

VM- Motor- *Diagnose*

Erstellen und Aufzeichnen einer neuen Parametergruppe

Beispiel: Überprüfen der AdBlue- Qualität (DEF) M29- CM 2200 Abgasstufe 6C

VM- Engine Diagnosis

Create and record a new parameter group

Example: Checking AdBlue Quality (DEF) M29- CM 2200 Emissions Stage 6C

Parameteraquisition auswählen und öffnen sie den Ordner.

VM Service Tool - ECU-Diagnose

1. Diagnose Codes
2. Parameteraquisition
3. Aufzeichnungen
4. Diagnose Tests
5. Gesammelte Motordaten
6. ECU Information
7. Verlassen

R754EU6-c

[Ethernet USB] Verbunden

Select Parameters acquisition and open the folder.

VM Service Tool - ECU Diagnosis

1. Diagnostic codes
2. Parameters acquisition
3. Trip Recorder
4. Diagnostic tests
5. Engine Collect Data
6. ECU Information
7. Exit

R754EU6-C

[Ethernet USB] Connected

[2] - VM Diagnose-Tool - Parameter-Aufzeichnung

Parameter-Gruppenliste

1. Partikelfilter

2. Druckkanäle

3. Einspritz Sollwert

4. Applikations Parameter

5. Temperaturkanäle

6. Sensor Signalspannung

7. Raildruckkontrolle

8. Motor Drehmoment/Drehzahl Anfragungskontrolle

Gruppe hinzufügen

Gruppe bearbeiten

Gruppe entfernen

Aufzeichnung
anschauen

Verlassen

Den Ordner „Gruppe hinzufügen“ auswählen und öffnen.

Eigene Parameter-Gruppe erstellen

[2] - VM Service Tool - Parameters acquisition

Parameters groups list

1. Particle filter

2. Pressure channels

3. Fueling setpoint

4. Application parameters

5. Temperature channels

6. Sensor signal voltage

7. Rail pressure check

8. Engine torque/speed request check

Add group

Edit group

Remove group

View acquisition

Exit

Select "Add group" and open the folder.

Create a customized parameters group

Parameter-Gruppe hinzufügen

| Parameter-Name | Messeinheit | Code | Parameter-Name |
|---|-------------|------|----------------|
| Abweichung zwischen der Soll-Luftmasse und Luftmassenmesser durch lesen - (AirCl_mGovDvt) | mg/Hub | 9 | |
| Fester Teil der kontrollierten Variablen [%] - (AirCl_rClVal) | % | 10 | |
| Variable Korrektur des AGR begrenzt - (AirCl_rGovOut_mp) | % | 11 | |
| Signal der dynamischen Kontrolle - Ausgang DT1 - für AGR - (AirCl_rOutD_mp) | % | 12 | |
| Ausgangs-Controller AGR I-Kanal - (AirCl_rOutI_mp) | % | 13 | |
| Ausgang der AGR P-Kontrolle [%] - (AirCl_rOutP_mp) | % | 14 | |
| Status: Stopp der Kontrolle - (AirCl_stMon) | - | 15 | |
| Einlasslufttemperatur durch den Flussmesser lesen - (Air_tSensTAFS) | °C | 16 | |
| Ladedruck (Boost-Sensor) - (Air_pCACDs) | bar | 17 | |
| Temperatur Einlasskrümmer - (Air_tCACDs) | °C | 18 | |
| Spannungssensor Temperatur BOOST - (Air_uRaw TCACDs) | V | 19 | |
| - (APP_r) | % | 20 | |
| Gaspedal - Spannung Potentiometer 1 - (APP_uRaw1) | V | 21 | |
| Gaspedal - Spannungspotentiometer 2 - (APP_uRaw2) | V | 22 | |
| Batteriespannung - (BattU_u) | V | 23 | |
| Status Bremse - (Brk_st) | - | 24 | |
| Betriebsstatus des Motors - (CoEng_st) | - | 25 | |
| Betriebsmodus aktiv - (CoEOM_stOpModeAct) | - | 26 | |
| Status redundanter Bremsschalter - (Brk_stRed) | - | 27 | |
| Kühflüssigkeitstemperatur - (CEngDsT_t_mp) | °C | 28 | |
| Wassertempersensormotor Spannungsmotor - (CEngDsT_uRaw) | V | 29 | |

Neuer Gruppennamen: Taskleistenbezeichnung:

| Parameter-Name | Messeinheit | Code | Parameter-Name |
|----------------|-------------|------|----------------|
| | | | |

Neue Parametergruppe mit einem Gruppennamen benennen:
Z.B. „AdBlue Qualität CM 2200“

Parameter hinzufügen

Entfernen

Gruppe hinzufügen

Abbrechen

Add parameter group

| Parameter name | Measure unit | Code | Parameter name |
|--|--------------|------|----------------|
| output of P-governor of EGR [%] - (AirCl_rOutP_mp) | % | 14 | |
| status: shutdown case of the governor - (AirCl_stMon) | - | 15 | |
| Intake air temperature read by the air mass meter - (Air_tSensTAFS) | °C | 16 | |
| Boost pressure - (Air_pCACDs) | bar | 17 | |
| temperature air inside the inlet manifold - (Air_tCACDs) | °C | 18 | |
| Boost temperature sens. Voltage - (Air_uRawTCACDs) | V | 19 | |
| pedale acceleratore Pedal - (APP_r) | % | 20 | |
| Acceleration Pedal potentiometer voltage 1 - (APP_uRaw1) | V | 21 | |
| Acceleration Pedal potentiometer voltage 2 - (APP_uRaw2) | V | 22 | |
| Battery voltage - (BattU_u) | V | 23 | |
| Brake switch state - (Brk_st) | - | 24 | |
| Engine operation status - (CoEng_st) | - | 25 | |
| Active operation mode - (CoEOM_stOpModeAct) | - | 26 | |
| State redundant brake switch - (Brk_stRed) | - | 27 | |
| Engine coolant temperature - (CEngDsT_t_mp) | °C | 28 | |
| water temp. sensor voltage - (CEngDsT_uRaw) | V | 29 | |
| Debounced status of Clutch - (Clth_st) | - | 30 | |
| Raw signal of clutch state - (Clth_stRaw) | - | 31 | |
| Request rpm via CAN - (CoETS_nTSEASpdReq_mp) | rpm | 32 | |
| Information about torque control value limited by limitation access - (CoETS_stTSEActLimited_mp) | - | 33 | |
| theoretical Fuel consumption - (Com_dvolFCons) | l/h | 34 | |

New group name: Button comment string:

| Parameter name | Measure unit | Code | Parameter name |
|----------------|--------------|------|----------------|
| | | | |

**Name a new parameter group with a group name:
For example, "AdBlue quality CM 2200"**

Remove

Add group

Cancel

Aus der Parameter- Code- Liste die erforderlichen Parameter (Code) auswählen und mit einem Doppel Klick in die neue Gruppe einfügen (09.2.9 Parameter- Code- Liste VM- Motor).

Add parameter group

| Parameter name | Measure unit | Code | Parameter name |
|---|--------------|------|----------------|
| Set-point for the Urea Pump Motor actuator - (UPmpMot_r) | % | 373 | |
| - (I15031_PID8FA) | - | 374 | |
| - (CoSCR_st) | - | 375 | |
| P3 rough exhaust gas pressure before the turbo (used for the check of the sensor plausibility) - (Exh_pSensPTrbnUs) | bar | 376 | |
| Sensed inlet air temperature - (Air_tSensTCACDs) | °C | 377 | |
| Pressure compensated NOx signal - (Exh_rNOxPresCompNoCat2Ds) | ppm | 378 | |
| Pressure compensated NOx signal - (Exh_rNOxPresCompNSCDs) | ppm | 379 | |
| position Throttle-Valve (freeze frame) - (PID45h_ThrVlv_rAct) | % | 380 | |
| valvola EGR Position (freeze frame) - (PID2Ch_EGRVlv_rPs) | % | 381 | |
| % soot accumulato su PM sensore (freeze frame) - (PID8Fh_Exh_ratPPDsNmCmt) | % | 382 | |
| Urea concentration % - (SCRPOD_ratConcSlowFil) | % | 383 | |
| Urea concentration % - (SCRPOD_ratConcFastFil) | % | 384 | |
| Operation of AdBlue Quality Control - (SCRPOD_flgUrQtyDetnRels_MP) | - | 385 | |
| DEF quality control operation Status - (SCRPOD_stUrQtyDetnRels) | - | 386 | |
| environment temperature - (EnvT_t) | °C | 387 | |
| Debounce value of Hand Brake switch (HndBrk_stDebVal) | - | 388 | |
| Raw value of Hand Brake switch read from the HWE (HndBrk_stDebVal) | - | 389 | |
| Demand status for passive OxiCat monitoring (OxiCat_stCalcPas) | - | 390 | |
| HC mass converted in the OxiCat during passive monitoring (OxiCat_mHCCMonPas_mp) | g | 391 | |
| DOC Efficiency (OxiCat_facHCCnvRat) | - | 392 | |
| Service regeneration required by the button on the dashboard | - | 393 | |

New group name: CM 2200 Button comment string:

| Parameter name | Measure unit | Code | Parameter name |
|--|--------------|------|----------------|
| Engine coolant temperature - (CEngDsT_t_mp) | °C | 28 | |
| Engine RPM - (Epm_nEng) | rpm | 57 | |
| Urea concentration % - (UrQlSnsr_ratConc) | % | 293 | |
| DEF temperature in the tank - (SCR_tUTnkT) | °C | 299 | |
| Urea concentration % - (SCRPOD_ratConcSlowFil) | % | 383 | |
| Urea concentration % - (SCRPOD_ratConcFastFil) | % | 384 | |

Buttons: Add parameter, Remove, Add group, Cancel

Beispiel:
Parameter Nr. 384
Harnstoff- Konzentration in %

Beispiel:
Neue Gruppe mit den ausgewählten Parametern

Select the required parameters (code) from the parameter code list and insert them into the new group with a double click (09.2.9 parameter code list VM- Engine).

Add parameter group

| Parameter name | Measure unit | Code | Parameter name |
|---|--------------|------|----------------|
| Set-point for the Urea Pump Motor actuator - (UPmpMot_r) | % | 373 | |
| - (I15031_PID8FA) | - | 374 | |
| - (CoSCR_st) | - | 375 | |
| P3 rough exhaust gas pressure before the turbo (used for the check of the sensor plausibility) - (Exh_pSensPTtrnUs) | bar | 376 | |
| Sensed inlet air temperature - (Air_tSensTCACDs) | °C | 377 | |
| Pressure compensated NOx signal - (Exh_rNOxPresCompNoCat2Ds) | ppm | 378 | |
| Pressure compensated NOx signal - (Exh_rNOxPresCompNSCDs) | ppm | 379 | |
| position Throttle-Valve (freeze frame) - (PID45h_ThrVlv_rAct) | % | 380 | |
| valvola EGR Position (freeze frame) - (PID2Ch_EGRVlv_rPs) | % | 381 | |
| % soot accumulato su PM sensore (freeze frame) - (PID8Fh_Exh_ratPPDsNmCmt) | % | 382 | |
| Urea concentration % - (SCRPOD_ratConcSlowFil) | % | 383 | |
| Urea concentration % - (SCRPOD_ratConcFastFil) | % | 384 | |
| Operation of AdBlue Quality Control - (SCRPOD_flgUrQlyDetnRels_MP) | - | 385 | |
| DEF quality control operation Status - (SCRPOD_stUrQlyDetnRels) | - | 386 | |
| environment temperature - (EnvT_t) | °C | 387 | |
| Debounce value of Hand Brake switch (HndBrk_stDebVal) | - | 388 | |
| Raw value of Hand Brake switch read from the HWE (HndBrk_stDebVal) | - | 389 | |
| Demand status for passive OxiCat monitoring (OxiCat_stCalcPas) | - | 390 | |
| HC mass converted in the OxiCat during passive monitoring (OxiCat_mHCCnvRels) | g | 391 | |
| DOC Efficiency (OxiCat_facHCCnvRels) | - | 392 | |
| Service regeneration required by the button on the dashboard | - | 393 | |

New group name: CM 2200 Button comment string:

| Parameter name | Measure unit | Code | Parameter name |
|--|--------------|------|----------------|
| Engine coolant temperature - (CEngDsT_t_mp) | °C | 28 | |
| Engine RPM - (Epm_nEng) | rpm | 57 | |
| Urea concentration % - (UrQlSnsr_ratConc) | % | 293 | |
| DEF temperature in the tank - (SCR_tUTnkT) | °C | 299 | |
| Urea concentration % - (SCRPOD_ratConcSlowFil) | % | 383 | |
| Urea concentration % - (SCRPOD_ratConcFastFil) | % | 384 | |

Buttons: Add parameter, Remove, Add group, Cancel

Example:
Parameter No. 384
Urea concentration in %

Example:
New group with the selected parameters.

[2] - VM Diagnose-Tool - Parameter-Aufzeichnung

Parameter-Gruppenliste

Gruppe hinzufügen

Gruppe bearbeiten

Gruppe entfernen

Aufzeichnung
anschauen

Verlassen

1. Partikelfilter

2. Druckkanäle

3. Einspritz Sollwert

4. Applikations Parameter

5. Temperaturkanäle

6. Sensor Signalspannung

7. Raildruckkontrolle

8. Motor Drehmoment/Drehzahl Anfragungskontrolle

Adblue Qualität CM 2200

Neu erstellte Parametergruppe auswählen und öffnen.

[2] - VM Service Tool - Parameters acquisition

Parameters groups list

1. Particle filter

2. Pressure channels

3. Fueling setpoint

4. Application parameters

5. Temperature channels

6. Sensor signal voltage

7. Rail pressure check

8. Engine torque/speed request check

Add group

Edit group

Remove group

View acquisition

Exit

Adblue quality CM 2200

Select and open new the new created parameter group.

[2] - VM Diagnose-Tool - Parameter-Aufzeichnung - CM 2200

| Parameter | Wert | Messeinheit | Bemerkungen |
|--|-------|-------------|-------------|
| Kühlflüssigkeitstemperatur - (CEngDsT_t_mp) | 15.96 | °C | |
| Motordrehzahl - (Epm_nEng) | 0.00 | rpm | |
| Harnstoffkonzentration - (UrQISnsr_ratConc) | 33.50 | % | |
| DEF Temperatur im Tank - (SCR_tUTnkT) | 11.86 | °C | |
| Harnstoffkonzentration - (SCRPOD_ratConcSlowFil) | 33.52 | % | |
| Harnstoffkonzentration - (SCRPOD_ratConcFastFil) | 33.50 | % | |

Darstellung der Parameterwerte in Zahlen

Optional können die Parameterwerte auch grafisch dargestellt werden. Den Button „Grafik“ anwählen und die Aufzeichnung der Parameter starten

Aufzeichnung Grafik Aufzeichnungsdatei Drucken Verlassen

[2-3] - VM Service Tool - Parameters acquisition - CM 2200

| Parameter | Value | Measure unit | Notes |
|--|-------|--------------|-------|
| Engine coolant temperature - (CEngDsT_t_mp) | 16.36 | °C | |
| Engine RPM - (Epm_nEng) | 0.00 | rpm | |
| Urea concentration % - (UrQISnsr_ratConc) | 33.50 | % | |
| DEF temperature in the tank - (SCR_tUTnkT) | 11.86 | °C | |
| Urea concentration % - (SCRPOD_ratConcSlowFil) | 33.52 | % | |
| Urea concentration % - (SCRPOD_ratConcFastFil) | 33.61 | % | |

Representation of the parameter Values in numbers.

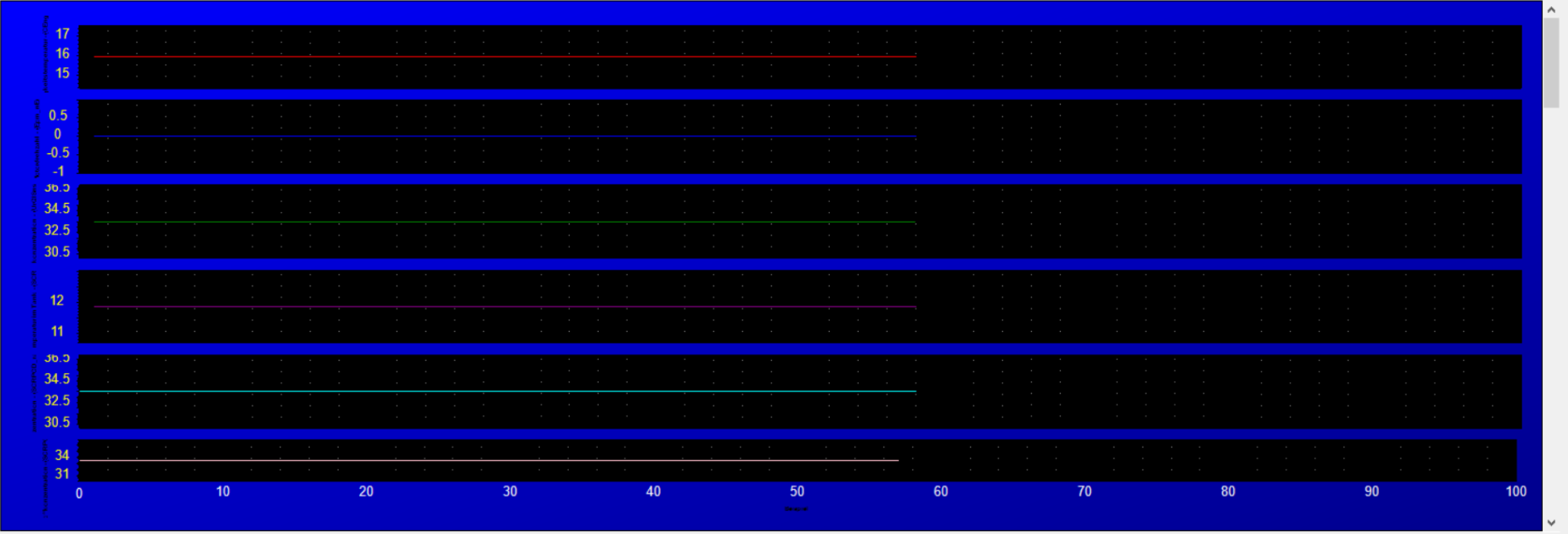
Optionally, the parameter values can also be displayed graphically. Select the "Graph" button and start recording the parameters.

Acquisition **Graph** Log file Print Exit

Die ausgewählten Parameter werden in ein Balkendiagramm aufgezeichnet. Durch das Anwählen Button „Stop Grafik“ wird die Aufzeichnung beendet.

[2] - VM Diagnose-Tool - Parameter-Aufzeichnung - CM 2200

| Parameter | Wert | Messeinheit | Bemerkungen |
|--|-------|-------------|-------------|
| Kühlflüssigkeitstemperatur - (CEngDsT_t_mp) | 15.96 | °C | |
| Motordrehzahl - (Epm_nEng) | 0.00 | rpm | |
| Harnstoffkonzentration - (UrQISnsr_ratConc) | 33.50 | % | |
| DEF Temperatur im Tank - (SCR_tUTnkT) | 11.86 | °C | |
| Harnstoffkonzentration - (SCRPOD_ratConcSlowFil) | 33.52 | % | |
| Harnstoffkonzentration - (SCRPOD_ratConcFastFil) | 33.50 | % | |



00:00:11

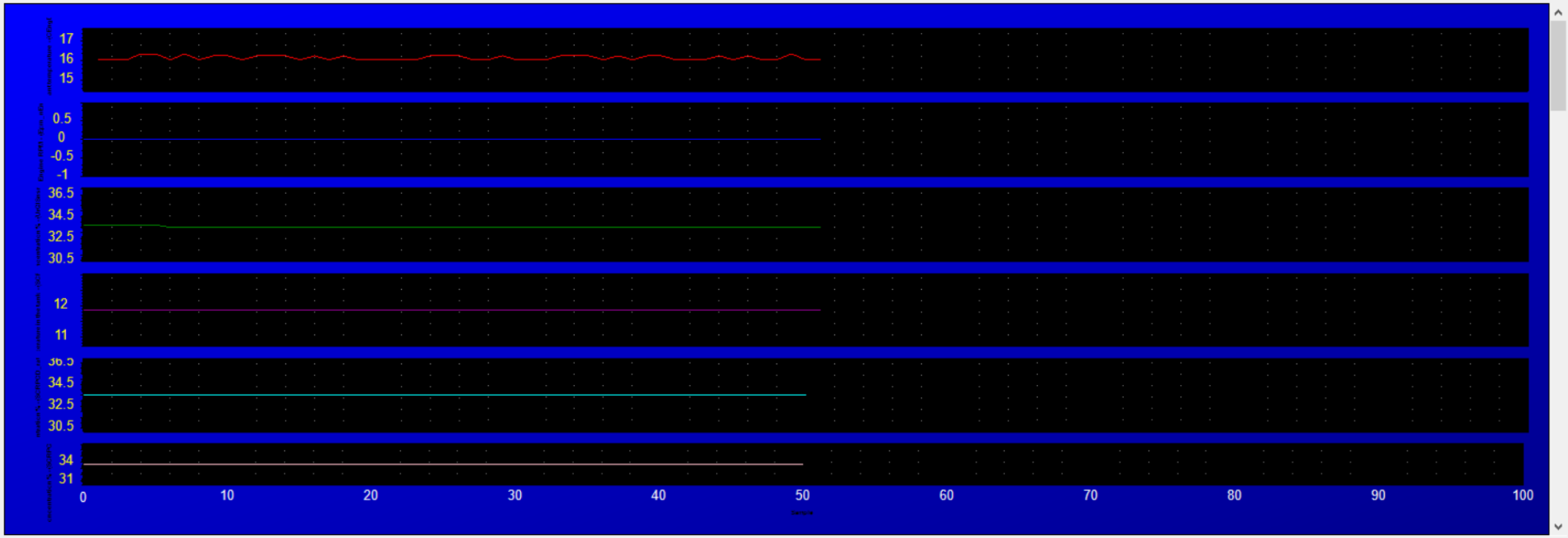
Aufzeichnung **Stop Grafik** Aufzeichnungsdatei Drucken Verlassen



The selected parameters are recorded in a bar chart. Selecting the button "Stop graph" ends the recording

[2-3] - VM Service Tool - Parameters acquisition - CM 2200

| Parameter | Value | Measure unit | Notes |
|--|-------|--------------|-------|
| Engine coolant temperature - (CEngDsT_t_mp) | 16.06 | °C | |
| Engine RPM - (Epm_nEng) | 0.00 | rpm | |
| Urea concentration % - (UrQISnsr_ratConc) | 33.50 | % | |
| DEF temperature in the tank - (SCR_tUTnkT) | 11.86 | °C | |
| Urea concentration % - (SCRPOD_ratConcSlowFil) | 33.52 | % | |
| Urea concentration % - (SCRPOD_ratConcFastFil) | 33.64 | % | |



00:00:10

Acquisition Stop graph Log file Print Exit

Request 4/6

Die Aufzeichnung der Parametergruppe als Textdatei auf dem Diagnoserechner abspeichern .
z.B. auf die Festplatte „C“ in den selbst erstellten Ordner „VM-Logfile“ mit Angabe des Gruppennamens abspeichern.

Save the recording of the parameter group as a text file on the diagnostic computer.
E.g. Save to disk "C" in the self-created folder "VM-Logfile" with the name of the group.

[2] - VM Diagnose-Tool - Parameter-Aufzeichnung - CM 2200

The screenshot shows the 'VM Diagnose-Tool' interface. A 'Speichern unter' (Save As) dialog box is open, showing the file path 'C:\Windows (C:)\VM-logfile'. The dialog lists two files: 'Adblue Qualität CM 2200' (13 KB) and 'Adblue quality CM 2200' (68 KB). A red arrow points to the second file. The 'Dateiname' field contains 'CM 2200 03.12.2018' and the 'Dateityp' is 'Text files (*.htm)'. A red arrow points from a 'save' label to the 'Speichern' button. The background shows a data recording window with a 'Bemerkungen' table and a large blue area with a grid. The bottom of the window has a status bar with '00:00:11' and buttons for 'Aufzeichnung', 'Stop Grafik', 'Aufzeichnungsdatei', 'Drucken', and 'Verlassen'.

[2] - VM Diagnose-Tool - Parameter-Aufzeichnung - CM 2200

| Parameter | Wert | Messeinheit | Bemerkungen |
|--|-------|-------------|-------------|
| Kühlflüssigkeitstemperatur - (CEngDsT_t_mp) | 16.26 | °C | |
| Motordrehzahl - (Epm_nEng) | 0.00 | rpm | |
| Harnstoffkonzentration - (UrQISnsr_ratConc) | 33.50 | % | |
| DEF Temperatur im Tank - (SCR_tUTnkT) | 12.86 | °C | |
| Harnstoffkonzentration - (SCRPOD_ratConcSlowFil) | 33.52 | % | |
| Harnstoffkonzentration - (SCRPOD_ratConcFastFil) | 33.53 | % | |

Verlassen der ausgewählten Parametergruppe



Aufzeichnung Grafik Aufzeichnungsdatei Drucken Verlassen

[2] - VM Service Tool - Parameters acquisition - CM 2200



| Parameter | Value | Measure unit | Notes |
|--|-------|--------------|-------|
| Engine coolant temperature - (CEngDsT_t_mp) | 16.26 | °C | |
| Engine RPM - (Epm_nEng) | 0.00 | rpm | |
| Urea concentration % - (UrQISnsr_ratConc) | 33.75 | % | |
| DEF temperature in the tank - (SCR_tUTnkT) | 12.86 | °C | |
| Urea concentration % - (SCRPOD_ratConcSlowFil) | 33.52 | % | |
| Urea concentration % - (SCRPOD_ratConcFastFil) | 33.75 | % | |

Exit the selected parameter group



Acquisition Graph Log file Print Exit

Request 6/6

Die abgespeicherte Textdatei (HTLM Document) öffnen.

Open the saved text file (HTML document).

The screenshot shows a Windows File Explorer window titled 'VM-logfile'. The address bar shows the path 'Dieser PC > Windows (C:) > VM-logfile'. The left sidebar shows the 'VM-logfile' folder selected. The main pane displays a list of files:

| | Änderungsdatum | Typ | Größe |
|--|------------------|---------------------|-------|
| <input type="checkbox"/> Adblue Qualität CM 2200 | | | |
| <input type="checkbox"/> Adblue quality CM 2200 | 03.12.2018 13:36 | Firefox HTML Doc... | 13 KB |
| <input type="checkbox"/> cm2200 | | Textdokument | 20 KB |
| <input type="checkbox"/> HK2201 | | Textdokument | 25 KB |
| <input type="checkbox"/> mm29 03.12.2018 | | Textdokument | 22 KB |
| <input type="checkbox"/> test | 03.12.2018 11:55 | Firefox HTML Doc... | 68 KB |

A red arrow points to the file 'Adblue quality CM 2200'. A tooltip for this file shows the following details:

- Typ: Firefox HTML Document
- Größe: 12.7 KB
- Änderungsdatum: 03.12.2018 13:36

The taskbar at the bottom shows the system tray with the date '03.12.2018' and time '13:37'.

Auswerten der Parametergruppe mit der Textdatei
Evaluate the parameter group with the text file

file:///C:/VM-logfile/CM 2200%20 03.12.2018.htm

Meistbesucht Erste Schritte Google Übersetzer

Datenaufzeichnung Steuergerät

| Zeit | KÄ½hlflÄ½ssigkeitstemperatur - (CEngDsT_t_mp) Å°C | Motordrehzahl - (Epm_nEng) rpm | Harnstoffkonzentration - (UrQlSnsr_ratConc) % | DEF Temperatur im Tank - (SCR_tUTnkT) Å°C | Harnstoffkonzentration - (SCRPOD_ratConcSlowFil) % | Harnstoffkonzentration - (SCRPOD_ratConcFastFil) % |
|----------|---|--------------------------------|---|---|--|--|
| 00:00:00 | 15.96 | 0.00 | 33.50 | 11.86 | 33.52 | 33.50 |
| 00:00:00 | 15.96 | 0.00 | 33.50 | 11.86 | 33.52 | 33.50 |
| 00:00:00 | 15.96 | 0.00 | 33.50 | 11.86 | 33.52 | 33.50 |
| 00:00:00 | 15.96 | 0.00 | 33.50 | 11.86 | 33.52 | 33.50 |
| 00:00:00 | 15.96 | 0.00 | 33.50 | 11.86 | 33.52 | 33.50 |
| 00:00:01 | 15.96 | 0.00 | 33.50 | 11.86 | 33.52 | 33.50 |
| 00:00:01 | 15.96 | 0.00 | 33.50 | 11.86 | 33.52 | 33.50 |
| 00:00:01 | 16.06 | 0.00 | 33.50 | 11.86 | 33.52 | 33.50 |
| 00:00:01 | 15.96 | 0.00 | 33.50 | 11.86 | 33.52 | 33.50 |
| 00:00:01 | 15.96 | 0.00 | 33.50 | 11.86 | 33.52 | 33.50 |
| 00:00:02 | 15.96 | 0.00 | 33.50 | 11.86 | 33.52 | 33.50 |