AMA2 - Replacing Seat Occupancy Detection System for Passenger Seat (USA/Canada) (Recall Campaign)

Revision:	This bulletin replaces bulletin Group 6 50/21 AMA2, dated November 4, 2021.
Model Year:	**As of 2015 up to 2018**
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.
Model Line:	**Macan**
Equipment:	Country equipment USA (C02)/Canada (C36)
Concerns:	**Seat occupancy detection system for passenger seat**
Information:	**Sensor mats for seat occupancy detection, on which the conductive fabric can break, were installed in the passenger seat on the affected vehicles.** If the conductive fabric breaks, the front airbags on the passenger's side will be deactivated because correct seat occupancy detection can no longer be guaranteed. The airbag warning light and Passenger Airbag OFF light will be activated in order to alert the driver.
Action required:	Replace the seat occupancy detection system according to the campaign scope assigned to the respective vehicle.

Information

To find out which campaign scope is assigned to the respective vehicle for **replacing the seat occupancy detection system**, see PIWIS Vehicle Information.

The **part numbers** of the **parts required** for the respective vehicle are specified in the **assigned scope for "Replacing seat occupancy detection system for passenger seat"**.
For an overview of the campaign scopes, see: ⇒ *Technical Information 'Warranty processing'*

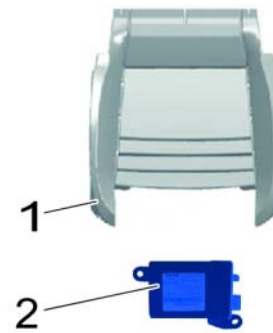|	
Affected Vehicles:	Only vehicles assigned to the campaign (see also PCSS Vehicle Information).

Spare parts information

🛈 **Information**

When replacing the occupant classification components, all coordinated components (padding, sensor mat and control unit) in the repair kit must be replaced.

Due to worldwide semiconductor bottlenecks at individual suppliers, we were **unfortunately unable** to **include** the corresponding **occupant classification control units** in the repair kit as part of this campaign.

To avoid delay in the implementation of this measure, the **occupant classification control unit installed in the vehicle is reused** in this particular case.

1 – Padding with affixed sensor mat - **replace**

2 – Occupant classification control unit - **reuse**

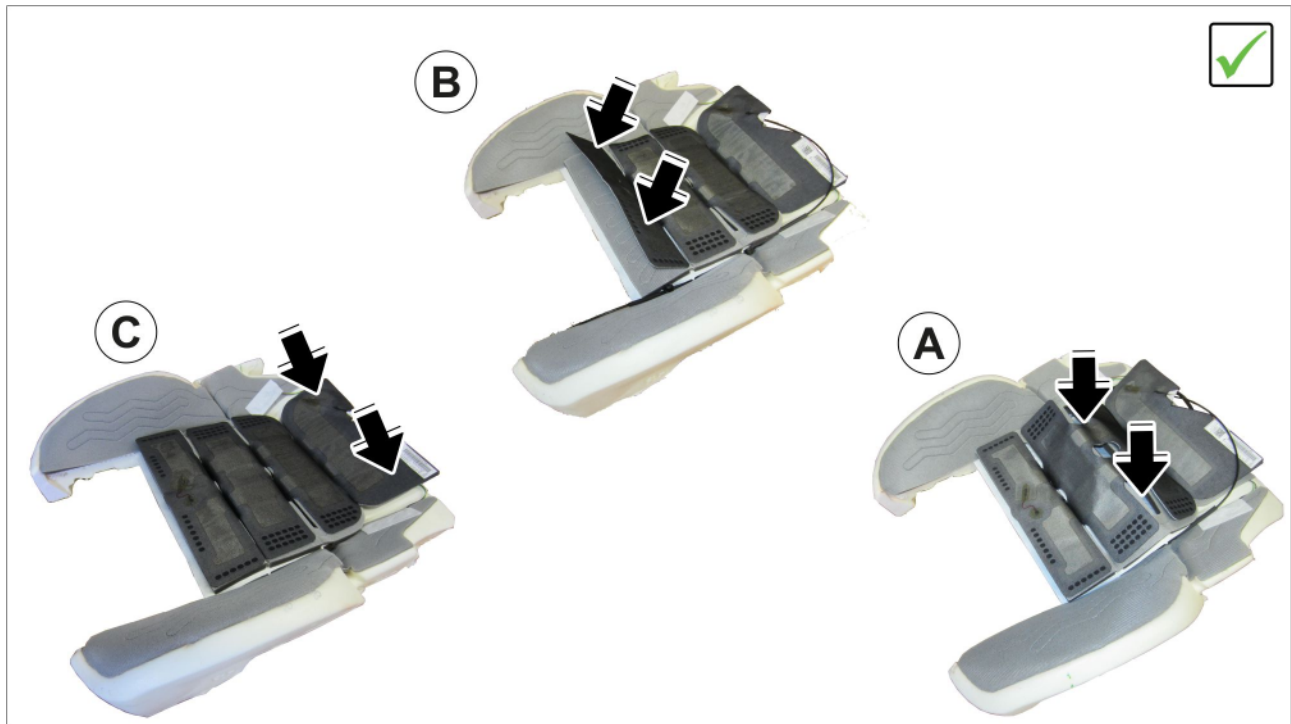*Contents of occupant classification system repair kit*

When implementing this measure, pay particular attention to the following:

- The **sensor mat** for the occupant classification system must **not** be **removed** from the foam part.

- **Mixed installation**, e.g. "old" padding and "new" sensor mat, is **not permitted**.

- The **existing control unit** for occupant classification must not be removed and must be **reprogrammed** with the provided programming box.

- The one-time procurement of the required programming box can be found in the section "Required tools".

- The **direct programming of the control unit** occupant classification with the currently valid software is **only approved and released within the scope of this campaign**.

- **After carrying out this campaign**, in the event of a further repair case, the **usual repair concept with complete replacement of all components** (including control units) for occupant classification **must be used**.

🛈 **Information**

Between delivery of the padding to its installation in the front seat, the glued sensor mat can partially detach from the foam part over longer periods of time. This does not constitute a material defect and will have no influence on the quality of the sensor mat.

Overview of padding

If the sensor mat has come loose as shown in the picture, then the sensor mat must be pressed back in place before installation as shown in pictures A, B, C.

Complete adhesive strength is only achieved after attaching or clamping the seat cover.

Required tools

Information

Purchasing the "AMA2 ReProgramming Tool" programming box

A special programming box is required to program the occupant classification control unit with the software required for the padding including sensor mat. This programming box, including its wiring harness, can be obtained from the **online shop of TKR Automotive GmbH**.

One programming box is provided for each affected Porsche dealer. **Only one programming box may** therefore be ordered for each affected Porsche dealer.

The link for the online shop is:
http://www.tkr-connector.com
For more information about using the online shop, see:
https://ppn.porsche.com/portal/community/porsc-he_cars_north_america/after_sales/service/special-tools-and-equipment/blog/2021/09/22/ama2-recall-campaign-ordering-the-tkr-programming-box.

TKR Automotive GmbH online shop

There are various search functions to help you identify the **"AMA2 ReProgramming Tool for Occupant"** programming box, e.g. by entering the campaign number or using a graphic search function.

The programming box consists of two components:

- **Item 1. Programming Box**

- **Item 2. Cable set with connections to cigarette lighter and control unit**

Please read the following information about processing the campaign:

- If the programming box was ordered on account, the invoice to TKR Automotive GmbH must be paid within the 14-day payment period.

AMA2 programming box

- The programming box must only be invoiced **once** for the first vehicle during **warranty processing** at each Porsche dealer. Only the required **materials and working time** must be invoiced in the campaign claim for the remaining vehicles on which work is carried out as part of this campaign at the Porsche dealer.

- For warranty processing, the **Part No. AMA20000002** with the "programming box" designation can be invoiced as an **additional part** in the warranty claim. Cost: $1,785.

- The shipping costs must only be invoiced once for the first vehicle during warranty processing by specifying **Part No. AMA20000003** with the designation "Shipping costs" as an **additional part**

and using the amount as per invoice. For all other vehicles, only the materials and working time must be invoiced in the warranty claim.

- Document a copy of the invoice in the warranty claim.

Tools:
- Battery charger with a current rating of **at least 90 A** and - if required - **also** with a **current and voltage-controlled charge map** for lithium starter batteries, e.g. **VAS 5908 Battery charger, 90 A**
- **9900 - PIWIS Tester 3**
- **VAS 6095A Engine and gearbox bracket**
- **VAS 6136 Seat repair stand**
- **VAG 1634B Cushion clip pliers**
- Torque wrench 2 - 10 Nm (1.5 - 7.5 ftlb.), e.g. **VAG 1783 torque wrench, 2 - 10 Nm (1.5 - 7.5 ftlb.)**
- Torque wrench, 6-50 Nm (4.5-37 ftlb.), e.g. **VAG 1331A Torque wrench, 6-50 Nm (4.5-37 ftlb.)**
- **"AMA2 ReProgramming Tool for Occupant"** programming box

Replacing seat occupancy detection system for passenger seat

Overview:

Installation position of seat occupancy detection system for passenger seat

Work
Procedure:

Preparatory work

1 Create vehicle analysis log (VAL) using the PIWIS Tester. Mark the vehicle analysis log you have just created with the attribute "Pre-VAL" and after carrying out the campaign, return it using the PIWIS Tester.

2 Remove passenger seat. ⇒ *Workshop Manual '720119 Removing and installing front seat'*

3 Remove padding for front seat ⇒ *Workshop Manual '741019 Removing and installing padding for front seat'.*

Replacing seat occupancy detection system for passenger seat

4 Replace padding for front seat including sensor mat. ⇒ *Workshop Manual '741055 Replacing padding for front seat'*

ℹ️ Information

Information: Incorrectly installed electrical connectors and falsely inserted metal fastening clips for the leather seat can also cause programming and calibration errors.

5 Replace occupant detection control unit. ⇒ *Workshop Manual '696819 Removing and installing occupant detection control unit'*

Concluding work

6 Install padding for front seat. ⇒ *Workshop Manual '741019 Removing and installing padding for front seat'*

7 Install the passenger seat and reprogram the control unit for occupant detection using the programming box.

   7.1 Remove the passenger seat from the mounting device and position it in the vehicle.

   7.2 Connect connectors for passenger seat. ⇒ *Workshop Manual '720119 Removing and installing front seat'*

   7.3 Connect the battery. ⇒ *Workshop Manual '2X00IN Work instructions after disconnecting the battery'.*

   7.4 Adjust the passenger seat so that the electrical plug connection is accessible to the occupant detection control unit.

7.5   Unlock the secondary locking of the plug connection ⇒ *Re-programming control unit* **-1-** on the occupant detection control unit ⇒ *Re-programming control unit* **-2-** (⇒ *Re-programming control unit* **-arrow A-**) and unplug the plug ⇒ *Re-programming control unit* **-arrow B-**.

7.6   Connect the cable set for the programming box to the occupant detection control unit and to the cigarette lighter in the centre console.

7.7   Switch on the ignition and reprogram the occupant detection control unit in the vehicle according to the instructions on the programming box.

Re-programming control unit

Re-programming control unit

1   – Start button
2   – LED display

ℹ️   **Information**

Information: If the green LED does not appear, then the data set can be checked for confirmation via the PIWIS Tester or the VALs. (See step 7.11) This step is only carried out after the occupant detection control unit has been reprogrammed.

7.8   After programming, switch off the ignition and disconnect the programming box.

7.9   Plug in the plug connection on the occupant detection control unit and close the secondary lock on the plug.

7.10 Fully install the passenger seat. ⇒ *Workshop Manual '720119 Removing and installing front seat'*

7.11 For specific information on control unit programming in this step, see the table below.

Airbag → Coding	
'Seat occupancy detection control unit, data record identifier'*	
Current Versions	Target Versions
A03/A04	A05
A53/A54	A55
B53/B54	B55
B03/B04	B05
K03/K04	K05
K53/K54	K55
S03/S04	S05
G03	G04
G53	G54
S32	S33
S53/S54	S55

*The vehicle will only have one of the possible versions listed.

Control unit for seat occupancy detection - passenger side → ECU information		
Label Description	Current Version	Target Version**
'Occupant detection'	5C6959339B	5C6959339C
'Occupant detection: software version'	0046	0047
'Occupant detection: Part number'	5C6959339C	5C6959339C

**Target version for all vehicles is the same, regardless of equipment or options

8 Re-calibrate occupant detection control unit.
For instructions, see: ⇒ *Workshop Manual '696855 Replacing occupant detection control unit'*.

ⓘ Information

If reprogramming of the occupant detection control unit passes (refer to Step 7.11) but the recalibration of the occupation control unit fails, it is recommended to replace the 'seat occupancy detection repair kit' (sensor mat only).

9　On vehicles with seat memory on passenger's side, perform standardization for seat motors. For instructions, see: ⇒ *Workshop Manual '729355 Replacing control unit for memory seat adjustment'.*

10　Create vehicle analysis log (VAL) using the PIWIS Tester. Mark the vehicle analysis log you have just created with the attribute "Final VAL" and after carrying out the campaign, return it using the PIWIS Tester.

11　Enter the campaign in the Warranty and Maintenance booklet.

Warranty processing

i **Information**

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

Scope 1-11:　**Only relevant for vehicles outside the USA/Canada – see relevant Technical Information for these vehicle types.**

Scope 12:　Vehicles **with basic seat (Alcantara) without seat heating**

Working time:		
Replacing seat occupancy detection system for passenger seat		Labor time: **203 TU**
Includes:　　Disconnecting and connecting battery		
Removing and installing passenger seat		
Removing and installing trim panel for seat		
Removing and installing cover for backrest		
Removing and installing padding for front seat		
Replacing padding for front seat		
Connecting and disconnecting PIWIS Tester		
Re-calibrating occupant detection control unit		
Standardizing control unit for seat memory		
Reading out and erasing fault memories		
Creating Vehicle Analysis Logs (VAL) before and after the campaign		
Parts required:		
V04015256BG	Seat occupancy detection repair kit	1 ea.
PAF911475	Fastening screws	4 ea.
V04015261AA	Fastening clips	15 ea.

| PAF038501 | Expansion rivet | 2 ea. |
| AMA20000001* | Tie-wrap, approx. 3.0 mm/ 0.12 in/ 0.12 in wide e.g. tie-wrap, Part No. 99951307540 | 1 ea. (for warranty invoicing only) |

Required tools:

| AMA20000002** | Programming box | 1 ea. (for warranty invoicing only) |
| AMA20000003*** | Shipping costs | 1 ea. (for warranty invoicing only) |

* For warranty invoicing for Part No. AMA20000001, enter "expendable items" designation as sublet item & additional measures Cost: $1.88.

The programming box must only be invoiced **once for the first vehicle during **warranty processing** at each Porsche dealer. For warranty processing, the **Part No. AMA20000002** with the "programming box" designation can be invoiced as an **additional part** in the warranty claim. Cost: $1,785.

*** The shipping costs must only be invoiced **once for the first vehicle** during warranty processing by specifying **Part No. AMA20000003** with the designation "Shipping costs" as an **additional part** and using the amount as per invoice. **Please document a copy of the invoice for this in the warranty claim.** For all other vehicles, only the part and working time must be invoiced in the warranty claim.

⇒ **Damage Code AMA2 099 000 2**

Scope 13: Vehicles **with comfort seat and seat heating**

Working time:

Replacing seat occupancy detection system for passenger seat   Labor time: **231 TU**
Includes: Disconnecting and connecting battery
               Removing and installing passenger seat
               Removing and installing trim panel for seat
               Removing and installing cover for backrest
               Removing and installing padding for front seat
               Replacing padding for front seat
               Connecting and disconnecting PIWIS Tester
               Re-calibrating occupant detection control unit
               Standardizing control unit for seat memory
               Reading out and erasing fault memories

Creating Vehicle Analysis Logs (VAL) before and after the campaign

Parts required:

V04015256BI	Seat occupancy detection repair kit	1 ea.
PAF911475	Fastening screws	4 ea.
V04015261AA	Fastening clips	15 ea.
PAF038501	Expansion rivet	2 ea.
AMA20000001*	Tie-wrap, approx. 3.0 mm/ 0.12 in wide e.g. tie-wrap, Part No. 99951307540	1 ea. (for warranty invoicing only)

Required tools:

AMA20000002**	Programming box	1 ea. (for warranty invoicing only)
AMA20000003***	Shipping costs	1 ea. (for warranty invoicing only)

* For warranty invoicing for Part No. AMA20000001, enter "expendable items" designation as sublet item & additional measures Cost: $1.88.

The programming box must only be invoiced **once for the first vehicle during **warranty processing** at each Porsche dealer. For warranty processing, the **Part No. AMA20000002** with the "programming box" designation can be invoiced as an **additional part** in the warranty claim. Cost: $1,785.

*** The shipping costs must only be invoiced **once for the first vehicle** during warranty processing by specifying **Part No. AMA20000003** with the designation "Shipping costs" as an **additional part** and using the amount as per invoice. **Please document a copy of the invoice for this in the warranty claim.** For all other vehicles, only the part and working time must be invoiced in the warranty claim.

⇒ **Damage Code AMA2 099 000 2**

Scope 14:   Vehicles **with comfort seat and seat heating/seat ventilation**

Working time:

Replacing seat occupancy detection system for passenger seat   Labor time: **231 TU**
Includes: Disconnecting and connecting battery
                   Removing and installing passenger seat
                   Removing and installing trim panel for seat
                   Removing and installing cover for backrest
                   Removing and installing padding for front seat
                   Replacing padding for front seat
                   Connecting and disconnecting PIWIS Tester
                   Re-calibrating occupant detection control unit
                   Standardizing control unit for seat memory
                   Reading out and erasing fault memories
                   Creating Vehicle Analysis Logs (VAL) before and after the
                   campaign

Parts required:

V04015256BK	Seat occupancy detection repair kit	1 ea.
PAF911475	Fastening screws	4 ea.
V04015261AA	Fastening clips	15 ea.
PAF038501	Expansion rivet	2 ea.
AMA20000001*	Tie-wrap, approx. 3.0 mm/ 0.12 in wide e.g. tie-wrap, Part No. 99951307540	1 ea. (for warranty invoicing only)

Required tools:

AMA20000002**	Programming box	1 ea. (for warranty invoicing only)
AMA20000003***	Shipping costs	1 ea. (for warranty invoicing only)

* For warranty invoicing for Part No. AMA20000001, enter "expendable items" designation as sublet item & additional measures Cost: $1.88.

The programming box must only be invoiced **once for the first vehicle during **warranty processing** at each Porsche dealer. For warranty processing, the **Part No. AMA20000002** with the "programming box" designation can be invoiced as an **additional part** in the warranty claim. Cost: $1,785.

*** The shipping costs must only be invoiced **once for the first vehicle** during warranty processing by specifying **Part No. AMA20000003** with the designation "Shipping costs" as an **additional part** and using the amount as per invoice. **Please document a copy of the invoice for this in the warranty claim.** For all other vehicles, only the part and working time must be invoiced in the warranty claim.

⇒ **Damage Code AMA2 099 000 2**

Scope 15: Vehicles **with 18-way sports seat (Alcantara or leather) and seat heating**

Working time:

Replacing seat occupancy detection system for passenger seat	Labor time: **231 TU**

Includes:
- Disconnecting and connecting battery
- Removing and installing passenger seat
- Removing and installing trim panel for seat
- Removing and installing cover for backrest
- Removing and installing padding for front seat
- Replacing padding for front seat
- Connecting and disconnecting PIWIS Tester
- Re-calibrating occupant detection control unit
- Standardizing control unit for seat memory
- Reading out and erasing fault memories
- Creating Vehicle Analysis Logs (VAL) before and after the campaign

Parts required:

V04015256A	Seat occupancy detection repair kit	1 ea.
PAF911475	Fastening screws	4 ea.
V04015261AA	Fastening clips	22 ea.
PAF038501	Expansion rivet	2 ea.
AMA20000001*	Tie-wrap, approx. 3.0 mm/ 0.12 in wide e.g. tie-wrap, Part No. 99951307540	1 ea. (for warranty invoicing only)

Required tools:

AMA20000002**	Programming box	1 ea. (for warranty invoicing only)
AMA20000003***	Shipping costs	1 ea. (for warranty invoicing only)

* For warranty invoicing for Part No. AMA20000001, enter "expendable items" designation as sublet item & additional measures Cost: $1.88.

The programming box must only be invoiced **once for the first vehicle during **warranty processing** at each Porsche dealer. For warranty processing, the **Part No. AMA20000002** with the "programming box" designation can be invoiced as an **additional part** in the warranty claim. Cost: $1,785.

*** The shipping costs must only be invoiced **once for the first vehicle** during warranty processing by specifying **Part No. AMA20000003** with the designation "Shipping costs" as an **additional part** and using the amount as per invoice. **Please document a copy of the invoice for this in the warranty claim.** For all other vehicles, only the part and working time must be invoiced in the warranty claim.

⇒ **Damage Code AMA2 099 000 2**

Scope 16:   Vehicles **with 18-way sports seat and seat heating/seat ventilation**

Working time:

Replacing seat occupancy detection system for passenger seat	Labor time: **231 TU**

Includes:
- Disconnecting and connecting battery
- Removing and installing passenger seat
- Removing and installing trim panel for seat
- Removing and installing cover for backrest
- Removing and installing padding for front seat
- Replacing padding for front seat
- Connecting and disconnecting PIWIS Tester
- Re-calibrating occupant detection control unit
- Standardizing control unit for seat memory
- Reading out and erasing fault memories
- Creating Vehicle Analysis Logs (VAL) before and after the campaign

Parts required:

V04015256BL	Seat occupancy detection repair kit	1 ea.
PAF911475	Fastening screws	4 ea.
V04015261AA	Fastening clips	22 ea.
PAF038501	Expansion rivet	2 ea.
AMA20000001	Tie-wrap, approx. 3.0 mm/ 0.12 in wide e.g. tie-wrap, Part No. 99951307540	1 ea. (for warranty invoicing only)*

Required tools:

| AMA20000002** | Programming box | 1 ea. (for warranty invoicing only) |
| AMA20000003*** | Shipping costs | 1 ea. (for warranty invoicing only) |

* For warranty invoicing for Part No. AMA20000001, enter "expendable items" designation as sublet item & additional measures Cost: $1.88.

The programming box must only be invoiced **once for the first vehicle during **warranty processing** at each Porsche dealer. For warranty processing, the **Part No. AMA20000002** with the "programming box" designation can be invoiced as an **additional part** in the warranty claim. Cost: $1,785.

*** The shipping costs must only be invoiced **once for the first vehicle** during warranty processing by specifying **Part No. AMA20000003** with the designation "Shipping costs" as an **additional part** and using the amount as per invoice. **Please document a copy of the invoice for this in the warranty claim.** For all other vehicles, only the part and working time must be invoiced in the warranty claim.

⇒ **Damage Code AMA2 099 000 2**

Scope 17: Vehicles **with 8-way sports seat GTS (Alcantara or leather) and seat heating**

Working time:

| Replacing seat occupancy detection system for passenger seat | Labor time: **231 TU** |
| Includes: Disconnecting and connecting battery | |

Includes:
- Disconnecting and connecting battery
- Removing and installing passenger seat
- Removing and installing trim panel for seat
- Removing and installing cover for backrest
- Removing and installing padding for front seat
- Replacing padding for front seat
- Connecting and disconnecting PIWIS Tester
- Re-calibrating occupant detection control unit
- Standardizing control unit for seat memory
- Reading out and erasing fault memories
- Creating Vehicle Analysis Logs (VAL) before and after the campaign

Parts required:

V04015256AR	Seat occupancy detection repair kit	1 ea.
PAF911475	Fastening screws	4 ea.
V04015261AA	Fastening clips	22 ea.

PAF038501	Expansion rivet	2 ea.
AMA20000001*	Tie-wrap, approx. 3.0 mm/ 0.12 in wide e.g. tie-wrap, Part No. 99951307540	1 ea. (for warranty invoicing only)
Required tools:		
AMA20000002**	Programming box	1 ea. (for warranty invoicing only)
AMA20000003***	Shipping costs	1 ea. (for warranty invoicing only)

* For warranty invoicing for Part No. AMA20000001, enter "expendable items" designation as sublet item & additional measures Cost: $1.88.
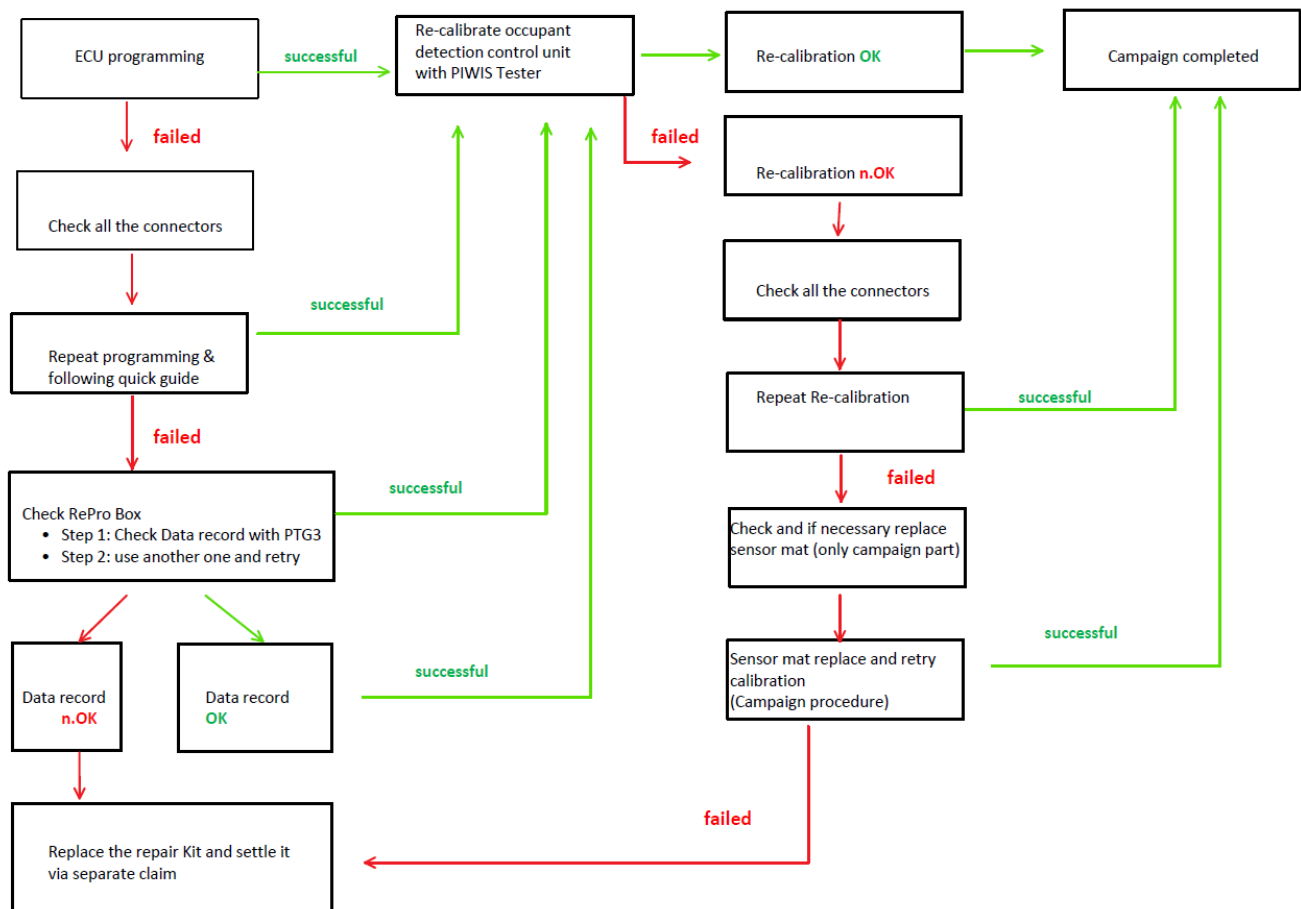
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⇒ **Damage Code AMA2 099 000 2**

Scope 18:   Vehicles **with standard seat (Alcantara, partial leather or leather) and seat heating**

Working time:

Replacing seat occupancy detection system for passenger seat   Labor time: **203 TU**
Includes: Disconnecting and connecting battery
                    Removing and installing passenger seat
                    Removing and installing trim panel for seat
                    Removing and installing cover for backrest
                    Removing and installing padding for front seat
                    Replacing padding for front seat
                    Connecting and disconnecting PIWIS Tester
                    Re-calibrating occupant detection control unit
                    Standardizing control unit for seat memory
                    Reading out and erasing fault memories

Creating Vehicle Analysis Logs (VAL) before and after the campaign

Parts required:

V04015256BM	Seat occupancy detection repair kit	1 ea.
PAF911475	Fastening screws	4 ea.
V04015261AA	Fastening clips	15 ea.
PAF038501	Expansion rivet	2 ea.
AMA20000001	Tie-wrap, approx. 3.0 mm/ 0.12 in wide e.g. tie-wrap, Part No. 99951307540	1 ea. (for warranty invoicing only)*

Required tools:

AMA20000002**	Programming box	1 ea. (for warranty invoicing only)
AMA20000003***	Shipping costs	1 ea. (for warranty invoicing only)

* For warranty invoicing for Part No. AMA20000001, enter "expendable items" designation as sublet item & additional measures Cost: $1.88.

The programming box must only be invoiced **once for the first vehicle during **warranty processing** at each Porsche dealer. For warranty processing, the **Part No. AMA20000002** with the "programming box" designation can be invoiced as an **additional part** in the warranty claim. Cost: $1,785.

*** The shipping costs must only be invoiced **once for the first vehicle** during warranty processing by specifying **Part No. AMA20000003** with the designation "Shipping costs" as an **additional part** and using the amount as per invoice. **Please document a copy of the invoice for this in the warranty claim.** For all other vehicles, only the part and working time must be invoiced in the warranty claim.

⟹ **Damage Code AMA2 099 000 2**

Additional instructions if programming is aborted

If individual programming steps or subsequent work could not be carried out correctly, see Workshop Manual for the basic procedure for control unit programming using the PIWIS Tester Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester - section on "Fault finding"'. : You will also find further information and instructions specifically for the programming and calibration procedures in the fault-tree diagram below:

Troubleshooting process AMA2