

**WF33 - Checking Radial Shaft Seal and Flanged Shaft on Front Axle at the Right for Oil Leaks (Workshop Campaign)**

Vehicle Type: **918 Spyder**

Model Year: **2015**

Concerns: **Radial shaft seal and flanged shaft on front axle at the right**

Information: This is to inform you of a voluntary Workshop Campaign on the above-mentioned vehicles. **There is a possibility that flanged shafts from a manufacturing batch in which the radial shaft seal area was not machined correctly may have been installed on the front axle at the right on the affected vehicles.**

This can result in a slight oil leak on the front-axle final drive even after driving the vehicle for only a short time.

Action Required: Check radial shaft seal and flanged shaft on the front axle at the right for oil leaks.  
 Replace sealing ring and flanged shaft, depending on the result of the check.



**Information**

The vehicle must be checked for defects and damage (damage to paintwork, missing parts, etc.) **each time** it is handed over, transferred or delivered. Confirmation that the vehicle is in good condition or details of any damage to the vehicle must be documented and archived for feedback purposes.

Service Level: **This campaign must be carried out by a Service Level 2 Porsche Dealer.**

Service Level 1 Porsche Dealers are **not** authorized to carry out this campaign. In accordance with the service concept for the 918 Spyder, the vehicle must be transferred to the nearest Service Level 2 Porsche Dealer in order to carry out this campaign.

In this case, please contact the nearest Service Level 2 Porsche Dealer and arrange for the transfer of the vehicle and implementation of the measure.

Information on invoicing for the transfer of the vehicle can be found under ⇒ *Technical Information 'WF3300 Invoicing'* at the end of this document.

Affected Vehicles: The VIN(s) can be checked by using PIWIS Vehicle Information link to verify if the campaign affects the vehicle. This campaign is scope specific to the VIN! Failure to verify in PIWIS may result in an improper repair. This campaign affects 4 vehicles in North America.

Parts Info: **NOTE: PARTS WILL NOT BE AUTOMATICALLY ALLOCATED TO YOUR DEALERSHIP. ALL PARTS MUST BE ORDERED VIA A PTEC/PAV.**

**Information**

Please note that **no parts are required** for **checking the radial shaft seal and flanged shaft** on the front axle.

Due to the expected repair rate, please do not order **any parts that may be required for replacing** the sealing ring and flanged shaft until **after you have checked** the sealing ring and **discovered an oil leak**.

Parts required **only** for **replacing the radial shaft seal and flanged shaft**:

Part No.	Designation – Use	Qty.
000.043.210.23	⇒ Radial shaft seal – Flanged shaft on front axle	1 ea.
000.043.210.20	⇒ Flanged shaft for all-wheel drive (long) – Front axle, right	1 ea.
999.084.445.01	⇒ Lock nut, M12 x 1.5 – Front-axle cross member to body	2 ea.
N 106.620.01	⇒ Hexagon-head bolt, M8 x 40 – Front engine support to center tunnel	2 ea.
999.084.656.01	⇒ Hexagon nut, M10 – Spring strut to lower trailing arm – Spring strut to upper mounting saddle Upper trailing arm to wheel carrier – Anti-roll bar to connecting link – Brake caliper to wheel carrier	12 ea.
N 911.744.01	⇒ Multiple-tooth screw, M8 x 35 Universal joint to steering gear	1 ea.
918.349.853.00	⇒ Drive shaft repair kit – Set of fastening parts for inner bellows	1 ea.
900.123.033.20	⇒ Sealing ring, A10 x 13.5 – Drain plug for cooling system	1 ea.
900.123.007.30	⇒ Sealing ring, A14 x 18 – Drain plug for cooling system	2 ea.
944.573.143.01	⇒ Desiccator – Refrigerant circuit	1 ea.

**The following parts are also required for each vehicle:**

- Vehicles **without** Racetrack package (I-no. 808):

999.311.502.01	⇒ Fit bolt, M12 x 1.5 – Front-axle cross member to body	2 ea.
999.311.602.01	⇒ Fit bolt, M10 x 1.5 x 65 – Upper trailing arm to wheel carrier	2 ea.
999.311.605.01	⇒ Fit bolt, M10 x 1.5 x 52 – Spring strut to upper mounting saddle	2 ea.
999.311.606.01	⇒ Fit bolt, M10 x 1.5 x 72 – Spring strut to lower trailing arm	2 ea.

**or:**

- Vehicles with **Racetrack package (I-no. 808):**

999.311.502.02	⇒ Fit bolt, M12 x 1.5 – Front-axle cross member to body	2 ea.
999.311.602.02	⇒ Fit bolt, M10 x 1.5 x 65 – Upper trailing arm to wheel carrier	2 ea.
999.311.605.02	⇒ Fit bolt, M10 x 1.5 x 52 – Spring strut to upper mounting saddle	2 ea.
999.311.606.02	⇒ Fit bolt, M10 x 1.5 x 72 – Spring strut to lower trailing arm	2 ea.

Materials:

**Required materials** (usually already available in the Porsche Dealer):

Part No.	Designation – Use	Qty.
000.043.300.35	McLube Sailkote High Performance Dry Lube – Central wheel lock  This can be sourced from marine supply stores.	428g spraying can (approx. 10 grams required per vehicle)

**Also required if radial shaft seal and flanged shaft need to be replaced:**

000.043.301.48	Antifreeze – Cooling system	20-liter container (approx. 2.5 liters required per vehicle)
000.043.205.93	Klüberplus Gel grease – O-rings and coolant hoses	100g tube As much as required (approx. 5 grams required per vehicle)
000.043.204.68	Klüber Syntheso Glep grease – O-rings for cooling system	50g tube As much as required (approx. 5 grams required per vehicle)
000.043.110.02	Castrol Optitemp HT1LF grease – Tripod joint on transmission side	100g tube (approx 130 grams required for each tripod joint on the transmission side)

## Tools:

- **9002 - Lifting platform holders**
- **9453 - Access ramps**
- **9454 - Strapping belts**
- **9003 - Socket wrench** for central wheel lock
- **9004 - Socket wrench** for central wheel lock cover
- Torque wrench, 150 – 800 Nm (111 – 592 ftlb.), e.g. **V.A.G 1601 - Torque wrench, 150 - 800 Nm (111 - 592 ftlb.)**
- 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, 2 – 10 Nm (1.5 – 7.5 ftlb.), e.g. **V.A.G 1783 - Torque wrench, 2-10 Nm (1.5-7.5 ftlb.)**
- Hand lamp or pocket lamp

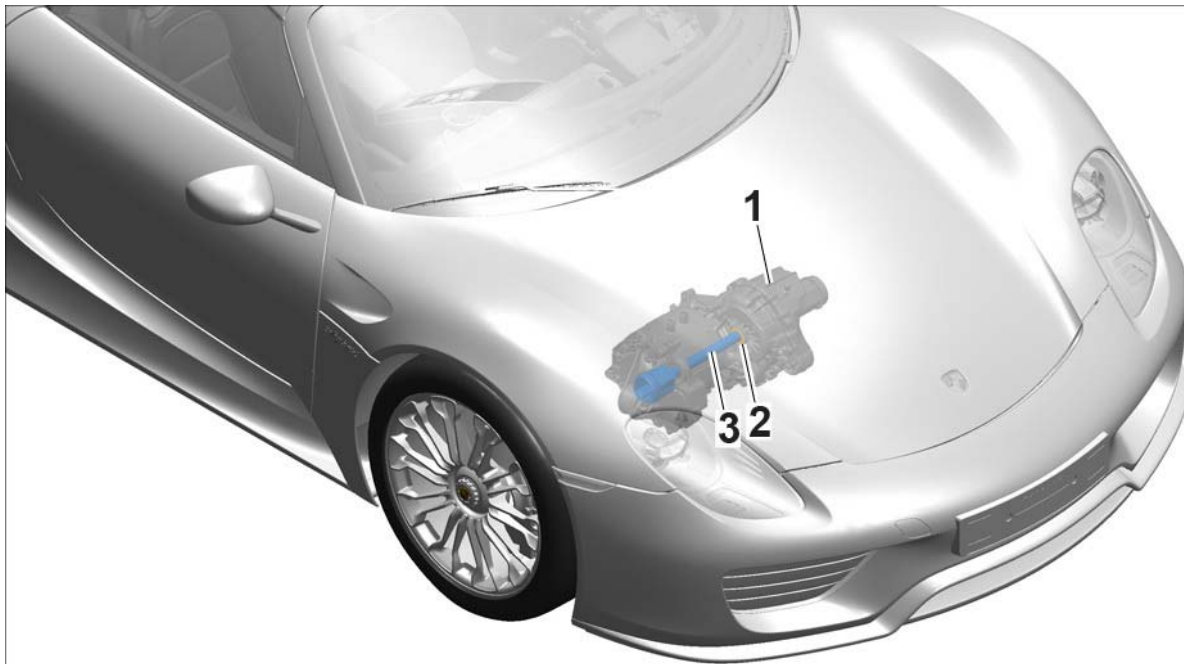
**Additional tools required for replacing the radial shaft seal and flanged shaft:**

- **9818 - PIWIS Tester II**
- Suitable battery charger, e.g. **VAS 5908 - Battery charger 90A** (charging current limit of max. 60 A required)
- **9027 - Release pin**
- **T40262 - Locking cap**
- **VAS 6558/9-6 - High-voltage test adapter HVA 280**
- Suitable air-conditioning recycling unit, e.g. **VAS 6456A - A/C service station with rinsing device**
- Suitable unit lifting platform, e.g. **VAS 6832 - Master Gear unit elevating platform**
- **9011 - Retaining device** for front-axle cross member

- **9001 - Socket wrench** for engine cover caps
- **VAS 6965 - Puller set**
- **9029/1 - Pressure piece for fitting radial shaft seals**
- **P254/e - Grab handle**
- **3370 - Hook**
- **VAS 6096/2 - Vacuum pump**
- **9696 - Filling device**
- **9005 - Hose**
- 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.**

Installation

Position:



*Installation position of flanged shaft for front axle at the right*

- 1** – Front-axle final drive
- 2** – Radial shaft seal for flanged shaft at the right (**check for oil leak**)
- 3** – Flanged shaft for front axle at the right

Claim See Attachment "A".

Submission:

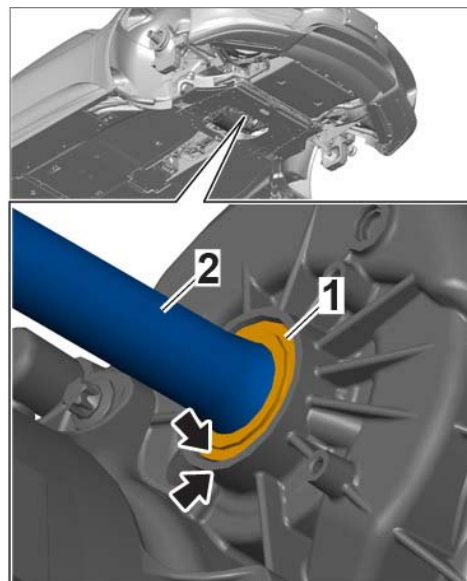
## Preliminary work

- Work Procedure: 1 Raise the vehicle on a lifting platform ⇒ *Workshop Manual '4X00IN Lifting the vehicle'*.
- 1.1 Position the vehicle between the arms of the lifting platform and push it onto the **9453 - access ramps**.
  - 1.2 Remove underbody covers and fit mounting plates **9002 - Lifting platform holders**, ⇒ *Workshop Manual '518119 Removing and installing jacking points'*.
  - 1.3 Jack and raise the vehicle at the mounting plates.
  - 1.4 Depending on the result of the check, secure the vehicle using **9454 - strapping belts** on the lifting platform arms in order to remove and install the front-axle cross member (subframe).
- 2 Remove both front wheels ⇒ *Workshop Manual '440519 Removing and installing wheel'*.
- 3 Remove center and front underbody panelling.
- 3.1 Remove center underbody cover (at the sides) at the left and right ⇒ *Workshop Manual '51931901 Removing and installing cover for centre underbody (at the sides)'*.
  - 3.2 Remove front wheel housing liner (front part) at the left and right ⇒ *Workshop Manual '50561901 Removing and installing front wheel housing liner (front part)'*.
  - 3.3 Remove front wheel housing liner (rear part) at the left and right ⇒ *Workshop Manual '50561905 Removing and installing front wheel housing liner (rear part)'*.
  - 3.4 Remove front underbody cover ⇒ *Workshop Manual '519219 Removing and installing cover for front underbody'*.
  - 3.5 Remove center underbody cover ⇒ *Workshop Manual '51931900 Removing and installing cover for centre underbody'*.

**Checking radial shaft seal and flanged shaft on front axle at the right for oil leaks**

Work Procedure: 1 Visually inspect the front-axle final drive for an oil leak  
 ⇒ *Performing visual inspection for oil leak -arrows-*  
 close to the radial shaft seal ⇒ *Performing visual inspection for oil leak -1-* for the flanged shaft at the right ⇒ *Performing visual inspection for oil leak -2-*.

- If **no** emerging transmission oil is visible: The installed flanged shaft was **machined correctly** ⇒ **End of action required**. Continue with ⇒ **Technical Information 'WF3300 Subsequent work'**.
- If **emerging transmission oil is visible**: The installed **flanged shaft** was **not machined correctly** and must be replaced. **To do this, continue with** ⇒ **Technical Information 'WF3300 Replacing radial shaft seal and flanged shaft on front axle at the right'**.



*Performing visual inspection for oil leak*

**Replacing radial shaft seal and flanged shaft on front axle at the right**

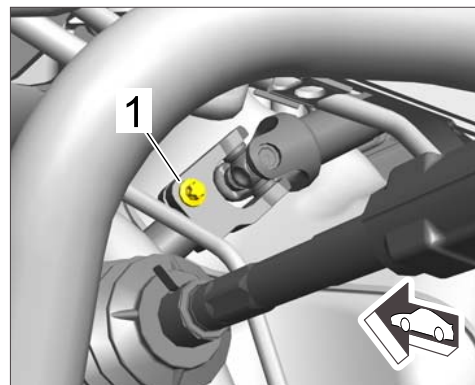
- Work Procedure: 1 Observe warning notes for working on the high-voltage vehicle electrical system ⇒ *Workshop Manual '2X00IN General warning notes for working on the high-voltage vehicle electrical system'*.
- 2 De-energize the high-voltage system and complete the relevant documentation ⇒ *Workshop Manual '2X00IN Isolating high-voltage electrical system from power supply/Starting high-voltage electrical system (diagnostics)'*.
- If absence of electric charge could not be verified automatically or if the function could not be run (see display in the 9818 PIWIS Tester II), the voltage must be measured manually.  
 For instructions, see ⇒ *Workshop Manual '2X00IN Isolating high-voltage electrical system from power supply/Starting high-voltage electrical system (manual)'*.
- 3 Secure the vehicle using **9454 - strapping belts** at the lifting platform arms in order to remove and install the front-axle cross member (subframe) ⇒ *Workshop Manual '4X00IN Lifting the vehicle'*.
- 4 Drain coolant.
- 4.1 Remove engine cover ⇒ *Workshop Manual '108319 Removing and installing engine cover'*.
  - 4.2 Remove both rear wheels ⇒ *Workshop Manual '440519 Removing and installing wheel'*.
  - 4.3 Remove lower part of rear spoiler (at the sides) ⇒ *Workshop Manual '66591901 Removing and installing lower part of rear spoiler (at the sides)'*.

- 4.4 Remove rear underbody cover ⇒ *Workshop Manual '519419 Removing and installing cover for rear underbody'*.
- 4.5 Drain coolant for medium- and low-temperature cooling system ⇒ *Workshop Manual '193817 Draining and filling coolant - medium- and low-temperature cooling system'*.
- 4.6 Drain coolant for high-temperature cooling system ⇒ *Workshop Manual '193817 Draining and filling coolant - high-temperature engine cooling system'*.
- 5 Remove low-voltage battery ⇒ *Workshop Manual '270619 Removing and installing battery'*.
- 6 Drain the air conditioning system ⇒ *Workshop Manual '870317 Draining and filling refrigerant'*.
- 7 Remove luggage compartment pan.
  - 7.1 Remove front luggage compartment trim panels ⇒ *Workshop Manual '700519 Removing and installing front luggage compartment trim panel'*.
  - 7.2 Remove luggage compartment light ⇒ *Workshop Manual '964019 Removing and installing luggage compartment lamp'*.
  - 7.3 Remove cover for transverse lock support ⇒ *Workshop Manual '703919 Removing and installing cover for lock support'*.
  - 7.4 Remove headlights at the left and right ⇒ *Workshop Manual '941519 Removing and installing headlights'*.
  - 7.5 Remove front apron ⇒ *Workshop Manual '631519 Removing and installing front apron'*.
  - 7.6 Remove wiper arm ⇒ *Workshop Manual '922519 Removing and installing wiper arm'*.
  - 7.7 Remove front trim panel ⇒ *Workshop Manual '700219 Removing and installing front trim panel'*.
  - 7.8 Remove cowl panel cover ⇒ *Workshop Manual '664419 Removing and installing cowl panel cover'*.
  - 7.9 Remove luggage compartment pan ⇒ *Workshop Manual '502019 Removing and installing floor front section'*.
- 8 Remove pressure accumulator for front axle lift system ⇒ *Workshop Manual '438219 Removing and installing pressure accumulator for front axle lift system'*.
- 9 Remove front power electronics ⇒ *Workshop Manual '279119 Removing and installing power electronics (front)'*.
- 10 Remove passenger compartment heater (PTC heating core) ⇒ *Workshop Manual '828019 Removing and installing passenger compartment heater'*.



- 11 Remove coolant lines on the front-axle cross member.  
 ⇒ *Workshop Manual '196419 Removing and installing front coolant pipes - medium- and low-temperature cooling system'*  
 ⇒ *Workshop Manual '196419 Removing and installing front coolant pipes - high-temperature cooling system'*

- 12 Loosen and unscrew clamping screw ⇒ *Universal joint for steering column-1* for the universal joint for the steering column on the steering gear.  
 To do this, secure the steering wheel in center position. The clamping screw is then accessible through an opening in the monocoque.



*Universal joint for steering column*

- 13 Remove front-axle cross member (subframe).



**Information**

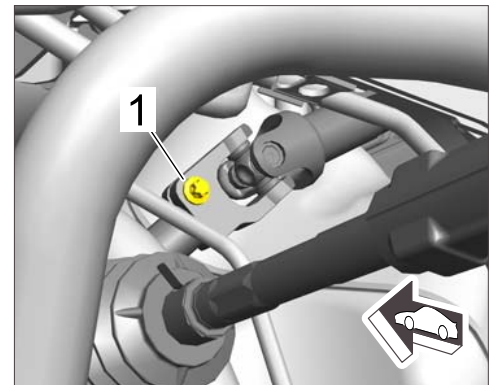
- **Do not open the brake hydraulic system (brake lines remain connected).**

- 13.1 Loosen front brake caliper at the left and right on the wheel carriers ⇒ *Workshop Manual '473919 Removing and installing front brake calliper'*.  
 Suspend brake calipers on the vehicle using tie-wraps, for example.
- 13.2 Loosen anti-roll bar at the connecting links ⇒ *Workshop Manual '407819 Removing and installing connecting link for anti-roll bar'*.
- 13.3 Loosen upper trailing arms at the left and right on the wheel carrier ⇒ *Workshop Manual '401519 Removing and installing upper trailing arm'*.
- 13.4 Remove front spring struts at the left and right ⇒ *Workshop Manual '408519 Removing and installing front spring strut'*.
- 13.5 Remove front-axle cross member ⇒ *Workshop Manual '400919 Removing and installing front-axle cross member (subframe)'*.

- 14 Replacing radial shaft seal and flanged shaft on front axle at the right.

- 14.1 Remove right drive shaft at the final drive ⇒ *Workshop Manual '404119 Removing and installing front drive shaft'*.
- 14.2 Remove flanged shaft on the front axle at the right ⇒ *Workshop Manual '396319 Removing and installing all-wheel drive flange shaft (long)'*.
- 14.3 Remove radial shaft seal for right flanged shaft and install **new sealing ring**. ⇒ *Workshop Manual '395955 Replacing sealing ring for all-wheel drive flange shaft (long)'*.
- 14.4 **Install new flanged shaft** on the front axle at the right ⇒ *Workshop Manual '396319 Removing and installing all-wheel drive flange shaft (long)'*.

- 14.5 Fit right drive shaft at the final drive ⇒ *Workshop Manual '404119 Removing and installing front drive shaft'*.
- 15 Install front-axle cross member (subframe).
- 15.1 Install front-axle cross member ⇒ *Workshop Manual '400919 Removing and installing front-axle cross member (subframe)'*.
- 15.2 Install front spring struts at the left and right ⇒ *Workshop Manual '408519 Removing and installing front spring strut'*.
- 15.3 Secure upper trailing arms at the left and right on the wheel carrier ⇒ *Workshop Manual '401519 Removing and installing upper trailing arm'*.
- 15.4 Secure anti-roll bar at the connecting links ⇒ *Workshop Manual '407819 Removing and installing connecting link for anti-roll bar'*.
- 15.5 Secure front brake caliper at the left and right to the wheel carriers ⇒ *Workshop Manual '473919 Removing and installing front brake calliper'*.
- 16 Push universal joint of the steering column onto the steering gear at the correct position. Note the position of the notch for the clamping screw while doing this.  
Screw in and tighten clamping screw ⇒ *Universal joint for steering column-1- used to secure the universal joint of the steering column to the steering gear.*  
**Tightening torque 20 Nm (15 ftlb.) +90°**
- 17 Install coolant lines on the front-axle cross member.  
⇒ *Workshop Manual '196419 Removing and installing front coolant pipes - medium- and low-temperature cooling system'*  
⇒ *Workshop Manual '196419 Removing and installing front coolant pipes - high-temperature cooling system'*
- 18 Install passenger compartment heater (PTC heating core) ⇒ *Workshop Manual '828019 Removing and installing passenger compartment heater'*.
- 19 Install front power electronics ⇒ *Workshop Manual '279119 Removing and installing power electronics (front)'*.
- 20 Install pressure accumulator for front axle lift system ⇒ *Workshop Manual '438219 Removing and installing pressure accumulator for front axle lift system'*.
- 21 Install luggage compartment pan.



Universal joint for steering column

- 21.1 Install luggage compartment pan ⇒ *Workshop Manual '502019 Removing and installing floor front section'*.
- 21.2 Install cowl panel cover ⇒ *Workshop Manual '664419 Removing and installing cowl panel cover'*.
- 21.3 Install front trim panel ⇒ *Workshop Manual '700219 Removing and installing front trim panel'*.
- 21.4 Install wiper arm ⇒ *Workshop Manual '922519 Removing and installing wiper arm'*.
- 21.5 Install front apron ⇒ *Workshop Manual '631519 Removing and installing front apron'*.
- 21.6 Install headlights at the left and right ⇒ *Workshop Manual '941519 Removing and installing headlights'*.
- 21.7 Install cover for transverse lock support ⇒ *Workshop Manual '703919 Removing and installing cover for lock support'*.
- 21.8 Install luggage compartment light ⇒ *Workshop Manual '964019 Removing and installing luggage compartment lamp'*.
- 21.9 Install front luggage compartment trim panels ⇒ *Workshop Manual '700519 Removing and installing front luggage compartment trim panel'*.
- 22 Install low-voltage battery ⇒ *Workshop Manual '270619 Removing and installing battery'*.
- 23 Start the high-voltage system and complete the relevant documentation ⇒ *Workshop Manual '2X00IN Isolating high-voltage electrical system from power supply/Starting high-voltage electrical system (diagnostics)'*.
- 24 Fill the air conditioning system ⇒ *Workshop Manual '870317 Draining and filling refrigerant'*.
- 25 Fill in coolant and bleed the cooling system.
  - 25.1 Fill in coolant for high-temperature cooling system ⇒ *Workshop Manual '193817 Draining and filling coolant - high-temperature engine cooling system'*.
  - 25.2 Fill in coolant for medium- and low-temperature cooling system ⇒ *Workshop Manual '193817 Draining and filling coolant - medium- and low-temperature cooling system'*.
  - 25.3 Bleed the cooling system.
    - ⇒ *Workshop Manual '190107 Bleeding the cooling system - high-temperature engine cooling system'*
    - ⇒ *Workshop Manual '190107 Bleeding the cooling system - medium- and low-temperature cooling system'*
- 26 Install rear underbody panelling.
  - 26.1 Install rear underbody cover ⇒ *Workshop Manual '519419 Removing and installing cover for rear underbody'*.

26.2 Install lower part of rear spoiler (at the sides) ⇒ *Workshop Manual '66591901 Removing and installing lower part of rear spoiler (at the sides)'*.

27 Install engine cover ⇒ *Workshop Manual '108319 Removing and installing engine cover'*.

### Subsequent work

Work Procedure: 1 Install center and front underbody panelling.

1.1 Install center underbody cover ⇒ *Workshop Manual '51931900 Removing and installing cover for centre underbody'*.

1.2 Install front underbody cover ⇒ *Workshop Manual '519219 Removing and installing cover for front underbody'*.

1.3 Install front wheel housing liner (rear part) at the left and right ⇒ *Workshop Manual '50561905 Removing and installing front wheel housing liner (rear part)'*.

1.4 Install front wheel housing liner (front part) at the left and right ⇒ *Workshop Manual '50561901 Removing and installing front wheel housing liner (front part)'*.

1.5 Install center underbody cover (at the sides) at the left and right ⇒ *Workshop Manual '51931901 Removing and installing cover for centre underbody (at the sides)'*.

2 Fit both front wheels and fit both rear wheels if they were removed earlier ⇒ *Workshop Manual '440519 Removing and installing wheel'*.

3 Lower the vehicle and remove it from the lifting platform ⇒ *Workshop Manual '4X00IN Lifting the vehicle'*.

3.1 Lower the vehicle onto the **9453 - access ramps** with the lifting platform.

3.2 Remove mounting plates **9002 - Lifting platform holders** and install the covers on the underbody ⇒ *Workshop Manual '518119 Removing and installing jacking points'*.

4 Perform suspension alignment and make adjustments if necessary.  
⇒ *Workshop Manual '449503 Suspension alignment, complete'*  
⇒ *Workshop Manual '4X00IN Adjustment values for suspension alignment'*

5 Adjust the headlights ⇒ *Workshop Manual '941515 Adjusting headlights'*.

6 Enter the workshop campaign in the Warranty and Maintenance booklet.

Attachment "A": **Claim Submission** - Workshop Campaign WF33

Warranty claims should be submitted via WWS/PQIS.

Open campaigns may be checked by using either the PIWIS Vehicle Information system or through PQIS Job Creation.

Labor, parts, and sublet will be automatically inserted when Technician is selected in WWS/PQIS. If necessary, the required part numbers will need to be manually entered into warranty system by the dealer administrator.

Service Level: **This campaign must be carried out by a Service Level 2 Porsche Dealer.**

Service Level 1 Porsche Dealers are **not** authorized to carry out this campaign.

In accordance with the service concept for the 918 Spyder, the vehicle must be transferred to the nearest Service Level 2 Porsche Dealer in order to carry out this campaign.

**In this case, Service Level 1 Porsche Dealers** can invoice the cost items listed below for vehicle acceptance, transporting the vehicle and accepting the vehicle following return transport using the **new vehicle warranty** for the vehicle in accordance with the specifications in the 918 Spyder AfterSales Fact Book 2014:

- Vehicle acceptance 100 TU
- Transporting the vehicle 100 TU
- Acceptance of the vehicle following return transport 50 TU
- Costs for transporting the vehicle to and from the Porsche Dealer Amount as per invoice \*

\* Please document copy of invoice in PQIS

Please invoice the costs by specifying **Damage code C902 97 000** and enter the technical reason by specifying **Coding C9020 9735** in PQIS. Also specify **Campaign WF33** under Comment.

**Service Level 2 Porsche Dealers** must always submit an invoice for the relevant **campaign scope**.



**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 1: **Check radial shaft seal and flanged shaft** – no parts must be replaced.

**Working time:**

Checking radial shaft seal and flanged shaft for oil leaks

Labor time: **335 TU**

- Includes:
- Raising and lowering the vehicle
  - Removing and installing front wheel at the left and right
  - Removing and installing center underbody cover (at the sides) at the left and right
  - Removing and installing front wheel housing liner (front part) at the left and right

Removing and installing front wheel housing liner (rear part)  
at the left and right  
Removing and installing front underbody cover  
Removing and installing center underbody cover

**Required materials:**

000.043.300.35	McLube Sailkote High Performance Dry Lube (428g spraying can)	0.03 ea. (= approx. 10 g)
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⇒ Damage code WF33 066 000 1

Scope 2:

**Checking radial shaft seal and flanged shaft and replacing both sealing ring and flanged shaft**

- Vehicles **without** Racetrack package (I-no. 808)

**Information**

The time required for **measuring the vehicle height as well as the camber and toe adjustment values** on the front axle is **included** in the working time.

All work that must be carried out in order to **adjust the wheel alignment positions** and parts required during the adjustment process are **not** included in the **scope of this campaign** and must be invoiced using a separate warranty claim.

**Working time:**

Replacing radial shaft seal and flanged shaft

Labor time: **1637 TU**

Includes:

- Checking radial shaft seal for flanged shaft for oil leaks
- Removing and installing all wheels
- Removing and installing center underbody cover (at the sides) at the left and right
- Removing and installing front wheel housing liner (front part) at the left and right
- Removing and installing front wheel housing liner (rear part) at the left and right
- Removing and installing front underbody cover
- Removing and installing center underbody cover
- Removing and installing rear underbody cover
- Isolating high-voltage electrical system from power supply/Starting high-voltage electrical system with documentation
- Draining and filling coolant for low/medium/high-temperature cooling system
- Removing and installing low-voltage battery
- Draining and filling the air conditioning system

Removing and installing luggage compartment pan  
 Removing and installing pressure accumulator for front axle lift system  
 Removing and installing front power electronics  
 Removing and installing passenger compartment heater (PTC heating core)  
 Removing and installing coolant lines on front-axle cross member  
 Loosening and securing universal joint for steering column on steering gear  
 Removing and installing front-axle cross member (subframe)  
 Performing suspension alignment  
 Adjusting headlights

**Parts required:**

000.043.210.23	Radial shaft seal for flanged shaft on front axle	1 ea.
000.043.210.20	All-wheel flanged shaft (long)	1 ea.
999.084.445.01	Lock nut, M12 x 1.5	2 ea.
N 106.620.01	Hexagon-head bolt, M8 x 40	2 ea.
999.084.656.01	Hexagon nut, M10	12 ea.
N 911.744.01	Multiple-tooth screw, M8 x 35	1 ea.
918.349.853.00	Drive shaft repair kit	1 ea.
900.123.033.20	Sealing ring, A10 x 13.5	1 ea.
900.123.007.30	Sealing ring, A14 x 18	2 ea.
944.573.143.01	Desiccator	1 ea.
999.311.502.01	Fit bolt, M12 x 1.5	2 ea.
999.311.602.01	Fit bolt, M10 x 1.5 x 65	2 ea.
999.311.605.01	Fit bolt, M10 x 1.5 x 52	2 ea.
999.311.606.01	Fit bolt, M10 x 1.5 x 72	2 ea.

**Required materials:**

000.043.300.35	McLube Sailkote High Performance Dry Lube (428g spraying can)	0.03 ea. (= approx. 10 g)
000.043.301.48	Antifreeze (20-liter container)	0.13 ea. (= approx. 2.5 liters)
000.043.205.93	Klüberplus Gel grease (100g tube)	0.05 ea. (= approx. 5 g)

000.043.204.68	Klüber Syntheso Glep grease (50g tube)	0.1 ea. (= approx. 5 g)
000.043.110.02	Castrol Optitemp HT1LF grease (100g tube)	1.3 ea. (= approx. 130 g)

⇒ Damage code WF33 066 000 2

Scope 3:

### Checking radial shaft seal and flanged shaft and replacing both sealing ring and flanged shaft

- Vehicles with Racetrack package (I-no. 808)



#### Information

The time required for **measuring the vehicle height as well as the camber and toe adjustment values** on the front axle is **included** in the working time.

All work that must be carried out in order to **adjust the wheel alignment positions** and parts required during the adjustment process are **not** included in the **scope of this campaign** and must be invoiced using a separate warranty claim.

#### Working time:

Replacing radial shaft seal and flanged shaft

Labor time: **1637 TU**

Includes:

- Checking radial shaft seal for flanged shaft for oil leaks
- Removing and installing all wheels
- Removing and installing center underbody cover (at the sides) at the left and right
- Removing and installing front wheel housing liner (front part) at the left and right
- Removing and installing front wheel housing liner (rear part) at the left and right
- Removing and installing front underbody cover
- Removing and installing center underbody cover
- Removing and installing rear underbody cover
- Isolating high-voltage electrical system from power supply/Starting high-voltage electrical system with documentation
- Draining and filling coolant for low/medium/high-temperature cooling system
- Removing and installing low-voltage battery
- Draining and filling the air conditioning system
- Removing and installing luggage compartment pan
- Removing and installing pressure accumulator for front axle lift system
- Removing and installing front power electronics



- Removing and installing passenger compartment heater (PTC heating core)
- Removing and installing coolant lines on front-axle cross member
- Loosening and securing universal joint for steering column on steering gear
- Removing and installing front-axle cross member (subframe)
- Performing suspension alignment
- Adjusting headlights

**Parts required:**

000.043.210.23	Radial shaft seal for flanged shaft on front axle	1 ea.
000.043.210.20	All-wheel flanged shaft (long)	1 ea.
999.084.445.01	Lock nut, M12 x 1.5	2 ea.
N 106.620.01	Hexagon-head bolt, M8 x 40	2 ea.
999.084.656.01	Hexagon nut, M10	12 ea.
N 911.744.01	Multiple-tooth screw, M8 x 35	1 ea.
918.349.853.00	Drive shaft repair kit	1 ea.
900.123.033.20	Sealing ring, A10 x 13.5	1 ea.
900.123.007.30	Sealing ring, A14 x 18	2 ea.
944.573.143.01	Desiccator	1 ea.
999.311.502.02	Fit bolt, M12 x 1.5	2 ea.
999.311.602.02	Fit bolt, M10 x 1.5 x 65	2 ea.
999.311.605.02	Fit bolt, M10 x 1.5 x 52	2 ea.
999.311.606.02	Fit bolt, M10 x 1.5 x 72	2 ea.

**Required materials:**

000.043.300.35	McLube Sailkote High Performance Dry Lube (428g spraying can)	0.03 ea. (= approx. 10 g)
000.043.301.48	Antifreeze (20-liter container)	0.13 ea. (= approx. 2.5 liters)
000.043.205.93	Klüberplus Gel grease (100g tube)	0.05 ea. (= approx. 5 g)
000.043.204.68	Klüber Syntheso Glep grease (50g tube)	0.1 ea. (= approx. 5 g)

000.043.110.02	Castrol Optitemp HT1LF grease (100g tube)	1.3 ea. (= approx. 130 g)
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⇒ **Damage code WF33 066 000 2**

- References:
- ⇒ *Workshop Manual '108319 Removing and installing engine cover'*
  - ⇒ *Workshop Manual '190107 Bleeding the cooling system - high-temperature engine cooling system'*
  - ⇒ *Workshop Manual '190107 Bleeding the cooling system - medium/low-temperature cooling system'*
  - ⇒ *Workshop Manual '193817 Draining and filling coolant - high-temperature engine cooling system'*
  - ⇒ *Workshop Manual '193817 Draining and filling coolant - medium/low-temperature cooling system'*
  - ⇒ *Workshop Manual '196419 Removing and installing front coolant pipes - high-temperature cooling system'*
  - ⇒ *Workshop Manual '196419 Removing and installing front coolant pipes - medium- and low-temperature cooling system'*
  - ⇒ *Workshop Manual '2X00IN General warning notes for working on the high-voltage vehicle electrical system'*
  - ⇒ *Workshop Manual '2X00IN Isolating high-voltage electrical system from power supply/Starting high-voltage electrical system (diagnostics)'*
  - ⇒ *Workshop Manual '2X00IN Isolating high-voltage electrical system from power supply/Starting high-voltage electrical system (manual)'*
  - ⇒ *Workshop Manual '270619 Removing and installing battery'*
  - ⇒ *Workshop Manual '279119 Removing and installing (front) power electronics'*
  - ⇒ *Workshop Manual '395955 Replacing sealing ring for all-wheel drive flange shaft (long)'*
  - ⇒ *Workshop Manual '396319 Removing and installing all-wheel drive flange shaft (long)'*
  - ⇒ *Workshop Manual '4X00IN Raising the vehicle'*
  - ⇒ *Workshop Manual '4X00IN Adjustment values for suspension alignment'*
  - ⇒ *Workshop Manual '400919 Removing and installing front-axle cross member (subframe)'*
  - ⇒ *Workshop Manual '401519 Removing and installing upper trailing arm'*
  - ⇒ *Workshop Manual '404119 Removing and installing front drive shaft'*
  - ⇒ *Workshop Manual '407819 Removing and installing connecting link for anti-roll bar'*
  - ⇒ *Workshop Manual '408519 Removing and installing front spring strut'*
  - ⇒ *Workshop Manual '438219 Removing and installing pressure accumulator for front axle lift system'*
  - ⇒ *Workshop Manual '440519 Removing and installing wheel'*
  - ⇒ *Workshop Manual '449503 Suspension alignment, complete'*
  - ⇒ *Workshop Manual '473919 Removing and installing front brake calliper'*
  - ⇒ *Workshop Manual '502019 Removing and installing floor front section'*
  - ⇒ *Workshop Manual '50561901 Removing and installing front wheel housing liner (front part)'*
  - ⇒ *Workshop Manual '50561905 Removing and installing front wheel housing liner (rear part)'*
  - ⇒ *Workshop Manual '518119 Removing and installing jacking points'*
  - ⇒ *Workshop Manual '519219 Removing and installing cover for front underbody'*
  - ⇒ *Workshop Manual '51931900 Removing and installing cover for centre underbody'*
  - ⇒ *Workshop Manual '51931901 Removing and installing cover for centre underbody (at the sides)'*
  - ⇒ *Workshop Manual '519419 Removing and installing cover for rear underbody'*
  - ⇒ *Workshop Manual '631519 Removing and installing front apron'*

- ⇒ *Workshop Manual '664419 Removing and installing cowl panel cover'*
- ⇒ *Workshop Manual '66591901 Removing and installing lower part of rear spoiler (at the sides)'*
- ⇒ *Workshop Manual '700219 Removing and installing front trim panel'*
- ⇒ *Workshop Manual '700519 Removing and installing trim panel for front luggage compartment'*
- ⇒ *Workshop Manual '703919 Removing and installing cover for lock support'*
- ⇒ *Workshop Manual '828019 Removing and installing passenger compartment heater'*
- ⇒ *Workshop Manual '870317 Draining and filling refrigerant'*
- ⇒ *Workshop Manual '922519 Removing and installing wiper arm'*
- ⇒ *Workshop Manual '941515 Adjusting headlights'*
- ⇒ *Workshop Manual '941519 Removing and installing headlights'*
- ⇒ *Workshop Manual '964019 Removing and installing luggage compartment lamp'*

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