

WG30 - Re-programming DME Control Unit (Workshop Campaign)

Revisions: **Revision 1 — August 11, 2016.**
 This revision amends WG30 as follows:
911 Turbo (991) was added to Model Line.

Model Year: **2017**

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. Please refer to Equipment Information EQ1401 for a list of suitable battery chargers/power supplies which should be used to maintain vehicle voltage.

Model Line: **911 (991)/911 Turbo (991)**

Subject: **DME control unit**

Issue: **There may be a difference between the actual coolant temperature and the predicted temperature due to incorrect positioning of the map-controlled thermostat during the warm-up phase on the affected vehicles.**
 The error message "Fault cooling system" will then be displayed in the instrument cluster and the Check Engine light will come on.

Remedial action: Re-program DME control unit using the PIWIS Tester with test software version **33.400.020** (PIWIS Tester 3) or version **17.400.020** (PIWIS Tester II) or a higher software version installed.

NOTICE

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

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

**Information**

On vehicles with Porsche Doppelkupplung (PDK), the **PDK control unit** is also re-programmed automatically in addition to the **DME control unit**.

Programming time:

- Vehicles with 7-speed manual transmission (I-no. 487): **6 minutes**
- Vehicles with PDK transmission (I-no. 250): **12 minutes**

Affected Vehicles: Only the vehicles assigned to the campaign (see also PIWIS Vehicle information). This campaign affects 4,365 vehicles in North America.

Required tools

- Tools:
- 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.
 - **9900 - PIWIS Tester 3** with PIWIS Tester test software version **33.400.020** (or higher) installed
- or
- **9818 - PIWIS Tester II** with PIWIS Tester test software version **17.400.020** (or higher) installed.

Preparatory 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 battery charger or power supply, suitable for AGM type batteries, recommended current rating of 70A fixed voltage 13.5V to 14.5V.**

NOTICE

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

- **An unstable Internet connection can interrupt communication between PIWIS Tester and the vehicle communication module (VCI). As a result, control unit programming may be aborted.**
- ⇒ **During control unit programming, always connect PIWIS Tester to the vehicle communication module (VCI) via the USB cable.**

NOTICE

Control unit programming will be aborted if the vehicle key is not recognized

- If the vehicle key is not recognized in vehicles with Porsche Entry & Drive, programming cannot be started or will be interrupted.
- ⇒ Switch on the ignition using the original vehicle key. To do this, replace the original vehicle key in the ignition lock with the plastic key fob if it was previously removed at the start of this procedure.

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 - section on "Preliminary work"*.

Re-programming DME control unit



Information

The procedure described here is based on the PIWIS Tester II software version **17.400.020**.

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.

Procedure: 1 **Re-program DME control unit.**

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

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

NOTICE

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

- Measure is ineffective
- ⇒ Always use the prescribed version or a higher version of the PIWIS Tester software for control unit programming.

Required PIWIS Tester software version:	<ul style="list-style-type: none"> • PIWIS Tester 3: 33.400.020 (or higher) • PIWIS Tester II: 17.400.020 (or higher)
Type of control unit programming:	<p>Control unit programming using the 'Automatic programming' function for the DME control unit.</p> <p>DME control unit > ⇒ 'Programming' menu >> 'Automatic programming' function.</p>

Programming sequence:	<p>Read and follow the information and instructions on the PIWIS Tester during the guided programming sequence.</p> <p>During the programming sequence, the DME control unit is re-programmed and then re-coded automatically.</p> <p>On vehicles with Porsche Doppelkupplung (PDK), the PDK control unit is also re-programmed and coded automatically.</p> <p>Do not interrupt programming and coding.</p>
Programming time (approx):	<ul style="list-style-type: none"> Vehicles with manual transmission: 6 minutes Vehicles with PDK transmission: 12 minutes
Procedure in the event of abnormal termination of control unit programming:	Repeat control unit programming by restarting programming.
Procedure in the event of other error messages appearing during the programming sequence:	⇒ <i>Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester - section on "Fault finding"</i> .

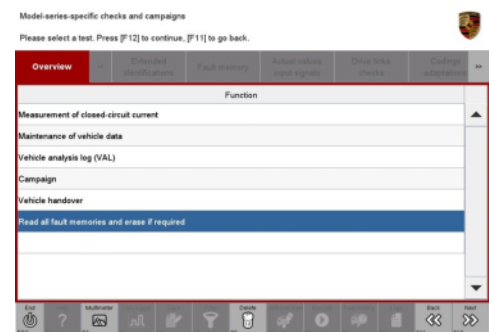
Reading Out and Erasing Fault Memory

Work Procedure: 1 In the control unit selection screen (⇒ 'Overview' menu), press •F7" to call up the Additional menu.

- 2 Select the function "Read all fault memories and erase if required" and press •F12" ('Next') to confirm your selection ⇒ *Erasing fault memories*.

The fault memories of the control units are read out.

- 3 Once you have read out the fault memories, erase the fault memory entries by pressing •F8" .
- 4 Press •F12" ('Yes') in response to the question as to whether you really want to delete all fault memory entries.



Erasing fault memories

The faults stored in the fault memories of the various control units are deleted.



Information

If the fault memories of individual control units cannot be erased, proceed as follows:

- Switch off the ignition.
- Disconnect the PIWIS Tester diagnostic connector from the diagnostic socket.
- Lock the vehicle using the driver's key.
- Wait approx. 1 minute before unlocking the vehicle again.
- Start the engine, leave it running for a short time and then stop it again.
- Switch off the ignition and wait approx. 10 seconds before switching it back on again.
- Plug the PIWIS Tester diagnostic connector into the diagnostic socket again and restore communication with the vehicle.
- Read out the fault memory again and delete any fault memory entries that are stored.

If the control units still have faults that cannot be deleted and are not caused by control unit programming, these faults must be found and corrected. This work **cannot** be invoiced under the workshop campaign number.

- 5 Once you have erased the fault memories, select the ⇒ **'Overview'** menu to return to the control unit selection screen ⇒ *Control unit selection*.

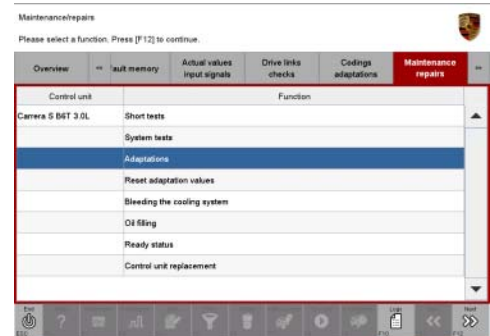


Control unit selection

Performing adaptations

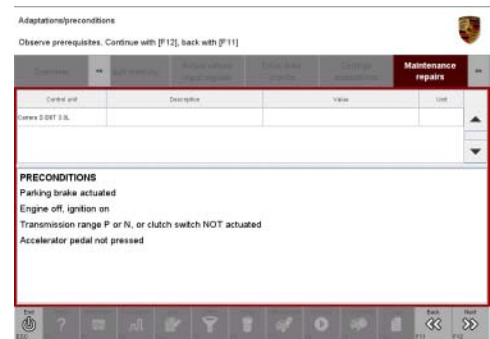
- Procedure:
- 1 Select the **'DME'** control unit in the control unit selection screen ('Overview' menu) and press • F12" ('Next') to confirm your selection.
 - 2 Once the DME control unit has been found and is displayed in the overview, select the ⇒ **'Main-tenance/repairs'** menu.

- 3 Select menu item ⇒ **'Adaptations'** and confirm your selection by pressing •F12" ('Next') ⇒ *DME - Adaptations*.



DME - Adaptations

- 4 Comply with the displayed preconditions and press •F12" ('Next') to confirm ⇒ *Adaptation preconditions*.
- 5 Perform throttle valve adaptation.



Adaptation preconditions

- 5.1 Select the ⇒ **'Throttle valve adaptation'** function so that the text line turns blue ⇒ *Throttle valve adaptation*.
- 5.2 Press •F8" ('Start') to start throttle valve adaptation.
- 5.3 Follow the instructions on the PIWIS Tester while throttle valve adaptation is being performed.



Throttle valve adaptation

Once the adaptation is complete, a tick will appear in the "Status" field for throttle valve adaptation on the PIWIS Tester display ⇒ *Throttle valve adaptation successful.*

If throttle valve adaptation is **not** completed successfully, the adaptation must be **repeated**.

- 5.4 Press •F8" ('Stop') to end throttle valve adaptation.

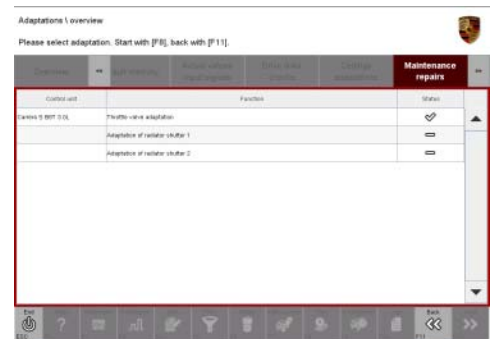
- 6 Perform radiator shutter adaptation.

NOTICE

Electrically moved components

- **Danger of limbs being trapped or severed**
- **Risk of damage to components**
- ⇒ **Do not reach into the danger area.**
- ⇒ **Do not move components or tools into the danger area.**
- ⇒ **Keep third parties away from the danger area.**

- 6.1 Select the ⇒ **'Radiator shutter 1 adaptation'** function so that the text line turns blue ⇒ *Radiator shutter 1 adaptation.*
- 6.2 Press •F8" ('Start') to start radiator shutter 1 adaptation.
- 6.3 Follow the instructions on the PIWIS Tester while radiator shutter 1 adaptation is being performed.



Throttle valve adaptation successful



Radiator shutter 1 adaptation

Once the adaptation is complete, a tick will appear in the "Status" field for radiator shutter 1 adaptation on the PIWIS Tester display ⇒ *Radiator shutter 1 adaptation successful.*

If radiator shutter 1 adaptation is **not** completed successfully, the adaptation must be **repeated**.

- 6.4 Press •F8" ('Stop') to end radiator shutter 1 adaptation.
- 6.5 Select the ⇒ '**Radiator shutter 2 adaptation**' function so that the text line turns blue ⇒ *Radiator shutter 2 adaptation.*
- 6.6 Press •F8" ('Start') to start radiator shutter 2 adaptation.
- 6.7 Follow the instructions on the PIWIS Tester while radiator shutter 2 adaptation is being performed.

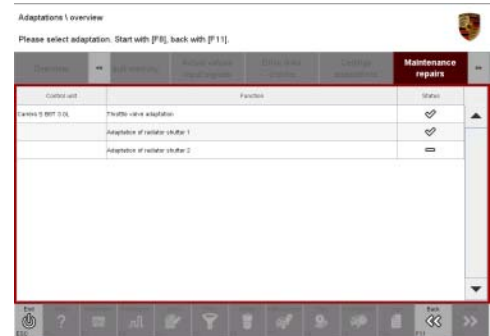
Once the adaptation is complete, a tick will appear in the "Status" field for radiator shutter 2 adaptation on the PIWIS Tester display ⇒ *Radiator shutter 2 adaptation successful.*

If radiator shutter 2 adaptation is **not** completed successfully, the adaptation must be **repeated**.

- 6.8 Press •F8" ('Stop') to end radiator shutter 2 adaptation.
- 7 Press •F11" ('Back') to return to the start page of the ⇒ '**Maintenance/repairs**' menu.
- 8 Select the ⇒ '**Overview**' menu and press •F11" ('Back') to return to the control unit selection screen.

Performing adaptations

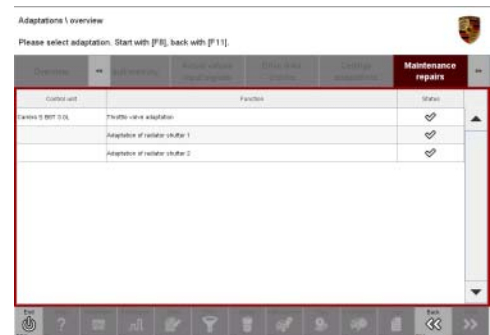
- Procedure:
- 1 Select the '**DME**' control unit in the control unit selection screen ('Overview' menu) and press •F12" ('Next') to confirm your selection.



Radiator shutter 1 adaptation successful

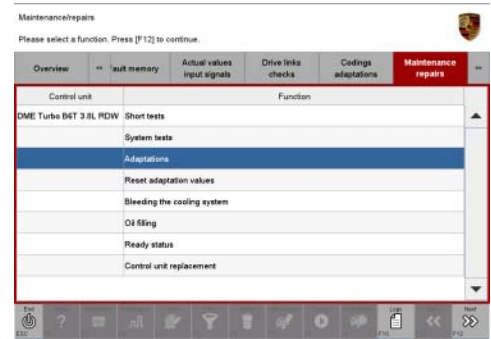


Radiator shutter 2 adaptation



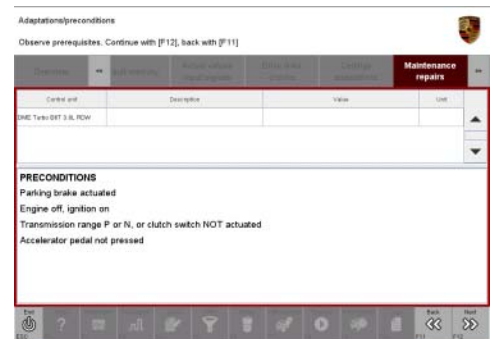
Radiator shutter 2 adaptation successful

- 2 Once the DME control unit has been found and is displayed in the overview, select the ⇒ **'Maintenance/repairs'** menu.
- 3 Select menu item ⇒ **'Adaptations'** and confirm your selection by pressing •F12" ('Next') ⇒ *DME - Adaptations*.



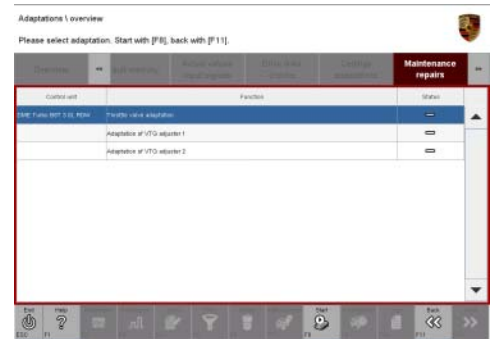
DME - Adaptations

- 4 Comply with the displayed preconditions and press •F12" ('Next') to confirm ⇒ *Adaptation preconditions*.
- 5 Perform throttle valve adaptation.



Adaptation preconditions

- 5.1 Select the ⇒ **'Throttle valve adaptation'** function so that the text line turns blue ⇒ *Throttle valve adaptation*.
- 5.2 Press •F8" ('Start') to start throttle valve adaptation.
- 5.3 Follow the instructions on the PIWIS Tester while throttle valve adaptation is being performed.



Throttle valve adaptation

Once the adaptation is complete, a tick will appear in the "Status" field for throttle valve adaptation on the PIWIS Tester display ⇒ *Throttle valve adaptation successful*.

If throttle valve adaptation is **not** completed successfully, the adaptation must be **repeated**.

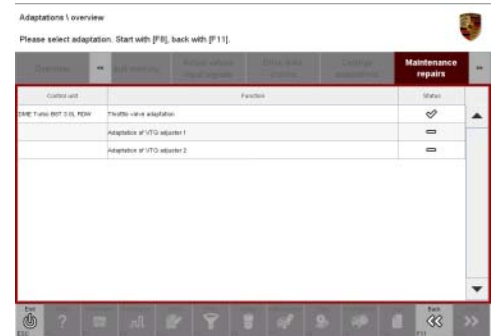
- 5.4 Press •F8" ('Stop') to end throttle valve adaptation.
- 6 Perform Variable Turbine Geometry (VTG) adjuster adaptation.

NOTICE

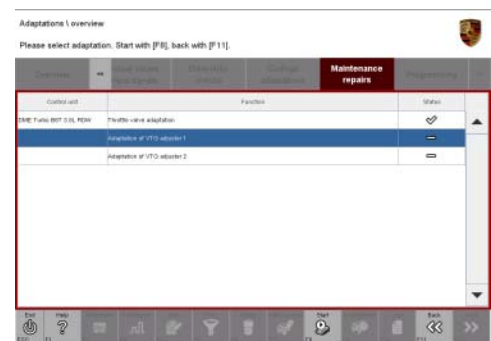
Electrically moved components

- Danger of limbs being trapped or severed
 - Risk of damage to components
- ⇒ Do not reach into the danger area.
- ⇒ Do not move components or tools into the danger area.
- ⇒ Keep third parties away from the danger area.

- 6.1 Select the ⇒ **'VTG adjuster 1 adaptation'** function so that the text line turns blue ⇒ *VTG adjuster 1 adaptation*.
- 6.2 Start VTG adjuster 1 adaptation by pressing •F8" ('Start').
- 6.3 Follow the instructions on the PIWIS Tester while VTG adjuster 1 adaptation is being performed.



Throttle valve adaptation successful



VTG adjuster 1 adaptation

Once the adaptation is complete, a tick will appear in the "Status" field for VTG adjuster 1 adaptation on the PIWIS Tester display ⇒ *VTG adjuster 1 adaptation successful*.

If VTG adjuster 1 adaptation is **not** completed successfully, the adaptation must be **repeated**.

- 6.4 End VTG adjuster 1 adaptation by pressing •F8" ('Stop').

- 6.5 Select the ⇒ **'VTG adjuster 2 adaptation'** function so that the text line turns blue ⇒ *VTG adjuster 2 adaptation*.

- 6.6 Start VTG adjuster 2 adaptation by pressing •F8" ('Start').

- 6.7 Follow the instructions on the PIWIS Tester while VTG adjuster 2 adaptation is being performed.

Once the adaptation is complete, a tick will appear in the "Status" field for VTG adjuster 2 adaptation on the PIWIS Tester display ⇒ *VTG adjuster 2 adaptation successful*.

If VTG adjuster 2 adaptation is **not** completed successfully, the adaptation must be **repeated**.

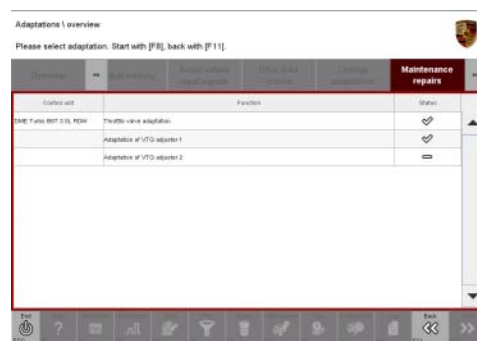
- 6.8 End VTG adjuster 2 adaptation by pressing •F8" ('Stop').

- 7 Press •F11" ('Back') to return to the start page of the ⇒ **'Maintenance/repairs'** menu.

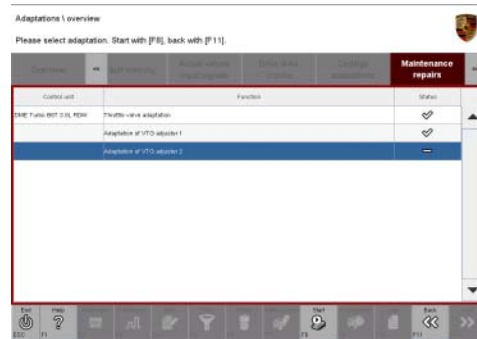
- 8 Select the ⇒ **'Overview'** menu and press •F11" ('Back') to return to the control unit selection screen.

Concluding Work

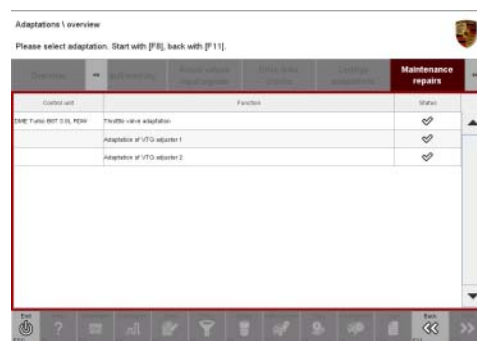
- Work Procedure: 1 Switch off the ignition.
- 2 Disconnect the PIWIS Tester from the vehicle.



VTG adjuster 1 adaptation successful



VTG adjuster 2 adaptation



VTG adjuster 2 adaptation successful

- 3 Switch off and disconnect the battery charger.
- 4 On vehicles with Porsche Entry & Drive, replace the original vehicle key in the ignition lock with the control panel again.

Warranty processing



Information

The working times specified were determined especially for the performance of this campaign and may deviate from the working times published in the catalogue of operations contained in PIWIS.

Scope 1: Re-program DME control unit

- Vehicles with 7-speed manual transmission (**I-no. 487**)

Working time:

Re-programming DME control unit

Labor time: **39 TU**

Includes: Connecting and disconnecting battery charger
Connecting and disconnecting PIWIS Tester
Performing adaptations
Reading out and erasing fault memories

Invoicing: ⇒ Damage Code WG30 66 000, Repair Code 1

Scope 2: Re-program DME control unit

- Vehicles with PDK transmission (**I-no. 250**)

Working time:

Re-programming DME control unit

Labor time: **57 TU**

Includes: Re-programming PDK control unit
Connecting and disconnecting battery charger
Connecting and disconnecting PIWIS Tester
Performing adaptations

Reading out and erasing fault memories

Invoicing: => Damage Code WG30 66 000, Repair Code 1

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