J2534 device DN-DST-010-A DN-DST-010-B DN-DST-010 Hardware Manual

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1. Preface

Thank you for purchasing this product.

Before using this product, read this document carefully so that you can use this product correctly and safely.

This document explains handling of this product.

Trademarks

- SD Memory CardTM and SDHC Memory CardTM are the registered trademarks of Panasonic Corporation, SanDisk Corporation in the United State and Toshiba Corporation.
- Bluetooth® is the trademark or registered trademark of Bluetooth SIG, Inc. in the United State and other countries.

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About this product

This product is a compact and lightweight communication interface for diagnosis.

With this product, diagnosis can be performed by connecting to a PC with the diagnostic software installed.

This product alone cannot perform diagnosis.

This is a compact product. Please do not forget to remove it after use.

* Some vehicles cannot be connected directly depending on the location of the available OBD connector.

The countries where the wireless model of this product is available

Japan, USA, Canada, China*, EU (European Union), Australia, New Zealand Please comply with the applicable laws and regulations in the country and/or region where the product is used.

* In China, use below certified DN-DST-010-A (DARK GREEN) units only.

Set Part Number: 95171-0148 * (*: 1 or higher)

S/N: 423X-YYYYYY (X: 2 or higher, Y: any value)

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Disposal of the product

When discarding the product or its accessories, contact authorized industrial wastedisposal service.

Those who discard waste without authorization will be punished by law.

Disposal requirements

The product shall be disposed in accordance with all applicable legislation for disposal of Electrical and Electronic Equipment in each country and region.

(e.g. WEEE Directive in EU)

Please contact our authorized distributor or our sales agent when disposing it.

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Product specifications(DN-DST-010-A,B)

Model No. Part No. Label color		DN-DST-010-A	DN-DST-010-B		
		95171-0148*	95171-0151*		
		DARK GREEN BLUE			
СРИ		32-bit microcomputer			
		USB	USB2.0 x 1 (Mini-DIN connector)		
	PC communication	Wireless LAN	IEEE802.11bgn 2.4GH z	-	
External interface		Bluetooth	IEEE802.15.1 Ver.4.0/Class1	-	
*Some functions	SD memory card (supporting SD and SDHC memory cards)		Slot x 1		
require the support software.			ISO9141(K/L)		
	Makisla assument	a dia n	HS-CAN, CAN-FD*1		
	Vehicle communi	cation	DoIP (Ethernet)		
			P-Line, Diag-X, Diag-H, SCS, WEN		
Main unit power	Vehicle power supply		DC6.5 ∼ 32V		
supply voltage	USB power (BUS power)*2		DC4.75 ∼ 5.25V		
Power consumption	1		MAX. 2.5W (12VDC)		
Operating	Operating temperature[Storage temperature]		-10 ~ 50°C [-10 ~ 60°C]		
environment	Operating humidity		35 ∼ 85%		
Main unit dimensions		47.2mm (W) × 73.0mm (H) × 22.5mm (D)			
OS environment		OS: Windows 10/11, CPU: 1GHz or higher, Memory: 2GB or higher, Free disk space: 1GB or higher *Excluding ARM-based processors			
Main unit mass		Approx. 70g			

^{*1} CAN-FD is available from DST-010 software Ver.3.2.0 onward..

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^{*2} This product can be turned on by the power supply from the USB power (BUS power), but power supply from the vehicle OBD connector is required in order to communicate with the vehicle.

Product specifications(DN-DST-010)

	•	•	•			
Model No. Part No. Label color		DN-DST-010				
		95171-0134*	95171-0137*	95171-0139*		
		GREEN	YELLOW	PINK		
CPU		32-bit microcomputer				
		USB	USB2.0 x 1 (Mini-DIN connector)			
	PC communication	Wireless LAN	IEEE802.11bgn 2.4GHz -			
External interface	Communication	Bluetooth	IEEE802.15.1 Ver.4.0	IEEE802.15.1 Ver.4.0/Class1 -		
*Some functions	SD memory card (supporting SD and SDHC memory cards)		Slot x 1	-	-	
require the support software.	Vehicle communication	ISO9141(K/L)	0	0	0	
		HS-CAN, CAN-FD*1	0	0	0	
		DoIP(Ethernet)	0	-	-	
		* Contact the distributor a	stributor about other inquires related to communication with the vehicle.			
Main unit power	Vehicle power supply		DC6.5 ∼ 32V			
supply voltage	USB power (BUS power)*2		DC4.75 ∼ 5.25V			
Power consumption			MAX. 2.5W (12VDC)			
Operating	Operating temperature [Storage temperature]		-10 ~ 50°C [-10 ~ 60°C]			
environment	Operating humidity		35 ~ 85%			
Main unit dimensions	•		47.2mm (W) × 73.0mm (H) × 22.5mm (D)			
OS environment			OS: Windows 10/11, CPU: 1GHz or higher, Memory: 2GB or higher, Free disk space: 1GB or higher *Excluding ARM-based processors			
Main unit mass			Approx. 70g	Approx. 60g	Approx. 60g	
				·	·	

^{*1} CAN-FD is available from DST-010 software Ver.3.2.0 onward.

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^{*2} This product can be turned on by the power supply from the USB power (BUS power), but power supply from the vehicle OBD connector is required in order to communicate with the vehicle.

This section provides important information to use the product safely. Please read the section carefully and understand the following content (indications and symbols).

Indication	Description	
MARNING Indicates an item for which incorrect handling can result in a major accident involving death or serious injury.		
⚠ CAUTION	Indicates an item for which incorrect handling can lead to injury or damage to property. Under certain conditions, more serious consequences may result.	

Symbol	Description	Symbol	Description
\Diamond	Indicates a prohibited method of handling.	0	Indicates a mandatory method of handling and a forcible item.

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<WARNING for handling this product>

 Do not disassemble or alter this product. Doing so could result an overheating, fire, explosion, and/or electric shock.



 When using wireless communication with wireless models, do not use this product inside medical facilities or near medical devices.



Doing so may cause an accident due to electric medical devices malfunction caused by the radio waves.

• When using wireless communication with wireless models, keep this product at least 22 cm away from the body part where the cardiac pacemaker is implemented.



The radio waves could affect the performance of the pacemaker.

<Warnings in operation>

• Do not connect or disconnect this product while the vehicle is running. Doing so may cause an accident.



• Do not route the USB cable of this product over the engine compartment, especially if the engine is running.



Cables and/or clothes could be caught by the belt and/or pulley, causing an accident.

CAUTION

<CAUTION for handling this product>

Do not remove the plate from this product.



Removing the plate will be regarded as disassembling the product and will not be eligible for warranty.

• When connecting or disconnecting this product from the diagnosis connector on the vehicle side, always turn OFF the starter switch (the ignition switch) and turn OFF the engine.



Failure to so may cause a malfunction of the vehicle.

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♠ CAUTION

• Inspect for foreign materials or damaged pins on each connector of this product before connecting to the diagnosis connector of the vehicle side.



They may cause damage to the diagnosis connector on the vehicle side and the product's connector terminal.

• When disconnecting this product from the diagnosis connector on the vehicle side, ensure that the connector lock is released.



Failure to release the connector lock may damage the vehicle diagnosis connector and the product's connector terminal.



 Do not pull the USB cable lock portion when disconnecting this product from the diagnosis connector on the vehicle side when using the USB cable lock.



The lock is designed to come off if certain force is applied. If the lock is pulled off by pulling the lock portion, your hand may hit something and may cause injury or product damage.



When connecting this product to the vehicle side diagnosis connector or disconnecting it from the connector, ensure the correct orientation and inclination of the connector and gently push or pull while keeping correct angle for pins and connector.



If you attempt to connect this product with a wrong orientation, if the product is connected with an inclination, or if the product is disconnected with an inclination, the connector terminals of the vehicle or the product can be damaged.

Do not leave this product connected to the vehicle when not in use for diagnosis. Connecting this product to the diagnosis connector on the vehicle side turns ON this product even if the starter switch (ignition switch) is OFF. Leaving this product connected may results in flat battery of the vehicle.



Do not drive the vehicle while this product is connected to the vehicle. Driving while this product is connected to the diagnosis connector on the vehicle side, may cause difficulty for proper driving operation.



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↑ CAUTION

• When using the wireless communication, do not use this product near an automatic control device such as an automatic door or a fire alarm.



The radio waves could affect operation and result in an accident caused by malfunction.

• When using the wireless communication, do not use this product in electric trains, airplanes, or places like gas stations where flammable gases are present.



Failure to do so may cause potential radio wave effects, resulting in an accident.

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4. Usage precautions

This section contains precautions for using this product.

↑ CAUTION

<Cautions on this product>

- Do not connect this product to anything with a voltage exceeding the ratings of this product.

 Doing so may cause a malfunction of the product.
- Do not use this product immediately after being left inside a hot vehicle for a long period of time. The temperature of the internal electronic parts could exceed the threshold, which may cause malfunction.
- Do not handle this product with wet hands.
 If the liquid makes contact with the terminal electronic circuit or the metal parts of this product, it may cause malfunction of this product.
- When carrying this product, do not put this product in wet clothes.
 If the liquid makes in contact with the terminal electronic circuit or the metal parts of this product, it may cause malfunction of this product.
- Do not directly touch the terminals of this product by hand.
 If skin oils or liquid make contact with the terminal portion of this product, it may result in malfunction of this product.
- Do not use this product in the following places.
 - Doing so may cause a malfunction of the product.
 - Places where the product is exposed to liquids.
 - Places with a high humidity.
 - Places with extreme amount of dust.
- Do not apply a physical load to this product while connected to the vehicle.
 It could result in damage on the connectors of the vehicle and/or this product.



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4. Usage precautions

♠ CAUTION

• Do not drop this product or subject it to a strong impact. It may cause damages or malfunctioning of the product.



 Do not lift or drag this product by holding the USB cable connected to this product. If this product falls when the USB cable is disconnected, it could result in damages or malfunctioning of the product.



• Do not insert anything other than an SD memory card in the SD memory card slot on this product. A SD memory card with damaged contact surface cannot be read.



<Cautions on the USB cable>

• When connecting this USB cable to this product and a PC, or disconnecting it from the product and the PC, ensure the correct orientation and inclination of the connector and gently push or pull while keeping correct angle for pins and connector.



If you attempt to connect this product with a wrong orientation, if the product is connected with an inclination, or if the product is disconnected with an inclination, the connector terminals of the PC or the product can be damaged.



 Do not apply a physical load to the USB cable connector connected to this product and the PC. It could result in damages on the connectors of the PC and/or this product.



 When disconnecting the USB cable from this product, always hold the connector to disconnect the cable.



Pulling on the cord section can break the lines in the USB cable.

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4. Usage precautions

♠ CAUTION

<Caution on connecting to a PC>

 When connecting this product and a PC with the USB cable, always use a USB port on the PC capable to supply 500 mA or more current source.



Insufficient current source supply could result in malfunction.

 When connecting this product and a PC with the USB cable, directly connect it to the USB port on the PC or via a USB hub that has the capability of supplying sufficient current.



Some types of USB hubs may have insufficient power supply capability for normal operation.

(For example, a hub on PC keyboard is not suitable for this connection.)

• When you start this product only by USB power (BUS power), be careful not to set the PC to "low power consumption mode" / "suspend mode".



Insufficient power supply could result in malfunction.

<Caution on storage location>

Do not store this product in the following places.



Doing so may cause a malfunction of the product.

- Places with a high temperature (on the vehicle dashboard, for example).
- Places exposed to the direct sunlight for a long period of time.
- Places where the product is exposed to liquids.
- Places with a high humidity.
- Places where this product can be stepped on or under heavy objects.

<Cautions on maintenance>

Do not clean by blowing air.

Moisture or foreign material may enter the product and cause malfunction.



• When cleaning this product, do not use a solvent or volatile oil.

To do so may cause deformation, discoloration, cracking, etc., and also result in loss of functions.

Wipe the product gently with a soft damp cloth with diluted neutral detergent.



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5. Product configuration

Main unit and accessories

Check that you have all of the following components before using this product.

Kit part number: 95171-0148* (with wireless communication, Ethernet supported)

" -0151* (without wireless communication, Ethernet supported)

" -0134* (with wireless communication, Ethernet supported)

" -0137* (with wireless communication supported)

" -0139* (without wireless communication supported, exclusive for USB communication)

No.	Part name	Illustration	Part No.	Q'ty
1	Main unit	DENSO T03020Z	-	1
2	USB cable (2m)	T03021Z	95171-1378*	1
3	USB cable lock	T03022Z	95171-1379*	1
4	Component list		-	1

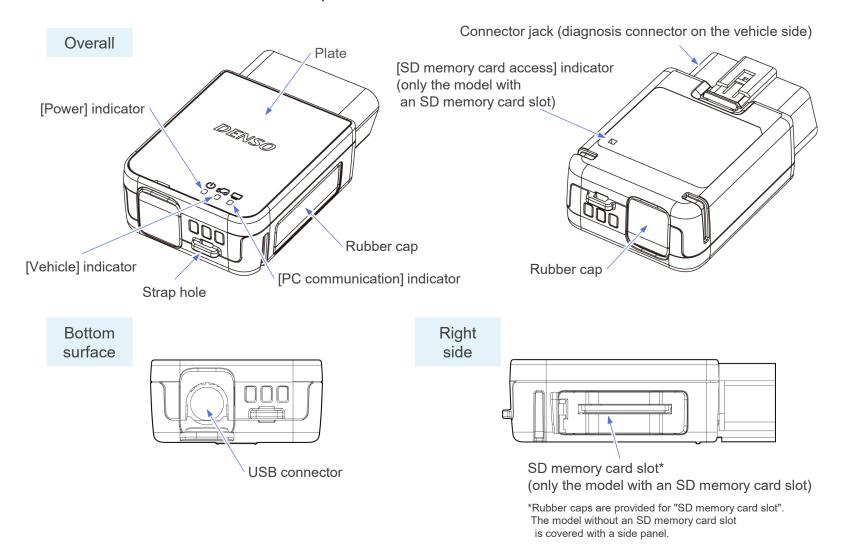
[NOTE]

The last character of the part number is indicated with an asterisk "*". When asking for information, please provide the 9 digit part number and part name.

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6-1. Names of the parts

The names of the main unit parts are as follows:

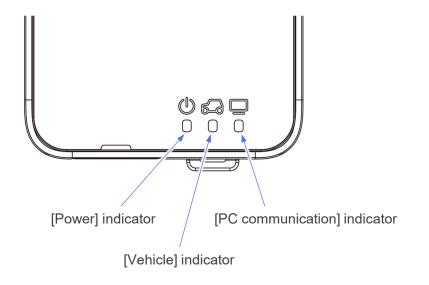


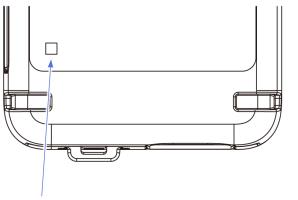
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6-2. Indicator

The indicators indicate the status of main unit.

Refer to the setup manual for the LED lighting patterns.





[SD memory card access] indicator (only the model with an SD memory card slot)

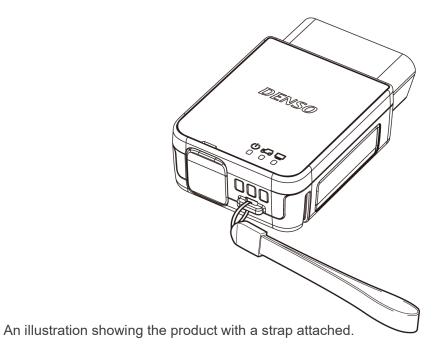
T03025J

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6-3. Strap hole

The strap hole can be used to attach a strap that serves as a reminder to help the user taking off the product after use.

A strap is not supplied with this product. It must be purchased separately.



T03026J

[CAUTION]

Do not disconnect this product by pulling the strap.

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7-1. Insertion and removal to the vehicle

- 1 Connect the main unit directly to the diagnosis connector on the vehicle side.
- After connecting, the main unit will power turn ON if power is supplied from the vehicle.

Check the position of the diagnosis connector of the vehicle side in the repair manual of the vehicle.

Connector lock status

Connector locked Connector unlocked

T03027J

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7-1. Insertion and removal to the vehicle

[CAUTION]

- When connecting the main unit to the diagnosis connector on the vehicle side, always unlock the connector lock.
 - If this product is connected to the diagnosis connector on the vehicle side when the connector lock is locked, it may damage the diagnosis connector on the vehicle side or this product.
- Since the space between the vehicle side diagnosis connector and the vehicle panel is narrow, the connector may be unable to lock, or difficult to unlock.

 Before using the connector lock, make sure that there is enough space.
- When removing the main unit from the diagnosis connector on the vehicle side when the connector lock is locked, the diagnostic connector on the vehicle side and the main unit might be damaged.
- When connecting the main unit with the diagnosis connector on the vehicle side through the extension cable, use the cable with a length of 3 m or less that is stipulated by the laws and regulations.

[NOTE]

- After connecting the main unit to the diagnosis connector on the vehicle side, lock the connector to help prevent the connector from being disconnected accidentally.
- When removing the main unit from the diagnostic connector, pull it straight out without twisting it. If you pull it out while twisting the main body, it may cause damage.

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Wireless communication (Wireless model only)

Refer to the setup manual for the connecting to the PC.

[CAUTION]

- When performing tasks that can cause vehicle malfunction if the wireless communication is disconnected, use the USB communication to connect with the PC by using the USB cable and the USB cable lock.
 - If communication is disconnected during performing such tasks, it may cause a malfunction of the vehicle.
- The communication range depends on any obstacles (i.e., human bodies, metal, walls) between this product and the wireless connection device, and the condition of the radio wave.
- An antenna is built into this product. The sensitivity of the wireless communication is maximized when no obstacles exist between the wireless connection device and the antenna of this product.
 - The communication distance becomes shorter when there are obstacles between the antenna of the connected Bluetooth device and the built-in antenna of this product.

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- Use the USB cable for more data critical situation rather than wireless communication due to the greater possibility of loss of connection during data upload or download of the data transmission.
- This information does not guarantee the connection between all of commercially available wireless communication modules and information terminals equipped with wireless communication (e.g., PC and cellular phone).
- Use a Bluetooth module that is labeled with the Bluetooth logo and conforms to the Bluetooth standard 4.0.
- Only one Bluetooth module and information terminal with Bluetooth can be paired with this product.

[NOTE]

- When the main unit is connected to the PC using the USB cable, the USB connection takes the priority.
- When connection cannot be made with wireless, please use USB connection.

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Wireless communication characteristics

The communication range depends on any obstacles (i.e., human bodies, metal, walls) between this product and the wireless connection device, and the condition of the radio wave.

If there is an obstacle between this product and the wireless connection device, the communication distance is shorter.

The following circumstances could affect the sensitivity of the wireless communication.

- Obstacles such as human body, metal, wall, etc.
- In places where other wireless communication is established, near a microwave oven in use, or other places with electromagnetic waves present.

The sensitivity of the wireless communication improves by removing obstacles between this product and the wireless connection devices.

Since the wireless LAN (IEEE802.11 b/g/n 2.4GHz) and Bluetooth equipped devices use the same frequency band (2.4 GHz), radio wave interference could occur and cause degradation of communication speed, noise and disconnection if a wireless LAN device is used near a Bluetooth equipped device.

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Wireless communication characteristics

To resolve poor communications, perform the following steps.

- Place this product as close to a wireless LAN device as possible.
- Keep a Bluetooth equipped device away from this product as much as possible.
- If communications do not improve, turn off any Bluetooth equipped devices nearby.

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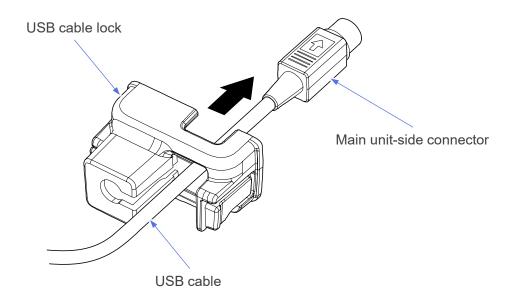
USB communication

USB cable and USB cable lock are used to connect the main unit and the PC.

[NOTE]

First, connect the main unit and USB cable (main unit-side connector) using the USB cable lock.

1 Pass the main unit-side connector of the USB cable through the USB cable lock.



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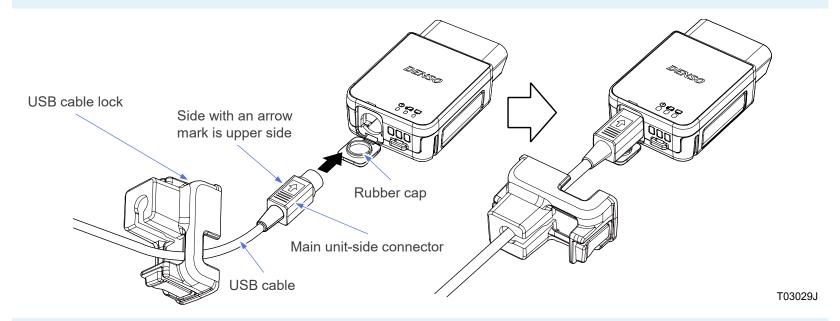
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Open the rubber cap on the main unit, and connect the main unit-side connector of the USB cable.

[NOTE]

Make sure that the direction of the connector is correct.

Side with an arrow mark on the main unit-side connector is the upper side.



[CAUTION]

Do not apply excessive force when inserting the connector.

Insert the USB cable carefully in the correct orientation.

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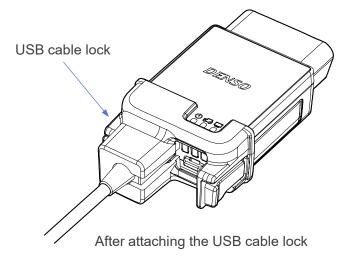
3 /

Attach the USB cable lock by aligning it with the guide section of the main unit.

[NOTE]

Store the rubber cap for main unit USB connector in the USB cable lock.

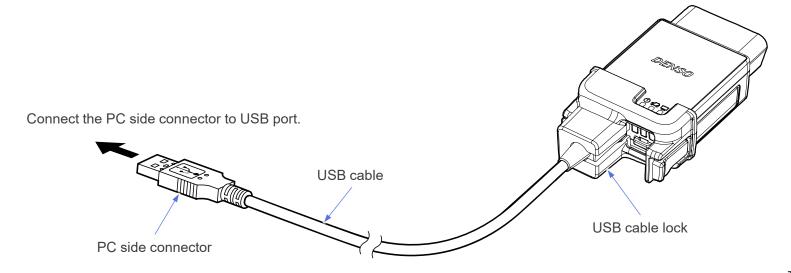
- 4 Press until you hear a click sound indicating it is locked.
- 5 Check that the USB cable lock is securely fixed to the main unit.



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- 6 Connect the PC side connector of the USB cable to the USB port of the PC.
- 7 After connecting the main unit, power supply becomes ON.



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[CAUTION]

When reprogramming this product, always attach the USB cable lock.

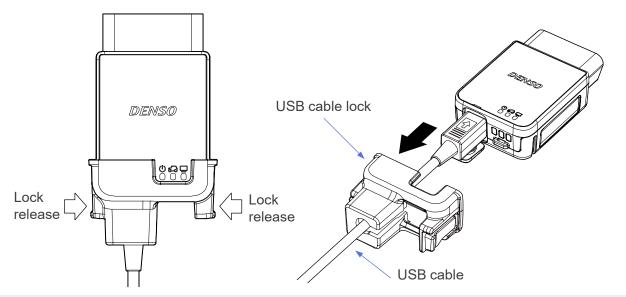
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■ Removing the USB cable lock

[NOTE]

USB cable lock must be removed before removing the USB cable.

1 Press the lock release on both sides and remove it from the main unit.



T03034J

[NOTE]

- Do not apply excessive force on the lock release.
- Pull the USB cable lock straight back to move it.

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8. Use cases

[CAUTION]

- This product alone cannot perform diagnosis.
 A PC with diagnostic software installed is required.
- Leaving the main unit connected in the vehicle could result in flat battery of the vehicle.
- Driving while the main unit is connected to the vehicle may cause difficulty for proper driving operation.

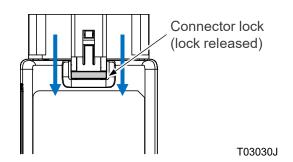
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8-1. Before starting diagnosis

1 Ensure that the connector lock is released.

Reference:

Page 19 Connecting to the vehicle (Chapter 7 Connection)

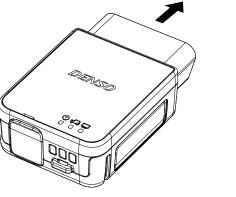


Connect the main unit to the diagnosis connector on the vehicle side.

Reference:

Page 19 Connecting to the vehicle (Chapter 7 Connection)

Connected to vehicle side diagnosis connector.



T03031J

[CAUTION]

If the main unit is connected to the diagnosis connector on the vehicle side when the connector lock is locked, it may damage the diagnosis connector on the vehicle side.

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8-1. Before starting diagnosis

3

Turn ON the starter switch (ignition switch) or start the engine of the vehicle.

[CAUTION]

When connecting this product from the diagnosis connector on the vehicle side, always turn OFF the starter switch (the ignition switch) and turn OFF the engine.

[NOTE]

This product cannot communicate with the system on the vehicle when the starter switch (ignition switch) of the vehicle is OFF or set to ACC.

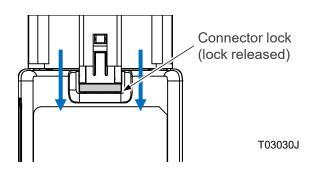
4

Launch the diagnostic software and start diagnosis.

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8-2. After diagnosis

- 1 Exit the diagnostic software.
- 2 Turn the vehicle starter switch (ignition switch) OFF.
- 3 Ensure that the connector lock is released.



[CAUTION]

If the main unit is disconnected from the diagnosis connector on the vehicle side while the connector lock is locked, it may damage the diagnosis connector on the vehicle side and/or the main unit connector.

When disconnecting this product from the diagnosis connector on the vehicle side, always turn OFF the starter switch (the ignition switch) and turn OFF the engine.

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8-2. After diagnosis



Disconnect the main unit from the diagnosis connector on the vehicle side.

[CAUTION]

Do not forget to disconnect the main unit.

Leaving the main unit connected in the vehicle could result in flat battery of the vehicle. In addition, driving while the main unit is connected to the vehicle, may cause difficulty for proper driving operation.

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9-1. Warranty

- The warranty period for this product is one year from the date of purchase. However, the warranty covers only the main unit; accessories are not covered.
- Pree repair warranty is applied only for the failure under proper operation conditions within the warranty period.
- Non-free repair is applied to the following cases even if the valid warranty period remains.
 - Failure or damage from fire, natural disaster, submergence, or exposure to liquids.
 - Failure or damage as a result of being dropped during transportation and movement after purchase or from improper handling.
 - Failure or damage caused from handling in a way contrary to proper operating methods and cautions described in this document.
 - Failure or damage from modification.
 - Replacement of external parts such as the resin case.
 - When evidence of disassembly is found.
 Evidence of removing the plate will be also be regarded as disassembling.

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9-2. Disclaimer

- We shall have no liability for any information leaked during the wireless communication.
 By exchanging information using the radio wave, the wireless communication allows free wireless connections in a range to which the radio wave reaches.
 On the other hand, an insufficient security setting may allow unauthorized access by a third-party person with a bad intention.
 We recommend to configure the security settings based on your decision and responsibility.
- We shall have no liability for any direct or indirect damage resulting from failure or use of this product.
- Data recorded in this product could be lost in repair.
 Please note that we disclaim any responsibility for data preservation or damages resulting from data loss.

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