clutch 2 Pressure
65164	1387	OREQ	3	SAEpr14	Auxiliary Analog Information	Auxiliary Pressure #1
65164	1388	OREQ	4	SAEpr14	Auxiliary Analog Information	Auxiliary Pressure #2
65246	6831	OREQ	2	SAEpr14	Engine Air Start Pressure	Engine Air Start Pressure (Extended Range)
65272	123	1000 ms	1	SAEpr14	Transmission Fluids 1	Transmission Clutch 1 Pressure
65272	127	1000 ms	4	SAEpr14	Transmission Fluids 1	Transmission 1 Oil Pressure
65275	119	1000 ms	1	SAEpr14	Retarder fluids	Hydraulic Retarder Pressure
65278	73	1000 ms	1	SAEpr14	Auxiliary Water Pump Pressure	Auxiliary Pump Pressure
64998	2580	100 ms	1	SAEpr15	Hydraulic Braking System	Hydraulic Brake Pressure Circuit 1
64998	2581	100 ms	2	SAEpr15	Hydraulic Braking System	Hydraulic Brake Pressure Circuit 2
64735	6816	500 ms	5	SAEpr17	Engine Fluid Level/Pressure 12	Engine Fuel Return Pressure
64938	3342	500 ms	3	SAEpr17	Engine Fluid Level/Pressure 4	Engine Coolant Pump Differential Pressure
61448	6707	50 ms	4-5	SAEpr20	Hydraulic Pressure Governor Info	Hydraulic Intake Pressure
61538	6583	10 ms	1-2	SAEpr22	Electronic Transmission Controller #12	Transmission Hydrostatic Loop 1 Pressure
61538	6584	10 ms	3-4	SAEpr22	Electronic Transmission Controller #12	Transmission Hydrostatic Loop 2 Pressure
61701	7939	20 ms	1-2	SAEpr22	Hydraulic Pressure Displacement	Hydraulic Line Pressure
64578	6988	10000 ms	2-3	SAEpr22	Tire Condition Message 2	Tire Pressure (Extended Range)
64578	6989	10000 ms	4-5	SAEpr22	Tire Condition Message 2	Required Tire Pressure
64579	6980	OREQ	2-3	SAEpr22	Tire Configuration Status Information	Cold Inflation Pressure
65277	7581	500 ms	7-8	SAEpr22	Alternate Fuel 1	Engine Gaseous Fuel Pressure Regulator Intake Pressure
61713	8494	100 ms	1-2	SAEpr25	Gaseous Fuel Pressure 3	Engine Fuel Valve 1 Differential Pressure (High Resolution)
61713	12301	100 ms	3-4	SAEpr25	Gaseous Fuel Pressure 3	Engine Gaseous Fuel Supply Filter Differential Pressure

\*1) For PDU1 PGNs only the broadcast destination address (0xFF) is supported.

\*2) OREQ = Signal send only on request



## 5.2.2 STW Proprietary PGNs

There are some additional STW-specific PGNs and SPNs to use the M01-CAN with J1939 in general.

PGN	SPN	TRR [ms]	Data Position	Slot	Description
65280	STW01	100	1-2	STWpr01	General purpose
65281	STW02	100	1-2	STWpr02	General purpose
65282	STW03	100	1-2	STWpr03	General purpose
65283	STW04	100	1-2	STWpr04	General purpose
65284	STW05	100	1-2	STWpr05	General purpose
65285	STW06	100	1-2	STWpr06	General purpose
65286	STW07	100	1-2	STWpr07	General purpose
65287	STW08	100	1-2	STWpr08	General purpose
65288	STW09	100	1-2	STWpr09	General purpose
65289	STW10	100	1-2	STWpr10	General purpose
65290	STW11	100	1-2	STWpr11	General purpose
65291	STW12	100	1-2	STWpr12	General purpose
65292	STW13	100	1-2	STWpr13	General purpose
65293	STW14	100	1-2	STWpr14	General purpose
65294	STW15	100	1-2	STWpr15	General purpose
65295	STW16	100	1-2	STWpr16	General purpose
65296	STW17	100	1-2	STWpr17	General purpose
65297	STW18	100	1-2	STWpr18	General purpose
65298	STW19	100	1-2	STWpr19	General purpose
65299	STW20	100	1-2	STWpr20	General purpose
65300	STW21	100	1-2	STWpr21	General purpose
65301	STW22	100	1-2	STWpr22	General purpose
65302	STW23	100	1-2	STWpr23	General purpose
65303	STW24	100	1-2	STWpr24	General purpose
65304	STW25	100	1-2	STWpr25	General purpose
65305	STW26	100	1-2	STWpr26	General purpose
65306	STW27	100	1-2	STWpr27	General purpose
65307	STW28	100	1-2	STWpr28	General purpose
65308	STW29	100	1-2	STWpr29	General purpose
65309	STW30	100	1-2	STWpr30	General purpose
65310	STW31	100	1-2	STWpr31	General purpose
65311	STW32	100	1-2	STWpr32	General purpose

PGN: Parameter Group Number  
SPN: Suspect Parameter Number  
TRR: Transmission Repetition Rate

### Hint:

The following settings will be used with PGNs of STW in general:

- default priority = 6
- data page = 0
- extended data page = 0



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## 5.2.3 Sorted by PGNs

PGN	SPN	TRR <sup>(*)</sup>	Data Position	Slot	Parameter Group Label	SPN Name
1792 <sup>(*)</sup>	4086	100 ms	1-2	SAEpr12	General Purpose Valve Pressure	Valve Load Sense Pressure
1792 <sup>(*)</sup>	4088	100 ms	4-5	SAEpr12	General Purpose Valve Pressure	Valve Assembly Load sense Pressure
1792 <sup>(*)</sup>	4089	100 ms	6-7	SAEpr12	General Purpose Valve Pressure	Valve Assembly Supply Pressure
1792 <sup>(*)</sup>	4087	100 ms	3	SAEpr14	General Purpose Valve Pressure	Valve Pilot Pressure
61448	1762	50 ms	1-2	SAEpr08	Hydraulic Pressure Governor Info	Hydraulic Pressure
61448	6708	50 ms	6-7	SAEpr08	Hydraulic Pressure Governor Info	Hydraulic Discharge Pressure Set Point
61448	6707	50 ms	4-5	SAEpr20	Hydraulic Pressure Governor Info	Hydraulic Intake Pressure
61475	4334	50 ms	6	SAEpr13	Aftertreatment 1 SCR Dosing System Information 1	Aftertreatment 1 Diesel Exhaust Fluid Doser 1 Absolute Pressure
61478	4387	50 ms	6	SAEpr13	Aftertreatment 2 SCR Dosing System Information 1	Aftertreatment 2 Diesel Exhaust Fluid Doser 1 Absolute Pressure
61538	6583	10 ms	1-2	SAEpr22	Electronic Transmission Controller #12	Transmission Hydrostatic Loop 1 Pressure
61538	6584	10 ms	3-4	SAEpr22	Electronic Transmission Controller #12	Transmission Hydrostatic Loop 2 Pressure
61701	7939	20 ms	1-2	SAEpr22	Hydraulic Pressure Displacement	Hydraulic Line Pressure
61702	8155	50 ms	3-4	SAEpr12	Well Stimulation Pump System 1	Well Stimulation Pump Discharge Pressure
61703	8156	50 ms	1-2	SAEpr03	Well Stimulation Pump System 2	Well Stimulation Pump Gear Box Oil Pressure
61709	6885	100 ms	1-2	SAEpr03	Fuel Information 6 (Gaseous)	Engine Fuel Valve 2 Differential Pressure
61713	12302	100 ms	5-6	SAEpr06	Gaseous Fuel Pressure 3	Engine Gaseous Fuel Supply Filter Intake Pressure
61713	8494	100 ms	1-2	SAEpr25	Gaseous Fuel Pressure 3	Engine Fuel Valve 1 Differential Pressure (High Resolution)
61713	12301	100 ms	3-4	SAEpr25	Gaseous Fuel Pressure 3	Engine Gaseous Fuel Supply Filter Differential Pressure
64383	9814	OREQ	2-3	SAEpr03	Well Stimulation Pump System Filter Information	Well Stimulation Pump Gear Box Outlet Oil Pressure
64383	9813	OREQ	1	SAEpr10	Well Stimulation Pump System Filter Information	Well Stimulation Pump Oil Filter Differential Pressure
64393	9653	500 ms	1	SAEpr10	Engine Fluid Level/Pressure 13	Engine Oil Pressure 2
64404	9379	OREQ	1-2	SAEpr12	Electronic Engine Controller 22	Engine Exhaust Gas Recirculation 1 Cooler Intake Pressure
64469	8635	1000 ms	1	SAEpr07	Aftercooler and Oil Cooler Fluids 2	Alternator Bearing Header Intake Pressure
64469	8636	1000 ms	2	SAEpr07	Aftercooler and Oil Cooler Fluids 2	Alternator Oil Cooler Discharge Pump Pressure
64469	8637	1000 ms	3	SAEpr07	Aftercooler and Oil Cooler Fluids 2	Engine Oil Cooler Discharge Pump Pressure
64470	8619	100 ms	1-2	SAEpr03	Electronic Engine Controller 21	Engine Exhaust Manifold Absolute Pressure 1
64470	8620	100 ms	3-4	SAEpr03	Electronic Engine Controller 21	Engine Exhaust Manifold Absolute Pressure 2
64479	8477	500 ms	1-2	SAEpr03	Intake/Exhaust Conditions 3	Engine Mixer 1 Intake Pressure
64479	8607	500 ms	3-4	SAEpr03	Intake/Exhaust Conditions 3	Engine Mixer 2 Intake Pressure
64479	11731	500 ms	5-6	SAEpr03	Intake/Exhaust Conditions 3	Engine Intake Manifold 2 Absolute Pressure (High Resolution)
64479	12307	500 ms	7-8	SAEpr03	Intake/Exhaust Conditions 3	Desired Engine Intake Manifold Pressure High Limit
64480	8472	1000 ms	8	SAEpr07	Aftercooler and Oil Cooler Fluids 1	Alternator Aftercooler Coolant Pump Outlet Pressure
64500	8163	500 ms	1-2	SAEpr03	Aftertreatment 2 Diesel Oxidation Catalyst 2	Aftertreatment 2 Diesel Oxidation Catalyst Intake Pressure
64500	8164	500 ms	3-4	SAEpr03	Aftertreatment 2 Diesel Oxidation Catalyst 2	Aftertreatment 2 Diesel Oxidation Catalyst Outlet Pressure
64500	8165	500 ms	5-6	SAEpr03	Aftertreatment 2 Diesel Oxidation Catalyst 2	Aftertreatment 2 DOC Intake to DPF Outlet Delta Pressure
64501	8160	500 ms	1-2	SAEpr03	Aftertreatment 1 Diesel Oxidation Catalyst 2	Aftertreatment 1 Diesel Oxidation Catalyst Intake Pressure
64501	8161	500 ms	3-4	SAEpr03	Aftertreatment 1 Diesel Oxidation Catalyst 2	Aftertreatment 1 Diesel Oxidation Catalyst Outlet Pressure



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PGN	SPN	TRR <sup>(*)2)</sup>	Data Position	Slot	Parameter Group Label	SPN Name
64501	8162	500 ms	5-6	SAEpr03	Aftertreatment 1 Diesel Oxidation Catalyst 2	Aftertreatment 1 DOC Intake to DPF Outlet Delta Pressure
64528	7781	1000 ms	1-2	SAEpr03	Ambient Conditions 3	Barometric Absolute Pressure 2
64557	6787	500 ms	1-2	SAEpr03	Alternate Fuel 5	LNG Tank 1 Vapor Pressure
64557	6788	500 ms	3-4	SAEpr03	Alternate Fuel 5	LNG Tank 2 Vapor Pressure
64559	7350	1000 ms	4	SAEpr13	Fire Suppression Agent Status	Fire Suppression Compressed Air Foam System Air Pressure
64564	7096	500 ms	1-2	SAEpr12	Engine Fuel Injector Metering Rail Pressure Information 2	Engine Fuel 1 Injector Metering Rail 1 Pressure 1 (Extended Range)
64564	7097	500 ms	3-4	SAEpr12	Engine Fuel Injector Metering Rail Pressure Information 2	Engine Fuel 1 Injector Metering Rail 1 Pressure 2 (Extended Range)
64564	7098	500 ms	5-6	SAEpr12	Engine Fuel Injector Metering Rail Pressure Information 2	Engine Fuel 1 Injector Metering Rail 2 Pressure 1 (Extended Range)
64564	7099	500 ms	7-8	SAEpr12	Engine Fuel Injector Metering Rail Pressure Information 2	Engine Fuel 1 Injector Metering Rail 2 Pressure 2 (Extended Range)
64569	7067	500 ms	1-2	SAEpr06	Gaseous Fuel Supply Pressure 2	Plant Gaseous Fuel Supply Outlet Pressure
64569	7068	500 ms	3-4	SAEpr06	Gaseous Fuel Supply Pressure 2	Plant Inert Gas Supply Outlet Pressure
64570	7063	500 ms	1-2	SAEpr06	Gaseous Fuel Supply Pressure 1	Engine Gaseous Fuel Supply Pressure 2
64570	7064	500 ms	3-4	SAEpr06	Gaseous Fuel Supply Pressure 1	Engine Gaseous Fuel Supply Unit Intake Pressure
64570	7065	500 ms	5-6	SAEpr06	Gaseous Fuel Supply Pressure 1	Engine Gaseous Fuel Supply Shutoff Valve 1 Intake Pressure
64570	7066	500 ms	7-8	SAEpr06	Gaseous Fuel Supply Pressure 1	Engine Gaseous Fuel Supply Shutoff Valve 2 Intake Pressure
64576	7019	500 ms	4-5	SAEpr08	Engine Hydraulic Fuel 2 Pump Status	Engine Fuel 2 Pump Hydraulic Pressure
64577	7021	500 ms	1-2	SAEpr08	Alternate Fuel 4	Engine Fuel 2 Injector Metering Rail 1 Pressure
64577	7022	500 ms	3-4	SAEpr08	Alternate Fuel 4	Engine Fuel 2 Injector Metering Rail 2 Pressure
64577	7513	500 ms	7-8	SAEpr08	Alternate Fuel 4	Engine Fuel 2 Injector Metering Rail 1 Pressure 2
64578	6988	10000 ms	2-3	SAEpr22	Tire Condition Message 2	Tire Pressure (Extended Range)
64578	6989	10000 ms	4-5	SAEpr22	Tire Condition Message 2	Required Tire Pressure
64579	6980	OREQ	2-3	SAEpr22	Tire Configuration Status Information	Cold Inflation Pressure
64589	6876	500 ms	1	SAEpr10	Aftertreatment 2 SCR Dosing System Information 3	Aftertreatment 2 Diesel Exhaust Fluid Doser Pressure
64589	8153	500 ms	4	SAEpr10	Aftertreatment 2 SCR Dosing System Information 3	Aftertreatment 2 Diesel Exhaust Fluid Doser 2 Pressure
64589	7464	500 ms	2	SAEpr13	Aftertreatment 2 SCR Dosing System Information 3	Aftertreatment 2 Diesel Exhaust Fluid Doser 2 Absolute Pressure
64590	6875	500 ms	1	SAEpr10	Aftertreatment 1 SCR Dosing System Information 3	Aftertreatment 1 Diesel Exhaust Fluid Doser Pressure
64590	8152	500 ms	4	SAEpr10	Aftertreatment 1 SCR Dosing System Information 3	Aftertreatment 1 Diesel Exhaust Fluid Doser 2 Pressure
64590	7459	500 ms	2	SAEpr13	Aftertreatment 1 SCR Dosing System Information 3	Aftertreatment 1 Diesel Exhaust Fluid Doser 2 Absolute Pressure
64595	6837	500 ms	4	SAEpr10	Engine Gaseous Leakage Information	Gas Leakage Detection 1 Pressure
64595	6838	500 ms	5	SAEpr10	Engine Gaseous Leakage Information	Gas Leakage Detection 2 Pressure
64595	6839	500 ms	6	SAEpr10	Engine Gaseous Leakage Information	Gas Leakage Detection 3 Pressure
64600	6811	1000 ms	1	SAEpr10	Turbocharger Information 7	Engine Turbocharger 2 Lube Oil Pressure
64600	6812	1000 ms	2	SAEpr10	Turbocharger Information 7	Engine Turbocharger 3 Lube Oil Pressure
64600	6813	1000 ms	3	SAEpr10	Turbocharger Information 7	Engine Turbocharger 4 Lube Oil Pressure
64659	6571	OREQ	1-2	SAEpr03	Gaseous Fuel Pressure 2	Engine Main Chamber Fuel Absolute Pressure
64659	6572	OREQ	3-4	SAEpr03	Gaseous Fuel Pressure 2	Engine Main Chamber Fuel Desired Absolute Pressure
64659	6573	OREQ	5-6	SAEpr03	Gaseous Fuel Pressure 2	Engine Prechamber Fuel Absolute Pressure
64659	6574	OREQ	7-8	SAEpr03	Gaseous Fuel Pressure 2	Engine Prechamber Fuel Desired Absolute Pressure



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PGN	SPN	TRR <sup>(*)2)</sup>	Data Position	Slot	Parameter Group Label	SPN Name
64662	7470	100 ms	3-4	SAEpr03	Engine Information 2	Engine Oil Filter Intake Pressure (High Resolution/Extended Range)
64662	6384	100 ms	1-2	SAEpr04	Engine Information 2	Engine Exhaust Pressure 1 (Extended Range)
64662	7720	100 ms	5	SAEpr10	Engine Information 2	Engine Common Rail Oil Pressure
64662	7721	100 ms	6	SAEpr10	Engine Information 2	Engine Common Rail Oil Absolute Pressure
64705	5937	1000 ms	1	SAEpr14	Transmission Fluids 3	Transmission Clutch 2 Pressure
64733	5590	500 ms	1-2	SAEpr03	Aftertreatment 2 Air Control 3	Aftertreatment 2 Secondary Air Absolute Pressure
64734	5589	500 ms	1-2	SAEpr03	Aftertreatment 1 Air Control 3	Aftertreatment 1 Secondary Air Absolute Pressure
64735	7595	500 ms	6-7	SAEpr03	Engine Fluid Level/Pressure 12	Engine Throttle Valve 2 Differential Pressure
64735	5578	500 ms	1	SAEpr10	Engine Fluid Level/Pressure 12	Engine Fuel Delivery Absolute Pressure
64735	5579	500 ms	2	SAEpr10	Engine Fluid Level/Pressure 12	Engine Filtered Fuel Delivery Pressure
64735	5580	500 ms	3	SAEpr10	Engine Fluid Level/Pressure 12	Engine Filtered Fuel Delivery Absolute Pressure
64735	7472	500 ms	8	SAEpr11	Engine Fluid Level/Pressure 12	Engine Fuel Supply Pump Intake Absolute Pressure (Extended Range)
64735	6816	500 ms	5	SAEpr17	Engine Fluid Level/Pressure 12	Engine Fuel Return Pressure
64739	5541	100 ms	1	SAEpr07	Engine Exhaust Brake Control	Engine Turbocharger 1 Turbine Outlet Pressure
64739	5542	100 ms	2	SAEpr07	Engine Exhaust Brake Control	Engine Turbocharger 1 Turbine Desired Outlet Pressure
64739	5544	100 ms	4	SAEpr07	Engine Exhaust Brake Control	Engine Turbocharger 2 Turbine Outlet Pressure
64739	5545	100 ms	5	SAEpr07	Engine Exhaust Brake Control	Engine Turbocharger 2 Turbine Desired Outlet Pressure
64751	5430	500 ms	1-2	SAEpr03	Engine Fluid Level/Pressure 11	Engine Exhaust Gas Recirculation 1 Intake Absolute Pressure
64751	5431	500 ms	3-4	SAEpr03	Engine Fluid Level/Pressure 11	Engine Exhaust Gas Recirculation 1 Outlet Absolute Pressure (High Resolution)
64751	7468	500 ms	5-6	SAEpr03	Engine Fluid Level/Pressure 11	Engine Oil Pressure (High Resolution/Extended Range)
64751	7469	500 ms	7-8	SAEpr03	Engine Fluid Level/Pressure 11	Engine Fuel Delivery Pressure (High Resolution/Extended Range)
64752	7395	500 ms	4-5	SAEpr03	Engine Fuel/Lube Systems 2	Fuel Tank Transfer Pump Pressure
64752	5417	500 ms	1	SAEpr07	Engine Fuel/Lube Systems 2	Engine Fuel Filter (Suction Side) Intake Absolute Pressure
64752	9648	500 ms	6	SAEpr10	Engine Fuel/Lube Systems 2	Engine Fuel Pump Intake Oil Pressure
64766	5259	OREQ	3-4	SAEpr06	Electronic Engine Controller 10	Engine Exhaust Gas Recirculation 2 Cooler Intake Gas Absolute Pressure
64766	9380	OREQ	7-8	SAEpr12	Electronic Engine Controller 10	Engine Exhaust Gas Recirculation 2 Cooler Intake Pressure
64768	5254	500 ms	4-5	SAEpr03	Engine Fluid Level/Pressure 10	Engine Exhaust Gas Recirculation 2 Outlet Absolute Pressure
64768	5429	500 ms	6-7	SAEpr03	Engine Fluid Level/Pressure 10	Engine Exhaust Gas Recirculation 2 Intake Absolute Pressure
64768	5253	500 ms	3	SAEpr07	Engine Fluid Level/Pressure 10	Engine Exhaust Gas Recirculation 2 Intake Pressure
64768	5708	500 ms	8	SAEpr07	Engine Fluid Level/Pressure 10	Engine Coolant Pressure 2
64799	4773	500 ms	5-6	SAEpr06	Aftertreatment 2 Diesel Oxidation Catalyst 1	Aftertreatment 2 Diesel Oxidation Catalyst Differential Pressure
64800	4767	500 ms	5-6	SAEpr03	Aftertreatment 1 Diesel Oxidation Catalyst 1	Aftertreatment 1 Diesel Oxidation Catalyst Differential Pressure
64801	4761	500 ms	5-6	SAEpr03	Aftertreatment 2 Gas Oxidation Catalyst	Aftertreatment 2 Gas Oxidation Catalyst Differential Pressure
64802	4755	500 ms	5-6	SAEpr03	Aftertreatment 1 Gas Oxidation Catalyst	Aftertreatment 1 Gas Oxidation Catalyst Differential Pressure
64817	1707	1000 ms	5-6	SAEpr06	Fan Drive #2	Hydraulic Fan 2 Motor Pressure
64825	4411	500 ms	1-2	SAEpr03	Aftertreatment 2 SCR Exhaust Gas Pressures	Aftertreatment 2 SCR Differential Pressure





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PGN	SPN	TRR*2)	Data Position	Slot	Parameter Group Label	SPN Name
64825	6798	500 ms	6-7	SAEpr03	Aftertreatment 2 SCR Exhaust Gas Pressures	Aftertreatment 2 SCR Intake Absolute Pressure
64827	4388	500 ms	1	SAEpr13	Aftertreatment 2 SCR Dosing System Information 2	Aftertreatment 2 SCR Dosing Air Assist Absolute Pressure
64831	4358	500 ms	1-2	SAEpr03	Aftertreatment 1 SCR Exhaust Gas Pressures	Aftertreatment 1 SCR Differential Pressure
64831	6797	500 ms	6-7	SAEpr03	Aftertreatment 1 SCR Exhaust Gas Pressures	Aftertreatment 1 SCR Intake Absolute Pressure
64833	4335	500 ms	1	SAEpr13	Aftertreatment 1 SCR Dosing System Information 2	Aftertreatment 1 SCR Dosing Air Assist Absolute Pressure
64836	4303	500 ms	1-2	SAEpr03	Aftertreatment 2 Fuel Control 2	Aftertreatment 2 Fuel Pressure 2
64837	4297	500 ms	5-6	SAEpr03	Aftertreatment 2 Three Way Catalyst	Aftertreatment 2 Three Way Catalyst Differential Pressure
64838	4291	500 ms	5-6	SAEpr03	Aftertreatment 1 Three Way Catalyst	Aftertreatment 1 Three Way Catalyst Differential Pressure
64869	4077	500 ms	1-2	SAEpr03	Aftertreatment 1 Fuel Control 2	Aftertreatment 1 Fuel Pressure 2
64876	3838	500 ms	7-8	SAEpr03	Aftertreatment 2 Air Control 2	Aftertreatment 2 Secondary Air Pressure
64877	3837	500 ms	7-8	SAEpr03	Aftertreatment 1 Air Control 2	Aftertreatment 1 Secondary Air Pressure
64879	4751	OREQ	5-6	SAEpr06	Electronic Engine Controller 8	Engine Exhaust Gas Recirculation 1 Cooler Intake Absolute Pressure
64900	3640	500 ms	1-2	SAEpr03	Engine Fluid Level/Pressure 9	Engine Intake Valve Actuation Oil Pressure for Cylinder #17
64900	3641	500 ms	3-4	SAEpr03	Engine Fluid Level/Pressure 9	Engine Intake Valve Actuation Oil Pressure for Cylinder #18
64900	3642	500 ms	5-6	SAEpr03	Engine Fluid Level/Pressure 9	Engine Intake Valve Actuation Oil Pressure for Cylinder #19
64900	3643	500 ms	7-8	SAEpr03	Engine Fluid Level/Pressure 9	Engine Intake Valve Actuation Oil Pressure for Cylinder #20
64901	3636	500 ms	1-2	SAEpr03	Engine Fluid Level/Pressure 8	Engine Intake Valve Actuation Oil Pressure for Cylinder #13
64901	3637	500 ms	3-4	SAEpr03	Engine Fluid Level/Pressure 8	Engine Intake Valve Actuation Oil Pressure for Cylinder #14
64901	3638	500 ms	5-6	SAEpr03	Engine Fluid Level/Pressure 8	Engine Intake Valve Actuation Oil Pressure for Cylinder #15
64901	3639	500 ms	7-8	SAEpr03	Engine Fluid Level/Pressure 8	Engine Intake Valve Actuation Oil Pressure for Cylinder #16
64902	3632	500 ms	1-2	SAEpr03	Engine Fluid Level/Pressure 7	Engine Intake Valve Actuation Oil Pressure for Cylinder #9
64902	3633	500 ms	3-4	SAEpr03	Engine Fluid Level/Pressure 7	Engine Intake Valve Actuation Oil Pressure for Cylinder #10
64902	3634	500 ms	5-6	SAEpr03	Engine Fluid Level/Pressure 7	Engine Intake Valve Actuation Oil Pressure for Cylinder #11
64902	3635	500 ms	7-8	SAEpr03	Engine Fluid Level/Pressure 7	Engine Intake Valve Actuation Oil Pressure for Cylinder #12
64903	3628	500 ms	1-2	SAEpr03	Engine Fluid Level/Pressure 6	Engine Intake Valve Actuation Oil Pressure for Cylinder #5
64903	3629	500 ms	3-4	SAEpr03	Engine Fluid Level/Pressure 6	Engine Intake Valve Actuation Oil Pressure for Cylinder #6
64903	3630	500 ms	5-6	SAEpr03	Engine Fluid Level/Pressure 6	Engine Intake Valve Actuation Oil Pressure for Cylinder #7
64903	3631	500 ms	7-8	SAEpr03	Engine Fluid Level/Pressure 6	Engine Intake Valve Actuation Oil Pressure for Cylinder #8
64904	3624	500 ms	1-2	SAEpr03	Engine Fluid Level/Pressure 5	Engine Intake Valve Actuation Oil Pressure for Cylinder #1
64904	3625	500 ms	3-4	SAEpr03	Engine Fluid Level/Pressure 5	Engine Intake Valve Actuation Oil Pressure for Cylinder #2
64904	3626	500 ms	5-6	SAEpr03	Engine Fluid Level/Pressure 5	Engine Intake Valve Actuation Oil Pressure for Cylinder #3
64904	3627	500 ms	7-8	SAEpr03	Engine Fluid Level/Pressure 5	Engine Intake Valve Actuation Oil Pressure for Cylinder #4
64907	3611	500 ms	1-2	SAEpr03	Aftertreatment 2 Gas Parameters	Aftertreatment 2 Diesel Particulate Filter Intake Pressure



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PGN	SPN	TRR <sup>(*)2)</sup>	Data Position	Slot	Parameter Group Label	SPN Name
64907	3612	500 ms	3-4	SAEpr03	Aftertreatment 2 Gas Parameters	Aftertreatment 2 Diesel Particulate Filter Outlet Pressure
64908	3609	500 ms	1-2	SAEpr03	Aftertreatment 1 Gas Parameters	Aftertreatment 1 Diesel Particulate Filter Intake Pressure
64908	3610	500 ms	3-4	SAEpr03	Aftertreatment 1 Gas Parameters	Aftertreatment 1 Diesel Particulate Filter Outlet Pressure
64916	5312	100 ms	7-8	SAEpr04	Electronic Engine Controller 7	Engine Intake Manifold Commanded Pressure
64926	3499	500 ms	1-2	SAEpr03	Aftertreatment 2 Air Control 1	Aftertreatment 2 Supply Air Pressure
64926	3500	500 ms	3-4	SAEpr03	Aftertreatment 2 Air Control 1	Aftertreatment 2 Purge Air Pressure
64927	3485	500 ms	1-2	SAEpr03	Aftertreatment 1 Air Control 1	Aftertreatment 1 Supply Air Pressure
64927	3486	500 ms	3-4	SAEpr03	Aftertreatment 1 Air Control 1	Aftertreatment 1 Purge Air Pressure
64928	3494	500 ms	1-2	SAEpr03	Aftertreatment 2 Fuel Control 1	Aftertreatment 2 Fuel Pressure 1
64929	3480	500 ms	1-2	SAEpr03	Aftertreatment 1 Fuel Control 1	Aftertreatment 1 Fuel Pressure 1
64930	3466	500 ms	1-2	SAEpr03	Fuel Information 3 (Gaseous)	Engine Fuel Valve 2 Intake Absolute Pressure
64930	3469	500 ms	7-8	SAEpr03	Fuel Information 3 (Gaseous)	Engine Fuel Valve 2 Outlet Absolute Pressure
64938	2631	500 ms	8	SAEpr07	Engine Fluid Level/Pressure 4	Engine Charge Air Cooler Outlet Pressure
64938	3340	500 ms	1	SAEpr07	Engine Fluid Level/Pressure 4	Engine Charge Air Cooler 1 Intake Pressure
64938	3341	500 ms	2	SAEpr07	Engine Fluid Level/Pressure 4	Engine Charge Air Cooler 2 Intake Pressure
64938	3342	500 ms	3	SAEpr17	Engine Fluid Level/Pressure 4	Engine Coolant Pump Differential Pressure
64943	3285	500 ms	5-6	SAEpr03	Aftertreatment 2 Intermediate Gas	Aftertreatment 2 Diesel Particulate Filter Differential Pressure
64946	3251	500 ms	5-6	SAEpr03	Aftertreatment 1 Intermediate Gas	Aftertreatment 1 Diesel Particulate Filter Differential Pressure
64961	5631	500 ms	7-8	SAEpr03	Engine Fluid Level/Pressure 3	Engine Throttle Valve 1 Differential Pressure
64961	3358	500 ms	3	SAEpr07	Engine Fluid Level/Pressure 3	Engine Exhaust Gas Recirculation 1 Intake Pressure
64961	5019	500 ms	6	SAEpr07	Engine Fluid Level/Pressure 3	Engine Exhaust Gas Recirculation 1 Outlet Pressure
64976	2809	500 ms	1	SAEpr02	Intake/Exhaust Conditions 2	Engine Air Filter 2 Differential Pressure
64976	2810	500 ms	2	SAEpr02	Intake/Exhaust Conditions 2	Engine Air Filter 3 Differential Pressure
64976	2811	500 ms	3	SAEpr02	Intake/Exhaust Conditions 2	Engine Air Filter 4 Differential Pressure
64976	4817	500 ms	6-7	SAEpr03	Intake/Exhaust Conditions 2	Engine Intake Manifold 1 Absolute Pressure (High Resolution)
64976	3562	500 ms	4	SAEpr07	Intake/Exhaust Conditions 2	Engine Intake Manifold #2 Pressure
64976	3563	500 ms	5	SAEpr07	Intake/Exhaust Conditions 2	Engine Intake Manifold #1 Absolute Pressure
64976	5422	500 ms	8	SAEpr07	Intake/Exhaust Conditions 2	Engine Intake Manifold 2 Absolute Pressure
64992	5685	1000 ms	7-8	SAEpr03	Ambient Conditions 2	Barometric Absolute Pressure (High Resolution)
64998	2580	100 ms	1	SAEpr15	Hydraulic Braking System	Hydraulic Brake Pressure Circuit 1
64998	2581	100 ms	2	SAEpr15	Hydraulic Braking System	Hydraulic Brake Pressure Circuit 2
65112	1725	100 ms	1-2	SAEpr03	Air Suspension Control 4	Bellow Pressure Front Axle Left
65112	1726	100 ms	3-4	SAEpr03	Air Suspension Control 4	Bellow Pressure Front Axle Right
65112	1727	100 ms	5-6	SAEpr03	Air Suspension Control 4	Bellow Pressure Rear Axle Left
65112	1728	100 ms	7-8	SAEpr03	Air Suspension Control 4	Bellow Pressure Rear Axle Right
65130	1381	500 ms	2	SAEpr07	Engine Fuel/Lube Systems	Engine Fuel Supply Pump Intake Absolute Pressure
65130	1382	500 ms	3	SAEpr07	Engine Fuel/Lube Systems	Engine Fuel Filter (suction side) Differential Pressure
65130	7104	500 ms	8	SAEpr07	Engine Fuel/Lube Systems	Engine Fuel Supply Pump Intake Pressure
65130	3549	500 ms	5	SAEpr10	Engine Fuel/Lube Systems	Engine Oil Filter Outlet Pressure
65143	136	OREQ	1-2	SAEpr06	Auxiliary Pressures	Auxiliary Vacuum Pressure Reading
65143	137	OREQ	3-4	SAEpr06	Auxiliary Pressures	Auxiliary Gage Pressure Reading 1



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PGN	SPN	TRR <sup>(*)2)</sup>	Data Position	Slot	Parameter Group Label	SPN Name
65143	138	OREQ	5-6	SAEpr06	Auxiliary Pressures	Auxiliary Absolute Pressure Reading
65145	141	OREQ	1-2	SAEpr06	Tire Pressure Control Unit Target Pressures	Trailer Tag Or Push Channel Tire Pressure Target
65145	142	OREQ	3-4	SAEpr06	Tire Pressure Control Unit Target Pressures	Drive Channel Tire Pressure Target
65145	143	OREQ	5-6	SAEpr06	Tire Pressure Control Unit Target Pressures	Steer Channel Tire Pressure Target
65146	144	OREQ	1-2	SAEpr06	Tire Pressure Control Unit Current Pressures	Trailer Tag Or Push Channel Tire Pressure
65146	145	OREQ	3-4	SAEpr06	Tire Pressure Control Unit Current Pressures	Drive Channel Tire Pressure
65146	146	OREQ	5-6	SAEpr06	Tire Pressure Control Unit Current Pressures	Steer Channel Tire Pressure
65163	1390	100 ms	1-2	SAEpr03	Gaseous Fuel Pressure 1	Engine Fuel Valve 1 Intake Absolute Pressure
65163	1391	100 ms	3-4	SAEpr03	Gaseous Fuel Pressure 1	Engine Fuel Valve 1 Differential Pressure
65163	1392	100 ms	5-6	SAEpr03	Gaseous Fuel Pressure 1	Engine Air to Fuel Differential Pressure
65163	2980	100 ms	7-8	SAEpr03	Gaseous Fuel Pressure 1	Engine Fuel Valve 1 Outlet Absolute Pressure
65164	1387	OREQ	3	SAEpr14	Auxiliary Analog Information	Auxiliary Pressure #1
65164	1388	OREQ	4	SAEpr14	Auxiliary Analog Information	Auxiliary Pressure #2
65167	1320	1000 ms	1-2	SAEpr06	Supply Pressure 2	Engine External Shutdown Air Supply Pressure
65170	1208	100 ms	1	SAEpr10	Engine Information 1	Engine Oil Filter Intake Pressure
65172	2435	500 ms	3	SAEpr07	Engine Auxiliary Coolant	Sea Water Pump Outlet Pressure
65172	8473	500 ms	6	SAEpr07	Engine Auxiliary Coolant	Engine Coolant Pump Coolant Outlet Pressure
65172	20	500 ms	4	SAEpr10	Engine Auxiliary Coolant	Engine Coolant Pressure 1 (Extended Range)
65172	1203	500 ms	1	SAEpr10	Engine Auxiliary Coolant	Engine Auxiliary Coolant Pressure
65172	7313	500 ms	5	SAEpr10	Engine Auxiliary Coolant	Engine Coolant Pressure 2 (Extended Range)
65174	1192	100 ms	5	SAEpr10	Turbocharger Wastegate	Engine Turbocharger Wastegate Actuator Control Air Pressure
65179	1168	1000 ms	1	SAEpr10	Turbocharger Information 1	Engine Turbocharger Lube Oil Pressure 2
65190	1127	500 ms	1-2	SAEpr04	Intake Manifold Information 1	Engine Turbocharger 1 Boost Pressure
65190	1128	500 ms	3-4	SAEpr04	Intake Manifold Information 1	Engine Turbocharger 2 Boost Pressure
65190	1129	500 ms	5-6	SAEpr04	Intake Manifold Information 1	Engine Turbocharger 3 Boost Pressure
65190	1130	500 ms	7-8	SAEpr04	Intake Manifold Information 1	Engine Turbocharger 4 Boost Pressure
65197	1091	100 ms	1	SAEpr11	Wheel Application Pressure High Range Information	Brake Application Pressure High Range Front Axle Left Wheel
65197	1092	100 ms	2	SAEpr11	Wheel Application Pressure High Range Information	Brake Application Pressure High Range Front Axle Right Wheel
65197	1093	100 ms	3	SAEpr11	Wheel Application Pressure High Range Information	Brake Application Pressure High Range Rear Axle #1 Left Wheel
65197	1094	100 ms	4	SAEpr11	Wheel Application Pressure High Range Information	Brake Application Pressure High Range Rear Axle #1 Right Wheel
65197	1095	100 ms	5	SAEpr11	Wheel Application Pressure High Range Information	Brake Application Pressure High Range Rear Axle #2 Left Wheel
65197	1096	100 ms	6	SAEpr11	Wheel Application Pressure High Range Information	Brake Application Pressure High Range Rear Axle #2 Right Wheel
65197	1097	100 ms	7	SAEpr11	Wheel Application Pressure High Range Information	Brake Application Pressure High Range Rear Axle #3 Left Wheel
65197	1098	100 ms	8	SAEpr11	Wheel Application Pressure High Range Information	Brake Application Pressure High Range Rear Axle #3 Right Wheel
65198	46	1000 ms	1	SAEpr13	Air Supply Pressure	Pneumatic Supply Pressure
65198	1086	1000 ms	2	SAEpr13	Air Supply Pressure	Parking and/or Trailer Air Pressure
65198	1087	1000 ms	3	SAEpr13	Air Supply Pressure	Service Brake Circuit 1 Air Pressure
65198	1088	1000 ms	4	SAEpr13	Air Supply Pressure	Service Brake Circuit 2 Air Pressure
65198	1089	1000 ms	5	SAEpr13	Air Supply Pressure	Auxiliary Equipment Supply Pressure
65198	1090	1000 ms	6	SAEpr13	Air Supply Pressure	Air Suspension Supply Pressure
65198	6305	1000 ms	8	SAEpr13	Air Supply Pressure	Powertrain Circuit Air Supply Pressure
65213	4211	1000 ms	5-6	SAEpr06	Fan Drive #1	Hydraulic Fan Motor Pressure



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PGN	SPN	TRR <sup>*2)</sup>	Data Position	Slot	Parameter Group Label	SPN Name
65245	104	1000 ms	1	SAEpr10	Turbocharger	Engine Turbocharger Lube Oil Pressure 1
65246	82	OREQ	1	SAEpr10	Engine Air Start Pressure	Engine Air Start Pressure
65246	6832	OREQ	3	SAEpr10	Engine Air Start Pressure	Engine Air Stop Pressure
65246	6831	OREQ	2	SAEpr14	Engine Air Start Pressure	Engine Air Start Pressure (Extended Range)
65263	22	500 ms	2	SAEpr02	Engine Fluid Level/Pressure 1	Engine Extended Crankcase Blow-by Pressure
65263	109	500 ms	7	SAEpr07	Engine Fluid Level/Pressure 1	Engine Coolant Pressure 1
65263	94	500 ms	1	SAEpr10	Engine Fluid Level/Pressure 1	Engine Fuel Delivery Pressure
65263	100	500 ms	4	SAEpr10	Engine Fluid Level/Pressure 1	Engine Oil Pressure 1
65268	241	10000 ms	2	SAEpr10	Tire Condition Message 1	Tire Pressure
65269	108	1000 ms	1	SAEpr05	Ambient Conditions	Barometric Pressure
65270	107	500 ms	5	SAEpr02	Intake/Exhaust Conditions 1	Engine Air Filter 1 Differential Pressure
65270	81	500 ms	1	SAEpr05	Intake/Exhaust Conditions 1	Aftertreatment 1 Diesel Particulate Filter Intake Pressure (use SPN 3609)
65270	112	500 ms	8	SAEpr05	Intake/Exhaust Conditions 1	Engine Coolant Filter Differential Pressure
65270	102	500 ms	2	SAEpr07	Intake/Exhaust Conditions 1	Engine Intake Manifold #1 Pressure
65270	106	500 ms	4	SAEpr07	Intake/Exhaust Conditions 1	Engine Intake Air Pressure
65272	126	1000 ms	3	SAEpr07	Transmission Fluids 1	Transmission Filter Differential Pressure
65272	123	1000 ms	1	SAEpr14	Transmission Fluids 1	Transmission Clutch 1 Pressure
65272	127	1000 ms	4	SAEpr14	Transmission Fluids 1	Transmission 1 Oil Pressure
65273	579	1000 ms	3	SAEpr10	Axle Information	Drive Axle Lift Air Pressure
65273	2613	1000 ms	5	SAEpr10	Axle Information	Drive Axle Lube Pressure
65273	2614	1000 ms	8	SAEpr10	Axle Information	Steering Axle Lube Pressure
65274	116	1000 ms	1	SAEpr10	Brakes 1	Brake Application Pressure
65274	117	1000 ms	2	SAEpr10	Brakes 1	Brake Primary Pressure
65274	118	1000 ms	3	SAEpr10	Brakes 1	Brake Secondary Pressure
65275	119	1000 ms	1	SAEpr14	Retarder fluids	Hydraulic Retarder Pressure
65276	99	1000 ms	4	SAEpr05	Dash Display 1	Engine Oil Filter Differential Pressure
65276	95	1000 ms	3	SAEpr07	Dash Display 1	Engine Fuel Filter Differential Pressure
65276	7471	1000 ms	8	SAEpr11	Dash Display 1	Engine Oil Filter Differential Pressure (Extended Range)
65277	159	500 ms	2-3	SAEpr06	Alternate Fuel 1	Engine Gaseous Fuel Supply Pressure 1
65277	6814	500 ms	4-5	SAEpr06	Alternate Fuel 1	Engine Gaseous Fuel Vent Pressure
65277	7581	500 ms	7-8	SAEpr22	Alternate Fuel 1	Engine Gaseous Fuel Pressure Regulator Intake Pressure
65278	73	1000 ms	1	SAEpr14	Auxiliary Water Pump Pressure	Auxiliary Pump Pressure

\*1) For PDU1 PGNs only the broadcast destination address (0xFF) is supported.

\*2) OREQ = Signal send only on request



## 5.3 Definitions

### 5.3.2 SPN

Each parameter used in the J1939 network is described by the standard. A Suspect Parameter Number (SPN) is a number that has been assigned by SAE committee to a specific parameter. Each SPN has the following detailed information associated with it: data length (in bytes); data type; resolution, offset; range; and a tag (label) for reference. SPNs that share common characteristics will be grouped into a Parameter Group (PG) and will be transmitted to the network using the same PGN.

### 5.3.3 PGN

The PGN (Parameter Group Number) uniquely identifies the Parameter Group (PG) that is being transmitted in the message. The Parameter Group Number (PGN) is a part of the 29-bit identifier sent with every message.

## 5.4 Overview of the slots for pressure sensors

Slot	Slot Type	Units	Scaling (mbar/bit)	Range (bar)	Offset	Length	Best STW Slot Match to SAE Standard
SAEpr02	Pressure	bar	0.5	0.125	0 bar	1 byte	
SAEpr03	Pressure	bar	1	64.255	0 bar	2 bytes	STWpr03
SAEpr04	Pressure	bar	1.25	80.31875	0 bar	2 bytes	STWpr03
SAEpr05	Pressure	bar	5	1.25	0 bar	1 byte	STWpr30 or STWpr24
SAEpr06	Pressure	bar	5	321.275	0 bar	2 bytes	
SAEpr07	Pressure	bar	20	5	0 bar	1 byte	STWpr25 STWpr31
SAEpr08	Pressure	bar	20	1285.1	0 bar	2 bytes	STWpr15
SAEpr10	Pressure	bar	40	10	0 bar	1 byte	STWpr26
SAEpr11	Pressure	bar	50	12.5	0 bar	1 byte	STWpr26
SAEpr13	Pressure	bar	80	20	0 bar	1 byte	STWpr01
SAEpr14	Pressure	bar	160	40	0 bar	1 byte	STWpr09
SAEpr15	Pressure	bar	1000	250	0 bar	1 byte	STWpr04
SAEpr16	Pressure	bar	500	125	0 bar	1 byte	
SAEpr17	Pressure	bar	16.4	-0.07 to 4.03	-0.07 bar	1 byte	
SAEpr19	Pressure	bar	0.078	5.02	0 bar	2 bytes	STWpr25 or STWpr31
SAEpr20	Pressure	bar	1.22	-1 to 68.4	-10 bar	2 bytes	
SAEpr21	Pressure	bar	9.765	627.4	0 bar	2 bytes	STWpr06
SAEpr22	Pressure	bar	10	642.55	0 bar	2 bytes	STWpr06
SAEpr25	Pressure	bar	0.078	-1 to 4.02	-100 kPa	2 bytes	
SAEpr26	Pressure	bar	0.04	2.5702	0 bar	2 bytes	



Additionally, there are some STW-specific:

Slot	Slot Type	Units	Scaling (mbar/bit)	Range (bar)	Offset	Length	STW Article Number
STWpr01	Pressure	bar	0.400	25.7	0 bar	2 bytes	
STWpr02	Pressure	bar	0.750	48.19	0 bar	2 bytes	
STWpr03	Pressure	bar	1.500	96.38	0 bar	2 bytes	#69413
STWpr04	Pressure	bar	4.000	257.02	0 bar	2 bytes	#69415
STWpr05	Pressure	bar	6.000	385.53	0 bar	2 bytes	
STWpr06	Pressure	bar	10.000	642.55	0 bar	2 bytes	#69418
STWpr07	Pressure	bar	12.500	803.18	0 bar	2 bytes	
STWpr08	Pressure	bar	0.414	26.59	0 bar	2 bytes	
STWpr09	Pressure	bar	0.690	44.31	0 bar	2 bytes	
STWpr10	Pressure	bar	1.379	88.62	0 bar	2 bytes	
STWpr11	Pressure	bar	3.448	221.57	0 bar	2 bytes	
STWpr12	Pressure	bar	6.207	398.82	0 bar	2 bytes	
STWpr13	Pressure	bar	8.621	553.93	0 bar	2 bytes	
STWpr14	Pressure	bar	12.069	775.45	0 bar	2 bytes	
STWpr15	Pressure	bar	19.000	1220.845	0 bar	2 bytes	
STWpr16	Pressure	bar	32.000	2056.16	0 bar	2 bytes	
STWpr18	Pressure	bar	18.690	1200.89	0 bar	2 bytes	
STWpr19	Pressure	bar	31.172	2002.96	0 bar	2 bytes	
STWpr21	Pressure	bar	0.032	-1...1.05616	-1 bar	2 bytes	
STWpr22	Pressure	bar	0.180	-1...10.5659	-1 bar	2 bytes	
STWpr23	Pressure	bar	0.410	-1...25.34455	-1 bar	2 bytes	
STWpr24	Pressure	bar	0.016	1.02808	0 bar	2 bytes	
STWpr25	Pressure	bar	0.078	5.01189	0 bar	2 bytes	
STWpr26	Pressure	bar	0.160	10.2808	0 bar	2 bytes	#83673
STWpr27	Pressure	bar	0.032	- 1...1.03	-14.5 psi	2 bytes	
STWpr28	Pressure	bar	0.172	-1.....10.06	-14.5 psi	2 bytes	
STWpr29	Pressure	bar	0.434	-1...26.91	-14.5 psi	2 bytes	
STWpr30	Pressure	bar	0.021	1.32	0 bar	2 bytes	
STWpr31	Pressure	bar	0.083	5.31	0 bar	2 bytes	
STWpr32	Pressure	bar	0.159	10.19	0 bar	2 bytes	

## 5.5 References

ISO11783-3 Data Link Layer

SAE J1939-71

SAE J1939 Digital Annex



## 5.6 Declaration of Conformity

Pioneering new technologies  
Pioneering new technologies



Sensor-Technik Wiedemann GmbH  
Mobil-Steuerungen und Messtechnik

Sensor-Technik Wiedemann GmbH  
Am Bärenwald 6 · 87600 Kaufbeuren · DEUTSCHLAND

### EG/EU-Konformitätserklärung EC/EU-Declaration of Conformity

Hiermit erklären wir, dass das nachfolgende Produkt  
We hereby declare that the following product

#### Drucktransmitter M01C / Pressure Transmitter M01C

den grundlegenden Sicherheits- und Gesundheitsanforderungen der  
nachfolgend aufgeführten EG/EU-Richtlinien entspricht.  
complies with the essential health and safety requirements of the following EC / EU Directives.:



RoHS-Richtlinie / Restriction of the use of certain hazardous substances Directive (RoHS)	2011/65/EU
EMV-Richtlinie / Electromagnetic compatibility Directive (EMC)	2014/30/EU
Maschinenrichtlinie / Machinery Directive (MD)	2006/42/EG

#### Angewandte harmonisierte Normen: Applied harmonized standards:

Angewandte harmonisierte Normen für RoHS-Richtlinie:  
Applied harmonized standards for RoHS Directive:  
EN 50581:2012

Angewandte harmonisierte Normen für EMV-Richtlinie:  
Applied harmonized standards for EMC Directive:  
EN 55011:2009/A1:2010  
EN 61000-6-1:2007  
EN 61000-6-2:2005/AC:2005  
EN 61000-6-4:2007/A1:2011

Angewandte harmonisierte Normen für Maschinenrichtlinie:  
Applied harmonized standards for Machinery Directive:  
EN ISO 13849-1:2015  
EN ISO 13849-2:2012

#### Bevollmächtigter für die Übermittlung der Technischen Unterlagen: authorised person to compile the technical file:

Philipp Luger  
Sensor-Technik Wiedemann GmbH, Am Bärenwald 6, 87600 Kaufbeuren

#### Angaben zur Person des bevollmächtigten Unterzeichners:

Personal data for the authorized signer:  
Wolfgang Wiedemann, Inhaber und Geschäftsführer von Sensor-Technik Wiedemann  
Wolfgang Wiedemann, owner and managing director of Sensor-Technik Wiedemann

Kaufbeuren, 21.04.2017

Unterschrift / signature