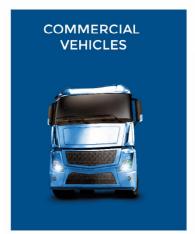


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## **JALTEST 18.1**

**Presentation of Innovations** 



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#### 1. RELEASE NOTES

The **new software version Jaltest 18.1** once again offers more improvements and innovations that consolidate this tool as a benchmark in multibrand diagnosis for commercial, agricultural, and OHW (Off High-Way) vehicles.

- -Improvement in the management of Jaltest Feedback. In this version, it is possible to save them and send them later.
  - -Error priority indication through an icon when performing diagnosis.
  - -Improvement in the model classification in some brands, including new search filters.
  - -Access to component location in fuse and relay boxes from the wiring diagram.
  - -Access to specific relevant technical data from a maintenance service.
  - -New vehicle communications test.

#### - And much more...

Throughout this document, you will be able to find information about new models, systems, functions and technical information like the ones listed below:

- DAF: CF E6 and XF E6 models (New F7/HB Series)
- DAF: checks in the ECS-DC6 system, in LF E6 models.
- Iveco: LDWS lane departure warning system, including technical information.
- MAN: more technical data in Euro 4/5 engine types.
- Mercedes-Benz; automatic calibration process in the TPM system.
- Mercedes-Benz: **System Display** in EAPU systems for Actros IV.
- Renault: **suspension calibration** for **6x4 vehicles**, V4 technology.
- Scania: Euro 6 models, R, P, G and S Series.
- Volvo: wiring diagram of the FLS radar sensor, V4 technology.
- Volvo: fuel consumption operation data in EMS V3 and V4.
- Isuzu: control of **new references** in engines 6WG1-TC & 6WF1.
- Hino: **operation diagram** of the DCU anti-pollution system.
- Irisbus: door calibration procedure in Heuliez Bus Euro 4/5 models.
- Mercedes-Benz: **fuse and relay boxes** in Euro 4/5 buses.
- Van Hool: **manual calibration procedure** of the auxiliary steering axle.
- Iveco: AdBlue/DEF dosing and high fuel pressure test in Daily.
- MAN: new **TGE model** in Light Vehicles.
- Trailer: **leak control check** in TEBS Gen 2 of Knorr-Bremse.
- Trailer: main **operation data** in Haldex EB+ 3<sup>rd</sup> Gen.
- And much more...

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

Finally, remember that, for security reasons, the **Expert Mode** has changed with the first version of the year. Please, access the client area on the website to request it again.



#### 2. NEW SOFTWARE FUNCTIONS

#### 2.1. JALTEST SOFT

#### 2.1.1. Vehicle communications bus test

This function allows to check if there is data traffic in the vehicle communications bus. By performing this test along with the connection test, which shows the voltage value of the diagnosis device, it is possible to detect and solve problems in the communication lines and the vehicle connector, or problems related to the connection to a system.



Image 1 Jaltest Link, Vehicle communications test

It is possible to verify more than one CAN or bus SAE J1708 communication channel at the same time, since this test sweeps all the pins of the diagnosis connector.

First, the test duration time must be entered. Then, you only need to analyse the results. The following data are displayed:

- If no communication channel was detected.
- Possible signal errors.
- Communication speed.
- Number of messages read during the set time.



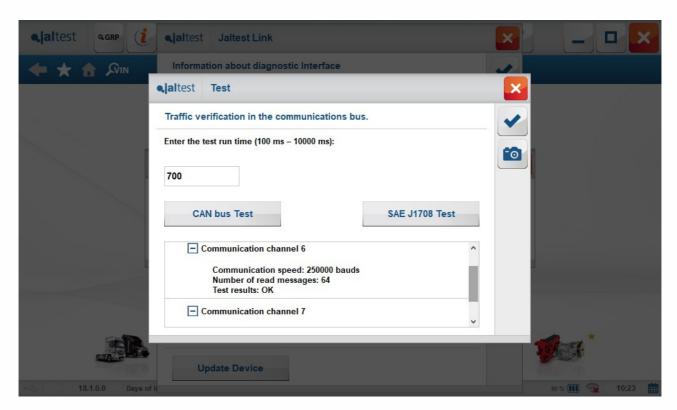


Image 2 Results of vehicle communications test. CAN bus

#### 2.1.2. Improvement in the management of Jaltest Feedback

It is possible to save the Jaltest Feedback without Internet connection, and manage this information through the new button 'Jaltest Feedback History'.

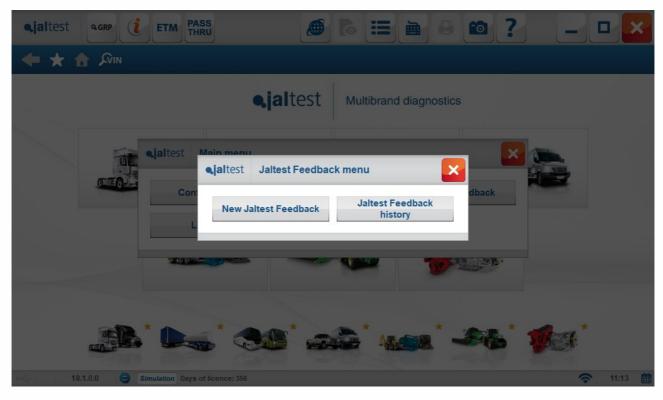


Image 3 Jaltest Feedback Menu



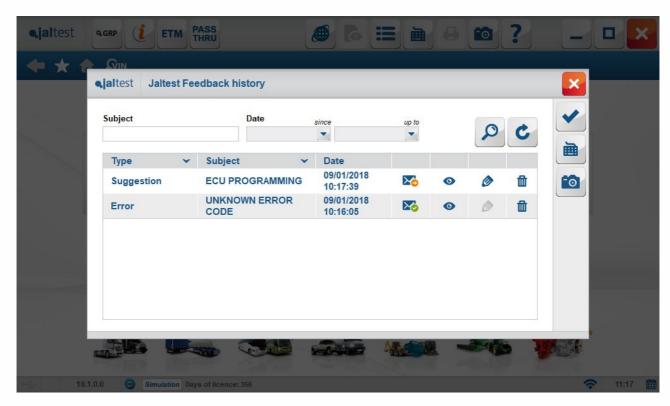


Image 4 Jaltest Feedback History

#### 2.1.3. Model search by category

With the goal of improving the vehicle model selection, the filter 'Search by category' has been created. It can be combined with the text filter and the model family selection.

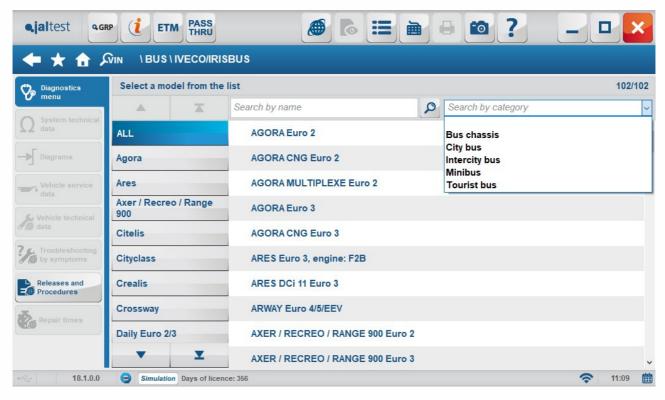


Image 5 Search filters by category in IVECO buses



#### 2.1.4. Vehicle technical data in maintenance services

In this new version, it is possible to easily access the technical data related to an operation or maintenance service through the 'wrench' icon.

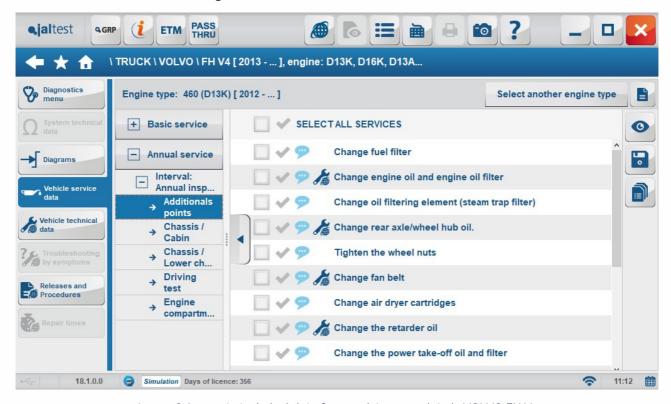


Image 6 Access to technical data from maintenance data in VOLVO FH V4

#### 2.1.5. Location of fuses and relays in wiring diagrams

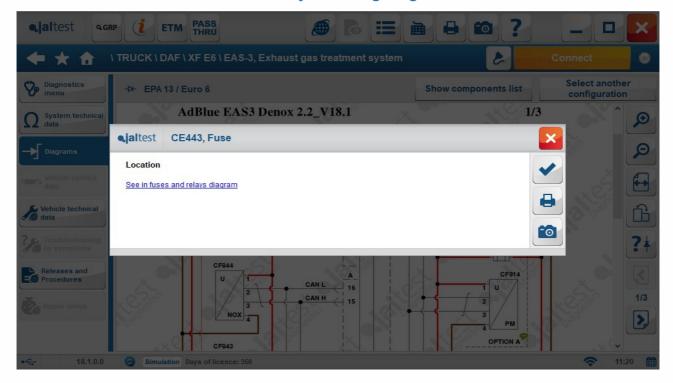


Image 7 Access to fuse location from a wiring diagram in DAF XF E6



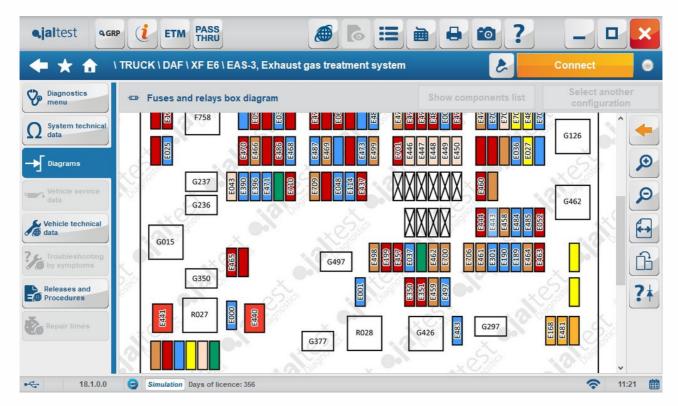


Image 8 Fuse and relay box in DAF XF E6

The fuse that we want to locate blinks in the fuse and relay box. The new function also allows to search the wiring diagrams where a component is being used, starting from the fuse and relay box. This means that the search is available in both directions. To do this, the complete component list is displayed with the 'Show components list' button. In this list, a new 'link' is displayed for all fuses and relays that appear in a diagram of that model.

#### 2.1.6. Search tool in the system action tree

This function allows to search a function inside the system actions menu. Use this filter with 'key' words to speed up the navigation through the diagnosis software. As shown in the image, the menu is reduced to the actions that contain the searched word. To display the complete menu again, all you need to do is delete the text that you entered and press the search button again.

Next, you will find a list with some examples that can be used in different systems:

- EGR
- VTG
- Injector
- Regeneration
- DPF
- Reset
- Operation data
- ...



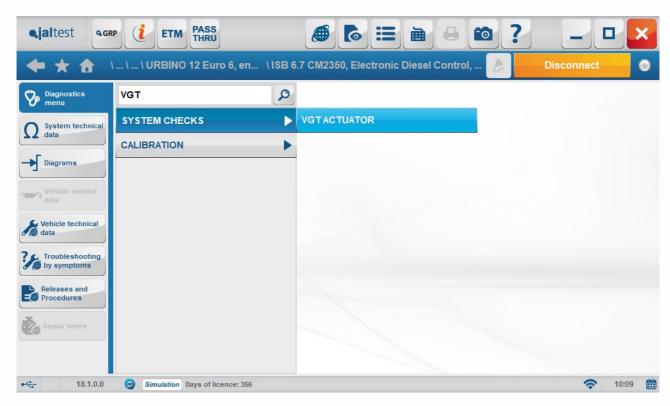


Image 9 Filter in the VGT action tree in the ISB 6.7 system of Cummins

#### 2.1.7. Priority indicators in errors

Very high priority and high priority errors are marked. The first ones must be repaired immediately, and the vehicle must not be driven if they are present. This information is obtained from additional error information or it has been verified with the manufacturer information.

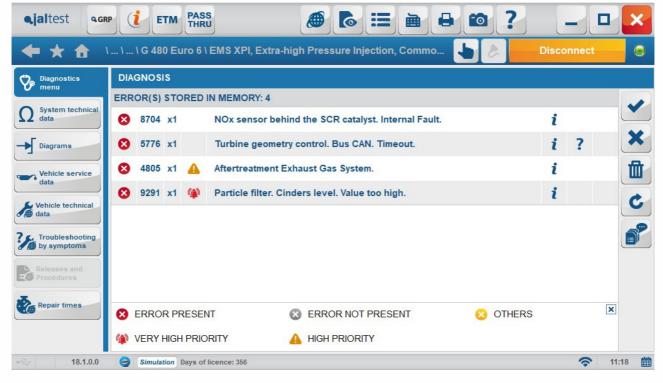


Image 10 Diagnosis results of the XPI engine management system of Scania



#### 2.1.8. Possibility to add customised troubleshooting guides to an error

Last version, the software customisation was improved with the possibility to add customised troubleshooting guides by symptoms. Now, they can be assigned to errors too.

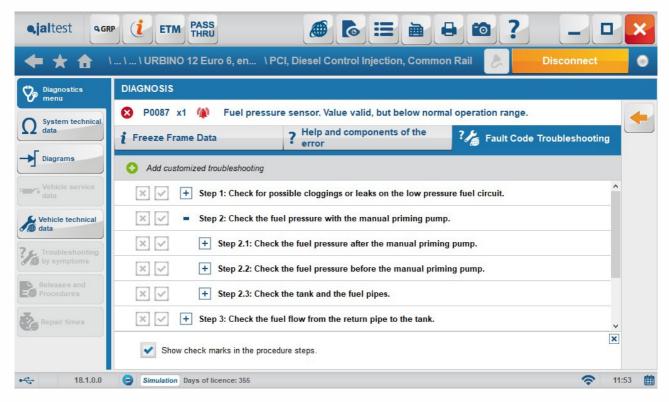


Image 11 Error troubleshooting guide

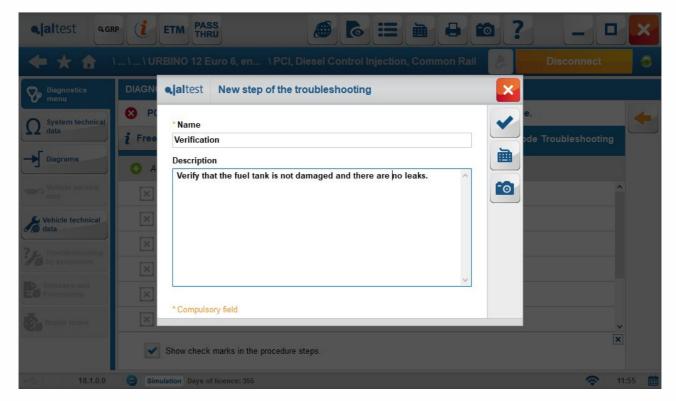


Image 12 Creation of a step in a customised troubleshooting guide

In the future, it will be possible to customise error help texts, maintenance sheets, and more...



#### 2.1.9. Other innovations

In addition, other improvements and new functions have been added. Some of them are listed below:

- Improvements in the steps of parameter configuration actions, more available ranges and dependency between the values of the different parameters.
- Improvement in error help texts, which may contain images, specially for generic OBD errors and other errors that apply to more than one system.
- Improvements in control and back-up of parameter files.

#### 2.2. ETM

#### 2.2.1. Dynamic errors in diagnosis

When connecting to an ETM module, it is possible to read static errors. These are present errors that occur in the module when it receives power supply (disconnected sensors, sensors in open circuit or short circuit, etc). However, once the ETM has been connected, errors or abnormal behaviour may occur during the operation. These errors occur under operating conditions, when the braking pressure is increased or decreased, and they are called dynamic errors. The new version takes into account both error types when obtaining diagnosis results.

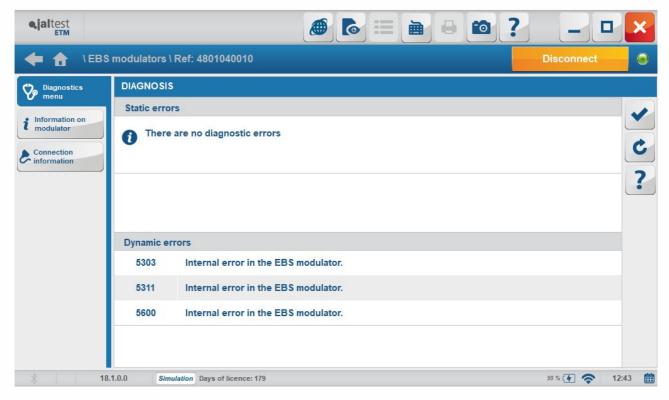


Image 13 Diagnosis results in EBS modulator



#### 2.2.2. Test for speed and wearing sensors in the diagnosis report

The check results of the speed and wearing sensors are taken into account in ETM diagnosis reports.

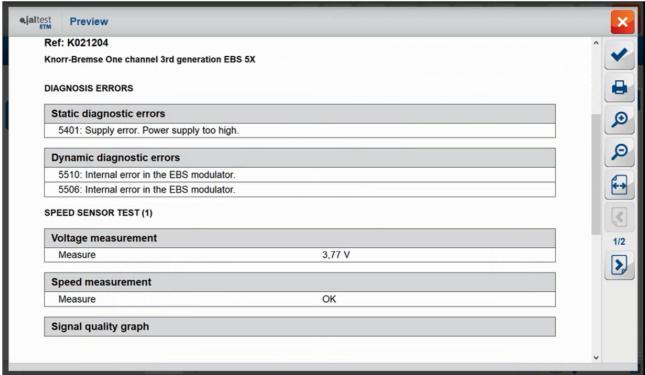


Image 14 Preview of ETM report with sensor results



#### 3. NEW DIAGNOSIS FUNCTIONS AND SYSTEMS

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

#### 3.1. DAF

- New systems in XF and CF Euro 6 models (New F7/BH Series):
  - o PCI control injection module, UDS protocol.
  - o Exhaust gases treatment system: AdBlue/DEF EAS4 Ecofit UL2.
  - o ZF TraXon transmission.
  - o ECAS5 suspension.
  - o LDWS-3 lane departure warning system.
  - o Phone system.
- PCI (Paccar Control Injection) system, KWP2000 on CAN protocol in CF and XF Euro 6 models:
  - o Checking of the rail pressure limiting valve.
  - o Checking of the fuel pumps, one per bank.
  - Calibration of the variable geometry turbocharger (VGT) actuator, including installation and calibration procedures and an error troubleshooting guide.
     Calibration included in the PMCI system of Paccar.

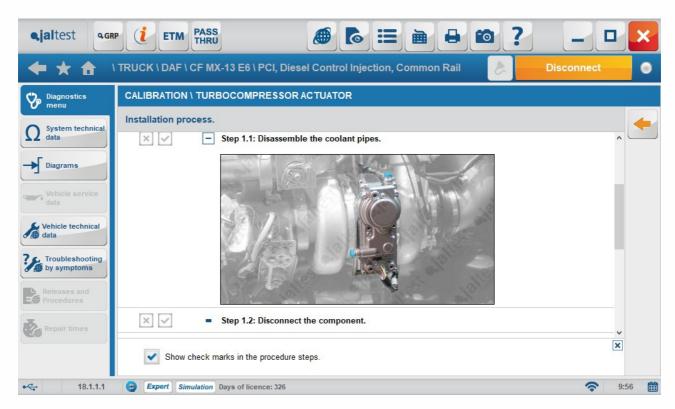


Image 15 Turbocharger actuator installation process

- ECS-DC6 (Engine Control System DAF Cummins) in CF and LF Euro 6 models:
  - Checking of the turbocharger actuator.
  - o AdBlue/DEF system priming.



- Parameter reading and modification in the VIC-3 (Vehicle Intelligence Centre) system, in CF and LF models with PX engine: enabling/disabling the driver performance assistant, colour modification of the parking brake warning lamp, and control parameters in the ESC (Engine Speed Control) system.
- **ZF AsTronic** transmission in DAF, copying and pasting of parameters for control units with GS3.6 software version in Euro 6 vehicles.

#### 3.2. *Iveco*

- New system: LDWS (Lane Departure Warning System).
- Reference control improvement in **CNG Metafuel TM** engine management system. *Also available for IRISBUS buses.*

#### 3.3. MAN

- Reference control improvement in the **BHTC (Behr-Hella ThermoControl)** climate control system. New option: 'Independent Air Conditioning'.
- **ECAS CAN** suspension, new height sensor calibration by directly entering the values. *Also available for MAN/NEOPLAN buses.*

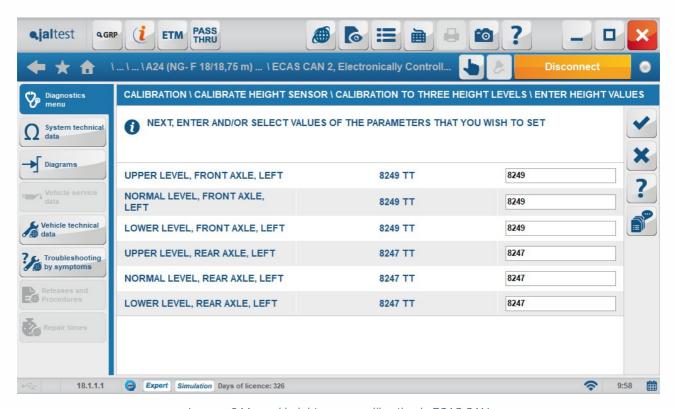


Image 16 Manual height sensor calibration in ECAS CAN



#### 3.4. Mercedes-Benz

The following innovations have been included for vehicles with MB4 technology:

- Reference control improvement and new diagnosis identifiers in the MCM, CPC and ACM drivetrain systems. Mercedes-Benz engines in all vehicle types: AGV, OHW, buses... And for TCM transmission systems: door control module driver and door control module passenger (DCMD/DCMP), and MS maintenance system for trucks.
- **TCM 01T** automatic transmission, more measurements and parameters. *G0250 identifier control for buses.*
- **TPM (Tire Pressure Monitor)**, automatic system calibration process.
- **SCA and SSAM** cab modules, parameters and calibrations.

#### 3.5. Renault

The control of new references and diagnosis identifiers has been improved. The following innovations have also been included for vehicles with V4 technology:

- **EMS DTi** engine management system, trip data and fuel consumption. System also available for vehicles with V3 technology where the regeneration of the diesel particulate filter (DPF) and the SCR catalyst have been developed.
- **CCM (Climate Control Module),** maintenances: system reset and component replacement, heater fan, glow plug, fuel dosing pump...
- **RCIOM (Rear Chassis I/O Module),** suspension system control for 6x4 configurations, solenoid valve test, up/down, calibration...

#### 3.6.Scania

- New systems in the new R, P, G and S Series models.
  - o APS2 (Air Process System).
  - o BMS brake control system (EBS 7).
  - o BWE bodywork control system (BCI2).
  - o CCS (Climate Control System).
  - o COO8 coordinator.
  - o DCS (Door Control System) and PDS (Passenger Door System).
  - o ICL3 instrumentation.
  - o EMS EMD1 engine management system.
  - o TMS2 transmission.
  - o INL interior lighting system.
  - o CMS (Chassis Management System).
  - o RTC C300 telematic module.
  - o Multimedia screen for the AUS4 telematics infotainment system.
- **BWS (BodyWork System)** bodywork control system, signal test of the CC493 connector.
- DIS 2 radar sensor (AICC Adaptive Intelligence Cruise Control), distance sensor checking. It must be carried out after the sensor calibration. It is an on-road test where at least 250 objects are detected at a speed higher than 50 km/h.





Image 17 List of systems in the new S Series models of Scania

#### 3.7. Volvo

The control of new references and diagnosis identifiers has been improved. The following innovations have been included in vehicles with V4 technology:

- **EMS DTi** engine management system, trip data and fuel consumption. System also available for vehicles with V3 technology where the regeneration of the diesel particulate filter (DPF) and the SCR catalyst have been developed.
- **CCM (Climate Control Module),** maintenances: system reset and component replacement, heater fan, glow plug, fuel dosing pump...
- **RCIOM (Rear Chassis I/O Module),** suspension system control for 6x4 configurations, solenoid valve test, up/down, calibration...

#### 3.8.Trailer

Jaltest keeps improving its coverage for Trailer systems, incorporating the new references of Trailer EBS modules. It remains a leading company in diagnosis for this type of vehicles.

#### 3.8.1. Haldex

 Important information has been added to the ODR operation data of the Trailer EBS 3rd Gen Haldex system.



#### 3.8.2. Knorr-Bremse

- **Trailer EBS Gen 2,** control of new CN (Compatibility Number) identifiers in system variants. Leak control test.

#### 3.8.3. Carrier

- Control of the Vector 1800MT Carrier cooling model.

#### 3.9.LCV

#### 3.9.1. Iveco

- **EDC 17** electronic diesel control system, AdBlue/DEF dosing test, high fuel pressure test and maintenances in Euro 6 variants:
  - o Oil change.
  - o Glow plug and intake air heater.
  - o Air flow sensor.
  - o Catalyst.
  - o Particulate filter replacement.
  - o Differential pressure sensor of the diesel particulate filter (DPF).
  - Lambda/O2 sensor.
  - o Boost air pressure sensor.
  - o Injection rail pressure sensor.
  - o Turbine.
  - o Injection rail pressure control valve.
  - o AdBlue/DEF dosing valve.

In addition, new system references are controlled in this system.

ZF 8HP Hi-Matic transmission, activation of the cooling fan relay.

#### 3.9.2. Ford

- Extension of the EDC SID 208 electronic diesel control system, 5-cylinder variant.

#### 3.9.3. Mercedes Benz

- New systems in models of the Vito [447] family:
  - o Electronic diesel control system. Common-Rail CR41.
  - o ESP 9 LEI brake control system
  - o FSCU4 fuel system.
  - EGS/VGS4NAG2 transmission.
     System wiring diagrams are included.

#### In Sprinter models:

- **CDID2** electronic diesel control system, maintenances:
  - o Injection rail pressure sensor.
  - o Hot-film air-mass meter.
  - o Differential pressure sensor of the diesel particulate filter (DPF).
- **EGS/VGSNAG2.1** transmission, gear shift and torque converter maintenances.



SCR Gen2 exhaust gases treatment system, AdBlue/DEF dosing test.

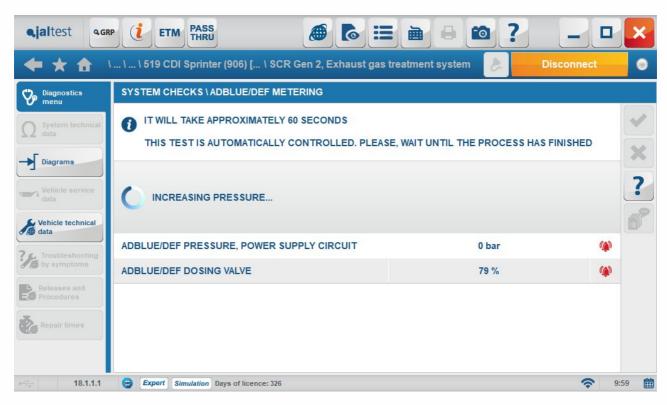


Image 18 Increasing pressure during the AdBlue dosing test in a Sprinter vehicle

#### 3.9.4. Renault

New EDC SID 310 electronic diesel control system.

#### 3.9.5. Volkswagen

- New systems in the T6 family models:
  - o AH 4.0 Auxiliary Heater.
  - o Info Electronics 4.0.
  - o ACC 4.2 Adaptive Cruise Control.
  - o CDC 3 suspension.
  - o DSM 3.1 seat control.

#### 3.9.6. PSA Group

- **EDC 8F3 CF5 V2 CAN (Fiat)** electronic diesel control system, regeneration of the diesel particulate filter (DPF).
- **CR/EDC DCU 102** electronic diesel control system, injector coding.
- **EDC SID 208** electronic diesel control system, oil change maintenance, and replacement of the diesel particulate filter (DPF) and differential pressure sensor.



#### 3.10. Other brands

#### 3.10.1. Hino

- New SRS Airbag system.
- Control of new references and diagnosis identifiers, Jo8E/UC, Jo8E/WU, No4C/TC, No4C/TW engines, and much more...
- **Jo8E** electronic diesel control system (communication via K line), reset of learned values and operation data.
- **Jo8E/VC y Jo8E/VB** electronic diesel control system (communication via CAN), reading and modification of 'Idle Shutdown' and 'PTO Set Speed' parameters.
- **Jo5E/TP** electronic diesel control system, fuel pump calibration.

#### 3.10.2. Hyundai and Tata-Daewoo

New ZF Intarder EST-52 system.
 Connection through GENERIC in next versions.

#### 3.10.3. Isuzu

- New 4HK1-TC Euro 6 electronic diesel control system.
- Control of new references and diagnosis identifiers in the **Isuzu AdBlue/DEF** exhaust gases treatment system.
- Control of new references and diagnosis identifiers in **6WF1** engines.
- **6WG1-TC** electronic diesel control system, actuations and checks.
- **6HK1-TC CAN** electronic diesel control system, reading and modification of injector codes, calibration of the fuel pump pressure regulator.

#### 3.10.4. Weichai

- New developments in systems of the Weichai manufacturer, WISE15 and AdBlue Denox in different vehicle brands.



#### 4. TECHNICAL INFORMATION

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

In addition, we keep adding and improving the technical information in the 'Vehicle technical data' section, updating the indicative <u>images</u> for tightening torques and <u>procedures</u> like the filter change in the AdBlue/DEF module in many engine types. The valve <u>adjustment</u> <u>data</u> have also been revised, and the <u>technical data templates</u> in the section 'Capacity and fluids quality' have been expanded.

#### 4.1. DAF

- System Display of the EAS 3 Denox 2.2 exhaust gases treatment system.

#### 4.2. Iveco/Irisbus

- Fuse and relay box in buses: Crossway Euro 6 and Heuliez Bus GX127 Euro 5.
- Fuse and relay box in Eurotrakker MP trucks with Cursor engine.
- **Technical release** of the vehicle CAN communications network in models of the Eurocargo family (e.g. CNG Euro 6) and Trakker Euro 3.
- Door calibration procedure in Heuliez Bus Euro 4/5 buses.



Image 19 Manual door calibration procedure in a Heuliez GX327 bus

#### 4.3. MAN

- Fuse and relay box in A21 and A23 buses.
- Wiring diagrams of the WSK TC2 torque converter clutch system in TG Series trucks.
- System Display of the ECAS CAN suspension system for articulated buses.



- **Technical release** of the exhaust gases treatment system with **CRT filter** and EDC7 electronic diesel control system for buses.

#### 4.4. Mercedes-Benz/Setra

- **Fuse and relay box** for the following buses: Euro 4/5 Citaro, Intouro, Integro, Travego Tourismo, Tourino and SETRA 400 Series.
- New wiring diagram configurations for the CPC (Common Powertrain Controller).
- **System Display** for the **EAPU (Electronic Air Process Unit)** system in Knorr-Bremse and Haldex.
- **ACM (Aftertreatment Control Module)** exhaust gases treatment system, **instructions** for the regeneration of the diesel particulate filter (DPF).

#### 4.5. Renault

- **System Display** for the **APM (Air Production Management)** system in vehicles with V4 technology.

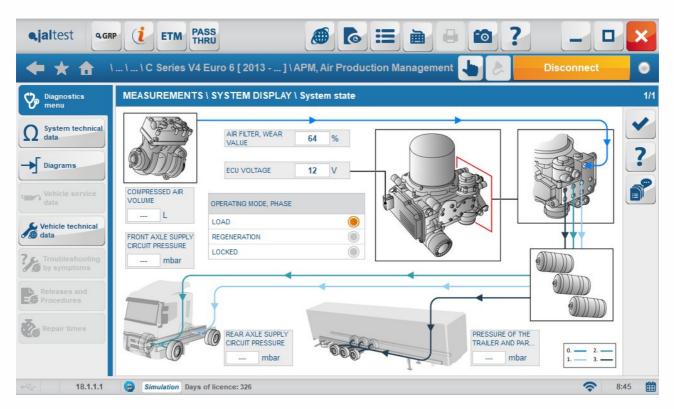


Image 20 System Display of the compressed air production and management system

#### 4.6.Scania

- System Display for the APS (Air Process System) in Scania trucks, R, P, G and S Series.

#### 4.7. Volvo

- **System Display** for the **APM (Air Production Management)** system in vehicles with V4 technology.
- **Wiring diagram** of the **FLS (Forward Looking Sensor)** radar control system in vehicles with V4 technology.



- More **images** and component **technical data** in engine control systems and in the transmission of vehicles with V4 technology.
- Vehicle technical data, FE V3 '350 (D8K)' model.

#### 4.8. Other brands

#### 4.8.1. CNHTC-SINOTRUK

- **Operation diagram** of the **AdBlue Denox 2.2** exhaust gases treatment system in CNHTC-SINOTRUK. Engines.

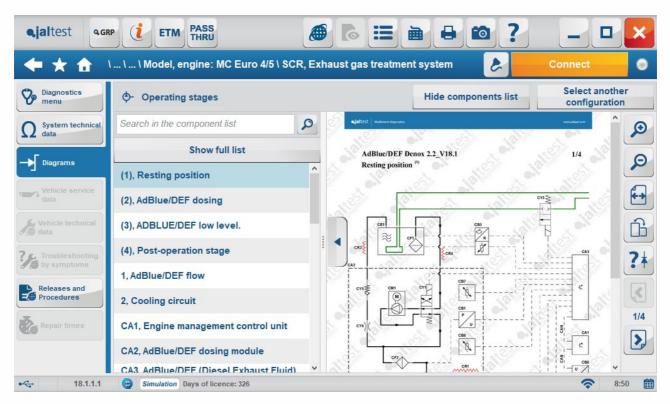


Image 21 AdBlue system operation diagram

#### 4.8.2. FAW

- Wiring diagram of the AdBlue DCU exhaust gases treatment system.
- **Operation diagram** of the exhaust gases treatment system in **EDC 17 CV44** FAW engines.

#### 4.8.3. Hino

- Operation diagram of the AdBlue Denox 2.2 Hino DCU (SCR) exhaust gases treatment system.

#### 4.8.4. Isuzu

- **Vehicle technical data** for many engine types in TRUCKS and LIGHT VEHICLES: 4HF1, 4HG1, 4JB1, 4JG2, 4HK1, ...

#### 4.8.5. Mitsubishi Fuso

Vehicle technical data. Canter '12.0 455 (OM 457 LA) Euro 5'.



#### 4.8.6. Van Hool

- Calibration procedure of the EHLA Elektronik Mobil auxiliary steering axle.

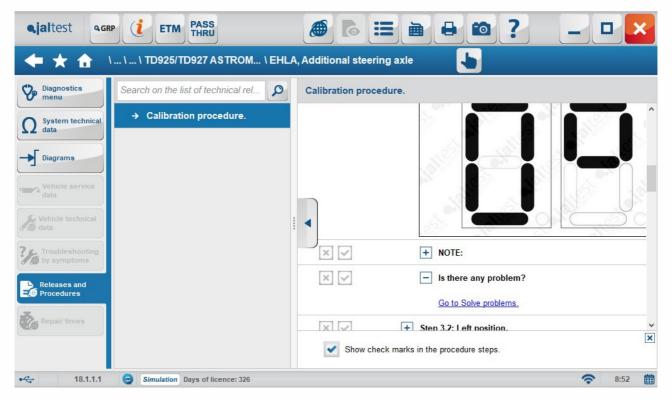


Image 22 Bus door calibration procedure

#### 4.8.7. Weichai

- **System Display** of the **EDC7 UC31** electronic diesel control in Weichai engines.
- **Operation diagram** of the exhaust gases treatment system in the **EDC 17 CV44** system in Weichai engines.



#### 5. Relevant information: new brands, models and cables

This section contains global information about the Jaltest project, taking into account all the markets and vehicle types.

#### 5.1. Brands

The new brands in this version are:

- MAN in Light commercial vehicles (LCV).
- DOOSAN, KÄSSBOHRER GELÄNDFAHRZEUG, TIGERCAT, LINK-BELT, LINDE, SUNDWARD and SANDVIK in OHW and Construction vehicles.
- FAW and YUCHAI in manufacturers.

#### 5.2. Models

The most outstanding models of this version are:

- DAF CF and XF E6 models (New F7/BH Series), on the market since 25/2017.
- New Scania models, R, P and G Series.
- Scania models, S Series.
- TATA models. Ultra 812, 912 y 1012.
- JH6 model with Weichai engine in FAW.
- DFH model with Cummins engine in DONGFENG.
- Models with Cummins ISF engine in CNHTC-SINOTRUK.
- MAN TGE model in light commercial vehicles.
- Models of the Mercedes-Benz Vito [447] family.
- VW Crafter minibus models.
- VDL Citea Euro 6 with Cummins and Cursor 9 engines.
- New Euro 5 and Euro 6 models in BREDAMENARINIBUS with the following engine types: '7,8 WG 290 (F2B FA602F)' and '7,8 WG 330 (F2B FA602D)'.

#### 5.3. Cables

REFERENCE	DESCRIPTION	PRODUCT
JDC 527A *	Volvo Penta (6 pins)	SE, OHW
JDC 528A *	Volvo Penta (8 pins)	SE, OHW
JDC 529A	Claas Combine & Xerion Series (7 pins)	AGV
JDC 530A	Claas Combine & Xerion Series (8 pins)	AGV
JDC 531A	RS232 Scania Engines	SE
JDC 532A	CAN Scania Engines (4 pins)	SE, OHW

For more information, consult our sales network.

#### Acronyms:

- SE -> Stationary Engines
- OHW -> OHW and Construction vehicles
- AGV -> Agricultural Vehicles

<sup>\*)</sup> The cables JDC 527A and JDC 528A replace the cables JDC 521A and JDC 524A, respectively. The possibility to connect via CAN has been incorporated.



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