



911 GT3
Driving on the race circuit



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Safety instructions, warnings and symbols in this brochure

For your own protection and longer service life of your vehicle, please heed all operating instructions and special warnings. These special warnings contain important messages regarding your safety and/or the potential for damage to your Porsche. Ignoring them could result in serious mechanical failure, serious personal injury or death.

Different types of warnings and symbols are used in this brochure.

 Serious injury or death

Failure to observe warnings in the "Danger" category will result in serious injury or death.

 Possible serious injury or death

Failure to observe warnings in the "Warning" category can result in serious injury or death.

 NOTICE

Failure to observe warnings in the "Notice" category can result in damage to the vehicle.

 **Information**

Additional information is indicated using the word "Information".

- ▶ Instructions that must be followed.
- 1. Instructions are numbered in cases where a sequence of steps must be followed.
- ▷ Indicates where you can find more information on a topic.

Race Circuit Driving

Preamble to 911 GT3 Race Circuit Session



DANGER

Race Circuit Driving

Driving at excessive speeds and risky maneuvers may lead to loss of control over the vehicle.

- ▶ Adapt your driving style and maneuvers to your personal ability, the road and weather conditions, as well as the traffic situation.
- ▶ Motor sports equipment such as six-point seat belts, Clubsport package fire extinguisher or emergency cut-off switches must **not** be used on public roads.

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- ▶ Please see chapter "Safety and Driving Pleasure" in the Owner's Manual.

Until only a few years ago, the race circuit performance potential that comes with your 911 GT3 was exclusive to pure, specially prepared race vehicles.

Compared with driving on roads, driving on race circuits involves disproportionately high vehicle loads, which pure race vehicles are able to withstand thanks to short maintenance and component reconditioning intervals. This includes carrying out checks and replacing individual components where necessary after each race circuit session, up to overhauling entire assemblies after a specified period.

What is meant by "driving on race circuits" is operation of the vehicle close to or at its performance limits during use on race circuits (e.g. in the context of track days, driver training events, slalom competitions etc.) or other courses closed to the public (e.g. hill climb races).

The 911 GT3 is a high-performance sports car approved for road use, but one that can handle a broad spectrum of driving, from everyday road use through to sessions on a race circuit. However, this broad spectrum requires significantly different servicing in some cases, depending on how the vehicle is used.

Standard servicing intervals may, for example, be absolutely adequate for a "normal" load profile on public roads, whereas for vehicles driven on the race circuit, additional checks must be performed before and after each session.

The maintenance requirements and service intervals which Porsche specifies for normal road use are not sufficient for vehicles used in a race circuit.

For information on service intervals for race circuit driving:

- ▶ Please see chapter "Vehicle Inspection and Maintenance for Driving on Race Circuits" on page 9.

This chapter explains the most important technical issues to look out for if you drive your vehicle on the race circuit. It also lists the checks that you must carry out before each session.

The main objective here is to help you ensure that your 911 GT3 remains in good technical condition at all times, including during driving on the race circuit.

Specifics of Individual Vehicle Assemblies

Given the particular vehicle loads associated with race circuit driving, there are certain additional issues that require attention. These are summarized below for the most important assemblies:

Brake system

Loads on the entire brake system during race circuit driving are significantly higher than with "normal" use, partly due to the achievable braking effect and the higher component temperatures associated with this.

Brake pads

During driving on the race circuit, the pads (inner and outer) may exhibit brake pad wear characteristics which cannot be fully detected by the standard brake pad wear indicator. Therefore, it is absolutely essential to visually inspect the pad condition before and after driving on the race circuit.

The standard brake pads provide the best possible compromise between day-to-day usability and sportiness.

Porsche offers special brake pads for particularly performance-oriented driving on race circuits.

For information on installation options and use on public roads:

- ▶ Contact your authorized Porsche dealer.

NOTICE

Use of non-approved brake pads is not permitted.

Brake disks



Fig. 1: PCCB wear check

Composite gray cast iron/aluminum brake disks can be tested for wear in the usual way. However, PCCB brake disk assessment can only be carried out using a Carboteq® measuring device (special electronic measuring device). This is not a “residual thickness assessment” but a measurement which uses the current condition of the ceramic compound material as a wear criterion.

i Information

Please ask your authorized Porsche dealer for more information about the Carboteq® measuring device.

The perforation holes on the gray cast iron friction ring on composite brake disks in particular can become clogged with brake dust. They must therefore be checked and cleaned if necessary before every race circuit session.

Brake fluid

A brake fluid check (boiling point and fill level) is essential before every race circuit session. Generally, brake fluid should not be more than 12 months old if the vehicle is driven on a race circuit.

Brake callipers, hoses and lines

NOTICE

- ▶ Before every race circuit session, check the brake calliper dust boots and all brake hoses and lines for signs of damage, and replace if necessary.

Brake cooling



Fig. 2: Brake air spoilers and brake air ducts

To ensure that the brake disks are cooled as required, special brake air spoilers or brake air ducts are fitted on the front and rear axles, allowing sufficient cooling air to reach the disks. Check that these are in perfect condition (in particular that they are damage-free) and correctly mounted before every race circuit session. They can be damaged, for example due to crossing curbs.

Following race circuit sessions, “cooling laps” must be performed to control the temperature reduction of the brake system, which has a particularly strong thermal load. Instantaneous stopping of the vehicle would result in a further rise in component temperature due to stationary heat build-up. This can irreparably damage individual components.

Wheels and tires

For particularly performance-oriented driving on race circuits, special race circuit tires approved by Porsche are available.

For information on race circuit tires:

- ▶ Contact your authorized Porsche dealer.
- ▶ Observe the customer information from the tire manufacturer regarding the specific tire properties.

Depending upon the race course and driving style, and at high ambient air temperatures, it may be necessary when driving on a race circuit to compensate for the increased pressure in hot tires by releasing air. The general rule is that the specified tire pressure should not be significantly exceeded (maximum 7.3 psi/0.5 bar/50 kPa above specified pressures, and never more than the sidewall maximum) even when the tires have been driven until they are hot.

For driving on a race circuit, you can use Tire Pressure Monitoring System (TPMS) to set and monitor pressures different to those used for road mode.

- ▶ Please see chapter "Tire Pressure Monitoring System (TPMS)" in the Owner's Manual.

⚠ WARNING

Releasing Air from Cold Tires

Releasing air from cold tires before driving on a race circuit can damage the tire structure. A damaged tire structure can cause the tire to burst.

- ▶ Only release air from warm tires.



Information

- ▶ Before driving on public roads, check the tire pressure and correct to the required pressure.



Fig. 3: Do not use slick tires

⚠ WARNING

Slick Tires

The use of slick tires can subject chassis and body components to excessive loads and cause damage as a result.

- ▶ Do not use slick tires.

⚠ WARNING

Driving Characteristics

Using rims with non-standard dimensions (rim width, rim offset, etc.) changes the driving characteristics. In particular, widening the track by using a lower rim offset on the front axle can be highly detrimental to handling, with significant effects in the high speed range.

- ▶ Use only wheels approved by Porsche.
- ▶ Do not fit wheel spacers.

When changing a wheel, follow the procedure described in the Owner's Manual exactly.

- ▶ Always fasten the wheels to the prescribed tightening torque of **443 ftlb. (600 Nm)**. Never use the emergency fastening method for the central bolt when driving on race circuits.
- ▶ Never drive with a defective captive lock.
- ▶ Please see chapter "Changing a wheel with central wheel lock" in the Owner's Manual.

Other chassis issues

Chassis setup

The toe-in, camber, vehicle height and anti-roll bar settings can be adjusted on the chassis. The factory basic setting provides a balanced compromise between high maximum lateral acceleration and excellent controllability.

Different values can be set for driving on a race circuit. In this case, you must take account of the fact that setting higher camber values reduces straight-running stability while increasing tire wear, in particular, on the tire inside shoulders.



WARNING

Increased Camber Values

During sustained driving at high speeds, increased camber values significantly reduce the strength of the tires. The tire structure may be overloaded, resulting in damage to the tire. Damaged tires can burst.

- ▶ For operation the vehicle at high speed, it is essential that the chassis setup values specified by Porsche are observed.

Solely for driving on race circuits, Porsche recommends:

Front axle overall toe-in	+0°2'
Rear axle toe-in per wheel	+0°10'
Front axle camber	-2°15'
Rear axle camber	-2°15'
Front axle ride height	±0 in. (±0 mm) ¹⁾
Rear axle ride height	-0.20 in. (-5 mm) ¹⁾

1) Compared to ride height with factory chassis setup.



Information

If the camber values are increased at the rear axle, the ride height is reduced by approx. 0.20 in. (5 mm). Do not correct this change. The ride height at the front axle does not change when the camber is set via the camber eccentric.

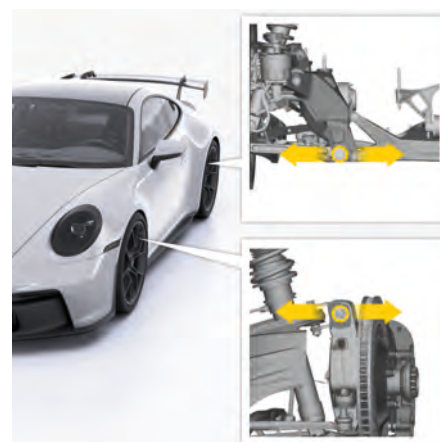


Fig. 4: Setting the camber via the camber eccentric

The camber values recommended for race circuits by Porsche can be set at both the front and rear axles via the camber eccentrics.

It is generally the case that using additional shims on the lower wishbone and on the front and rear axles may, in certain circumstances, cause the tires to come into contact with the wheel housing liner. It is essential to bear this point in mind if the factory basic setting is changed.

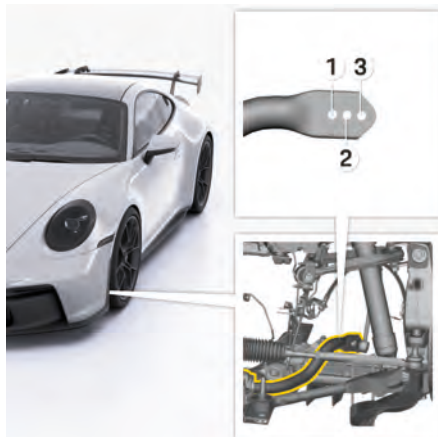


Fig. 5: Example: Adjusting anti-roll bars at front axle

- 1 Hard
- 2 Medium - factory setting
- 3 Soft

The factory setting of the anti-roll bars provides the best compromise between high agility and controllability of the vehicle.

For driving on race circuits, the anti-roll bars at the front and rear axles can be set to 3 positions. Here, it is absolutely essential that you set the anti-roll bars on the left and right of one axle to the same position.

Surface protection is applied to the anti-roll bars. Following initial tightening of the fastening nut when setting the anti-roll bar to position **1** (hard) or position **3** (soft), the nut must be loosened and tightened again due to the settling behavior.

- ▶ Tighten the fastening nut to the prescribed tightening torque of **29.5 ftlb (40 Nm) + 30°**.

i Information

The anti-roll bars on the front and rear axles must be in the factory setting when driving on public roads. After driving on the race circuit, always:

- ▶ Return the anti-roll bars on the front and rear axle to the factory setting (position **2**).

Suspension alignment/ Wheel clearance

The 911 GT3, like pure race vehicles, is very sensitive to small changes in the chassis setup.

For optimum handling, it is essential that suspension alignment is properly performed, in exact compliance with nominal values and tolerances.

Despite the height adjustability of the chassis, no further lowering is permissible. The height adjustment of the spring struts serves exclusively for fine-adjustment of the wheel loads. Otherwise, there is a risk of increased contact with the end stops.

You can obtain the relevant values from your authorized Porsche dealer if required.

i Information

In the course of extreme race circuit driving with the 911 GT3, harmless score marks may appear in the wheel housing liners on the front and rear axles.

Porsche recommends regular checks of the entire chassis setup (suspension alignment) as it has such a great influence on handling and on the wheel clearance, which is subject to tight tolerances.

i Information

The chassis must be in the factory setting when driving on public roads.

For information on the factory setting:

- ▶ Please see chapter "Technical Data" in the Owner's Manual.

Other chassis components



Fig. 6: Central bolt and wheel hub

WARNING

Race Circuit Driving

Failure to carry out inspection, maintenance and replacement measures and incorrect implementation of the fitting instructions can result in component failure and accidents.

This is especially true when a high total mileage is reached when driving on race circuits.

- ▶ Make sure that the tools are in perfect condition and that the torque wrench is set correctly.
- ▶ Always make inquiries about the current stipulations and conditions before driving on race circuits: Contact your authorized Porsche dealer.

Even if all the relevant chassis components are regularly checked, certain components must still be replaced after specific time periods if the vehicle is driven on race circuits.

This applies to central bolts and wheel hubs, including wheel bearings.

For information on the corresponding replacement intervals:

- ▶ Please see chapter "Vehicle Inspection and Maintenance for Driving on Race Circuits" on page 9.

Aerodynamic components



Fig. 7: Rear wing adjustment positions

The aerodynamic stability of the vehicle is greatly affected by the front end lip and rear wing at high speeds. These components therefore need to be checked for signs of damage and to ensure they are correctly mounted before every race circuit session.



Fig. 8: Rear wing adjustment

The vehicle downforce can be increased for driving on race circuits.

The rear wing angle of attack can be adjusted to 4 positions to increase the rear axle downforce.

- ▶ Tighten the fastening screws of the rear wing to the prescribed tightening torque of **6 ftlb (8 Nm)**.



Fig. 9: Front diffuser adjustment positions

NOTICE

The setting of the front diffusers must **not** be changed on the 911 GT3 with Touring Package.

The right and left front diffusers can be adjusted to 4 positions to increase the front axle downforce. Here, it is absolutely essential that you set the right and left front diffusers to the same adjustment position so that the balance is not shifted to one side of the vehicle.

- ▶ Tighten the fastening screws of the front diffusers to the prescribed tightening torque of **1.5 ftlb (2 Nm)**.



Fig. 10: Front diffuser adjustment

Should adjustment be required, Porsche recommends adapting the rear wing and front diffusers at the same time.

For an additional improvement in brake cooling, Porsche recommends the high downforce setting for race circuits where the brakes are subjected to high loads.

It should be noted that any adaptation of the rear wing and/or front diffusers leads to a shift in the overall balance of the vehicle.

High downforce settings also result in greater aerodynamic drag, which affects the maximum speed and acceleration capability at high speeds.

As in the case of the chassis, factory basic settings for the vehicle's overall aerodynamic stability on the race circuit or elsewhere are a balanced compromise between downforce on both axes and the resulting drag.

Thus, a steeper rear wing setting angle, for example, not only results in a higher air resistance, but also displaces the aerodynamic balance in the direction of the rear axle. This means less downforce on the front axle – and the associated potential consequences (a tendency to understeer, etc.).

i Information

The rear wing and front diffusers must be in the factory setting when driving on public roads.

After driving on the race circuit, always:

- ▶ Adjust the rear wing to the factory setting (position **1**; front fastening screws of rear wing at lower end of slot).
- ▶ Adjust the right and left front diffusers to the factory settings (position **1**; fastening screws of the front diffusers at the upper end of the slot).

Engine oil

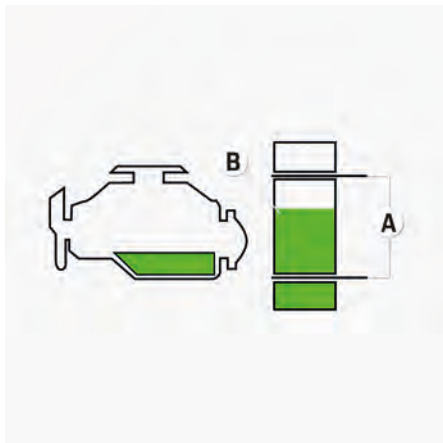


Fig. 11: Measuring the engine oil level

- A** Difference approx. 1.1 quarts (1.0 liter)
- B** Oil level for optimum engine operation

The recommended oil level for optimum engine operation, including during race circuit driving, is approx. 75 % of the display area **B**. When topping up, be aware that the difference **A** between the minimum and maximum marks is approx. 1.1 quarts (1.0 liter). Overfilling with oil must always be avoided.

- ▶ Check the engine oil level before each race circuit session and top up if necessary.

The engine oil and oil filter must be changed after 3,000 mls (5,000 km) of race circuit driving at the latest.

Coolant



Fig. 12: Measuring the engine coolant level

- ▶ Check the coolant level before each race circuit session and top up if necessary. The coolant level must be between the **min** and **max** markings.

General information

Following race circuit sessions, “cooling laps” must be performed to control the temperature reduction of assemblies with a particularly strong thermal load (brake system, engine). Instantaneous stopping of the vehicle would result in a further rise in component temperature due to stationary heat build-up.

This can irreparably damage individual components. Motor sports equipment that is not approved for public roads, such as six-point seat belts, Clubsport package fire extinguisher or emergency cut-off switches, may only be used where Federal Motor Vehicle Safety Standards do not apply.

The same applies to the changes to the chassis and aerodynamic components mentioned in previous sections.

The vehicle checks in the next section serve to ensure that your 911 GT3 remains in good condition during race-circuit driving and therefore also helps to ensure your personal safety.

If necessary, your authorized Porsche dealer can help you carry out the specific vehicle inspection for your race circuit session.

Vehicle Inspection and Maintenance for Driving on Race Circuits

Before driving on a race circuit

For vehicles driven on the race circuit, in addition to the scope of regular maintenance at standard servicing intervals, the following checks must be carried out before each session:



Central wheel lock	
Wheels removed	
– Check security of driving pin.	
– Check wheel attachment face for damage.	
– Check the central bolt and locking mechanism for ease of movement.	
– Grease the central wheel lock.	
▷ Please see chapter “Changing a wheel with central wheel lock” in the Owner’s Manual.	
Wheels fitted	
– Check the tightening torque of the central wheel bolts before and if necessary during driving on race circuits.	



Checking threaded connections of chassis setup	
Front axle:	
– Threaded connection for toe-in adjustment at tie rod.	
– Adjust camber via strut mounts on body.	
Rear axle:	
– Toe-in at tie rod via eccentric screw.	
– Adjust camber via eccentric screw.	

Front and rear axle:	
- Adjust camber inside wishbone.	
- Height adjustment at strut.	
- Connecting link on anti-roll bar.	



Wheel control joints and rubber mounts	
- Check joints and rubber mounts for play, replace if necessary.	



Chassis setup	
- Check vehicle height and, if necessary, measure and adjust chassis.	



Brakes	
- Check for wear/condition of pads and disks, replace if necessary.	
- Steel brake disk: clean perforation holes if necessary.	
- PCCB brake disk: check wear using a Carboteq® measuring device (special electronic measuring device).	
- Check brake calliper dust boots for damage.	
- Check brake lines and hoses for damage.	
- Check brake fluid (boiling point, fill level).	
- Check brake vents on both axles for damage and correct seating.	

**Tires**

- Check tires for damage.
- Tire pressure: take account of race-circuit driving (warm tires).

**Drive shafts**

- Check drive shaft boots for damage.

**Engine oil**

- Check the engine oil level and top up if necessary.
- ▷ Please see chapter "Engine oil" on page 8.

**Coolant**

- Check coolant level and top up coolant if necessary.
- ▷ Please see chapter "Coolant" on page 8.

**Aerodynamic components**

- Check aerodynamic components for freedom from damage and make sure they are securely mounted.



Motor sports equipment	
<ul style="list-style-type: none"> – Six-point seat belts: Observe the expiry date on the packaging. ▷ See the separate instructions provided by the equipment manufacturer. 	
<ul style="list-style-type: none"> – Clubsport package fire extinguisher: Observe the service intervals for the fire extinguisher. If the fire extinguisher is used after the service date has passed, functionality is no longer guaranteed. ▷ See the separate instructions. 	

After driving on a race circuit

For vehicles driven on the race circuit, in addition to the scope of regular maintenance at standard servicing intervals, the following checks must be carried out after each session:



Central wheel lock	
Wheels removed	
<ul style="list-style-type: none"> – Check all wheel components such as the central wheel bolt, wheel, wheel hub, brake pads and disks for damage and wear; replace them if necessary. 	
<ul style="list-style-type: none"> – Grease the central wheel lock. ▷ Please see chapter "Changing a wheel with central wheel lock" in the Owner's Manual. 	
Wheels fitted	
<ul style="list-style-type: none"> – Check the tightening torque of the central bolts. 	

Additional maintenance scopes

For vehicles driven on the race circuit, in addition to the scope of regular maintenance at standard servicing intervals, the following maintenance must be carried out at specific intervals:



Engine oil	
Every 3,000 mls (5,000 km) of race circuit driving:	
– Change engine oil and replace oil filter.	



Central wheel lock	
Every 6,000 mls (10,000 km) of race circuit driving: corresponds to a distance of approx. 2.5 x "Nürburgring 24 Hours")	
– Replace all central bolts.	
– Replace wheel hubs and wheel bearings on rear axle.	

Every 12,000 mls (20,000 km) of race circuit driving:	
– Replace wheel hubs and wheel bearings on front axle.	

