PORSCHE

Advanced Technical Information

This bulletin replaces bulletin Group 2, #1302, dated 8-16-13.

Cayenne S Engine Pinging at Low Engine Speed in Higher Gear

Models: **Cayenne S (92A)**

Model Year: **2011 and up**

Issue: Engine pinging/rattling noise at 1100-1400 engine rpm.

Information: The customer states they hear an engine pinging/rattling noise at 1100-1400 rpm in 4th-7th gears.

First, verify that the customer is using the highest octane fuel available. This can be done by checking the Z010 value in the DME. A value is entered here in accordance with the knock resistance of the fuel. 0 corresponds to 98 RON, 1 corresponds to 95 RON or less. As a general rule, the value should be very close to 0.

Also verify that there is no carbon build up in the combustion chamber.

If the fuel octane is correct and there is no carbon build up in the combustion chamber, then program the DME with PIWIS Tester II software 12.600 or higher.

If the last programming date of the DME shown in the VAL is after the publication date of this bulletin, then the DME should already have the updated software.

Information!

Combustion noise is reduced in most cases by the automatic adaptation of the DME control unit while driving. For successful adaptation, the vehicle must be driven constantly for a few seconds in the driving state (engine speed, gear selection, load range, etc.) in which increased combustion noise occurs.

> Please also inform the customer of this issue accordingly:

Filling the vehicle with fuel of different quality requires an “adaptation phase” for the engine control system. As a result, increased combustion noise can occur briefly in certain driving states. If the vehicle is filled alternately with fuel of different quality (high quality, low quality), this can briefly cause increased combustion noise. In order to respond to the changed conditions, the DME control unit re-adapts each time a different fuel quality is used.

Required Tools: **PIWIS Tester II** 9818 with software version 12.600 (or higher) installed
Battery Charger/Power Supply - Suitable for AGM Type batteries, recommended current rating of 70A fixed voltage 13.5V to 14.5V. Refer to Equipment Information EQ-1105.

Work Procedure: **Preliminary Work**

1. Disconnect the electric plug connection for the fan blower to prevent the blower from coming on during control unit programming. Having the fan on and the associated increased current draw can cause a drop in voltage, which can result in abnormal termination of control unit programming.

2. Connect a battery charger or power supply, suitable for AGM type batteries, recommended current rating of 70A fixed voltage 13.5V to 14.5V to the jump-start terminals in the engine compartment.

3. Switch on the ignition using the original driver's key. For vehicles with “Porsche Entry & Drive”, replace the control panel in the ignition lock with the original driver’s key, if necessary.

4. Connect the PIWIS Tester II with software version 12.600 (or higher) to the vehicle communication module (VCI) using the USB cable. Then connect the communication module to the vehicle and switch on the PIWIS Tester.

5. On the PIWIS Tester start screen, call up the menu ‘Diagnostic’ and select the vehicle type ‘Cayenne’ ‘92A as of MY 2011’. The diagnostic application is then started and the control unit selection screen is populated.

Work Procedure: (cont'd)

Re-programming DME Control Unit

Information!

Programming interrupted

- Malfunctions in control unit
- Risk of damage to control unit

> Before starting work, connect a battery charger or power supply, suitable for AGM type batteries, recommended current rating of 70A fixed voltage 13.5V to 14.5V to the jump-start terminals in the engine compartment.

> For vehicles with Porsche Entry & Drive, remove the control panel from the ignition lock and insert the original vehicle key into the ignition lock instead of the control panel. Keep the control panel in a safe place.

> Switch on the ignition using the original vehicle key for the duration of the work, otherwise the ignition will be switched off automatically after 10 minutes and control unit programming will be interrupted.

Information!

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

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

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

Information!

The procedure described below is based on PIWIS Tester II test software version 12.600.
The PIWIS Tester instructions take precedence and in the event of a discrepancy, these are the instructions that must be followed. A discrepancy may arise with later software versions for example.

Information!

If the fault memories of individual control units (e.g. fault memory of the DME control unit, Adaptive Cruise Control (ACC) control unit, etc.) cannot be erased, switch off the ignition, disconnect the PIWIS Tester diagnostic connector from the diagnostic socket and lock the vehicle using the vehicle key. Wait for approx. 1 minute and then read out the fault memories of these control units again and erase the fault memories separately. If control units are found to have faults, which cannot be erased and are not caused by control unit programming, these faults must be located and corrected.

Work Procedure: (cont'd)

Maintenance of Vehicle Data

1. In the menu 'Control unit overview' press F7 to select the Additional menu.

2. When prompted, press F12 ('Yes') to confirm that you wish to create a vehicle analysis log (VAL).

3. Press F12 to acknowledge the message informing you that campaigns for the vehicle are stored in the PIWIS information system.

4. Select 'Maintenance of vehicle data' and press F12 to confirm your selection.

4.1. Skip the display containing vehicle description details by pressing F12.

4.2. Skip the display containing information about colors and material by pressing F12.

4.3. Skip the first display containing PR numbers by pressing F12.

4.4. In the second display containing PR-numbers, code the coding value '738 bad fuel region'. Once coding is complete, a tick appears in the 'Installed' field.

5. Press F8 to save your selection.

6. Press F12 to continue and save the change again (F8).

7. Press F11 to return to the overview.

8. In the control unit selection (menu "Overview") the control unit.

Re-program the DME control unit

1. Select the DME control unit and confirm by pressing F12.

2. Once the DME control unit has been found, select the menu 'Programming'.

2.1. Select 'Automatic programming' and confirm by pressing F12.

2.2. Press F8 ("Execute") to start programming. When programming is complete, the message "Programming was completed successfully" will be displayed.

3. Once programming is completed successfully, press F12 to continue.

Work Procedure: (cont'd)

4. Select the menu 'Overview' and press F12 to return.

5. Switch off ignition.

6. Disconnect the PIWIS Tester diagnostic connector from the diagnostic socket.

7. Lock the vehicle with the driver's key and wait for approx. 1 minute. In the meantime, connect the electric plug connection for the fan blower.

8. Unlock the vehicle and insert the PIWIS Tester diagnostic connector into the diagnostic socket.

9. Switch on the ignition and restore communication between the PIWIS Tester and the vehicle.

Code the DME Control Unit

10. Select the 'DME' control unit in the control unit selection screen ('Overview' menu) and press >> to confirm your selection.

11. Once the DME control unit has been found and is displayed in the overview, select the menu 'Codings/adaptations'.

12. Select the 'Automatic coding' function and press >> to start coding.Once coding is completed successfully, the message "Coding has been completed successfully" is displayed and a tick appears in the 'Status' box. If coding is not completed successfully (error message "Coding was not completed successfully"), coding must be repeated.

13. Once coding is completed successfully, press >> to continue.

Perform Throttle Valve Adaptation

14. Select the 'Maintenance/repairs' menu.

15. Select 'Adaptations' in the menu and confirm your selection by pressing >>.

16. Check that the displayed preconditions (engine off, ignition on, accelerator pedal not pressed) are met and confirm by pressing >>.

17. Select the 'Throttle valve adaptation' function so that the corresponding text line turns blue and press F8 to start throttle valve adaptation.

Work Procedure: (cont'd)

18. Follow the instructions on the PIWIS Tester while throttle valve adaptation is being performed. Once throttle valve adaptation is complete, a tick appears in the "Value" field on the PIWIS Tester display. If throttle valve adaptation is not completed successfully, the adaptation must be repeated.

19. Press F8 (“Stop”) to end throttle valve adaptation.

20. Press << to return to the start page of the 'Maintenance/repairs' menu.

21. Select the 'Overview' menu and press << to return to the control unit selection screen.

Reading Out and Erasing Fault Memory

22. In the control unit selection screen ('Overview' menu), press F7 to call up the Additional menu.

23. Select the function “Read all fault memories and erase if required” and press >> to confirm. The fault memories of the control units are read out.

24. Once you have read out the fault memories, erase the fault memory entries by pressing F8 .

25. Press F12 (“Yes”) in response to the question as to whether you really want to erase all fault memory entries. The faults stored in the fault memories of the various control units are deleted.

26. Once you have erased the fault memories, select the menu ‘Overview’ and press << to return to control unit selection.

Subsequent Work

1. Switch off ignition.

2. Disconnect the PIWIS Tester from the vehicle.

3. On vehicles with Porsche “Entry & Drive”, replace the original vehicle key in the ignition lock with the control panel again.

4. Switch off and disconnect the battery charger.

The required action is now complete.

Working Time: 24702500: Programming DME control unit; Labor time 80 TU

Dealership Distribution Routing									
	Service Manager _____	Shop Foreman _____	Service Technician _____	_____	_____	_____	_____		
	Asst. Manager _____	Warranty Admin. _____	Service Technician _____	_____	_____	_____	_____		