

Technischer Hinweis: 05666702.1824
Bezeichnung: CAN Protokoll Liste V596
Motortype: 1Bxxe/1D90e



Erstellt von:	Is	Datum:	10.01.2024
Geprüft:	Mo	Datum:	10.01.2024

Änderungsstand:

Anzahl	Änd.-Nr.	Datum	Name	Änderung
	00	10.01.2024	Is	ÄM B.24/001

CAN-nodes

00 engine control 4G - 56pin

03 control panel / gearbox

6E/FF service tool / control panel

PGN decimal	Name	Identifier hex	SPN	Databyte(s) lsb-msb	Information	Value/bit	Offset	Cycle (ms)	Source	Remote
4G sent messages										
61444	EEC-1	0CF00400	190	4-5	engine speed	0,125 rpm	0	10	00	broadcast
61443	EEC-2	0CF00300	91	2	FPP position	0,4%	0%	50	00	broadcast
65253	HOURS	18FEE500	247	1-4	engine total operation hours	0,05 h	0	2000	00	broadcast
65262	ET-1	18FEEE00	175	3-4	oil temperature	0,03125°C	-273°C	1000	00	broadcast
65269	AMB	18FEF500	108	1	Barometric pressure	5 mbar	0	1000	00	broadcast
			171	4-5	Ambient air temperature	0,03125°C	-273°C			
65271	VEP-1	18FEF700	168	5-6	Battery potential	0,05V	0	1000	00	broadcast
			158	7-8	Keyswitch Battery potential	0,05V	0			
60928	NAME	18EEFF00			Manufacturer and System IDs					On Request

Obnn = binary number, 0xnn = hex number, refer to SAE-J1939-71 for details

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PGN decimal	Name	Identifier hex	SPN	Databyte(s) lsb-msb	Information	Value/bit	Offset	Cycle (ms)	Source	Remote
4G error messages										
65226	DM1 single	18FECA00		Byte1/bit1-2	Protection lamp	0b00 = lamp off 0b01 = lamp on		1000	00	broadcast
				Byte1/bit3-4	Warning lamp					
				Byte1/bit5-6	Stop lamp					
				Byte1/bit7-8	Malfunction lamp					
				3-5	error SPN					
				5	error FMI / SPN					
				6	Occurance counter					
60671				DM1/2 BAM	1CECFF00					
60415	DM1/2 Multi	1CEBFF00			Packages 2-6					
4G input / output status										
65364	proprietary ProStOut	18FF5400		Bytes 1-2	remaining service hours	1h	0h	100	00	broadcast
				Byte 5	Altitude derate level	0,4%				
				Byte 6	Load command	0,4%				
				Byte7/bit3-4	engine running	0b00 = lamp off 0b01 = lamp on				
				Byte7/bit5-6	Service delay					
				Byte7/bit7-8	pre-glow active					
				Byte8/bit1-2	oil pressure missing					
				Byte8/bit3-4	engine diagnostic lamp					
				Byte8/bit5-6	engine overtemperature					
65237	AI	18FED500		Byte3/bit1-2	charge control D+	0b00-0b01		100	00	broadcast

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PGN decimal	Name	Identifier hex	SPN	Databyte(s) lsb-msb	Information	Value/bit	Offset	Cycle (ms)	Source	Remote
4G accepted messages										
57344	CM1	0CE00003	1656	Byte6/bit7-8	Auto Start enable switch (option)	0b00 = stop 0b01 = start 0b11 = ignore		1000	03	00
0000	TSC1	0C000003	695	Byte1/bit1	Override control mode	0 = disabled 1 = speed control		10	03	00
			898	2-3	Speed setpoint	0,125 rpm	0			
				8	Fixed value	0xFF				
65485	Proprietary SIR	18FFCD6E		1	Service interval reset	0x00		Once	6E	00
				2		0x04				
				3		0x95				
				4		0x11				
				5		0x12				
				6		0x32				
				7		0x07				
				8		0x36				
59904	PGN-Request	18EA00FF		1	Request for data, not sent periodically PGN 0xFECB = DM2 historic faults PGN 0xFEED = Component ID PGN 0xFEDA = Software ID PGN 0xEE00 = NAME	PGN low byte		Once	FF	00
				2		PGN high byte				
				3		0x00				

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Detailed information on CAN-Messages:

ProStOut Message (send)															
Identifier 18FF5400															
Byte 7								Byte 8							
8	7	6	5	4	3	2	1	8	7	6	5	4	3	2	1
Glow															Oilpr.
Service												Diagnostic			
Engine running										Overtemperature					

Overview control lamp states (00 = lamp off / 01 = lamp on)

AI Message (send)															
Identifier 18FED500															
Byte 3															
8	7	6	5	4	3	2	1	8	7	6	5	4	3	2	1
Charge control															

Charge control (00 = not charging / 01 = charging)

Cab Message CM1 (receive)

Identifier 0CE00003															
Byte 6															
8	7	6	5	4	3	2	1	8	7	6	5	4	3	2	1
		1	1	1	1	1	1								
Start															
Not used															
Not used															
Not used															

Send **0b00** to **stop** engine (byte value 0x3F)

Until Engine running signal expires

Send **0b01** to **start** engine (byte value 0x7F)

Until Engine running signal appears

Send **0b11** to **retain current state** (byte value 0xFF)

To allow recoil-start

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DM1 single Message (send) - bytes 2, 7,8 not used																																								
byte	1								3								4								5								6							
bit	8	7	6	5	4	3	2	1	8	7	6	5	4	3	2	1	8	7	6	5	4	3	2	1	8	7	6	5	4	3	2	1	8	7	6	5	4	3	2	1
Information	MIL		Stop		Warn.		Prot.		lsb								SPN								msb		FMI				CM		OC							

MIL = Malfunction indicator lamp (0x00 = off / 0x01 = on)
Stop = Stop lamp (0x00 = off / 0x01 = on)
Warn. = Warning lamp (0x00 = off / 0x01 = on)
Prot. = Protection lamp (0x00 = off / 0x01 = on)
SPN = Error suspect parameter number SPN msb > SPN > SPN lsb
FMI = Error failure mode indication
CM = conversion method (0 = standard method mode 4)
OC = occurrence counter

Multi-Package Message starts with
Broadcast Announce Message (BAM)

Identifier	DLC	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7	Byte 8
1CECF00	8	20	NDB		NoP	FF	CA	FE	0
Nr. of bytes in multipack							Multipack related to PGN FECA = DM1 FECB = DM2 FEED = Comp. ID FEDA = SW ID		
Number of packages									

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Packages (Transport Protocol)

Identifizier	DLC	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7	Byte 8
1CEBFF00									
Packet 1:	8	1	Lamps		SPNlo1	SPNhi1	SPNhi/FMI1	OC1	SPNlo2
Packet 2:	8	2	SPNhi2	SPNhi/FMI2	OC2	SPNlo3	SPNhi3	SPNhi/FMI3	OC3
Packet 3:	8	3	SPNlo4	SPNhi4	SPNhi/FMI4	OC4	SPNlo5	SPNhi5	SPNhi/FMI5
Packet 4:	8	4	OC5	SPNlo6	SPNhi6	SPNhi/FMI6	OC6	SPNlo7	SPNhi7
Packet 5:	8	5	SPNhi/FMI7	OC7	SPNlo8	SPNhi8	SPNhi/FMI8	OC8	SPNlo9
Packet 6:	8	6	SPNhi9	SPNhi/FMI9	OC9	SPNlo10	SPNhi10	SPNhi/FMI10	OC10

Bit layout as shown in DM1 single message. Idle bytes carry 0xFF value.

Component ID – PGN 0xFEED (Multi message consisting of 4 packages):
 Engine manufacturer * Engine type number * Serial number * unit number * shown in ASCII code

Software ID – PGN 0xFEDA (Multi message consisting of 3 packages):
 Software Version and Dataset revision * * * ECU Hardware * shown in ASCII code

NAME message (network management / address claim)
 Identifier 0x18EEFF00
 Identity number = 142536 (dec)
 Manufacturer code = 114 (dec) EControls / ECU manufacturer
 ECU is not capable of arbitrating it's CAN-address
 See SAE-J1939-81 for detailed description

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