

PORSCHE CARS NORTH AMERICA - INC.

# Technical Bulletin

<b>Model</b> 911 Carrera 2/4 1989-91	<b>Group</b> 2
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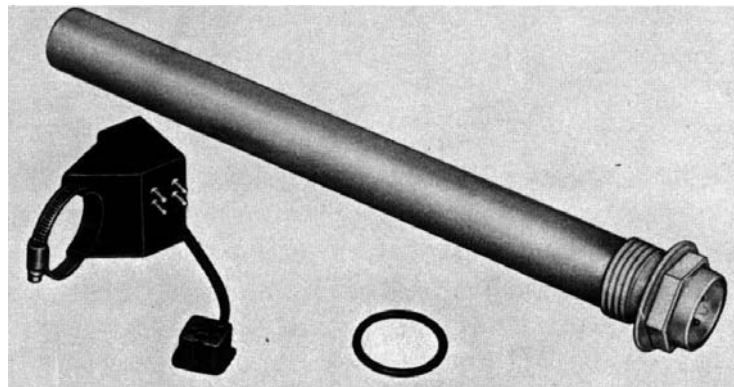
**Subject:** Fuel Level Gauge Sender Replacement and/or Checking

<b>Part Identifier</b> 2015	<b>Number</b> 9101
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This is to notify you of a Service Action on the fuel level gauge sender for all 1989, 1990 and some 1991 model Carrera 2/4 Porsches. The VIN ranges are as follows:

- 1989 Carrera 4 — WP0AB096 \_ KS450061 to WP0AB096 \_ KS451117
- 1990 Carrera 2/4 — WP0AB296 \_ LS450061 to WP0AB296 \_ LS452119
- WP0BB296 \_ LS460061 to WP0BB296 \_ LS460729
- WP0CB296 \_ LS470061 to WP0CB296 \_ LS472169
- 1991 Carrera 2/4 — WP0AB296 \_ MS410061 to WP0AB296 \_ MS410883
- WP0BB296 \_ MS440061 to WP0BB296 \_ MS440392
- WP0CB296 \_ MS460061 to WP0CB296 \_ MS460899

The new fuel level gauge sender is a two-piece sender unit consisting of a separate sensor and a separate electronic component. The new two-piece fuel level gauge sender components parts set can be ordered under Part Number 000 043 175 00.



The new sender unit must be installed on all vehicles falling within the VIN ranges listed above **and** which have a single-piece fuel level gauge sender with a production date of "25-10-90" **or earlier**. The one-part fuel level gauge sender, Part Number 964 641 801 01, with a production date of "26-10-90" **or later**, need not be replaced unless it is not functioning. This production date is shown on a sticker affixed to the hexagon nut of the sender.

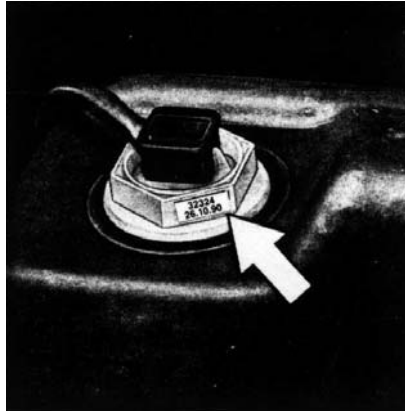
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# SERVICE

Page 1 of 3  
March 12, 1991

<b>Technical Bulletin</b>	<b>Model</b> 911 Carrera 2/4 1989-91	<b>Group</b> 2
	<b>Subject:</b> Fuel Level Gauge Sender Replacement and/or Checking	<b>Part Identifier</b> 2015



The fuel level gauge sender shown above, with production date "26-10-90" or later, **should not** be replaced if the sender is operating properly. If, however, the sender is not operating, it must be replaced with the sender components shown on page one (1). The parts set is Part Number 000 043 175 00.

**Note:** In addition to this Technical Bulletin, Porsche Cars N.A., will mail a letter this week to all dealers further expanding on this Service Action. See enclosed copy.

**Customer Notification**

The Customer Notification will be by letter mailed 1st class during the week of March 18, 1991. This letter will also include a postage pre-paid postcard to inform Porsche Cars N.A., by the vehicle owner, of any status change, if need be. See enclosed copies.

Please perform this Service Action on all applicable customer vehicles in your dealership.

For those vehicles for which the sales information is not in our files, the notification will be addressed and mailed to the dealer who received that vehicle. If the vehicle is in dealer inventory, new or used and/or in demo use, this Service Action should be performed without delay. If the vehicle has been retailed or dealer traded, the dealer is to make the necessary arrangements to have the customer or receiving dealer contacted and this action performed.

A listing of all VIN's with owners' names and addresses in your area within the Service Action VIN ranges will be sent to you shortly.

**Work Procedure**

See attachments: Please note that there are two (2) different work procedures: 1) Work Procedure "A", for the replacement of a single piece unit with a production date of **25-10-90 or earlier** with a new unit; and 2) Work Procedure "B", for checking such a unit, for the production date of the senders for all vehicles within the affected ranges.

# Technical Bulletin

**Model**  
911 Carrera 2/4  
1989-91

**Group**  
2

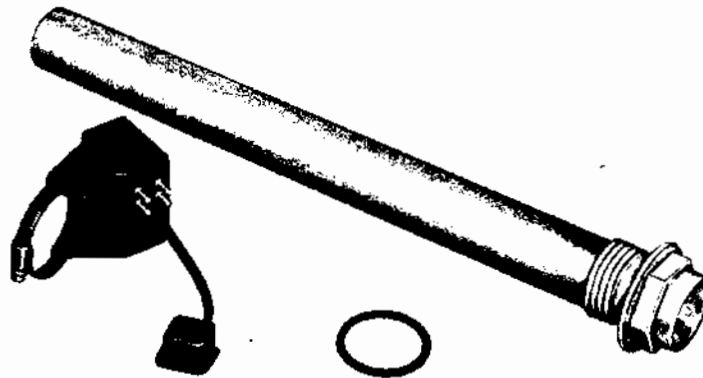
**Subject:** Fuel Level Gauge Sender  
Replacement and/or Checking

**Part Identifier**  
2015

**Number**  
9101

## Parts Requirement

One initial shipment of parts and copies of the book, Porsche — The Fine Art of the Sports Car (Part Number PNA 000 099), to commence this Service Action will be shipped to your dealership by March 15, 1991. Additional parts and books are to be ordered on a need-to-have basis through your Porsche Cars N.A. parts Customer Service Representative at our Reno PDC.



Shown above is sender components parts set, Part Number 000 043 175 00 which consists of:

Sender	964 641 801 02
Control Unit	964 641 081 00
Clamp	N 024 507 3
Sealing O-ring	999 707 115 40

This set will be discontinued at a later date; the individual parts will then be available only.

**Note:** With each fuel level gauge sender ordered, Part Number 000 043 175 00, to perform the 091 Service Action, the book, Part Number PNA 000 099 will also be shipped.

## Time Allowance

- 30 TU for replacement of sender, including all associated work as described in work procedure "A".
- 20 TU for checking of sender, dated "26-10-90" or later, as described in work procedure "B".

## Administrative Procedure

**See attachments:** Please note that there are three (3) different administrative procedures also, "A", "B" and "C".



(COPY OF LETTER TO DEALERS)

TO: ALL PORSCHE DEALER PRINCIPALS  
ALL PORSCHE SERVICE MANAGERS  
ALL PORSCHE PARTS MANAGERS

DATE: MARCH 15, 1991

SUBJECT: SERVICE ACTION, FUEL GAUGE SENDING UNIT,  
911 CARRERA 2 AND 4

Enclosed, for your information, is a copy of the Service Action announcement that will be sent next week to all owners of 911 Carrera 2's and 4's that were produced with a fuel sending unit manufactured prior to October 26, 1990. This sending unit, while incorporating the latest in solid state electronic technology to provide fuel levels as well as the necessary inputs to support some features of the trip computer, unfortunately had less reliability than we deem acceptable for a Porsche. Those manufactured subsequent to October 25, 1990, have been rigorously tested and are reliable. Therefore, unless found to be inoperative, there is no need to replace units manufactured after October 26, 1990.

As announced in the letter to certain Porsche Owners, we will replace all fuel sending units manufactured prior to October 26, 1990. To accomplish this expeditiously and with minimal inconvenience to Porsche Owners, we are commencing a Service Action. The Service Action is applicable to 1989, 1990, and 1991 Carrera 2's and 4's produced with a fuel sending unit manufactured prior to October 26, 1990. The technical details of this Service Action; i.e. applicable VIN's, information necessary to identify the units needing replacement, and warranty claim procedures, are being sent to you under separate cover as Technical Bulletin Group 2, No. 9101.

In addition, to minimize the inconvenience to Porsche Owners with vehicles involved in this Service Action, you are authorized to provide a rental car for one day. Porsche Cars North America, Inc. will reimburse you up to \$30.00 for the one day rental car.

As an alternative, you may elect to send your technician to the home or office of the Porsche Owner and complete the repair at that location; Porsche Cars N.A. will reimburse you \$30.00 for the travel associated with each off site repair. The procedures for the replacement or inspection for the correct unit are minimal and can easily be accomplished at a location more convenient to the Porsche owner. Many dealers have requested authorization for such a procedure in the past, and we feel this Service Action is the appropriate time to implement this procedure.

Page 2

Service Action, Fuel Gauge Sending Unit, 911 Carrera 2 and 4  
March 15, 1991

The failure of the fuel sending unit has been inconvenient to Porsche Owners. As daunting as this episode could be, it is also an excellent opportunity for you, the Porsche dealer, and Porsche Cars North America, Inc. to show these Porsche Owners that we appreciate their purchase of a Porsche, their patience while this technical problem was solved, and lastly our intention to make the Porsche Ownership Experience as pleasurable as possible. This opportunity for a positive contact can also be an effective time to merchandise the special Service, Parts, Accessories, and Boutique offerings your dealership has for the 911 Carrera 2 and 4.

As a gesture of our appreciation, we are shipping to you an appropriate number of copies of the new book, Porsche - The Fine Art of the Sports Car, for your presentation to each Porsche Owner at the completion of the Service Action. There is an important note about this book which you need to be aware of. To minimize your acquisition and stock costs, we are specially reducing your dealer cost to \$35.00 (PNA 000 099) from the normal Boutique dealer price of \$50.00 (BOU 506 000). As a result of this special pricing, we will not be paying a warranty markup on this book.

To assist both of us in segregating these special purchases for the Service Action from those for sale through your Parts Department, not later than September 15, 1991, all purchases of this book will be reconciled with the Service Action claims submitted by your dealership. Any book purchases under the reduced pricing, in excess of the number of Service Actions completed, will be invoiced to you at an additional cost of \$15.00.

If you have any questions regarding this Service Action, please contact your District Service Manager.

Sincerely,

Larry A. Morris  
Vice President  
Service and Parts

LAM/djr

Enc.

Page 2 of 2

(COPY OF LETTER TO CUSTOMERS)

March 15, 1991

Customer's Name  
Address  
Address

Dear (Customer):

In step with our attempts to keep our owners informed, I regret that I must write and advise you of a difficulty which might occur with the fuel gauge on your 911 Carrera 2 or 911 Carrera 4. This problem is due to a faulty fuel gauge sending unit which is located in the fuel tank and produces a signal to the fuel gauge designating the proper fuel level. The result of this failure would be that the fuel gauge indicates more or less fuel than what is actually in the tank.

For those of you who may have already experienced this difficulty, you know it can be a significant inconvenience. We sincerely regret this situation and apologize for any inconvenience created by the faulty unit.

Porsche AG, Porsche Cars North America, Inc., and our authorized Porsche dealers are committed to replacing all the faulty fuel gauge sending units. At your convenience, please contact your Porsche dealer to schedule an appointment to have the fuel gauge sending unit replaced in your 911 Carrera 2 or 911 Carrera 4. In some cases, you may already have had a fuel gauge sending unit replacement, but we would recommend that your vehicle be reinspected to be sure that the latest unit has been installed. The replacement or inspection for the correct unit will take approximately 30 minutes. Until you have had an opportunity to have this replacement performed, we suggest that you monitor your fuel usage by resetting the trip odometer and filling up the fuel tank every 250 miles.

As a gesture of our appreciation that you have purchased a Porsche and for the patience and understanding that a technical problem of this nature requires, we will provide you with the new book, Porsche - The Fine Art of the Sports Car by Lucinda Lewis. This new book captures some of the finest examples of each Porsche in beautiful color, and I am sure you will enjoy this collectible publication. Your dealer will provide you with this outstanding book upon installation or inspection of the new fuel gauge sending unit.

Page 2  
March 15, 1991

Once again, we apologize if this technical problem causes you any inconvenience or embarrassment. Please be assured that we will continue to do everything possible to ensure your continued satisfaction. Should you have any questions, please contact our Owner Relations Department at (702) 348-3154.

Sincerely,

Brian Bowler  
President and  
Chief Executive Officer

BB/djr

Enc.





**WORK PROCEDURE "A"**  
**Service Action 091**

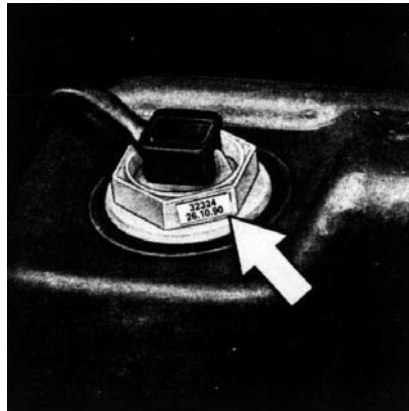
This Work Procedure is for checking and replacing all fuel level gauge senders which have a production date of "25-10-90" or earlier AND for checking and replacing defective senders with a production date of "26-10-90" or later.

The VIN ranges are as follows:

WP0AB096 \_ KS450061 to WP0AB096 \_ KS451117  
WP0AB296 \_ LS450061 to WP0AB296 \_ LS452119  
WP0BB296 \_ LS460061 to WP0BB296 \_ LS460729  
WP0CB296 \_ LS470061 to WP0CB296 \_ LS472169  
WP0AB296 \_ MS410061 to WP0AB296 \_ MS410883  
WP0BB296 \_ MS440061 to WP0BB296 \_ MS440392  
WP0CB296 \_ MS460061 to WP0CB296 \_ MS460899

1. Open the front trunk lid.
2. Remove the luggage compartment matting from the fuel tank and check production date on the sender.

The production date is shown on a sticker which is attached to the hexagon nut of the sender.



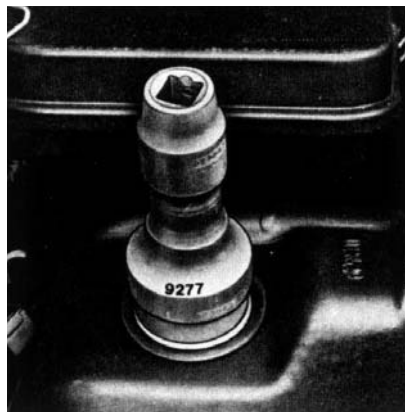
**Note:** The one-part sender, Part Number 964 641 801 01, with a production date of "26-10-90" or later should not be replaced unless it is not operable. If replacement is warranted, proceed with Work Procedure "A".

Date of "25-10-90" or earlier — replace with Part Number 000 043 175 00.

Date of "26-10-90" or later and inoperable — replace with 000 043 175 00.

Date of "26-10-90" or later, but sender is operable — **DO NOT REPLACE THIS SENDER, REFER TO WORK PROCEDURE "B".**

3. Tools required: Hand driven drill  
3mm drill bit  
Special tool #9277  
Screwdriver
4. **Caution:** a. Fuel tank must not be more than  $\frac{3}{4}$  full when replacing the fuel level gauge sender; remove excessive amount of fuel.  
b. Do not use electric drill. (see point 8 below)  
c. Observe all safety regulations when working on the fuel system.
5. Remove the plug connector from the sender.
6. Loosen the sender with the special tool #9277 or a box wrench (50mm).



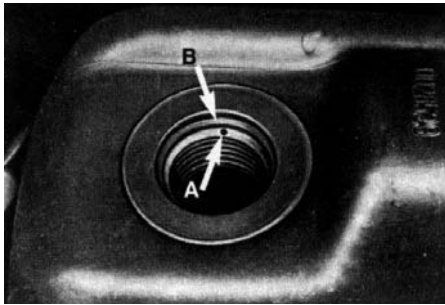
Slowly remove the sender from the fuel tank so the fuel from the sender can drain back into the tank.

**Note:** An additional vent hole of 3mm must be drilled into the sender opening of the fuel tank to avoid any fuel gauge reading deviation at "Full".

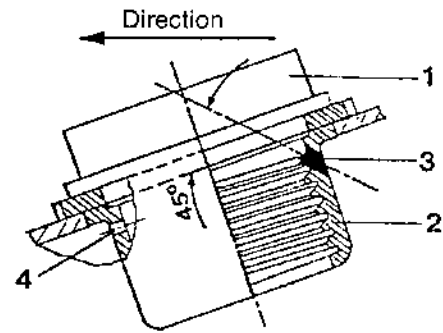
7. Block off the tank opening for the sender with a non-fraying paper or cloth, as shown.



8. Mark the position for the vent hole to be drilled as shown. The vent hole should be at the rear (relative to the direction of travel) top end of the thread, at the point of transition between the threads and the oblique surface. The sealing surface above **must not be damaged**.



A - Additional 3mm vent hole  
B - Sealing surface



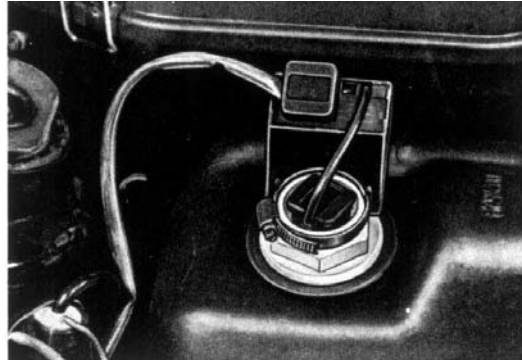
1 - Fuel level gauge sender  
2 - Fuel tank  
3 - Additional vent hole  
4 - Existing vent hole

**Caution: BECAUSE OF FUEL VAPOR AND THE DANGER OF FIRE AND INJURY —  
DO NOT USE AN ELECTRIC DRILL.  
USE ONLY A HAND DRIVEN DRILL.**

Drill the required additional 3mm vent hole with a hand driven drill in a downward angle of approximately 45° as shown in the above sketch.

9. Deburr the drilled vent hole if needed.
10. Remove any filings and the paper/cloth.
11. Reinstall the new fuel level gauge sender part set, Part Number 000 043 175 00. This part set includes a new sealing O-ring. Coat this O-ring lightly with lubricant and hand tighten the sender.
12. Torque the sender, using Special tool #9277, to 25Nm (18 ft. lbs.).

13. Fasten the electronic component with the clamp onto the sender upright, and towards to the rear as shown.



Connect the electronic component plug to the sender and the cable harness plug to the electronic component.

14. Check the fuel gauge operation.
15. Re-install the luggage compartment matting.
16. Close the trunk lid securely.
17. Place the book, Porsche — The Fine Art of the Sports Car on the passenger seat.

**WORK PROCEDURE "B"**  
**Service Action 091**

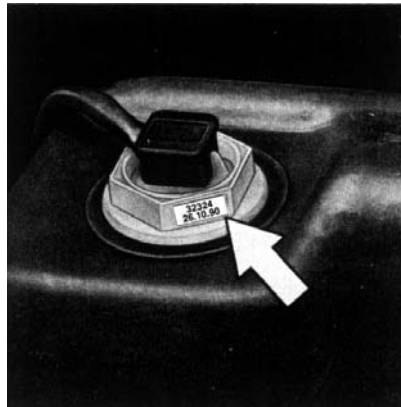
This Work Procedure is for checking, but not replacing, the fuel level gauge senders which have a production date of "26-10-90" or later.

The VIN ranges are the same as in Work Procedure "A", which are as follows:

WP0AB096 \_ KS450061 to WP0AB096 \_ KS451117  
WP0AB296 \_ LS450061 to WP0AB296 \_ LS452119  
WP0BB296 \_ LS460061 to WP0BB296 \_ LS460729  
WP0CB296 \_ LS470061 to WP0CB296 \_ LS472169  
WP0AB296 \_ MS410061 to WP0AB296 \_ MS410883  
WP0BB296 \_ MS440061 to WP0BB296 \_ MS440392  
WP0CB296 \_ MS460061 to WP0CB296 \_ MS460899

1. Open the front trunk lid.
2. Remove the luggage compartment matting from the fuel tank and check production date on the sender.

The production date is shown on a sticker which is attached to the hexagon nut of the sender.



**Note:** The one-part sender, Part Number 964 641 801 01, with a production date of "26-10-90" or later should not be replaced unless it is inoperable. If replacement is warranted, refer to Work Procedure "A".

**Date of "25-10-90" or earlier — refer to Work Procedure "A" for replacement.**

**Date of "26-10-90" or later and defective — refer to Work Procedure "A" for replacement.**

**Date of "26-10-90" or later, but sender is not defective — proceed with Work Procedure "B".**

3. Verify proper function of the fuel gauge.
4. Re-install luggage compartment matting.
5. Close the trunk lid securely.
6. Place the book, Porsche — The Fine Art of the Sports Car on the passenger seat.

**ADMINISTRATIVE PROCEDURE "A"**  
**Service Action 091**

**Administrative Procedure for checking and replacing all fuel level gauge senders which have a production date of "25-10-90" or earlier AND checking and replacing defective senders with a production date of "26-10-90" or later.**

Warranty Claims should be submitted via DCS

Affected VINs:            WP0AB096 \_ KS450061 to WP0AB096 \_ KS451117  
                             WP0AB296 \_ LS450061 to WP0AB296 \_ LS452119  
                             WP0BB296 \_ LS460061 to WP0BB296 \_ LS460729  
                             WP0CB296 \_ LS470061 to WP0CB296 \_ LS472169  
                             WP0AB296 \_ MS410061 to WP0AB296 \_ MS410883  
                             WP0BB296 \_ MS440061 to WP0BB296 \_ MS440392  
                             WP0CB296 \_ MS460061 to WP0CB296 \_ MS460899

Warranty Code:            R

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Damage Code:            WM02 66 0912  
Labor Operation:        2015 19 0A  
Time Units:              30  
Part Number:            000 043 175 00  
Warranty Parts \$:        272.21

**Note: Also refer to Administrative Procedure "C"**  
    **a. to claim book, Part Number PNA 000 099, or**  
    **b. to claim book and car rental, or**  
    **c. to claim book and off-site repair.**

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In cases where the Service Action **cannot** be performed, submit the information on a claim via DCS with the appropriate disposition code by inserting the code in at the last digit of the damage code.

Disposition	Damage Code To Be Used	Parts and Labor
3 - Total loss	WM02 66 0913	Not applicable
4 - Vehicle stolen	WM02 66 0914	"
5 - Vehicle left U.S.A.	WM02 66 0915	"
6 - Customer moved, new address unknown	WM02 66 0916	"
7 - Vehicle sold, new owner unknown	WM02 66 0917	"
9 - Customer refused to comply	WM02 66 0919	"

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**Owner Name and Address Change**

If owner name and/or address is shown incorrectly, submit correction using name/address change postcard from the Warranty and Maintenance Booklet or the postage pre-paid postcard mailed with the Customer Notification letter, or report to Porsche Cars N.A. via DCS to USPCWARRANTY, including VIN.

**ADMINISTRATIVE PROCEDURE "B"**  
**Service Action 091**

**Administrative Procedure for checking, BUT NOT REPLACING, the fuel level gauge senders which have a production date of "26-10-90" or later.**

Warranty Claims should be submitted via DCS

Affected VINs:            WP0AB096 \_ KS450061 to WP0AB096 \_ KS451117  
                             WP0AB296 \_ LS450061 to WP0AB296 \_ LS452119  
                             WP0BB296 \_ LS460061 to WP0BB296 \_ LS460729  
                             WP0CB296 \_ LS470061 to WP0CB296 \_ LS472169  
                             WP0AB296 \_ MS410061 to WP0AB296 \_ MS410883  
                             WP0BB296 \_ MS440061 to WP0BB296 \_ MS440392  
                             WP0CB296 \_ MS460061 to WP0CB296 \_ MS460899

Warranty Code:            R

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Damage Code:            WM02 66 0911  
Labor Operation:        2015 19 00  
Time Units:              20  
Part Numbers:            —  
Warranty Parts \$:        —

**Note: Also refer to Administrative Procedure "C"**  
**a. to claim book, Part Number PNA 000 099, or**  
**b. to claim book and car rental, or**  
**c. to claim book and off-site repair.**

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In cases where the Service Action **cannot** be performed, submit the information on a claim via DCS with the appropriate disposition code by inserting the code in at the last digit of the damage code.

Disposition	Damage Code To Be Used	Parts and Labor
3 - Total loss	WM02 66 0913	Not applicable
4 - Vehicle stolen	WM02 66 0914	"
5 - Vehicle left U.S.A.	WM02 66 0915	"
6 - Customer moved, new address unknown	WM02 66 0916	"
7 - Vehicle sold, new owner unknown	WM02 66 0917	"
9 - Customer refused to comply	WM02 66 0919	"

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**Owner Name and Address Change**

If owner name and/or address is shown incorrectly, submit correction using name/address change postcard from the Warranty and Maintenance Booklet or the postage pre-paid postcard mailed with the Customer Notification letter, or report to Porsche Cars N.A. via DCS to USPCWARRANTY, including VIN.

**ADMINISTRATIVE PROCEDURE "C"**  
**Service Action 091**

**Supplement to Administrative Procedures "A" and "B"**

Warranty Claims should be submitted via DCS

Affected VINs:            WP0AB096 \_ KS450061 to WP0AB096 \_ KS451117  
                             WP0AB296 \_ LS450061 to WP0AB296 \_ LS452119  
                             WP0BB296 \_ LS460061 to WP0BB296 \_ LS460729  
                             WP0CB296 \_ LS470061 to WP0CB296 \_ LS472169  
                             WP0AB296 \_ MS410061 to WP0AB296 \_ MS410883  
                             WP0BB296 \_ MS440061 to WP0BB296 \_ MS440392  
                             WP0CB296 \_ MS460061 to WP0CB296 \_ MS460899

Warranty Code:            5

**NOTE: WARRANTY CODE 5 WILL BE CHANGED TO CODE 9 AFTER PAYMENT BY THE WARRANTY DEPARTMENT.**

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Damage Code:            WM02 88 0912  
Labor Operation:        —  
Time Units:              —  
Part Numbers:           PNA 000 099  
Warranty Parts \$:        35.00

**Note: CAR RENTAL or OFF-SITE REPAIR, if applicable, can be claimed as follows:**

**Car Rental — Misc. cost \$: 30.00**  
**Misc. code: R**  
**Auth. code: ORA 0091**

or

**Off-Site Repair — Sublet labor \$: 30.00**

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In cases where the Service Action **cannot** be performed, submit the information on a claim via DCS with the appropriate disposition code by inserting the code in at the last digit of the damage code.

Disposition	Damage Code To Be Used	Parts and Labor
3 - Total loss	WM02 66 0913	Not applicable
4 - Vehicle stolen	WM02 66 0914	"
5 - Vehicle left U.S.A.	WM02 66 0915	"
6 - Customer moved, new address unknown	WM02 66 0916	"
7 - Vehicle sold, new owner unknown	WM02 66 0917	"
9 - Customer refused to comply	WM02 66 0919	"

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**Owner Name and Address Change**

If owner name and/or address is shown incorrectly, submit correction using name/address change postcard from the Warranty and Maintenance Booklet or the postage pre-paid postcard mailed with the Customer Notification letter, or report to Porsche Cars N.A. via DCS to USPCWARRANTY, including VIN.