

Technical Information Service 13/17 ENU AH01

AH01 - Replacing Fastening Screws For Fuel Collection Pipes (Stop-Sale Campaign)

Revision: February 23, 2017

This revision amends AHO1 as follows:

1 — The work procedure was amended to include removing the rear-axle cross member completely to gain additional space when lowering the engine.

2 — Scope 12 was added for cars where a replacement engine was installed but not documented. With this scope, the engine number must be checked according to a list published via PPN to determine if the newly installed engine is affected or not.

Model Year: 2017

Vehicle Type: 718 Cayman (982)/718 Cayman S (982)

Subject: Fastening screws for fuel collection pipes

Concern: There is a possibility that the fastening screws for the fuel collection pipes on the affected vehicles can shear off due to stress corrosion cracking.

If this happens, the high fuel pressure that builds up in the fuel injection system when the engine is running can press the relevant fuel collection pipe off the fuel injectors. This can cause a fuel leak in the engine compartment.

Remedial Action:

Replace fastening screws for both fuel collection pipes.



Information

Vehicles with replacement engine installed

On vehicles in which a **replacement engine was installed** and the relevant **engine number was not documented**, we **cannot be sure** that the correct fastening screws were used. These vehicles are **also assigned to Scope 12**.

The engine number on the vehicles must first be checked. The fastening screws may or may not have to be **replaced**, **depending on the result of the check**.

For instructions and further information, see \Rightarrow *Technical Information 'AH0100 Scope 12 - Checking engine number'*.

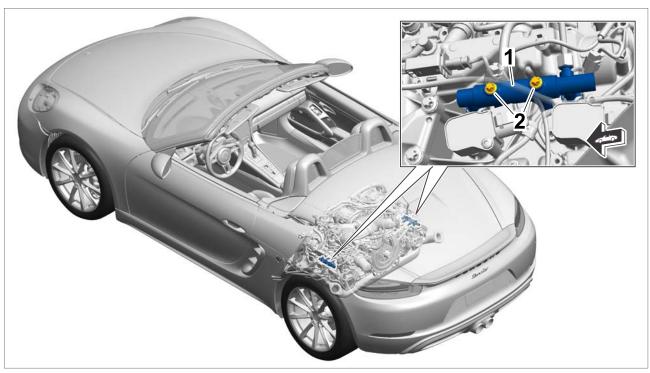
To find out which campaign scope is assigned to the respective vehicle for this campaign, see PIWIS Vehicle Information.

Parts Info: NOTE: NECESSARY PARTS FOR THIS CAMPAIGN ARE STILL BEING MANUFACTURED AND ARE

EXPECTED TO ARRIVE CW07. ONCE THE REQUIRED PARTS FOR THIS CAMPAIGN HAVE ARRIVED, PCNA

WILL BEGIN THE AUTOMATIC ALLOCATION PROCESS FOR UP TO 50% OF THE VEHICLES THAT ARE SERVICED AT YOUR DEALERSHIP. APPROXIMATELY 45 DAYS AFTER YOUR FIRST ALLOCATION, YOUR DEALER WILL AUTOMATICALLY BE ALLOCATED AN ADDITIONAL 30% OF THE REQUIRED PARTS FOR THE VEHICLES THAT ARE STILL IN NEED OF REPAIR.

Installation position:



Overview of installation position (shown on 718 Boxster as an example)

- 1 Fuel collection pipe
- 2 Fastening screws (replace)

Affected Only the vehicles assigned to the campaign (see also PIWIS Vehicle information). This campaign affects

Vehicles: 4,518 vehicles in North America.

Parts required

Part No.:	Part No.	Designation - Use		Qty.
	000 043 306 00	⇒ Torx screw, BM 6 x 85		4 ea.

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999 076 053 01	⇒ Hexagon nut, M10– Rear diagonal brace	12 ea.
999 072 840 01	⇒ Hexagon-head bolt, M10 x 35– Diagonal brace to body	2 ea.
N 908 484 05	⇒ Hexagon nut, M12 x 1.5– Engine carrier to engine mount	2 ea.

Required tools

Tools:

- Torque screwdriver, 1.5 3 Nm (1 2 ftlb.), e.g. VAS 6494 Torque screwdriver
- Torque wrench, 6 50 Nm (4.5 37 ftlb.), e.g. V.A.G 1331 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/torque angle screw tool, 20 400 Nm (15 296 ftlb.), e.g. VAS 6942 Torque/torque angle screw tool
- Hydraulic transmission jack, e.g. VAS 6931 Engine and gearbox jack
- VAS 6918 Quick-Clamping Unit
- 9229/1 Puller hook
- Battery Charger/Power Supply Suitable for AGM Type batteries, recommended current rating of 70A fixed voltage 13.5V to 14.5V.
- 9900 PIWIS Tester 3
- Plastic assembly wedge (commercially available)

If the **wheel alignment values** must be **corrected** during suspension alignment, the following tools will also be required:

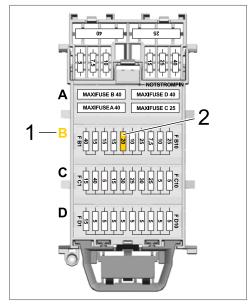
- 9626 Insert for torque wrench
- 9730 Socket-wrench insert
- 9847 Socket-wrench insert
- VAS 6430/1A Setting Device with Reflector
- VAS 6430/3 ACC reflector mirror
- VAS 6190/2 T-bar Setting Tool for ACC Sensor

Preparatory work

Work Procedure: 1 Raise the vehicle on a lifting platform ⇒ Workshop Manual '4X00IN Lifting the vehicle'.

- 2 Relieve fuel pressure in the system.
 - 2.1 Remove cover on the fuse carrier in the passenger compartment at the front left.

Pull out fuse for fuel pump.
 The fuse (20 A) is in row B ⇒ Fuse carrier in passenger compartment at the front left
 -1-, slot FB5 ⇒ Fuse carrier in passenger compartment at the front left -2-.



Fuse carrier in passenger compartment at the front left



Exhaust gases

- · Risk of Carbon Monoxide (CO) Poisoning
- ⇒ Before starting the engine, position an exhaust extraction system behind the vehicle's exhaust pipes and switch it on.
 - 2.3 Start the engine and leave it running at idle speed until it cuts out. **This can take up to 5 minutes.**
 - 2.4 Switch off ignition and remove ignition key.
 - 2.5 Re-insert fuse for fuel pump.
 - 3 Disconnect ground line at the battery ⇒ Workshop Manual '2X00IN Work instructions after disconnecting the battery'.
 - 4 Remove trim panel for engine compartment lid.
 - 4.1 Remove trim panel for belt strap guide at the left and right.For instructions, see ⇒ Workshop Manual '707519 Removing and installing side trim panel'.
 - 4.2 Remove side trim panel for rear luggage compartment at the left and right ⇒ Workshop Manual '700319 Removing and installing side trim panel for rear luggage compartment'.
 - 4.3 Remove C-pillar trim panel (rear part) at the left and right ⇒ Workshop Manual '70681907 Removing and installing C-pillar trim panel (rear part)'.

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- 4.4 Remove trim panel for package boxes at the left and right.For instructions, see ⇒ Workshop Manual '706619 Removing and installing package box'.
- 4.5 Remove rear cover ⇒ Workshop Manual '705319 Removing and installing rear cover'.
- 4.6 Remove reinforcement and upper part of trim panel for rear wall.

 For instructions, see ⇒ Workshop Manual '703119 Removing and installing trim panel for rear wall'.
- 4.7 Remove trim panel for engine compartment lid ⇒ Workshop Manual '700819 Removing and installing trim panel for convertible top compartment/engine compartment lid'.
- 5 Remove engine compartment lid ⇒ Workshop Manual '557819 Removing and installing engine compartment lid'.
- 6 Remove air cleaner housing ⇒ Workshop Manual '242519 Removing and installing air cleaner housing'.
- 7 Remove rear wheels ⇒ Workshop Manual '440519 Removing and reinstalling wheel'.
- 8 Remove cover for rear underbody ⇒ Workshop Manual '519419 Removing and installing cover for rear underbody'.
- 9 Remove diagonal braces on the rear axle ⇒ Workshop Manual '421320 Removing and installing struts'.
- 10 Remove support plate on the rear axle ⇒ Workshop Manual '421419 Removing and installing support plate'.
- 11 Remove rear-axle cross member ⇒ Workshop Manual '420619 Removing and installing rear-axle cross member'.

Replacing fastening screws for fuel collection pipes

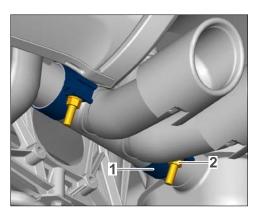
Work Procedure: 1 Lowering the engine to complete other work.

1.1 Loosen fastening nuts ⇒ Turning tailpipe cover-2- on both clamps ⇒ Turning tailpipe cover-1- for the tailpipe cover and turn the tailpipe cover as far as required until the tailpipes are pointing downwards.



Information

- The weight must be distributed uniformly on the oil pan.
- Never apply localised pressure to the oil pan.
- 1.2 Support the engine at the oil pan using a suitable transmission jack.



Turning tailpipe cover



Information

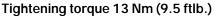
- When lowering the engine, it must not rest on the rear-axle cross member.
- The exhaust system must not touch against the body or rear apron when lowering it.
- · Always be careful of hoses, lines and cables when lowering the system!
- · Always avoid collisions!
- 1.3 Lower the engine as far as required until the fastening screws for the fuel collection pipes are accessible.

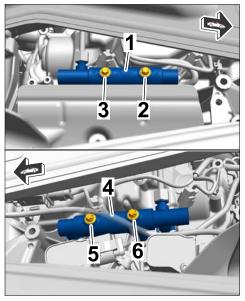
For instructions, see \Rightarrow Workshop Manual '1001IN Lowering the engine to complete other work'.

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- 2 Replace fastening screws for fuel collection pipes.
 - 2.1 Loosen and unscrew front fastening screw ⇒ Replacing fastening screws -2- (viewed in direction of travel) for fuel collection pipe on cylinder 1–3 ⇒ Replacing fastening screws -1-.
 - 2.2 Screw in and tighten new fastening screw, Part No. 000 043 306 00.
 - Tightening torque 13 Nm (9.5 ftlb.)
 - 2.3 Loosen and unscrew rear fastening screw

 ⇒ Replacing fastening screws -3- for fuel
 collection pipe on cylinder 1–3 ⇒ Replacing
 fastening screws -1-.
 - 2.4 Screw in and tighten new fastening screw, Part No. 000 043 306 00.





Replacing fastening screws

- 2.5 Repeat steps **3.1 to 3.4** on the fuel collection pipe on cylinder 4–6 ⇒ *Replacing fastening screws* **-4** in order to replace the fastening screws ⇒ *Replacing fastening screws* **-5 and 6**-.
- Raise the engine to installation position and secure it.
 For instructions, see ⇒ Workshop Manual '1001IN Lowering the engine to complete other work'.
- Turn tailpipe cover into installation position and align it with respect to the rear apron. Then secure the tailpipe cover.
 For instructions, see ⇒ Workshop Manual '263519 Removing and installing tailpipe cover'.

Concluding work

Work Procedure: 1 Install rear-axle cross member ⇒ Workshop Manual '420619 Removing and installing rear-axle cross member'.

- Install support plate on the rear axle \Rightarrow Workshop Manual '421419 Removing and installing support plate'.
- 3 Install diagonal braces on the rear axle ⇒ Workshop Manual '421320 Removing and installing struts'.
- 4 Install cover for rear underbody ⇒ Workshop Manual '519419 Removing and installing cover for rear underbody'.
- 5 Install rear wheels ⇒ Workshop Manual '440519 Removing and reinstalling wheel'.

- 6 Install air cleaner housing ⇒ Workshop Manual '242519 Removing and installing air cleaner housing'.
- 7 Install engine compartment lid ⇒ Workshop Manual '557819 Removing and installing engine compartment lid'.
- 8 Install trim panel for engine compartment lid.
 - Install trim panel for engine compartment lid \Rightarrow Workshop Manual '700819 Removing and installing trim panel for convertible top compartment/engine compartment lid'.
 - 8.2 Install reinforcement and upper part of trim panel for rear wall.

 For instructions, see ⇒ Workshop Manual '703119 Removing and installing trim panel for rear wall'.
 - 8.3 Install rear cover ⇒ Workshop Manual '705319 Removing and installing rear cover'.
 - 8.4 Install trim panel for package boxes at the left and right.

 For instructions, see ⇒ Workshop Manual '706619 Removing and installing package box'.
 - 8.5 Install C-pillar trim panel (rear part) at the left and right ⇒ Workshop Manual '70681907 Removing and installing C-pillar trim panel (rear part)'.
 - 8.6 Install side trim panel for rear luggage compartment at the left and right ⇒ Workshop Manual '700319 Removing and installing side trim panel for rear luggage compartment'.
 - 8.7 Install trim panel for belt strap guide at the left and right.For instructions, see ⇒ Workshop Manual '707519 Removing and installing side trim panel'.
- 9 Connect ground line for battery ⇒ Workshop Manual '2X00IN Work instructions after disconnecting the battery'.
- 10 Bleed the high-pressure side of the fuel system.

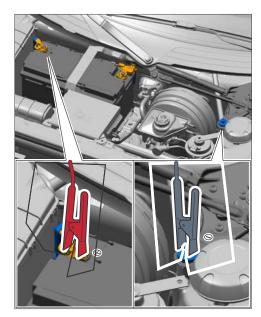
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10.1 Connect a battery charger or power supply, suitable for AGM type batteries, recommended current rating of 70A fixed voltage 13.5V to 14.5V.
 First connect the positive cable of the charger to the positive terminal of the battery and then connect the negative cable of the charger to the ground point for jump-lead starting ⇒ External power connection.
 Then switch on the battery charger and start

10.2 Switch on the ignition.

charging the battery.

- 10.3 Connect the PIWIS Tester to the vehicle communication module (VCI) via the USB cable. Then connect the communication module to the vehicle and switch on the PIWIS Tester.
- 10.4 On the PIWIS Tester start screen, call up the 'Diagnostics' menu.



External power connection

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

- 10.5 Bleed the high-pressure side of the fuel system using the PIWIS Tester ⇒ Workshop Manual '200107 Bleeding fuel system on high-pressure side First start function'.
- 10.6 Read out and erase the fault memory ⇒ Workshop Manual '033500 Fault memory for on-board diagnosis'.



Information

If control units are found to have faults that are **not** related to this workshop campaign, these must be **found** and **corrected** separately. This work **cannot** be invoiced under the workshop campaign number.

- 10.7 Switch off the ignition.
- 10.8 Disconnect the PIWIS Tester from the vehicle.
- 10.9 Switch off and disconnect the battery charger.
- 11 Remove the vehicle from the lifting platform.
- 12 Perform suspension alignment and make adjustments.
 - ⇒ Workshop Manual '449503 Suspension alignment, complete'
 - ⇒ Workshop Manual '4495TW Adjustment values for suspension alignment'

- 13 After correcting the wheel alignment values, carry out the following required steps.
 - 13.1 Calibrate steering-angle sensor *⇒ Workshop Manual '456005 Initialising and calibrating PSM steering-angle sensor'*.
 - 13.2 Teach steering lock settings for the power-steering gear ⇒ Workshop Manual '489025 Power-steering gear: Teaching steering lock settings'.
 - 13.3 **If installed**: Calibrate control unit for distance measuring sensor (ACC) ⇒ *Workshop Manual '278515 Adjusting control unit for distance measuring sensor'*.
 - 13.4 **If installed**: Calibrate front camera.

 For instructions, see ⇒ Workshop Manual '963855 Replacing front camera'.
- 14 Enter the campaign in the Warranty and Maintenance booklet.

References:

- ⇒ Workshop Manual '033500 Fault memory for on-board diagnosis'
- ⇒ Workshop Manual '1001IN Lowering the engine to complete other work'
- ⇒ Workshop Manual '2X00IN Work instructions after disconnecting the battery'
- ⇒ Workshop Manual '200107 Bleeding fuel system on high-pressure side First start function'
- ⇒ Workshop Manual '242519 Removing and installing air cleaner housing'
- ⇒ Workshop Manual '263519 Removing and installing tailpipe cover'
- ⇒ Workshop Manual '278515 Adjusting control unit for distance measuring sensor'
- ⇒ Workshop Manual '4X00IN Lifting the vehicle'
- ⇒ Workshop Manual '420619 Removing and installing rear-axle cross member'
- ⇒ Workshop Manual '421320 Removing and installing struts'
- ⇒ Workshop Manual '421419 Removing and installing support plate'
- ⇒ Workshop Manual '440519 Removing and installing wheel'
- ⇒ Workshop Manual '4495TW Adjustment values for suspension alignment'
- ⇒ Workshop Manual '449503 Suspension alignment, complete'
- ⇒ Workshop Manual '456005 Initialising and calibrating PSM steering-angle sensor'
- ⇒ Workshop Manual '489025 Power-steering gear: Teaching steering lock settings'
- ⇒ Workshop Manual '519419 Removing and installing cover for rear underbody'
- ⇒ Workshop Manual '557819 Removing and installing engine compartment lid'
- ⇒ Workshop Manual '700319 Removing and installing side trim panel for rear luggage compartment'
- ⇒ Workshop Manual '700819 Removing and installing trim panel for convertible top compartment/engine compartment lid'
- ⇒ Workshop Manual '703119 Removing and installing trim panel for rear wall'
- ⇒ Workshop Manual '705319 Removing and installing rear cover'
- ⇒ Workshop Manual '706619 Removing and installing package box'
- ⇒ Workshop Manual '70681907 Removing and installing C-pillar trim panel (rear part)'
- ⇒ Workshop Manual '707519 Removing and installing side trim panel'
- ⇒ Workshop Manual '963855 Replacing front camera'

Warranty processing

Information: Scope 1 – Scope 8: Not relevant for this vehicle type.

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Labor time: 542 TU



Information

The working times specified below were determined specifically for carrying out this campaign and may differ from the working times published in the Labor Operation List in PIWIS.

Scope 9: Replacing fastening screws for fuel collection pipes

Vehicle equipment:

- without adaptive cruise control ACC
- without front camera

Working time:

Replacing fastening screws for fuel collection pipes

Includes: Raising and lowering the vehicle

Reducing fuel pressure

Disconnecting and connecting battery

Removing and installing trim panel for belt strap guide at the

left and right

Removing and installing side trim panel for rear luggage

compartment at the left and right

Removing and installing C-pillar trim panel (rear part) at the

left and right

Removing and installing trim panel for package boxes at the

left and right

Removing and installing rear cover

Removing and installing reinforcement/upper part of trim

panel for rear wall

Removing and installing trim panel for engine compartment

lid

Removing and installing engine compartment lid

Removing and installing air cleaner housing

Removing and installing rear wheels

Removing and installing cover for rear underbody

Removing and installing diagonal braces
Removing and installing support plate

Removing and installing rear-axle cross member

Loosening and securing tailpipe cover

Loosening and securing engine

Connecting and disconnecting battery charger

Connecting and disconnecting PIWIS Tester

Bleeding fuel high-pressure system

Reading out and erasing fault memory

Performing suspension alignment and adjusting the vehicle

Calibrating steering-angle sensor

Without:	Calib	Teaching steering lock settings Calibrating control unit for distance measuring sensor Calibrating front camera				
Parts requi	red:					
000 043 30	6 00	Torx screw, BM 6 x 85 – Fuel collection pipe	4 ea.			
999 076 05	3 01	Hexagon nut, M10 – Rear diagonal brace	12 ea.			
999 072 84	0 01	Hexagon-head bolt, M10 x 35 – Diagonal brace to body	2 ea.			
N 908 484 0)5	Hexagon nut, M12 x 1.5 – Engine carrier to engine mount	2 ea.			
⇒ Damage Code AH01 099 000 2						

Scope 10: Replacing fastening screws for fuel collection pipes

Vehicle equipment:

Adaptive cruise control ACC (I-no. 456) and/or front camera (I-no. 631, 632 or 852)

Working time:

Replacing fastening screws for fuel collection pipes

Includes: Raising and lowering the vehicle

Reducing fuel pressure

Disconnecting and connecting battery

Removing and installing trim panel for belt strap guide at the

left and right

Removing and installing side trim panel for rear luggage

compartment at the left and right

Removing and installing C-pillar trim panel (rear part) at the

left and right

Removing and installing trim panel for package boxes at the

left and right

Removing and installing rear cover

Removing and installing reinforcement/upper part of trim

panel for rear wall

Removing and installing trim panel for engine compartment

lid

Removing and installing engine compartment lid Removing and installing air cleaner housing

Removing and installing rear wheels

Removing and installing cover for rear underbody

Labor time: 592 TU

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Removing and installing diagonal braces

Removing and installing support plate

Removing and installing rear-axle cross member

Loosening and securing tailpipe cover

Loosening and securing engine

Connecting and disconnecting battery charger

Connecting and disconnecting PIWIS Tester

Bleeding fuel high-pressure system

Reading out and erasing fault memory

Performing suspension alignment and adjusting the vehicle

Calibrating steering-angle sensor

Teaching steering lock settings

Calibrating control unit for distance measuring sensor

Calibrating front camera

Parts required:

000 043 306 00 T	orx screw, BM 6 x 85	4 ea.

Fuel collection pipe

999 076 053 01 Hexagon nut, M10 12 ea.

- Rear diagonal brace

999 072 840 01 Hexagon-head bolt, M10 x 35 2 ea.

- Diagonal brace to body

N 908 484 05 Hexagon nut, M12 x 1.5 2 ea.

- Engine carrier to engine mount

⇒ Damage Code AH01 099 000 2

Scope 12 - Checking engine number



Information

Vehicles with replacement engine installed

On vehicles in which a **replacement engine was installed** and the relevant **engine number was not documented**, we **cannot be sure** that the correct fastening screws were used. The engine number on these vehicles must first be checked.

A corresponding **list of the replacement engines affected by the campaign** is available for this purpose in the PPN portal.

If a **replacement engine affected** by this campaign was **installed** in the respective vehicle, the **campaign** must be **carried out** in accordance with the scope that is also assigned to the vehicle. If the respective **replacement engine is not affected**, **no further action** is required.

Work Procedure: 1 Raise the vehicle on a lifting platform ⇒ Workshop Manual '4X00IN Lifting the vehicle'.

Labor time: 47 TU

- 2 Remove cover for rear underbody ⇒ Workshop Manual '519419 Removing and installing cover for rear underbody'.
- 3 Check the engine number using the list provided in the PPN portal.
 - The **engine number** of the installed engine **is included in the list of engines**: The **fastening screws** for the fuel collection pipes must be **replaced**. Continue with ⇒ *Technical Information 'AHO100 AHO1 Recall campaign Replacing fastening screws for fuel collection pipes'*.
 - The engine number that was read off is not included in the list: The installed engine is not affected. Complete the vehicle and remove it from the lifting platform. End of action required. For invoicing, see Scope 12.

Scope: Scope 12 - Checking engine number



Information

Scope 12 must only be invoiced if the installed replacement engine is **not** affected by this campaign and **no fastening screws must be replaced**.

Working time:

Checking engine number of the installed replacement engine

Includes: Raising and lowering the vehicle

Removing and installing cover for rear underbody

⇒ Damage Code AH01 099 000 1

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Tester are the ones that must be followed.

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