WNE2 - Re-Programming Instrument Cluster (Stop Delivery)

Important:	**CRITICAL WARNING** - This campaign includes steps where control unit(s) in the vehicle will be programmed with the PIWIS Tester. The vehicle voltage must be maintained between 13.5 volts and 14.5 volts during this programming. Failure to maintain this voltage could result in damaged control unit(s). Damage caused by inadequate voltage during programming is not a warrantable defect. The technician must verify the actual vehicle voltage in the PIWIS Tester before starting the campaign and also document the actual voltage on the repair order.
Model Year:	**2022**
Model Line:	**Cayenne (9YA / 9YB)**
Concerns:	**Instrument cluster**
Information:	**Due to the semiconductor shortages, the instrument cluster of the affected vehicles was built up with an alternative chip for audio output.**
	With the current instrument cluster software, no visual error message is displayed in the instrument cluster if the new chip fails. As a result, audio output in the instrument cluster would not work and a corresponding error message will not be displayed.
	Due to the possibility of failed programming, it is recommended that your dealer creates an extended logging sequence before starting programming. This can be started and stopped by using CTRL+L. In the event of failed programming, a PRMS ticket should be created as normal. Please attach the logging file to the ticket in order to help PCNA to investigate and resolve the issue.
Action required:	Re-program the instrument cluster using the PIWIS Tester with software version **41.000.030** (or higher) installed.

NOTICE

Use of a PIWIS Tester software version that is older than the specified version

• **Measure is ineffective**

⇒ **Always use the prescribed version or a higher version of the PIWIS Tester software for control unit programming.**

ℹ️ Information

During the campaign, the instrument cluster is re-programmed and then coded **automatically**.
It takes **about 60 minutes** to **program and code** the instrument cluster.

Affected Vehicles:	Only the vehicles assigned to the campaign (see also PCSS Vehicle Information).

Required tools

Tool:
- **9900 - PIWIS Tester 3** with PIWIS Tester software version **41.000.030** (or higher) installed
- Battery charger with a current rating of **at least 90 A** and a **current and voltage-controlled charge map** for lithium starter batteries, e.g. **VAS 5908 battery charger 90A**

i **Information**

The Cayenne is equipped as standard with a **lithium starter battery**, which must only be charged using suitable battery chargers.

For further information about the battery chargers to be used, see:

- ⇒ *Workshop Manual '2706IN General information on the 12-volt lithium-ion battery'*

- ⇒ *Workshop Manual '270689 Charging vehicle electrical system battery'*

Preliminary work

NOTICE

Fault entry in the fault memory and control unit programming aborted due to low-voltage.

- **Increased current draw during diagnosis or control unit programming can cause a drop in voltage, which can result in one or more fault entries and the abnormal termination of the programming process.**

- ⇒ **Before starting control unit programming, connect a suitable battery charger or power supply, suitable for AGM type batteries, recommended current rating of 90A fixed voltage 13.5V to 14.5V.**

NOTICE

Control unit programming will be aborted if the WLAN connection is unstable.

- **An unstable WiFi connection can interrupt communication between the PIWIS Tester and the vehicle communication module (VCI). As a result, control unit programming may be aborted.**

- ⇒ **During control unit programming, always connect the PIWIS Tester to the vehicle communication module (VCI) via the USB cable.**

NOTICE

Control unit diagnosis will be aborted if the driver's key is not recognized

- **If the driver's key is not recognized in the vehicle, control unit diagnosis cannot be started or will be interrupted.**

- ⇒ **Position the driver's key in the rear area of the left cupholder in the center console between the holding struts (emergency start tray) in order to guarantee a permanent radio link between the vehicle and driver's key.**

NOTICE

Completely flat vehicle battery

- **The break in communication in the vehicle system during programming causes safety-relevant functions, e.g. driving light and brake light, to be switched on automatically. This results in an increased current draw, which will run down the vehicle battery.**

⇒ **Before starting control unit programming, connect a suitable battery charger with a current rating of at least 90 A to the vehicle.**

Work Procedure: 1 Carry out general preliminary work for control unit programming as described in ⇒ *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester'*.

ℹ️ Information

Programming can cause the individual customer settings to be lost. Always check these and write them down if necessary before getting started.

2 Check customer settings in the instrument cluster and write them down if necessary.

3 Connect a battery charger that is suitable for lithium starter batteries with a current rating of at least 90 A (e.g. **battery charger 90 A**) to the jump-start terminals in the engine compartment. For instructions, see ⇒ *Workshop Manual '2706IN External power connection, jump-lead starting'*.

4 **Position** the driver's key in the rear area of the left cupholder in the center console between the holding struts (emergency start tray) in order to ensure a permanent radio link between the vehicle and driver's key ⇒ *Emergency start tray*.

5 Connect **9900 - PIWIS Tester 3** to the vehicle communication interface module (VCI) via the **USB cable**. Then connect the communication module to the vehicle and switch on the PIWIS Tester.

6 Switch on ignition.

Emergency start tray

7 On the PIWIS Tester start screen, call up the **'Diagnostics'** application.

The vehicle type is then read out, the diagnostic application is started and the control unit selection screen is populated.

Re-programming instrument cluster

Work Procedure: 1 **Re-programm instrument cluster.**

> **NOTICE**
>
> **Use of a PIWIS Tester software version that is older than the specified version**
>
> • **Measure is ineffective**
>
> ⇒ **Always use the prescribed version or a higher version of the PIWIS Tester software for control unit programming.**

ℹ️ **Information**

The procedure described here is based on the PIWIS Tester 3 software version **41.000.030**.

The PIWIS Tester instructions take precedence and in the event of a discrepancy, these are the instructions that must be followed.
Deviations may occur with later software versions, for example.

The basic procedure for control unit programming is described in the Workshop Manual ⇒ *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester'*.

For specific information on control unit programming during this campaign, see table below.

Required PIWIS Tester software version:	**41.000.030** (or higher)
Type of control unit programming:	Control unit programming using the **'Automatic programming'** function of the instrument cluster: **Instrument cluster'** control unit – **'Coding/programming'** menu – **'Automatic programming'** function.
Programming sequence:	Read and follow the **information and instructions on the PIWIS Tester** during the guided programming sequence. During the programming sequence, the **instrument cluster** is **re-programmed** and then **automatically re-coded**. The display in the instrument cluster is switched off during programming. The ignition stays active in the background. When the programming is completed successfully, the display in the instrument cluster will be switched on again automatically.

	Switch the ignition off and then on again only when prompted to do so by the PIWIS Tester because otherwise, programming will be interrupted and will then have to be started again.
Programming time (approx):	**55 minutes**
Software version programmed during this campaign:	**Instrument cluster** Software version: **0977**
	Following control unit programming, the software version can be read out of the instrument cluster in the 'Incremented identification' menu using the PIWIS Tester.
Procedure in the event of abnormal termination of control unit programming:	• Switch ignition off and then on again. • Read out and erase the fault memory ⇒ *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester - "Rework" section'*. • Repeat control unit programming by restarting programming.
Procedure in the event of error messages appearing during the programming sequence:	⇒ *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester - section on "Fault finding"'*.

2   Once programming has been carried out successfully, continue with ⇒ *Technical Information '9X00IN Concluding work'*.

Concluding work

Work Procedure: 1   Carry out general rework for control unit programming as described in ⇒ *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester'*.

ℹ Information

The values for the Tire Pressure Monitoring (TPM) system may be lost during re-coding of the instrument cluster.
If the Tire Pressure Monitoring (TPM) system is reset, the wheel electronics must be re-taught and adapted to the system.

Preconditions and procedure for teaching the wheel electronics units:

- Vehicle is stationary for at least 5 minutes.

- Select the type of tires installed (type and size) in the TPM menu in the instrument cluster. The message "No monitoring. System is learning from 15 mph (25 km/h)" then appears in the multi-function display.

- Drive at a speed of more than 15 mph (25 km/h) - ideally without stopping - until the tire pressure values are displayed (learning time: less than 2 minutes).

The system learns the wheel electronics only while driving. Intermediate stops and deviations from the described teaching procedure can result in a much longer learning time.

Teaching can be performed during the test drive or later while the customer is driving. Please inform your customer about this if necessary.

2   Restore customer settings if necessary.

3   Enter the campaign in the Guarantee and Maintenance booklet.

Warranty processing

ℹ Information

The specified working times were determined specifically for carrying out this campaign and include all necessary preliminary and subsequent work.
The working time may differ from the working time published in the Labor Operation List in the PCSS.

Scope 1:   **Re-programming instrument cluster**

Labor time:
Re-programming instrument cluster   Labor time: **45 TU**
Includes: Connecting and disconnecting battery charger
Connecting and disconnecting PIWIS Tester
Check customer settings and restore if necessary
Reading out and erasing fault memories
⇒ **Damage Code WNE2 066 000 000 1**