

**WLA8 Workshop campaign - Checking connecting shaft for front-wheel drive and replacing it if necessary**

**Introduction**

Vehicle Type: **Panamera Turbo (971)/Panamera Turbo Executive (971)/Panamera Turbo Sport Turismo (971)  
Panamera Turbo S E-Hybrid (971)/Panamera Turbo S E-Hybrid Executive (971)/Panamera Turbo S E-Hybrid Sport Turismo (971)**

Model Year: **As of 2017 up to 2018**

Equipment: All-wheel drive

Subject: **Connecting shaft for front-axle final drive**

Information: **There is a possibility that the splines of the connecting shaft for the front-axle final drive were not greased according to specifications on the affected vehicles.**

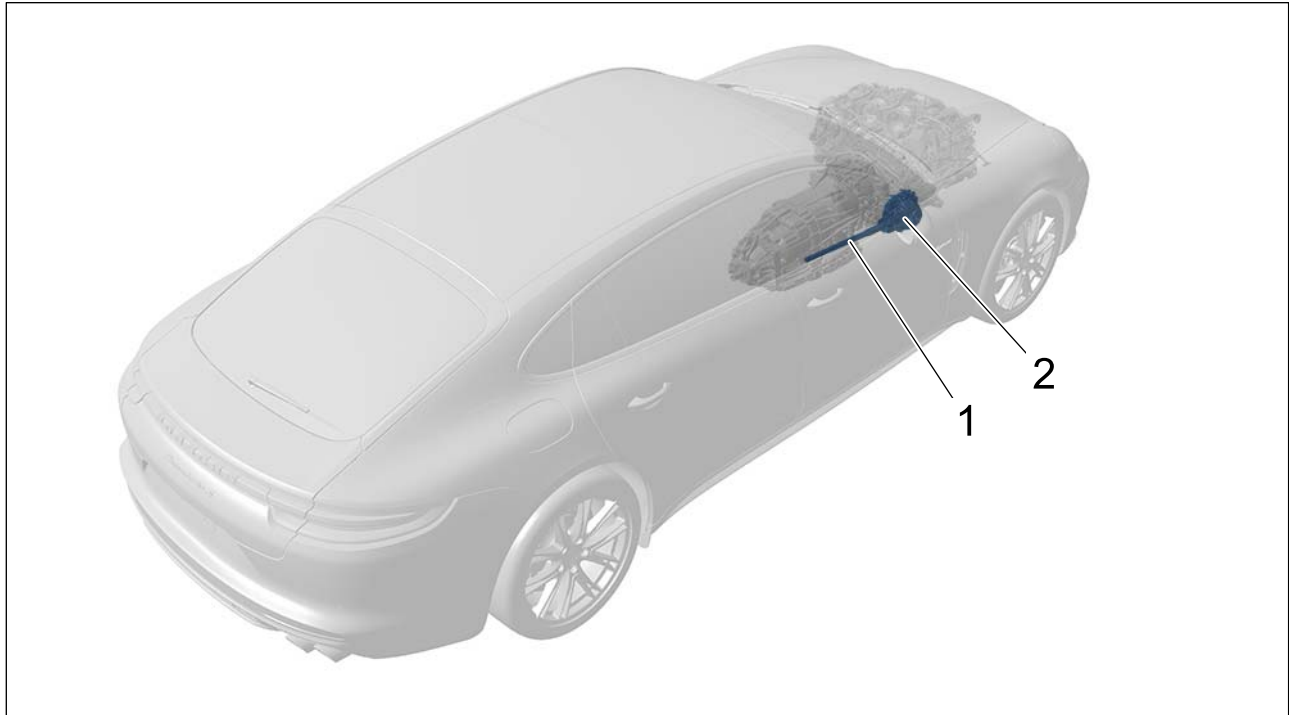
If this is the case, the area on and around the splines can become corroded over the service life of the vehicle and as a result, the splines will wear. The customer may hear noises.

Remedial Action:

- Checking connecting shaft for front-axle final drive
- Replacing the connecting shaft and front-axle final drive if necessary, depending on the result of the check

Affected Vehicles: Only vehicles assigned to the campaign (see also PCSS Vehicle Information). There are 2,153 vehicles affected by this campaign.

Installation  
Position:



*Overview of installation position*

- 1 – Connecting shaft (**check and replace if necessary**)
- 2 – Front-axle final drive (**replace if necessary**)

### Required parts and materials

Parts Info: **No parts are required for checking** the connecting shaft for the front-axle final drive.

Parts required for **replacing** the connecting shaft for the front-axle final drive, **depending on the result of the check**:

Part No.	Designation – Use	Qty.
9A730720300	⇒ Connecting shaft – Front-wheel drive	1 ea.
9A7409505KX	⇒ Front-axle final drive – Front-wheel drive	1 ea.
N 0123741	⇒ Circlip – Front-wheel drive	1 ea.

WHT005157	⇒ O-ring – Front-wheel drive	1 ea.
9A740763500	⇒ Circlip – Left and right drive shaft	2 ea.
298407475	⇒ Protective ring – Left and right drive shaft	2 ea.
971407297	⇒ Circlip – Drive shaft	1 ea.
N 10687201	⇒ Cheese head bolt, M10 x 45 – Engine carrier to engine	6 ea.
PAF911489	⇒ Hex flange bolt, M12 x 1.5 x 60 – Engine mount to bracket	2 ea.
N 91244301	⇒ Hex flange bolt, M12 x 1.5 x 90 – Front-axle carrier to body front – Strut to body	8 ea.
N 91251301	⇒ Hexagon flange bolt, M10 x 60 – Transmission support to body	6 ea.
N 10714101	⇒ Hexagon flange bolt, M10 x 25 – Strut to body	2 ea.
N 10628301	⇒ Hex flange bolt, M12 x 1.5 x 90 – Spring strut to lower trailing arm	2 ea.
PAF104029	⇒ Hexagon collar nut, M12 – Spring strut to lower trailing arm	2 ea.
WHT005633	⇒ Double-hex collar nut, M14 x 1.5 – Lower trailing arm to wheel bearing housing	2 ea.
9A700499500	⇒ Hexagon nut, M12 x 1.5 – Tie-rod ball to wheel bearing housing	2 ea.
WHT005819	⇒ Hexagon collar nut, M12 x 1.5 – Upper trailing arm to wheel bearing housing	2 ea.
N 10082913	⇒ Hexagon-head bolt, M6 x 16 – Brake cover panel to wheel bearing housing	10 ea.
N 10456004	⇒ Internal hexagon round countersunk screw, M6 x 12 – Brake disc to wheel hub	4 ea.
WHT004955A	⇒ Internal hexagon round cheese head bolt, M8 x 30 – Steering column (center) to power-steering gear	1 ea.
N 90440003	⇒ Hexagon-head bolt, M8 x 35 – A-strut to body	2 ea.

9A700489400	⇒ O-ring, 31.42 x 2.62 – Cardan shaft to transmission	1 ea.
9A752572202	⇒ Circlip – Cardan shaft to transmission	1 ea.
WHT005156	⇒ O-ring, 28 x 2 – Cardan shaft to rear axle	1 ea.
9A750730100	⇒ Circlip, 31.5 – Cardan shaft to rear axle	1 ea.
9A757374903	⇒ O-ring, 16.25 x 2.5 – Refrigerant intake pipe to condenser	2 ea.
95557374900	⇒ Round sealing ring, 9.5 x 2.5 – Refrigerant lines to condenser – High-pressure refrigerant line	3 ea.
99970755741	⇒ O-ring, 11 x 2.5 – Refrigerant lines in engine compartment	2 ea.
N 10664503	⇒ Hex flange bolt, M8 x 45 – Side strut to body	2 ea.
N 10272302	⇒ Hexagon collar nut, M10 – Connecting link to wheel bearing housing	2 ea.
WHT008539	⇒ Hex flange bolt, M10 x 80 – Torque support screw – Dome strut to body	3 ea.
N 10261311	⇒ Hexagon nut, M10 – Dome strut to body – Spring strut to body	8 ea.
N 10625901	⇒ Hex flange bolt, M10 x 70 – Torque support screw	1 ea.
N 90666003	⇒ O-ring, 11.5 x 3 – ATF line to ATF cooler	2 ea.
95511110830	⇒ Clamp – Exhaust system	2 ea.
971253115B	⇒ Seal – Primary catalytic converter to exhaust turbocharger	2 ea.
9A725372500	⇒ Clamp – Primary catalytic converter to exhaust turbocharger	2 ea.

PAB253725	⇒ Clamp – Primary catalytic converter to catalytic converter	2 ea.
5Q0253115B	⇒ Seal – Primary catalytic converter to catalytic converter	2 ea.
N 91130801	⇒ Hexagon nut, self-locking, M8 – Catalytic converter to primary catalytic converter	6 ea.

**Additional parts required** for vehicles with **19" or 20" disc brakes (I-no. 1LM, 1LP, 1LK, 1LL, 1LC, 1LI, 1LJ, 1LW):**

WHT004572	⇒ Collared cheese head bolt, M14 x 1.5 x 135 – 19", 20" brake calliper	4 ea.
9A769826900	⇒ Retainer spring for brake pad – Brake calliper	2 ea.

or

**Additional parts required** for vehicles with **PCCB disc brakes (I-no. 1LV, 1ZQ):**

WHT004572	⇒ Collared cheese head bolt, M14 x 1.5 x 135 – PCCB brake calliper	4 ea.
971698231A	⇒ Retainer spring for brake pad – PCCB brake calliper	2 ea.

**Additional parts required** for vehicles **without** PDCC:

N 10793603	⇒ Hex flange bolt, M12 x 1.5 x 60 – Anti-roll bar to connecting link (conventional)	2 ea.
N 0150818	⇒ Hexagon collar nut, M12 x 1.5 – Anti-roll bar to connecting link (conventional)	2 ea.

or

**Additional parts required** for vehicles with **PDCC (I-no. 1P7):**

N 10702302	⇒ Hexagon-head bolt, M12 x 1.5 x 50 – Anti-roll bar to connecting link (PDCC)	2 ea.
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Materials: **No materials are required** for **checking** the connecting shaft.

**Materials required** for **replacing** the connecting shaft for the front-axle final drive, **depending on the result of the check** (usually already available at the Porsche dealer):

Part No.	Designation – Use	Qty.
00004330586	⇒ Anti Seize AS040P mounting paste, 10 g/ 3.5 oz applicator gun – Connecting shaft splines	1 ea.
00004330534	⇒ Transmission oil, 1-liter/ 33.8 fl. oz. container – Front-axle final drive	As much as required (approx. 0.5 liter/16.9 fl. oz. required per vehicle)
00004321044	⇒ Pentosin FFL-8, 1-liter/ 33.8 fl. oz. container – ATF for transmission	As much as required (approx. 0.2 liter/ 6.7 fl. oz. required per vehicle)
00004330516	⇒ Coolant additive, 20-liter/ 676.3 fl. oz. container – Cooling system	As much as required (approx. 2 liter/ 67.6 fl. oz. required per vehicle)
00004330508	⇒ Mounting paste, 100 g tube – Inner drive shaft splines	As much as required (approx. 10 g/ 3.5 ozrams required per vehicle)

## Required tools

Tools: Tools required for **checking the connecting shaft**:

- Torque screwdriver, 1.5-3 Nm (1-2 ftlb.), e.g. **VAS 6494 Torque screwdriver, 1.5-3.0 Nm (1-2 ftlb.)**
- Flashlight

**Additional** tools required for **replacing** the connecting shaft:

- 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.)**
- Torque wrench, 20-100 Nm (15-74 ftlb.), e.g. **VAS 5820 Torque wrench or equivalent, 20-100 Nm (15-74 ftlb.)**
- Torque/torque angle wrench, 20-400 Nm (15-296 ftlb.), e.g. **VAS 6942 Digital torque wrench or equivalent, 20-400 Nm (15-296 ftlb.)**
- Torque wrench, 40-200 Nm (30-148 ftlb.), e.g. **VAG 1332 Torque wrench, 40-200 Nm (30-148 ftlb.)**
- **VAS 6832 Master Gear unit elevating platform**
- **VAS 6832/7 Assembly fixture - Panamera G2**
- **VAS 6928 Socket wrench set, 39-piece**
- **T10439 - Assembly pin**

- 9472 - Brake piston resetting fixture
- 9229/1 - Puller hook
- VAS 6926 Puller set (locally available) or equivalent
- T10187 - Press-out tool
- VW552 - Spring compressor or equivalent
- VAS 6931 Transmission and Engine Jack
- 9799 - Impact puller
- VAS 6096/2 Vacuum pump
- 9696 - Filling device
- VAG 1274B Tester for Cooling System
- VAS 6562 Porsche Adapter Set for Cooling System Tester
- VAS 6890 Spring Band Clamp Pliers or equivalent
- T40178B - Oil gauge tester
- VAS 6262A Adapter for Oil Filling
- VAS6262/2 Adapter for Filling ATF Oil
- VAS 581001 Air-conditioning service unit R1234yf
- VAS 6381B Air conditioning service unit R134a
- VAS 581007 Extraction unit for R1234yf
- T10118 - Assembly tool
- VAS 741039 Manoeuvring aid set
- 9825/3 - Adapter
- 9825/1 - Connecting line
- VAS 6629A Nitrogen Filler Set for Air-Spring Struts
- VAS6350A Calibration unit
- VAS6350/2A Spacing laser
- VAS 6350/4 Calibration Unit for Lane Change Assist
- VAS 6430/1A Setting Device with Reflector
- VAS 6430/3 ACC reflector mirror
- VAS 6430/4 Lane Departure Warning Calibration Plate
- VAS 6430/6 Enhanced night vision calibration unit
- 9900 - PIWIS Tester 3
- VAS 5908 Battery Charger, 90 A
- VAS 6826 Steering wheel balance
- VAS 6918 Quick-Clamping Unit
- T10188 - Open-end spanner insert
- 9889 - Press-off tool
- 9940 - Adapter
- 3438 - Hook
- VAS 6883 Insulated Tool Set

**Additional** tools required for vehicles with hybrid drive if the **high-voltage system cannot be isolated** automatically using the PIWIS Tester:

- VAS 6558/9-6 High-voltage test adapter HVA 280
- T40262 - Locking cap
- 9703 - Flexible screwdriver

### Checking connecting shaft for front-axle final drive

- Procedure:
- 1 Raise the vehicle using a lifting platform ⇒ *Workshop Manual '4X00IN Lifting the vehicle'*.
  - 2 Remove front underbody cover ⇒ *Workshop Manual '519219 Removing and installing cover for front underbody'*.
  - 3 Remove center underbody cover ⇒ *Workshop Manual '519319 Removing and installing cover for centre underbody'*.
  - 4 **Visually inspect the connecting shaft** on and around the splines for the front-axle final drive to see whether **there is any corrosion residue**.



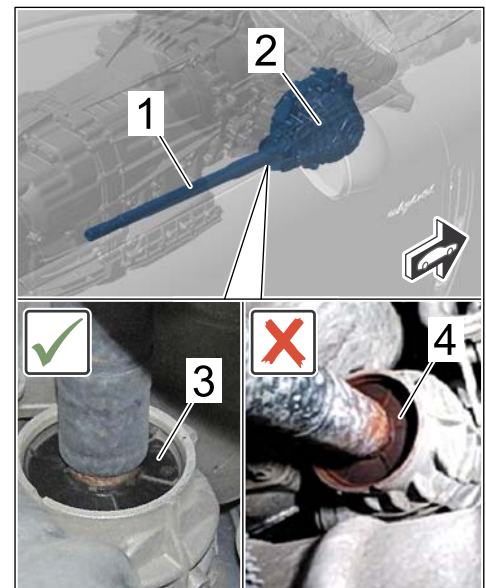
#### Information

**Limescale deposits or dirt** that gets into the connecting shaft area as a result of driving the vehicle **are not a defect**. The connecting shaft and front-axle final drive must only be replaced if there are **obvious signs** of corrosion (red rust).

- There is **no corrosion dust** on the dust boot on the front-axle final drive to the connecting shaft: The connecting shaft for the front-axle final drive is greased according to specifications and **does not have to be replaced**. Continue with **Step 5**.
  - If **there is corrosion dust** on the **dust boot** on the front-axle final drive, the connecting shaft was not greased according to specifications. The **connecting shaft** and the **front-axle final drive** must be **replaced**. To do this, continue with ⇒ *Technical Information '519319 Replacing connecting shaft for front-axle final drive'*.
- 5 Install center underbody cover ⇒ *Workshop Manual '519319 Removing and installing cover for centre underbody'*.
  - 6 Install front underbody cover ⇒ *Workshop Manual '519219 Removing and installing cover for front underbody'*.
  - 7 Lower the vehicle and remove it from the lifting platform.
  - 8 Enter the campaign in the Warranty and Maintenance booklet.

– End of action required –

For warranty processing, see **Scope 1** under ⇒ *Technical Information '519219 Warranty processing'*.



*Dust boot and connecting shaft for front-axle final drive*

## Replacing connecting shaft and front-axle final drive

Procedure:



### Information

Digital photos of the relevant connecting shafts and the relevant front-axle final drive are required for analysing the damage and for vehicle differentiation. Please add these photos to the relevant warranty claim and send them to Porsche AG.

- 1 Document the damage on the connecting shaft and front-axle final drive **while installed** on the respective vehicle.  
To do this, take digital photos that clearly show the signs of corrosion.  
Also take digital photos of the connecting shaft and front-axle final drive after removing them (see Step 16).
- 2 **Vehicles with hybrid drive:** Observe general warning notes for working on the high-voltage vehicle electrical system ⇒ *Workshop Manual '2X00IN General warning notes for working on the high-voltage electrical system'*.
- 3 **Vehicles with hybrid drive:** Isolate the high-voltage system from the power supply and complete the relevant documentation ⇒ *Workshop Manual '2X00IN Isolating high-voltage system from power supply/Starting high-voltage system'*.
- 4 **Only for vehicles with PDCC:** Disconnect 48 V system ⇒ *Workshop Manual '270703 Disconnecting and starting 48 V system'*.
- 5 Disconnect ground strap on the battery.  
For instructions, see ⇒ *Workshop Manual '270619 Removing and installing battery'*.
- 6 Remove front wheels ⇒ *Workshop Manual '440519 Removing and installing wheel'*.
- 7 Remove front wheel housing liners on both sides of the vehicle ⇒ *Workshop Manual '505619 Removing and installing front wheel housing liner'*.
- 8 Remove front-axle support (front section)  
For instructions, see ⇒ *Workshop Manual '400819 Removing and installing front-axle support'*.
- 9 Remove front air-spring struts ⇒ *Workshop Manual '433019 Removing and installing front air-spring strut'*.

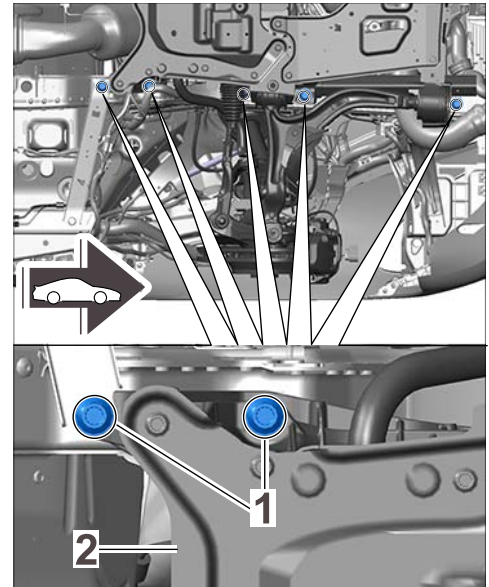
**Information**

The camber on the front axle cannot be adjusted, but must be centered evenly within the tolerance range by moving the front-axle carrier.

The bores in the front-axle carrier for the fastening screws are designed as slots for this purpose.

To minimize the work involved in subsequently performing suspension alignment and adjusting the vehicle, mark the **position of the fastening screws** ⇒ *Marking fastening screws on front-axle carrier -2-* in relation to the front-axle carrier ⇒ *Marking fastening screws on front-axle carrier -1-* before loosening them using a suitable pen or marker.

- 10 Remove engine/transmission unit together with the front-axle carrier.  
For instructions, see ⇒ *Workshop Manual '100119 Removing and installing engine'*.
- 11 Remove heat shield on turbocharger ⇒ *Workshop Manual '261219 Removing and installing heat shield on turbocharger (V8 biturbo)'*.
- 12 Remove heat shields on top half of catalytic converter  
For instructions, see ⇒ *Workshop Manual '261219 Removing and installing heat shield on catalytic converter (V8 biturbo)'*.
- 13 Remove primary catalytic converters together with catalytic converters  
For instructions, see ⇒ *Workshop Manual '267619 Removing and installing primary catalytic converter (V8 biturbo)'*  
For instructions, see ⇒ *Workshop Manual '267319 Removing and installing catalytic converter (V8)'*.
- 14 Remove heat shields on bottom half of catalytic converter  
For instructions, see ⇒ *Workshop Manual '261219 Removing and installing heat shield on catalytic converter (V8 biturbo)'*.
- 15 Remove front drive shafts ⇒ *Workshop Manual '404119 Removing and installing front drive shaft'*.



*Marking fastening screws  
on front-axle carrier*

**Information**

Digital photos of the relevant connecting shafts and the relevant front-axle final drive are required for analysing the damage and for vehicle differentiation. Please add these photos to the relevant warranty claim and send them to Porsche AG.

- 16 Document the damage on the connecting shaft and front-axle final drive **after removing them**. To do this, take digital photos that clearly show the signs of corrosion on the respective components.
- 17 Remove front-axle final drive and connecting shaft ⇒ *Workshop Manual '398819 Removing and installing all-wheel final drive'*.
- 18 Install new front-axle final drive and connecting shaft.  
**Make sure to grease the splines of the connecting shaft for the front-axle final drive with Weicon Anti Seize AS040P mounting paste (Part No. 00004330586).**  
For instructions, see ⇒ *Workshop Manual '398819 Removing and installing all-wheel final drive'*.
- 19 Install front drive shafts ⇒ *Workshop Manual '404119 Removing and installing front drive shaft'*.
- 20 Install heat shields on bottom half of catalytic converter  
For instructions, see ⇒ *Workshop Manual '261219 Removing and installing heat shield on catalytic converter (V8 biturbo)'*.
- 21 Install primary catalytic converters together with catalytic converters  
For instructions, see ⇒ *Workshop Manual '267619 Removing and installing primary catalytic converter (V8 biturbo)'*  
For instructions, see ⇒ *Workshop Manual '267319 Removing and installing catalytic converter (V8)'*.
- 22 Install heat shields on top half of catalytic converter  
For instructions, see ⇒ *Workshop Manual '261219 Removing and installing heat shield on catalytic converter (V8 biturbo)'*.
- 23 Install heat shield for turbocharger ⇒ *Workshop Manual '267619 Removing and installing primary catalytic converter'*.

**Information**

First secure the front-axle carrier **to the body using the old fastening screws** and after you have performed suspension alignment and adjusted the vehicle, **replace all the relevant fastening screws one after the other with new screws**.

- 24 Install engine/transmission unit together with the front-axle carrier ⇒ *Workshop Manual '100119 Removing and installing engine'*.
- 25 Install front air-spring struts ⇒ *Workshop Manual '433019 Removing and installing front air-spring strut'*.
- 26 Install front-axle support (front section)  
For instructions, see ⇒ *Workshop Manual '400819 Removing and installing front-axle support'*.

- 27 Install front wheel housing liners on both sides of the vehicle ⇒ *Workshop Manual '505619 Removing and installing front wheel housing liner'*.
- 28 Install front wheels ⇒ *Workshop Manual '440519 Removing and installing wheel'*.
- 29 Connect ground strap on the battery.  
For instructions, see ⇒ *Workshop Manual '270619 Removing and installing battery'*.
- 30 Observe general warning notes for working on the high-voltage vehicle electrical system ⇒ *Workshop Manual '2X00IN General warning notes for working on the high-voltage electrical system'*.
- 31 **Only for vehicles with PDCC:** Start the 48 V vehicle electrical system.
- 32 **Vehicles with hybrid drive:** Start the high-voltage system and complete the relevant documentation ⇒ *Workshop Manual '2X00IN Isolating high-voltage system from power supply/Starting high-voltage system'*.
- 33 **Vehicles with hybrid drive:** Bleed the coolant system ⇒ *Workshop Manual '193817 Draining and filling coolant (includes bleeding)'*.
- 34 Check and top up ATF ⇒ *Workshop Manual '370235 Checking and topping up ATF'*.
- 35 Lower the vehicle and remove it from the lifting platform ⇒ *Workshop Manual '4X00IN Lifting the vehicle'*.
- 36 Perform suspension alignment and adjust the vehicle ⇒ *Workshop Manual '449503 Suspension alignment, complete'*.
- 37 **Unscrew previously re-used fastening screws** on the front-axle carrier **individually** and **one after the other** and replace them with **new fastening screws**.  
For instructions, see ⇒ *Workshop Manual '400619 Removing and installing front-axle carrier'*.
- 38 Enter the campaign in the Warranty and Maintenance booklet.  
**– End of action required –**  
For warranty processing, see **Scopes 7 – 9** under ⇒ *Technical Information '400619 Warranty processing'*.

**Warranty processing**

Scope 1: **Checking connecting shaft for front-axle final drive – No parts** have to be replaced.

**Relevant for all vehicles.**

**Working time:**

Checking connecting shaft for front-axle final drive Labor time: **69 TU**

Includes:    Removing and installing cover for front underbody  
                  Removing and installing cover for center underbody

⇒ **Damage Code WLA8 066 000 1**

Scope 2- 6: **Not relevant** for this **vehicle type**.

Scope 7: **Checking connecting shaft for front-axle final drive – Replacing connecting shaft and front-axle final drive**

**Only relevant** for vehicles with the following **version/equipment**:

- Vehicles **without** hybrid drive
- Vehicles **without** PDCC

**Working time:**

Checking connecting shaft for front-axle final drive – replacing connecting shaft and front-axle final drive Labor time: **1944 TU**

Includes:    Disconnecting and connecting the battery  
                  Removing and installing wheel  
                  Removing and installing front wheel housing liners at the left and right  
                  Removing and installing front-axle support  
                  Removing and installing front air-spring struts  
                  Removing and installing engine/transmission unit together with front-axle carrier  
                  Removing and installing heat shield on turbocharger  
                  Removing and installing heat shields on top half of catalytic converter  
                  Removing and installing primary catalytic converters together with catalytic converters  
                  Removing and installing heat shields on bottom half of catalytic converter  
                  Removing and installing front drive shafts  
                  Removing and installing all-wheel final drive  
                  Checking oil level in front-axle final drive and topping up oil  
                  Checking and topping up ATF  
                  Performing suspension alignment and adjusting the vehicle  
                  Calibrating assistance systems

**Parts required:**

9A730720300	Connecting shaft	1 ea.
9A7409505KX	Front-axle final drive	1 ea.
N 0123741	Circlip	1 ea.
WHT005157	O-ring	1 ea.
9A740763500	Circlip	2 ea.
298407475	Protective ring	2 ea.
971407297	Circlip, 23.5 x 1.6	1 ea.
N 91244301	Hex flange bolt, M12 x 1.5 x 90	8 ea.
N 91251301	Hexagon flange bolt, M10 x 60	6 ea.
N 10714101	Hexagon flange bolt, M10 x 25	2 ea.
WHT004955A	Hex flange bolt, M8 x 30	1 ea.
N 10687201	Cheese head bolt, M10 x 45	6 ea.
PAF911489	Hex flange bolt, M12 x 1.5 x 60	2 ea.
N 10664503	Hex flange bolt, M8 x 45	2 ea.
N 90666003	O-ring, 11.5 x 3	2 ea.
N 10628301	Hex flange bolt, M12 x 1.5 x 90	2 ea.
PAF104029	Hexagon collar nut, M12 x 1.5	2 ea.
N 10261311	Hexagon nut, M10	8 ea.
N 10272302	Hexagon nut, M10	2 ea.
WHT005819	Hexagon collar nut, M12 x 1.5	2 ea.
WHT005633	Double-hex collar nut, M14 x 1.5	2 ea.
9A700499500	Hexagon nut, M12 x 1.5	2 ea.
WHT008539	Hex flange bolt, M10 x 80	3 ea.
N 10625901	Cheese head bolt, M10 x 70	1 ea.
N 90440003	Hexagon-head bolt, M8 x 35	2 ea.
N 10082913	Internal hexagon round-head bolt, M6 x 16	10 ea.
N 10456004	Internal hexagon round-head bolt, M6 x 12	4 ea.
N 10793603	Hex flange bolt, M12 x 1.5 x 60	2 ea.
N 0150818	Hexagon collar nut, M12 x 1.5	2 ea.
9A700489400	O-ring, 31.42 x 2.62	1 ea.

9A752572202	Circlip	1 ea.
WHT005156	O-ring, 28 x 2	1 ea.
9A750730100	Circlip, 31.5	1 ea.
9A757374903	O-ring, 16.25 x 2.5	2 ea.
95557374900	Round sealing ring, 9.5 x 2.5	3 ea.
99970755741	O-ring, 11 x 2.5	2 ea.
95511110830	Clamp	2 ea.
971253115B	Seal	2 ea.
9A725372500	Clip	2 ea.
PAB253725	Clip	2 ea.
5Q0253115B	Seal	2 ea.
N 91130801	Hexagon nut M8	6 ea.
<b>Additional parts required for vehicles with 19" or 20" disc brakes:</b>		
WHT004572	Collared cheese head bolt, M14 x 1.5 x 135	4 ea.
9A769826900	Retainer spring for brake pad	2 ea.
<b>or</b>		
<b>Additional parts required for vehicles with PCCB disc brakes:</b>		
WHT004572	Collared cheese head bolt, M14 x 1.5 x 135	4 ea.
971698231A	Retainer spring for brake pad (PCCB)	2 ea.
<b>Materials required:</b>		
00004330586	Anti Seize AS 040P mounting paste, 10 g/ 3.5 oz applicator gun	1 ea.
00004330534	Transmission oil, 1-liter/ 33.8 fl. oz. container	0.5 ea. (= approx. 0.5 liter/ 16.9 fl. oz.)
00004321044	Pentosin FFL-8, 1-liter/ 33.8 fl. oz. container	0.2 ea. (= approx. 0.2 liter/ 6.7 fl. oz.)
00004330508	Mounting paste for drive shaft, 100 g tube	0.1 ea. (= approx. 10 g/ 3.5 oz)
00004330516	Coolant additive, 20-liter/ 676.3 fl. oz. container	0.1 ea. (= approx. 2 liter/ 67.6 fl.oz.)
⇒ Damage Code WLA8 066 000 2		

Scope 8: **Checking connecting shaft for front-axle final drive – Replacing connecting shaft and front-axle final drive**

**Only relevant** for vehicles with the following **version/equipment**:

- Vehicles **without** hybrid drive
- Vehicles **with PDCC (I-no. 1P7)**

**Working time:**

Checking connecting shaft for front-axle final drive – replacing connecting shaft and front-axle final drive

Labor time: **1966 TU**

Includes:

- Disconnecting and starting 48 V system
- Disconnecting and connecting the battery
- Removing and installing wheel
- Removing and installing front wheel housing liners at the left and right
- Removing and installing front-axle support
- Removing and installing front air-spring struts
- Removing and installing engine/transmission unit together with front-axle carrier
- Removing and installing heat shield on turbocharger
- Removing and installing heat shields on top half of catalytic converter
- Removing and installing primary catalytic converters together with catalytic converters
- Removing and installing heat shields on bottom half of catalytic converter
- Removing and installing front drive shafts
- Removing and installing all-wheel final drive
- Checking oil level in front-axle final drive and topping up oil
- Checking and topping up ATF
- Performing suspension alignment and adjusting the vehicle
- Calibrating assistance systems

**Parts required:**

9A730720300	Connecting shaft	1 ea.
9A7409505KX	Front-axle final drive	1 ea.
N 0123741	Circlip	1 ea.
WHT005157	O-ring	1 ea.

9A740763500	Circlip	2 ea.
298407475	Protective ring	2 ea.
971407297	Circlip, 23.5 x 1.6	1 ea.
N 91244301	Hex flange bolt, M12 x 1.5 x 90	8 ea.
N 91251301	Hexagon flange bolt, M10 x 60	6 ea.
N 10714101	Hexagon flange bolt, M10 x 25	2 ea.
WHT004955A	Hex flange bolt, M8 x 30	1 ea.
N 10687201	Cheese head bolt, M10 x 45	6 ea.
PAF911489	Hex flange bolt, M12 x 1.5 x 60	2 ea.
N 10664503	Hex flange bolt, M8 x 45	2 ea.
N 90666003	O-ring, 11.5 x 3	2 ea.
N 10628301	Hex flange bolt, M12 x 1.5 x 90	2 ea.
PAF104029	Hexagon collar nut, M12 x 1.5	2 ea.
N 10261311	Hexagon nut, M10	8 ea.
N 10272302	Hexagon nut, M10	2 ea.
WHT005819	Hexagon collar nut, M12 x 1.5	2 ea.
WHT005633	Double-hex collar nut, M14 x 1.5	2 ea.
9A700499500	Hexagon nut, M12 x 1.5	2 ea.
WHT008539	Hex flange bolt, M10 x 80	3 ea.
N 10625901	Cheese head bolt, M10 x 70	1 ea.
N 90440003	Hexagon-head bolt, M8 x 35	2 ea.
N 10082913	Internal hexagon round-head bolt, M6 x 16	10 ea.
N 10456004	Internal hexagon round-head bolt, M6 x 12	4 ea.
9A700489400	O-ring, 31.42 x 2.62	1 ea.
9A752572202	Circlip	1 ea.
WHT005156	O-ring, 28 x 2	1 ea.
9A750730100	Circlip, 31.5	1 ea.
9A757374903	O-ring, 16.25 x 2.5	2 ea.
95557374900	Round sealing ring, 9.5 x 2.5	3 ea.
99970755741	O-ring, 11 x 2.5	2 ea.
95511110830	Clamp	2 ea.

971253115B	Seal	2 ea.
9A725372500	Clip	2 ea.
PAB253725	Clip	2 ea.
5Q0253115B	Seal	2 ea.
N 91130801	Hexagon nut M8	6 ea.
N 10702302	Hex flange bolt, M12 x 1.5 x 50	2 ea.

**Additional parts required** for vehicles with **19" or 20" disc brakes:**

WHT004572	Collared cheese head bolt, M14 x 1.5 x 135	4 ea.
9A769826900	Retainer spring for brake pad	2 ea.

**or**

**Additional parts required** for vehicles with **PCCB disc brakes:**

WHT004572	Collared cheese head bolt, M14 x 1.5 x 135	4 ea.
971698231A	Retainer spring for brake pad (PCCB)	2 ea.

**Materials required:**

00004330586	Anti Seize AS 040P mounting paste, 10 g/ 3.5 oz applicator gun	1 ea.
00004330534	Transmission oil, 1-liter/ 33.8 fl. oz. container	0.5 ea. (= approx. 0.5 liter/ 16.9 fl. oz.)
00004321044	Pentosin FFL-8, 1-liter/ 33.8 fl. oz. container	0.2 ea. (= approx. 0.2 liter/ 6.7 fl. oz.)
00004330508	Mounting paste for drive shaft, 100 g tube	0.1 ea. (= approx. 10 g/ 3.5 oz)
00004330516	Coolant additive, 20-liter/ 676.3 fl. oz. container	0.1 ea. (= approx. 2 liter/ 67.6 fl. oz.)

⇒ **Damage Code WLA8 066 000 2**

Scope 9:

**Checking connecting shaft for front-axle final drive – Replacing connecting shaft and front-axle final drive**

**Only relevant** for vehicles with the following **version/equipment:**

- Vehicles **with hybrid drive**
- Vehicles **with PDCC (I-no. 1P7)**

**Working time:**

Checking connecting shaft for front-axle final drive – replacing connecting shaft and front-axle final drive

Labor time: **2158 TU**

- Includes:
- Isolating high-voltage system from power supply/Starting high-voltage system
  - Disconnecting and connecting the battery
  - Removing and installing wheel
  - Removing and installing front wheel housing liners at the left and right
  - Removing and installing front-axle support
  - Removing and installing front air-spring struts
  - Removing and installing engine/transmission unit together with front-axle carrier
  - Removing and installing heat shield on turbocharger
  - Removing and installing heat shields on top half of catalytic converter
  - Removing and installing primary catalytic converters together with catalytic converters
  - Removing and installing heat shields on bottom half of catalytic converter
  - Removing and installing front drive shafts
  - Removing and installing all-wheel final drive
  - Checking oil level in front-axle final drive and topping up oil
  - Checking and topping up ATF
  - Performing suspension alignment and adjusting the vehicle
  - Calibrating assistance systems

**Parts required:**

9A730720300	Connecting shaft	1 ea.
9A7409505KX	Front-axle final drive	1 ea.
N 0123741	Circlip	1 ea.
WHT005157	O-ring	1 ea.
9A740763500	Circlip	2 ea.
298407475	Protective ring	2 ea.
971407297	Circlip, 23.5 x 1.6	1 ea.
N 91244301	Hex flange bolt, M12 x 1.5 x 90	8 ea.
N 91251301	Hexagon flange bolt, M10 x 60	6 ea.
N 10714101	Hexagon flange bolt, M10 x 25	2 ea.
WHT004955A	Hex flange bolt, M8 x 30	1 ea.

N 10687201	Cheese head bolt, M10 x 45	6 ea.
PAF911489	Hex flange bolt, M12 x 1.5 x 60	2 ea.
N 10664503	Hex flange bolt, M8 x 45	2 ea.
N 90666003	O-ring, 11.5 x 3	2 ea.
N 10628301	Hex flange bolt, M12 x 1.5 x 90	2 ea.
PAF104029	Hexagon collar nut, M12 x 1.5	2 ea.
N 10261311	Hexagon nut, M10	8 ea.
N 10272302	Hexagon nut, M10	2 ea.
WHT005819	Hexagon collar nut, M12 x 1.5	2 ea.
WHT005633	Double-hex collar nut, M14 x 1.5	2 ea.
9A700499500	Hexagon nut, M12 x 1.5	2 ea.
WHT008539	Hex flange bolt, M10 x 80	3 ea.
N 10625901	Cheese head bolt, M10 x 70	1 ea.
N 90440003	Hexagon-head bolt, M8 x 35	2 ea.
N 10082913	Internal hexagon round-head bolt, M6 x 16	10 ea.
N 10456004	Internal hexagon round-head bolt, M6 x 12	4 ea.
9A700489400	O-ring, 31.42 x 2.62	1 ea.
9A752572202	Circlip	1 ea.
WHT005156	O-ring, 28 x 2	1 ea.
9A750730100	Circlip, 31.5	1 ea.
9A757374903	O-ring, 16.25 x 2.5	2 ea.
95557374900	Round sealing ring, 9.5 x 2.5	3 ea.
99970755741	O-ring, 11 x 2.5	2 ea.
95511110830	Clamp	2 ea.
971253115B	Seal	2 ea.
9A725372500	Clip	2 ea.
PAB253725	Clip	2 ea.
5Q0253115B	Seal	2 ea.
N 91130801	Hexagon nut M8	6 ea.
N 10702302	Hex flange bolt, M12 x 1.5 x 50	2 ea.

WHT004572	Collared cheese head bolt, M14 x 1.5 x 135	4 ea.
971698231A	Retainer spring for brake pad (PCCB)	2 ea.
<b>Materials required:</b>		
00004330586	Anti Seize AS 040P mounting paste, 10 g/ 3.5 oz applicator gun	1 ea.
00004330534	Transmission oil, 1-liter/ 33.8 fl. oz. container	0.5 ea. (= approx. 0.5 liter/ 16.9 fl. oz.)
00004321044	Pentosin FFL-8, 1-liter/ 33.8 fl. oz. container	0.2 ea. (= approx. 0.2 liter/ 6.7 fl. oz.)
00004330508	Mounting paste for drive shaft, 100 g tube	0.1 ea. (= approx. 10 g/ 3.5 oz)
00004330516	Coolant additive, 20-liter/ 676.3 fl. oz. container	0.1 ea. (= approx. 2 liter/ 67.6 fl. oz.)
⇒ <b>Damage Code WLA8 066 000 2</b>		

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