

AMB1 – Replacing Engine (Stop Delivery/Recall Campaign)

Vehicle Type: **Cayenne GTS (9YA) / Cayenne GTS Coupé (9YB)
Cayenne Turbo (9YA)**

Model Year: **2021**

Concerns: **Cracking in the cylinder liners**

Information: **There is a possibility that cracking has occurred in the cylinder liners on the affected vehicles due to a process error during the casting of the engine block.**

Over time, the cracks may widen due to the load during engine operation, causing damage to the cylinder wall and the piston.

- Action required:
- Replacing engine
 - Replace vehicle-specific stickers showing the allocation of vehicle identification number to engine number
 - Vehicles with M-no. 6GK - (widened wheel arch in vehicle color), replace wheel arch trims on the rear axle

Affected Vehicles: Only vehicles assigned to the campaign (see also PCSS Vehicle Information). This campaign affects 12 vehicles.

Required parts and materials

Parts Info:

Part No.	Designation - Use	Qty.
PAB100021 X	⇒ Replacement engine GTS / Turbo (M-no. 0K0)	1 ea.

Additional parts required – all scopes:

V04015002Q	⇒ Thatcham stickers (3 ea.) – Vehicle-specific stickers Order can only be placed if new engine number is known.	1 ea.
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N 91157202	⇒ Collared cheese head bolt with multiple-tooth head, M8 x 30 – Air-conditioning compressor bracket to engine	5 ea.
N 10272202	⇒ Hexagon-head bolt (combination), M12 x 1.5 x 95 – Spring strut to spring strut fork	2 ea.
N 10106402	⇒ Hexagon collar nut, self-locking, M12 x 1.5 – Spring strut to spring strut fork	2 ea.
N 10518405	⇒ Cheese head bolt with multiple-tooth socket head, self-locking, M8 x 30 – Universal joint for steering gear	1 ea.
PAF91184301	⇒ Hexagon-head bolt, M12 x 1.5 x 90 – Front-axle carrier to body, front	4 ea.
PAF91237901	⇒ Hexagon-head bolt, M14 x 1.5 x 100 – Front-axle carrier to body, rear	4 ea.
PAF00072900	⇒ Hexagon socket head bolt, M8 x 20 – Front underbody cover	3 ea.
WHT005372	⇒ Cheese head bolt with multiple-tooth head – Front-axle support, front	2 ea.
PAF911511	⇒ Hexagon-head bolt (combination) – Front-axle support, rear	4 ea.
PAF107599	⇒ Cheese head bolt with multiple-tooth head, M10 x 1 x 45.0 – Cardan shaft to rear axle differential	6 ea.
95534919121	⇒ Plate – Cardan shaft to rear axle differential	3 ea.
PAB25311500	⇒ Seal – Primary catalytic converter to catalytic converter	2 ea.
PAF911308	⇒ Hexagon collar nut, self-locking, M8 – Primary catalytic converter to catalytic converter	6 ea.
WHT006662	⇒ Hexagon-head bolt (combination), M12 x 1.5 x 167 – Power-steering gear to front-axle carrier	2 ea.
WHT002305	⇒ Square nut, M12 x 1.5 – Power-steering gear to front-axle carrier – Front-axle support	6 ea.

WHT006151	⇒ Hexagon collar nut, self-locking, M14 x 1.5 – Tie-rod end to wheel bearing housing	2 ea.
9A700837900	⇒ Tie-wrap, A8.0 x 337 – Brake air guide – Electric wire harness for steering gear	3 ea.
95851218200	⇒ Fixing clip – Stone guard for rear axle	4 ea.
PAF91275001	⇒ Cheese head bolt, M12 x 1.5 x 70 – Screw securing engine mount to engine support	2 ea.
N 91175601	⇒ Cylinder fit bolt with multiple-tooth head, M12 x 1.5 x 22 – Drive shaft to transmission	12 ea.
9A725311500	⇒ Seal – Turbocharger – Primary catalytic converter	2 ea.
PAB25372500	⇒ Clamp – Turbocharger – Primary catalytic converter	2 ea.
95557374900	⇒ Round seal 9.5 x 2.5 – Refrigerant line section in wheel housing – Refrigerant line on condenser	2 ea.
95557374901	⇒ Round seal, 11.0 x 2.5 – Line connection to compressor	2 ea.
95557374902	⇒ Round seal, 13.7 x 2.5 – Coolant line section in wheel housing	1 ea.
95557374903	⇒ O-ring, 23.8 x 2.4 – Line connection to compressor	1 ea.
PAF911296	⇒ 12-point socket, aluminium, M12 x 100 x 90 – Transmission to engine flange	4 ea.
N 91129801	⇒ 12-point socket, aluminium, M12 x 125 x 90 – Transmission to engine flange	1 ea.

N 91150701	⇒ 12-point socket, aluminium, M10 x 60 – Transmission to engine flange	2 ea.
N 91153201	⇒ 12-point socket, aluminium, M10 x 95 – Transmission to engine flange	1 ea.

Additional parts required – Vehicle-specific/equipment-specific:

Vehicles with M-no.:

- 1ZL (19" front disc brakes, red (NAR))
- 1ZN (19" front disc brakes, red (RoW))
- 1ZI (Porsche Surface Coated Brake (PSCB))

Part No.	Designation – Use	Qty.
WHT004572	⇒ Collared cheese head bolt with multiple-tooth head, M14 x 1.5 x 135 – Brake calliper to wheel bearing housing	4 ea.

Additional parts required – Vehicle-specific/equipment-specific:

Vehicles with M-no. 1ZV (Porsche Ceramic Composite Brake (PCCB))

Part No.	Designation – Use	Qty.
95800841100	⇒ Cheese head bolt, M14 x 1.5 x 145 – Brake calliper to wheel bearing housing	4 ea.

Additional parts required – Vehicle-specific/equipment-specific:

Vehicles with M-no. DT8 (8-CYL. BITURBO 4.0/338 KW)

Part No.	Designation – Use	Qty.
PAF107722	⇒ Hose clamp 36.1 x 9 x 0.6 – Rear cardan shaft	1 ea.

Additional parts required – Vehicle-specific/equipment-specific:

Vehicles with M-no. DW4 (8-cyl. biturbo 4.0/404KW)

Part No.	Designation – Use	Qty.
PAF10848901	⇒ Hose clamp 40 x 9 x 0.9 – Rear cardan shaft	1 ea.

Additional parts required – Vehicle-specific/equipment-specific:

Vehicles with M-no. 1P0 (standard suspension)

Part No.	Designation – Use	Qty.
WHT006917	⇒ 12-point socket, M10 x 62 – Anti-roll bar to connecting link	2 ea.
PAF102861	⇒ Hexagon collar nut, self-locking M10 – Anti-roll bar to connecting link	2 ea.

Additional parts required – Vehicle-specific/equipment-specific:

Vehicles with M-no. 1P7 (Porsche Dynamic Chassis Control (PDCC))

Part No.	Designation – Use	Qty.
PAF007423	⇒ 12-point socket, M12 x 65 – Anti-roll bar to connecting link	2 ea.
PAF015081	⇒ Hexagon collar nut, M12 – Anti-roll bar to connecting link	2 ea.

Additional parts required – Vehicle-specific/equipment-specific:

Vehicles with M-no. OK0 (without alternative drive system)

Part No.	Designation – Use	Qty.
N 91129201	⇒ 12-point socket, aluminium, M10 x 75 – Transmission to engine flange	1 ea.

Additional parts required – Vehicle-specific/equipment-specific:

Vehicles with M-no. 6GK (widened wheel arch in vehicle color)

- Cayenne Turbo (9YA) / Cayenne GTS (9YA)

Part No.	Designation – Use	Qty.
9Y0854731D G2X	⇒ Wheel arch cover – Rear left	1 ea.
9Y0854732D G2X	⇒ Wheel arch cover – Rear right	1 ea.

Additional parts required – Vehicle-specific/equipment-specific:

Vehicles with M-no. 6GK (widened wheel arch in vehicle color)

- Cayenne Turbo Coupé (9YB) / Cayenne GTS Coupé (9YB)

Part No.	Designation – Use	Qty.
9Y0854731C G2X	⇒ Wheel arch cover – Rear left	1 ea.
9Y0854732C G2X	⇒ Wheel arch cover – Rear right	1 ea.

Materials:

Required materials (usually already available at the Porsche dealer):

Part No.	Designation	Qty.
00004330516	⇒ Coolant additive	20 liter/ 5.28 gal container (approx. 5 liter/ 1.32 gal required per vehicle)
00004330508	⇒ Mounting paste – Wheel centring surface to wheel hub	100 g/ 3.52 oz tube (approx. 2 grams/ 0.07 oz required per vehicle)
AMB10000001 ¹⁾	Paint in vehicle color (if required) – SportDesign wheel arch covers (M-no. 6GK)	1 ea.

¹⁾ This item must be specified in the warranty claim as an additional part with the designation "Expendable items" and includes all materials used over the entire area for the respective labor operation (including masking materials, sanding materials and cleaning agents as well as paint in vehicle color).

Required tools

Tools:

Special tools:

Designation/Comment	Use
VAS 581 007 - Extraction unit for R1234yf or suitable air-conditioning servicing unit for refrigerant R134a, e.g. VAS 6381B - air-conditioning service station R134a	Draining and filling refrigerant

<p>3094 - Hose clamp 9696 - Filling device VAS 6096/2 - Vacuum pump VAS 6889 - Spring Band Clamp Pliers 9900 - PIWIS Tester 3</p>	<p>High-temperature cooling system: Draining/filling coolant and bleeding the cooling system</p>
<p>3094 - Hose clamp 9696 - Filling device</p>	<p>Low-temperature cooling system: Draining/filling coolant and bleeding the cooling system</p>
<p>VAS 6891 - Spring band clamp pliers</p>	<p>Removing and installing intake manifold</p>
<p>T40010A - Ball-joint extractor VAS 6927 - Tie-wrap pliers VAS 6931 - Engine and gearbox jack</p>	<p>Removing and installing steering gear</p>
<p>VAS 6494 - Torque screwdriver</p>	<p>Removing and installing center/rear cover</p>
<p>V.A.G 1416 - Hot-air blower, VAG 197814A or equivalent</p>	<p>Replacing SportDesign wheel arch cover</p>
<p>VAS 6760 - Storage tray, ITVSSPC-DB & ITVSSPC-PT or equivalent</p>	<p>Removing and installing rear apron</p>
<p>VAS 6931 - Engine and gearbox jack</p>	<p>Removing and installing exhaust system</p>
<p>V.A.G 1275A - Hose clip pliers VAS 6199A - Clamping pliers</p>	<p>Removing and installing cardan shaft</p>
<p>T10384 - Ratchet wrench, a/f 13 VAS 6928 - Socket set, 39-piece</p>	<p>Removing and installing engine mount</p>
<p>3424 - Spreader T40327 - Fixing device VAS 6826 - Steering wheel scales VAS 6832 - Master Gear unit elevating platform VAS 6832/8 - Universal assembly tool VAS 6890 - Spring band clamp pliers</p>	<p>Removing and installing engine</p>
<p>VAS 6883 - Insulated tool set T40262 - Locking cap VAS 6935 - Pole terminal puller</p>	<p>Removing and installing engine (hybrid)</p>

3311 - Hook and support tool	Removing and mounting automatic transmission
V.A.G 1331/12 - Ring wrench insert, a/f 16	
VAS 6890 - Spring band clamp pliers	
9900 - PIWIS Tester 3	Bleeding cooling system
VAS 5908 - Battery charger 90A	
V.A.G 1274/8 - Adapter for cooling system tester	Checking the cooling system
9229/1 - Puller hook	Performing suspension alignment at front and rear
T40183 - Insert tool	
VAS 6826 - Steering wheel scales	
VAS 6918 - Quick-clamping unit	
VAS 6927 - Tie-wrap pliers	
9900 - PIWIS Tester 3	
VAS 5908 - Battery charger 90A	
VAS 6826 - Steering wheel scales	Calibrating steering-angle sensor
9900 - PIWIS Tester 3	
VAS 5908 - Battery charger 90A	
9900 - PIWIS Tester 3	Teaching power-steering gear
VAS 5908 - Battery charger 90A	
VAS 6430/1A - Adjustment device with reflector	Calibrating distance measuring sensor
VAS 6430/3 - ACC reflector mirror	
9900 - PIWIS Tester 3	
VAS 5908 - Battery charger 90A	
VAS 6350A - Calibration unit	Calibrating infrared camera
VAS 6430/1A - Adjustment device with reflector	
VAS 6430/6 - Enhanced night vision calibration unit	
9900 - PIWIS Tester 3	
VAS 5908 - Battery charger 90A	

VAS 6350/2A - Spacing laser Calibrating front corner radar/front camera

VAS 6350A - Calibration unit

VAS 6430/1A - Adjustment device with reflector

VAS 6430/4 - Lane Departure Warning calibration board

9900 - PIWIS Tester 3

VAS 5908 - Battery charger 90A

VAS 6350/2A - Spacing laser Calibrating Lane Change Assist

VAS 6350/4 - Calibration unit for Lane Change Assist

VAS 6350A - Calibration unit

9900 - PIWIS Tester 3

VAS 5908 - Battery charger 90A

VAS 5208A - Headlight aiming device LED head-lights Adjusting main headlights

or

VAS 5209B - Headlight aiming device LED head-lights

9900 - PIWIS Tester 3

VAS 5908 - Battery charger 90A

9900 - PIWIS Tester 3 On-board diagnosis (OBD)

VAS 5908 - Battery charger 90A

General tools:

- Torque wrench, 2-10 Nm (1.5-7.5 ftlb.), e.g. **V.A.G 1783 - Torque wrench, 2-10 Nm (1.5-7.5 ftlb.)**
- Torque wrench, 6 – 50 Nm (4.5 – 37 ftlb.), e.g. **V.A.G 1331A - Torque wrench, 6-50 Nm (4.5-37 ftlb.)**
- Torque wrench, 40 – 200 Nm (30 – 148 ftlb.), e.g. **V.A.G 1332 - Torque wrench, 40-200 Nm (30-148 ftlb.)**
- Torque angle torque wrench, e.g. **9768 - Electronic torque wrench, 2 - 100 Nm (1.5 - 74 ftlb.)**

Vehicles with M-no. 6GK (widened wheel arch in vehicle color) - replace rear wheel arch covers

Work Procedure: In order to replace the engine, the rear apron must be detached so that the exhaust system can be removed.

On vehicles with equipment M-no. 6GK (widened wheel arch in vehicle color), the wheel arch covers cannot be removed from the rear apron without being damaged.

For this reason, the rear wheel arch covers must be replaced.

New painting of the wheel arch trims must be ordered to prevent any delay in repairing the vehicle.

The wheel arch covers can be painted either at the Porsche dealer or externally. The relevant process must be selected during warranty processing, depending on the procedure selected.

- Scope 3 – Replacing engine (painting at the Porsche dealer)
- Scope 4 – Replacing engine (painting done externally)



Information

Painting stage S1 - new part painting

The painting of new body parts - including sub-parts and sections - is referred to as "new part painting". A differentiation is made between screwed parts and welded parts. The painting of visible and invisible interior surfaces, e.g. the lid hinge, is classified as Painting stage 1.

Stage 1 includes:

- Phase I - Preparation
- Phase II - Priming
- Phase III – Painting
- Phase IV - Applying clear lacquer

Information on painting can be found in the "Paint Manual - Painting method for plastic components".



Information

SportDesign wheel arch covers (M-no. 6GK) must be properly scrapped or disposed of following removal. Further use of the wheel arch covers is prohibited.

The procedure for removing and installing the wheel arch covers is described in the relevant section of the TI.

Preparatory work

Work Procedure: 1 Allocate the new engine to the vehicle and request vehicle-specific stickers and certificate.



Information

Given that the engines are being replaced, the vehicle-specific stickers showing the allocation of vehicle identification number to engine number must be replaced with updated stickers showing the allocation of vehicle identification number to the new engine number.

Since it takes about **4 working days plus shipping** to deliver the vehicle-specific stickers and the certificate, the vehicle-specific stickers (Thatcham) below and the certificate should be requested as soon as a new engine has been allocated to a specific vehicle:

Part No.	Designation	Qty.
V04015002Q	Thatcham sticker (contains 3 ea.)	1 ea.

To ensure that your request is processed quickly and efficiently, always use the following procedure when ordering the vehicle-specific stickers and certificate:

The vehicle-specific stickers and the certificate are obtained by submitting a request or PRMS ticket to your contact person responsible for parts enquiries at PCNA.

As soon as the **new engine** has been **allocated** to the vehicle, send the following information and details:

- **Vehicle identification number**
- **Exact mileage (km or miles) of the vehicle**
- **Engine number** of the **old** engine that was removed from the vehicle
- **Engine number** of the **new** engine, which will be installed in the vehicle
- Order no. (630...)
- **Delivery address** and **name of the contact person at the Porsche dealer** to whom the documents must be sent
- Campaign name **AMB1 Recall campaign – Replacing engine**

When requesting the stickers, also attach **digital photos** showing the following data to the request:

- Vehicle identification number of the vehicle
- Engine number of the new engine
- Engine number of the old engine

This can help to avoid transmission errors and longer processing times.

**Information**

The **engine number** is located on the crankcase above the oil pan ⇒ *Engine number on crankcase -1-* and on the cylinder head ⇒ *Engine number on crankcase -2-*.

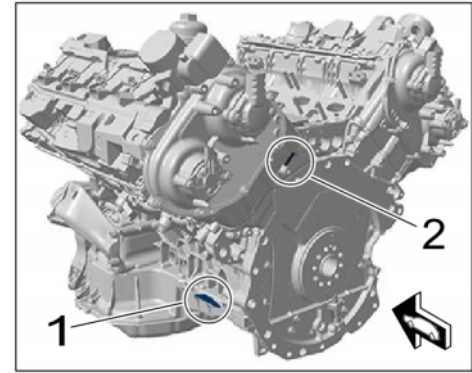
The engine number previously assigned to the VIN in the PAG systems is replaced with the new engine number in the PAG systems.

- 2 Before you start working on a vehicle, use the PIWIS Tester to read out the fault memories and create a Vehicle Analysis Log (VAL).

**Information**

The created vehicle analysis log must be marked with the attribute '**Initial VAL**' and returned using the PIWIS Tester after the campaign is carried out.

- 2.1 Connect a battery charger with a current rating of **at least 90 A**, e.g. **Battery charger 90A**, to the jump-start terminals and switch it on ⇒ *External power connection*.
- 2.2 Switch on the ignition.
- 2.3 Connect **9900 - PIWIS Tester 3** to the vehicle communication module (VCI) via the **USB cable**. Then connect the communication module to the vehicle and switch on the PIWIS Tester.

*Engine number on crankcase**External power connection***Replacing engine****NOTICE**

Engine/transmission unit lowered or inserted incorrectly.

- Risk of damage to engine/transmission unit
 - Cables and coolant hoses can be stretched and torn
- ⇒ Gradually lower or raise the engine using a jack.
- ⇒ Always check that all necessary cables were disconnected when lowering the engine/transmission unit.
- ⇒ Make sure that no cables or hoses are damaged when installing the engine/transmission unit.
- ⇒ Get one or two more persons to help.



WARNING

Danger of objects or loads falling down

- Risk of squashing or crushing
- ⇒ Secure components to prevent them from falling down.



Information

The engines to be replaced will either be requested and must be returned to the Warranty Parts Test Center or will have to be scrapped by certified companies in the market. This depends on the agreement reached with each market.

The guidelines for the Warranty Parts Process ('Porsche warranty guidelines' and 'Returns and claims guidelines') shall always apply.

If the engine to be replaced is requested and must be returned to the Warranty Parts Test Center, the following points must be observed:

- Do not damage the packaging in which the reconditioned engine is delivered because the engine to be replaced must be returned in this packaging.
- All operating fluids must be drained from the engines before they are returned.
- **The engine number of the returned engine must be entered on the Warranty parts request form (barcode).** The engine number can be entered either in the PDF file or handwritten on the printout.

- Work Procedure: 1 Drain the engine oil from the old engine, empty the oil filter completely and then re-install the oil filter and drain plugs.
For instructions, see:
⇒ *Workshop Manual '170117 Draining and filling engine oil'*
⇒ *Workshop Manual '173055 Changing oil filter'*
- 2 Remove engine/transmission unit.
For instructions on removing the engine/transmission unit, see: ⇒ *Workshop Manual '100119 Removing and installing engine'*

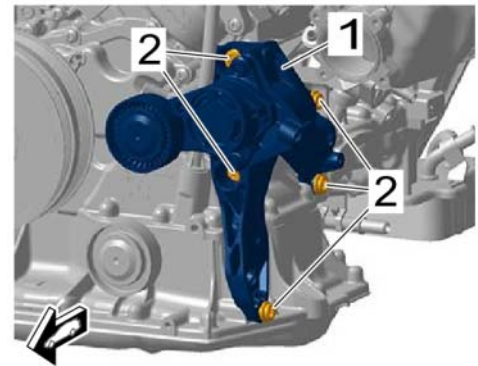


Information

After opening the refrigerant line connections, close them off immediately using stoppers.

- 3 Remove engine. ⇒ *Workshop Manual '100127 Removing and mounting engine'*
- 4 Remove primary catalytic converters. ⇒ *Workshop Manual '267619 Removing and installing primary catalytic converter (V8 biturbo)'*

- 5 Remove drive belt and tensioning rollers. ⇒ *Workshop Manual '137819 Removing and installing drive belt (V8 biturbo)'*
- 6 Remove generator. ⇒ *Workshop Manual '272219 Removing and installing generator'*
- 7 Remove air-conditioning compressor. ⇒ *Workshop Manual '873419 Removing and installing air-conditioning compressor'*
- 8 Remove pressure hoses. ⇒ *Workshop Manual '213919 Removing and installing pressure hose (V8 biturbo)'*
- 9 Remove engine mount. ⇒ *Workshop Manual '103519 Removing and installing engine mounts (V8 biturbo)'*
- 10 Remove transport packaging on the new engine.
- 11 Lift new engine out of the transport packaging and position on the elevating platform.
- 12 Verify and document engine number.
- 13 Remove all stoppers from the new engine.
- 14 Convert air-conditioning compressor bracket ⇒ *Air-conditioning compressor bracket -1-*.
 - 14.1 Unscrew screws securing air-conditioning compressor bracket ⇒ *Air-conditioning compressor bracket -2-*.
 - 14.2 Remove air-conditioning compressor bracket ⇒ *Air-conditioning compressor bracket -1-* and position on the new engine.
 - 14.3 Install and tighten **new** screws securing air-conditioning compressor bracket ⇒ *Air-conditioning compressor bracket -2-*.
Tightening torque 20 Nm (15 ftlb.)



Air-conditioning compressor bracket

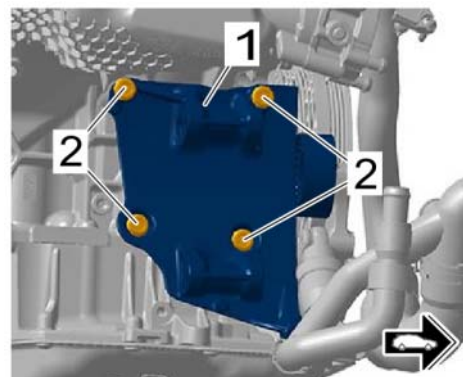
15 Convert generator bracket ⇒ *Generator bracket-1-*.

15.1 Unscrew screws ⇒ *Generator bracket-2-*.

15.2 Remove generator bracket ⇒ *Generator bracket-1-* and position on the new engine.

15.3 Install and tighten screws ⇒ *Generator bracket-2-*.

Tightening torque 23 Nm (17 ftlb.)



Generator bracket

16 Convert coolant hoses ⇒ *Coolant hoses-1-*.

16.1 Unscrew screws ⇒ *Coolant hoses-2-*.

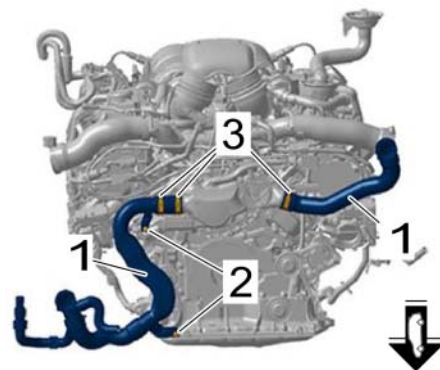
16.2 Loosen spring band clamps ⇒ *Coolant hoses-3-* using **VAS 6890 - spring band clamps pliers**.

16.3 Remove coolant hoses ⇒ *Coolant hoses-1-*.

16.4 Refit coolant hoses ⇒ *Coolant hoses-1-* on the new engine in reverse order.

16.5 Tighten screws ⇒ *Coolant hoses-2-*.

Tightening torque 9 Nm (6.5ftlb.)



Coolant hoses

17 Install engine mount. ⇒ *Workshop Manual '103519 Removing and installing engine mounts (V8 biturbo)'*

18 Install air-conditioning compressor. ⇒ *Workshop Manual '873419 Removing and installing air-conditioning compressor'*

19 Install generator. ⇒ *Workshop Manual '272219 Removing and installing generator'*

20 Install drive belt and tensioning rollers. ⇒ *Workshop Manual '137819 Removing and installing drive belt (V8 biturbo)'*

21 Install primary catalytic converters. ⇒ *Workshop Manual '267619 Removing and installing primary catalytic converter (V8 biturbo)'*

22 Mount engine. ⇒ *Workshop Manual '100127 Removing and mounting engine'*

23 Install engine. ⇒ *Workshop Manual '100119 Removing and installing engine'*

- 24 Perform on-board diagnosis using the PIWIS Tester.
 - 24.1 Read out the fault memory and check any existing fault memory entries ⇒ *Workshop Manual '033500 Fault memory for on-board diagnosis'*.
 - 24.2 Delete fault memory entries and return to the control unit selection screen.
 - 24.3 Select the **DME control unit** in the control unit selection screen ('Overview' menu) and press •F12" ("Next") to confirm your selection.
 - 24.4 Call up the '**Drive links/checks**' menu.
 - 24.5 Select the '**Adaptations**' function and press •F12" ("Next") to confirm your selection.
 - 24.6 Select **all** functions listed under 'Adaptations' **individually** and perform them **one after the other**.
Then press •F12" ("Next") and •F11" ("Back") to return to the control unit selection screen.
 - 24.7 Read out the engine-oil level using the PIWIS Tester and add engine oil if necessary ⇒ *Workshop Manual '170101 Checking engine-oil level'*.
 - 24.8 Switch off ignition.
- 25 Performing suspension alignment and adjusting the vehicle.
For instructions, see:
⇒ *Workshop Manual '449503 Performing front and rear suspension alignment'*
⇒ *Workshop Manual '4495TW Adjustment values for suspension alignment'*
- 26 After correcting the wheel alignment values, carry out the following work.
 - 26.1 Calibrate steering-angle sensor. ⇒ *Workshop Manual '456005 Initialising and calibrating steering-angle sensor'*
 - 26.2 Teach steering lock settings for the power-steering gear. ⇒ *Workshop Manual '489025 Power-steering gear: Teaching steering lock settings'*
 - 26.3 Calibrate front camera. ⇒ *Workshop Manual '963855 Replacing front camera'*
 - 26.4 If installed: Calibrate control unit for distance measuring sensor (ACC sensor) (M-no. 8T3).
⇒ *Workshop Manual '278515 Adjusting control unit for distance measuring sensor'*
 - 26.5 If installed: Calibrate night vision camera (M-no. 9R1). ⇒ *Workshop Manual '908055 Replacing infrared camera'*
 - 26.6 If installed: Calibrate Surround View camera (M-no. KA6). ⇒ *Workshop Manual '917225 Calibrating Surround View camera'*
 - 26.7 If installed: Calibrate Lane Change Assist (M-no. 7Y1). ⇒ *Workshop Manual '917025 Calibrating Lane Change Assist'*

Concluding work



Information

Once the engine in the vehicle has been replaced, the stickers affixed to the vehicle showing the vehicle identification number and engine number must be replaced with updated stickers showing the engine number of the **newly installed engine**.

Work Procedure: 1 Affix new vehicle identification stickers over the stickers showing the allocation of vehicle identification number to engine number.

The stickers must be affixed at the following positions on the **right-hand side of the vehicle in direction of travel**:

- Lid, front right inside
- A-pillar, front right
- D-pillar, inside right

2 After delivery, check that the vehicle identification number and engine number shown on the new stickers match the vehicle identification number of the vehicle and the engine number of the reconditioned engine.

2.1 Check that the vehicle identification number and engine number shown on the **new** stickers match the vehicle identification number of the vehicle and the engine number of the **newly installed engine**.

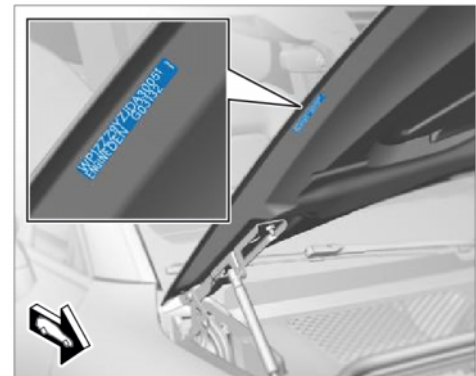
2.2 Affix new sticker over existing sticker on the front right lid ⇒ *Sticker on front right lid -1-*.

2.2.1 Open the front lid.

2.2.2 Clean the sticker ⇒ *Sticker on front right lid -1-* using a suitable cleaning agent (e.g. isopropanol) and then rub dry with a clean, lint-free cloth.

2.2.3 Affix the **new** sticker over the existing sticker ⇒ *Sticker on front right lid -1-* in the **same position** so that it **covers the old sticker exactly**.

2.2.4 Close the front lid.



Sticker on front right lid

2.3 Affix new sticker over existing sticker ⇒
Sticker on right A-pillar -1- on the right A-pillar.

2.3.1 Open front right door.

2.3.2 Clean the sticker ⇒ *Sticker on right A-pillar -1-* using a suitable cleaning agent (e.g. isopropanol) and then rub dry with a clean, lint-free cloth.

2.3.3 Affix the **new** sticker over the existing sticker ⇒ *Sticker on right A-pillar -1-* in the **same position** so that it **covers the old sticker exactly**.

2.3.4 Close front right door.

2.4 Affix new sticker over existing sticker ⇒
Sticker on inside right of D-pillar -1- on the inside right of the D-pillar.

2.4.1 Open the rear lid.

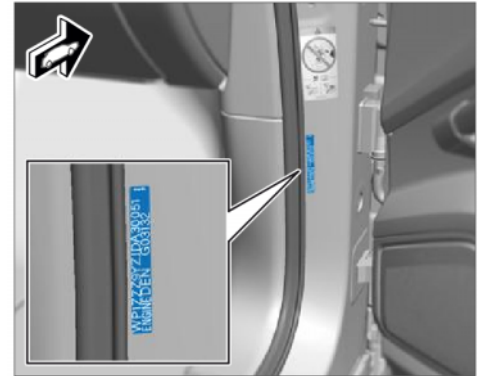
2.4.2 Clean the sticker ⇒ *Sticker on inside right of D-pillar -1-* using a suitable cleaning agent (e.g. isopropanol) and then rub dry with a clean, lint-free cloth.

2.4.3 Affix the **new** sticker over the existing sticker ⇒ *Sticker on inside right of D-pillar -1-* in the **same position** so that it **covers the old sticker exactly**.

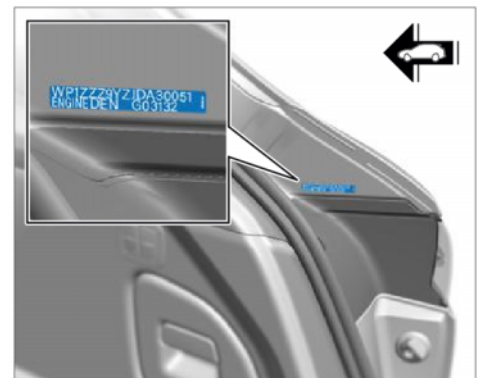
2.4.4 Close the rear lid.

3 Carry out an **extended test drive** according to the criteria for a test drive performed as part of the sales check and **observe the following instructions**:

- Only allow service advisors or workshop staff with the relevant qualification and experience (e.g. workshop managers) to test-drive the vehicle.
- Only drive with the selector lever in position "D".
- The vehicle should be driven for a distance of approx. **20 kilometres (12 miles)** with a **normal** driving profile.
- Do not exceed a maximum engine speed of **6,500 rpm**.
- **Do not drive in kickdown mode** in order to ensure that a maximum engine speed of 6,500 rpm is not exceeded.
- Check the vehicle for unusual handling behavior, vibrations and noise.



Sticker on right A-pillar



Sticker on inside right of D-pillar

- 4 After the test drive, let the vehicle cool down until the coolant temperature is max. 60 °C. Then check the coolant level and engine-oil level and add coolant or engine oil as required.
- 5 Create a vehicle analysis log (VAL) using the PIWIS Tester.
Mark the vehicle analysis log you have just created with the attribute "Final VAL" and return using the PIWIS Tester after carrying out the campaign.
- 6 Disconnect the PIWIS Tester from the vehicle.
- 7 Switch off and disconnect the battery charger.
- 8 Raise the vehicle on a lifting platform again and check the engine for leaks or other problems.
- 9 Enter the campaign in the Warranty and Maintenance booklet.
– End of action required –

Warranty processing

Scope 2: **Replacing engine**

- Cayenne Turbo

Working time:

Replacing engine

Labor time: **2153 TU**

- Includes:
- Removing and installing engine/transmission unit
 - Removing engine to be replaced and mounting new engine
 - Removing peripheral parts on engine to be replaced and installing them on new engine
 - Checking engine-oil level
 - Connecting and disconnecting battery charger (several times)
 - Connecting and disconnecting PIWIS Tester (several times)
 - Performing on-board diagnosis using the PIWIS Tester
 - Performing suspension alignment and adjusting the vehicle
 - Calibrating steering-angle sensor
 - Teaching power-steering gear
 - Calibrating assistance systems
 - Replacing vehicle identification stickers

Parts required:

PAB100021 X	Replacement engine (M-no. OKO)	1 ea.
V04015002Q	Thatcham sticker (3 ea.)	1 ea.

N 91157202	Collared cheese head bolt with multiple-tooth head, M8 x 30	5 ea.
N 10272202	Hexagon-head bolt (combination), M12 x 1.5 x 95	2 ea.
N 10106402	Hexagon collar nut, self-locking, M12 x 1.5	2 ea.
N 10518405	Cheese head bolt with multiple-tooth head, self-locking, M8 x 30	1 ea.
PAF91184301	Hexagon-head bolt, M12 x 1.5 x 90	4 ea.
PAF91237901	Hexagon-head bolt, M14 x 1.5 x 100	4 ea.
PAF00072900	Hexagon socket head bolt, M8 x 20	3 ea.
WHT005372	Cheese head bolt with multiple-tooth head	2 ea.
PAF911511	Hexagon-head bolt (combination)	4 ea.
WHT002305	Square nut	6 ea.
PAF107599	Cheese head bolt with multiple-tooth head, M10 x 1 x 45.0	6 ea.
95534919121	Plate	3 ea.
PAB25311500	Seal	2 ea.
PAF911308	Hexagon collar nut, self-locking, M8	6 ea.
WHT006662	Hexagon-head bolt (combination), M12 x 1.5 x 167	2 ea.
WHT006151	Hexagon collar nut, self-locking, M14 x 1.5	2 ea.
9A700837900	Tie-wrap, A8.0 x 337	3 ea.
95851218200	Fixing clip	4 ea.
PAF91275001	Cheese head bolt, M12 x 1.5 x 70	2 ea.
N 91175601	Cylinder fit bolt with multiple-tooth head, M12 x 1.5 x 22	12 ea.
9A725311500	Seal	2 ea.
PAB25372500	Clamp	2 ea.
PAF10848901	Hose clamp, 40 x 9 x 0.9	1 ea.
PAF007423	12-point socket, M12 x 65	2 ea.
PAF015081	Hexagon collar nut, M12	2 ea.
PAF911296	12-point socket, aluminium, M12 x 100 x 90	4 ea.
N 91129801	12-point socket, aluminium, M12 x 125 x 90	1 ea.
N 91150701	12-point socket, aluminium, M10 x 60	2 ea.

N 91153201	12-point socket, aluminium, M10 x 95	1 ea.
N 91129201	12-point socket, aluminium, M10 x 75	1 ea.
95557374900	Round seal, 9.5 x 2.5	2 ea.
95557374902	Round seal, 13.7 x 2.5	1 ea.
95557374903	O-ring, 23.8 x 2.4	1 ea.
95557374901	Round seal, 11.0 x 2.5	2 ea.
WHT004572	Collared cheese head bolt, M14 x 1.5 x 135	4 ea.
WHT006917	12-point socket, M10 x 62	2 ea.
PAF102861	Hexagon collar nut, M10	2 ea.
Materials required:		
00004330516	Coolant additive	0,2 ea.
00004330508	Mounting paste	0,1 ea.
⇒ Damage Code AMB1 099 000 2		

Warranty processing

Scope 3: **Replacing engine (painting at the Porsche dealer)**

- Cayenne GTS / Cayenne GTS Coupé
- Cayenne Turbo Coupé

The wheel arch covers were painted **in their entirety by the Porsche dealer**.



Information

- Porsche dealers that carry out **this campaign fully** must submit an invoice for **Scope 3**.
- Porsche dealers that hand the wheel arch covers over to an **external service provider** to carry out the required **painting work** must submit an invoice for **Scope 4**.

Working time:

Replacing engine

Labor time: **2363 TU**

- Includes:
- Removing and installing engine/transmission unit
 - Removing engine to be replaced and mounting new engine
 - Removing peripheral parts on engine to be replaced and installing them on new engine
 - Checking engine-oil level
 - Connecting and disconnecting battery charger (several times)
 - Connecting and disconnecting PIWIS Tester (several times)

Performing on-board diagnosis using the PIWIS Tester
 Performing suspension alignment and adjusting the vehicle
 Calibrating steering-angle sensor
 Teaching power-steering gear
 Calibrating assistance systems
 Replacing vehicle identification stickers

Parts required:

PAB100021 X	Replacement engine (M-no. OK0)	1 ea.
V04015002Q	Thatcham sticker (3 ea.)	1 ea.
N 91157202	Collared cheese head bolt with multiple-tooth head, M8 x 30	5 ea.
N 10272202	Hexagon-head bolt (combination), M12 x 1.5 x 95	2 ea.
N 10106402	Hexagon collar nut, self-locking, M12 x 1.5	2 ea.
N 10518405	Cheese head bolt with multiple-tooth head, self-locking, M8 x 30	1 ea.
PAF91184301	Hexagon-head bolt, M12 x 1.5 x 90	4 ea.
PAF91237901	Hexagon-head bolt, M14 x 1.5 x 100	4 ea.
PAF00072900	Hexagon socket head bolt, M8 x 20	3 ea.
WHT005372	Cheese head bolt with multiple-tooth head	2 ea.
PAF911511	Hexagon-head bolt (combination)	4 ea.
WHT002305	Square nut	6 ea.
PAF107599	Cheese head bolt with multiple-tooth head, M10 x 1 x 45.0	6 ea.
95534919121	Plate	3 ea.
PAB25311500	Seal	2 ea.
PAF911308	Hexagon collar nut, self-locking, M8	6 ea.
WHT006662	Hexagon-head bolt (combination), M12 x 1.5 x 167	2 ea.
WHT006151	Hexagon collar nut, self-locking, M14 x 1.5	2 ea.
9A700837900	Tie-wrap, A8.0 x 337	3 ea.
95851218200	Fixing clip	4 ea.
PAF91275001	Cheese head bolt, M12 x 1.5 x 70	2 ea.

N 91175601	Cylinder fit bolt with multiple-tooth head, M12 x 1.5 x 22	12 ea.
9A725311500	Seal	2 ea.
PAB25372500	Clamp	2 ea.
PAF911296	12-point socket, aluminium, M12 x 100 x 90	4 ea.
N 91129801	12-point socket, aluminium, M12 x 125 x 90	1 ea.
N 91150701	12-point socket, aluminium, M10 x 60	2 ea.
N 91153201	12-point socket, aluminium, M10 x 95	1 ea.
N 91129201	12-point socket, aluminium, M10 x 75	1 ea.
95557374900	Round seal, 9.5 x 2.5	2 ea.
95557374902	Round seal, 13.7 x 2.5	1 ea.
95557374903	O-ring, 23.8 x 2.4	1 ea.
95557374901	Round seal, 11.0 x 2.5	2 ea.
WHT004572	Collared cheese head bolt, M14 x 1.5 x 135	4 ea.
Additional parts required for Turbo vehicles		
PAF10848901	Hose clamp, 40 x 9 x 0.9	1 ea.
Additional parts required for Cayenne GTS vehicles		
PAF107722	Hose clamp, 36.1 x 9 x 0.6	1 ea.
Additional parts required for Cayenne Coupé vehicles		
9Y3854731C G2X	Wheel arch cover	1 ea.
9Y3854732C G2X	Wheel arch cover	1 ea.
Additional parts required for Cayenne vehicles		
9Y0854731D G2X	Wheel arch cover	1 ea.
9Y0854732D G2X	Wheel arch cover	1 ea.
Additional parts required, vehicle-specific/equipment-specific		
WHT006917	12-point socket, M10 x 62 (M-no. 1P0)	2 ea.
PAF102861	Hexagon collar nut, M10 (M-no. 1P0)	2 ea.
PAF007423	12-point socket, M12 x 65 (M-no. 1P7)	2 ea.
PAF015081	Hexagon collar nut, M12 (M-no. 1P7)	2 ea.
Materials required:		
00004330516	Coolant additive	0,2 ea.
00004330508	Mounting paste	0,1 ea.
⇒ Damage Code AMB1 099 000 2		

Scope 4: **Replacing engine (painting done externally)**

- Cayenne GTS / Cayenne GTS Coupé
- Cayenne Turbo Coupé

The wheel arch covers were **painted** by an **external service provider**.

**Information**

Porsche dealers that have outsourced the painting work to an external service provider must include a copy of the invoice for external services with the warranty claim.

Working time:

Replacing engine

Labor time: **2153 TU**

Includes:

- Removing and installing engine/transmission unit
- Removing engine to be replaced and mounting new engine
- Removing peripheral parts on engine to be replaced and installing them on new engine
- Checking engine-oil level
- Connecting and disconnecting battery charger (several times)
- Connecting and disconnecting PIWIS Tester (several times)
- Performing on-board diagnosis using the PIWIS Tester
- Performing suspension alignment and adjusting the vehicle
- Calibrating steering-angle sensor
- Teaching power-steering gear
- Calibrating assistance systems
- Replacing vehicle identification stickers

Parts required:

PAB100021 X	Replacement engine (M-no. OK0)	1 ea.
V04015002Q	Thatcham sticker (3 ea.)	1 ea.
N 91157202	Collared cheese head bolt with multiple-tooth head, M8 x 30	5 ea.
N 10272202	Hexagon-head bolt (combination), M12 x 1.5 x 95	2 ea.
N 10106402	Hexagon collar nut, self-locking, M12 x 1.5	2 ea.
N 10518405	Cheese head bolt with multiple-tooth head, self-locking, M8 x 30	1 ea.

PAF91184301	Hexagon-head bolt, M12 x 1.5 x 90	4 ea.
PAF91237901	Hexagon-head bolt, M14 x 1.5 x 100	4 ea.
PAF00072900	Hexagon socket head bolt, M8 x 20	3 ea.
WHT005372	Cheese head bolt with multiple-tooth head	2 ea.
PAF911511	Hexagon-head bolt (combination)	4 ea.
WHT002305	Square nut	6 ea.
PAF107599	Cheese head bolt with multiple-tooth head, M10 x 1 x 45.0	6 ea.
95534919121	Plate	3 ea.
PAB25311500	Seal	2 ea.
PAF911308	Hexagon collar nut, self-locking, M8	6 ea.
WHT006662	Hexagon-head bolt (combination), M12 x 1.5 x 167	2 ea.
WHT006151	Hexagon collar nut, self-locking, M14 x 1.5	2 ea.
9A700837900	Tie-wrap, A8.0 x 337	3 ea.
95851218200	Fixing clip	4 ea.
PAF91275001	Cheese head bolt, M12 x 1.5 x 70	2 ea.
N 91175601	Cylinder fit bolt with multiple-tooth head, M12 x 1.5 x 22	12 ea.
9A725311500	Seal	2 ea.
PAB25372500	Clamp	2 ea.
PAF911296	12-point socket, aluminium, M12 x 100 x 90	4 ea.
N 91129801	12-point socket, aluminium, M12 x 125 x 90	1 ea.
N 91150701	12-point socket, aluminium, M10 x 60	2 ea.
N 91153201	12-point socket, aluminium, M10 x 95	1 ea.
N 91129201	12-point socket, aluminium, M10 x 75	1 ea.
95557374900	Round seal, 9.5 x 2.5	2 ea.
95557374902	Round seal, 13.7 x 2.5	1 ea.
95557374903	O-ring, 23.8 x 2.4	1 ea.
95557374901	Round seal, 11.0 x 2.5	2 ea.
WHT004572	Collared cheese head bolt, M14 x 1.5 x 135	4 ea.
AMB10000001 *	Expendable items	1 ea. (for warranty invoicing only)

Additional parts required for Turbo vehicles

PAF10848901 Hose clamp, 40 x 9 x 0.9 1 ea.

Additional parts required for Cayenne GTS vehicles

PAF107722 Hose clamp, 36.1 x 9 x 0.6 1 ea.

Additional parts required for Cayenne Coupé vehicles

9Y3854731C G2X Wheel arch cover 1 ea.

9Y3854732C G2X Wheel arch cover 1 ea.

Additional parts required for Cayenne vehicles

9Y0854731D G2X Wheel arch cover 1 ea.

9Y0854732D G2X Wheel arch cover 1 ea.

Additional parts required, vehicle-specific/equipment-specific

WHT006917 12-point socket, M10 x 62 (M-no. 1P0) 2 ea.

PAF102861 Hexagon collar nut, M10 (M-no. 1P0) 2 ea.

PAF007423 12-point socket, M12 x 65 (M-no. 1P7) 2 ea.

PAF015081 Hexagon collar nut, M12 (M-no. 1P7) 2 ea.

Materials required:

00004330516 Coolant additive 0,2 ea.

00004330508 Mounting paste 0,1 ea.

Sublet labor:Painting wheel arch trims with top-coat paint Sublet labor time: **max.
210 TU****

* For warranty processing, **also** specify this part number and designation in the warranty claim. The amount must not exceed \$30.

** The maximum amount that will be paid as sublet labor time is the amount corresponding to the specified working time based on the individual charging rate under warranty of the respective Porsche dealer. Please include a copy of the invoice for external services with the warranty claim.

⇒ **Damage Code AMB1 099 000 2**

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