

Service

146/18enu

4

WJ20

## WJ20 - Replacing PASM Control Unit (Workshop Campaign)

Important:	<b>CRITICAL WARNING</b> -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:	As of 2017 up to 2018
Model line:	Panamera (971)
Subject:	Control unit for Porsche Active Suspension Management (PASM)
Information:	The PASM control unit can stop working on the affected vehicles after several years of driving. This is caused by a defective soldered joint.
	As a result, the function of the chassis may be impaired and a corresponding warning will be displayed in the instrument cluster.
Remedial Action:	Replace PASM control unit.
Affected Vehicles:	Only the vehicles assigned to the campaign (see also PIWIS Vehicle information). This campaign affects 2,385 vehicles in North America.

<b>AfterSal</b>	es

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# **Technical Information**

Installation position:



Installation position of PASM control unit

## Parts required

Part No.:	Part No.	Designation – Use	Qty.
	00004399031	⇒ PASM control unit – Vehicles with <b>air suspension (I-no. 1BK)</b>	1 ea.
	or		
	00004399032	⇒ PASM control unit – Vehicles with steel springs (I-no. 1BH)	1 ea.
	Also required for all fixed luggage compa	vehicles <b>except</b> vehicles with equipment combination Intment cover ( <b>I-no. 3U7</b> ) and without sun blind ( <b>I-no. 3Y0</b> ):	
	9A700794200	$\Rightarrow$ Bearing pin	1 ea.

### Parts required

Part No.:	Part No.	Designation	Qty.			
	00004399033	$\Rightarrow$ PASM control unit	1 ea.			
	Also required for all ve fixed luggage compartm	hicles <b>except</b> vehicles with equipment combination nent cover ( <b>I-no. 3U7</b> ) and without sun blind ( <b>I-no. 3YO</b> ):				
	9A700794200	$\Rightarrow$ Bearing pin	1 ea.			
Required tools	5					
Tools:	<ul> <li>9900 - PIWIS Teste</li> <li>Battery charger with</li> </ul>	er 3 a current rating of <b>at least 90 A</b> , e.g. Battery Charger, 90	A C			
Replacing PAS	SM control unit					
Work Procedure:	1 Observe warning no Manual 'General wai	tes for working on the high-voltage vehicle electrical system rning notes for working on the high-voltage vehicle electrical	⇒Workshop system'.			
	2 Isolate the high-volta system from power	Isolate the high-voltage system from the power supply $\Rightarrow$ Workshop Manual 'Isolating high-voltage system from power supply/Starting high-voltage system'.				
	3 Complete the releva charge'.	nt documentation $\Rightarrow$ <i>Workshop Manual 'Test log: Verifying a</i>	bsence of electric			
	4 Remove side trim pa and installing side tr	anel for rear luggage compartment at the left $\Rightarrow$ <i>Workshop M im panel for rear luggage compartment</i> '.	lanual 'Removing			
	5 <b>Only for vehicles v</b> Remove subwoofer	<b>vith subwoofer (I-no. 9VJ or 9VL):</b> $\Rightarrow$ Workshop Manual 'Removing and installing subwoofer'.				
	6 Disconnect high-volt	age charger with coolant lines connected and set it aside.				
NOTIC	E					
Coolant hos	ses kinked or pulled too	otightly				
<ul> <li>If the cooling</li> </ul>	oolant hoses are kinke J system.	d or pulled too tightly, this can cause lasting damage a	nd leaks in the			

⇒ Remove and install the high-voltage charger carefully without kinking the coolant hoses or pulling them too tightly.

6.1 Disconnect all electric plug connections on the high-voltage charger and unscrew fastening screws and nuts. Do **not** drain the coolant in the low-temperature system and do **not** disconnect the coolant hoses while doing this.
 For instructions, see ⇒ Workshop Manual 'Removing and installing high-voltage charger',

ignoring steps 9 and 10.

6.2 First, tilt the high-voltage charger with holder ⇒ Removing high-voltage charger with holder
-1- and with coolant hoses connected ⇒ Removing high-voltage charger with holder
-2- to the rear ⇒ Removing high-voltage charger with holder - arrow A- and then set it down carefully with the front side on the carpeted floor of the luggage compartment ⇒ Removing high-voltage charger with holder - arrows B-.

Set the high-voltage charger  $\Rightarrow$  Setting down high-voltage charger with holder -1 - down on the carpeted floor in such a way that the coolant hoses  $\Rightarrow$  Setting down high-voltage charger with holder -2 - are not strained.

- Replace PASM control unit.
   For instructions, see:
   ⇒ Workshop Manual 'Removing and installing PASM control unit'.
   ⇒ Workshop Manual 'Replacing PASM control unit'
- 8 Install high-voltage charger  $\Rightarrow$  Workshop Manual 'Removing and installing high-voltage charger'.



Removing high-voltage charger with holder



Setting down high-voltage charger with holder

- 9 Install subwoofer, if you removed it earlier  $\Rightarrow$  *Workshop Manual 'Removing and installing subwoofer'*.
- 10 Install side trim panel for rear luggage compartment at the left *⇒ Workshop Manual 'Removing and installing side trim panel for rear luggage compartment'.*
- 11 Start the high-voltage system ⇒ Workshop Manual 'Isolating high-voltage electrical system from power supply/Starting high-voltage electrical system'.
- 12 Complete the relevant documentation on commissioning ⇒ *Workshop Manual 'Test log: Commissioning the high-voltage system'*.
- 13 Commission the PASM control unit  $\Rightarrow$  Workshop Manual 'Replacing PASM control unit'.

- 14 Calibrate the levelling system  $\Rightarrow$  Workshop Manual 'Calibrating the levelling system'.
- 15 Read out and erase the fault memories of all control units.
  - 15.1 Press F7" in the control unit selection screen ('Overview' menu) to call up the Additional menu.
  - 15.2 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.

15.3 Once you have read out the fault memories, check the fault memory entries.

Overview	-				Cadings adaptations
			Function		
Measurement of	closed-ci	rcuit current			
faintenance of v	ehicle da	ta			
/ehicle analysis	og (VAL)				
Campaign					
ehicle handover					
Read all fault me	mories a	nd erase if required			

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### Information

If control units are found to have faults that

Erasing fault memories

are **not** caused by control unit programming, these must first be **found** and **corrected**. This work **cannot** be invoiced under the workshop campaign number.

- 15.4 Press F8" to delete fault memory entries.
- 15.5 Press F12" ('Yes') in response to the question as to whether you really want to delete all fault memory entries.

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



#### Information

If fault memory entries for individual control units cannot be deleted, 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.

- 15.6 Once you have erased the fault memories, select the **'Overview'** menu to return to the control unit selection screen  $\Rightarrow$  *Control unit selection*.
- 16 Enter the campaign in the Warranty and Maintenance booklet.

OV	erview	- Description Parliages			1
отс	Retur	Centrol unit	DSN	Perache part number	Г
		Airbag			-
		Gateway			
		DME			
		PDK (Porsche Doppelkupplung)			
		PDK selector lever			
		Instrument cluster			
		Steering wheel electronics			
		Stopwatch			L
		PCM / CDR			

Control unit selection

#### **Replacing PASM control unit**

- Replace PASM control unit and commission it.
   For instructions, see:
   ⇒ Workshop Manual 'Removing and installing PASM control unit'
   ⇒ Workshop Manual 'Replacing PASM control unit'
- 2 Calibrate the levelling system  $\Rightarrow$  Workshop Manual 'Calibrating the levelling system'.
- 3 Enter the campaign in the Warranty and Maintenance booklet.

#### Warranty processing



#### Information

The specified working times were determined specifically for carrying out this campaign and include all required preliminary and subsequent work.

The working times may differ from the working times published in the Labor Operation List in PIWIS.

#### Scope 1:

#### Vehicles with air suspension (I-no. 1BK)

Working ti	me:	
Replacing F Includes:	ASM control unit Connecting and disconnecting battery charger Connecting and disconnecting PIWIS Tester Calibrating the levelling system	Labor time: <b>174 TU</b>
Parts requ	ired:	
00004399	031 PASM control unit 1 ea	ì.
Also requi	red for all vehicles except vehicles with equipment combination ge compartment cover (I-no. 3U7) and without sun blind (I-no. 3YC	<b>)</b> ):

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	9A700794200 ⇒ Damage Code V	Bearing pin <b>NJ20 066 000</b>	1 ea.		
Scope 2:	Vehicles with ste	eel springs (I-no. 1BH)			
	Working time: Replacing PASM cor Includes: Conne Conne Calibr	ntrol unit ecting and disconnecting battery charger ecting and disconnecting PIWIS Tester ating the levelling system	I	Labor time: <b>1</b>	74 TU
	Parts required:				
	00004399032	PASM control unit	1 ea.		
	<b>Also required</b> for a fixed luggage comp	II vehicles <b>except</b> vehicles with equipment artment cover ( <b>I-no. 3U7</b> ) and without sun	combination blind ( <b>I-no. 3Y0</b> ):		
	9A700794200	Bearing pin	1 ea.		
	$\Rightarrow$ Damage Code V	NJ20 066 000 2			

### Warranty processing

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### Information

The specified working times were determined specifically for carrying out this campaign and include all required preliminary and subsequent work.

The working times may differ from the working times published in the Labor Operation List in PIWIS.

Information: Scopes 1 and 2 are not relevant for this vehicle type.

#### Scope 3: • Vehicles with air suspension (I-no. 1BK) and without subwoofer

Working tir	ne:	
Replacing P Includes:	ASM control unit Connecting and disconnecting battery charger Connecting and disconnecting PIWIS Tester Calibrating the levelling system	Labor time: <b>174 TU</b>
Parts requ	red:	

000043990	31	PASM control unit	1 ea	
Also require	e <b>d</b> for all v e compart	ehicles <b>except</b> vehicles with equi ment cover ( <b>I-no. 3U7</b> ) and witho	pment combination out sun blind ( <b>I-no. 3YO</b>	):
9A7007942	00	Bearing pin	1 ea	
$\Rightarrow$ <b>Damage</b>	Code WJ	20 066 000 2 springs (I-no, 1BH) and withou	t subwoofer	
Working tim	ie:			
Daulasina DA	SM contro	alunit		Labortimo, 17/ TU
Includes:	Connect Connect Calibrati	ing and disconnecting battery cha ing and disconnecting PIWIS Testo ng the levelling system	arger er	
Parts requir	Connect Connect Calibration	ing and disconnecting battery cha ing and disconnecting PIWIS Test ng the levelling system	arger er	
Parts requir	Connect Connect Calibratii	ing and disconnecting battery cha ing and disconnecting PIWIS Testo ng the levelling system PASM control unit	arger er 1 ea	
Parts require 000043990 Also require	Connect Connect Calibratii red: 32 ed for all v	ing and disconnecting battery cha ing and disconnecting PIWIS Teste ng the levelling system PASM control unit ehicles <b>except</b> vehicles with equi ment cover ( <b>I-no. 3U7</b> ) and witho	arger er 1 ea ipment combination put sun blind ( <b>I-no. 3YO</b>	):

Scope 5:

Scope 4:

• Vehicles with air suspension (I-no. 1BK) and subwoofer (I-no. 9VJ or 9VL)

Working ti	me:				
Replacing F Includes:	ASM contro Connectir Connectir Removing Calibratin	l unit ng and disconnecting batt ng and disconnecting PIW and installing subwoofer g the levelling system	ery charger IS Tester		Labor time: <b>190 TU</b>
Parts requ	ired:				
00004399	031	PASM control unit		1 ea.	
Also requin	<b>red</b> for all ve ge compartr	hicles <b>except</b> vehicles w nent cover ( <b>I-no. 3U7</b> ) ar	ith equipment combinatio nd without sun blind ( <b>I-no.</b>	n <b>3Y0</b> ):	
9A700794	200	Bearing pin		1 ea.	

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#### $\Rightarrow$ Damage Code WJ20 066 000 2

Scope 6:

Vehicles with steel springs (I-no. 1BH) and subwoofer (I-no. 9VJ or 9VL)

Working tir	ne:	
Replacing Pa Includes:	ASM control unit Connecting and disconnecting battery charger Connecting and disconnecting PIWIS Tester Removing and installing subwoofer Calibrating the levelling system	Labor time: <b>190 TU</b>
Parts requi	ired:	
000043990	D32 PASM control unit 1 e	а.
Also requir fixed luggag	ed for all vehicles except vehicles with equipment combination be compartment cover (I-no. 3U7) and without sun blind (I-no. 3Y	<b>D)</b> :
9A7007942	200 Bearing pin 1 e	а.
⇒ Damage	e Code WJ20 66 000 2	

### Warranty processing

### Information

The specified working times were determined specifically for carrying out this campaign and include all required preliminary and subsequent work.

The working times may differ from the working times published in the Labour Operation List in PIWIS.

- Information: Scopes 1 to 6 are not relevant for this vehicle type.
- Scope 7: Vehicles without subwoofer

Working time:						
Replacing PASM control unit		Labor time: 231 TU				
Includes:	Connecting and disconnecting battery charger					
	Connecting and disconnecting PIWIS Tester					
	Loosening and securing high-voltage charger					
	Calibrating the levelling system					

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Parts requi	ired:							
000043990	031	PASM control unit		1 ea.				
Also required for all vehicles except vehicles with equipment combination fixed luggage compartment cover (I-no. 3U7) and without sun blind (I-no. 3Y0):								
9A7007942	200	Bearing pin		1 ea.				
$\Rightarrow$ Damage Code WJ20 066 000 2								
Vehicles	with <b>subwc</b>	ofer (I-no. 9VJ or 9V	L)					
Working tir	ne:							
Replacing PASM control unit					Labor time: 247 TU			
Includes:	Connectir	ig and disconnecting ba	attery charger					
	Removing	ig and disconnecting Pl Land installing subwoof	WIS lester er					
	Loosening	g and securing high-volt	age charger					
	Calibratin	g the levelling system						
Parts requi	ired:							
000043990	)31	PASM control unit		1 ea.				
Also requir fixed luggag	<b>ed</b> for all ve je compartr	hicles <b>except</b> vehicles nent cover ( <b>I-no. 3U7</b> )	with equipment combin and without sun blind ( <b>I-</b>	nation •no. 3YO):				
9A7007942	200	Bearing pin		1 ea.				
⇒ Damage	e Code WJ2	20 066 000 2						

### Warranty processing

Scope 8:

	<b>Information</b> The specified working time was determined specifically for carrying out this campaign and includes a required preliminary and subsequent work. The working time may differ from the working times published in the Labour Operation List in PIWIS.			
Information:	Scopes 1 to 8 are not relevant for this vehicle type.			
Scope 9:	• Vehicles with air suspension (I-no. 1BK) and subwoofer (I-no. 9VJ or 9VL)			

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Working time:							
Replacing PASM	Labor time: 247 TU						
Includes: Co	nnecting and disconnecting battery cl	harger					
Co	nnecting and disconnecting PIWIS les	ster					
Re Lo	moving and installing subwoorer	argor					
Ca	librating the levelling system	aigei					
Parts required:							
00004399033	PASM control unit	1 ea.					
Also required for all vehicles except vehicles with equipment combination fixed luggage compartment cover (I-no. 3U7) and without sun blind (I-no. 3Y0):							
9A700794200	Bearing pin	1 ea.					
$\Rightarrow$ Damage Code WJ20 066 000 2							

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