Navigator TXB 2





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NAVIGATOR TXB 2 TECHNICAL MANUAL

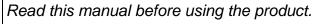
1 REVISION OF THE MANUAL

This document is the technical manual for the product: NAVIGATOR TXB 2

Document Review Number:01

Date of Issue:01/03/2024







Read the documents carefully whenever the General Risk symbol is shown.

2 INTRODUCTION

Dear Customer,

We would like to thank you for choosing a TEXA product for your workshop.

We are certain that you will get the greatest satisfaction from it and receive a great deal of help in your work.

Please read through the instructions in this manual carefully and keep it for future reference.

Reading and understanding the following manual will help you to avoid damage or personal injury caused by improper use of the product to which it refers.

TEXA S.p.A reserves the right to make any changes deemed necessary to improve the manual for any technical or marketing requirement; the company may do so at any time without prior notice.

This product is intended for use by technicians specialised in the automotive field only. Reading and understanding the information in this manual cannot replace adequate specialised training in this field.

The sole purpose of the manual is to illustrate the operation of the product sold. It is not intended to offer technical training of any kind and technicians will therefore carry out any interventions under their own responsibility and will be accountable for any damage or personal injury caused by negligence, carelessness, or inexperience, regardless of the fact that a TEXA S.p.A. tool has been used based on the information within this manual.

Any additions to this manual, useful in describing the new versions of the program and new functions associated to it, may be sent to you through our TEXA technical bulletin service.

This manual should be considered an integral part of the product to which it refers. In the case it is resold the original buyer is therefore required to forward the manual to the new owner.

Reproduction, whole or in part, of this manual in any form whatsoever without written authorization from the producer is strictly forbidden.

The original manual was written in Italian, every other language is a translation of the original manual.

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3 LEGEND OF THE SYMBOLS USED

Some of the symbols indicated below may not be used in the manual.

	Toxic material hazard	<u>~</u>	Floor level obstacle warning
	Explosive material hazard	*	Laser beam hazard
A	Electric shock hazard		Low temperature danger - freezing
	Electromagnetic field hazard		General Risk
	Flammable material hazard		Obligation to read the instructions
	Hot surface hazard		Safety glasses required
	Corrosive substance hazard		Protective gloves required
	Risk of noise level above 80 dB(A)		Protective clothing required
	Moving Parts Risk		Respiratory protection required
	Risk of crushing hands		Disconnect mains plug from electrical outlet

IAA DANGER	This is not a safety symbol. It indicates a hazardous situation which, if not avoided, will result in serious permanent injury or death.
AL WARRING	This is not a safety symbol. It indicates a hazardous situation which, if not avoided, may result in serious permanent injury or death.
▲ CAUTION	This is not a safety symbol. It indicates a hazardous situation which, if not avoided, may result in minor injury.
NOTICE	This is not a safety symbol. It indicates a hazardous situation which, if not avoided, may result in material damage.

INFORMATION

This is not a safety symbol.

It indicates important information.

4 SAFETY RULES

The technology used for the design and production control of the **NAVIGATOR TXB 2** diagnostic tools make them reliable, simple and safe to use.

Personnel in charge of using the diagnostic tools is required to follow the general safety rules and use the **NAVIGATOR TXB 2** devices for their intended use only. Furthermore, they are required to carry out the maintenance as described in this manual.

All the safety requirements issued by the following must be assessed and applied:

- Labour inspectorate
- Trade associations
- Vehicle manufacturers
- Anti-pollution regulations

in force in the country where the product is used.

INFORMATION

In no way shall the manufacturer be held liable for accidents or damages caused by the use of the product by personnel who is not adequately informed and trained pursuant to the safety regulations in force in the country where the product is used, nor who misused or failed to comply, even in part, with the safety regulations and procedures described in this manual.

4.1 Intended Use

Product	Intended Use		
	Multi-brand diagnosis on:		
NAVIGATOR TXB 2	 motorcycles 		
	• scooters		
	• quads		
	• e-bikes		
	electric scooters		
	personal watercrafts		
	 outboard engines 		
	 inboard engines 		

4.2 Glossary

- Tool:NAVIGATOR TXB 2
- Operator: qualified person responsible for using the diagnostic tool.
- Vehicle: any motorised means of transportation that can be diagnosed using the tool.

INFORMATION

The definition of "operator" cannot be applied to minors or to people with reduced physical, sensory or mental capabilities or without any experience or knowledge required.

4.3 General Rules



The operator must have carefully read and understood all the information and instructions in the technical documents provided with the tool. If the operator cannot read this manual, it is responsibility of the owner of the tool/employer/person in charge of the safety to illustrate the contents of this document and adequately train the operator in relation to the operating instructions and safety measures for a proper use of the tool.

- The operator that works on vehicles must have basic qualifications and knowledge of mechanics, automotive engineering, vehicle repairing and of the potential dangers that may arise during self-diagnosis operations.
- The operator must be completely clear-headed and sober when using the device; taking drugs or alcohol before or when operating the tool is strictly forbidden.
- The operator must follow all the instructions provided in the technical documents.
- The operator is required to wear adequate personal protective equipment (PPE) throughout the use of the tool.
- The operator must monitor the tool during the operating phases wherever this is possible in compliance with the safety measures indicated below.
- The operator must periodically check the electrical connections of the tool, making sure they are in good condition and immediately replacing any damaged cables.
- The operator must periodically check the parts that are subject to wear and replace them if necessary, using only original spare parts or spare parts approved by the manufacturer.
- The operator must stop using the tool immediately should any failure occur, and promptly contact the technical assistance.
- Contact your retailer for extraordinary maintenance operations.
- Do not remove or damage the labels and the warnings on the tool; do not in any case make them illegible.
- Do not remove or tamper with any safety devices the tool is equipped with.

4.4 Operator Safety



The airbags inflate with great force.



In case of explosion, a device located in the airbag's expansion area will be thrown with force causing severe damages and injuries.

Safety Measures:

• Do not place the tool in the airbags' expansion areas.



Some self-diagnosis operations allow you to activate/ deactivate certain actuators and safety systems on the vehicle.



Failure to reactivate the actuators and safety systems properly or at all may be a safety risk for the vehicle user.

Safety Measures:

- In order to avoid injuring people and/or damaging the device or the electronic systems
 of the vehicle connected to the device, do not allow unqualified personnel to use the
 device.
- Follow the instructions supplied by the software thoroughly.



The tool was designed to be electrically safe and to work with specific supply voltage levels.



Improper use may expose the operator to the risk of electric shock, even though of low intensity.

Safety Measures:

- Wear adequate personal protective equipment during all the operating phases.
- Do not handle or touch the tool or any accessories (e.g. cables) with wet hands.



The current used during the operating phases generates electromagnetic fields (EMF) near the tool.



Even though of low intensity, these fields may interfere with medical prostheses, such as pacemakers.

Safety Measures:

- · Keep away from the tool after launching the operating phases.
- If you have a medical prosthesis (e.g.: pacemaker), check with your doctor as to the appropriateness of using the tool or being near it.

4.5 Tool Safety

NOTICE

The tool was designed to be used in specific environmental conditions.



Using the tool in environments with temperature and humidity values that differ from those specified may impair its efficiency.

Safety measures:

- Put the tool in a dry area.
- · Do not expose or use the tool near heat sources.
- Put the tool where it can be properly ventilated.
- Do not use corrosive chemicals, solvents or harsh detergents to clean the tool.

NOTICE

The tool was designed to be mechanically sturdy and suitable for use in the workshop.



Careless use and excessive mechanical strain may impair its efficiency.

Safety measures:

- Do not drop, shake or bump the tool.
- Do not place the tool where it could fall into water. Avoid any contact with water.
- · Do not place objects over the cables nor bend them.
- Do not perform any kind of intervention that may damage the tool.
- Do not open or disassemble the tool.

NOTICE

The tool was designed to be electrically safe and to work with specific supply voltage levels.



Failure to comply with the specifications related to the power supply may impair the tool's efficiency.

Safety measures:

- Do not wet the tool with water or other liquids.
- If not otherwise specified, use the device on vehicles with a 12/24 V DC power supply and the chassis connected to the negative pole.
- The connection for the tool's power supply should always take place with the battery system of the vehicle being tested.
- Do not use external batteries to supply the tool unless explicitly requested to do so by the software.
- Pay the utmost attention to battery terminals and cables when setting up the connection to the vehicle. This will avoid false contacts and/or accidentally connecting the cables to metallic parts of the vehicle being tested.





The electromagnetic compatibility tests carried out on the tool guarantee that it can be adapted to the technologies normally used on vehicles (e.g.: engine check, ABS, airbag, etc.). Nevertheless, if malfunctions occur you should contact the vehicle's dealer.

4.6 Disclaimer





MARINE environment:

- It is the responsibility of the operator to install the device and inform the driver about the correct use of the product.
- An improper use of the product may cause serious and permanent injury.
- Make sure the installation does not interfere with the operation of the vehicle controls.
- Make sure the product's position does not compromise safety when driving the vehicle.
- Inform the driver about the correct driving behaviour.
- Inform the driver that the device must not be moved in any way or for any reason from the location where it was installed.

A CAUTION



BIKE environment:

- On-road use:
 - For safety reasons never drive the vehicle when the tool is connected to it.
- Test bench use (dyno bench):
 - It is the responsibility of the operator to install the device and inform the driver about the correct use of the product.
 - An improper use of the product may cause serious and permanent injury.
 - Make sure the installation does not interfere with the operation of the vehicle controls.
 - Make sure the product's position does not compromise safety when testing the vehicle.
 - Inform the driver about the correct driving behaviour.
 - Inform the driver that the device must not be moved in any way or for any reason from the location where it was installed.

5 OPERATION OF THE RADIO DEVICES

Wireless connection with Bluetooth® technology

The wireless connection with Bluetooth technology is a technology that supplies a standard and reliable method to exchange information between different devices, using radio waves. Products such as cellular phones, portable devices, computers, printers, cameras, pocket PCs etc. use this type of technology.

The Bluetooth interface searches for compatible electronic devices according to the radio signal they generate and establishes a connection between them. The tools operate a selection suggesting only compatible / enabled devices. This does not exclude the presence of other sources of communication or interference.

THE EFFICIENCY AND THE QUALITY OF THE BLUETOOTH COMMUNICATION MAY BE INFLUENCED BY THE PRESENCE OF RADIO DISTURBANCE SOURCES. THE COMMUNICATION PROTOCOL HAS BEEN DEVELOPED TO MANAGE THESE TYPES OF ERRORS; HOWEVER, IN THESE CASES COMMUNICATION MAY BECOME DIFFICULT AND CONNECTION MAY REQUIRE SEVERAL ATTEMPTS.

SHOULD THE WIRELESS CONNECTION ENCOUNTER SERIOUS PROBLEMS THAT MAY COMPROMISE A REGULAR COMMUNICATION, THE SOURCE OF THE ENVIRONMENTAL ELECTROMAGNETIC INTERFERENCE MUST BE IDENTIFIED AND ITS INTENSITY REDUCED.

Position the product in order to guarantee the correct operation of its radio devices. In particular, do not cover it with any shielding or metal materials in general.

6 ENVIRONMENTAL INFORMATION



Do not dispose of this product with other undifferentiated solid waste.

For information regarding the disposal of this product please see the pamphlet supplied.

7 NORMATIVE INFORMATION



The manufacturer, TEXA S.p.A., declares that the radio equipment type **NAVIGATOR TXB 2** is compliant with the following directives:

- RED 2014/53/UE
- RoHS 2011/65/UEand Delegated Directive 2015/863/UE

The complete text of the EU declaration of conformity is available at the following Internet address http://www.texa.it/download.



The manufacturer, TEXA S.p.A., declares that the radio equipment type **NAVIGATOR TXB 2** is compliant with the following regulations:

- Radio Equipment Regulation 2017 No. 1206
- RoHS Regulation 2012 No. 3032

The complete text of the UK declaration of conformity is available at the following Internet address http://www.texa.it/download.

Use restrictions and warnings (FCC / ISED)

Modification statement

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Les changements ou modifications non expressément approuvés par la partie responsable de la conformité peuvent annuler le droit de l'utilisateur à utiliser l'équipement.

Labeling information

Device model: NAVIGATOR TXB 2
Contains FCC ID: WAP3026
Contains IC: 7922A-3026

FCC Compliance

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- · Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Cet appareil est conforme à la partie 15 des règlements de la FCC. L'utilisation est soumise aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Remarque: Cet équipement a été testé et déclaré conforme aux limites d'un appareil numérique de classe B, conformément à la partie 15 des règlements de la FCC. Ces limites sont conçues pour fournir une protection raisonnable contre les interférences nuisibles dans une installation résidentielle.

Ce produit génère, utilise et peut émettre des ondes radio qui peuvent causer des interférences nuisibles s'il n'est pas installé et utilisé conformément aux instructions. Si néanmoins ce produit cause des interférences nuisibles à la réception de la radio ou de la télévision, ce qui peut être déterminé en éteignant et en rallumant l'appareil, l'utilisateur est encouragé à essayer de corriger l'interférence par une ou plusieurs des mesures suivantes:

- Réorienter ou déplacer l'antenne de réception.
- Augmenter la distance entre le produit et le récepteur.
- Brancher l'appareil sur une prise de courant différente de celle à laquelle le récepteur est raccordé.
- Consulter le revendeur ou un technicien radio/TV expérimenté pour obtenir de l'aide.

ISED compliance

This device contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's license exempt RSS(s). Operation is subject to the following two conditions: (1) This device may not cause interference. (2) This device must accept any interference, including interference that may cause undesired operation of the device.

This radio transmitter has been approved by Innovation, Science and Economic Development Canada to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.

L'emetteur/recepteur exempt de licence contenu dans le present appareil est conforme aux CNR d'Innovation, Sciences et Developpement economique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisee aux deux conditions suivantes : (1) L'appareil ne doit pas produire de brouillage; (2) L'appareil doit accepter tout brouillage radioelectrique subi, meme si le brouillage est susceptible d'en compromettre le fonctionnement.

Le présent émetteur radio a été approuvé par Innovation, Sciences et Développement économique Canada pour fonctionner avec les types d'antenne énumérés ci dessous et ayant un gain admissible maximal. Les types d'antenne non inclus dans cette liste, et dont le gain est supérieur au gain maximal indiqué pour tout type figurant sur la liste, sont strictement interdits pour l'exploitation de l'émetteur.

ICES-003 Class B Notice -Avis NMB-003 Classe B: This Class B digital device complies with Canadian ICES-003

Cet appareil numerique classe B est conforme à la norme Canadien NMB-003. CAN ICES-3(B) / NMB-3(B)

RF Radiation Exposure statement

This product complies with FCC and ISED radiation exposure limits set forth for an uncontrolled environment. The antenna should be installed and operated with minimum distance of 20 cm between the radiator and your body.

This device complies with Health Canada's Safety Code. The installer of this device should ensure that RF radiation is not emitted in excess of the Health Canada's requirement.

Cet appareil est conforme aux limites d'exposition aux rayonnements de l'ISED pour un environnement non contrôlé. L'antenne doit être installé de façon à garder une distance minimale de 20 centimètres entre la source de rayonnements et votre corps.

Cet appareil est conforme avec Santé Canada Code de sécurité 6. Le programme d'installation de cet appareil doit s'assurer que les rayonnements RF n'est pas émis au-delà de l'exigence de Santé Canada.

Certificação ANATEL

"Este produto está homologado pela ANATEL, de acordo com os procedimentos regulamentados pela Resolução 715/2019, e atende aos requisitos técnicos aplicados". Para maiores informações, consulte o site da ANATEL www.anatel.gov.br



00537-24-10401

Este equipamento não tem direito à proteção contra interferência prejudicial e não pode causar interferência em sistemas devidamente autorizados.

8 NAVIGATOR TXB 2

NAVIGATOR TXB 2 is a multi-brand and multi-environment VCI (Vehicle Communication Interface) that can communicate with a large variety of vehicles.

Thanks to the Bluetooth technology that this tool is equipped with, you can either work moving freely around the vehicle or work comfortably sitting in the vehicle.

The Bluetooth technology allows you to connect to all the display units without being conditioned by cables.

The VCI is able to connect and communicate with the electronic control systems of the vehicles, ensuring performances and speed.



This VCI has been specifically developed for motorcycles and marine engines.

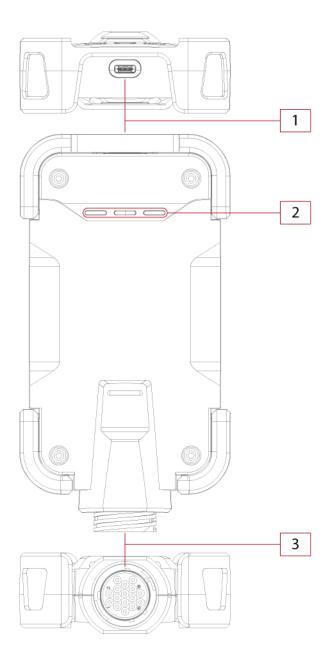
The VCI allows you to perform a self-diagnosis on:

- motorcycles
- scooters
- quads
- · e-bikes
- electric scooters
- personal watercrafts
- outboard engines
- · inboard engines

Thanks to it, you can carry out the following operations:

- the self-diagnosis for the reading and the clearing of the errors, the display of the engineering parameters and of the control unit's statuses;
- the activation, adjustment and configuration of the devices installed on the vehicle;
- the resetting of the warning lights,
- the configuration of the control units;

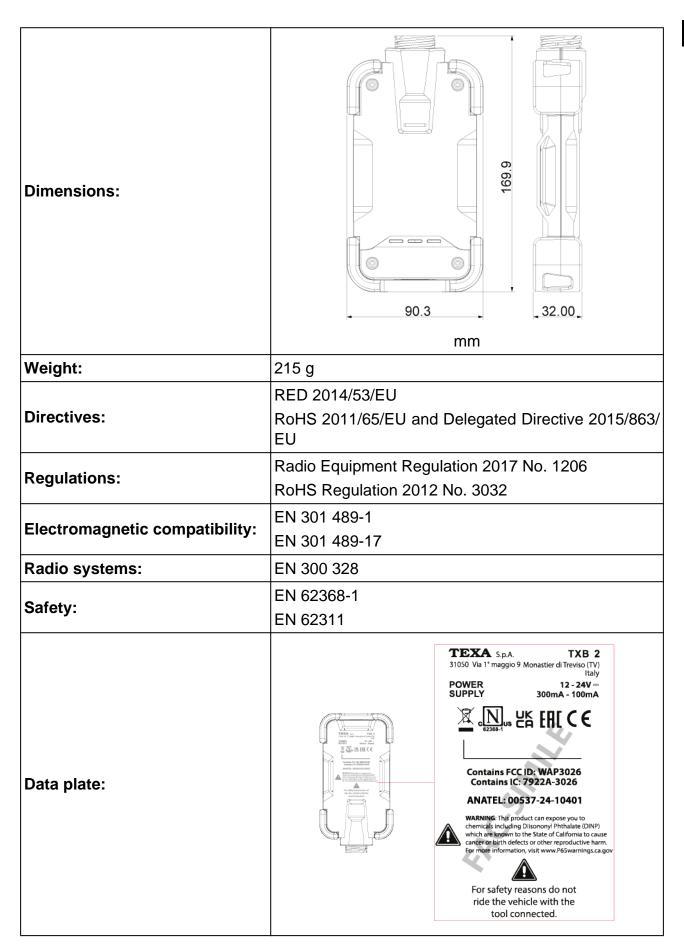
9 DESCRIPTION



- 1. USB C
- 2. Status LED
- 3. Diagnostic connector

10 TECHNICAL FEATURES

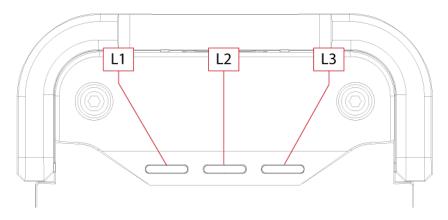
Model:	NAVIGATOR TXB 2	
Manufacturer:	TEXA S.p.A.	
Processor:	CORTEX M7 STM32H735AGI6 up to 550 MHz, 1MB FLASH, 564KB RAM	
SRAM memory:	16 MBits organized in 1024K x 16 bits	
SRAM:	256 MBits organized in 4096K x 4 banks x 16 bits	
eMMC memory:	8 GByte on an 8-bit bus	
	system management at:	
Vehicle Battery:	• 12 V ₌₌₌ *	
	• 24 V=== *	
External power supply:	12 ÷ 24 V=== *	
USB communication:	2.0 high speed 5 V=== / 500 mA *	
Wireless connection:	Bluetooth 5.0 class1	
Operational band:	2402 ÷ 2480 MHz	
Maximum radio frequency power transmitted:	10 dBm	
Electronic switch:	2-way, 13 independent positions	
Diagnostic connector:	16-pin CPC	
	Blink codes Codes	
	K, L (with current protection 100 mA), ISO9141-2, ISO14230	
	• FD CAN 11898-2:2016 2 channels	
Supported protocols:	CAN ISO 11898-3 LOW Speed	
Сарронов ризосов.	CAN SAE J2411 Single Wire	
	• SAE J1850 PWM	
	SAE J1850 VPWSAE J1708	
	• SAE J1708 • RS232	
Visible warnings:	LED: RGB x3	
12 V consumption:	300 mA	
24 V consumption:	100 mA	
Operating temperature:	0 ÷ 50 °C	
Storage temperature:	- 20 ÷ 60 °C	
Operating moisture:	10 ÷ 80 % without condensation	
	-	



^(*)The symbol "___ indicates direct voltage.

11 BLINK CODES

The VCI uses LEDs to indicate its status both while connected to the vehicle and to the display unit.



	LED		VOLCTATUC.	
-	COLOUR	STATUS	VCI STATUS:	
		ON	On, working, awaiting commands.	
green blinking COMMUNICATION WITH Passthru mode active.*		blinking	COMMUNICATION WITH THE VEHICLE IN PROGRESS./ Passthru mode active.*	
		OFF	Off.	
	orange	blinking	Blocked via software. On, working, awaiting commands.	
L2	red	blinking	Errors detected.	
slow blinking Bluetooth connection		slow blinking	Bluetooth connection established.	
	blue quick blinking		Bluetooth communication in progress.	
L3		OFF	No Bluetooth connection.	
LJ	yellow	slow blinking	USB connection established.	
		quick blinking	USB communication in progress.	
		OFF	No USB connection.	

^(*)Based on the mode of use in progress.

DYNAMIC TESTS - REC MODE

When set in **REC** mode to run the dynamic test, the LEDs flash in sequence to indicate the status of the VCI.

	LED		VOI CTATUC.	
-	COLOUR	STATUS	VCI STATUS:	
	orange	flashing in sequence	REC mode active.	
green flashing in sequence ve			REC mode active. Communication with the vehicle established. Data storage in progress.	

FIRMWARE UPDATE

The LEDs flash simultaneously to indicate the status of the VCI firmware update.

	LED		VCI STATUS:	
_	COLOUR	STATUS	VCISIATUS:	
L1 - L2 - L3	green	simultaneous flashing	Firmware update in progress.	
L1 - L2 - L3	red	simultaneous flashing	Firmware update failed.	

12 POWER SUPPLY

The VCI is designed and manufactured to be powered directly from the battery in the vehicle being tested.

Power is taken from the battery in the vehicle being tested via:

- Diagnostic cable;*
- Power supply cable.

(*) This type of power supply requires using specific wirings.

Alternatively, the VCI can be powered via PC through a USB cable connection.

NOTICE

The use of different power sources other than the ones indicated in this manual can damage the VCI.

Do not power the VCI using external batteries that are not electrically connected to the vehicle you are working on.

To use the VCI with a supply voltage different from the one specified in this manual, contact Technical Assistance.

NOTICE

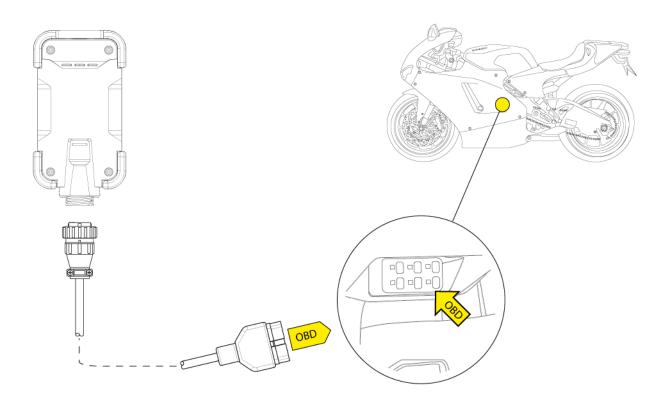
The images below are only examples: the position of the diagnostic socket and the type of diagnostic cable may change based on the vehicle being tested.

Always refer to the documentation supplied by the vehicle manufacturer for the positioning and correct access to the diagnostic socket.

Always refer to the indications provided by the diagnostic software for the selection of the diagnostic cable to use.

12.1 Diagnostic Cable

The VCI can be powered through the diagnostic socket of the vehicle being tested. In this mode the power is drawn from the vehicle's battery through a specific diagnostic cable connected to such socket.





The diagnostic connector is the device that disconnects the VCI from the power source.



Position the VCI so that the diagnostic connector is easy to access and so that it can be easily disconnected from the vehicle's diagnostic socket.

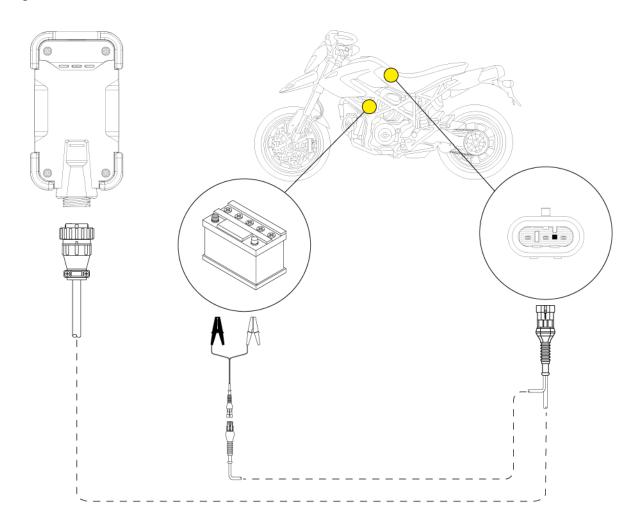
Proceed as follows:

- 1. Connect the diagnostic cable to the diagnostic connector.
- 2. Connect the diagnostic cable to the vehicle's diagnostic socket.
- 3. Turn the vehicle's ignition key on ON (instrument panel on).

The **LED L1** stays on solid **green** if the □VCI is properly powered.

12.2 Power Supply Direct from Battery

The VCI can be powered by means of a power supply cable with clamps connected to specific diagnostic cables.



NOTICE

If the battery is in the rear part of the vehicle, we recommend connecting the VCI directly to the power supply points coming from the battery that are available near the area in which you are operating.

Use the battery power only when specifically requested by the software.

Be careful to respect the polarities indicated on the cables when connecting to the battery terminals.

Proceed as follows:

- 1. Connect the diagnostic cable to the diagnostic connector.
- 2. Connect the power supply cable to the diagnostic cable.
- 3. Connect the cable clamps to the battery terminals.
- 4. Turn the vehicle's ignition key on ON (instrument panel on).

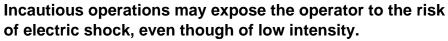




The diagnostic connector is the device that disconnects the VCI from the power source.

Position the VCI so that the diagnostic connector is easy to access and so that it can be easily disconnected from the vehicle's diagnostic socket.





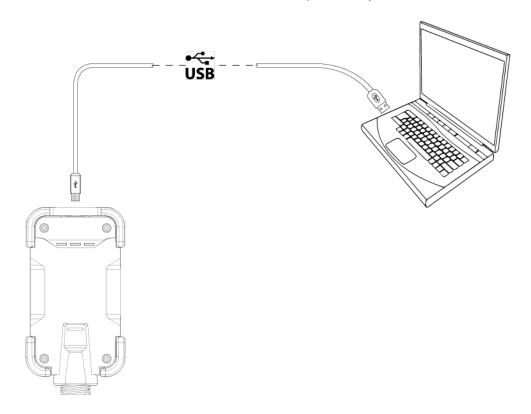


Be very careful when connecting the clamps to the battery terminals.

The **LED L1** stays on solid **green** if the □VCI is properly powered.

12.3 Power supply via USB

The VCI can be powered by using the specific cable provided or, if necessary, equivalent AM-CM cables on which "USB HIGH SPEED" is specifically indicated.



NOTICE

Power supply via USB must only take place as described below.

Voltages above the ones expected may damage the VCI.

Do not connect battery chargers or power adapters to the USB port on the VCI.

Proceed as follows:

- 1. Connect the USB cable to the USB connector on the VCI.
- 2. Connect the USB cable to a USB port on the PC.
- 3. Turn on the PC.

The **LED L1** stays on solid **green** if the □VCl is properly powered.

13 POWER ON/OFF

A CAUTION

In all the power source connection and disconnection operations, please refer to the safety indications in the POWER SUPPLY and DIAGNOSIS chapters in order to reduce the risk of electric shock.

13.1 Power on

The VCI turns on automatically once it is connected to one of the power sources described previously.

The **LED L1** stays on solid **green** if the □VCl is properly powered.

For further information see the POWER SUPPLY chapter.

13.2 Boot down

To turn off the VCI, you must disconnect it from the power source.

The **LED L1** turns off if the power supply has been properly removed.

INFORMATION

Generally, if the tool is powered via OBD connector, just turn off the vehicle by turning the ignition key to the OFF position (ignition off).

For further information, please refer to the technical documentation provided by the manufacturer.

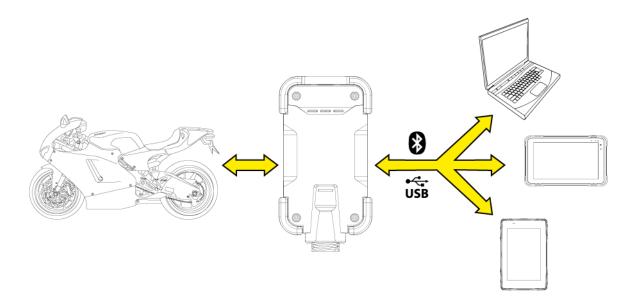
NOTICE

Turning off the VCI during specific diagnostic operations may cause the operations to fail.

Make sure all diagnostic operations have been completed before turning off the VCI.

14 COMMUNICATION

The VCI communicates with the control units in the vehicle being tested via connection to the vehicle's diagnostic socket through the specific diagnostic cable indicated by the software.



The VCI has various communication modes, some of which are reserved for specific types of diagnosis:

- Bluetooth
- USB

The communication between the VCI and the display unit must be configured through the specific software function before any type of operation on the vehicle.

This function allows configuring all communication modes at once.

Proceed as follows:

- 1. Power the VCI through the vehicle's diagnostic socket, as described in this manual.
- 2. Turn on the display unit.
- 3. Start the diagnostic software.
- 4. Launch the VCI configuration function.
- 5. Follow on screen instructions.

When turning on the VCI, it automatically recognises the communication mode through which it is connected to the display unit.



The Bluetooth communication mode is active by default.

To change the communication mode between the VCI and the display unit you must first turn off the VCI and then choose the mode you prefer.



For further information, see the software operating manual.

14.1 Bluetooth

The wireless connection eliminates the communication cable with the display unit, making the VCI more practical to use.

The Bluetooth communication mode is active by default.

INFORMATION

The Bluetooth communication is only possible with display units with Bluetooth 4.0 or higher.



INFORMATION

To configure the communication properly you must use the serial number indicated on the data plate on the VCI.

The LED L2 flashes blue:

- during the configuration phase of the Bluetooth communication;
- during the communication between the VCI and the display unit, while data is being exchanged.



For further information, see the software operating manual.

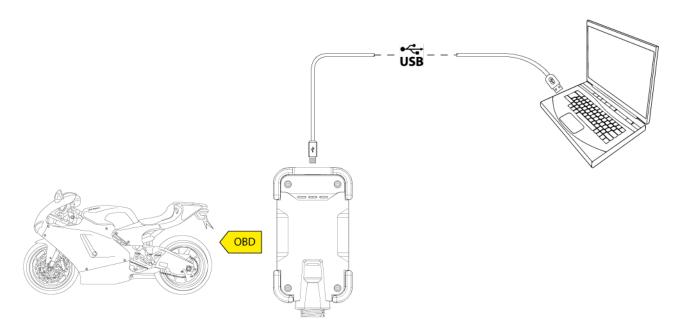
14.2 USB

In order to connect via USB, you must use the specific cable provided or, if necessary, equivalent AM-CM cables on which "USB HIGH SPEED" is specifically indicated.



This communication mode is not available for the following display units:

AXONE 5



The **LED L3** flashes **yellow**:

- during the configuration phase of the USB communication;
- during the communication between the VCI and the display unit, while data is being exchanged.



15 DIAGNOSIS

The protocols supported by the VCI allow it to perform various types of diagnoses.

The type of diagnosis that can be carried out depends on the vehicle being tested and its compliance with specific protocols for communication with the control units.

Where possible, the selection of the type of diagnosis is carried out through specific functions in the diagnostic software.

INFORMATION

Carrying out diagnostic tests using the functions made available by the software requires you to read and accept specific disclaimers.

Such disclaimers contain important safety indications that you must have read and fully understood before carrying out the tests.

INFORMATION

To carry out diagnostic tests, you must have previously configured the communication between the VCI and the display unit.

Some types of diagnostic operations require specific communication modes.



For further information, see the software operating manual.

The diagnostic connection is always established through a specific wiring indicated by the diagnostic software.

The diagnostic cable must be connected to the diagnostic connector on the VCI on one end, and to the diagnostic socket in the vehicle being tested on the other end.



For further information on the positioning and correct access to the diagnostic socket, refer to the documentation made available by the vehicle manufacturer.

INFORMATION

In some cases, specific adapters may be required.

NOTICE

Using a wrong diagnostic cable or a cable not specifically designed for this VCI may prevent a correct diagnosis and/ or damage the VCI and the vehicle.

Only use the diagnostic cables indicated by the diagnostic software.

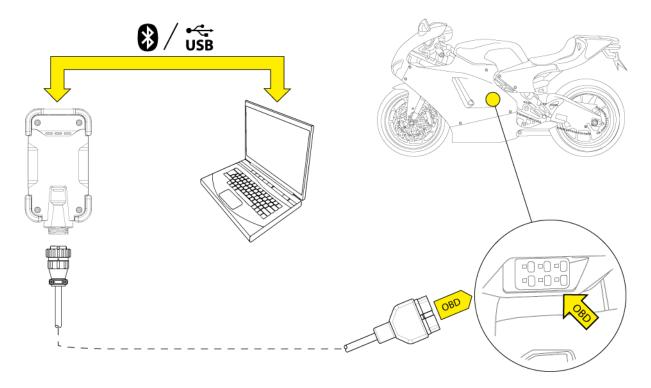
Do not use third-party diagnostic cables that have not been specifically approved by the VCI manufacturer.

The VCI also allows carrying out diagnostic tests with the vehicle on road / vessel running. This mode of use is called **REC** (*Recording*) and allows checking the vehicle's behaviour during its normal use.

For further information see the DYNAMIC TESTS chapter.

15.1 STANDARD diagnosis

STANDARD diagnosis stand for a type of diagnosis based on the diagnostic protocols indicated in the TECHNICAL FEATURES chapter.



The following communication modes are available for this type of diagnosis:

- Bluetooth
- USB

For further information see the COMMUNICATION chapter.

Proceed as follows:

- 1. Start the diagnostic software.
- 2. Select the vehicle you wish to work on.
- 3. Select the system you wish to diagnose.
- 4. Select the desired variant.
- 5. Connect the VCI to the vehicle following the support information provided by the software.
- 6. Select the STANDARD diagnosis.



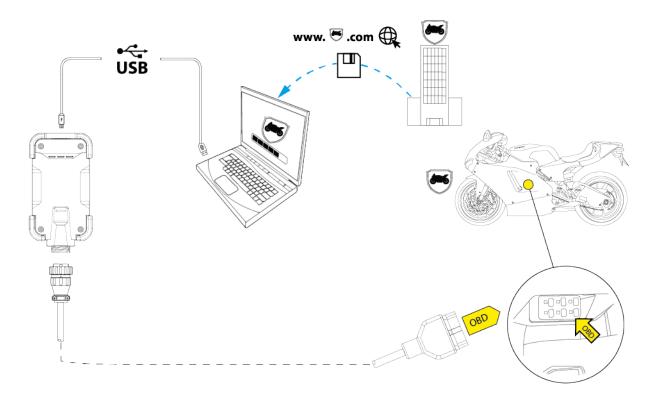
15.2 Pass-Thru

The Pass-Thru standards SAE J2534 and ISO 22900 aim at guaranteeing the possibility to carry out specific operations for control unit diagnosis and reprogramming using a third-party VCI, i.e. not proprietary to the vehicle manufacturer.

These operations are possible by using the VCI in combination with a specific software.

The VCI and the software must comply with the requirements of the Pass-Thru standards.

The software is distributed by the vehicle manufacturer through its website or a physical storage device.



INFORMATION

The activation date, the actual availability, the type, the cost and the procedures regarding the use of the Pass-Thru service(s) are specifically determined by each manufacturer; costs, performances and procedures may therefore vary independently of what TEXA S.p.A establishes.

Each manufacturer imposes specific hardware and operating system requirements for the PC where its software will be installed.

The PC must be generally equipped with the following:

- Windows operating system;
- USB port;
- serial port;
- RJ45 port;
- Wi-Fi;
- access to the Internet.

INFORMATION

Reprogramming or calibrating the control units may require you to download specific files from the vehicle manufacturer's website.

A high-speed connection to the Internet is highly recommended.

The vehicle manufacturer is entitled to request specific documentation to independent vehicle repairers (e.g.: Chamber of Commerce company registration showing that the company is actually registered in the register of vehicle repairers) so that they can carry out reprogramming operations on security systems (e.g.: immobiliser and/or antitheft control units).

The full compliance with the J2534-1 standard of the VCI that you purchased allows you to carry out operations using the diagnostic cable indicated by the software.

If operating on vehicles using the J2534-2 standard for the CAN Single Wire reprogramming, an optional cable may be required to connect to the **PV** connector.

INFORMATION

When using the VCI for Pass-Thru operations, the communication with the display unit can only be established via USB through the specific cable connected to the **USB DEVICE** connector.

During the reprogramming operations, it is essential that:

- the vehicle's supply voltage remains constant throughout the operations; if necessary, use an external power adapter to charge the vehicle's battery;
- the vehicle's electrical system is efficient and working properly;
- the Internet connection is stable and suitable for the operations required;
- the instructions provided by the vehicle manufacturer are followed to the letter step by step.

NOTICE

Reprogramming or calibrating the control units is an extremely delicate operation that may cause serious damage to persons or things if not performed properly.

Carefully follow the indications by the vehicle manufacturer for every aspect of the reprogramming procedure and in general for every operation in Pass-Thru.



For further information, please refer to the documentation provided by the vehicle manufacturer.

INFORMATION

TEXA S.p.A. is not, under any circumstance, liable for repair and maintenance work carried out on vehicles using the Technical Information and/or Services offered by the specific websites of each manufacturer. In this respect, the use of Pass-Thru mode is subject to the acceptance of specific Liability regulations defined by each vehicle manufacturer.

15.3 Dynamic Tests

The **REC** mode of the VCI allows checking the vehicle's behaviour during its normal use.

The VCI can acquire and store data relating to the tests through the OBD connector of the vehicle to which it is connected.

The data that can be stored includes the following:

- Engineering Parameters
- Errors
- states

The data to be stored will be selected by the operator through a specific function in the diagnostic software.

INFORMATION

Some information may not be acquirable or have a delayed recording during a dynamic test due to the operating strategy of the control unit.

The operating strategy is defined by the vehicle manufacturer.

Using the VCI in this mode requires different phases that must be carried out correctly and in the order described:

As an example, below you will find the operating procedure of the VCI in case of a test carried out with the following specifications:

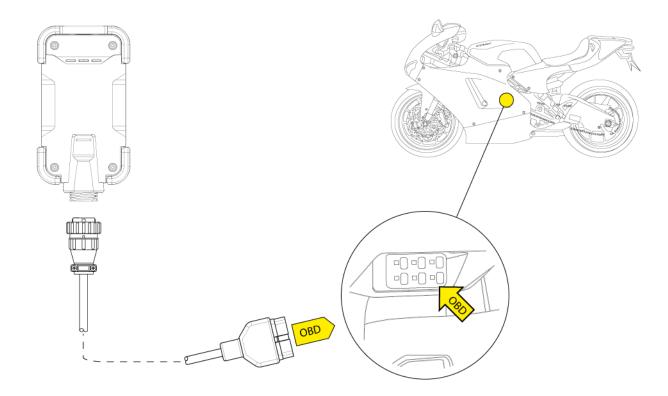
- motorcycle;
- Bluetooth communication between VCI and display unit already configured.

NOTICE

The safety indications below must be adapted based on the type of vehicle you wish to test.

In particular, refer to the contents in the chapter SAFETY RULES and in the DISCLAIMER.

I.INSTALLATION



- 1. Turn off the vehicle (instrument panel off).
- 2. Locate the OBD connector.
- 3. Carefully remove any panels protecting the OBD connector.



For further information, please refer to the documentation provided by the vehicle manufacturer.

- 4. Connect the diagnostic cable to the diagnostic connector on the VCI.
- 5. Connect the diagnostic cable to the vehicle's OBD connector.
- 6. Make sure the diagnostic cable is secured to the OBD connector in order to avoid any accidental disconnection during use.
- 7. Position the VCI and the diagnostic cable properly.



An improper positioning of the VCI and/or diagnostic cable may expose to the risk of hindrance to driving, and in particular to the activation of safety devices.

Position the VCI and the diagnostic cable so that they do not compromise driving or the proper operation of safety devices.

Make sure the electric cables, the wiring in general, the fuel hydraulic pipes and the safety pneumatic devices of the vehicle are not damaged during the installation.

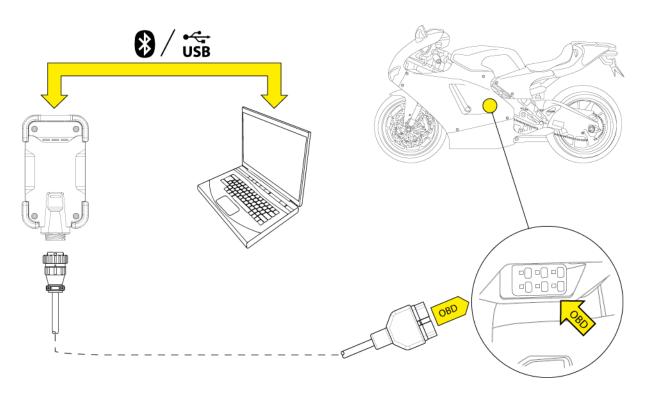
8. Fasten the VCI and the diagnostic cable properly.



Improperly fastening the VCI and diagnostic cable may cause the VCI itself or the diagnostic cable to fall, which may be a hindrance to vehicle driving and to the proper operation of safety devices.

Secure the VCI and the diagnostic cable so as to minimise their risk of falling.

II.CONFIGURATION



- 9. Turn on the vehicle (instrument panel on).
- 10. Start the diagnostic software.
- Connect the VCI to the display unit via Bluetooth or USB.
 (If previously configured, the wireless connection is automatic)
- 12. Select the vehicle on which you wish to operate.
- 13. Select the control unit you wish to monitor.
- 14. Start the diagnosis.
- 15. Create or select a group of favourite parameters that you wish to record.
- 16. Press the dynamic tests icon.
 - The software provides the sequence of operations required to complete the procedure in order to configure the VCI.
- 17. Follow the information that appear on screen.
- 18. Close the diagnostic software.
- 19. If connected via USB, disconnect the VCI from the display unit.

INFORMATION

The VCI starts recording only after the diagnostic software has been closed or after being turned off and back on.

The actual time required for the recording to start is proportional to the number of selected parameters.

The recording mode must remain active for at least one minute in order for the VCI to store valid diagnostic data.

III.DYNAMIC TESTS

The sampling of the parameters generally takes place every second.

Any errors that may occur during the tests are stored within the memory of the VCI.



Do not operate the VCI in any way.

IV.ANALYSIS OF THE COLLECTED DATA

The analysis of the collected data is performed by the specific software.

In order to analyse the results of the dynamic tests, you must connect the VCI to the display unit and download the recorded data.

The software allows you to view specific reports for the data stored.

- 20. Keep the VCI connected to the OBD socket.
- 21. Connect the VCI to the display unit via Wi-Fi, Bluetooth or USB. (If previously configured, the wireless connection is automatic)
- 22. Start the diagnostic software.



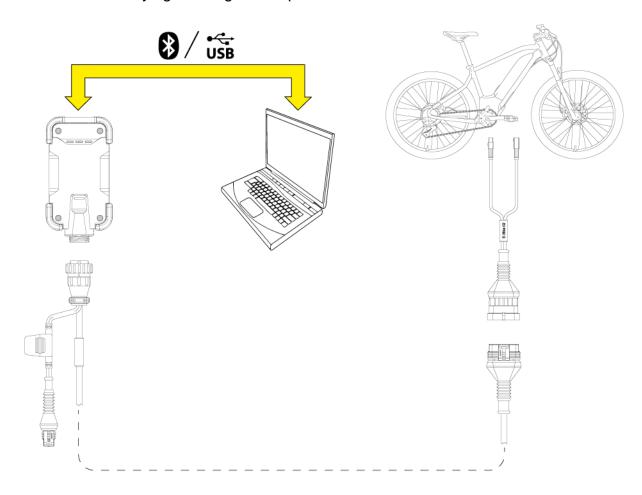
For further information, see the software operating manual.

INFORMATION

The analysis of the collected data can be carried out at a later time, also powering the VCI in a different way from the one described. However, we recommend carrying out these operations as described so far.

15.4 Diagnosis on e-bikes

The VCI allows carrying out diagnostic operations on e-bikes.



The following communication modes are available for this type of diagnosis:

- Bluetooth
- USB

For further information see the COMMUNICATION chapter.

Proceed as follows:

- 1. Start the diagnostic software.
- 2. Select the vehicle you wish to work on.
- 3. Select the system you wish to diagnose.
- 4. Select the desired variant.
- 5. Connect the VCI to the vehicle following the support information provided by the software.
- 6. Start the diagnosis.



15.5 Disconnection at the End of a Diagnosis

Once the diagnostic operations are complete, disconnect the VCI and restore the initial vehicle conditions.

Proceed as follows:

- 1. Close the diagnostic software.
- 2. Turn off the vehicle (instrument panel off).
- 3. Disconnect the diagnostic cable from the vehicle's diagnostic connector.
- 4. Disconnect the diagnostic cable from the diagnostic connector on the VCI.
- 5. Reposition any panels protecting the OBD connector.



The unexpected unfastening of any panels protecting the OBD connector may expose to the risk of hindrance to driving, and in particular to the activation of safety devices. Make sure any panels protecting the OBD connector that were previously removed and then reinstalled are secured in place, so that they do not fall off while driving.

16 FIRMWARE UPDATE

The firmware in the VCI is updated through a specific software function and requires the connection to the display unit.

Connection to the display unit may be established via:

- Bluetooth
- USB

INFORMATION

The available connection modes depend on the display unit used; however, the Bluetooth connection cannot be used to update the firmware.

INFORMATION

Regardless of the communication mode, during the update:

- do not turn off the VCI;
- do not turn off the display unit;
- do not interrupt the connection between the VCI and the display unit.

The procedure is the same for all connection modes.

Proceed as follows:

- 1. Power the VCI.
- 2. Turn on the display unit.
- 3. Start the diagnostic software.
- 4. Start the VCI firmware update.
- 5. Follow on screen instructions.

Wait for the update procedure to complete.

All the LEDs flash green simultaneously during the update.

All the LEDs flash red simultaneously if the update fails.



17 MAINTENANCE

This product does not require special maintenance. However, we recommend the following:

- carefully follow the instructions provided in this manual;
- keep the product clean;
- periodically inspect the electrical connections making sure they are in good conditions;
- immediately replace any damaged cables;
- only use original spare parts or spare parts approved by the manufacturer;
- contact your retailer for extraordinary maintenance operations;

NOTICE



The use of spare parts and accessories that are not approved by the manufacturer may compromise the product's efficiency and safety.

Only use spare parts and accessories that are approved by the manufacturer.

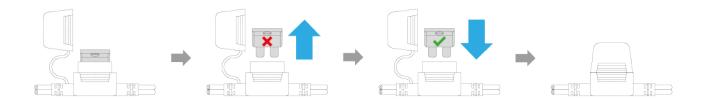
INFORMATION

For further help, contact your retailer or the technical assistance service.

You can see the list of authorised retailers at the following address:https://www.texa.com/sales-network

17.1 Fuse Replacement

Some diagnostic cables and power supply cable are equipped with a safety fuse. If blown, the fuse [F] must be replaced with one with the same technical features.



Proceed as follows:

- 1. Disconnect the cable from the diagnostic socket.
- 2. Disconnect the cable from the VCI.
- 3. Open the fuse housing.
- 4. Remove the blown fuse.
- 5. Replace the fuse with one that has the same technical features.
- 6. Close the fuse housing.

18 LEGAL NOTICES

TEXA S.p.A.

Via 1 Maggio, 9 - 31050 Monastier di Treviso - ITALY

Tax Code - Company Register of Treviso ID No. - VAT No.: 02413550266

Single-shareholder company subject to the direction and coordination activities of Opera Holding S.r.l.

Paid-up share capital 1,000,000 € - R.E.A. (Economic Administrative Index) No. 208102 Legal Representative Bruno Vianello

Phone +39 0422.791.311

Fax +39 0422.791.300

www.texa.com

For information regarding the legal notices, please refer to the **International Warranty Booklet** provided with the product.