

**Transmission Symptom - Oil Leakage on Transfer Box: Observe Specified Procedure (SY 206/20)**

**Change overview:**

Release	Date	Change
0	03/01/2021	<ul style="list-style-type: none"> <li>• First publication</li> </ul>
1	06/27/2024	<ul style="list-style-type: none"> <li>• Vehicle types added</li> <li>• "Required parts" sections adapted to new vehicle types</li> </ul>

Model Line: **Cayenne (9YA / 9YB)**

Model Year: **As of 2018**

Concerns: **Transfer gear**

Symptom: Oil leakage is found on the vehicle in the area of the hang-on transfer box and at the transition to the automatic transmission.

Cause: We have discovered that the location and cause could not always be clearly determined in the dealer organization when attempting to resolve the complaint "Oil leakage". As a result, some of the repair measures that were carried out were not always effective.

Oil migration in the area of the automatic transmission and transfer box can result in incorrect diagnoses when locating oil leakage. For example, the radial shaft seal on the automatic transmission or transfer box side may leak at the connection point of the automatic transmission and transfer box.

In addition, oil leakage in the area of the automatic transmission can result in escaping oil contaminating the transfer box, due to the air flow at the vehicle underbody.



**Information**

In the case of oil leaks in the area of the transfer box, see also ⇒ *Technical Information 'Transmission symptom - Oil leaks on automatic transmission: Observe specified procedure (SY 205/20)'*.

Remedial action: Find oil leakage and carry out the relevant repair measure.

## Preparatory work

Work

Procedure:



### Information

- Oil leaks must be clearly identifiable and reproducible.
  - Engine oil and coolant must have reached operating temperature during a test drive.
- 1 Document the original complaint condition with meaningful photos.
  - 2 Attach documentation to PCSS line.
  - 3 Clean automatic transmission and transfer box thoroughly.
  - 4 Spray large areas of the automatic transmission and transfer box with SpotCheck around the suspected leakage points.
  - 5 Perform a test drive.
  - 6 Locate the oil leakage:
    - The oil leakage is located on the transfer box, continue with ⇒ *Technical Information 'Transmission symptom - Oil leakage on transfer box'*.
    - The oil leakage is located on the automatic transmission, continue with ⇒ *Technical Information 'Transmission symptom - Oil leakage on automatic transmission: Observe specified procedure (SY 205/20)'*.
    - The oil leakage cannot be clearly identified, continue with ⇒ *Technical Information 'Oil leakage on transfer box'*.
  - 7 Produce photo documentation of the leakage point located using SpotCheck.
  - 8 Attach documentation to PCSS line.

## Oil leaks on the transfer box



### Information

Either the radial shaft seal on the automatic transmission or the transfer box may be damaged at the transition from automatic transmission to transfer box.



### Information

Oil penetration of the connection point on the transfer box housing (housing cover) can result in incorrect interpretations.

Check for oil leaks in the area of the input shaft for hang-on transfer box ⇒ *Oil migration* and ⇒ *Oil leak on input-shaft radial shaft*.

- 1 Oil leak on transfer box housing with drops forming in the area of the input shaft. The upswinging motion of the input shaft in the axial direction causes the transmission oil ahead of the radial shaft seal to surge with strong pressure fluctuations. This can result in an oil leak complaint.
  - 1.1 In the event of a complain, first check the technical status of the transfer box using the differentiation table:

Differentiation of measures via hang-on serial numbers			
Start of production as of:	Part number:	Description of change:	Start of production VIN:
All vehicles as of hang-on serial number * 265 NVG0023783F  <b>Start of production: 12.04.2018</b>	0F2341011F	Swirl-free input shaft through modified partly automated grinding process	WP1AA29Y9KDA05 830 Part No. transfer gear: 265 NVG0023783F

- If the serial number on the transfer box corresponds to the specified differentiation data from the table, the entire transfer box must be replaced, see ⇒ *Technical Information 'Replacing transfer box'*. Replacing the radial shaft seal alone would not be effective in the long term and the radial shaft seal would leak again.
- However, if the serial number corresponds to a newer version than that in the differentiation list, only the radial shaft seal may then be replaced, see ⇒ *Technical Information 'Replacing sealing ring for transfer box (front transmission side)'*. The hardware version of the transfer box corresponds to the latest technical status.



#### Information

If the repair history of the vehicle indicates that the radial shaft seal was already replaced in the past, a PRMS ticket must be created before carrying out repairs in order to coordinate the relevant repair with Technical Support.

- 1.2 If the radial shaft seal on the automatic transmission is damaged, see ⇒ *Technical Information 'Complaint - Oil leaks on automatic transmission: Observe specified procedure (205/20)'*.



*Oil migration*



*Oil leak on input-shaft radial shaft*

- 2 Oil leaks in the area of the output shaft to the rear axle ⇒ *Oil leak on output-shaft radial shaft seal.*  
If the output-shaft radial shaft seal is damaged, see ⇒ *Technical Information 'Replacing sealing ring for transfer box (rear transmission side)'*.



*Oil leak on output-shaft radial shaft seal*

**Replacing transfer box**

Work Procedure: 1 For Cayenne vehicles from model year 2018 to 2019, check the permissible transfer case / automatic transmission combinations.

See TI 22/19: ⇒ *Technical Information 'Spare parts requirements for (hang-on) transfer box/automatic transmission: Observe permitted combinations (22/19)'*

**Information**

For Cayenne (9Yx) vehicles from other model years, TI 22/19 must be selected using Manual Series Selection with a 2018 or 2019 model year Cayenne (9Yx) vehicle, if required.

- 2 Replace transfer box, see ⇒ *Workshop Manual '396519 Removing and installing transfer box'*.
- 3 Check and top up oil for transfer box, see ⇒ *Workshop Manual '399035 Checking and topping up oil for transfer box'*.

Parts Info:

**Required parts:**

<b>Part No.</b>	<b>Designation – Point of use</b>	<b>Number</b>
OF2341x <sup>1)</sup>	⇒ Transfer gear	1 piece
N 91239302	⇒ 12-point flange bolt – Input shaft	6 pieces
PAF107722	⇒ Hose clamp 36.1 x 9 x 0.6 – Cardan shaft	1 piece
<b>or</b>		
PAF10848901	⇒ Hose clamp 40 x 9 x 0.9 – Cardan shaft	1 piece
PAF107599	⇒ Cheese head bolt with multiple-tooth head – Rear cardan shaft	6 pieces
95534919121	⇒ Plate – Rear cardan shaft	3 pieces
PAF91203204	⇒ Round head screw – Protective plate / vibration damper transfer case	5 pieces
PAF00072900	⇒ M8 x 20 hexagon socket head bolt – Front section of front underbody cover	3 pieces
<b>or</b>		
95530111501	⇒ Screw plug – Check and top up oil for transfer gear	1 piece

N 10518405<sup>2)</sup> ⇒ Cheese head bolt with multiple-tooth head  
– Universal joint 1 piece

<sup>1)</sup> Part number varies depending on transmission type

<sup>2)</sup> Only for vehicles with particle filter

**Additional parts required (R4 in-line engine PHEV):**

Part No.	Designation – Point of use	Number
PAB25311500	⇒ Seal – Primary catalytic converter	1 piece
<b>or</b>		
PAB253115D	⇒ Seal – Particle filter	1 piece
PAF911308	⇒ Hexagon collar nut, self-locking – Primary catalytic converter	3 pieces
PAB111220A	⇒ Clamping sleeve – Primary catalytic converter/particle filter	1 piece

**Additional parts required (V6 monoturbo):**

Part No.	Designation – Point of use	Number
PAB25311520	⇒ Seal – Primary catalytic converter	1 piece
<b>or</b>		
PAB253115D	⇒ Seal – Particle filter	2 pieces
<b>or</b>		
PAB253725A	⇒ Clamp – Particle filter	2 pieces
PAF911308	⇒ Hexagon collar nut, self-locking – Primary catalytic converter	3 pieces
<b>or</b>		
PAF911308	⇒ Hexagon collar nut, self-locking – Particle filter	6 pieces
<b>or</b>		

PAB253115B	⇒ Seal – Particle filter	2 pieces
PAB25314120	⇒ Clamping sleeve – Primary catalytic converter	1 piece
	<b>or</b>	
PAB111220A	⇒ Clamping sleeve – Particle filter	2 pieces

**Additional parts required (V6 and V8 biturbo):**

<b>Part No.</b>	<b>Designation – Point of use</b>	<b>Number</b>
PAB25311500	⇒ Seal – Primary catalytic converter/particle filter	2 pieces
	<b>or</b>	
PAB253115D	⇒ Seal – Primary catalytic converter/particle filter	2 pieces
PAF911308	⇒ Hexagon collar nut, self-locking – Primary catalytic converter/particle filter	6 pieces
9A725314100	⇒ Clamping sleeve – Primary catalytic converter/particle filter	2 pieces
	<b>or</b>	
PAB111220A	⇒ Clamping sleeve – Primary catalytic converter/particle filter	2 pieces

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

<b>Part No.</b>	<b>Designation – Point of use</b>	<b>Quantity</b>
00004321030	⇒ Grease – Transfer gear	20-gram/ 0.7 oz tube 1)
00004330563	⇒ Transfer gear oil – Check and top up oil for transfer gear	20-liter/ 5.28 gal container 2)

1) approx. 2 grams/ 0.07 oz required per vehicle

2) approx. 0.1 liter/ 3.38 fl oz required per vehicle

Labor position:

APOS	Labor operation	I No.
39650140	Checking transfer gear	
39651930	Removing and installing transfer box	
39651950	Removing and installing transfer box	
39651960	Removing and installing transfer box	
39651990	Removing and installing transfer box	
39651991	Removing and installing transfer box	
39351905	Remove and install rear cardan shaft	
39351910	Remove and install rear cardan shaft	
39351920	Remove and install rear cardan shaft	
39351930	Remove and install rear cardan shaft	
39351950	Remove and install rear cardan shaft	
39903556	Check and top up oil for transfer gear	

PCSS

encryption:

Location (FES5)	39650	Transfer gear
Damage type (SA4)	5400	Oil leak

References: ⇒ *Workshop Manual '396519 Removing and installing transfer box'*  
 ⇒ *Workshop Manual '399035 Check and top up oil for transfer gear'*  
 ⇒ *Technical Information '399035 Spare parts requirements for (hang-on) transfer box/automatic transmission: Observe permitted combinations (22/19)'*  
 ⇒ *Technical Information '399035 Transmission symptom - Oil leakage on automatic transmission: Observe specified procedure (SY 205/20)'*

### Replacing radial shaft seal on input shaft

- Work Procedure: 1 Replace radial shaft seal on input shaft for hang-on transfer box, see ⇒ *Workshop Manual '399255 Replacing sealing ring for transfer box'*.
- 2 Check and top up oil for transfer box, see ⇒ *Workshop Manual '399035 Checking and topping up oil for transfer box'*.

Parts:

**Required parts:**

Part No.	Designation – Point of use	Number
9Y0321199B	⇒ Shaft seal – Input shaft	1 piece
N 91239302	⇒ 12-point flange bolt – Input shaft	6 pieces
PAF107722	⇒ Hose clamp 36.1 x 9 x 0.6 – Cardan shaft	1 piece
<b>or</b>		
PAF10848901	⇒ Hose clamp 40 x 9 x 0.9 – Cardan shaft	1 piece
PAF107599	⇒ Cheese head bolt with multiple-tooth head – Rear cardan shaft	6 pieces
95534919121	⇒ Plate – Rear cardan shaft	3 pieces
PAF91203204	⇒ Round head screw – Protective plate / vibration damper transfer case	5 pieces
PAF00072900	⇒ M8 x 20 hexagon socket head bolt – Front section of front underbody cover	3 pieces
<b>or</b>		
N 10082912	⇒ Hexagon screw (instrument cluster), self-locking M6 x 16 – Engine protection	3 pieces
95530111501	⇒ Screw plug – Check and top up oil for transfer gear	1 piece
N 10518405 <sup>2)</sup>	⇒ Cheese head bolt with multiple-tooth head – Universal joint	1 piece

<sup>1)</sup> Part number varies depending on transmission type

<sup>2)</sup> Only for vehicles with particle filter

**Additional parts required (R4 in-line engine PHEV):**

Part No.	Designation – Point of use	Number
PAB25311500	⇒ Seal – Primary catalytic converter	1 piece
<b>or</b>		

PAB253115D	⇒ Seal – Particle filter	1 piece
PAF911308	⇒ Hexagon collar nut, self-locking – Primary catalytic converter	3 pieces
PAB111220A	⇒ Clamping sleeve – Primary catalytic converter/particle filter	1 piece

**Additional parts required (V6 monoturbo):**

<b>Part No.</b>	<b>Designation – Point of use</b>	<b>Number</b>
PAB25311520	⇒ Seal – Primary catalytic converter	1 piece
	<b>or</b>	
PAB253115D	⇒ Seal – Particle filter	2 pieces
	<b>or</b>	
PAB253725A	⇒ Clamp – Particle filter	2 pieces
PAF911308	⇒ Hexagon collar nut, self-locking – Primary catalytic converter	3 pieces
	<b>or</b>	
PAF911308	⇒ Hexagon collar nut, self-locking – Particle filter	6 pieces
	<b>or</b>	
PAB253115B	⇒ Seal – Particle filter	2 pieces
PAB25314120	⇒ Clamping sleeve – Primary catalytic converter	1 piece
	<b>or</b>	
PAB111220A	⇒ Clamping sleeve – Particle filter	2 pieces

**Additional parts required (V6 and V8 biturbo):**

Part No.	Designation – Point of use	Number
PAB25311500	⇒ Seal – Primary catalytic converter/particle filter	2 pieces
<b>or</b>		
PAB253115D	⇒ Seal – Primary catalytic converter/particle filter	2 pieces
PAF911308	⇒ Hexagon collar nut, self-locking – Primary catalytic converter/particle filter	6 pieces
9A725314100	⇒ Clamping sleeve – Primary catalytic converter/particle filter	2 pieces
<b>or</b>		
PAB111220A	⇒ Clamping sleeve – Primary catalytic converter/particle filter	2 pieces

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

Part No.	Designation – Point of use	Quantity
00004321030	⇒ Grease – Transfer gear	20-gram/ 0.7 oz tube 1)
00004330563	⇒ Transfer gear oil – Check and top up oil for transfer gear	20-liter/ 5.28 gal container 2)

1) approx. 2 grams/ 0.07 oz required per vehicle

2) approx. 0.1 liter/ 3.38 fl oz required per vehicle

Labor position:

APOS	Labur operation	I No.
39650140	Checking transfer gear	
39925551	Replacing radial shaft seal on transfer gear (input shaft)	
39651930	Removing and installing transfer box	
39651950	Removing and installing transfer box	
39651960	Removing and installing transfer box	
39651990	Removing and installing transfer box	

APOS	Labor operation	I No.
39651991	Removing and installing transfer box	
39351905	Remove and install rear cardan shaft	
39351910	Remove and install rear cardan shaft	
39351920	Remove and install rear cardan shaft	
39351930	Remove and install rear cardan shaft	
39351950	Remove and install rear cardan shaft	
39903556	Check and top up oil for transfer gear	

PCSS  
encryption:

<b>Location (FES5)</b>	39650	Transfer gear
<b>Damage type (SA4)</b>	5400	Oil leak

References: ⇒ *Workshop Manual '399255 Replace sealing ring for transfer box'*  
 ⇒ *Workshop Manual '399035 Check and top up oil for transfer gear'*  
 ⇒ *Technical Information '399035 Spare parts requirements for (hang-on) transfer box/automatic transmission: Observe permitted combinations (22/19)'*  
 ⇒ *Technical Information '399035 Transmission symptom - Oil leakage on automatic transmission: Observe specified procedure (SY 205/20)'*

### Replacing radial shaft seal on output shaft

- Work Procedure: 1 Replace radial shaft seal on output shaft for hang-on transfer box, see ⇒ *Workshop Manual '399255 Replacing sealing ring for transfer box'*.
- 2 Check and top up oil for transfer box, see ⇒ *Workshop Manual '399035 Checking and topping up oil for transfer box'*.

Parts Info: **Required parts:**

Part No.	Designation – Point of use	Number
9Y0321199	⇒ Shaft seal – Output shaft	1 piece
9Y0341375	⇒ Protective ring – Output shaft	1 piece

PAF107722	⇒ Hose clamp 36.1 x 9 x 0.6 – Cardan shaft	1 piece
	<b>or</b>	
PAF10848901	⇒ Hose clamp 40 x 9 x 0.9 – Cardan shaft	1 piece
PAF107599	⇒ Cheese head bolt with multiple-tooth head – Rear cardan shaft	6 pieces
95534919121	⇒ Plate – Rear cardan shaft	3 pieces
PAF91203204	⇒ Round head screw – Protective plate / vibration damper transfer case	5 pieces
PAF00072900	⇒ M8 x 20 hexagon socket head bolt – Front section of front underbody cover	3 pieces
	<b>or</b>	
N 10082912	⇒ Hexagon screw (instrument cluster), self-locking M6 x 16 – Engine protection	3 pieces
95530111501	⇒ Screw plug – Check and top up oil for transfer gear	1 piece
N 10518405 <sup>2)</sup>	⇒ Cheese head bolt with multiple-tooth head – Universal joint	1 piece

<sup>1)</sup> Part number varies depending on transmission type

<sup>2)</sup> Only for vehicles with particle filter

#### Additional parts required (R4 in-line engine PHEV):

Part No.	Designation – Point of use	Number
PAB25311500	⇒ Seal – Primary catalytic converter	1 piece
	<b>or</b>	
PAB253115D	⇒ Seal – Particle filter	1 piece
PAF911308	⇒ Hexagon collar nut, self-locking – Primary catalytic converter	3 pieces
PAB111220A	⇒ Clamping sleeve – Primary catalytic converter/particle filter	1 piece

**Additional parts required (V6 monoturbo):**

<b>Part No.</b>	<b>Designation – Point of use</b>	<b>Number</b>
PAB25311520	⇒ Seal – Primary catalytic converter	1 piece
	<b>or</b>	
PAB253115D	⇒ Seal – Particle filter	2 pieces
	<b>or</b>	
PAB253725A	⇒ Clamp – Particle filter	2 pieces
PAF911308	⇒ Hexagon collar nut, self-locking – Primary catalytic converter	3 pieces
	<b>or</b>	
PAF911308	⇒ Hexagon collar nut, self-locking – Particle filter	6 pieces
	<b>or</b>	
PAB253115B	⇒ Seal – Particle filter	2 pieces
PAB25314120	⇒ Clamping sleeve – Primary catalytic converter	1 piece
	<b>or</b>	
PAB111220A	⇒ Clamping sleeve – Particle filter	2 pieces

**Additional parts required (V6 and V8 biturbo):**

<b>Part No.</b>	<b>Designation – Point of use</b>	<b>Number</b>
PAB25311500	⇒ Seal – Primary catalytic converter/particle filter	2 pieces
	<b>or</b>	
PAB253115D	⇒ Seal – Primary catalytic converter/particle filter	2 pieces
PAF911308	⇒ Hexagon collar nut, self-locking – Primary catalytic converter/particle filter	6 pieces

9A725314100	⇒ Clamping sleeve – Primary catalytic converter/particle filter	2 pieces
<b>or</b>		
PAB111220A	⇒ Clamping sleeve – Primary catalytic converter/particle filter	2 pieces

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

Part No.	Designation – Point of use	Quantity
00004321030	⇒ Grease – Transfer gear	20-gram/ 0.7 oz tube 1)
00004330563	⇒ Transfer gear oil – Check and top up oil for transfer gear	20-liter/ 5.28 gal container 2)

1) approx. 2 grams/ 0.07 oz required per vehicle

2) approx. 0.1 liter/ 3.38 fl oz required per vehicle

Labor position:

APOS	Labor operation	I No.
39650140	Checking transfer gear	
39925550	Replacing radial shaft seal on output shaft	
39351905	Remove and install rear cardan shaft	
39351910	Remove and install rear cardan shaft	
39351920	Remove and install rear cardan shaft	
39351930	Remove and install rear cardan shaft	
39351950	Remove and install rear cardan shaft	
39903556	Check and top up oil for transfer gear	

PCSS

encryption:

Location (FES5)	39650	Transfer gear
Damage type (SA4)	5400	Oil leak

References: ⇒ *Workshop Manual '399255 Replace sealing ring for transfer box'*

⇒ *Workshop Manual '399035 Check and top up oil for transfer gear'*

⇒ *Technical Information '399035 Spare parts requirements for (hang-on) transfer box/automatic transmission: Observe permitted combinations (22/19)'*

⇒ *Technical Information '399035 Transmission symptom - Oil leakage on automatic transmission: Observe specified procedure (SY 205/20)'*

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