

off-Highway vehicles

INNOVATIONS 20.1











SOFTWARE INNOVATIONS

The new software version **Jaltest 20.1** once again offers more improvements and innovations that consolidate this tool as a benchmark in **multibrand diagnostic** for commercial, agricultural and OHW (Off-Highway) vehicles.

This version shows the **new graphic interface of Jaltest**, characterized by new improved and modern design lines, more legible content and more direct accessibility. This improvement in the visualization of the content means a great advantage for Jaltest users who can now find and manage the information in an easier and more intuitive way. Apart from these graphic changes, both the runtimes and installation times have been improved, improving in this way its speed.



Next, some examples of displays and aspects of the application, with a considerable improvement regarding the graphic interface, are shown.











e,jaitest GRP VIN OEM	# 🕄 🗄 🖶 🙆 ? 🏢 - 💷	×
A altest configuration (user) Configuration (user)	settings) 🔐 🙆 🗙 MANUAL	
Language	Select the application theme:	
Graphic customization	OHW Yellow	
Activate Expert Mode	Select the opening mode of the initial display:	
Units of measurement		
Messages	MANUAL AUTO	
Product improvement	Select the size of the text and other elements of the application:	
Vehicle System Scan process configuration	○ 80 %	
Volvo/Mack HD-OBD process configuration	Select the following option to adjust the application size to the screen resolution selected in the computer:	
Light/Medium Duty OBD process configuration	Adjust to screen resolution	
jõe s⇔n	For more information on display options: <u>click here</u> W	

Graphic customization.

Configuration of the screen resolution, text size and other elements of the application. Option to adjust the application size to the resolution of the selected screen in the PC.

Connection selection.

The connections associated to a system are listed at the left, the connection instructions remain always visible, navigating through the images is easier, etc.

÷	🚖 🏫 > они	& CONSTRUCTION EQUI	PMENT	BOSCH REXROTH > BODAS > BODAS RC Serie	es 21 (CAN). Programmable control unit Connect
		Select the appropriate	connecti	in in order to connect to the system	In order to carry out a manual pin selection, <u>click b</u>
Ω	System technical data	Available connections	: 3	CONNECTION 1 - JDC 213.9 + JDC 522A	OIRECT CONNECTOR O MULT
-1	Diagrams	CONNECTION 1	۲	Attention! The use of direct connector requires external power supply to the device by connecting the lighter or the	Detail
K	Vehicle technical data	CONNECTION 2		battery cable to the extension cable. Make sure to use the appropriate	
3%	Troubleshooting by symptoms	CONNECTION 3		 make sure to use the appropriate cable, whose reference must match the one displayed. When the cable is not available, contact your distributor 	1000
e,	Releases and Procedures (TSBs)			or use the multipins option.	
1%	Component Replacement Guides			diagnosis connector are not damaged.	
¢,	Repair times			Guarantee the electrical supply of the vehicle. of the system and of the diagnosis device. Check whether the vehicle battery is in perfect conditions.	
				- Avoid connecting the diagnosis device with a moving vehicle.	o 💮
<				- The remaining conditions of use may be found in the program.	•

e ja		255 🛞 🕀 🛞 🖽 🛞 🔞 ? 💷 - 🗆 ×
> 01	HW & CONSTRUCTION EQU	IPMENT > JCB > 400 Series, engine: Final Tier 4 / Stage IV > QSB 4.5%7 CM2350, Electronic Diesel Control, Common Rail 📰 🥌 🗲 Disconnect
84	Diagnostics menu	Select the desired action
Ω	System technical data	Bearch in the list of actions
Ч	Diagrams	
10	Vehicle technical data	READ FAULT CODES
3%	Troubleshooting by symptoms	
₽,	Releases and Procedures (TSBs)	operation data 🔊 Monitoring 😇 actuate components
1%	Component Replacement Guides	
Ø,	Repair times	
		CALIBRATION CONFIGURATION O DATA RECORDER
<		

Main menu of a system.

Classification of the main types of actions when connecting to a system, which allow you to know quickly the coverage of a system. Improvement of the action searcher.

System actions in tree diagram.

System actions organized in tree diagram and actions grouped together in folders. The "DIAGNOSTIC" function is always available on the right bar through the button with the corresponding icon.

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> 0	HW & CONSTRUCTI	ON EQU	IPMENT >	JCB $>$ 400 Series, engine: Final Tier 4 / Stage IV $>$ QSB 4.5/6.7 CM2350, Electronic Diesel Control, Common Rail	Discon	nect
84	Diagnostics menu		🕳 А М	AINTENANCE		
Ω	System technical	data	Search	in the list of actions] Q
÷	Diagrams		= 0	Collapse all actions		÷
K	Vehicle technical	data		PARTICULATE FILTER REGENERATION		8
%	Troubleshooting symptoms	by		DOC (DIESEL OXIDATION CATALYST) MAINTENANCE		
6	Releases and Procedures (TSBs)	,		DPF (DIESEL PARTICULATE FILTER) MAINTENANCE		
₫%	Component Replacement Gui	ides	-			
Ø.,	Repair times					
				RESET		
<						
<u>`</u>						











Other innovations

Other functionalities of the version are listed below:

- **Countdown timer** in procedure steps and troubleshooting guides.
- Search filter in the measurement list of a step of an action.
- Component filter in system technical data by configuration of wiring diagram.

GRP

Sending of reports to an email address

Jaltest allows you to configure the sending of predefined information and reports to an email address through the **"Send to an email address"** function available in the **"Configuration"** menu of GRP. Once the sending has been activated, the program will suggest this possibility when generating a report. The report will be sent by an email with the configured format (subject, fields of the body of the email, etc.).

Q GRP		⊕ ≔ ≝ ⇔ ⊠ ?	? 🖩 – 🗆 X	e,jaltest GRP VIN	OEM RP1250		* 🕽 🗄 🖀 👄 🔯	? Ⅲ – □ ×
Customer list	GRP Configuration (user se	ettings) 👸 🙆	×	🔶 🌟 🏠 > > p	CB > 400 Series, engine: Final Ti	er 4 / Stage IV > QSB 4.5/6.7 CM23	50, Electronic Diesel Control, Common Rail	Connect
🔐 Vehicle list	Language	Jaitest allows you to configurate the sending of predefined information and reports to an email address.	~	Diagnostics menu		Types	Select a system from the list and click on Conne	
Reports	Graphic customization	Activate sending		Ω System technical data	System Scan	ALL 🖉	Search by system name	Q Name OActions
Workshop management	Messages	Select the report types you want to send (at least one)		Diagrams	Fre			۵
My tasks	Product improvement	Diagnostic report Maintenance report *E-Mail		🎢 Vehicle technical data	•	Do you want to send	the report by email?	
A Reception	Company data			% Troubleshooting by symptoms	WARNING			mmon Rail
🙀 Human resources	Reports configuration	innovations@jaltest.com		Releases and Procedures (TSBs)	WARNING		YES NO	
start window	User accounts	Press here to configure the email format to be sent (subject, fields to fill-in, etc.)		Component Replacement Guides				
	Send to an email address			🚱 Repair times			HYDRAULICS. Hydraulic System	
							MCM, Electronic Diesel Control, Common Rail	
<		*Mandatory field		<			MECU, Body computer	

A new column for the sending management has also been included in the GRP report list. The user will be able to send reports marked as "*Pending to be sent*" or to resend a report.











0,0	GRP				⊕ ⊞ e	6 6	6		2 ==	-		
úi,	Customer list	Q GRP				ď	0	?	×			
æ,	Vehicle list	Subject							~			
	Reports				Mand	latory field			^			
£		Order	Field name	Туре	Mandatory field				\sim			
		4				o	ø	Î				
		2	Subject	Text	No	0	۲	Û				
		3	Drop-down field	Drop-down field	No	0	۲					
A	Start window											
<							Add field					
											_	

The user can customize as many fields as desired and the email subject, as well as define if they are mandatory input data or not. The field types can be as following:

- Text
- Date
- Drop-down field

The image shows an example with three fields.

GRP	ے 🗎 🗎	to ? 💷	– 🗆 🗙
Customer list	Diagnostic reports		
Vehicle list	See GRP Information to be sent by email	tumer	P1 Q 🔄
Reports	See	✓	
Workshop management	Subject Sent reports to an email address - Innovations!	~	
My tasks	*Date 17/01/2020		
Reception	Subject Image Innovations		
Human resources	Drop-down field		
Start window	☑ Remember information		
	*Mandatory field		
<		Open report	

Example, sending of a report with Jaltest:

Received email



Date: 17/01/2020 Subject: Innovations image Select the importance: SI











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.

This version, the **SCHAEFF** brand of OHW & CONSTRUCTION EQUIPMENT has been included.

CASE CE

Reorganization of the brand that has 22 new families and 135 models.

DIAGNOSIS AND SYSTEMS

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

OHW & CONSTRUCTION EQUIPMENT

• New JDC 546A cable to connect and calibrate the ZF ErgoPower transmission.













BOBCAT

• New JDC 547A cable for control systems of DOOSAN DL02 and DL03 engines. New system checks, calibrations and injector coding have been developed in these systems.

New MCONT central computer developed for telescopic handlers.

CATERPILLAR CE

		PARAMETERS \ INJECTOR CODE \ MODIFY PARAMETERS	
Ω	System technical data	i IMPORTANTI DATA FORMAT:	
ſ	Diagrams	- VALID CODES HAVE 20 CHARACTERS AND MUST COMPRISE ONLY DIGITS FROM 0-9 AND LETTERS FROM A-Z.	
ĸ	Vehicle technical data	INTRODUCE THE NEW VALUE OF THE CONFIGURATION PARAMETER	
z	Troubleshooting by symptoms	123456789ASDFGHJKLZX	
٩,	Releases and Procedures (TSBs)		
1%	Component Replacement Guides		
ė.	Repair times		

ə 🔍 H 🖄 **?** 📖 ← 0 ENT > CATERPILLAR > 120 Series CALIBRATION Ω Syste Q - Diagrams Expand all actions 4 🄏 Vehicle te data Sh. % Troubleshoo + Releases and Procedures (T + STEERING - POSITION SENSOR Component Replacement Repair times <

• New EHCU I hydraulic system developed for motor graders.

• New MCM central computer developed for wheel loaders.

CNH CE GROUP

EDC 17 C49 control system of **FPT engines**, new checks of the exhaust gas treatment system (AdBlue/DEF leak control, AdBlue/DEF metering pump, etc.) and maintenances such as the startups counter reset.

EDC 17 CV41 + Denox 2.2 engine control system, new maintenances such as the reset of the Pressure Relief Valve (PRV).

	🗯 🗮 🖶 🛍 🖶 🙆 ? 📰 – 🗆	×	Gialtest CRP VIN	🕮 🛞 🗄 🖨 🖶 🙆 ? 🗮 -	o x
> OHW & CONSTRUCTION EC	QUIPMENT > CASE CE > 121 F > EDC 17 C49, Electronic Diesel Control, Common Rail 🚽 🧲 Disconn	ect	> OHW & CONSTRUCTION EQ	UIPMENT > CASE CE > 1121 F > EDC 17 CV41 + Denox 2.2, Electronic Diesel Control, Common Rail 🛒 🧲 🖬	lisconnect
🕅 Diagnostics menu	SYSTEM CHECKS		🖏 Diagnostics menu	MAINTENANCE \ REPLACEMENT OF COMPONENTS \ PRESSURE RELIEF VALVE RESET (PRV)	
Ω System technical data	Search in the list of actions	Q	Ω System technical data	RESET OF THE ADAPTATION VALUES	~
	Collapse all actions	←) Diagrams	THIS OPERATION MUST BE PERFORMED WHEN THE COMPONENT HAS BEEN REPLACED	×
Vehicle technical data	INJECTOR SWITCHOFF	8	Yehicle technical data		?
Control Troubleshooting by symptoms	ENGINE ROTATION		Troubleshooting by symptoms	RESET ALLOWED	6
Releases and Procedures (TSBs)	adblutidef		Releases and Procedures (TSBs)		
Component Replacement Guides	LEAK CONTROL		Component Replacement Guides		
Repair times	METERING PUMP		🚱 Repair times		
	ADBLUE/DEF METERING VALVE				
<	ADBLUE/DEF METERING SYSTEM		۲.		











DOOSAN

- ⊕ New JDC 545A cable.
- New E-EPOS system developed for DX 3 Series excavators.

EDC DL03 engine control system, system checks and calibrations. It is worth noting the dynamic test of the fuel metering valve.

EDC DL06 engine control system, actuations, system checks and maintenances such as the regeneration, the ash load reset and the DPF replacement.

•jaltest GRP VIN	OEM RP1210) R E	🖴 🖶 😰 ? 🎟 – 🗆 ×	•jaltest CRP VIN		e 🙆 ? 🎟 - 🗆	×
CHW		> DOOSAN > DL200-5 Series > DL06, CAN, Engine C	iontrol Module Connect	> OHW & CONSTRUCTION EQ	VUPMENT > DOOSAN > DL200-5 Series > DL06, CAN, Engine Control Module		onnect
Ω System technical data	Available connections: 4	CONNECTION 1 - JDC 213.9 + JDC 545A	Other of dary dot a manaal pin selection, <u>MAXIEEE</u> One Direct Connector O MULTIPINS	Ω Diagnostics menu Ω System technical data	SYSTEM CHECKS \ REQUESTED ENGINE RPM I PRESS THE BUTTONS TO CONTROL THE COMPONENT AND CHECK WHETHER IT IS PROPERLY OF	ERATED	~
→∫ Diagrams	CONNECTION 1	 Make sure to use the appropriate cable, whose reference must match the one displayed. When the cable is 	JDC 213.9 + JDC 545A	→∫ Diagrams			×
Vehicle technical data	CONNECTION 2	not available, contact your distributor or use the multiplns option.		Yehicle technical data	ENGINE SPEED	984 rpm	? °
Troubleshooting by symptoms	CONNECTION 3	 Verify the cables and the pins of the diagnosis connector are not damaged. 		Troubleshooting by symptoms	DESIRED REVOLUTIONS	739 rpm	Ľ
Releases and Procedures (TSBs)	CONNECTION 4	 Guarantee the electrical supply of the vehicle, of the system and of the diagnosis device. Check whether the vehicle battery is in perfect conditions. 	6	Releases and Procedures (TSBs)			6
🎨 Repair times		Avoid connecting the diagnosis device with a moving vehicle. The remaining conditions of use		🇞 Repair times			
<		may be found in the program.		<	750 RPM	800 RPM 850 RPM	

HITACHI

MC central computer, parameter setting of the implement for excavators.

JOHN DEERE CE

• New systems of the **PDU** instrument cluster display and **VC2** central computer developed for backhoe loaders.

Timer setting of automatic stop of the engine at idle speed rates in the VCU central computer of backhoe loaders.

	where a construction ed	JIPMENT > JOHN DEERE > 1050K > VCU, Body computer	← Disconnect
		RARAMETERS \ MODIFY PARAMETERS \ IDLE SHUTDOWN TIMER	
Ω	System technical data	the current value is displayed next. Do you wish to modify the parameter?	~
ſ	Diagrams		>
k	Vehicle technical data	IDLE SHUTDOWN TIMER 2 5	3
2	Troubleshooting by symptoms		6
2,	Releases and Procedures (TSBs)		
12	Component Replacement Guides		
ġ,	Repair times		











VOLVO CE

Vehicle Electronic Control Unit (VECU), new system checks and calibration of the transmission in wheel loaders.

٩ja	altest GRP	N 🛤 🕀 🗎 🖶 🖶 🖬 🗕 🗆	
> 0	HW & CONSTRUCT	EQUIPMENT > VOLVO CE > L Series (XY E) > VECU, Vehicle Electronic Control Unit	lect
		CALIBRATION \ TRANSMISSION CALIBRATION	
Ω	System technical data	THE PROCESS HAS FINISHED SUCCESSFULLY COMPLETED	~
-1	Diagrams		×
K	Vehicle technica data	Search in the live data list	?
3%	Troubleshooting symptoms	FORWARD CLUTCH, FILLING PRESSURE 8 kPa	6
e,	Releases and Procedures (TSBs	REVERSE CLUTCH, FILLING PRESSURE 2 kPa	
4%	Component Replacement Gu	CLUTCH 1, FILLING PRESSURE 2 kPa	
Ø,	Repair times	CLUTCH 2, FILLING PRESSURE 5 kPa	
		CLUTCH 3, FILLING PRESSURE 5 kPa	
<		CLUTCH 4, FILLING PRESSURE 10 kPa	

STATIONARY ENGINE

DEUTZ

Control system of the **Deutz EMR4 - EDC 17 CV52 engine**, new parameters such as the set of the idle speed rate.

DOOSAN

New JDC 545A and JDC 547A cables, the latter for DL02 and DL03 engines.

EDC DL03 engine control system, system checks and calibrations. It is worth noting the dynamic test of the fuel metering valve.

e, ja	Itest CRP VIN					ď		\mathbf{O}	?		-		
> \$1	ATIONARY ENGINES > D	DOSAN > DL06 > DL06, CAN, Engine Control Module								s	÷	Discon	nect
		SYSTEM CHECKS \ REQUESTED ENGINE RPM											
Ω	System technical data	2 PRESS THE BUTTONS TO CONTROL THE COMPONENT AND CHECK WHETHER IT IS PROPERLY OPERATED								•			
ł	Diagrams												>
k	Vehicle technical data	ENGINE SPEED 857 rpm							2				
X	Troubleshooting by symptoms	DESIRED REVOLUTIONS	922 rpm					Ŀ					
e,	Releases and Procedures (TSBs)												1
1%	Component Replacement Guides												
Ø,	Repair times												
<					750 RPN	4		800 RPM			850 RPN	4	

EDC DL06 engine control system, actuations, system checks and maintenances such as the regeneration, the ash load reset and the DPF replacement.

IVECO-FPT

EDC 17 C49 control system of **FPT engines**, new checks of the exhaust gas treatment system (AdBlue/DEF leak control, AdBlue/DEF metering pump, etc.) and maintenances such as the startups counter reset.











EDC 17 CV41 + Denox 2.2 engine control system, new maintenances such as the reset of the Pressure Relief Valve (PRV).

PERKINS

854F engine control system, cylinder cutout, high-pressure fuel test, inducement mode reset, component reset such as the NOx sensor or the SCR catalytic converter, and replacements of the DOC catalytic converter and the cooler of the Exhaust Gas Recirculation system (EGR).

٩ja	altest GRP VIN	0EM 🛞 良 🗄	📸 🖶 🙆 ? 🗰	>
> s1	TATIONARY ENGINES > P	RKINS > 854F > 854F, J1939, Electronic Diesel Control, Common Rail		Disconnect
		MAINTENANCE \ REPLACEMENT OF THE DIESEL OXIDATION CATALYST (DOC)		
Ω	System technical data	i INITIAL CONDITIONS:		•
-1	Diagrams	- ENGINE STOPPED - FULLY CHARGED BATTERY		
k	Vehicle technical data	CONTINUE WITH THE PROCESS		;
X	Troubleshooting by symptoms	ENGINE SPEED	1100 rpm	٠
ę,	Releases and Procedures (TSBs)	BATTERY VOLTAGE	18 V	۲
1%	Component Replacement Guides			
¢,	Repair times			
<				

STREET SWEEPERS

TENAX

EDC 17 C49 control system of **FPT engines**, new checks of the exhaust gas treatment system (AdBlue/DEF leak control, AdBlue/DEF metering pump, etc.) and maintenances such as the startups counter reset.

TECHNICAL INFORMATION

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

Maintenance and technical data of the vehicle

Engine types in **CATERPILLAR CE** and stationary engines, diesel engines 3,3 (C3B), 6,6 (C6) and 9,3 (C9).











Wiring diagrams and technical information

CASE CE

EDC 17 CV41 + Denox 2.2 engine control systems and ZF ErgoPower transmission for wheel loaders.

CATERPILLAR CE

Extension of wiring diagrams in all vehicle categories of the brand: excavators, compact loaders, wheel loaders, motor graders, dozers and backhoe loaders.

VOLVO CE

Extension of wiring diagrams in the following vehicle categories: articulated haulers, excavators, wheel loaders and pipelayers.

System Display

System Display in the transmission system of the CATERPILLAR CE wheel loaders.









