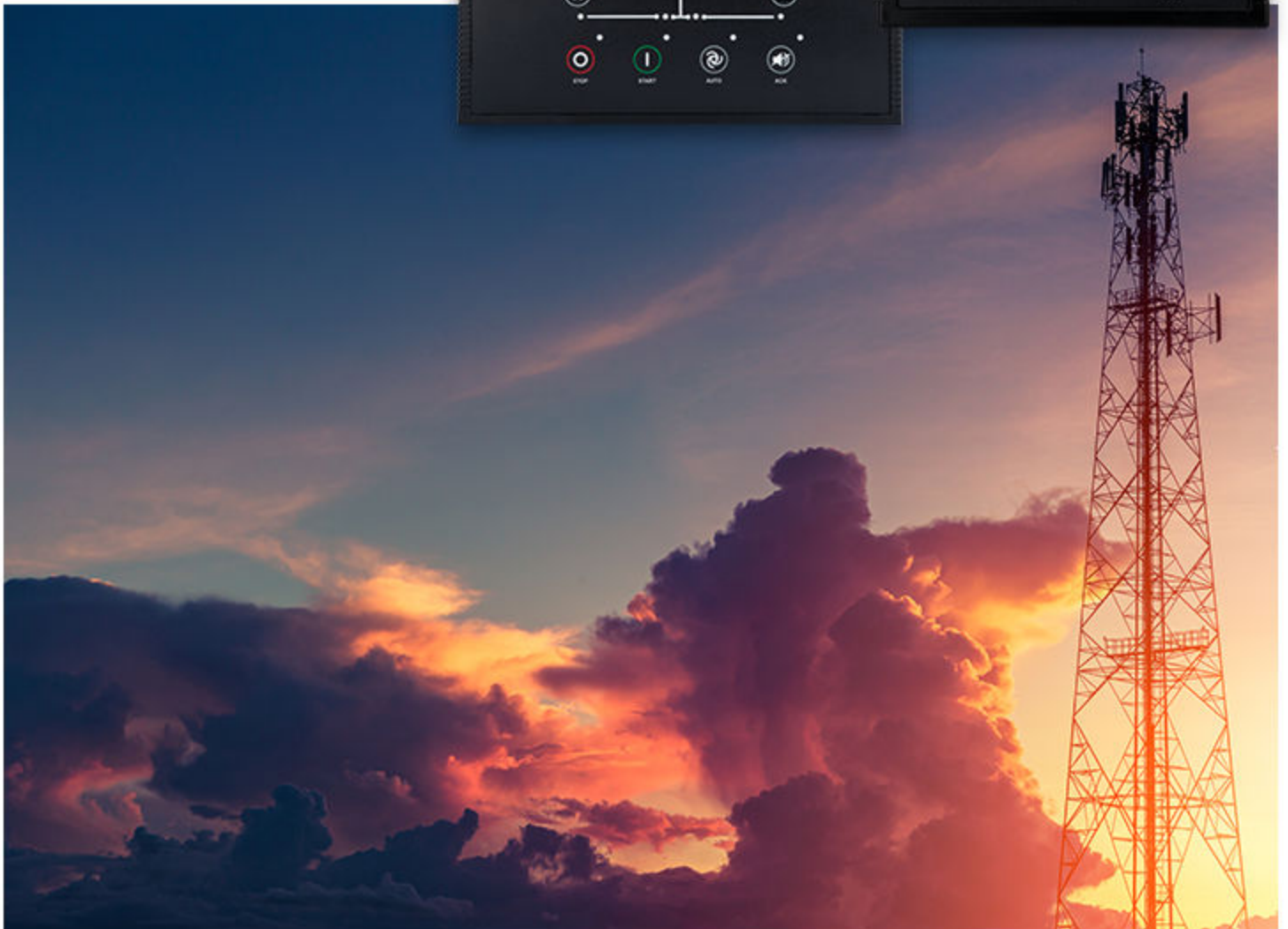# SGC Mk II

SGC 120 Mk II and SGC 420 Mk II

CAN bus engine communication

DEIF Improve Tomorrow

1. About this manual

2. About Engine interface communication

3. J1939 ECUs and engines

1. About this manual

1.1 Intended users of the Engine communication manual

This manual is for the designer or the commissioning engineer, who configures the controller with an ECU. The manual includes information about the supported protocols, support engine types, and other information.

⚠ CAUTION
Read this manual Read this manual before you configure your system. Failure to do this may result in personal injury and/or damage to the equipment.

1.2 Disclaimer

DEIF A/S reserves the right to change any of the contents of this document without prior notice.

The English version of this document always contains the most recent and up-to-date information about the product. DEIF does not take responsibility for the accuracy of translations, and translations might not be updated at the same time as the English document. If there is a discrepancy, the English version prevails.

1.3 Copyright

2. About Engine interface communication

2.1 How it works

The controller can receive information from an ECU using CAN bus communication. The information can be used as input for the controller functions. The controller also uses the information as display values, alarms, and as values to be transmitted through Modbus.

Most of the engine communication protocols are based on the SAE J1939 standard. The controller supports the engine relevant parts of J1939 as required/implemented by each ECU manufacturer.

You can read the engine data from the SGC Mk II over Modbus.

Refer to the Modbus tables to see how the controller data is mapped to the Modbus addresses.

Controller	Modbus tables
SGC 120 Mk II	https://www.deif.com/documentation/sgc-120-mk-ii/
SGC 420 Mk II	https://www.deif.com/documentation/sgc-420-mk-ii/

General default values
For each protocol, unless otherwise mentioned:
- The protocol is based on J1939.
- The baud rate is 250 kb/s for CAN bus communication.

2.2 Software version

This document is based on SGC 120 Mk II firmware version **R15** and SGC 420 Mk II firmware version **R16**.

2.3 Supported engines

Manufacturer	SGC 120 Mk II Firmware version R15	SGC 420 Mk II Firmware version R16
Angle	●	●
Baudouin	●	●
Bosch	●	●
Caterpillar	●	●
Cummins	●	●
DCEC	●	●
Detroit Diesel	●	●
Deutz	●	●
Doosan	●	●
FPT industrial	●	●
Hatz Diesel	●	●
Isuzu	-	●
Iveco	●	●
JCB	-	●
Jichai	-	●

Manufacturer	SGC 120 Mk II Firmware version R15	SGC 420 Mk II Firmware version R16
Jing Guan	-	●
John Deere	-	●
Kohler	●	●
Kubota	●	●
MAN	●	●
MTU	●	●
Perkins	●	●
PSI/Power Solutions	-	●
Scania	●	●
SDEC	●	●
Steyr	●	●
Volvo Eicher	●	●
Volvo Penta	●	●
Weichai	-	●
Xichai	●	●
YANMAR	●	●
Yuchai united	●	●

Generic	SGC 120 Mk II Firmware version R15	SGC 420 Mk II Firmware version R16
Generic CPCB IV	-	●
Generic J1939	●	●

2.4   J1939 and other protocols

J1939-based protocols

Most of the engine communication protocols are based on SAE J1939. J1939 is a very large standard, and most of it is irrelevant to engine communication. The SGC Mk II supports only relevant parts of J1939. The parts of J1939 that the SGC Mk II supports are described in Generic J1939.

If your ECU is not included in **J1939 ECUs and engines** chapter, you can use the parts of J1939 that the SGC Mk II and ECU both support.

If the ECU is included in **J1939 ECUs and engines** chapter, you can use the parts of J1939 that the SGC Mk II and ECU both support.

Relationship between the SGC Mk II and ECU for J1939

Information	Communication	Included in the SGC Mk II J1939	Not included in the SGC Mk II J1939	J1939 ECUs and engines
Alarms	The ECU broadcasts the information as an SPN+FMI combination.	The SGC Mk II has an alarm text for some SPN+FMI combinations.	The SGC Mk II displays the SPN+FMI. The user can look up the SPN in the J1939 standard. The SGC Mk II also	The SGC Mk II assigns texts to the proprietary alarms listed in this document. Controllers can also display special proprietary

Information	Communication	Included in the SGC Mk II J1939	Not included in the SGC Mk II J1939	J1939 ECUs and engines
			displays the text "N/A" and uses the FMI to add text like "High" or "Most severe".	text for SPN/FMI combinations. Some ECUs use proprietary alarm systems. For example, Scania uses KWP2000.
Statuses	The ECU broadcasts the information as a PGN number, with each status defined by a bit.	The SGC Mk II treats the information like a digital input.	The SGC Mk II ignores the information.	The SGC Mk II has custom functions for the additional/proprietary statuses listed in this document.
Measurements	The ECU broadcasts the CAN ID, with a priority and the information as a PGN number, with each measurement defined by a byte or 2.	The SGC Mk II treats the information like an analogue input. The measurements can activate alarms.	The SGC Mk II ignores the information.	The SGC Mk II has custom functions for the additional/proprietary measurements listed in this document.
Commands	The SGC Mk II sends a telegram with the command.	The SGC Mk II can send the telegram. If the ECU supports the command, it responds accordingly.	The SGC Mk II will not send the telegram.	The SGC Mk II can send the additional telegrams listed in this document.
Set points	The SGC Mk II sends a telegram with the set point at regular intervals. Set points are mostly used for speed regulation. Some ECUs allow idle speed and frequency regulation.	The SGC Mk II can send the telegram. If the ECU supports the set point, it responds accordingly.	The SGC Mk II will not send the telegram.	The SGC Mk II can send the additional telegrams listed in this document.

NOTE   The **MTU J1939 Smart Connect, ECU8 and ECU9** protocols are based on J1939.

Other engines and controllers

If you have an engine or controller that is not listed in this document, contact DEIF.

3. J1939 ECUs and engines

3.1 Generic CPCB IV

3.1.1 Generic CPCB IV

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
		Generic CPCB IV

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, GC1, TD	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.2 Generic J1939

3.2.1 Generic J1939

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)	
		Generic J1939	

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, GC1	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.3 Angle

3.3.1 Angle

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
		Angle

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, GC1	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.4 Baudouin

3.4.1 Baudouin Gas

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
		Baudouin Gas

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, CM1, GC1	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration ●	Inhibit regeneration ●

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.4.2   Baudouin Wise10B

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
Wise 10B		Baudouin Wise10B

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, CM1, GC1	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration ●	Inhibit regeneration ●

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.4.3 Baudouin Wise15

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
Wise 15		Baudouin Wise15

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, GC1	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.5   Bosch

3.5.1   Bosch EDC17CVC54

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
EDC17		Bosch EDC17CVC54

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, GC1	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.6   Caterpillar

3.6.1   Caterpillar ADEM3

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
ADEM3		Caterpillar ADEM3

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 0	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, GC1, CM1, ETC3	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration ●	Inhibit regeneration ●

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.6.2 Caterpillar ADEM4

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
ADEM4		Caterpillar ADEM4

EIC control

Start	Stop	Speed control
●	●	●
Default speed control address 0	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, GC1, CM1, ETC3	Proprietary message(s): -

Diagnostic messages

DM1 Yellow lamp	DM1 Red lamp	DM1 Protect	DM1 Malfunction	DM2
●	●	●	●	●

Emissions

Tier 4/Stage V	Force regeneration	Inhibit regeneration
●	●	●

Analogue readings

Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.6.3   Caterpillar ADEM6

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
ADEM6		Caterpillar ADEM6

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, CM1, GC1, EBC1, CM2	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration ●	Inhibit regeneration ●

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.6.4 Caterpillar ADEM Generic

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
		Caterpillar ADEM Generic

EIC control

Start	Stop	Speed control
●	●	●
Default speed control address 0	**Idle mode** ●	**50/60 Hz frequency selection** ●
Shutdown override -	**J1939 message:** TSC1, GC1, CM1, ETC3	**Proprietary message(s):** -

Diagnostic messages

DM1 Yellow lamp	DM1 Red lamp	DM1 Protect	DM1 Malfunction	DM2
●	●	●	●	●

Emissions

Tier 4/Stage V	Force regeneration	Inhibit regeneration
●	●	●

Analogue readings

Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.7 Cummins

3.7.1 Cummins Generic

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
CM 500, CM 558, CM 570, CM 850, CM 2150 and CM 2250		Cummins Generic

EIC control		
Start -	Stop -	Speed control ●
Default speed control address 220	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override ●	J1939 message:	Proprietary message(s): Cummins Gain, Cummins Droop

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.7.2   Cummins CM 500

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
CM 500		Cummins CM500

EIC control		
Start -	Stop -	Speed control ●
Default speed control address 220	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override ●	J1939 message:	Proprietary message(s): Cummins Gain, Cummins Droop

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.7.3 Cummins CM 558

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
CM 558	QSL, QSB5, QSX15 and 7, QSM11, QSK 19/23/50/60	Cummins CM558

EIC control		
Start -	Stop -	Speed control ●
Default speed control address 220	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override ●	J1939 message:	Proprietary message(s): Cummins Gain, Cummins Droop

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.7.4 Cummins CM 570

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
CM 570	QSL, QSB5, QSX15 and 7, QSM11, QSK 19/23/50/60	Cummins CM570

EIC control		
Start -	Stop -	Speed control ●
Default speed control address 220	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override ●	J1939 message:	Proprietary message(s): Cummins Gain, Cummins Droop

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.7.5 Cummins CM 850

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
CM 850	QSL, QSB5, QSX15 and 7, QSM11, QSK 19/23/50/60	Cummins CM850

EIC control		
Start -	Stop -	Speed control ●
Default speed control address 220	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override ●	J1939 message:	Proprietary message(s): Cummins Gain, Cummins Droop

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.7.6 Cummins CM 2150

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
CM 2150	QSL, QSB5, QSX15 and 7, QSM11, QSK 19/23/50/60	Cummins CM2150

EIC control		
Start -	Stop -	Speed control ●
Default speed control address 220	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override ●	J1939 message:	Proprietary message(s): Cummins Gain, Cummins Droop

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.7.7   Cummins CM 2250

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
CM 2250	QSL, QSB5, QSX15 and 7, QSM11, QSK 19/23/50/60	Cummins CM2250

EIC control		
Start -	Stop -	Speed control ●
Default speed control address 220	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override ●	J1939 message:	Proprietary message(s): Cummins Gain, Cummins Droop

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.7.8 Cummins CM 2350

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
CM 2350		Cummins CM2350

EIC control		
Start -	Stop -	Speed control ●
Default speed control address 220	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override ●	J1939 message:	Proprietary message(s): Cummins Gain, Cummins Droop

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.7.9   Cummins CM 2358

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
CM 2358		Cummins CM2358

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 220	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: GC2, ACS, GC1 and EES	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.7.10 Cummins CM 2850

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
CM 2850		Cummins CM2850

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 234	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override ●	J1939 message: GC2, ACS, GC1 and EES	Proprietary message(s): See Cummins documentation

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration ●	Inhibit regeneration ●

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.7.11 Cummins CM 2880

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
CM 2880		Cummins CM2880

EIC control		
Start -	Stop -	Speed control ●
Default speed control address 220	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override ●	J1939 message:	Proprietary message(s): Cummins Gain, Cummins Droop

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.7.12 Cummins KTA19

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
	KTA19	Cummins KTA19

EIC control

Start	Stop	Speed control
●	●	●
Default speed control address 220	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: GC2, ACS, GC1 and EES	Proprietary message(s): -

Diagnostic messages

DM1 Yellow lamp	DM1 Red lamp	DM1 Protect	DM1 Malfunction	DM2
●	●	●	●	●

Emissions

Tier 4/Stage V	Force regeneration	Inhibit regeneration
●	-	-

Analogue readings

Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.8 DCEC Cummins

3.8.1 DCEC Cummins

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
		DCEC Cummins

EIC control		
Start -	Stop ●	Speed control ●
Default speed control address 0	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, EBC1	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.9 Detroit Diesel

3.9.1 DDEC III

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
DDEC III	Series 50, 60 and 2000	DDEC III

EIC control		
Start -	Stop -	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, CM1	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration ●	Inhibit regeneration ●

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.9.2   DDEC IV

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
DDEC IV	Series 50, 60 and 2000	DDEC IV

EIC control		
Start -	Stop -	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, CM1	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration ●	Inhibit regeneration ●

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.9.3 DDEC Generic

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
DDEC III		DDEC Generic

EIC control		
Start -	Stop -	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, CM1	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration ●	Inhibit regeneration ●

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.10 Deutz

3.10.1 Deutz EMR 2

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)	
EMR2		Deutz EMR 2	

EIC control		
Start -	Stop ●	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.10.2 Deutz EMR 3

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
EMR3		Deutz EMR 3

EIC control		
Start -	Stop ●	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.10.3 Deutz EMR 4

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
EMR 4		Deutz EMR 4

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, GC1	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.10.4 Deutz EMR 5

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
EMR 5		Deutz EMR 5

EIC control

Start	Stop	Speed control
-	●	●
Default speed control address 39	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, CM1	Proprietary message(s): VCM2ECM, BC2EDC2

Diagnostic messages

DM1 Yellow lamp	DM1 Red lamp	DM1 Protect	DM1 Malfunction	DM2
●	●	●	●	●

Emissions

Tier 4/Stage V	Force regeneration	Inhibit regeneration
●	●	●

Analogue readings

Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.10.5 Deutz EMR 5 Stage V

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
EMR4 Stage V		Deutz EMR 5 Stage V

EIC control

Start ●	Stop ●	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, GC1, CM1	Proprietary message(s): Engine Stop Request, EATCTLRX

Diagnostic messages

DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions

Tier 4/Stage V ●	Force regeneration ●	Inhibit regeneration ●

Analogue readings

Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.10.6 Deutz EMR Generic

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
EMR2 and EMR3		Deutz EMR Generic

EIC control		
Start -	Stop ●	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.11 Doosan

3.11.1 Doosan D18

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
		Doosan D18

EIC control		
Start -	Stop ●	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TTSC1, CM1, CCVS, ETC5	Proprietary message(s): GEN4(65363)

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration ●	Inhibit regeneration ●

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.11.2 Doosan EDC17

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
EDC17		Doosan G2 EDC17

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, GC1	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.11.3 Doosan MD1

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
MD1		Doosan MD1

EIC control

Start	Stop	Speed control
-	●	●
Default speed control address	**Idle mode**	**50/60 Hz frequency selection**
39	●	●
Shutdown override	**J1939 message:**	**Proprietary message(s):**
-	TSC1, CM1	VCM2ECM, BC2EDC2

Diagnostic messages

DM1 Yellow lamp	DM1 Red lamp	DM1 Protect	DM1 Malfunction	DM2
●	●	●	●	●

Emissions

Tier 4/Stage V	Force regeneration	Inhibit regeneration
●	●	●

Analogue readings

Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.11.4 Doosan Stage V

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
		Doosan Stage V

EIC control

Start	Stop	Speed control
●	●	●
Default speed control address 253	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, GC1, CM1, EOI, CCVS1	Proprietary message(s): -

Diagnostic messages

DM1 Yellow lamp	DM1 Red lamp	DM1 Protect	DM1 Malfunction	DM2
●	●	●	●	●

Emissions

Tier 4/Stage V	Force regeneration	Inhibit regeneration
●	●	●

Analogue readings

Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.12 FPT Industrial

3.12.1 FPT Industrial EDC 17

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)	
EDC17		FPT EDC17	

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, GC1	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.12.2 FPT Industrial Stage V

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
		FPT Stage V

EIC control

Start	Stop	Speed control
-	●	●
Default speed control address 39	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, GM1	Proprietary message(s): VCM2ECM, BC2EDC2

Diagnostic messages

DM1 Yellow lamp	DM1 Red lamp	DM1 Protect	DM1 Malfunction	DM2
●	●	●	●	●

Emissions

Tier 4/Stage V	Force regeneration	Inhibit regeneration
●	●	●

Analogue readings

Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.13 Hatz

3.13.1 Hatz Diesel 3H50TICD, 4H50TICD

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
	3H50TICD, 4H50TICD	Hatz

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, CM1, GC1	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration ●	Inhibit regeneration ●

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.13.2 Hatz Diesel EDC17

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
EDC17		Hatz EDC17

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, GC1	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.14 Isuzu

3.14.1 Isuzu

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
		Isuzu

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, GC1, CM1	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration ●	Inhibit regeneration ●

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.15 Iveco

3.15.1 Iveco CURSOR

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
CURSOR		Iveco CURSOR

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1	Proprietary message(s): ENG-CNTRL

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.15.2 Iveco EDC7

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
EDC7		Iveco EDC7

EIC control

Start	Stop	Speed control
●	●	●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1	Proprietary message(s): ENG-CNTRL

Diagnostic messages

DM1 Yellow lamp	DM1 Red lamp	DM1 Protect	DM1 Malfunction	DM2
●	●	●	●	●

Emissions

Tier 4/Stage V	Force regeneration	Inhibit regeneration
●	-	-

Analogue readings

Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.15.3 Iveco NEF

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
NEF		Iveco NEF

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1	Proprietary message(s): ENG-CNTRL

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.15.4 Iveco Bosh MD1

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
Bosch MD1		Iveco Stage V

EIC control		
Start -	Stop ●	Speed control ●
Default speed control address 39	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, CM1	Proprietary message(s): VCM2ECM, BC2EDC2

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration ●	Inhibit regeneration ●

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.15.5 Iveco Vector 8

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
Vector 8		Iveco Vector8

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1	Proprietary message(s): ENG-CNTRL

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.15.6 Iveco Generic

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
		Iveco Generic

EIC control

Start	Stop	Speed control
●	●	●
Default speed control address 3	**Idle mode** ●	**50/60 Hz frequency selection** ●
Shutdown override -	**J1939 message:** TSC1	**Proprietary message(s):** ENG-CNTRL

Diagnostic messages

DM1 Yellow lamp	DM1 Red lamp	DM1 Protect	DM1 Malfunction	DM2
●	●	●	●	●

Emissions

Tier 4/Stage V	Force regeneration	Inhibit regeneration
●	-	-

Analogue readings

Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.16   JCB

3.16.1   JCB

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
		JCB

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, CM1, GC1	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration ●	Inhibit regeneration ●

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.16.2 JCB 430/448 Stage V

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
		JCB 430/448 Stage V

EIC control

Start	Stop	Speed control
●	●	●
Default speed control address 3	**Idle mode** ●	**50/60 Hz frequency selection** ●
Shutdown override -	**J1939 message:** TSC1, CM1, GC1	**Proprietary message(s):** -

Diagnostic messages

DM1 Yellow lamp	DM1 Red lamp	DM1 Protect	DM1 Malfunction	DM2
●	●	●	●	●

Emissions

Tier 4/Stage V	Force regeneration	Inhibit regeneration
●	●	●

Analogue readings

Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.17 Jichai

3.17.1 Jichai JC15D Weifu

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
		Jichai JC15D Weifu

EIC control		
Start -	Stop -	Speed control -
Default speed control address 129	Idle mode -	50/60 Hz frequency selection -
Shutdown override -	J1939 message: -	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.17.2 Jichai JC15T JG

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
JC15T JG, JC15D-ECU22		Jichai JC15T JG

EIC control		
Start -	Stop -	Speed control -
Default speed control address 129	Idle mode -	50/60 Hz frequency selection -
Shutdown override -	J1939 message: -	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp	DM1 Red lamp	DM1 Protect	DM1 Malfunction	DM2
●	●	●	●	●

Emissions		
Tier 4/Stage V	Force regeneration	Inhibit regeneration
●	-	-

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.17.3 Jichai JC190

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
JC190		Jichai JC190

EIC control		
Start -	Stop -	Speed control -
Default speed control address 129	Idle mode -	50/60 Hz frequency selection -
Shutdown override -	J1939 message: -	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.17.4 Jichai WYS

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
JC15D WYS		Jichai WYS

EIC control

Start	Stop	Speed control
-	-	-
Default speed control address 129	**Idle mode** ●	**50/60 Hz frequency selection** -
Shutdown override -	**J1939 message:** -	**Proprietary message(s):** -

Diagnostic messages

DM1 Yellow lamp	DM1 Red lamp	DM1 Protect	DM1 Malfunction	DM2
●	●	●	●	●

Emissions

Tier 4/Stage V	Force regeneration	Inhibit regeneration
●	-	-

Analogue readings

Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.18 Jing Guan

3.18.1 Jing Guan

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
		Jing guan

EIC control		
Start -	Stop -	Speed control -
Default speed control address 129	Idle mode -	50/60 Hz frequency selection -
Shutdown override -	J1939 message: -	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.19 John Deere

3.19.1 John Deere

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
		John Deere

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, GC1, CM1	Proprietary message(s): JDEC_SRG

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration ●	Inhibit regeneration ●

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.19.2 John Deere Stage V

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
		John Deere Stage V

EIC control

Start	Stop	Speed control
●	●	●
Default speed control address 17	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, GC1, CM1	Proprietary message(s): JDEC_SRG

Diagnostic messages

DM1 Yellow lamp	DM1 Red lamp	DM1 Protect	DM1 Malfunction	DM2
●	●	●	●	●

Emissions

Tier 4/Stage V	Force regeneration	Inhibit regeneration
●	●	●

Analogue readings

Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.20 Kohler

3.20.1 Kohler

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
		Kohler

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, GC1, CM1	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration ●	Inhibit regeneration ●

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.20.2 Kohler KDI 3404

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
		Kohler KDI 3404

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, GC1	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.21 Kubota

3.21.1 Kubota

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
		Kubota

EIC control		
Start -	Stop ●	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, CM1, CCVS, ETC5	Proprietary message(s): GEN4(65363)

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration ●	Inhibit regeneration ●

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.21.2 Kubota Stage V

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
KORD3		Kubota Stage V

EIC control		
Start -	Stop ●	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, CM1, CCVS, ETC5	Proprietary message(s): GEN4(65363)

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration ●	Inhibit regeneration ●

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.22 MAN

3.22.1 MAN

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
		MAN

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, CM1, GC1	Proprietary message(s): KMS

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration ●	Inhibit regeneration ●

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.22.2 MAN EDC17

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
EDC17		MAN EDC17

EIC control		
Start	Stop	Speed control
●	●	●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, GC1	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp	DM1 Red lamp	DM1 Protect	DM1 Malfunction	DM2
●	●	●	●	●

Emissions		
Tier 4/Stage V	Force regeneration	Inhibit regeneration
●	-	-

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.22.3 MAN EMC Step 2.0

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
EMC 2.0		MAN EMC Step 2.0

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, CM1, GC1	Proprietary message(s): KMS

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration ●	Inhibit regeneration ●

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.22.4 MAN EMC Step 2.5

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
EMC 2.5		MAN EMC Step 2.5

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, CM1, GC1	Proprietary message(s): KMS

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration ●	Inhibit regeneration ●

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.23 MTU

3.23.1 MTU

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
		MTU

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 234	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, GC1, ESS, MSOSC1	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.23.2 MTU ECU8

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
ECU8		MTU ECU8

EIC control

Start	Stop	Speed control
●	●	●
Default speed control address 234	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override ●	J1939 message: TSC1, RESET, OHECS	Proprietary message(s): Speed Start/Stop, Droop

Diagnostic messages

DM1 Yellow lamp	DM1 Red lamp	DM1 Protect	DM1 Malfunction	DM2
●	●	●	●	●

Emissions

Tier 4/Stage V	Force regeneration	Inhibit regeneration
●	-	-

Analogue readings

Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.23.3 MTU ECU9

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
ECU9		MTU ECU9

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 234	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override ●	J1939 message: TSC1, RESET, OHECS	Proprietary message(s): Speed Start/Stop, Droop

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.23.4 MTU J1939 Smart Connect

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
J1939 Smart Connect, ECU8, ECU9	Series 1600	MTU J1939 Smart Connect

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 234	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override ●	J1939 message: TSC1, RESET, OHECS	Proprietary message(s): Speed Start/Stop, Droop

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.24 Perkins

3.24.1 Perkins ADEM3

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
ADEM3		Perkins ADEM3

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 0	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, GC1, CM1, ETC3	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration ●	Inhibit regeneration ●

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.24.2 Perkins ADEM4

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
ADEM4		Perkins ADEM4

EIC control

Start	Stop	Speed control
●	●	●
Default speed control address 0	**Idle mode** ●	**50/60 Hz frequency selection** ●
Shutdown override -	**J1939 message:** TSC1, GC1, CM1, ETC3	**Proprietary message(s):** -

Diagnostic messages

DM1 Yellow lamp	DM1 Red lamp	DM1 Protect	DM1 Malfunction	DM2
●	●	●	●	●

Emissions

Tier 4/Stage V	Force regeneration	Inhibit regeneration
●	●	●

Analogue readings

Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.24.3 Perkins CPCB IV

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
		Perkins CPCB IV

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 253	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, GC1, CM1, CCVS1, EOI	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration ●	Inhibit regeneration ●

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.24.4 Perkins EDC1749

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
EDC17		Perkins EDC1749

EIC control

Start	Stop	Speed control
●	●	●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, GC1	Proprietary message(s): -

Diagnostic messages

DM1 Yellow lamp	DM1 Red lamp	DM1 Protect	DM1 Malfunction	DM2
●	●	●	●	●

Emissions

Tier 4/Stage V	Force regeneration	Inhibit regeneration
●	-	-

Analogue readings

Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.24.5 Perkins Stage V

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
	Series 400 and 1200	Perkins Stage V

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, CM1, CM2, ESR, OHECS, EBC1, ENGSC	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration ●	Inhibit regeneration ●

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.24.6 Perkins Stage V 120xJ

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
		Perkins Stage V 120xJ

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, CM1, ESR, OHECS, EBC1, GC1, CM2, EESI	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration ●	Inhibit regeneration ●

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.24.7 Perkins StV 400

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
	Series 400 Model IQ IR IW IY IF	Perkins StV 400

EIC control

Start	Stop	Speed control
●	●	●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, CM1, CM2, ESR, OHECS, EBC1, ENGSC	Proprietary message(s): -

Diagnostic messages

DM1 Yellow lamp	DM1 Red lamp	DM1 Protect	DM1 Malfunction	DM2
●	●	●	●	●

Emissions

Tier 4/Stage V	Force regeneration	Inhibit regeneration
●	●	●

Analogue readings

Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.24.8 Perkins StV 1200

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
	Series 400 Model IQ IR IW IY IF	Perkins StV 1200

EIC control

Start	Stop	Speed control
●	●	●
Default speed control address 3	**Idle mode** ●	**50/60 Hz frequency selection** ●
Shutdown override -	**J1939 message:** TSC1, CM1, CM2, ESR, OHECS, EBC1, ENGSC	**Proprietary message(s):** -

Diagnostic messages

DM1 Yellow lamp	DM1 Red lamp	DM1 Protect	DM1 Malfunction	DM2
●	●	●	●	●

Emissions

Tier 4/Stage V	Force regeneration	Inhibit regeneration
●	●	●

Analogue readings

Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.24.9 Perkins Generic

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
ADEM3, ADEM4	Series 850, 1100, 1200, 1300, 2300, 2500 and 2800	Perkins Generic

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 0	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, GC1, CM1, ETC3	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration ●	Inhibit regeneration ●

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.25 PSI/Power Solutions

3.25.1 PSI/Power Solutions

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
	PSI/Power solutions	PSI

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 234	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, ACS, CM1, GC1	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration ●	Inhibit regeneration ●

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.26 Scania

3.26.1 Scania EMS

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
EMS		Scania EMS

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 39	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message:	Proprietary message(s): 65408, 65527

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.26.2 Scania EMS2 S6

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
EMS2 S6		Scania EMS2 S6

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 39	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message:	Proprietary message(s): 65408, 65527

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.26.3 Scania EMS2 S8

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
EMS2 S8	DC9, DC13, DC16	Scania EMS2 S8

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 39	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override ●	J1939 message: CM1, ADC, CCVS	Proprietary message(s): 65408, 65527

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration ●	Inhibit regeneration ●

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.26.4 Scania S8 Industrial

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
		Scania S8 Industrial

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 39	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override ●	J1939 message: CM1, ADC, CCVS	Proprietary message(s): 65408, 65527

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration ●	Inhibit regeneration ●

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.27 SDEC

3.27.1 SDEC

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
		SDEC

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, GC1	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.28 Steyr

3.28.1 Steyr EDC17

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
EDC17		Steyr EDC17

EIC control		
Start	Stop	Speed control
●	●	●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, GC1	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp	DM1 Red lamp	DM1 Protect	DM1 Malfunction	DM2
●	●	●	●	●

Emissions		
Tier 4/Stage V	Force regeneration	Inhibit regeneration
●	-	-

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.29 Volvo Eicher

3.29.1 VE E483/E694 CPCB IV

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)	
		VE E483/E694 CPCB IV	

EIC control		
Start -	Stop -	Speed control -
Default speed control address 3	Idle mode -	50/60 Hz frequency selection -
Shutdown override -	J1939 message: TD, CM1	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration ●	Inhibit regeneration ●

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.30 Volvo Penta

3.30.1 Volvo Penta EMS2

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
EMS, EMS 2.0 to EMS2.3	D6, D7, D9, D12, D16 (GE and AUX variants only)	Volvo Penta EMS2

EIC control		
Start ●	Stop ●	Speed control
Default speed control address 17	Idle mode	50/60 Hz frequency selection ●
Shutdown override -	J1939 message:	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.30.2 Volvo Penta EMS2.3

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
EMS2.3		Volvo Penta EMS2.3

EIC control

Start	Stop	Speed control
●	●	
Default speed control address 17	**Idle mode**	**50/60 Hz frequency selection** ●
Shutdown override -	**J1939 message:**	**Proprietary message(s):** -

Diagnostic messages

DM1 Yellow lamp	DM1 Red lamp	DM1 Protect	DM1 Malfunction	DM2
●	●	●	●	●

Emissions

Tier 4/Stage V	Force regeneration	Inhibit regeneration
●	-	-

Analogue readings

Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.30.3 Volvo Penta EMS 2.4

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
EMS2.4		Volvo Penta 2.4

EIC control

Start	Stop	Speed control
●	●	
Default speed control address 17	**Idle mode**	**50/60 Hz frequency selection** ●
Shutdown override -	**J1939 message:**	**Proprietary message(s):** -

Diagnostic messages

DM1 Yellow lamp	DM1 Red lamp	DM1 Protect	DM1 Malfunction	DM2
●	●	●	●	●

Emissions

Tier 4/Stage V	Force regeneration	Inhibit regeneration
●	-	-

Analogue readings

Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.30.4 Volvo Penta 1500

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
		Volvo Penta 1500

EIC control		
Start ●	Stop ●	Speed control
Default speed control address 17	Idle mode	50/60 Hz frequency selection ●
Shutdown override -	J1939 message:	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.30.5 Volvo Penta EDC3 (1500)

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
EDC3		Volvo Penta EDC3 (1500)

EIC control

Start	Stop	Speed control
●	●	
Default speed control address 17	**Idle mode**	**50/60 Hz frequency selection** ●
Shutdown override -	**J1939 message:**	**Proprietary message(s):** -

Diagnostic messages

DM1 Yellow lamp	DM1 Red lamp	DM1 Protect	DM1 Malfunction	DM2
●	●	●	●	●

Emissions

Tier 4/Stage V	Force regeneration	Inhibit regeneration
●	-	-

Analogue readings

Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.30.6 Volvo Penta EDC4 (1500)

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
EDC4		Volvo Penta EDC4 (1500)

EIC control		
Start ●	Stop ●	Speed control
Default speed control address 17	Idle mode	50/60 Hz frequency selection ●
Shutdown override -	J1939 message:	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.30.7 Volvo Penta 1800

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
		Volvo Penta 1800

EIC control

Start	Stop	Speed control
●	●	
Default speed control address 17	**Idle mode**	**50/60 Hz frequency selection** ●
Shutdown override -	**J1939 message:**	**Proprietary message(s):** -

Diagnostic messages

DM1 Yellow lamp	DM1 Red lamp	DM1 Protect	DM1 Malfunction	DM2
●	●	●	●	●

Emissions

Tier 4/Stage V	Force regeneration	Inhibit regeneration
●	-	-

Analogue readings

Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.30.8 Volvo Penta EDC 3 (1800)

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
EDC3		Volvo Penta EDC 3 (1800)

EIC control		
Start ●	Stop ●	Speed control
Default speed control address 17	Idle mode	50/60 Hz frequency selection ●
Shutdown override -	J1939 message:	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.30.9 Volvo Penta EDC 4 (1800)

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
EDC4		Volvo Penta EDC 4 (1800)

EIC control		
Start ●	Stop ●	Speed control
Default speed control address 17	Idle mode	50/60 Hz frequency selection ●
Shutdown override -	J1939 message:	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.30.1 Volvo Stage V 0

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
		Volvo Stage V

EIC control

Start	Stop	Speed control
●	●	
Default speed control address 17	**Idle mode**	**50/60 Hz frequency selection** ●
Shutdown override -	**J1939 message:**	**Proprietary message(s):** -

Diagnostic messages

DM1 Yellow lamp	DM1 Red lamp	DM1 Protect	DM1 Malfunction	DM2
●	●	●	●	●

Emissions

Tier 4/Stage V	Force regeneration	Inhibit regeneration
●	-	-

Analogue readings

Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.31 Weichai

3.31.1 Weichai Diesel

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
WOODWARD PG+	Diesel	Weichai Diesel

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, CM1, GC1	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration ●	Inhibit regeneration ●

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.31.2 Weichai e6gas

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
		Weichai e6gas

EIC control

Start	Stop	Speed control
-	-	●

Default speed control address	Idle mode	50/60 Hz frequency selection
234	●	●

Shutdown override	J1939 message:	Proprietary message(s):
-	TSC1, GC2, ACS, EBC1, GTACP	65403

Diagnostic messages

DM1 Yellow lamp	DM1 Red lamp	DM1 Protect	DM1 Malfunction	DM2
●	●	●	●	●

Emissions

Tier 4/Stage V	Force regeneration	Inhibit regeneration
●	-	-

Analogue readings

Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.31.3 Weichai Gas

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
WOODWARD PG+	Gas	Weichai Gas

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, CM1, GC1	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration ●	Inhibit regeneration ●

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.31.4 Weichai Wise10B

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
Wise 10B		Weichai Wise10B

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, CM1, GC1	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration ●	Inhibit regeneration ●

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.31.5 Weichai Wise15

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
Wise 15		Weichai Wise15

EIC control

Start	Stop	Speed control
●	●	●
Default speed control address 3	**Idle mode** ●	**50/60 Hz frequency selection** ●
Shutdown override -	**J1939 message:** TSC1, CM1, GC1	**Proprietary message(s):** -

Diagnostic messages

DM1 Yellow lamp	DM1 Red lamp	DM1 Protect	DM1 Malfunction	DM2
●	●	●	●	●

Emissions

Tier 4/Stage V	Force regeneration	Inhibit regeneration
●	●	●

Analogue readings

Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.32 Xichai

3.32.1 Xichai Gas

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
		Xichai Gas

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, GC1	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.33 YANMAR

3.33.1 YANMAR EDC17

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
EDC17		YANMAR ED17

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, GC1	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.33.2 Yanmar Stage V

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
		Yanmar Stage V

EIC control

Start	Stop	Speed control
-	-	●
Default speed control address 3	**Idle mode** ●	**50/60 Hz frequency selection** ●
Shutdown override -	**J1939 message:** TSC1	**Proprietary message(s):** 65304, 65308

Diagnostic messages

DM1 Yellow lamp	DM1 Red lamp	DM1 Protect	DM1 Malfunction	DM2
●	●	●	●	●

Emissions

Tier 4/Stage V	Force regeneration	Inhibit regeneration
●	-	-

Analogue readings

Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.34 Yuchai United

3.34.1 Yuchai

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
		Yuchai

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, GC1, CM1	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration ●	Inhibit regeneration ●

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.34.2 Yuchai BOSCH

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
		Yuchai BOSCH

EIC control		
Start -	Stop ●	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, EBC1	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.34.3 Yuchai Diesel

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
YCGCU (Version 4.2)	Diesel	Yuchai diesel

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, GC1, CM1	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration ●	Inhibit regeneration ●

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.34.4 Yuchai Gas

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
YCGCU (Version 4.2)	Gas	Yuchai gas

EIC control

Start	Stop	Speed control
●	●	●
Default speed control address 3	**Idle mode** ●	**50/60 Hz frequency selection** ●
Shutdown override -	**J1939 message:** TSC1, GC1, CM1	**Proprietary message(s):** -

Diagnostic messages

DM1 Yellow lamp	DM1 Red lamp	DM1 Protect	DM1 Malfunction	DM2
●	●	●	●	●

Emissions

Tier 4/Stage V	Force regeneration	Inhibit regeneration
●	●	●

Analogue readings

Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.34.5 Yuchai YC-BCR

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
YC-BCR		Yuchai YC-BCR

EIC control		
Start ●	Stop ●	Speed control ●
Default speed control address 3	Idle mode ●	50/60 Hz frequency selection ●
Shutdown override -	J1939 message: TSC1, GC1	Proprietary message(s): -

Diagnostic messages				
DM1 Yellow lamp ●	DM1 Red lamp ●	DM1 Protect ●	DM1 Malfunction ●	DM2 ●

Emissions		
Tier 4/Stage V ●	Force regeneration -	Inhibit regeneration -

Analogue readings			
Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●

3.34.6 Yuchai YCGC ECU

ECU(s)	Engine (s)	Engine interface protocol (Engine Type)
		Yuchai YCGCU EC

EIC control

Start	Stop	Speed control
●	●	●
Default speed control address 3	**Idle mode** ●	**50/60 Hz frequency selection** ●
Shutdown override -	**J1939 message:** TSC1, GC1, CM1	**Proprietary message(s):** -

Diagnostic messages

DM1 Yellow lamp	DM1 Red lamp	DM1 Protect	DM1 Malfunction	DM2
●	●	●	●	●

Emissions

Tier 4/Stage V	Force regeneration	Inhibit regeneration
●	●	●

Analogue readings

Engine speed	●	Inlet temperature	●
Percent load	●	Exhaust temperature	●
Oil pressure	●	Fuel pressure	●
Oil temperature	●	Fuel temperature	●
Coolant pressure	●	Water in fuel	●
Coolant temperature	●	Fuel consumption/rate (L/h)	●
Turbo pressure	●	Fuel used (L)	●
Atmospheric pressure	●	Battery voltage	●
Engine hours	●	Battery potential (voltage)	●