

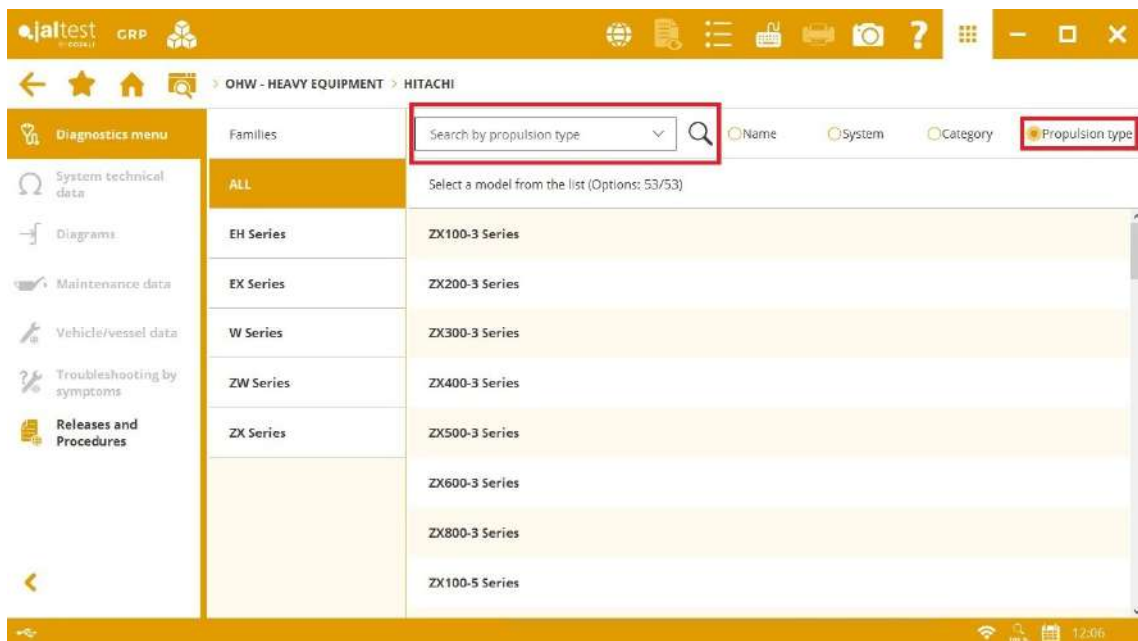


## INNOVATIONS 22.3

# SOFTWARE INNOVATIONS

The new software version Jaltest 22.3 once again offers more improvements and innovations that consolidate this tool as a benchmark in multi-brand diagnostics for commercial vehicles, agricultural equipment, OHW equipment, material handling equipment and vessels.

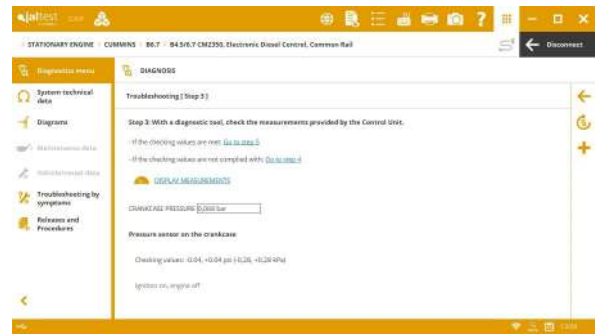
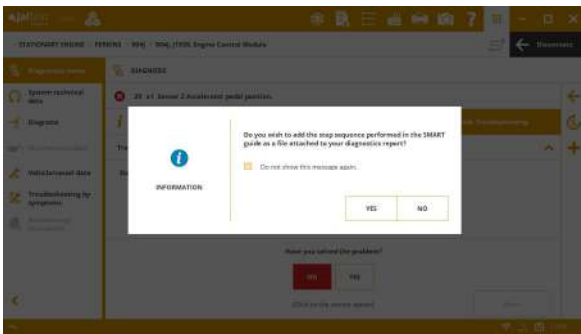
Overall, some improvements in the software usage have been included, for example, new descriptions for each of the additional modules grouped on the upper toolbar of the application. It is also important to highlight the group of models categorised by propulsion type (electric vehicle, diesel engine, etc.) or the extension in the data recorder duration.



In Jaltest Feedback forms, the phone number and other fields are automatically filled provided that they have been previously configured in the user and company data in GRP.

## SMART guides

Several innovations have been included in SMART guides. In this version, the step sequence of a SMART guide can be attached as file to the diagnostics report, in the steps of these guides the values of the system measurements, as well as the result of performing a reading or error clearance can also be displayed. In addition, there are text boxes so that the user can enter measured values manually, etc.



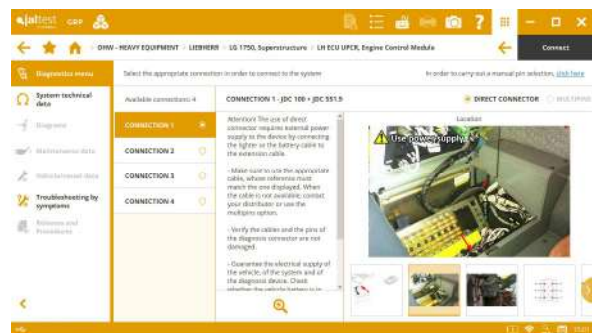
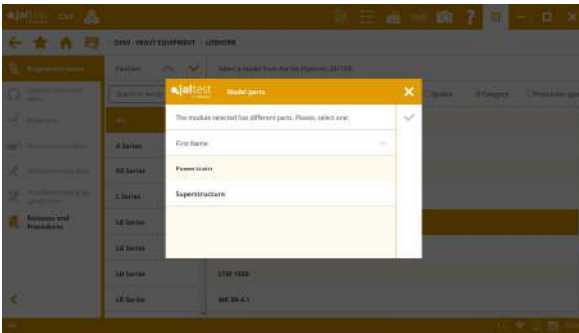
## System Display

From this version, in System Display, different elements from the image can move independently depending on the measurement value and new types of measurement graphic representation have been included. In addition, during the execution of a check or activation, steps can be displayed directly through a System Display.



## Model division into parts

This version, several parts of a model can be specified, if necessary, to improve access to systems and technical information. The example shows how the LG 1750 self-propelled crane model of LIEBHERR brand is divided into the superstructure and the powetrain.



## GRP

The user experience has been significantly improved in GRP, taking into account the following innovations:

- Improved database lookup times of the GRP synchronisation.
- The possibility of creating alarms and notifications from Reports.
- The possibility of entering phone number by user.
- Improved management and display of files attached to GRP entities.
- Access to “Human Resources” menu for service managers.

# BRANDS AND MODELS

Take into account that this document is only a summary of the most relevant information of this new version. For further information, please visit Jaltest Report.

## OHW - HEAVY EQUIPMENT

In this version the following new brands have been included: **KATO** and **POWERSCREEN**.

### HITACHI

New models for 7 Series.

### LIEBHERR

New models, 2 families and 12 models included.

### LIUGONG

New **900F Series** crawl excavator models.

## OHW - COMPACT EQUIPMENT

In this version the following new brands have been included: **AGRIMAC** and **KATO** that include new **HITACHI** and **LIUGONG** models and **SANY** that includes the **SLB95** backhoe loader.

## DIAGNOSTICS AND SYSTEMS

Take into account that this document is only a summary of the most relevant information of this new version. For further information, please visit Jaltest Report.

It is important to highlight the continuous development of advanced functions. For example, the **EMS V3 Volvo** engine control system, which applies to several brands such as **GRADALL**, **VOLVO CE** or **XCMG**, includes the high-pressure fuel circuit check and the System Display in the fuel consumption check. In addition, in **Volvo** engines, the **EDC V2** system includes the soot content check in the Diesel Particulate Filter (DPF).

## OHW - HEAVY EQUIPMENT

### CASE CE

Wiring diagram configurations have been included in **750M** and **850M** models.

### CATERPILLAR

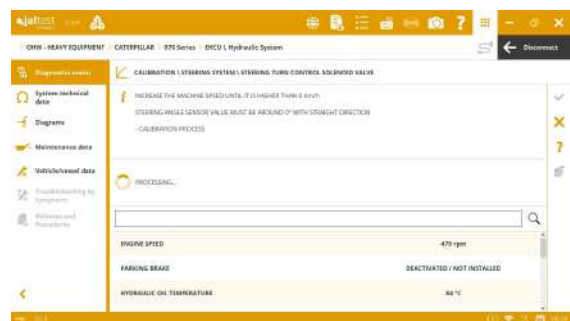
⊕ **MCM** central computer for **900 Series** wheel loaders.

**C-9.3** and **C-15** (on SAE J1939) engine control systems among others, the ignition system check and the system heater check have been developed in the **ARD** exhaust gas aftertreatment system.

**EHCU I** (on CDL) hydraulic control system for wheel loaders, steering system calibrations.

**EHCU** (on SAE J1939) hydraulic control system for **D6T** Dozer, calibration of the blade raising/lowering solenoid valves and automatic calibration of the implement solenoid valves.

Wiring diagram configurations have been included in **370 Series** crawl excavators.



### DRESSTA

**QSG12 CM2350 Cummins** engine control system, configuration of the engine temperature protection parameters, the engine brake parameters, etc.

**QSB4.5/6.7 CM2350 Cummins** engine control system, configuration of the fan type, the inducement mode override switch parameters, etc.

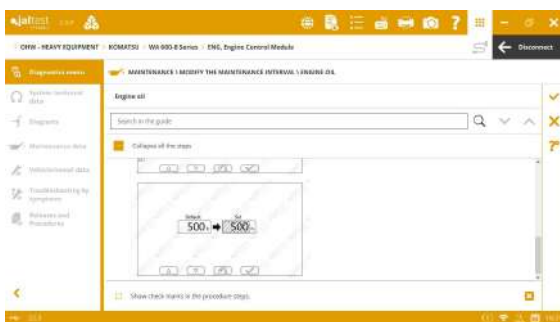
## HYDREMA

Equipment technical data and new engine types in **M1500**, **M1600** and **M1700** models.

## JCB

Equipment technical data and new engine types in **JS Series**, **VM Series** and **X Series** family models.

## KOMATSU



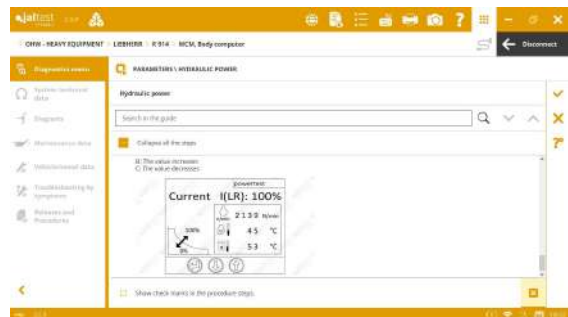
⊕ **ENG** engine control system for monitor R in wheel loaders and dumpers.

⊕ **ENG** engine control system for monitor C in excavators.

## LIEBHERR

⊕ **MCM** central computer for **R Series** crawl excavators.

**LIDEC1** engine control system, maintenance to clear errors of the aftertreatment system and the System Display.



## PRINOTH

Equipment technical data and new engine types in **Trooper Series** and **SW4S Series** models.

## SANDVIK

**C-13** (on SAE J1939) **Cummins** engine control system, the ignition system check of the exhaust gas aftertreatment system.

**904J** (on SAE J1939) **Perkins** engine control system, configuration of the automatic stop system parameters and System Display.

## VOLVO CE

⊕ **IC** instrument cluster for excavators.

⊕ New **CU** climate control.

**ACM** exhaust gas aftertreatment system, aftertreatment fuel system check.

**VECU** machine control unit, check of the control joystick buttons, the switches and the pressure sensors.

**CCU** cab module for **A Series (D)** articulated hauler, check of the control unit connector signals and System Display.

## OHW -COMPACT EQUIPMENT

Take into account that this document is only a summary of the most relevant information of this new version. For further information, please visit Jaltest Report and coverage on Jaltest website where you can find new technical data and engine types included in **COMPACT EQUIPMENT** in models of brands such as **ATLAS, DIECI, JCB, LIUGONG, MECALAC, MERLO, TEREX**, etc.

The **VCU** central computer from **WACKER NEUSON** has been developed for wheel loaders of brands such as **KRAMER** or **WEIDEMANN**.

### CASE CE

Wiring diagram configurations have been included in **SR 130 Series, SV 340 Series** and **SR 160 Series** models.

### CATERPILLAR

⊕ **IC** (on SAE J1939) instrument cluster.

⊕ **MCM** central computer for **900 Series** wheel loaders.

**C-7.1** (on SAE J1939) engine control system, the ignition system check and the system heater check have been developed in the **ARD** exhaust gas aftertreatment system.

**EHCU** (on SAE J1939) hydraulic control system for Dozer, calibration of the blade raising/lowering solenoid valves and automatic calibration of the implement solenoid valves.

Equipment technical data and new engine types in **240 Series, 270 Series, 280 Series, 300 Series** and **900 Series** models.

Wiring diagram configurations have been included in **900 Series** wheel loaders.

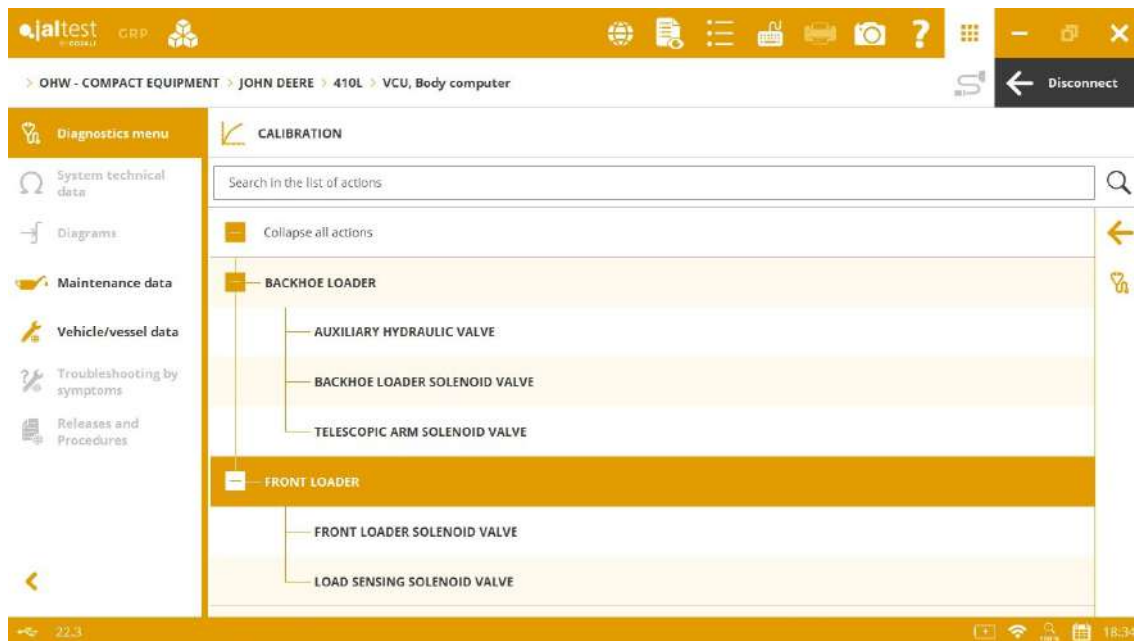


## JCB

**ECM** (on SAE J1939) Perkins 404J engine control system, check of the exhaust gas temperature sensor, the operation test of the particulate filter regeneration, maintenance of the turbocharger, the recovery process of the exhaust gas aftertreatment system, etc.

## JOHN DEERE CE

**VCU** central computer for **410L** and **710L** backhoe loaders, calibrations.



## LIEBHERR

⊕ **MCM** central computer for the **R 924 Compact** model.

**LH ECU UPCR** engine control system, air purge of the fuel system, injector test, cylinder cut-out and compression test.

## NEW HOLLAND CE

Wiring diagram configurations have been included in **L213**, **L218**, **L221** and **L230** models.

## VOLVO CE

⊕ **IC** instrument cluster for excavators.

**ACM** exhaust gas aftertreatment system, aftertreatment fuel system check.

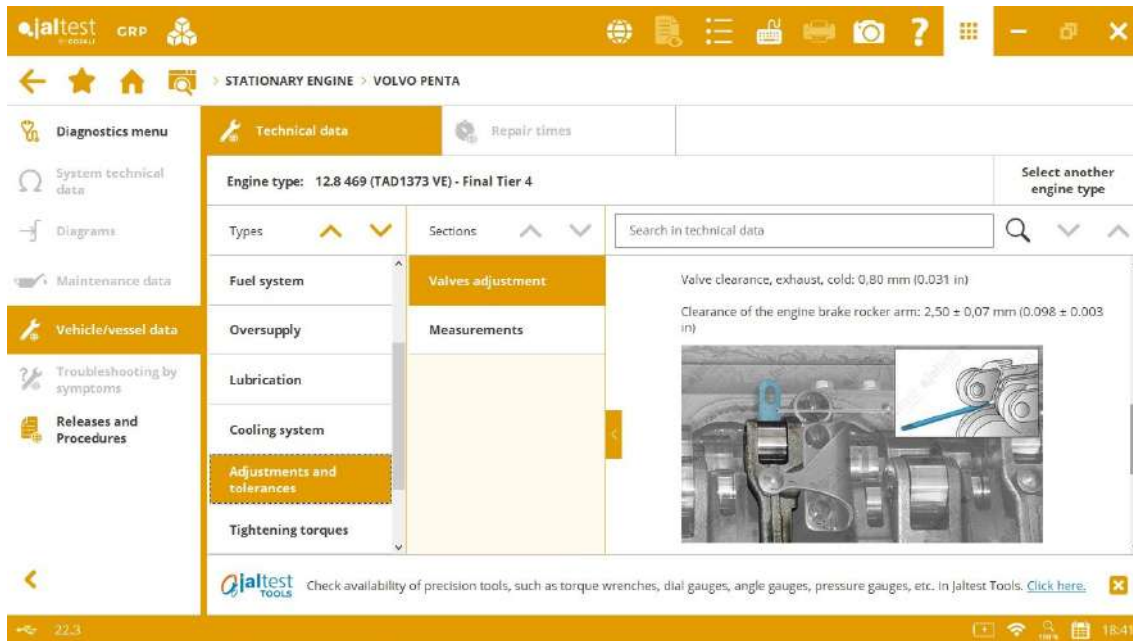
**VECU** machine control unit, check of the control joystick buttons, the switches and the pressure sensors.

**CU** climate control for excavators, actuation of the air conditioning clutch, check of the system hatches and the heating valve, etc.



## STATIONARY ENGINE

Overall, technical data in new engine types in brands such as **ISUZU, JCB, KOHLER, LIEBHERR, PERKINS** and **VOLVO PENTA** has been included.



## CATERPILLAR

**Caterpillar** (on SAE J1939) engine control systems among others, the ignition system check and the system heater check have been developed in the **ARD** exhaust gas aftertreatment system.

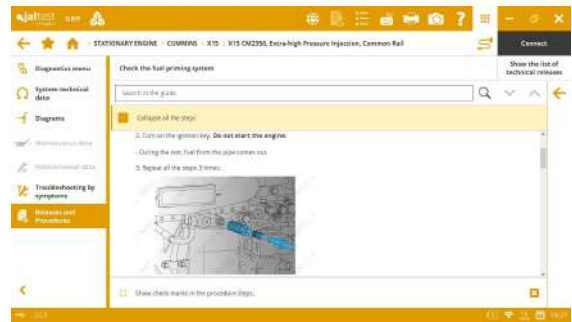
Wiring diagram configurations have been included in **C-3.6, C-4.4, C-7.1, C-15, C-18, C-27** and **C-32** engines.

## CUMMINS

More than 500 references of **CUMMINS** systems have been included. In these systems, the display format of parameters has also been improved. In addition, the System Display has been included in engine control systems such as **B4.5/6.7** and **L9 CM2350**. The parameter copying and pasting to the control unit is also available in these systems.

**ISF/F 3.8 CM2350** and **QSF 3.8 CM2350** engine control systems, there are new advanced diagnostics functions such as the cylinder cut-out and the parameter configuration.

Technical releases and procedures in **X15** engines such as “*Check the fuel pump*” or “*Check for leaks in the oil cooler*”, among others.



## DOOSAN

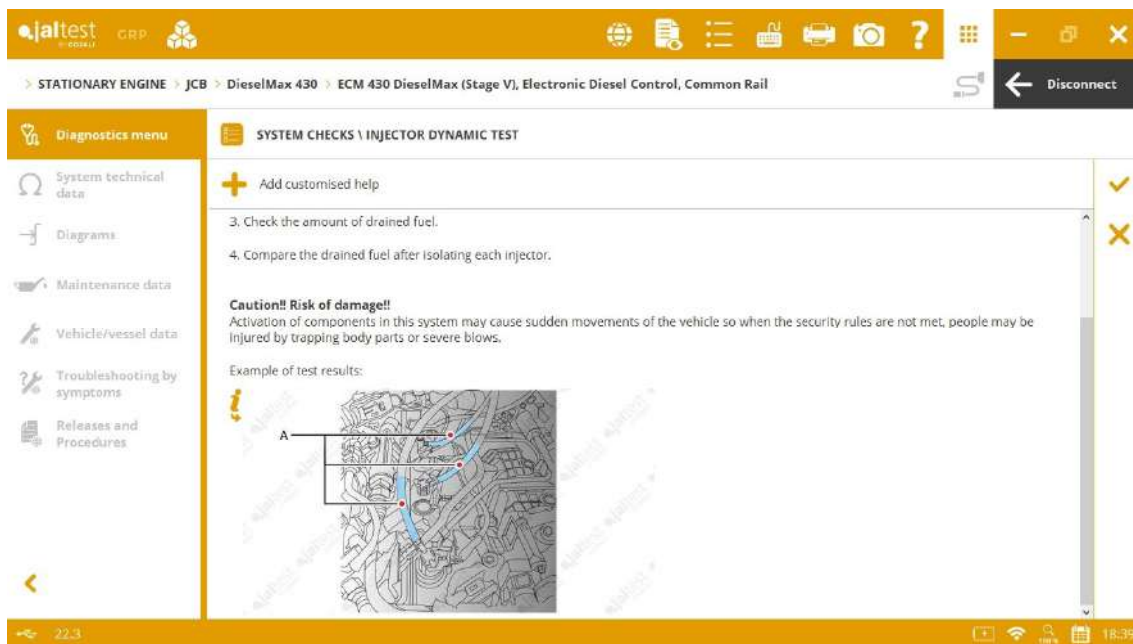
**DL06/DL08** (*K line*) engine control system, compression test.

## ISUZU

**6HK1** (*on CAN*) engine control system, catalyst cleaning process and exhaust gas aftertreatment system reset.

## JCB

**DieselMax 430 Stage V** engine control system, advanced diagnostics functions, checks and maintenance services.



## KOHLER

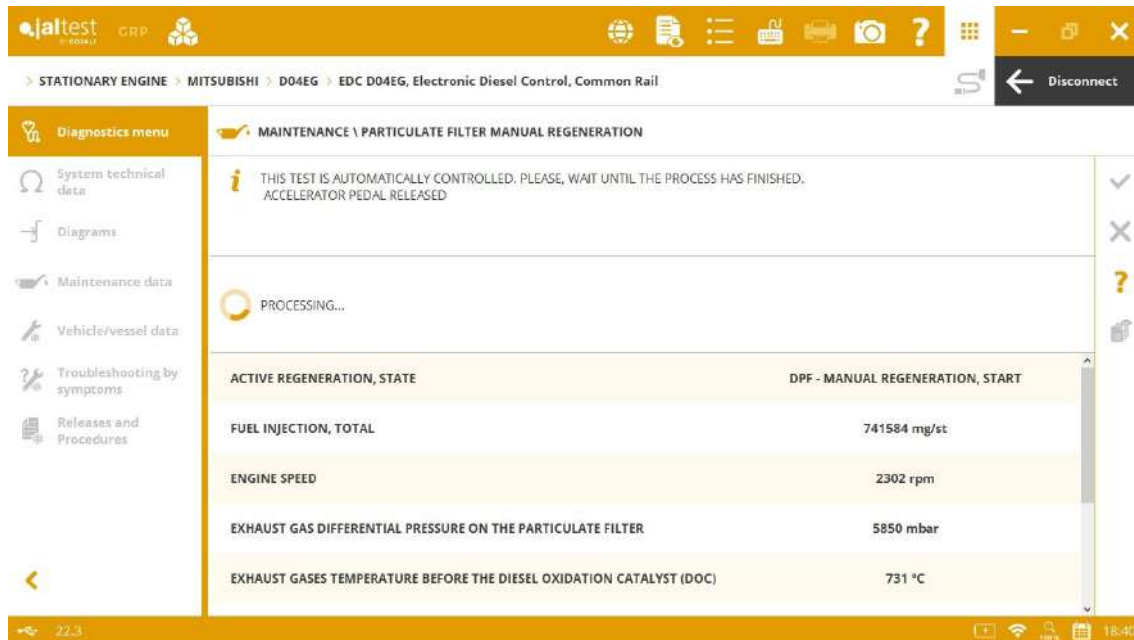
⊕ **DCU** exhaust gas aftertreatment system.

## LIEBHERR

**LH ECU UPCR** engine control system, air purge of the fuel system, injector test, cylinder cut-out and compression test.

## MITSUBISHI

⊕ **EDC D04EG Tier IV** engine control system.



## PERKINS

Extended diagnostics coverage for **404J** and **904 J** (on SAE J1939) engine control systems.

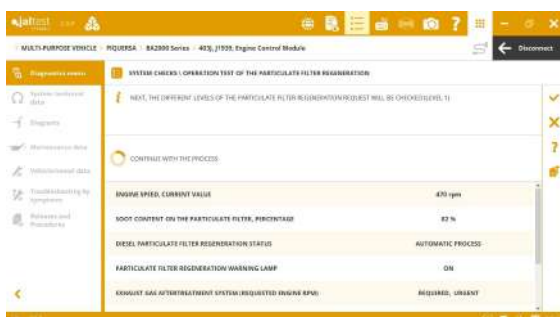
## VM MOTORI

**EDC R754/R756 Stage IV/Euro 6** engine control system, AdBlue/DEF actuations and checks of the SCR exhaust gas aftertreatment system.

## VOLVO PENTA

**EMS V4** engine control system, high-pressure fuel circuit check and System Display.

## MULTI-PURPOSE VEHICLE



Overall, extended diagnostics coverage for engine control systems. There are new innovations in the **403J PERKINS** system in **PIQUERSA** brand, in the **QSF 3.8 CM2350 CUMMINS** system in **RAVO** brand and in the **EDC R754/R756 VM** system for **Stage IV/Euro 6** engines in **SCHMIDT** brand.