

## Calibration of emissions testing devices – the ultimate in precision

As users of the XDS 1000 multi-brand diagnostic device already know, a new newsletter means a whole range of innovations in the AVL DiTEST world of diagnostics. This time we would also like to draw your attention to the topic of calibration of emissions testing devices, with the 2012 legislation regarding obligatory calibration of measuring devices which are used for carrying out official duties for testing processes – brake test stands, headlight beam setters and, since January 1, 2019, also emissions measuring equipment. The obligatory calibration for emissions testing devices, in parallel with the official obligatory calibration, put workshop outfitters and operators to the test. Up until October 2018, practically no calibration laboratories were accredited according to the principles of the Deutschen Akkreditierung-Stelle (DAkkS - the national accreditation body of the

Federal Republic of Germany). At the turn of the year 2019/2020, workshops faced the loss of emissions authorisation without a calibrated emissions testing device. AVL DiTEST helped to close existing gaps in calibration capacity. As the first manufacturer of emissions testing systems, the company opened its own calibration laboratory, accredited according to DIN EN ISO/TEC 17025 DAkkS at the site in Cadolzburg on January 1, 2019. "Within the first year, the experts issued over 12,000 calibration certificates," says Ilker Isleyenler from AVL DiTEST.

### Calibration capacity doubled

The opening of a second calibration laboratory at AVL DiTEST's headquarters in Graz doubled calibration capacity for emissions measuring systems and extended the service further for customers. This

means that all device operators receive their petrol and diesel measuring devices from Graz complete with a calibration certificate. "Emissions testing devices are an important part of day-to-day work for workshops, which is why we offer a comprehensive carefree service in addition to device calibration," explains Isleyenler. As well as recalibration to national standards, this includes maintenance, repair and calibration of emissions testing devices. The complete service takes just two days – from as-found to as-left calibration. If the device is faulty, our own plug&play concept ensures rapid replacement of components and provision of replacement devices where required. "Calibration is essential for the necessary precision demanded by official tests. Which is why we invest in this service for our customers," says Ilker Isleyenler.

## Three steps to the XDS 1000 online update

Three steps are all it takes for users to install updates on their XDS 1000 multi-diagnostics device easily and conveniently, directly from the internet: 1. Download the update: Download the 2020-03 software version to your XDS 1000 tablet/PC from the internet and then run the installation file on your device. 2. Start XDS 1000: Start your XDS 1000 and connect the USB port of your PC to the vehicle's diagnostics port using your VCI 1000. Then double-click on the XDS

symbol on the start screen and select "Interface selection: cable (USB)". Then select a vehicle and click on "AutoScan" or "ECU overview". The serial number of your XDS 1000 will be displayed on the screen. It is needed in order to activate the update. Enter your email address and your device's serial number on the AVL DiTEST website, which will request a 25-digit activation code for the software update on your device. Enter the code under "Product activation" to activate

update 2020-03 on your XDS 1000. Alternatively, the update can also be downloaded and installed via Bluetooth. Users can find a step-by-step guide to downloading and installing software updates for the XDS 1000 at the following link or the adjacent QR code.

<https://www.avlditest.com/index.php/en/xds-updates.html>





Diagnostic data that is always up to date forms the basis for successful work in the workshop.

## XDS 1000 2020-03, the new features:

930 different car models from 43 manufacturers and 235 LGV/HGV models are covered by the 2020-03 update for the AVL DiTEST XDS 1000 multi-brand diagnostic system, allowing for full diagnostics to be run. An overview of the brands and models included in the latest update:

Manufacturer	Models
Audi	A4 (8W), A5 (F5), Q5 (FY)
Ford	Focus IV
Renault	Megane IV
Skoda	Karoq (NU), Kodiaq (NS), Octavia (5E)
Volkswagen	Golf VII (AU), Golf Sportsvan (AU), Tiguan (AD), Touran (ST)

## Update 2020-03 for XDS 1000 ready to download

Experts from Germany and Austria published a new update for the AVL DiTEST XDS 1000 multi-brand diagnostic device at the end of November. This is now available for all device users to download and update their diagnostics systems (see box). This latest update focuses on cars from the Volkswagen Group, in particular models from Audi, Skoda and VW. The AVL DiTEST experts have added new functions to the diagnostics software in XDS 1000 for ten of the best sellers from the VAG range of models. This concerns the electronics system for airbags, brakes, gearbox, air conditioning and engines for all ten models. The update now contains a function for reading and resetting error codes for all these systems. Furthermore, the update also provides additional measurement values for the aforementioned systems

which are essential for rapid diagnostics and troubleshooting. The update from the AVL DiTEST experts now covers all available control unit variants for the airbag, brake, gearbox, air conditioning and engine systems for the models Audi A4, A5 and Q5, Skoda Octavia, Kodiaq, Karoq and the Volkswagen Golf, Touran, Tiguan. There are almost 70,000 different error codes for these systems which the user can now read and reset/delete with the 2020-03 update.

The 2020-03 update provides updated information for 26 electronics systems for the latest Ford Focus model (IV, year of construction 2018 and later). From the airbag to the central electronics, workshops can now read and delete error codes in the systems with the freshly updated XDS 1000. The 2020-03 update for the AVL DiTEST XDS 1000 also con-

tains additional data for the engine electronics. In regard to the diesel versions, this covers data for regeneration and replacement of diesel particulate filters. In addition, the error environment data has also been extended. This is particularly important for detecting sporadic errors in the workshop.

### Obtaining fresh data online

Find out more in the notice on this page. The 2020-03 update is now available for all XDS 1000 multi-brand diagnostic devices. Details of the brands and models affected in the update can be seen in the overview table on this page. AVL DiTEST updates are only available online and can be installed on the systems, ready for use, with just a few clicks. (See box)

## How to download the 2020-03 update

Updates for the XDS 1000 diagnostic system are only ever available online. The advantage for AVL DiTEST customers is the immediate availability of new data, fast integration into the existing system, even during operation, and simple installation thanks to step-by-step instructions. Version XDS 1000 2020-03 is now available for download from the Internet. Users can find all of the relevant information on the update process online at <https://www.avlditest.com/index.php/en/xds-updates.html>

# “It was there a minute ago”

It is a situation that every master technician has encountered: A desperate customer arrives at the workshop, exasperated with the following description of a fault. “The car started to judder, seemed to misfire and then there’s no throttle response.” The perfect candidate for a test drive. And then? Nothing. No misfiring, no judders, no reluctant throttle response. The engine runs like a dream. “I don’t understand it, the problem was there a minute ago,” says the customer, almost with disappointment. The experts at AVL DiTEST have installed a “long-term memory” in the XDS 1000 for problems such as this type of sporadic fault. The system automatically adds a virtual timestamp to errors stored in the control units. The system also records data such as the date, time and exact mileage at the point at which the error occurred, as well as how often an error has occurred and how of-

ten the control unit has tried to reset the error (unlearning counter). “The scope of the recorded error environment data varies depending on the manufacturer and control unit. Basically, the workshop uses the data to narrow down and more quickly locate errors that only occur sporadically, under specific conditions,” says Andreas Wittig from AVL DiTEST. Errors such as those that only occur in the presence of heat, cold, humidity or an uneven road surface (cable, PCB broken for example) can be identified much more quickly with the environment data and the information provided by the customer than by carrying out troubleshooting purely based on diagnostic data. Users of the AVL DiTEST XDS 1000 have automatic access to the error environment data. “This data is part of the scope of our XDS 1000 and is a key component in our diagnostic software,” says Andreas Wittig.



Photo: shutterstock/Ann Kosolapova

Sporadic errors are no longer something to fear thanks to error environment data.

## XIS Pro update – visual aids

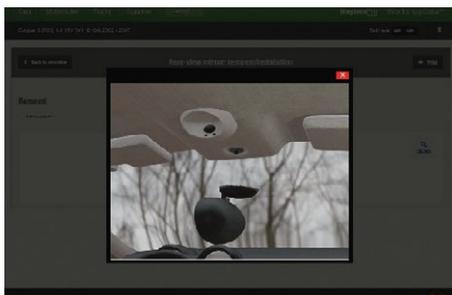
Thorough and error-free diagnostics is half the battle when it comes to professional repair. But it can sometimes be a difficult task for workshop technicians. For example, if the mechanic is not familiar with the vehicle type or components must first be laboriously removed to access the faulty part or a narrow space with poor visibility makes access difficult.

### No more ‘trial and error’

The XIS Pro from AVL DiTEST is the perfect solution in such scenarios. Its detailed removal and installation instructions and component position plans save mechanics from time-consuming ‘trial and error’ repair attempts. The experts at AVL DiTEST have significantly extended the XIS Pro’s amount of information and added a special feature in the 2020-03 update. From now on, for certain repairs, 3D animated images in GIF format will accompany the familiar repair instructions: These are de-

signed to aid understanding of the repair methods described in the manuals. This tool is currently only integrated for installation/removal of rear view mirrors on a certain number of vehicles. AVL DiTEST will add further vehicles and repair activities with each subsequent update. With this update, 25 new vehicle models have been added to the vehicle range in the online repair data portal, which means maintenance data can now be called up for a total of 165 car types. The new additions include several models from Japanese and Korean brands that are popular in Germany and the new Golf VIII from Volkswagen which was launched only a few weeks back. The online-based device-independent database is user-friendly and can be accessed on a PC, tablet or smartphone. Users who combine their AVL DiTEST XDS 1000 multi-brand diagnostic device with the XIS Pro can enjoy maximum ease of use. This enables data such as tightening torques, vehicle-specific servicing plans or circuit diagrams to be called up directly from the diagnostic device via WLAN for a specific job. “Of course, all the information in the XIS Pro complies with the manufacturer’s specifications” says Andreas Wittig from AVL DiTEST. Interested workshops can try out the online-based repair database for 30 days free of charge.

The trial can be accessed at <https://www.avditest.com/index.php/en/subscription-xis-pro-free-trial.html>



3D animated images provide visual explanations.

## AVL DiTEST XIS Pro

### The following is included:

- Maintenance information
- Removal and installation instructions
- Default values
- Operating materials and fill volumes and their specification
- Tightening torques incl. technical drawings
- Known measures and remedies
- Works value lists with integrated cost estimate
- Component tests with target values
- Circuit diagrams
- Component positions



Photo: shutterstock/Dazhen Zeng



If you're getting nowhere with troubleshooting, the experts on the AVL DiTEST vehicle hotline are on hand to assist users of the AVL DiTEST XDS 1000

## The number to call for unusual cases

Time is of the essence in today's workshops. Jobs and utilisation of employees, workstations and workshop equipment are often so tightly synchronised that small, unpredictable issues can bring this finely-tuned system of work processes and jobs to a halt.

### Technical 'crisis line'

Such an issue might arise if a mechanic cannot clearly identify the error in a vehicle's system using a diagnostic device, despite taking all due care, for example. This is where Christoph Gröschel and his colleagues at AVL DiTEST come into play. Gröschel leads the vehicle service hotline in Cadolzburg. "Customers call us when they are stuck with a diagnostic or finishing off a repair task. There can be a number of causes, for example measurements not providing plausible results, mechanical errors in the engine having an effect on electronic values or the user not being familiar with how to operate the device and needing support with the best repair method with the XDS 1000 diagnostic device," says Gröschel. The experienced service technician and his colleagues, who are also all trained service technicians or master mechanics, are increasingly identifying wear-related me-

chanical problems as the cause of electronic errors in the engine control unit, including on younger vehicles. "Timing chain problems are on the rise in many diesel and petrol vehicles. We are also seeing more and more engine problems due to coked-up intake ports," explains Gröschel. Petrol direct injection engines frequently suffer from this phenomenon. "This often causes engine running issues which many initially suspect are due to an electronic problem in the control unit. In such cases, diagnostic devices don't deliver clear results right away because the error symptoms only provide limited insight into the cause. We zero in on the problem with the user, analyse the measurements they have obtained together and guide them to the actual error," says Gröschel. We do this on the telephone while the AVL DiTEST customer is working on the vehicle. For very tricky cases, Gröschel and his colleagues can also connect to the customer's diagnostic devices via Teamviewer and go through the troubleshooting with them step by step. The employees on the hotline are also aware that time is money. After all, hotline users have generally carried out key diagnostic steps themselves before calling the AVL DiTEST vehicle hotline. "They

are often under time pressure and want to get the job done. So when they call the hotline, it's often their last hope," says Gröschel. And it is the right place to turn to: The AVL DiTEST vehicle hotline solves over 80 percent of cases in no time at all. Solved cases are entered into a database by the employees along with the solution. If specific repairs occur repeatedly, the experts at AVL DiTEST also add the resolution to the XIS Pro online repair database which can be linked to the XDS 1000 multi-brand diagnostic device.

### Hotline supplementary agreement

All owners of an AVL DiTEST multi-brand diagnostic device can use this 'technical crisis line'. In addition to the device, a separate hotline agreement is to be concluded, which grants the contract holder unlimited access to the repair hotline. "In isolated cases, we also help AVL DiTEST customers without a contract," says Christoph Gröschel. If it is more complex, the experts bill a flat rate of 30 euros.

Further information on the AVL DiTEST vehicle hotline can be found at:

<https://avlditest.com/index.php/en/vehicle-diagnostics-xds-1000.html>

### Contact:

AVL DiTEST GmbH, Alte Poststraße 156, 8020 Graz, AUSTRIA, Tel. +43 (0)316 787-0, Fax -1460  
AVL DiTEST GmbH, Schwadernmühlstraße 4, 90556 Cadolzburg, GERMANY, Tel. +49 (0)9103 7131-540, Fax -477

### Presented by: