

Spacer Ring and Crankshaft Sealing Ring (3/08)



Information

This Technical Information replaces the TI dated February 18, 2008.

Changes/additions compared to the previous Technical Information:

- ▶ Added: Section “1 Repairs”:
 - Refer to Workshop Manual text “Note” and “Information”.
 - Vacuum system: Cannot start engine when vacuum system is open.
- ▶ New: Section “2 Oil leak”.

Vehicle Type: **911 GT3 (997)**

Model Year: **As of 2007**

Concerns: **Crankshaft seal on flywheel side.**

Information: **Repairs:** See ⇒ 1

- New spacer ring for crankshaft sealing ring.
- Procedure changed in Workshop Manual.
- Crankshaft sealing ring: installing and handling.
- Cannot start engine when vacuum system is open.

Oil leak: See ⇒ 2

- Check vacuum system for leaks.
- Procedure after vacuum check.

For 1: Situation: 1 **Repairs**

From November 21, 2007 onwards, a spacer ring is installed on the crankshaft sealing ring on the flywheel side on GT3 engines. The **spacer ring** is installed between the crankcase and crankshaft sealing ring.

For 1: Date of Introduction: November 21, 2007 as of engine numbers
 M9776 618 24155
 M9776 618 29001

For 1: Repairs: The following applies:

- Engine **without** spacer ring: **The spacer ring must be retrofitted** when **replacing** the crankshaft sealing ring on the flywheel side.
- Engine **with** spacer ring: **The spacer ring must be replaced** when **replacing** the crankshaft sealing ring on the flywheel side.

- The **Workshop Manual** has been changed accordingly, see ⇒ *Workshop Manual '135919 Removing and installing crankshaft sealing ring - GT3 (flywheel side)'*.

In relation to **installing a new crankshaft sealing ring** and given that the installation position of the sealing ring is different on the GT3 compared with the Boxster or Carrera, we must ask you again to **read the two pieces of information below** (extract from the Workshop Manual mentioned above).

See also ⇒ *Figure 1* (figure shows a removed sealing ring):

item A: black-colored rubberized outer ring with integral sealing lip (in **crankcase side** installation position),
item B: gray-colored inner steel ring (**transmission side** installation position),
item C: sand (beige)-colored cardboard ring on inner steel ring.

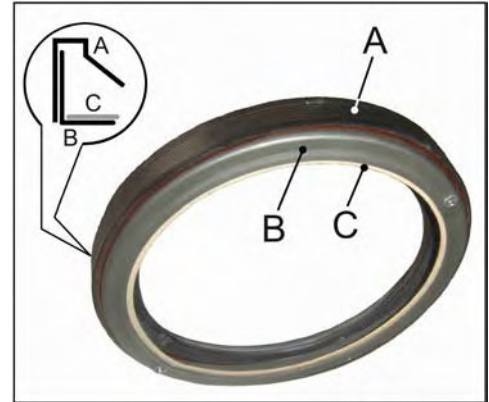


Figure 1

NOTICE

Incorrectly installed sealing ring

- **Damage to micro-sealing lip**
 - **Leaks**
- ⇒ **Only install the crankshaft sealing ring dry.**
- ⇒ **Never touch the micro sealing lip.**



Information

- Because of the vacuum conditions in the GT3 crankcase, the sealing ring is installed "**the other way round**" unlike the other Porsche engines.
- Make sure that the steel ring is facing the observer during installation.

For 1: Parts **997.101.264.90** New/ ⇒ Spacer ring
 Info: 997.102.264.91 ⇒ Shaft sealing ring

For 1: Vacuum System:

NOTICE

Engine cannot be started or stationary engine running with vacuum lines removed

- **Modified vacuum conditions in the crankcase can damage the crankshaft sealing ring on the flywheel side.**
 - **Oil leak at the damaged crankshaft sealing ring.**
 - **Repair costs as a result of oil leak.**
- ⇒ **Before starting the engine, make sure that the removed vacuum lines are installed again.**

In relation to **repair work on the engine**, during which lines for the **vacuum system were disconnected** (opened), the following must be observed **with immediate effect**:

For 2: Situation: 2 **Oil leak**

Leaks on the flywheel side can occur at the following places:

- Crankcase joint,
- Crankcase screws,
- Oil duct stoppers,
- Crankshaft sealing ring.

Emerging oil is whirled around by air flows within the transmission bell housing and then settles as a thin film of oil on the crankcase and flywheel. As a result, it is not always possible to uniquely diagnose the exact location of the leak. In many cases, therefore, the crankcase sealing ring is identified as the cause since the oil gathers underneath this area and flows down (because of gravity).

We have since discovered that a leaking crankshaft sealing ring on the flywheel side can also be caused by a **leaking or manipulated¹ engine vacuum system**.

If an oil leak is found in the area between the engine and transmission, the **vacuum system** must be **checked** for leaks **before starting repair work**; see ⇒ *Workshop Manual '135919 Leak-testing the vacuum system - GT3'*.

¹ see Note below.

Important Note — Manipulating the factory installed engine components

The following will disrupt the vacuum conditions in the crankcase which can damage the crankshaft sealing ring on the flywheel side causing it to leak oil.

- Pulling off the vacuum supply to the exhaust flaps.
- Modified (negative) engine power characteristic.
- Increased noise level over the entire rpm range.
- Deleting factory installed exhaust components.
- Replacing factory installed exhaust components with non-approved parts.

Additionally, the correct flywheel for the engine must be used. The incorrect flywheel will not disrupt the vacuum inside the engine however the increased crankshaft vibrations may damage the seal.

2.1 Proceed as follows, regardless of the result of the **vacuum test** (leak or no leaks):

- 2.2 If there is a leak in the vacuum system: ⇒ Carry out the relevant remedial action.
- 2.3 If the exact cause of the oil leak can be determined (crankcase joint, crankcase screws, stoppers): ⇒ Carry out the relevant remedial action.
- 2.4 **Before removing the crankshaft sealing ring:** ⇒ **Clean the surface of the crankcase** close to the crankcase joint, crankcase screws and stoppers with solvent naphtha or acetone.
- 2.5 Replace the crankshaft sealing ring, ⇒ *Workshop Manual '135919 Removing and installing crankshaft sealing ring - GT3 (flywheel side)'*.
- 2.6 **Before installing the flywheel:**

**Information**

Cover or **mask** the **crankshaft stub and sealing ring** with plenty of paper. Then, spray around the **crankcase joint, screws and stoppers** with commercially available **leak detection spray** (leak detector, contrast agent, etc.; e.g. Spotcheck SKD-S2).

A more exact diagnosis of the cause of the oil leak is possible and assured – if the problem recurs – thanks to this measure.

- 2.7 Following the above-mentioned work procedure steps will help prevent removing the transmission a second time.

References: ⇒ *Workshop Manual '135919 Removing and installing crankshaft sealing ring - GT3 (flywheel side)'*
⇒ *Workshop Manual '135919 Leak-testing the vacuum system - GT3'*

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