Simplifying the present,
anticipating the future

Monastier di Treviso, September 10, 2024

TEXA AT AUTOMECHANIKA FRANKFURT 2024

LEADING AUTOMOTIVE INNOVATION

Within an impressive exhibition space, spanning over 700 square meters, TEXA presents a world preview of technological innovations dedicated to repair professionals and manufacturers. Among the most interesting new products, the IDC6 diagnostic software equipped with Artificial Intelligence, solutions for ADAS calibration and vehicle alignment check, the latest developments for propulsion and maintenance of hybrid and electric vehicles.

Once again, it's time for Automechanika Frankfurt, the leading European trade fair dedicated to the automotive aftermarket, and **TEXA is a major player**, with many new products. For the occasion, **an impressive exhibition space of over 700 square meters** has been created, in **Hall 8 - Stand E96**, conceptually divided into 6 thematic areas: **Diagnosis**, **ADAS Calibration**, **e-Powertrain**, **Innovation**, **A/C Maintenance** and **Emissions Analysis**. Each of these areas contains the latest technological innovations developed, dedicated both to garage equipment and to the world of Manufacturers.

THE NEW PRODUCTS

- **IDC6**, the new generation of diagnostic software equipped with Artificial Intelligence.
- **TXT MULTIHUB 2:** the top-of-the-range and multi-environment vehicle interface, even more powerful and complete.
- **NAVIGATOR NANO S 2:** the miniaturized VCI for CAR diagnosis.
- **RC4**: the rev counter and OBD scan tool, with a touch display.

THE PREVIEWS

- **ROTO CHECK**: the innovative system for vehicle alignment check.
- **VISION CHECK**: vehicle setup and ADAS calibrations, fast and precise.
- **E-DIAG CHARGER**: the charging and diagnostic station for electric vehicles.
- **TC 160**: the electronic battery charger and maintainer.

At Automechanika, other solutions dedicated to vehicle maintenance and the field of hybrid and electric propulsion will not be missing, including:

- **AXONE VOICE**, **PLUS** and **LIGHT**: the trilogy of diagnostic displays, recently introduced on the market.
- **Navigator TXB 2:** VCI developed specifically for the motorcycle and marine propulsion environment.
- **E-Fluid (OEM):** performs the maintenance service on electric vehicle cooling systems.
- **RCCS 3 EVO**: TEXA's already established ADAS structure, even more evolved.
- **ARAS BIKE**: for the calibration of driving assistance systems in the two-wheeler industry.
- **KONFORT TOUCH**: the complete line of stations for A/C maintenance.
- **NP 01 e GASBOX 2**: the most advanced tools for emissions analysis.
- **ELECTRIC MOTOR, INVERTER AND VCU:** the powertrain system for electric and hybrid vehicles, with inverters mounted on board the Lamborghini Revuelto Hypercar.

THE NEW PRODUCTS

SOFTWARE IDC6

A DIAGNOSTIC EXPERIENCE NEVER REACHED BEFORE

IDC6 is the peak of innovation and integration in the field of automotive diagnostics, as it can interact and continuously adapt to the new features in the industry. It creates the **perfect synergy between TEXA's display units and vehicle interfaces**, taking repair professionals always to the core of multi-brand and multi-environment diagnostics. Its advanced architecture and an ever more intuitive diagnostic interface provide an **incredible diagnostic experience**: users can quickly and accurately access the diagnostic information they need to solve any kind of problem in the vehicle. Furthermore, IDC6 updates itself constantly. This allows being always at the forefront of modern vehicle diagnostics. From now on it will be even easier to **work efficiently and safely, reducing downtimes** of the vehicle and **increasing customer satisfaction**.

The system was designed to face the challenges of the future of diagnosis. In fact, with the evolution of the technologies that feature the latest generation mobility industry, the need for authentication in order to perform protected operations or settings provided for by the manufacturers becomes more and more common. IDC6 is an **intelligent application** as it has an evolutionary capability to **satisfy user needs** over time, by learning from their behaviours and recommending the use of certain functions that are used less. Furthermore, it creates shortcuts for the most frequent operations, thus **improving efficiency and user experience**.

The brain of TEXA's diagnostics has evolved once again

Ever since the initial design and development phases of the new IDC6, we have kept in consideration **four essential features** that could not be left aside. The purpose was to get to the release of a software that could - once again - fully meet the new needs of professional users, ever more requested in the Garage Equipment industry. The result of this great work is actualised in a diagnostic software that is **Intelligent**, **Simple**, **Quick** and **Complete**.

Intelligent

Thanks to **Artificial Intelligence**, it allows a simplified access to information. It also uses Artificial Intelligence for troubleshooting.

Simple

It has a **new graphical interface** with a fully **redesigned** homepage. The navigation has been optimised, with preset *tooltips* and *shortcuts*.

Quick

The **release of updates** is automatic and consists in a unified multi-environment architecture.

Complete

It meets any diagnostic need. It allows carrying out Remote and Authenticated Diagnosis, PassThru, protected operations and OE adjustments.

Artificial Intelligence applied to diagnostics

An innovative combination that makes the work of vehicle repairers easier and quicker

The growing impact of electronics and the variety of systems integrated in the vehicles have made the work of diagnostic technicians **ever more complex**. This change, imposed by technical reasons, often translates into increasingly difficult and time-consuming troubleshooting, with many obstacles and glitches that complicate the identification of the problem causing the malfunction. Moreover, error codes can be due to various causes and may create possible confusion instead of supporting the diagnosis, leaving it to technicians to find out how to solve the failures encountered.

With IDC6, TEXA has opened its diagnostic software **to the potentiality** given by the use of **Artificial Intelligence**, so to make **the diagnostic process easier and more straightforward**, allowing workshops to save a significant amount of time and **drastically reduce the possibility of error** during repair work. This technology **uses, aggregates, reprocesses, and makes more accessible the diagnostic contents** and support information, **providing users with diagnostic indications and paths** that are statistically **reliable**. The **exclusive use of sources certified** by **TEXA**, **continuously updated**, combined with the consolidated experience in the diagnostics industry, ensures and guarantees the validity of the result. **AI therefore becomes a technology supporting mechanics during all the diagnostic operations**, as it can provide quick and complete answers to any questions that may arise during their work.

The application of Artificial Intelligence to diagnostics actualises in **two original functions**: AI Global Search and AI Intelligent Diagnosis. Both make full use of TEXA's diagnostic know-how of over 30 years,

which includes an extremely wide database of stored error codes and thousands of repair solutions, defined and archived by the Call Center, to find the solution to a fault within a short time.

AI Global Search allows preemptively querying TEXA's databases to **identify any information** about a specific problem on a given vehicle, reporting it in a **new, much more accessible form**.
AI Intelligent Diagnosis, on the other hand, **guides technicians during all the diagnostic phases**: from the automatic vehicle selection to the malfunction solution, through the TGS3s control unit scan, in next to no time. In fact, IDC6 optimises the fault identification and suggests effective troubleshooting solutions for technicians.
All the diagnostic solutions with a TEXPACK subscription include the advanced functionalities of artificial intelligence, offering users a powerful technology to support their daily workshop activities.

A user experience never reached before
Starting from the **solid base of IDC5**, the software was further improved and adapted to the new needs of repair professionals, using a layout that favours an **unprecedented user experience**. The IDC6 **homepage** was redesigned to offer a **simple, clear and customisable navigation** based on the needs of each user. The **menus** were organised intelligently and can **adapt to the user's habits**, for example by highlighting the most frequently used vehicle selections. Also, **new repair support contents**, increasingly accurate, have been included, such as the Dashboards and the images that can be zoomed in and displayed in detail. The **presence of the tooltips**, pop-up messages that suggest ideal paths or the use of unused functions, is very useful as well.
IDC6 uses preset **shortcuts** that **simplify the navigation experience** by quickly bringing the user to the section of interest.

An even more fast and up-to-date software
IDC6 allows a **fast and immediate access to the latest software updates** thanks to a new and advanced automatic installation mode, which optimises the process and guarantees that users are always **in step with the latest new diagnostic features**. Furthermore, when in standby, the system performs the **updates autonomously** thus avoiding any interruption of the work in progress. All these features are enhanced by a **single software architecture** to access the information and run the functions more quickly, guaranteeing more rapid responses and increasingly shorter loading times. A unified technological base allows adding **new functions**, editing the settings and customising IDC6, thus helping the software grow and adapt to the changing needs on the market.

IDC6 Further Expands Gateway Unlock Functionality

TEXA continues its significant efforts to ensure that its mechanics are always able to perform all diagnostic operations, even on vehicles equipped with access restrictions such as Gateways or electronic control unit protection systems. Thanks to the constant and fruitful collaboration with manufacturers, IDC6 allows for authenticated, quick and simple diagnostic interventions, even on Mercedes-Benz cars. This important novelty joins the brands that TEXA has already made available for some time, namely: Abarth, Alfa Romeo, Audi, Bentley, Chrysler, Cupra, Dacia, Dodge, Fiat, Fiat Professional, Jeep, KIA, Lancia, Lamborghini, Maserati, Renault, Seat, Skoda, Volkswagen, and Volkswagen commercial vehicles.
The new functionality will be available, at no additional cost and without limitations, to all TEXPACK CAR service subscribers who have a personal account to access the myTEXA portal. **TRUCK users**, on the other hand, **will be able to benefit from the agreement reached with IVECO**, which will allow technicians equipped with TEXA tools to operate on the range of light, heavy and bus vehicles equipped with diagnostic limitations. **The introduction of the SGW unlock functionality on IVECO is also significant news for all CAR mechanics who work on light commercial vehicles**.

TXT MULTIHUB 2
THE TOP-OF-THE-RANGE AND MULTI-ENVIRONMENT VEHICLE INTERFACE,
EVEN MORE POWERFUL AND COMPLETE

The innovative vehicle interface by TEXA that allows operating on **cars**, **heavy-duty vehicles**, **motorcycles**, **boats**, **agricultural** and **construction vehicles**, in a versatile, quick and intuitive way. It has a built-in display, very useful to view the most important information during the diagnostic operations. It automatically manages the **CAN**, **CAN FD***, **DoIP**, **PassThru communication protocols** fully, and the "on board" Linux operating system ensures intelligent connectivity.
Moreover, MULTIHUB 2 enables the remote diagnosis, allowing users to carry out an extensive range of operations such as reprogrammings, ADAS calibrations, component replacements, codings, body computer, service reset and many more, thanks to expert personnel that guarantees specialised support.

NAVIGATOR NANO S 2
THE MINIATURIZED VCI FOR CAR DIAGNOSIS

The simplest solution among the vehicle interfaces offered by TEXA. Small, robust, lightweight and ergonomic, it has been specifically developed for the **diagnostic operations in the CAR environment**. Every aspect of Navigator NANO S 2 has been carefully designed and developed to fully satisfy the needs of the modern workshops, creating an interface that is rich in innovative technical details. Just think of its new latest-generation processor, 8 GB storage, and an advanced connectivity that includes a Bluetooth 5.0 module. Moreover, Navigator NANO S 2 is compatible with the **CAN FD**, supporting the simultaneous management of the 3 channels, and **DoIP** communication protocols.

RC4

REV COUNTER AND OBD SCAN TOOL, WITH TOUCHSCREEN

The **new RC4 rev counter** is a significant evolution in the field of vehicle diagnostic tools and meets the specific needs of inspection centres. Thanks to its modern design and intuitive **touchscreen**, it allows an easy configuration and **quick connection to the vehicle**.

Moreover, its internal battery reduces the possibility of error due to an incorrect initial setup, allowing users to make sure the rpm reading is correct before starting the inspection test.

Other than a rev counter, RC4 is also an **OBD scantool** designed to support both the **inspection tests** and the **OBFCM (On-Board Fuel Consumption Monitoring) data reading**, thus ensuring greater versatility of use. Furthermore, its compatibility with all the software platforms currently in use in the various countries makes it an **adaptable solution that can be applied universally**.

Another innovation concerns the cables and connectors: robust and easy to use, they make the connection and disconnection process quicker, more intuitive and safer.

RC4 **supports all the main EOBD protocols**, among which: J1850 VPW, PWM, J1939, CAN High Speed ISO11898-2, KL ISO9141-2, KL ISO14230-1, and the new ISO13400-3 (DoIP). This broad compatibility guarantees that the tool can be used on a wide range of vehicles, ensuring excellent performance and accurate readings in any situation.

RC4 by TEXA is an **essential tool for inspection centres**, as it combines technological innovation, ease of use and reliability.

THE PREVIEWS

ROTO CHECK

THE INNOVATIVE SYSTEM FOR VEHICLE ALIGNMENT VERIFICATION

ROTO CHECK is an innovative and revolutionary "touchless" alignment system, designed for a simplified and quicker check on the main angles of the vehicle alignment without needing to apply any targets to the wheels. Thanks to its advanced technology for 3D optical reading, ROTO CHECK **makes a breakthrough in alignment measurement and adjustment**, guaranteeing an unrivalled precision, speed and ease of use.
The system is **available in two configurations**, both with four measuring units: the first has the measuring units on the ground and is ideal for vehicles on the ground or over a work pit. The second has movable measuring units, it is perfect for vehicles on the ground or on a lift, as it allows following the vehicle movement without any height constraints, so operators can set the lift at the height they prefer.

The measuring units are hooked to plates, installed in a dedicated area in the repair centre. They are equipped with robust targets that, thanks to the use of Gorilla® Glass, can be walked on. These units include **three infrared LED-matrix cameras**: two pointing towards the wheel for a 3D view, and a third

one to check the correct positioning. **The system is completed by a mini-PC with Wi-Fi for direct communication with the display unit** and a laser illuminator with structured light: thanks to a point cloud, it ensures an accurate camera view.

As an integral part of this innovative wheel alignment system, **the TEXA software uses Artificial Intelligence (AI) to identify any kind of wheel pairing (rim/tyre) and determine the angles using a stereoscopic view**. This integration also allows controlling the operations through the display unit, significantly improving the job management and efficiency.
ROTO CHECK offers many revolutionary advantages, among which: **greater stability** when reading the toe and camber values, **an optimised detection speed** that significantly reduces the time required for measurements and adjustments compared to traditional systems, and **greater ease of use in the lift adjustment** thanks to the unit following the wheel without any height constraints. Moreover, the solution eliminates the need for clamps, measuring heads and wheel targets, simplifying the operations on vehicles with different wheelbases.
This wide offer allows choosing between movable units with an internal battery or powered by cable, making it an incredibly versatile and space-saver solution.

VISION CHECK
VEHICLE SETUP AND ADAS CALIBRATIONS, FAST AND PRECISE

TEXA revolutionises the ADAS calibration with **VISION CHECK**, **a premium self-adjusting solution that combines top-notch manufacturing technologies with high-quality components**, providing operators with a calibration experience that is extraordinarily practical, simple, and - above all - quick. This innovative, one-of-a-kind solution allows obtaining unrivalled results, always with the utmost reliability and accuracy. VISION CHECK **minimises the technician's work** when positioning the unit: in this case, the adjustments and fine-tuning that are usually done by hand will be performed automatically, directly by the unit, thanks to the continuous communication between the unit and the smart targets, in a perfect synergy that is made possible by the interaction between the extremely accurate cameras and the software.
The result is **an impeccable positioning**, the basis to obtain an equally accurate calibration.
VISION CHECK **allows checking the vehicle alignment and carrying out the calibration in total safety**, meeting the strict criteria defined by the manufacturer, thanks to a thorough check on the positioning of the unit with respect to the vehicle and on the vehicle alignment. The use of smart tags connected to the built-in cameras guarantees an optimal ease of use and an absolute measuring precision. **A series of automated adjustments assists the technician in the accurate positioning of the unit**, sensibly reducing the time required and guaranteeing a pinpoint precision. The integration with the TEXA IDC6 diagnostic software allows starting the guided operation with minimum settings by the user, offering a step-by-step support throughout the process.

VISION CHECK can therefore be used right away, without requiring a specific training, as the technician is

guided in all the calibration phases by intuitive graphics and clear instructions that are displayed directly both on the 75" monitor with 4K resolution and on the diagnostic tool. **The solution guarantees the compatibility with over 75 makes and many models thanks to the wide range of accessories and digital panels with a 1:1 ratio for each manufacturer**. The respect of the original dimensions and the assisted positioning of the unit are the only method guaranteeing that the targets are used faithfully as prescribed by the manufacturers. Any other solution is not in line with the set requirements and therefore does not provide any certainty that the calibration will be successful.

VISION CHECK **drastically reduces the operation costs and times**, guaranteeing a high accuracy and eliminating any kind of risk for both the operator and the customer, thus allowing workshops to put the vehicles back on the road in absolute safety. Its advanced technology, along with the integration with IDC6, allows even non-specialised technicians to intervene with great ease, completing the operation accurately and rapidly. For these features, VISION CHECK is the ideal partner for workshops in the calibration of the ADAS.

E-DIAG CHARGER
THE CHARGING AND DIAGNOSTIC STATION FOR ELECTRIC VEHICLES

The new solution by TEXA allows better facing the issues tied with the maintenance and management of vehicles with full or partial electric drive. **E-DIAG CHARGER is featured as an innovative diagnosis and charging station for traction batteries on Battery Electric Vehicles (BEV) and Plug-in Hybrid Electric Vehicles (PHEV)**. It comes in two versions, 30 kW and 60 kW, and allows:

a) charging the traction batteries on BEVs and PHEVs in alternating current (Type 2 connector) and in direct current (CCS 2 Combo connector), even on two vehicles simultaneously, with power and time thresholds that can be set by the user;
b) adjusting the maximum charge power automatically, thus avoiding untimely disconnections due to overdraw compared to the maximum contractual power or due to the intervention of electric protection caused by overload of the workshop's electrical system;
c) diagnosing the traction battery (State of Health, State of Charge, etc.);
d) being easily moved within the workshop thanks to its wheeled structure;
e) being directly powered through a three-phase electrical outlet part of the workshop's electrical system.

The built-in diagnosis by TEXA allows physically checking the operation of the charging systems, displaying the main parameters so to have a better idea of the magnitudes involved, reading the parameters tied to the battery and the charging system through the vehicle's OBD socket. As by TEXA's tradition, during the project phase, special attention was given to the design and useability of the product, which were made clear through the well-finished and captivating contours, though preserving the practicality and immediateness of use.

Simplifying the present,
anticipating the future

TC 160

THE ELECTRONIC BATTERY CHARGER AND MAINTAINER

TC 160 is the first battery support unit by TEXA, designed to meet the demands of workshops that need a powerful and stable solution. This new product offers four main functions: **charger**, **maintainer**, **recovery of deteriorated batteries and showroom mode**. Thanks to its extraordinary **160 A power**, TC 160 stands out as **the most powerful battery support unit on the market**, ideal to work on 12 V batteries on cars and light commercial vehicles. TC 160 is compatible with lead and lithium batteries, offering versatility in several applications.

Using the EIS (Electrochemical Impedance Spectroscopy) technology **it can identify the type of battery and analyse the chemical reactions in the cells**. In case of excessive wear, you can manually select the type of battery or directly scan its bar code, using Bluetooth or USB reader, or from your smartphone thanks to a dedicated app. Once the battery is identified, the operator receives tips on how to manage it at best thanks to the contents in the database and can consult useful information directly from the tool's practical 5" display that provides a step-by-step guide and shows the battery's state of charge and the progress of the charge operations.

For deteriorated batteries, TC 160 **offers a desulphation cycle that increases the battery voltage and removes lead sulphide deposits from the plates**.

Maintenance in workshops on a modern vehicle is based on two operations that have a strong impact on the battery: locate any failure through a diagnostic phase and reprogramme one or more control units. Both these operations use up energy and require using a Battery Support Unit (BSU). **The diagnostic work with the BSU allows following the recommendations by manufacturers**, performing a flawless update in the vehicle control units, and keeping all the vehicle's electrical systems at a stable voltage, regardless of the electrical loads tested on the vehicle.

With TC 160 these operations can be carried out safely by setting maximum current and voltage thresholds in compliance with the manufacturer's indications.

ELECTRIC MOTOR, INVERTER AND VCU:

THE POWERTRAIN SYSTEM FOR ELECTRIC AND HYBRID VEHICLES,

WITH INVERTERS MOUNTED ON BOARD THE LAMBORGHINI REVUELTO HYPERCAR.

Today TEXA is among the very few that can offer an axial flux engine, after being able to face and solve the critical aspects. The axial flux architecture does not use a stator-concentric rotor as in the large majority of electric motors, but rather parallel discs, one of which is fixed (stator) and one or more are rotating (rotor). This solution offers important benefits in terms of compactness and layout, which allow placing it on board easily, pushing further on the integration lever and taking full advantage of its quick response and delivery features.

TEXA's axial flux motor, a liquid-cooled permanent magnet synchronous type, has two disc rotors that face the same centre stator, reaching, despite its high performance, ultra-compact sizes and a very low weight: its weight is almost halved compared to a radial flux motor with similar power. As previously stated, **the inverter** is a crucial element, both in terms of effectiveness (motor response speed and precision) and in terms of efficiency (electric motor performance, heat dissipated from the motor and inverter itself), and it is not surprising that over time this component was subject to major developments. It is not by chance that the inverter designed by TEXA includes latest generation IGBT electronic devices. TEXA's inverter, also liquid-cooled and particularly compact, is based on IGBT modules, but starting from 2024 it can count on very recent MOSFET-SiC, more efficient at low speeds and low loads and therefore winning in urban use. TEXA is equipping itself even to use sophisticated components made of Gallium nitride (GaN), the most advanced technology worldwide in the field of inverters, still at a prototype stage. Completing the circle of control electronics, TEXA created an innovative **vehicle control unit** able to fully exploit the speed and reactivity of the motor and inverter. The control unit can control two inverters and two motors guaranteeing instant reaction times, capable of giving an advantage not only in terms of efficiency but also in the driving dynamics of high-performing vehicles that have always been the pride of our Country. We wish to highlight that, thanks to the industrial project carefully researched also according to the industry's national supply chain, TEXA's powertrain can be built entirely in Italy maintaining a competitive price even against foreign competitors.

At the stand, you can admire a magnificent example of the Revuelto, Lamborghini's newest hypercar equipped with two TEXA inverters and a vehicle control unit, a front dual-channel unit that manages two electric motors connected to the front wheels, and a rear unit also connected to an additional electric motor that acts as a generator and starter, as well as providing torque to the wheels.

Brief TEXA profile

Founded in 1992, today TEXA is a leader in the design, industrialisation and production of diagnostic tools, tele-diagnostic devices, A/C service stations, exhaust gas analysers, dedicated to cars, bikes, trucks, agricultural vehicles and marine engines. The last frontier is the production of sophisticated Powertrain systems for electric vehicles. Present all over the world with a widespread net of distributors, TEXA commercialises directly in Brazil, France, Germany, Japan, the UK, Poland, Russia, Spain and the United States through its subsidiaries. Currently it has almost 1,000 employees: the workforce is young, with over 300 engineers and specialised technicians dedicated to Research and Development.

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