

MANTHEY - RACING

Porsche 911 GT3 Cup MR Gen. II (Type 991.2)

Technical Manual

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Contact

Manthey-Racing GmbH
Technical Support

Rudolf-Diesel-Str. 11-13
53520 Meuspath
Deutschland

Phone: +49 (0) 2691 9338 807
E-Mail: techsupport@manthey-racing.de

Preface

This document should give you the ability to look up data, settings and operating regulations and also to facilitate the maintenance of the car.

It should be clearly pointed, that this manual should only make the operation of your 911 GT3 Cup MR Gen.II (991.2) easier. It does not replace the separate installation guide and the technical documents of the Porsche AG for the 911 GT3 Cup Gen.II (991.2)

We wish you much success with your 911 GT3 Cup MR Gen.II (991.2)

Your technical support of Manthey-Racing GmbH

Proper use

This execution of the car is specially designed for the participation in competitions on circuits.

Repair work, maintenance work or adjustment tasks on a racecar need special skills and great accuracy. The persons who work on a 911 GT3 Cup MR Gen.II (991.2) should be sensitized to the special requirements of motorsports.

Illustrations, descriptions and schematics only serve as an example of the text.

We take no responsibility for the completeness and the conformity of our content with the respectively applicable sporting codes and the valid legal regulations. Manthey-Racing GmbH assumes no responsibility for the conformity with regulations.

Improper use

This car cannot be registered for the use on public roads and does not comply with the German road traffic regulation. (StVZO)

Further information

Caused by the constant optimization of our products, there are regular updates for this technical manual. Please note that only the latest version of the technical manual is valid.

This can always be found in the download area of the Manthey-Racing GmbH homepage under:

<https://www.manthey-racing.de/en/motorsport/downloads>

and there be viewed and downloaded.

This technical manual contains information specific to the **911 GT3 Cup MR Gen.II (991.2)**. In addition to this technical manual, further information such as detailed installation and operating instructions are available on the above-mentioned website.

Please always use this technical manual in conjunction with the technical documentation for the Porsche **911 GT3 Cup Gen.II (991.2)** from Porsche AG. Manuals, parts catalogs and technical information (TI) for the basic vehicle can be viewed and downloaded at <https://motorsport.porsche.com>.

Further information, such as detailed repair manuals are available in the **Porsche Integrated Workshop Information System (PIWIS)**. For that please contact your Porsche Partner. Alternatively, you can call up this information for a fee at the following Internet address:

<https://techinfo2.porsche.com/PAGInfosystem/VFModuleManager?>

Type=GVOLangSelection

Warning and safety instructions

The classification of the warning or safety information is carried out by the respective signal word (danger, warning, caution) next to the warning symbol.



WARNING AGAINST DEATH OR SERIOUS BODILY INJURIES WHICH WILL OCCUR IN CASE OF NON-COMPLIANCE.



WARNING OF DEATH OR SERIOUS BODILY INJURY WHICH CAN OCCUR THROUGH NON-COMPLIANCE



WARNING OF MINOR BODILY INJURY POSSIBLE IF NOT OBSERVED.

NOTE

WARNING OF PROPERTY DAMAGE IF NON-OBSERVANCE.



Includes action-supporting information to facilitate the work process.



Required tightening torque specification [Nm]. Specified tightening torques must be adhered to.

To avoid personal injury and damage to the vehicle's operating or road safety or damage to the vehicle as a result of improper work, these warnings and safety instructions must be read carefully and followed without restriction.

For Manthey-Racing GmbH it is not possible to rate all dangerous situations in final consequence for the executing person. Repair, maintenance or adjustment work should only be done by professional, trained mechanics. Attempting to perform repair or maintenance or adjustment work without proper training, tools and equipment may result in death or injury to yourself or others. In addition, there may be vehicle damage or malfunction of the correct vehicle function.

It is therefore expressly pointed out that all work of the described work processes is only to be carried out in compliance with the applicable directives and regulations of the locally competent authorities, health, accident and environmental protection or in consideration of the applicable legal provisions.

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1 Engine

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1.1 Service Intervals

Part	Service interval	Max. runtime	Service advice
Engine oil quick filler	Before every session	-	Check the filling hose in the engine compartment for firm seating and chafe marks. Check the quick disconnect coupling for cleanliness and damage.
Central radiator	Before every session	-	Check the central radiator for contamination. Check connections and fastening points for damage and tight fit. Check water hoses including ventilation line for chafe marks.

1.2 Engine Oil Quick Filler

- The engine oil quick filler allows the engine oil to be refilled while the engine cover is closed. Up to 1.0 litre of oil can be refilled. The oil is pressed into the oil circuit with **max. 2 bar** in the filling bottle. Drip-free filling is ensured via the quick disconnect coupling.
- Both the mounting bracket and the engine cover are equipped with a corresponding opening for mounting.

NOTE

The specified tightening torques must be observed. The vehicle operator must confirm with the organizer whether the opening in the engine cover is permitted. Under certain circumstances, this can be interpreted as an irregular aerodynamic change.

Only fill with the quick disconnect coupling when the valve is clean. Dirt ingress into the system must be avoided.

! ATTENTION

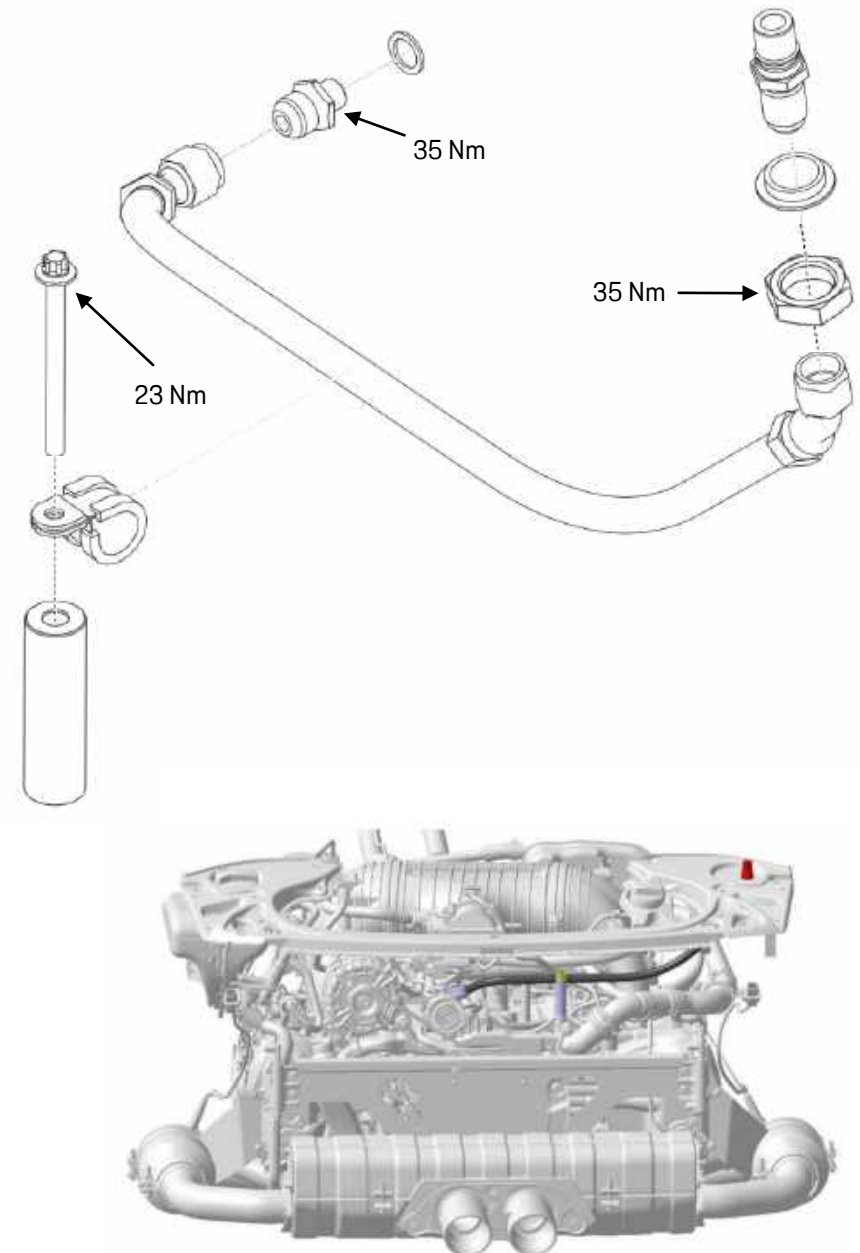
Never apply a higher pressure than specified to the system components! The filler bottle, the filling line or engine components could be damaged.

NOTE

In some racing series, closing the opening in the engine cover is not permitted (aerodynamic masking). The vehicle operator / team is responsible for compliance with the relevant regulations.



A corresponding filler bottle (oil stick) can be obtained from Manthey-Racing GmbH.



1.3 Central Radiator

- A central water radiator is used on the 911 GT3 Cup MR Gen.II. The series- moderate water cooler (3 pieces) are no longer installed. This means that the vehicle is better protected against radiator damage when touched, even in close proximity battles on the race track.
- Like in the 911 GT3 Cup Gen.II, the cooling system is thermostat controlled. The blanking of the

NOTE

The connectors and the ventilation line must be checked for correct fitting and chafing points before each session.

NOTE

The hose clamps for the connectors may only be used once. Never retighten them! The specified tightening torque of **3 Nm** must be observed.

NOTE

The four rubber brackets on the radiator holders must be checked for damage before each event and replaced if necessary. ↓

⚠ ATTENTION

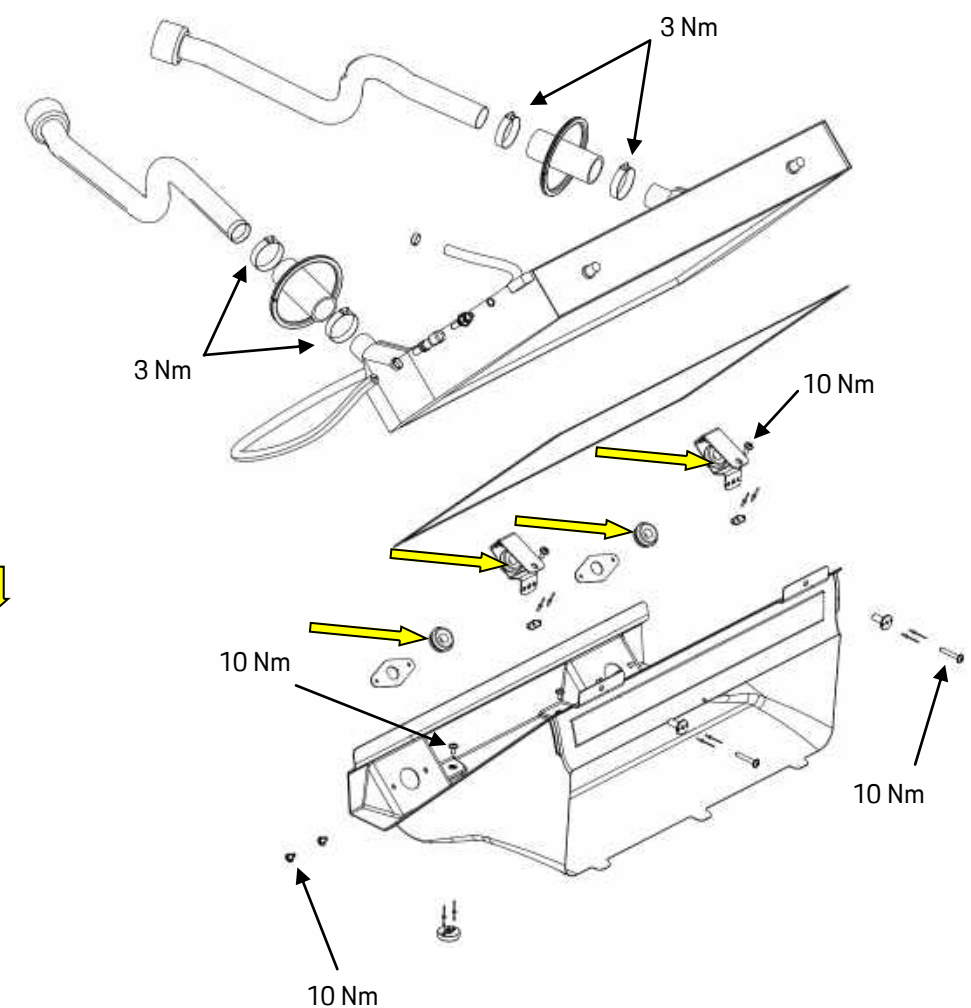
In the event of loss of coolant, all components of the cooling system must be checked for damage. Checking tools (see technical manual from Porsche AG) may have to be used. Failure to do so can damage the engine due to overheating.

⚠ WARNING

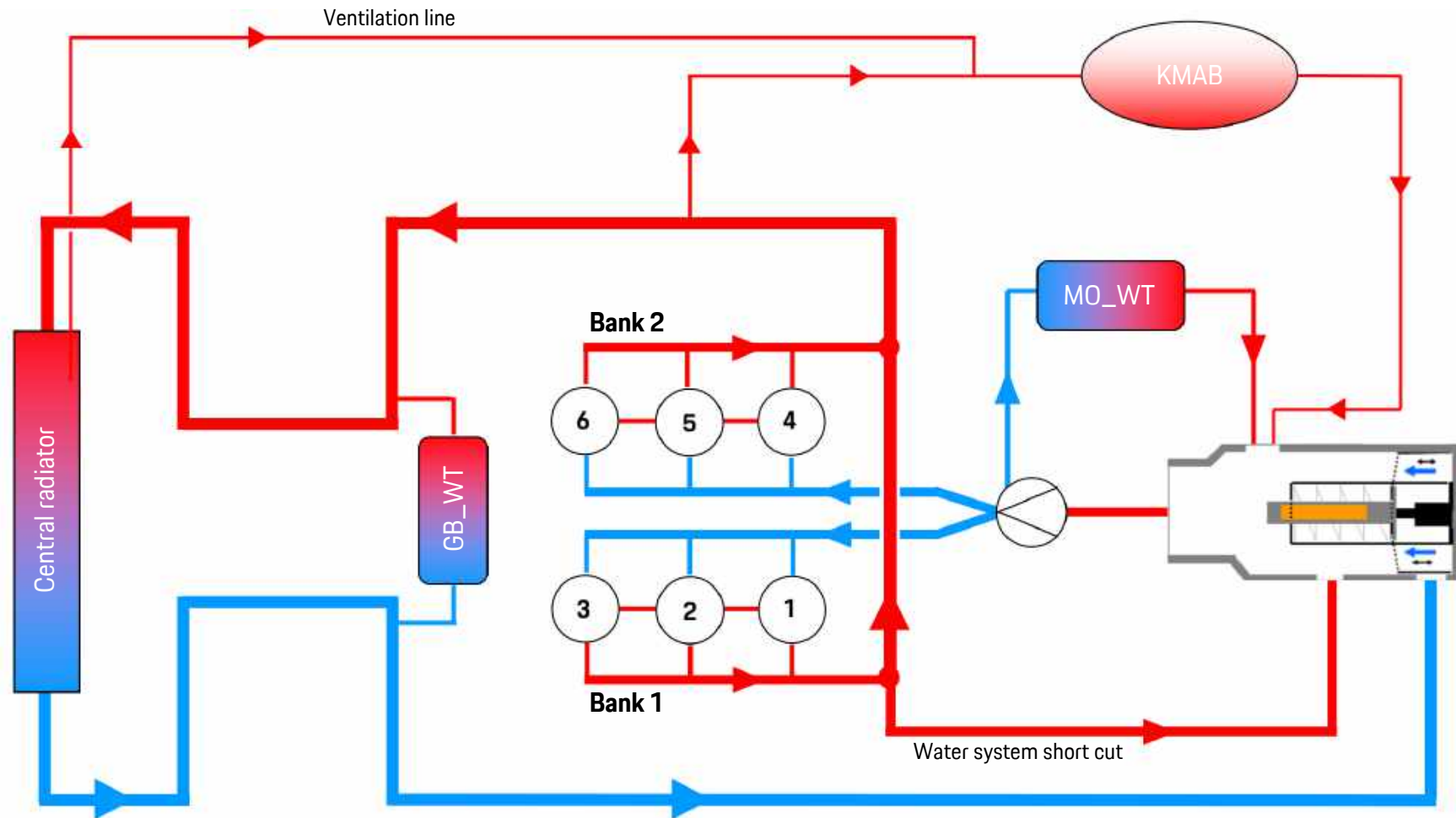
High water temperatures and high water pressure!
Risk of injury from burning.
Allow the system to cool down before starting work !



Only coolant antifreeze approved by Porsche AG may be used. The specified mixing ratio for the 911 GT3 Cup Gen.II has to be used.



Cooling System Schematic



GB_WT ► Gearbox_heat exchanger
 MO_WT ► Engine oil_heat exchanger
 KMAB ► Water reservoir

2 Gearbox

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2.1 Service Intervals

Part	Service interval	Max. runtime	Service advice
Bleeding the clutch	Before each session	-	Bleed the clutch before each session. Check the line for firm seating and chafe marks.

2.2 Clutch Bleeding Line

- ▶ With the optionally available upward vent coupling, the hydraulic clutch mechanism can be bled without disassembly of the underbody.
- ▶ To allow fast removal of the gearbox, the ventilation line has a drip-proof quick disconnect coupling

NOTE

The specified tightening torques for the quick disconnect coupling and the bleeder must be observed.

NOTE

The abrasion protection included in the scope of delivery must be installed in the area of the water pipe around the ventilation line. Failure to observe this may cause damage to the ventilation line. A failure of the clutch system is possible! ↓

NOTE

The components of the clutch ventilation must be checked for firm seating and chafing before each use. In the event of leaks, the relevant components must be replaced.

NOTE

If the quick disconnect coupling is unlocked, the two coupling parts must be checked for dirt and damage before reconnecting (connecting) the coupling. The proper latching of the coupling must be ensured.

⚠ ATTENTION

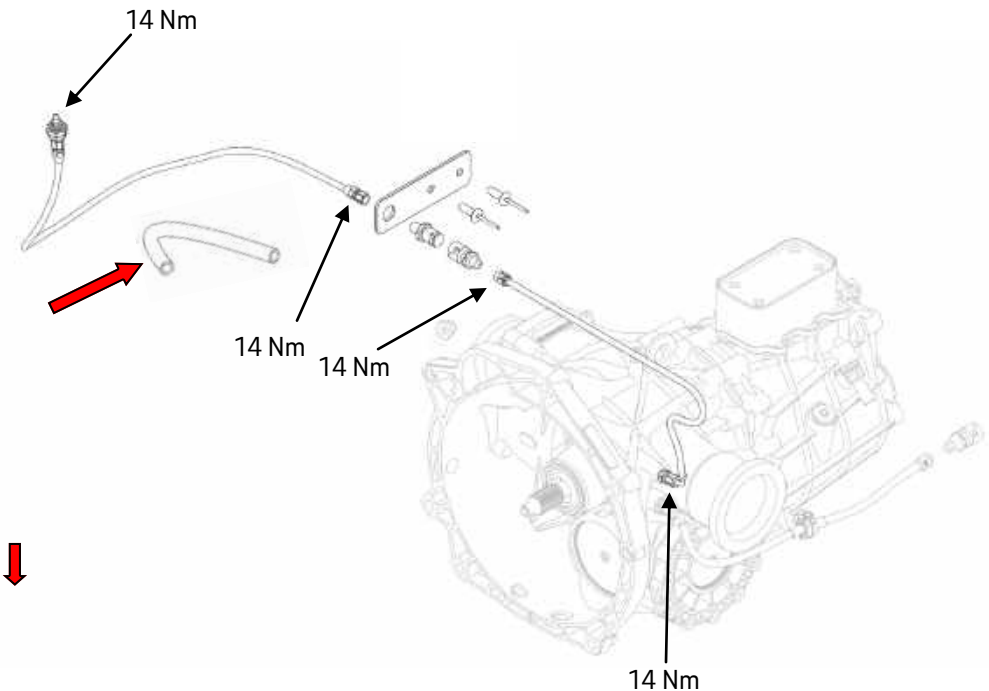
Never disconnect the clutch bleeding line under load (clutch depressed). This may damage the quick disconnect coupling.

⚠ ATTENTION

Personal protective equipment must be worn when bleeding the coupling. Dispose of used hydraulic fluid in accordance with regulations.



The ventilation line can only be installed in the vehicle when the drive train is removed.



3 Exhaust System & Fuel System

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3.1 Service Intervals

Part	Service intervals	Max. runtime	Service advice
Exhaust manifolds	Before every session	50 hours	Check the exhaust manifold and heat protection for damage before each session. If the side silencers available from Porsche Motorsport are driven, they must be checked for damage and full functionality. No pickup may accumulate on parts of the exhaust system.

3.2 Exhaust Manifolds

- The exhaust manifolds of the 911 GT3 Cup MR Gen.II correspond to the standard exhaust manifolds. Due to the closed underbody on the 911 GT3 Cup MR Gen.II, cool air can no longer flow around the exhaust manifold. In order to protect surrounding components from excessive heat radiation / heat transfer, the exhaust manifolds have been equipped with a special heat protection insulation.

WARNING

Only exhaust manifolds with heat protection insulation may be driven with. Failure to observe this may damage surrounding components due to the effects of heat. Risk of fire!

WARNING

The heat protection insulation must be checked for damage before each session. Rubber parts (pickup) must not accumulate on the exhaust manifolds. Risk of fire!

NOTE

The brackets including clamps of the 911 GT3 Cup MY 2016 must **NOT** be installed. This could damage the heat protection insulation. ↓

NOTE

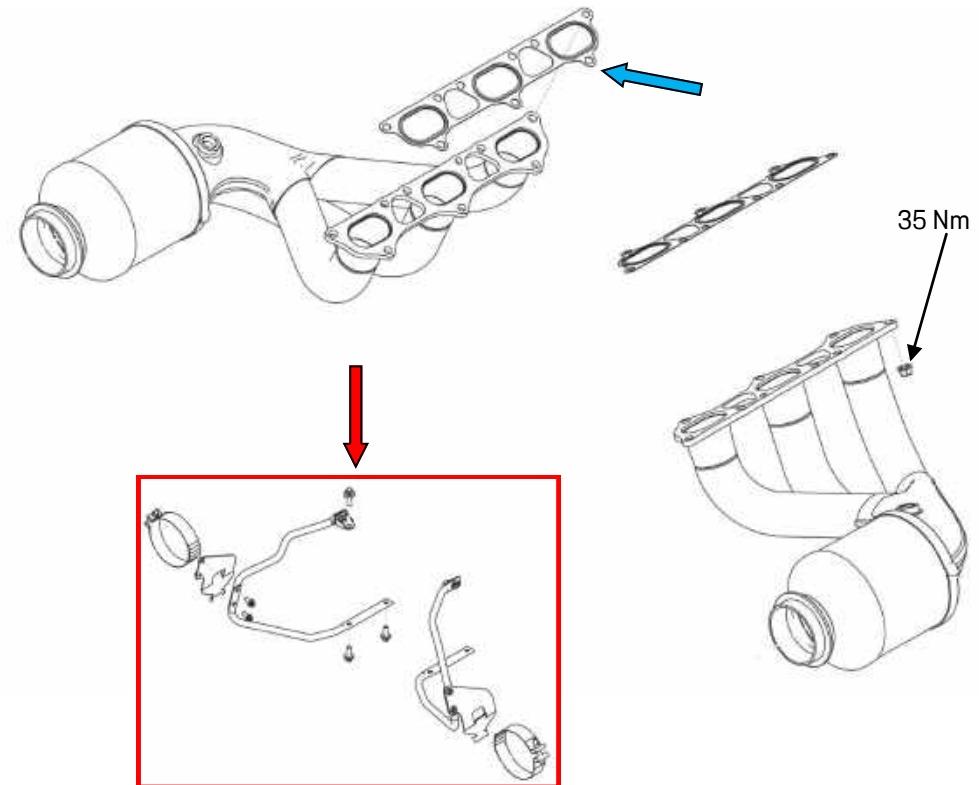
The specified tightening torque for the M8 fastening nuts for connecting the manifold to the engine block must be observed. The metal seals between the manifold and the engine block must be replaced after each disassembly. ↓

NOTE

The maximum runtime of the exhaust manifold described in the 911 GT3 Cup Gen.II manual remains unchanged.



Only new exhaust manifolds can be provided with the heat protection insulation. New exhaust manifolds with heat protection must be obtained from Manthey-Racing GmbH.



3.3 Porsche Motorsport Silencers

- For events with strict noise requirements, the side silencers available from Porsche Motorsport can be installed.

WARNING

All components of the optionally available side silencers must be installed. Failure to observe can lead to heat build-up in sensitive areas. Risk of fire!

WARNING

The components of the side silencers must be checked for damage before each session. Rubber parts (pickup) must not accumulate on the components. Risk of fire!

NOTE

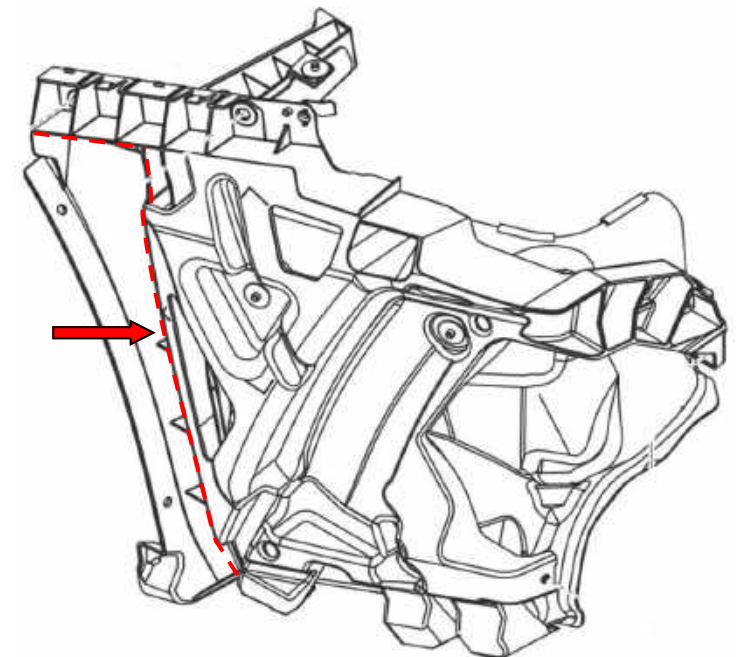
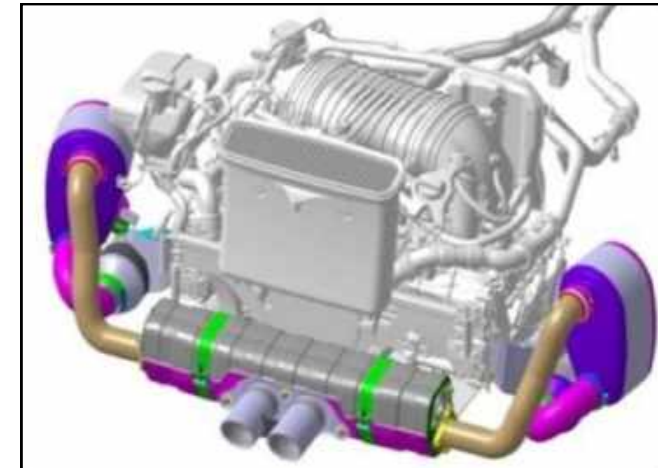
The side brackets 9F0813651B and 9F0813652B must be cut on the line shown opposite. 
The side brackets are not part of the "front silencer" scope of delivery.

NOTE

Please note that all parts described in the technical manual of the 911 GT3 Cup Gen.II must be installed for the assembly of the side silencers.



Detailed installation instructions can be downloaded from the download area of the Manthey Racing website.



3.4 Fuel System - Refuelling

- The 911 GT3 Cup MR Gen.II is refuelled with the front cover closed. The standard top plate is expanded with a tank tower and a three-flap safety lock. An additional rollover valve with increased air flow is installed in the top plate in order to ensure quick and complete refuelling in all conditions. As a result, the tank is vented quickly even during extreme conditions.
- The three-flap safety lock is self-sealing and does not require an additional fuel cap.
- Refuelling can be carried out using a fuel nozzle or suitable tank cans with a hose attachment.

DANGER

Fireproof clothing is strongly recommended for all work on the fuel system (including refueling and defueling). Failure to observe can result in serious injuries! Suitable fire extinguishers must be provided for all work on the fuel system!

WARNING

The fuel system, including the tank tower and its components, must be checked for damage and leaks as part of vehicle maintenance. Failure to do so can result in serious injury.

WARNING

Modifications to the three-flap safety lock are not permitted.

WARNING

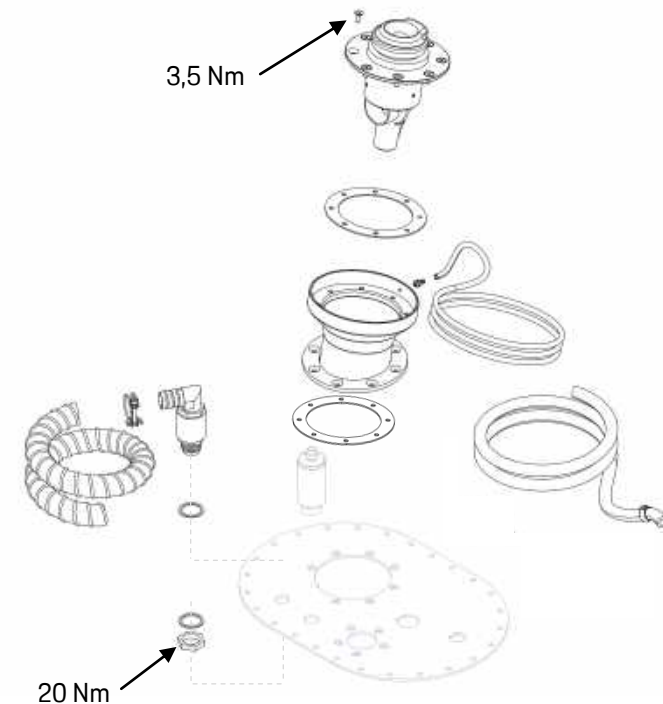
Always insert the nozzle into the three-flap safety lock as deep as possible!

ATTENTION

Never refuel the vehicle with the engine running!

NOTE

Please respect the information and technical information for the fuel system in the manual for the 911GT3 Cup Gen.II provided by Porsche Motorsport.



3.5 Fuel system - Capacity Increase

- The refuelling system (page 19) can be increased with the optionally available capacity enlargement ring by approx. 2.5 liters. With this volume increase, an approx. 5 cm high intermediate ring with longer fastening screws is installed between the standard fuel tank and the top plate. The method of refuelling using a three-flap safety valve is retained.

DANGER

Fireproof clothing is strongly recommended for all work on the fuel system (including refueling and defueling). Failure to observe can lead to serious injuries! Suitable fire extinguishers must be provided for all work on the fuel system!

WARNING

The fuel system, including the tank tower and its components, must be checked for damage and leaks as part of vehicle maintenance. Failure to do so can result in serious injury.

WARNING

Modifications to the three-flap safety lock are not permitted.

WARNING

Always insert the nozzle into the three-flap safety lock as deep as possible!

ATTENTION

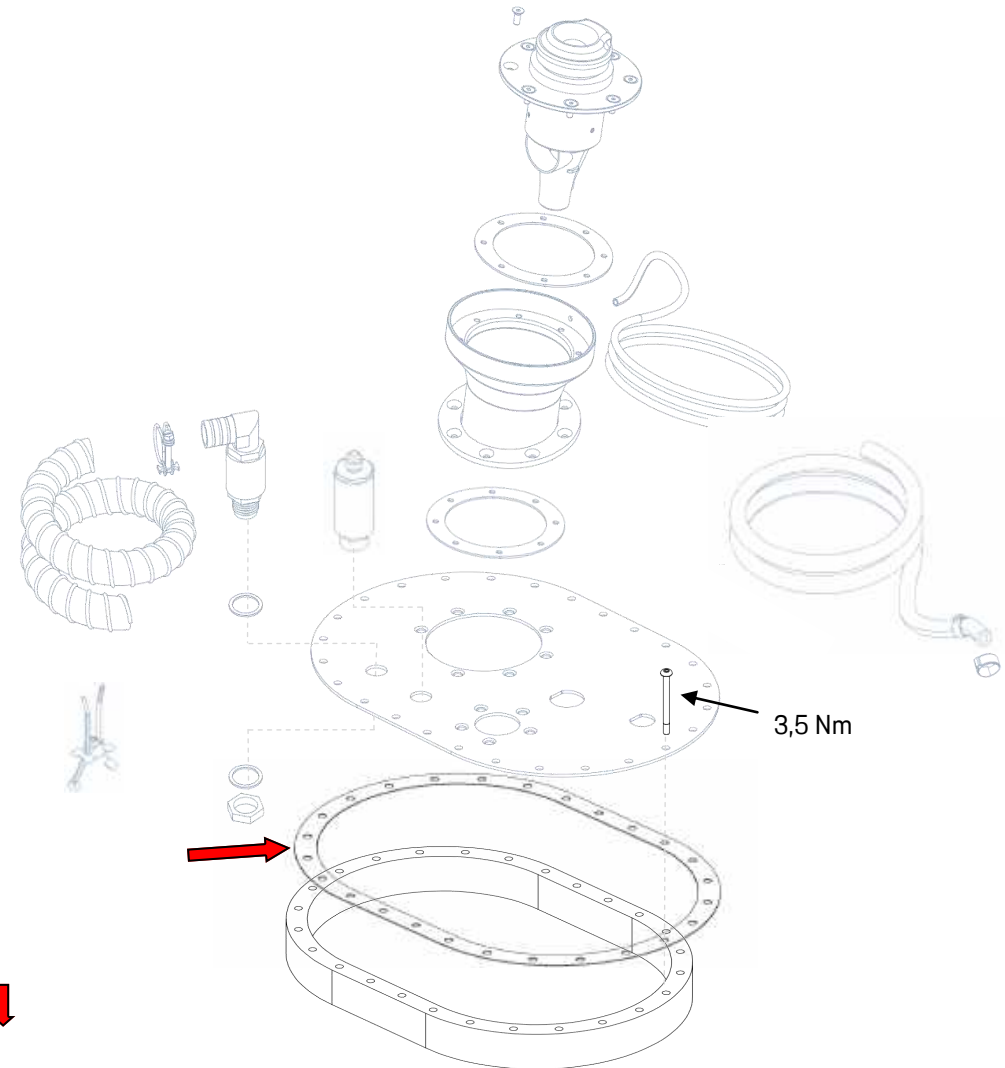
Never refuel the vehicle with the engine running!

ATTENTION

The additional flat gasket may only be used once. If the top plate is removed, this gasket must be replaced! ↓

NOTE

Please respect the information and technical information for the fuel system in the manual for the 911GT3 Cup Gen.II provided by Porsche Motorsport.



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4.1 Service Intervals

Part	Service Interval	Max. Runtime	Service Advice
Wishbone rear axle lower	Before every session	90 hours	Check for damage and tight fit. Check play in the joints.
Wishbone rear axle upper	Before every session	90 hours	Check for damage and tight fit. Check play in the joints.
Trailing arm rear axle lower	Before every session	90 hours	Check for damage and tight fit. Check play in the joints.
Trailing arm rear axle upper	Before every session	90 hours	Check for damage and tight fit. Check play in the joints.
Tie rod rear axle	Before every session	90 hours	Check for damage and tight fit. Check play in the joints.
Side sections rear axle	Before every session	90 hours	Check the side parts for damage / cracks before each event. Crack testing is possible through Manthey-Racing GmbH.
Spacer drive shaft	Before every session	-	Check screws for tightness. Screws must be replaced after each loosening.
Power steering	Before every session	See technical manual 911 GT3 Cup Gen.II	Check lines for tight fit and chafing. Check fluid level. Check the electrical connections in the trunk liner on the left for chafe marks and firm seating.
Rims	After every event	10.000 km	Visual inspection. Crack inspection possible by BBS.

Part	Service Interval	Max. Runtime	Service Advice
Suspension strut FA/RA	Before every session	Shocks: 150 hours Springs: 90 hours	Check the shock absorbers for damage and leaks before each session. Revision possible at Manthey-Racing GmbH. Check the pressure reservoirs for correctly set pressure of at least 10 bar before each event.
Brake cooling ducts/hoses front axle	Before every session	-	Check air ducts for free passage over the entire length. Check flexible pipe parts for chafe marks. Replace defective parts.
ABS * Only use brake fluid approved by Porsche Motorsport! See technical manual of the 911 GT3 Cup Gen.II	Before every event	-	Check hydraulic lines and connections for leaks. Check wiring harnesses for chafe marks. Check main fuse (80A) for tightness. Check software versions for updates.
Brake lines rear axle	Before every session	-	Check brake lines for damage and chafing. Check connections for leaks and tight fit.

4.2 Shock Absorbers

- The racing suspension used in the 911 GT3 Cup MR Gen.II has a triple adjustment. The rebound on the shock absorbers can be set in 18 clicks. The rebound is adjusted on the front axle at the bottom of the shock absorber.

The rebound can be adjusted on the top bearing on the rear axle damper.

REBOUND ADJUSTMENT/CHECK:

1. Turn the setting wheel counterclockwise (arrow direction -) until the end stop is reached.
2. Turn the setting wheel clockwise (direction of arrow +) to the desired level and count the clicks.
3. Always start with step 1 for further adjustment of the rebound damping and then perform step 2.

▪ **Position 0: Rebound Closed = Hard**

- The compression stage (bump) can be set separately on the pressure sockets for the high-speed and low-speed range in 18 clicks each.

BUMP ADJUSTMENT:

The compression stage of the 3-way damper is separated into high and low speed. The setting wheels are located on the pressure reservoir and are marked with "bump". With the gold-colored wheel (inscription High) the HighSpeed compression stage can be adjusted. You can read off the white line on the housing. The low-speed pressure level can be set using the purple wheel (labeled Low). It is also read on the white line on the housing.

▪ **Position 0: Bump Closed = Hard**

▪ **Position 18: Bump Open = Soft**



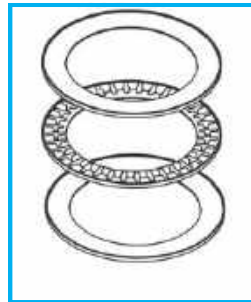
NOTE

The rebound setting cannot be read directly. To determine the rebound, the setting and test instructions opposite must be followed.



- For a wider adjustment range of camber on the front axle, the struts on the front axle are equipped with an adjustable top mount.
- Axial needle roller bearings are used on the front axle for rotary compensation. This results in the spring assembly being free on tension during the steering process. The axial needle roller bearings should be cleaned and re-lubricated, especially after wet races and running the vehicle in a dusty environment (e.g. Dubai 24 Hours).

The axial needle roller bearings can be dismantled. Cleaning is done using isopropanol. High temperature-resistant and water-resistant roller bearing grease (e.g. STALOC RED BEARING roller bearing grease) is suitable for the lubricant replacement.



NOTE

The pressure reservoirs of the front and rear axle dampers must be checked before every event. The minimum pressure must not fall below **10 bar**. If necessary, adjust the pressure with a suitable air pump (e.g. MTB suspension fork pump).

NOTE

Never unscrew the pressure reservoir from the damper! This will lead to the leakage of damper oil and damper needing to be serviced.

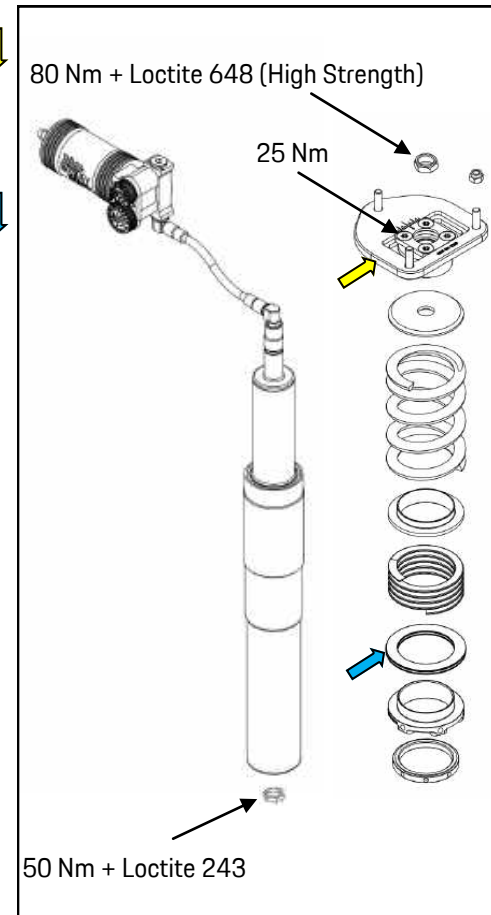
⚠ ATTENTION

The fastening nuts (at the top and bottom of the struts) must not be loosened or tightened using an impact wrench! Failure to observe may damage the internal components of the shock absorber.

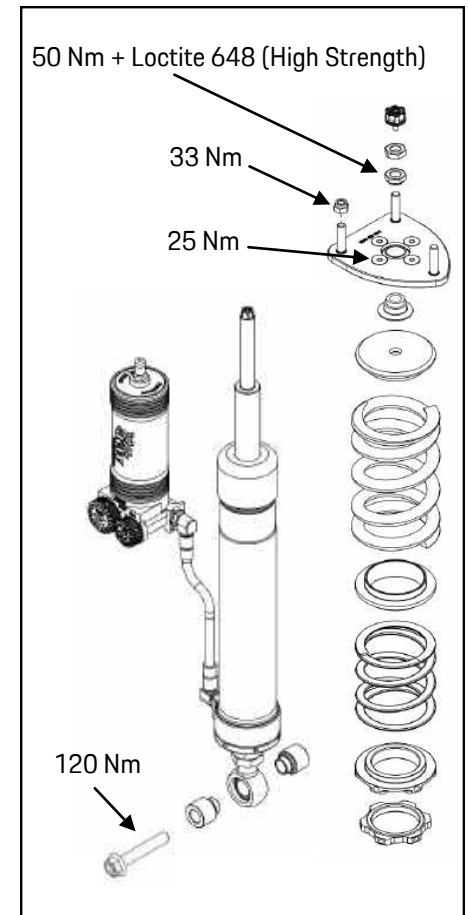


The service interval of 5,000 km and the maximum running time of the dampers and springs must be observed. Runtime servicing and repairs can be carried out by Manthey-Racing GmbH.

Damper Strut - Front Axle



Damper Strut - Rear Axle



Spring Variants for Nordschleife (NS) and GP Track (GP) Suspension Versions

- Two suspension variants with different settings are available. In addition to different spring assemblies, the two variants also differ in the configuration of the damper (packer and bumpstops).

The following suspension variants are available:

Suspension variant "GP Track" (MTH034810A):

Spring FA	180-60-120 (180 N/mm with lenght l=120mm)	P.-Nr. MTH411865
Spring RA	200-60-140 (200 N/mm with lenght l=140mm)	P.-Nr. MTH333096
Helper FA and RA	3-60-80 (3 N/mm with free lenght 80 mm)	P.-Nr. MTH343537A

Suspension variant "Nordschleife" (MTH034800):

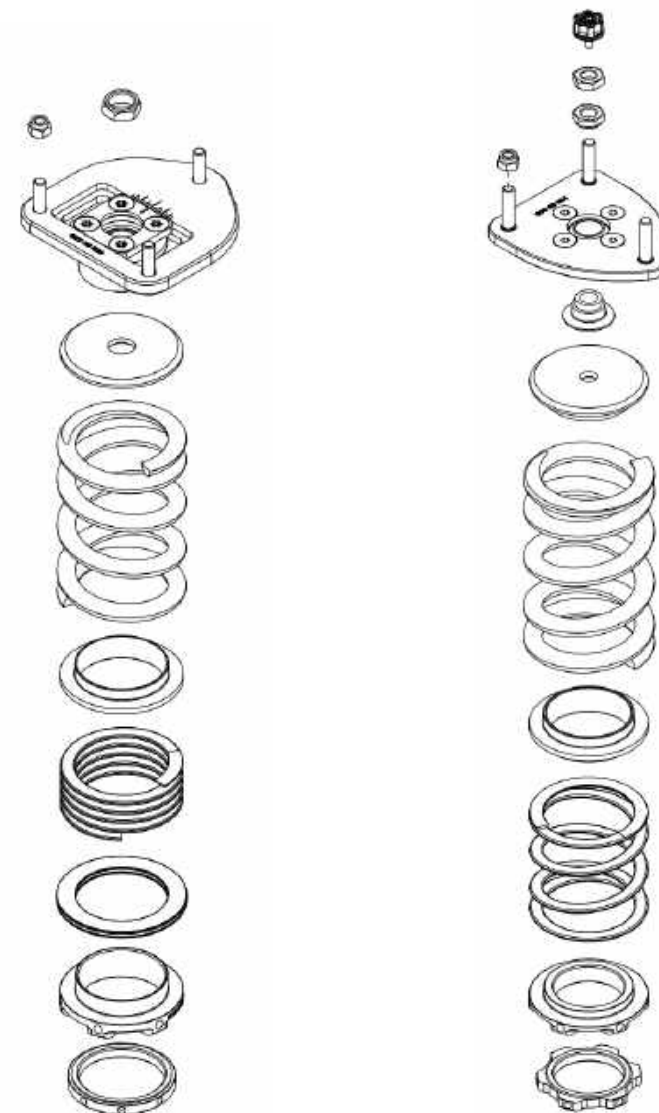
Spring FA	160-60-120 (160 N/mm with lenght l=120mm)	P.-Nr. MTH411860
Spring RA	180-60-140 (180 N/mm with lenght l=140mm)	P.-Nr. MTH511860
Helper FA and RA	3-60-80 (3 N/mm with free lenght 80 mm)	P.-Nr. MTH343537A

NOTE

Only the spring variants listed above are permitted for their respective suspension variant.



Runtime servicing and repairs can be handled by Manthey-Racing GmbH.



4.3 Brake Cooling - Front Axle

- The brake ventilation on the front axle of the 911 GT3 Cup MR Gen.II has been significantly increased compared to the base vehicle. The cooling air flows to the brakes on the front axle via openings in the front bumper.

NOTE

The flexible hose section is heavily stressed by the steering movements while driving and is subject to increased wear. A visual inspection before each session is recommended. Defective hose sections must be replaced immediately. ↓

NOTE

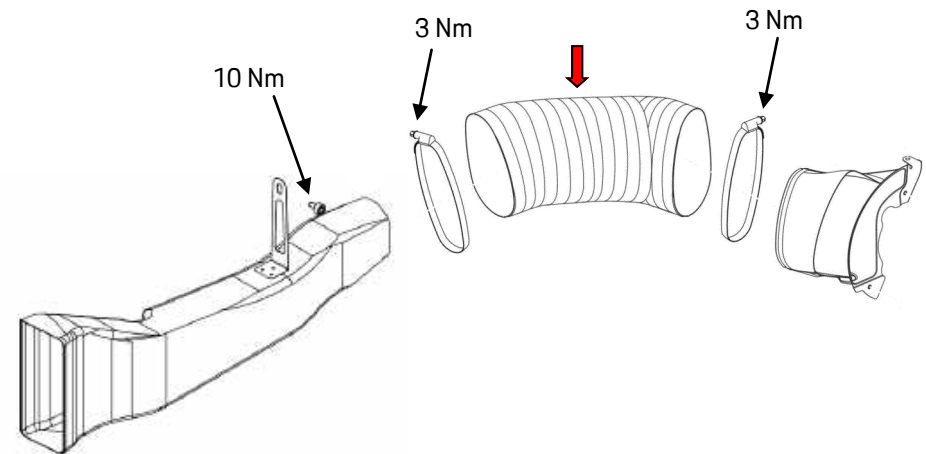
Do not tighten the hose clamps with a higher torque as specified.

NOTE

Before each session, all components must be checked for unrestricted air flow and damage.

NOTE

In order to prevent the brake system from over-cooling in races with extremely long straights (e.g. Nordschleife), the brake vents should be partially closed with suitable means (blanking plate). The target should be to maintain the brake disc temperature at approx. 250-300°C in order to guarantee optimal braking performance at all times and to counteract the premature wear of the brake discs (cracking).



4.4 ABS M4

- The 911 GT3 Cup MR Gen.II is delivered with the ABS M4 (until Dec. 2019) as standard. The ABS can be set by the driver via a 12-position rotary selector switch in the control characteristics to the track conditions and the preferences of the driver. The system developed by Manthey-Racing is fully integrated into the vehicle's CAN architecture.

DANGER

The system must be installed based on the available assembly instructions and checked for correct function. If errors in the hydraulic and electrical assignment are not corrected, life-threatening driving conditions can arise while driving.

DANGER

The brake master cylinders with part number 9913551708C installed in the base vehicle **MUST** be replaced by ABS compatible brake master cylinders with part number 9913551708E for operation with ABS. These brake master cylinders are included in the kit. Failure to do so can lead to brake failure while driving.

WARNING

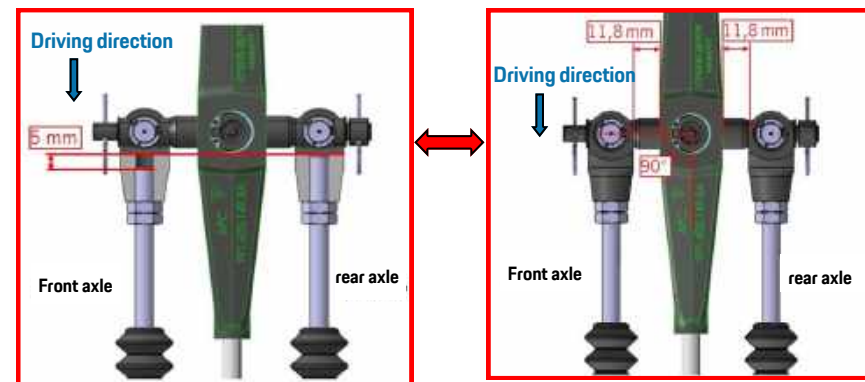
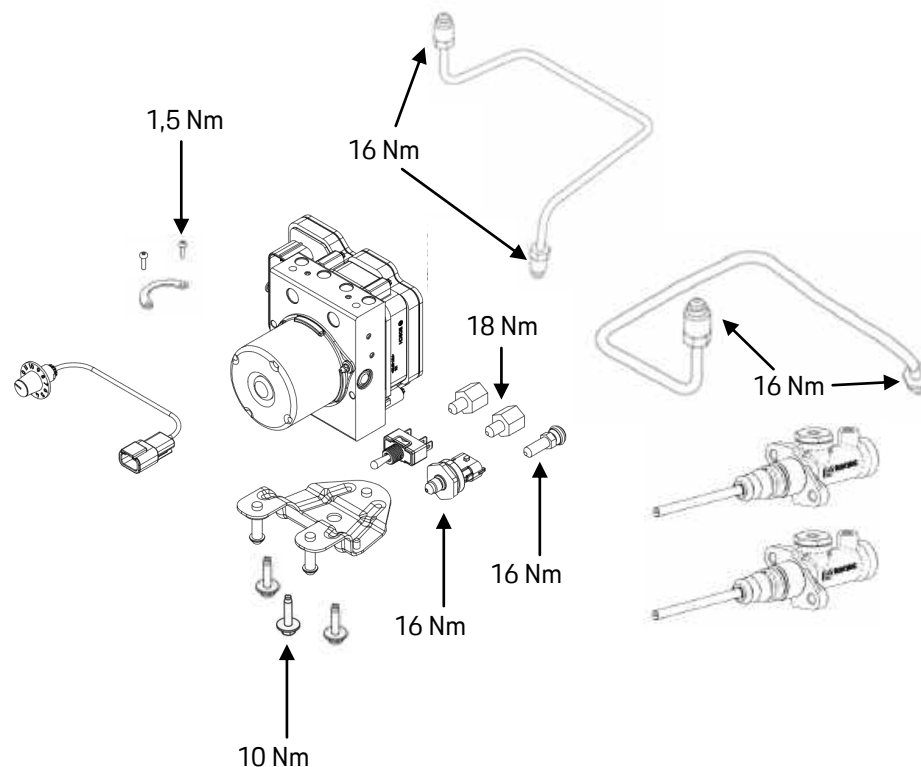
The maximum running time for the brake master cylinder 9913551708E is 90 hours or 15,000 km. A service using new seals is **NOT PERMITTED!** The brake master cylinder must be replaced upon reaching this max. runtime!

WARNING

The balance bar system must also be adjusted with the new master brake cylinders in accordance with the specifications of Porsche AG. Failure to follow can lead to altered braking behavior and loss of control over the vehicle.

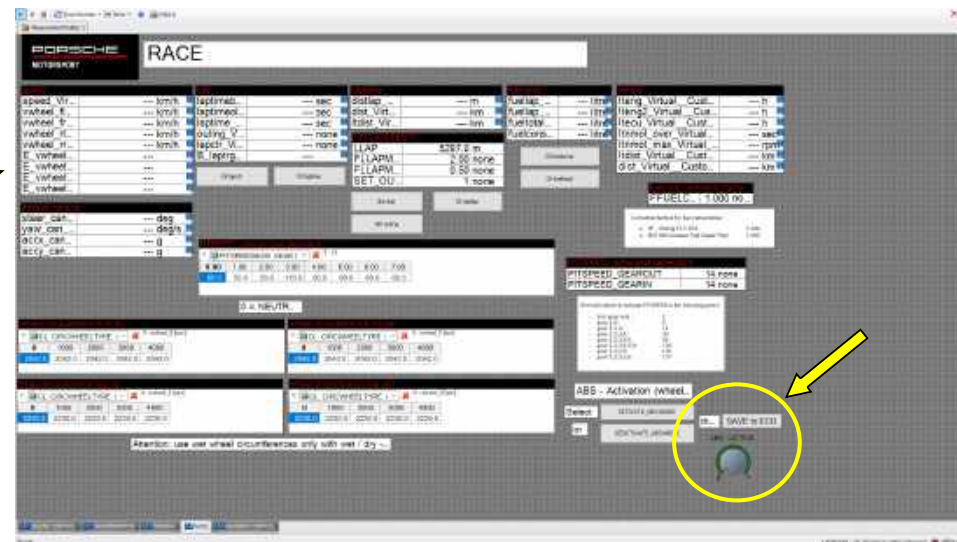


Detailed instructions on installing and operating the ABS can be downloaded from the download area on the Manthey-Racing website.



WARNING

After an engine revision (ECU will be sent in) or a firmware update, the RaceCon must be checked to see whether the ABS is still activated in the engine control unit. The control dial must be in position "1". If the rotary control shown is set to "0", the ABS must be reactivated. To do this, click the control dial. The controller position changes to value "1". Click the "SAVE to ECU" button.



NOTE

The RaceCon software from Bosch is required for communication with the engine control unit (from version 2.5.5.8). In addition, the corresponding project file (.rlp) with the designation "PA10_0410_991-CUPII_CU_0520_red_V02_de.rlp" must be opened for connection to the engine control unit in RaceCon. These software tools can be obtained from the PMRSI. The Bosch Motorsport Interface MSA-Box II including the appropriate driver is also required for communication between the laptop and the vehicle.

NOTE

The RaceABS software (at least version 1.4.0.9) from Bosch is required for communication, diagnosis and maintenance of the ABS M4. A suitable FPS file for displaying the fault memory in plain text can be obtained from the Manthey-Racing website.

NOTE

If the ABS is operated without the appropriate ICD configuration for operation with ABS, the wheel speed sensors are no longer queried by the system. This results in incorrect values for the total mileage and the ABS has no function.



Detailed instructions on installing and operating the ABS can be downloaded from the download area on the Manthey-Racing website.

The table opposite shows guidance values based on driving tests with Michelin tires. A setting recommendation is not given in these instructions, since an optimal ABS setting depends not only on many vehicle and track-specific factors, but also not least on the driving skills of the driver.



In order to familiarize yourself with the control interventions of the ABS while driving, Manthey-Racing strongly recommends that you start with an ABS level with stronger controls. Once the driver has become familiar with the system, ABS levels with less control intervention can be selected.

ABS Map internal/ abs_poti_diag	1	2	3	4	5	6	7	8	9	10	11	12
ABS 12- pos. Multi- switch/ dash_poti_abs	0	1	2	3	4	5	6	7	8	9	10	11
Grip level	Off	High Grip	→	→	→	→	→	→	→	→	→	Low Grip
track conditions	Off	Dry	Dry	Dry	Dry	Dry	Dry - Damp	Dry - Damp	Damp - Wet	Damp - Wet	Wet	Wet
Regulation difference to the next lower level	Off	- Setting for highest grip level and a lot of slip. - Hot and dry track conditions	- Earlier ABS interventions as switch pos. 1	- Earlier ABS interventions on the front axes as switch pos. 2 - Higher pedal frequency than switch pos. 2	- Earlier ABS interventions on the rear axes as switch pos. 3	- Earlier ABS interventions on the rear axes as switch pos. 4	- Earlier ABS control interventions on the rear axes with increased braking stability compared to switch pos. 5 Lower pedal frequency than switch pos. 5	- Earlier ABS interventions on the rear axes with increased braking stability compared to switch pos. 6. Lower pedal frequency than switch pos. 6	- Basic setting for wet track conditions	- Earlier ABS interventions on both axes with increa- sed braking stability on the front axle compared to switch pos. 8	- Earlier ABS interventions on both axes with increa- sed braking stability compared to switch pos. 9	- Earlier ABS interventions on both axes with increa- sed braking stability compared to switch pos. 10

4.5 Brake Lines - Rear Axle

- In the 911 GT3 Cup MR Gen.II, the standard brake lines on the rear axle are replaced by steel braided brake lines. This significantly increases the brake pedal feeling (pressure point and response) for the driver.

WARNING

Never kink or twist the brake lines. Structural damage can result, which can lead to brake line failure during operation.

WARNING

The specified tightening torques must be observed. If the connector is removed from the brake caliper, the marked sealing ring must be replaced. ↓

NOTE

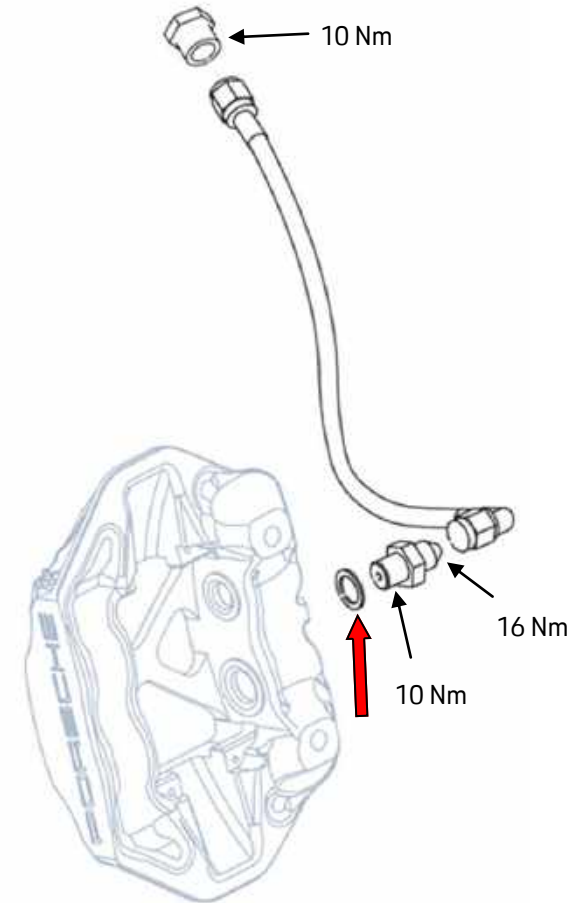
Check the brake lines for damage (chafing/abrasion) and firm seating before each session and replace them if necessary.

NOTE

The correct laying of the brake lines should be checked regularly. Especially after reassembling the brake lines, it must be checked to ensure the brake lines do not come into contact with other components

NOTE

If the braking system is opened (e.g. for service of the brake calipers), the system must be prevented from running dry. Failure to do so will result in air being drawn into the ABS hydraulic unit. It is imperative that ABS hydraulic unit is bled using RaceABS.



4.6 Brake Lines - Quick Couplings

- Optionally, the brake lines can be equipped with quick couplings. Especially in endurance races (24h), this can save valuable time in the pit lane when the brakes have to be changed.

WARNING

The specified tightening torques are mandatory.

DANGER

The quick coupling must always be checked for correct seating (locking). If this is not observed, the brake pressure exerted by the driver cannot be fully transferred to the pistons of the brake caliper, whereby the driver assumes that the brake is fully functional (brake pedal feedback).

ATTENTION

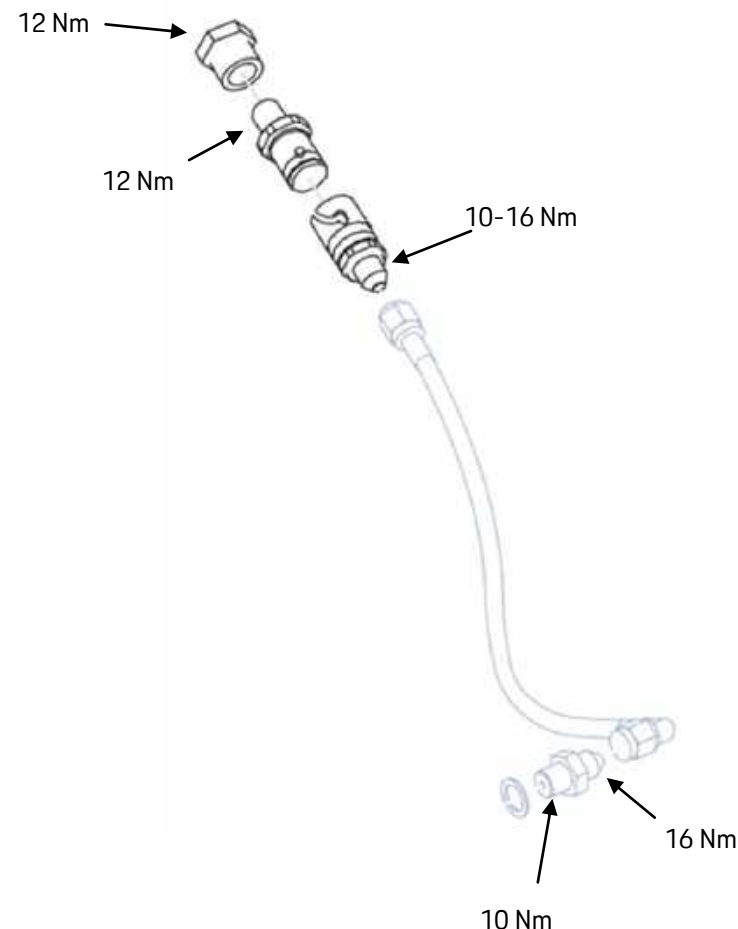
Never attempt to connect/disconnect the quick coupling while the system is pressurized. This can result in damage to the connectors.

NOTE

Check the quick disconnect coupling components for damage and leaks before every event and replace damaged/defective components if necessary.

NOTE

When used properly, the quick coupling can be disconnected or connected without fluid loss or air entry into the system. It is not necessary to bleed the brake system after disconnecting/connecting the coupling. Ensure cleanliness when connecting the connectors. Failure to observe can lead to leaks and damage to the quick connectors.



4.7 Rear Axle - Suspension Arms

- In the 911 GT3 Cup MR Gen.II, longer suspension struts are used on the rear axle compared to the 911 GT3 Cup Gen.II base vehicle. The length of all struts can be adjusted via their rod end joints. The lengths are preset at the factory and should not be changed. An overview of the lengths of each suspension link is listed below.

⚠ ATTENTION

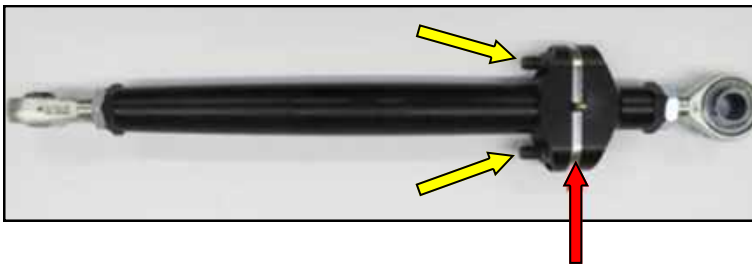
The tightening torques given alongside for the individual linkages must be observed.

⚠ ATTENTION

The length of the struts is preset and is delivered ready for installation. If there is play in a linkage ball joint, the link must be replaced.

⚠ ATTENTION

A maximum of 15 mm of shims may be installed in the wishbone. At least 9 threads of the fastening screws for the clamping must protrude after proper fastening.



NOTE

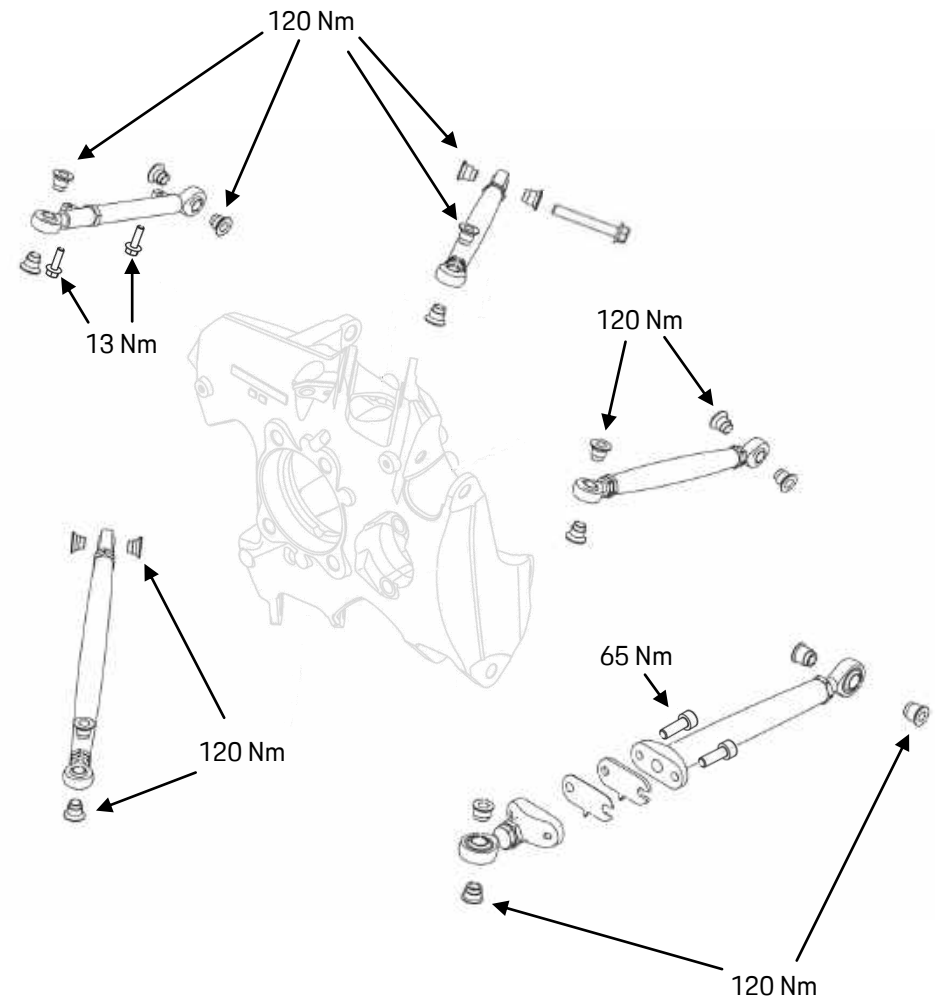
The maximum camber values permitted by the respective tire manufacturer must not be exceeded at any time.

⚠ ATTENTION

There must always be as few shims as possible mounted in the wishbone. The setting behavior of the shims must be observed! The bigger the shim, the greater the setting change.

NOTE

The wishbones are delivered equipped with 10 mm shims.

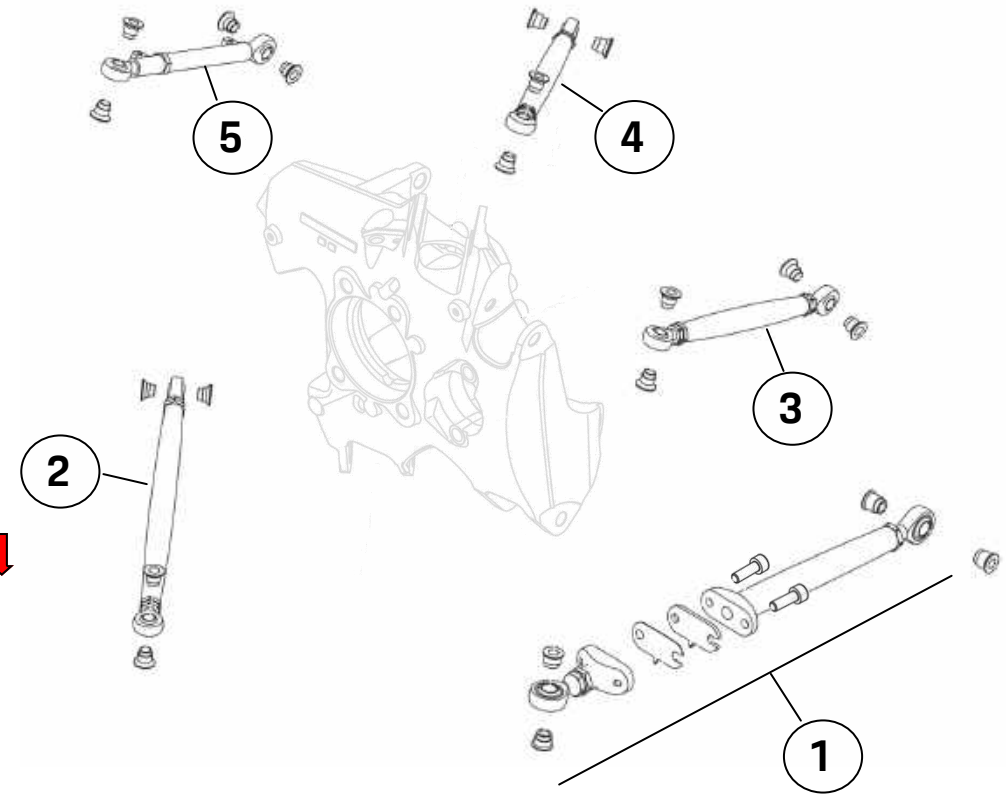


Overview of the Preset Suspension Linkage Lengths

Pos.	Part Description	Part Number	Preset Length [mm]
1	Wishbone lower	MTH331053	300 mm
2	Trailing arm lower	MTH331043	332 mm
3	Wishbone upper	MTH331047	220 mm
4	Trailing arm upper	MTH331061	250 mm
5	Tie rod	MTH331045	N/A

⚠ ATTENTION

The lower wishbone inner rod end must be mounted on the **UPPER** ↓ hole of the subframe.



4.8 Rear Axle - Side Subframes

- The aluminum side subframes on the rear axle are adopted from the 911 GT3 Cup Gen.II. The attachment point in the marked area is changed to connect the new wishbone to the side subframe. ↓

⚠ WARNING

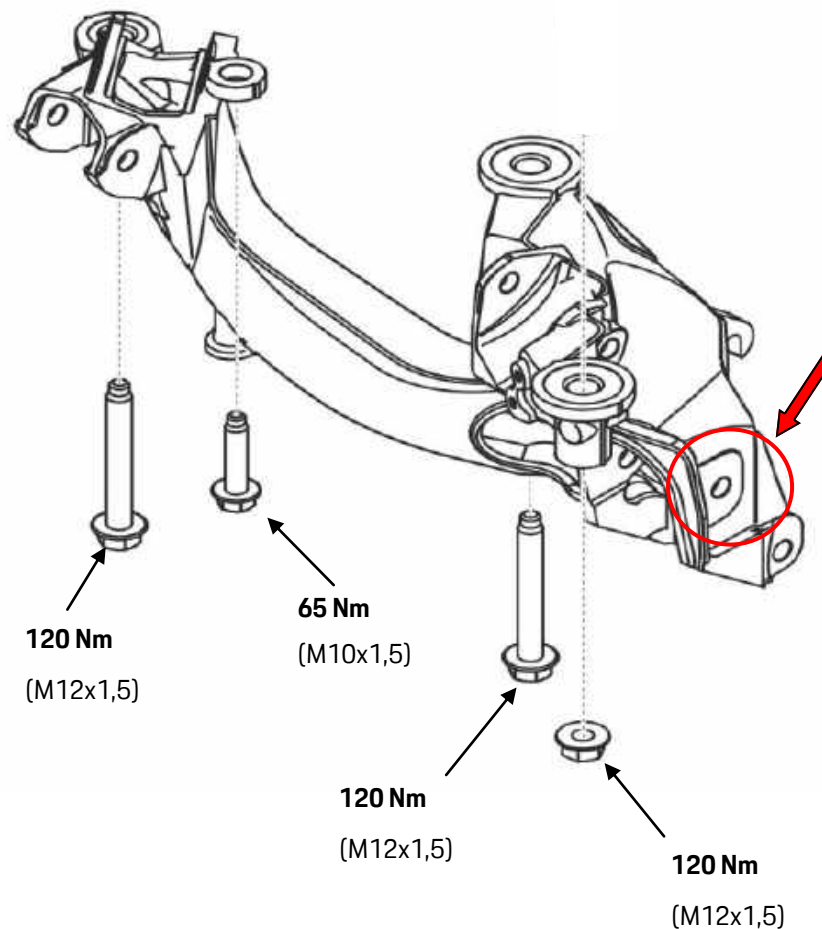
Changes to the attachment point in the aluminum side subframes may only be carried out by Manthey-Racing GmbH.

⚠ WARNING

If side subframes of the 911 GT3 Cup Gen.II are installed without the changes mentioned, there will be contact between the lower wishbone and other components while driving.

NOTE

As part of the regular vehicle maintenance, the side subframes must be checked for damage.



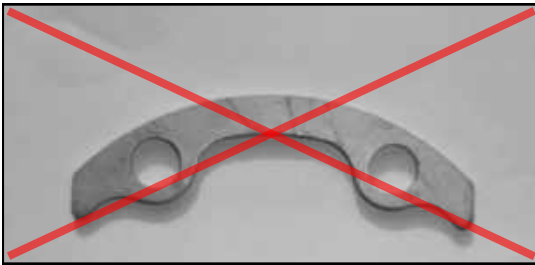
The maximum runtime of 90 hours for the side subframes must not be exceeded!

4.9 Drive Shaft Spacers

- Due to the significantly increased track width on the rear axle, spacers must be installed between the drive shaft and the gearbox.

⚠ ATTENTION

The standard shims with part number 7L0501357D must **NOT** be used anymore! Failure to do so can result in damage to the body and powertrain components.



NOTE

The tightening sequence and the three-stage tightening procedure are mandatory. Only screws with part number MTH332526 may be used.

NOTE

Due to the high loading experienced during driving, the MTH332526 fastening screws must be replaced after each loosening (disassembly).

NOTE

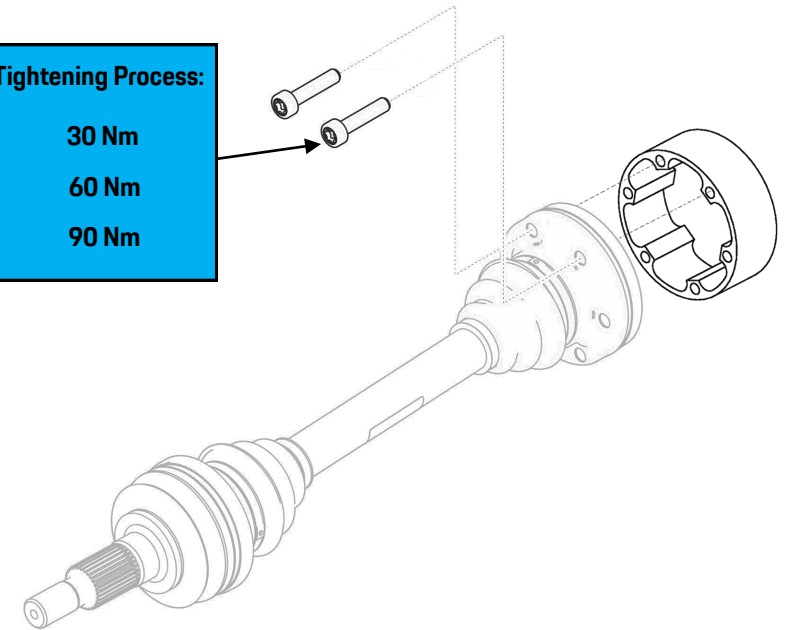
The use of thread locking adhesive (e.g. Loctite) is not permitted!



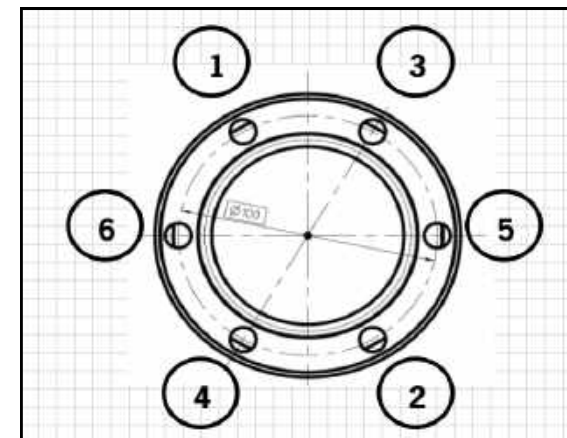
The running times of the standard drive shafts must be observed. Further information can be found in the technical documentation for the 911 GT3 Cup Gen.II from Porsche AG.

Three-Stage Tightening Process:

Stage 1	30 Nm
Stage 2	60 Nm
Stage 3	90 Nm



Tightening Sequence



4.10 Power Steering

- On the 911 GT3 Cup MR Gen.II, the standard power steering pump of the 911 GT3 Cup Gen.II is moved from the boot liner to the front area of the left wheel arch below the main headlight.

⚠ ATTENTION

The holder for the power steering pump must be mounted horizontally on the body. Failure to do so may result in the pump drawing air during extreme driving maneuvers and causing the pump to fail temporarily. ↓

⚠ ATTENTION

Even small amounts of air in the system significantly reduce the service life of the power steering pump and the steering rack.

NOTE

The protective housing around the power steering pump must be installed. Pump damage can occur otherwise (e.g. delaminating tyre). ↓

NOTE

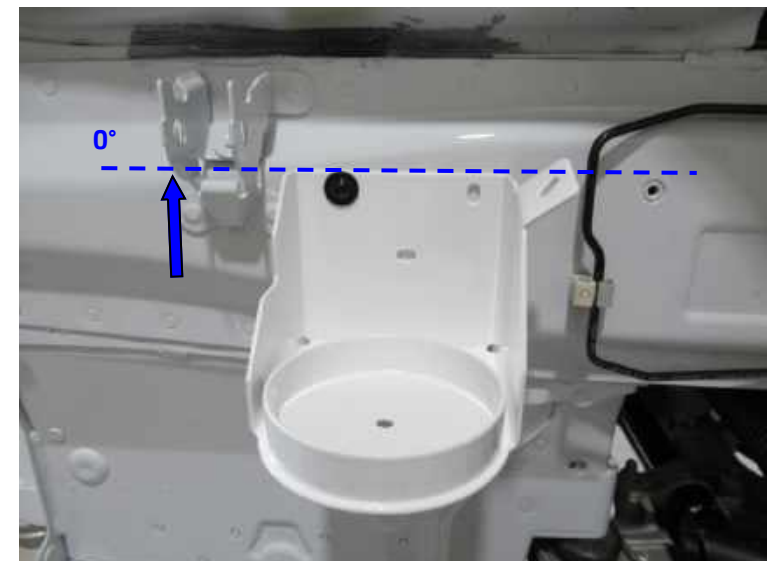
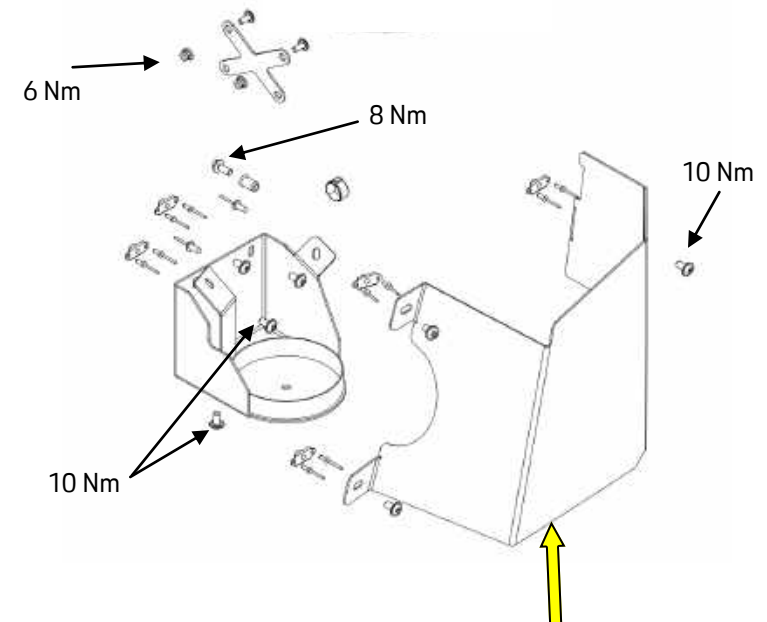
Maintenance work, such as refilling the system after replacing the steering rack, is carried out in accordance with the technical manual for the 911 GT3 Cup Gen.II from Porsche AG.

NOTE

The fluid level in the reservoir can be checked and adjusted via the service flap in the left fender (lamp housing).



Further information on the steering system can be found in the 911 GT3 Cup Gen.II technical manual from Porsche AG.



NOTE

Tightening torques must be observed!

NOTE

The rubber pad must be placed in the holder underneath the power steering pump. 

NOTE

Both lines (pressure line and return line) must be checked for firm seating and chafing before each event. Damaged lines must be replaced.

⚠ ATTENTION

The operating pressure of the system is **96 bar**!

⚠ ATTENTION

Loose connections and frayed connection lines are the main reasons for failure of the power steering pump. Short circuits may damage the

NOTE

The power steering pump's ventilation line must not be kinked. Check  the condition of this line regularly.

NOTE

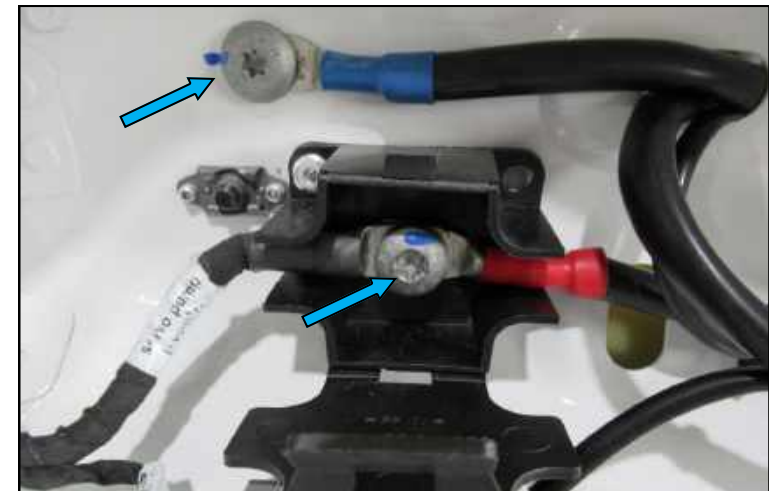
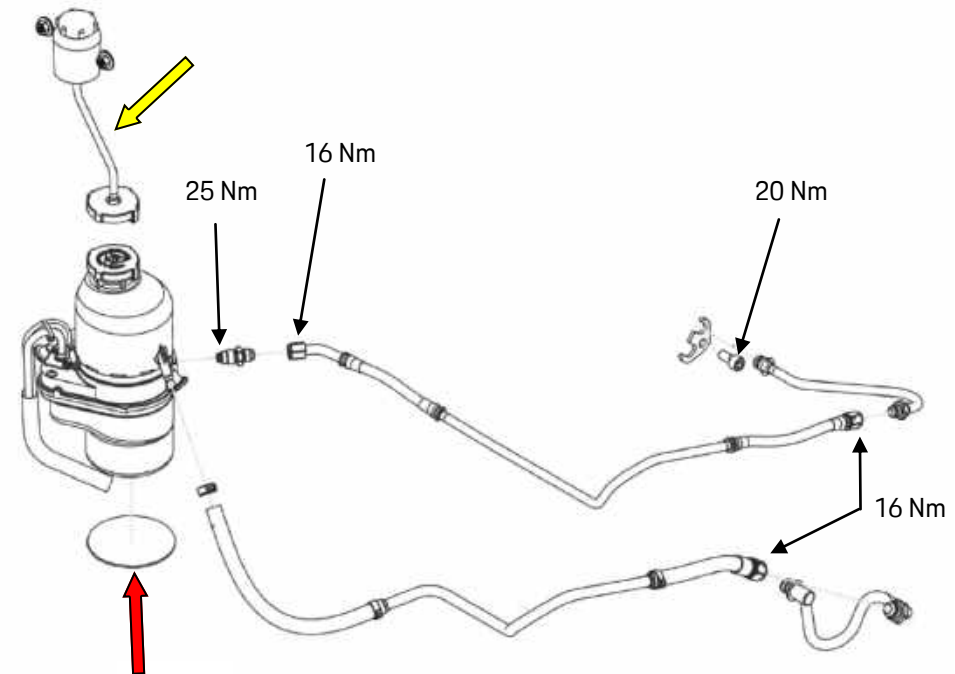
The connections + 12Volt BATT and the ground connection for the power steering pump should be checked for firm seating and chafing as part of the normal vehicle inspection. 

⚠ ATTENTION

Loose connections and frayed connection lines are the main reasons for failure of the power steering pump. Short circuits may damage the



Further information on the steering system can be found in the 911 GT3 Cup Gen.II technical manual from Porsche AG.



4.11 Rims

- The 911 GT3 Cup MR Gen.II is supplied with one-piece aluminum forged wheels from BBS in the sizes 12x18 ET17 on the front axle and 13x18 ET37.5 on the rear axle.

WARNING

The tightening torques specified by Porsche AG for the wheel attachment of the 911 GT3 Cup Gen.II are mandatory.

WARNING

Only the original wheel nuts with part numbers 9973313079A (left) and 9973313089A (right) are permitted for wheel mounting.

WARNING

Wheels with damage (cracks, deformations surrounding grooves in the rim base) **must not** be repaired. An examination and repair can be requested at the manufacturer (BBS).

ATTENTION

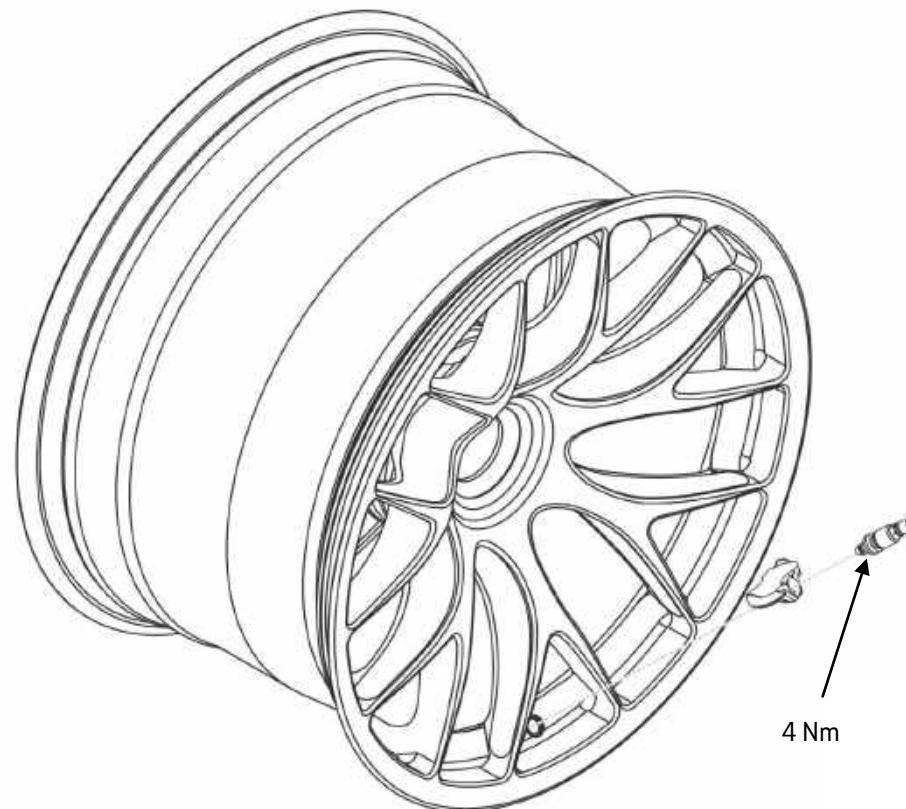
Before use, thread new wheels several times with the specified tightening torque (tighten/loosen 3 times) until a uniform contact pattern results in the cone of the rim.

ATTENTION

New wheel nuts must be tightened several times with the prescribed tightening torque before use on track. This minimizes the risk of the nut "setting" during racing and resulting in loosening of the wheel nut during driving. The running time of the wheel nut of 6 hours must be observed!

NOTE

Always apply a thin layer of Molub Optimol Paste TA lubricant to the rim cone and the wheel nut cone face.



NOTE

Only original valves with part number 9F2601361 may be used.

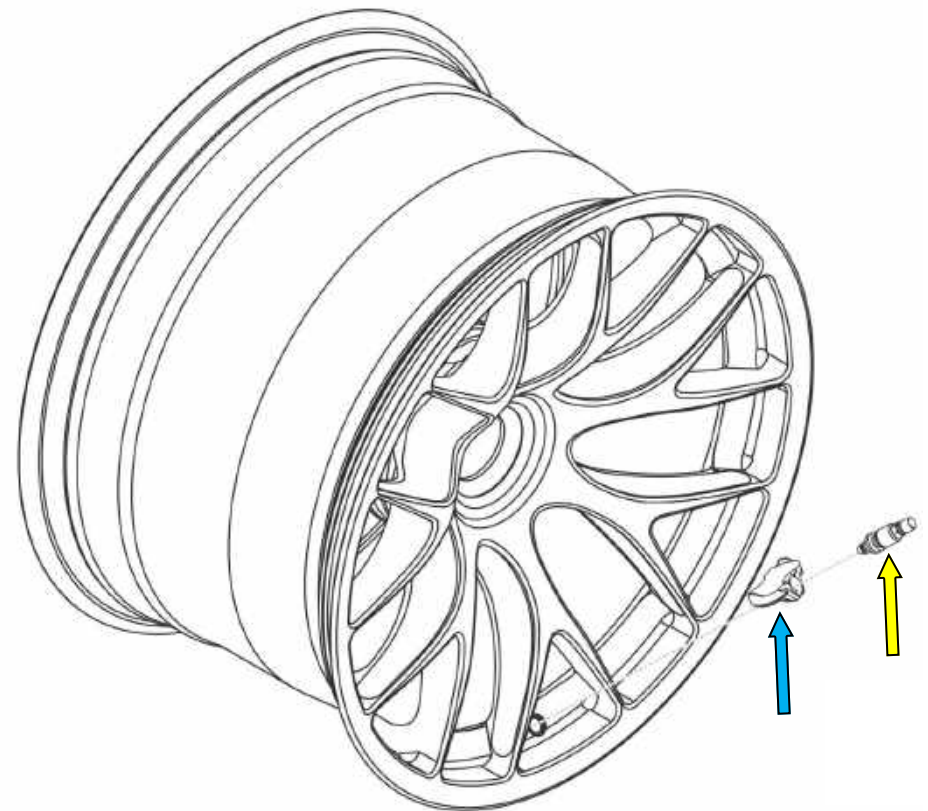


NOTE

Tire pressure sensors should be replaced after two years. Do not block the openings of the pressure sensor with the tire mounting paste. This can impair the function of the pressure sensor.



Check the tightening torque of the valve nut before each use. Do not tighten a loose valve again! The valve must be replaced.



5 Body Exterior

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5.1 Service Intervals

Part	Service interval	Max. runtime	Service advice
Air jack system	Before every session	-	Check for leaks and damage to lines and air jacks. Check that the air jacks are firmly seated in the body mounts. Check the front air jack seats for firm seating and cracks.
Air jacks	2,000 strokes / 2 years	-	Revision of the air jacks by the manufacturer. Check the jacks for damage every time the vehicle is serviced and maintain with silicone spray.
Lock pins	Before every session	-	Check for tightness and damage. Replace if necessary.
Aerocatch fasteners and retaining tabs on boot lid and front front covering	Before every session	-	Check for tightness and damage .Replace if necessary.
Heat protection insulation	Before every session	-	Check the heat protection insulation on the diffuser and rear panel for damage, repair if necessary.
Fiber composite parts	Before every session		Visually inspect fiber composite components for structural damage before each session.

5.1 Service Intervals

Part	Service interval	Max. runtime	Service advice
Strakes and fins	Before every session	-	Check components for damage/wear and replace if necessary.
Underbody and skid pads	Before every session		Check the underbody and skid pads for wear and damage. Replace components if necessary.
Rear wing / wing supports	Before every session	-	Check the rear wing and wing supports for firm seating and damage. Replace damaged parts immediately. Ensure that the Gurney and wing end plates are firmly seated.
Retaining cables of the front splitter	Before every session	-	Check for kinks / damage, replace if necessary. Check connections to body and front splitter for firm seating.

5.2 Air Jack System

- With the 911 GT3 Cup MR Gen.II, the standard position of the air jack system in the trunk area is relocated within the front of the trunk area using a modified bracket. The air jack system is expanded by an additional lifting cylinder. From the bulkhead to the passenger compartment, the system corresponds to the 911 GT3 Cup Gen.II.

WARNING

High risk of injury! No one may be in the danger zone. All persons entrusted with work on the vehicle must receive safety training in handling the air jack system.

WARNING

Never work under the raised vehicle without securing it against unintentional lowering. It must always be secured with the standard air jacks supports!

ATTENTION

In order to avoid damage to the end stops of the air jacks, never let the air jacks extend freely at full operating pressure (without vehicle load).

ATTENTION

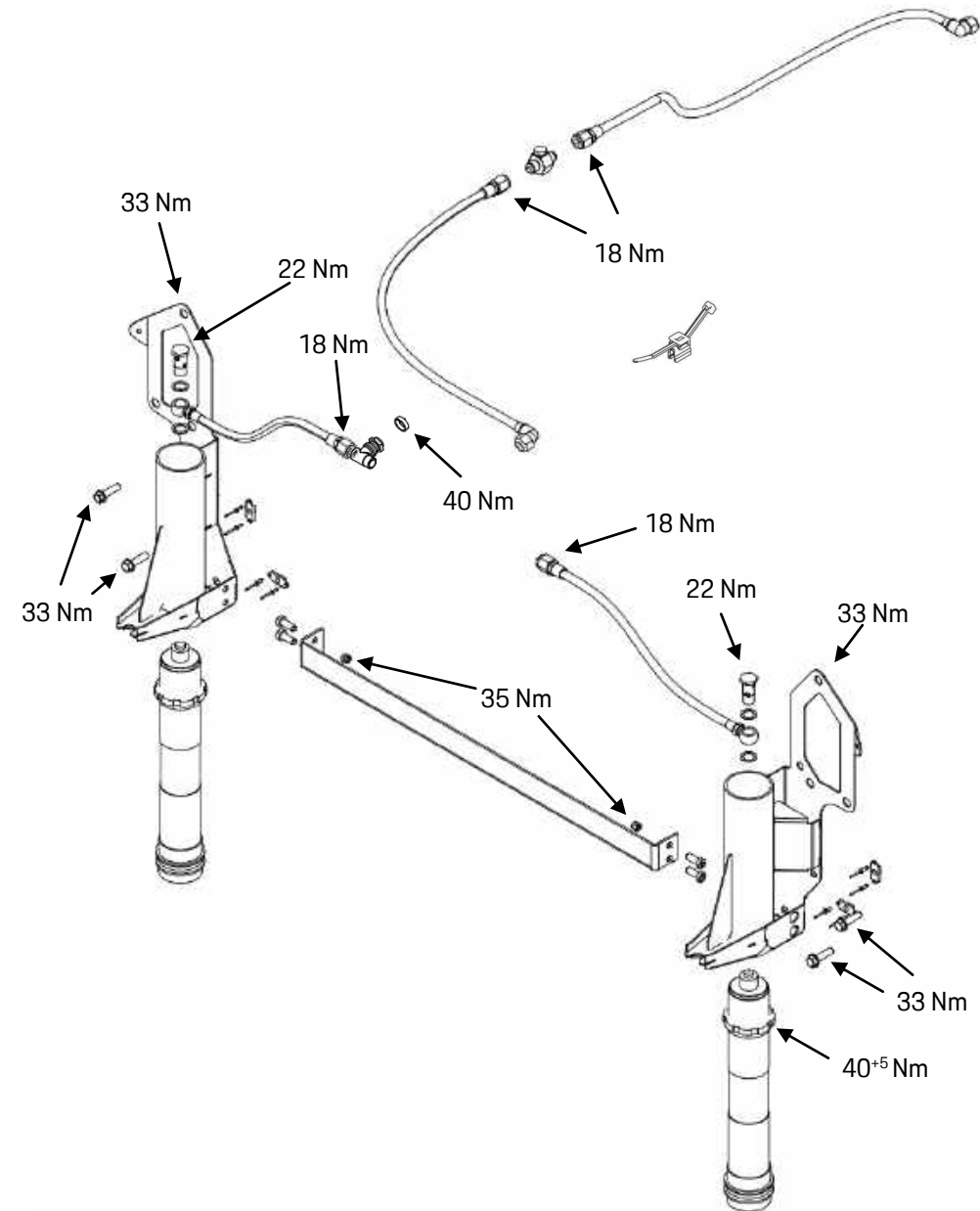
Never open the air jacks! Due to their layout, the jacks are under pressure even when retracted. If a lifting cylinder is opened, the manufacturer (Krontec Maschinenbau GmbH) must carry out a service.

ATTENTION

The maximum permitted pressure of **35 bar** must not be exceeded. Connections and air jacks can be damaged.



All four crown nuts for fastening the air jacks in their mounts must be checked and, if necessary, retightened before every race weekend and before every endurance race.



NOTE

If the optionally available "Autostart" function is ordered, the vehicle can be started automatically when the vehicle is lowered using a pressure sensor in the line system of the lifting system.

The wiring loom is already prepared for the connection of such a sensor (connector in the trunk area with the label "sensor_pres_airjack"). The starter is controlled via the ICD and IPS configuration.

As standard, the connection is closed with a threaded plug. As part of the maintenance work, the screw plug should be checked for tightness. ↓

NOTE

The raised vehicle can be lowered slowly and in a controlled manner using a plunger in the drain valve. This function is useful to lower the vehicle slowly (e.g. on a weighing scales). ↓

NOTE

The drain valve must be open (pulled out) while driving in order to ensure that the air jacks are retracted completely and to prevent the jacks from being inadvertently removed when the system heats up.

NOTE

Do not use mineral oil containing care/cleaning agents for the air jacks. This can damage the seals. Only silicone grease or sprays containing silicone are permitted. Check the air jacks regularly for mechanical damage.



Runtime-related servicing of the air jacks can be carried out by KRON-TEC Maschinenbau GmbH.



Air Jack System - Optional Accessories

- Manthey-Racing offers a TÜV-tested compressed air bottle with a 3 meter hose, pressure gauge and trolley for operating the air jack system.
- A second level for the air jack supports is available to make working under the vehicle easier.

⚠ WARNING

Never exceed the maximum working pressure of 35 bar. The hose line could burst!

⚠ ATTENTION

In order to prevent damage to the pressure gauge during transport, it should be dismantled and stored safely. Damaged or defective pressure gauges must be replaced immediately.

⚠ ATTENTION

Always park the bottle trolley securely and secure it against falling over.

NOTE

The compressed air bottle is subject to German TÜV regulations. The regular inspection is the responsibility of the operator.

⚠ WARNING

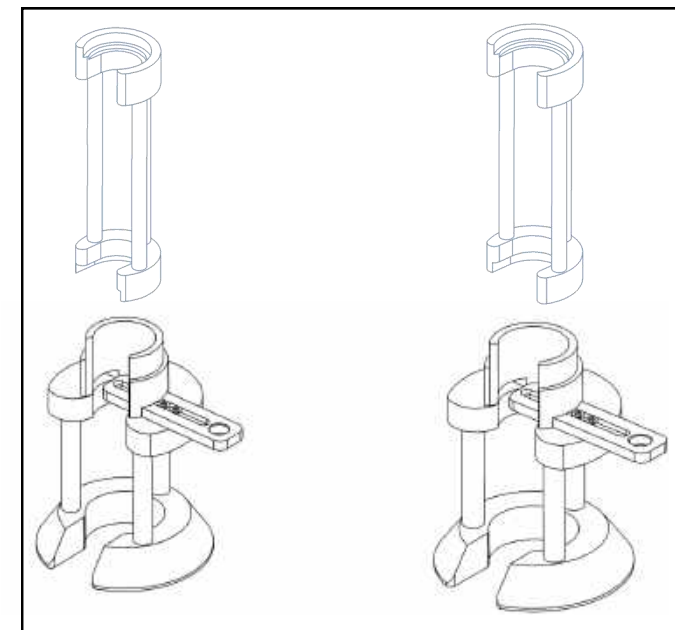
The optional second level for the air jacks may only be used on firm and level ground.

Additional securing when working under the raised vehicle is strongly recommended.

Accident prevention is the responsibility of the operator / user.



If you have any questions about the optional accessories for the air jack system, please contact: sales@manthey-racing.de



5.3 Front Bumper

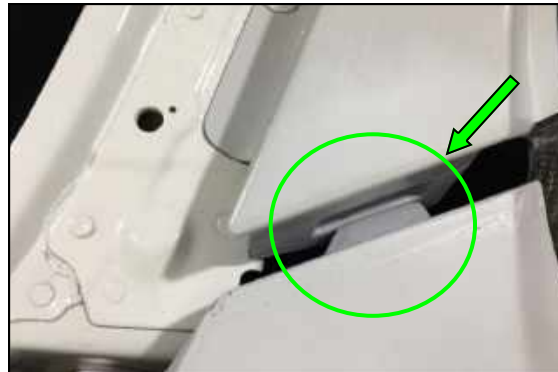
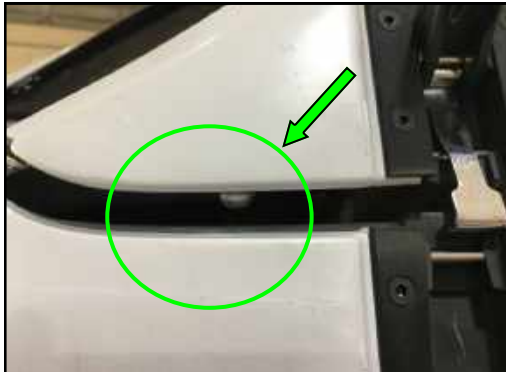
- Weight-optimized front bumper made of fiber composite material (CFRP) with a central air inlet for the cooling air for the central water radiator. The air inlet is provided with a protective grille. Two smaller air inlets are positioned to the left and right of the central air inlet for the front brake cooling.

NOTE

The front bumper is attached using four fastening screws in the lower area.

The front bumper must clip into the corresponding brackets on the fender. ↓

The front bumper is finally fastened using AeroCatch quick-release catches on the left and right.

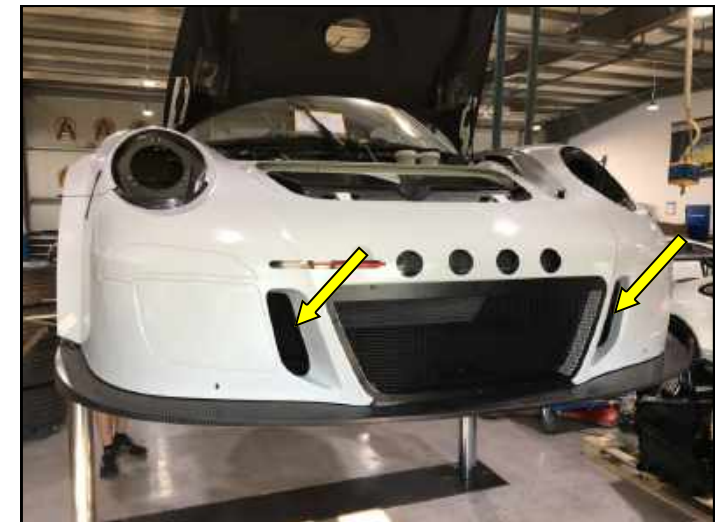
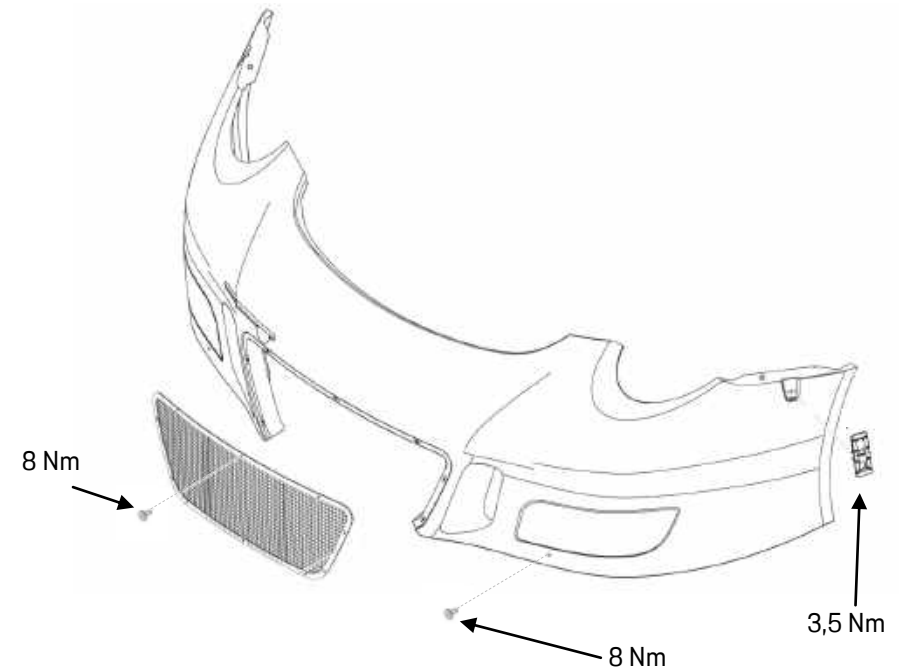


NOTE

The air intakes should be free of dirt (leaves, pick-up) at all times to ensure the most efficient cooling possible.

NOTE

Protective grids can be inserted into the openings brake cooling inlets. ↓



5.4 Front Impact Bar

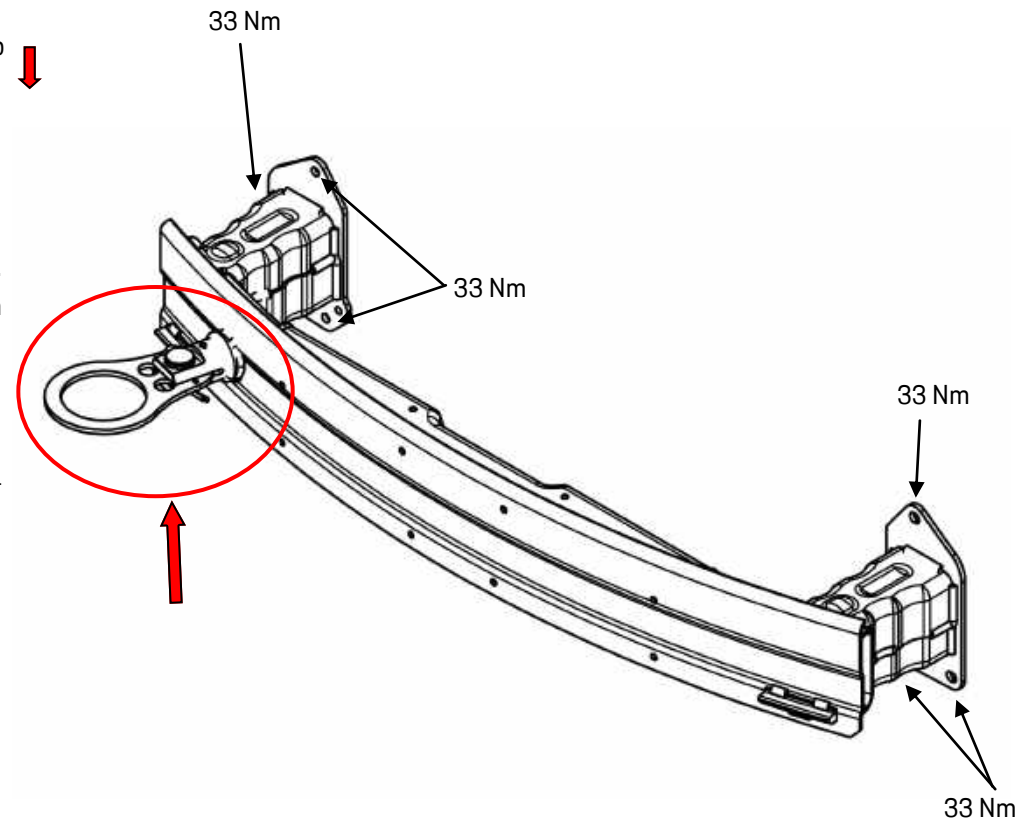
- The standard front impact bar of the base vehicle has to be redesigned for use in the 911 GT3 Cup MR Gen.II. The position and length of the towing eye mount must be adjusted. ↓

NOTE

The attachment points of the bumper on the body remain unchanged. The corresponding tightening torque can be found in the illustration opposite.

NOTE

The bumper is manufactured exclusively by Manthey-Racing GmbH. Alternatively, the bumper of the 911 GT3 Cup (991.1) with part number 9915051218B can be used.



5.5 Polycarbonate windscreen

- The 911 GT3 Cup MR Gen.II can be equipped with an optionally available polycarbonate windscreen. When participating in various series (e.g. Creventic, BelCar, etc.), the approval of the competitor/vehicle operator must be requested from the series organizer.
- The advantages of the PC front windscreen are, in addition to the weight saving compared to the standard laminated glass, the significantly lower susceptibility to stone chips and the resulting cracks.

WARNING

The exact mounting procedure outlined in the installation instructions must be followed. Only the adhesive system with all its components (primer, adhesive) described there may be used.

NOTE

The use of a multi-layer tear-off film (MTH541916) is strongly recommended to protect against scratches.

NOTE

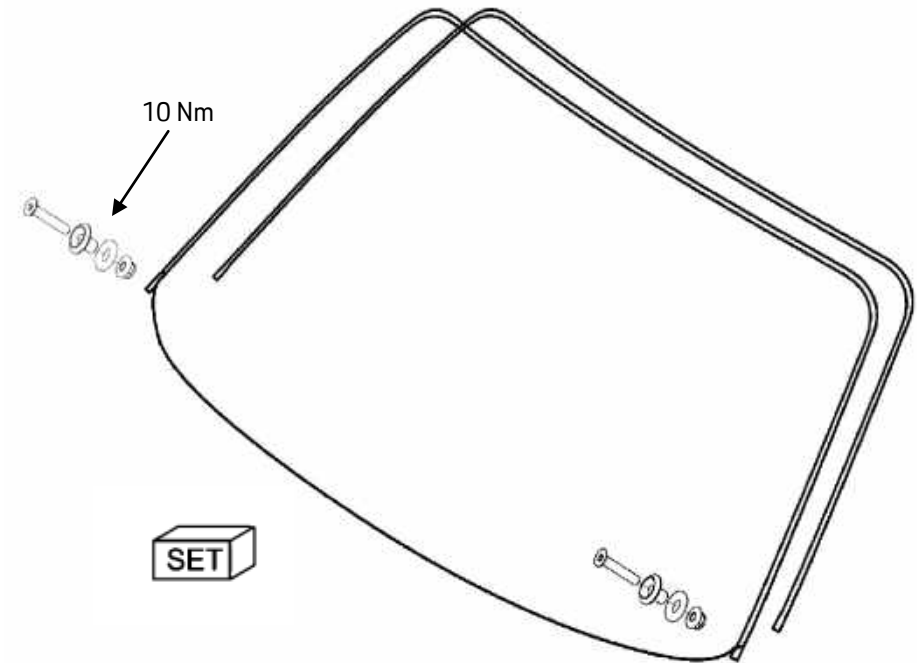
Only microfiber cloths should be used for cleaning (inside and outside). Use only mild detergents.

ATTENTION

The specified tightening torque for the additional screw mountings must never be exceeded.



Detailed installation instructions can be downloaded from the download area of the Manthey-Racing website.



5.6 Fender

- ▶ The weight-optimized fenders are made of carbon fiber composite and are designed to accommodate lightweight headlights (XENON) with integrated daytime running lights.
- ▶ The lightweight main headlights and the headlight covers can be replaced separately.
- ▶ The exhaust vents in the fenders (Louvre) ensure continuous ventilation of the wheel house. This counteracts lifting caused by excess pressure / turbulence in the wheel house, which is noticeable in the overall downforce of the vehicle.
- ▶ The wheel arch liners on the front axle are made of high durability kevlar-reinforced composite material.



NOTE

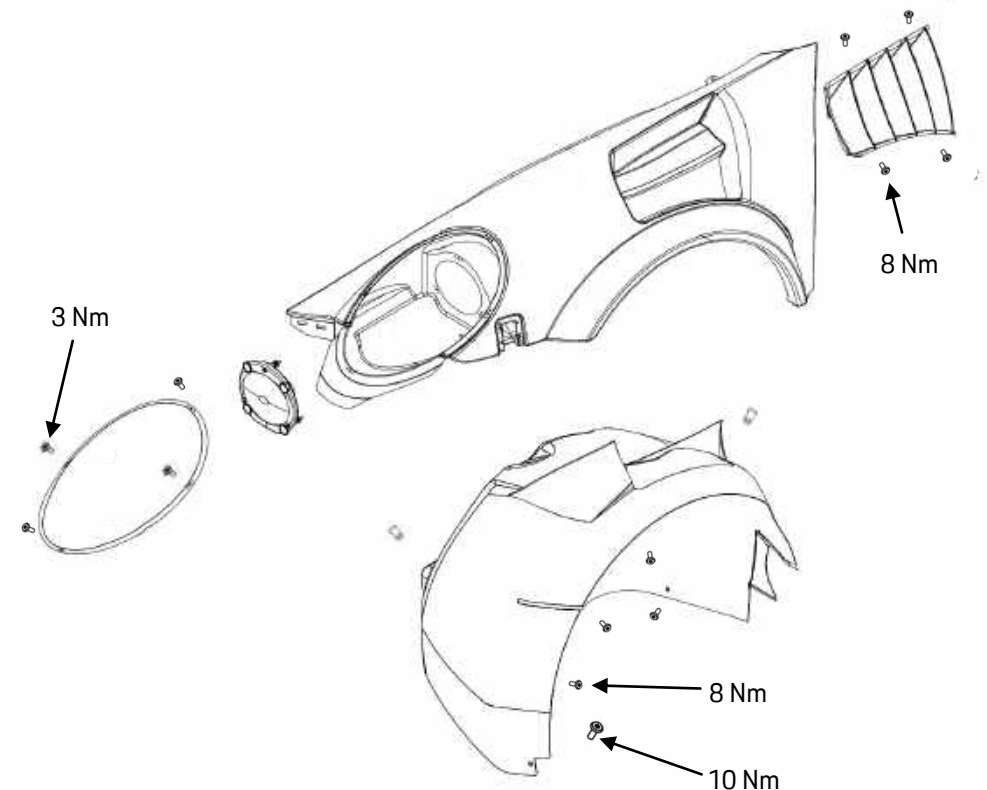
The headlight covers may only be cleaned with microfibre cloths and gentle cleaning agents (detergent). Failure to observe can lead to scratches and clouding of the material.

NOTE

Never tighten the fastening screws for the headlight cover with a torque higher than specified here. Failure to observe can lead to cracks.

NOTE

To prevent the headlight covers from fogging up, Manthey-Racing recommends regular use with appropriate anti-fogging agents.



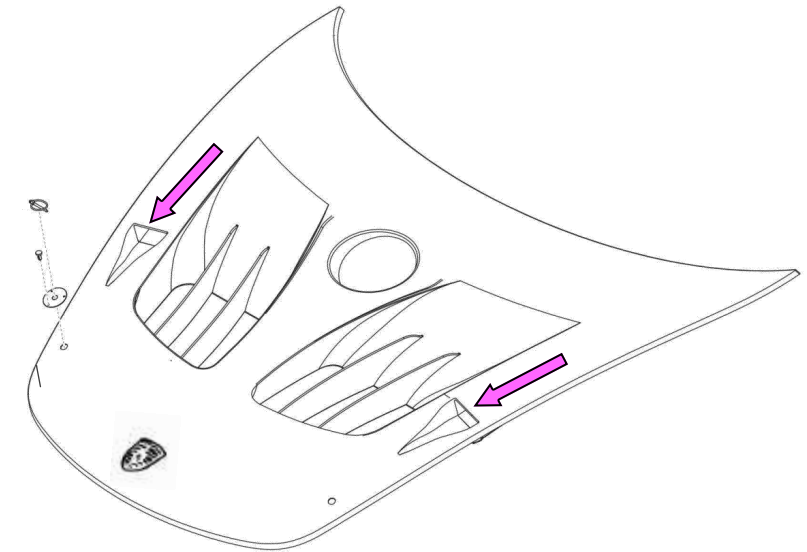
5.7 Trunk lid

- Weight-optimized trunk lid made of fiber composite material (CFRP) with a round cutout for refueling when the lid is closed.
- Large flow-optimized air outlets for the hot air from the central water radiator.
- Two openings for the fresh air supply to the passenger compartment.


WARNING

An improperly closed trunk lid can open, tear off and hit the wind-screen while driving.

- Push the lock pins completely through the studs and lock them carefully.


NOTE

Damaged locking pins must be replaced. The bolts must be checked for damage and firm seating as part of the vehicle preparation.

NOTE

In wet conditions, the two air intakes for the fresh air supply to the passenger compartment should be closed. Failure to do so may result in water entering the passenger compartment. ↓

NOTE

Only one standard hood lift may be installed. The trunk lid is attached to the standard hinges using the standard M6 collar nuts. ↓


10 Nm


5.8 Underbody

- The underbody of the 911 GT3 Cup MR Gen.II is completely closed for aerodynamic reasons. The aerodynamic efficiency is further increased by the flow-optimized front splitter and the rear diffuser.

NOTE

The strakes on the front splitter and the four fins on the underbody at the rear must be replaced if they are damaged or badly worn. The components can be replaced individually. ↓

NOTE

The marked areas represent skid pads. The skid plates can be replaced individually and are arranged so that they wear out before the actual CFRP components are damaged. ↓



WARNING

When carrying out any work on the underbody, the vehicle must be secured against falling using suitable means.



WARNING

All underbody components must be checked for tightness before each use. Loose components pose a high safety risk for you and others!



The corresponding tightening torques can be found in the detailed assembly instructions. This is available for download from the Manthey Racing website.

Underbody - Front Splitter

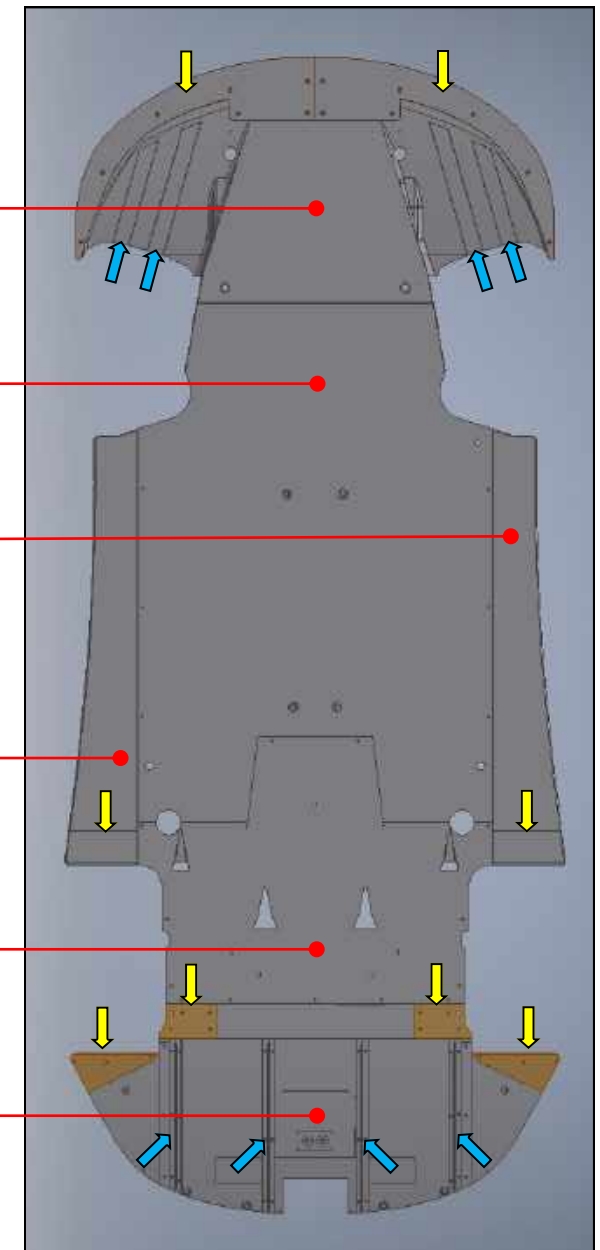
Underbody - Centre

Sill Cover - LH

Sill Cover - RH

Underbody - Centre-Rear

Underbody - Rear Diffuser



Underbody - Front Splitter

NOTE

The strakes on the front underbody should be checked regularly for wear and damage. The front skid pads must also be checked regularly for damage and wear. If the wear is high, the skid pads must be replaced.

NOTE

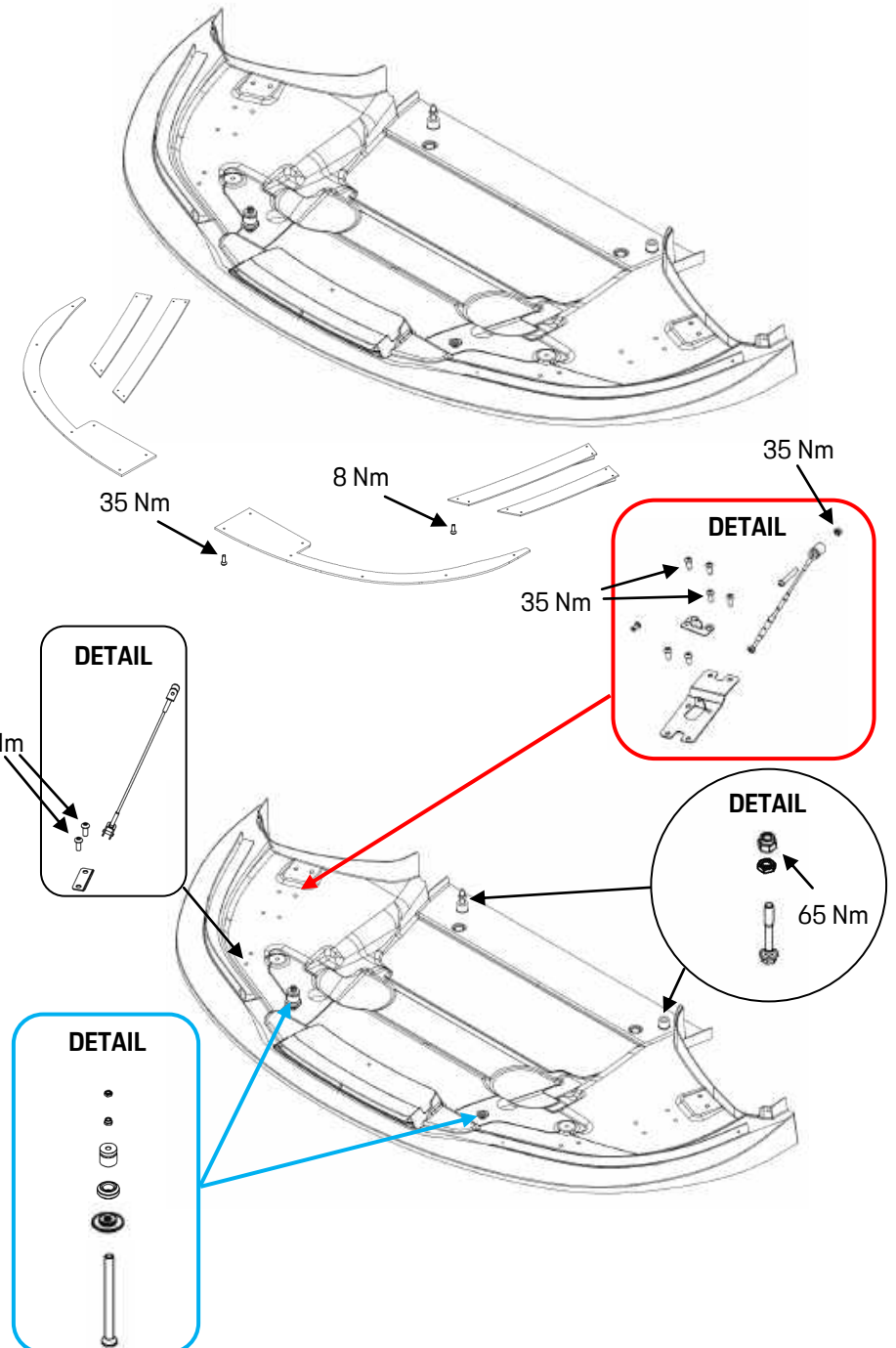
The brackets on the front underbody to hold the cables and the attachment points on the body must be checked regularly for tightness and damage. 

NOTE

The retaining cables must not be kinked. Defective cables (individual strands broken) must be replaced immediately. The cables are to be kept taut and the adjusters are to be secured against loosening with the lock nuts.

NOTE

The front insertion pins are to be checked for correct seating in the mounting points of the body. The screw connection is to be checked for tight fit. 



The corresponding tightening torques can be found in the detailed assembly instructions. This is available for download from the Manthey Racing website.

Underbody - Central and Sill Covers

- The sill covers and the center underbody use aluminum retaining strips as their central fastening element. In order to get the underbody as straight as possible, a very precise horizontal alignment of the two strips is required.

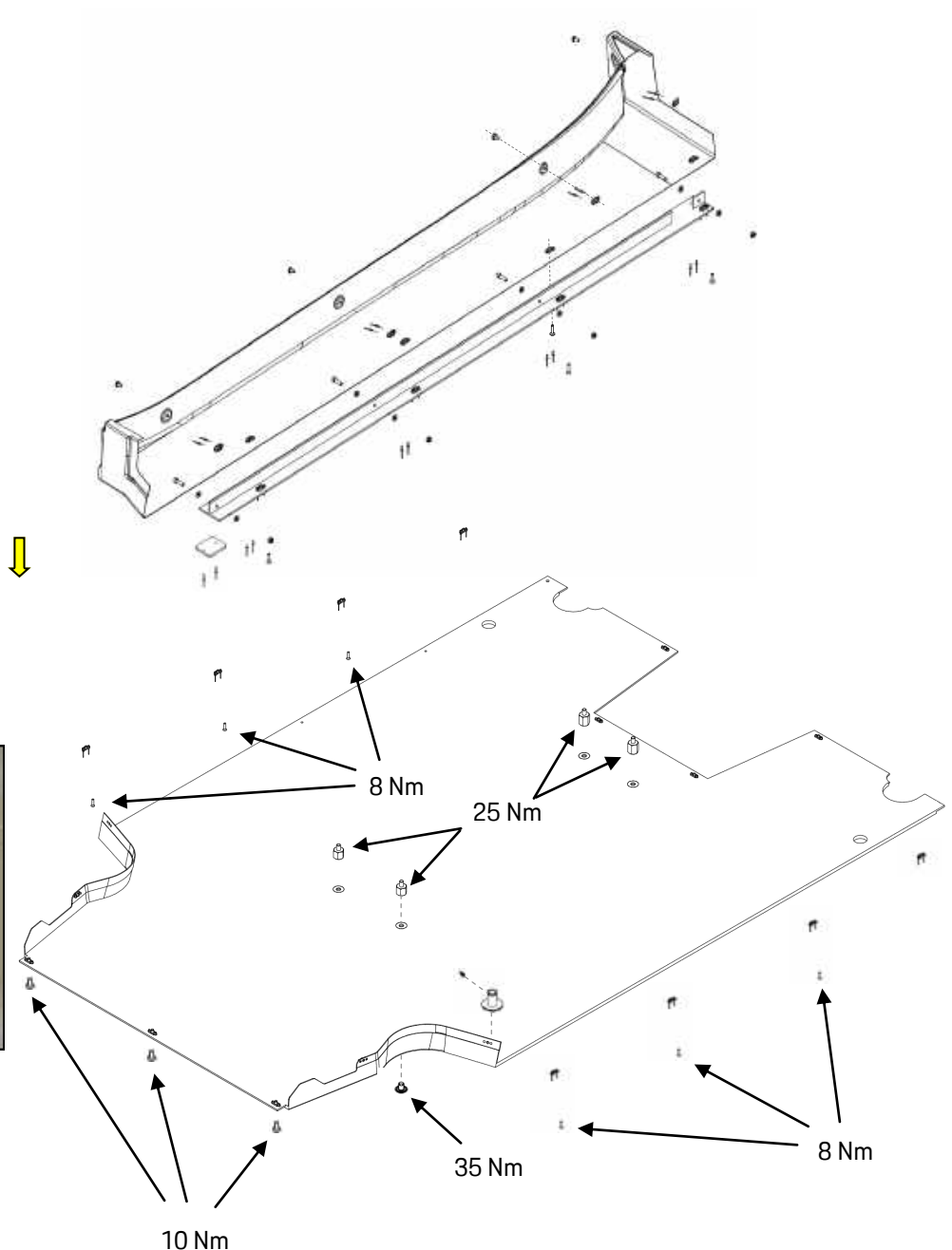
NOTE

The spacers shown are the main fixation points for the middle underbody. These spacers are of different lengths. Confusing the two spacer variants inevitably leads to extreme misalignment of the underbody! ↓

The assembly instructions must be followed. The spacers are to be glued in with medium-strength screw locking (Loctite 243).



The corresponding tightening torques can be found in the detailed assembly instructions. This is available for download from the Manthey Racing website.



Underbody - Centre-Rear

NOTE

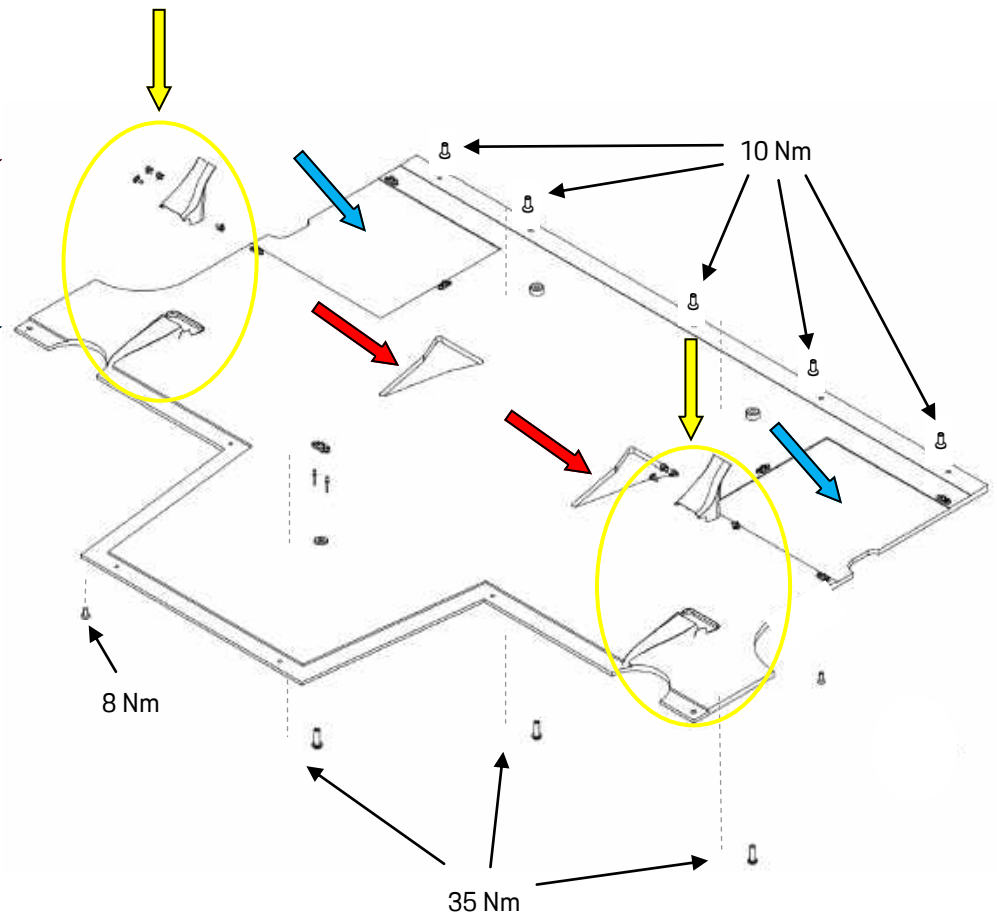
The standard air ducts for the cooling of the rear axle brakes are carried over and attached to the positions shown using blind rivets. ↓

NOTE

The standard air ducts for the drive shaft joint cooling of the 911 GT3 Cup Gen.II are installed in the positions shown. ↓

NOTE

The two service flaps on the left and right on the underbody can be removed for easier access to the suspension components when aligning/setting up the vehicle. ↓



The corresponding tightening torques can be found in the detailed assembly instructions. This is available for download from the Manthey Racing website.

Underbody - Rear Diffuser

⚠ ATTENTION

Due to its proximity to the exhaust system, the rear underbody is completely covered with heat protection insulation. Damage to the heat protection must be repaired immediately. Failure to observe may lead to thermal overloading of the fiber composite material and cause a fire.

NOTE

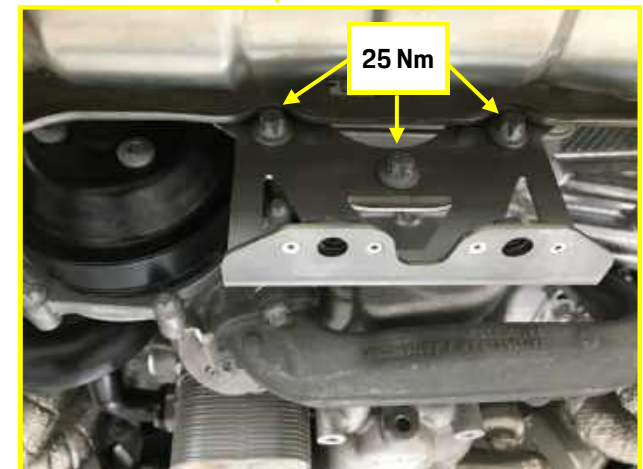
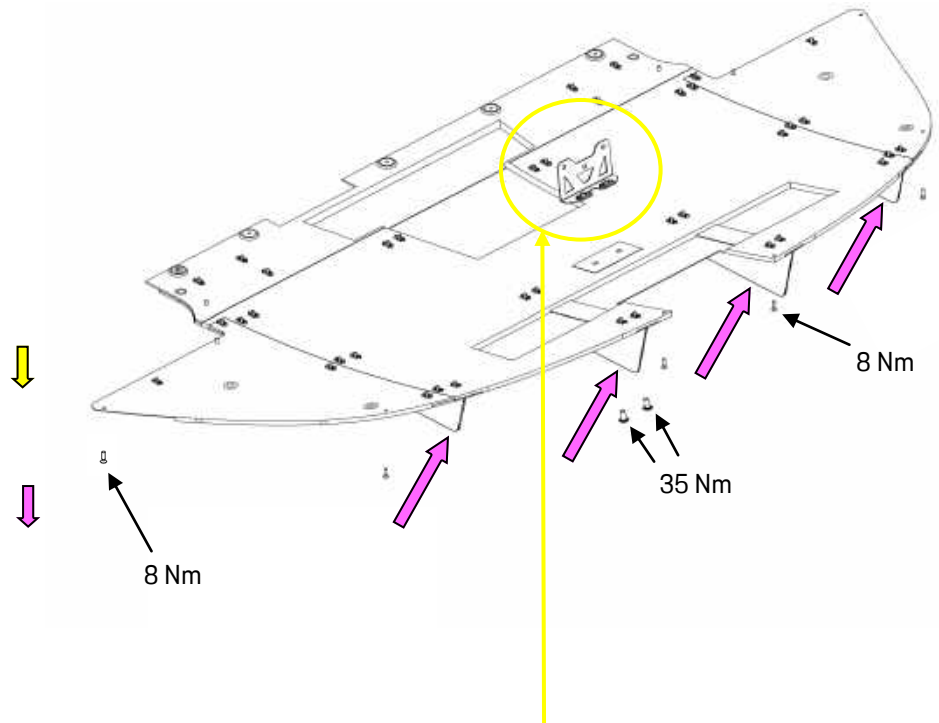
Within each vehicle preparation the rear bracket must be checked for firm seating and damage (e.g. cracks).

NOTE

Damaged and worn fins must be replaced.

NOTE

The specified tightening torques must be observed.



5.8 Rear Bumper

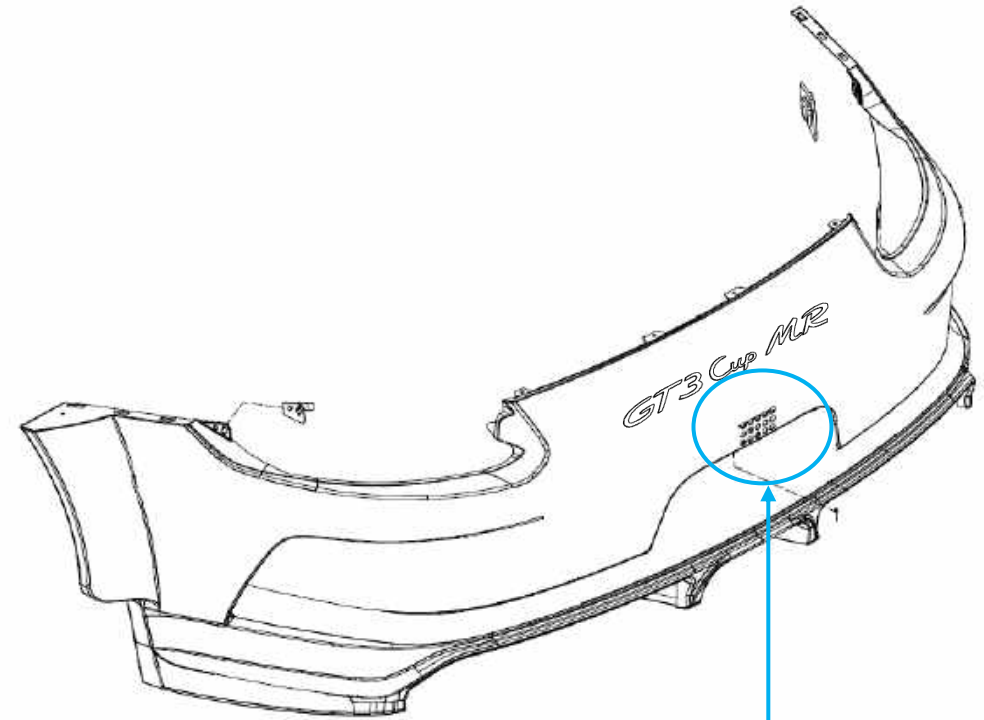
- The weight-optimized rear bumper is made of carbon fiber composite and is designed for fastening the rear diffuser.

⚠ ATTENTION

The inside of the rear trim is covered with a heat-resistant film. Damage to this film must be repaired immediately with the appropriate material. Failure to observe this can result in heat damage to the rear bumper.

NOTE

The standard rain light of the 911 GT3 Cup Gen.II must be retained for the new rear bumper.



The corresponding tightening torques can be found in the detailed assembly instructions. This is available for download from the Manthey Racing website.

5.10 Engine Cover

- The weight-optimized engine cover is made of carbon fiber composite. The standard hinges are also replaced by weight-optimized retaining pins.
- The engine cover is inserted onto the two tabs on the wing supports and then fixed to the front holding peg using two lock pins.

⚠ ATTENTION

As part of vehicle preparation, both the tabs on the wing supports and the mounts and studs on the body must be checked for firm seating and damage.

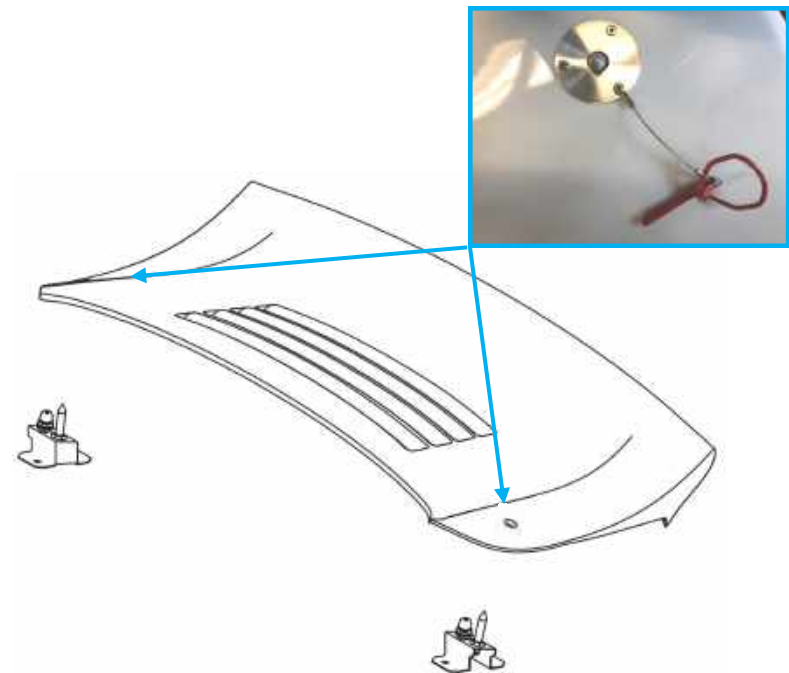
NOTE

Care must be taken that the two pins in the wing supports engage in the recesses in the engine cover. If this is not observed, the cover cannot be attached properly.



NOTE

Damaged lock pins must be replaced immediately.



5.11 Rear Wing

- The 911 GT3 Cup MR Gen.II is delivered with an aerodynamically adapted rear wing. The width of this corresponds to that of the 911 GT3 Cup Gen.II. The wing depth was increased significantly. In conjunction with the diffuser, this results in a significantly increased downforce value on the rear axle.
- The standard wing supports are modified as part of the conversion in the area of the rear wing connection point to the wing support. The front six attachment points of the wing support are extended by three additional attachment points. This results in a wider adjustment range for the rear wing.
- The Gurney contributes significantly to the overall downforce and is therefore mandatory!
- Due to the much wider adjustment range of the rear wing, the wing end plates have an increased



WARNING

The rear wing and wing supports must be checked for damage as part of the regular vehicle maintenance before each event. Damaged/

ATTENTION

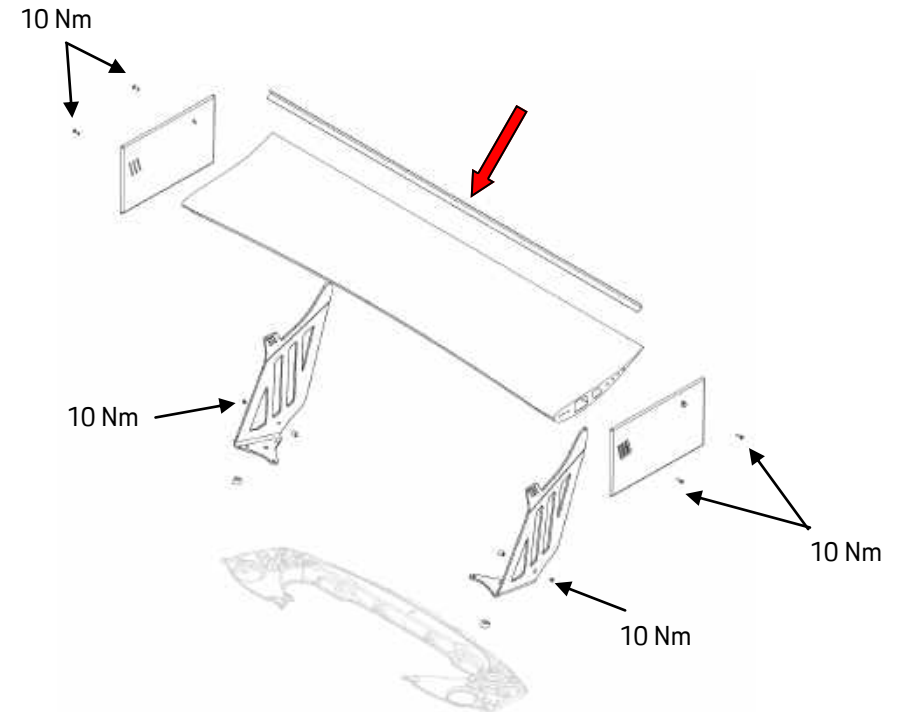
The rear wing must be mounted on both sides at the same attachment points on the wing support. Failure to observe can damage the wing blade due to torsion.

ATTENTION

The specified tightening torques are mandatory!

ATTENTION

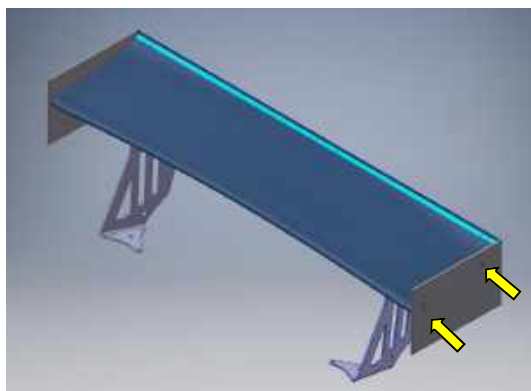
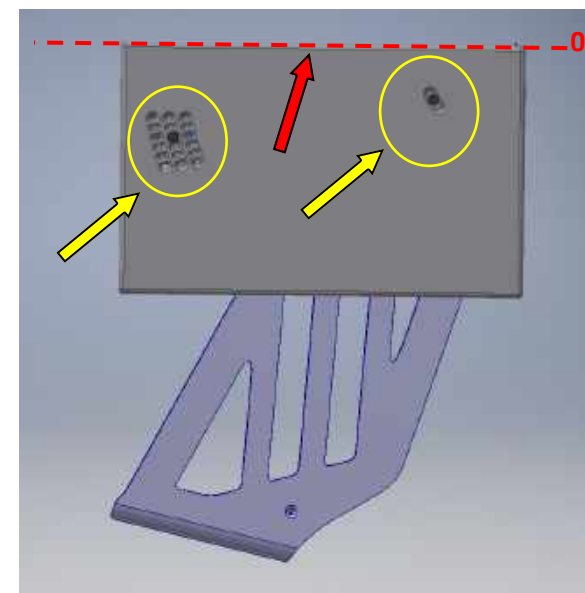
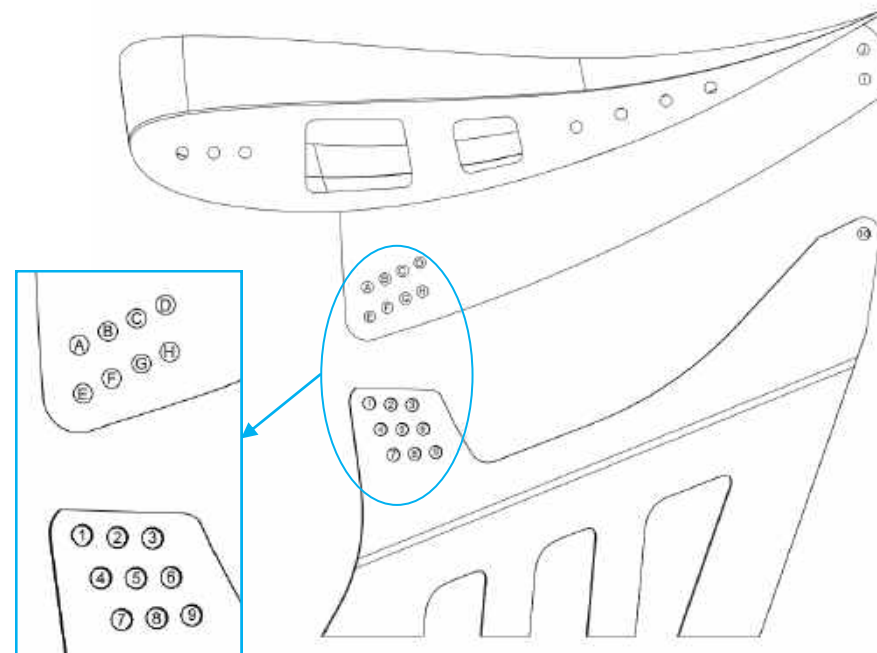
Modifications of the rear wing and its sub-components is prohibited!



- The setting options for the rear wing are shown in the adjacent graphic. The table below shows the changes in the angle of of the rear wing resulting from the individual settings.

Wing position [deg]	Wing mount hole front	Support mount hole front	Wing mount hole rear	Support mount hole rear
- 4°	D	9	I	10
-3°	C	8	I	10
-2°	B	7	I	10
-1°	D	6	I	10
0°	C	5	I	10
1°	B	4	I	10
6°	H	5	J	10
7°	G	4	J	10
9°	H	2	J	10
10°	G	1	J	10

- If the rear wing is adjusted in its inclination, both wing end plates must be adjusted in their orientation. Typically, the end plates are installed in a horizontal position. The end plate is adjusted using the 18 holes on the front attachment and an elongated hole on the rear connection.



6 Electrics

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6.1 Service Intervals

Part	Service interval	Max. runtime	Service advice
Endurance wiring loom	Before each event	-	Check all wiring harnesses for chafing points. Check that all connectors are fitted/fastened correct. Check the function of all connected systems.
Xenon headlights	Before each event	-	Check the function of the xenon headlights. Check function of LED rings (daytime running lights, flashing function, etc.). Check control units and wiring looms for tight fit and damage.
ICD/IPS Configuration	Before each event	-	Check for current valid dataset (check the Manthey Racing website regularly for any available updates).
Traction control	Before each event	-	Check the function of the rotary selector switch.

6.2 Endurance Wiring Loom

- In the 911 GT3 Cup MR Gen.II, a fully integrated endurance wiring loom is used to connect all the necessary systems. The 911 GT3 Cup MR Gen.II is equipped with the cockpit wiring harness and the front wiring harness as standard. The rear wiring harness with connection options for air condi-

NOTE

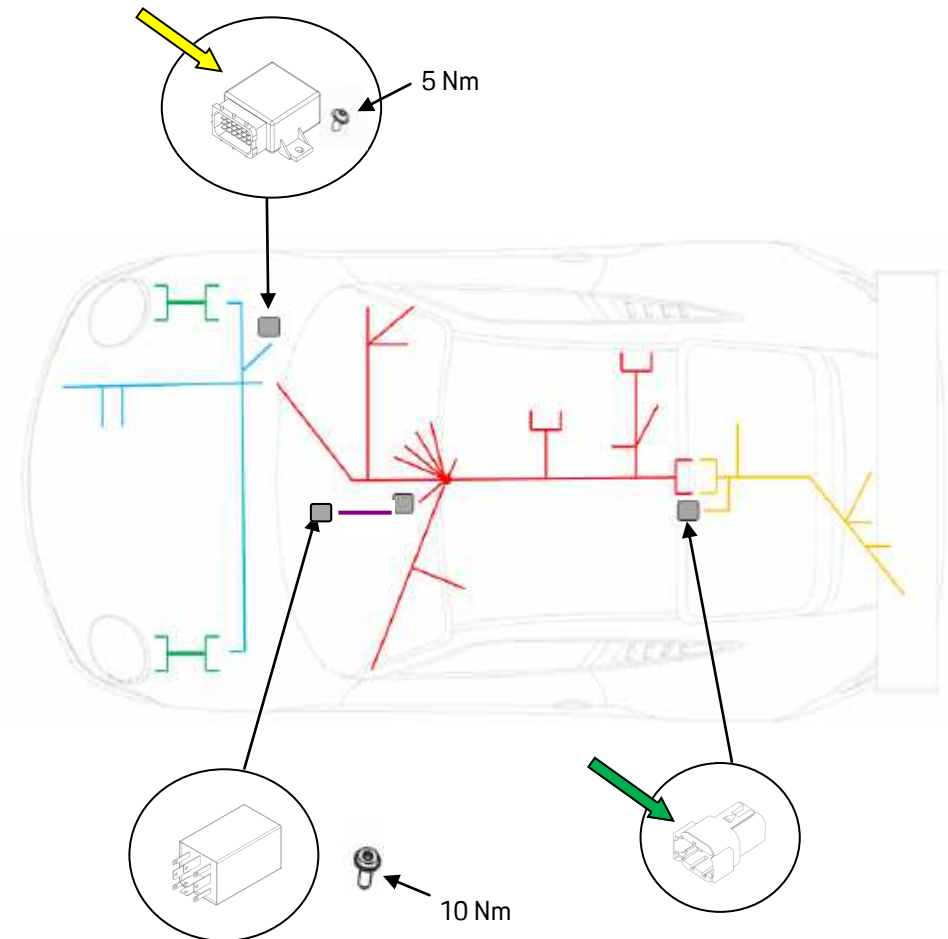
Before each event, all wiring harnesses must be checked for chafing and the connectors for correct fitting.

NOTE

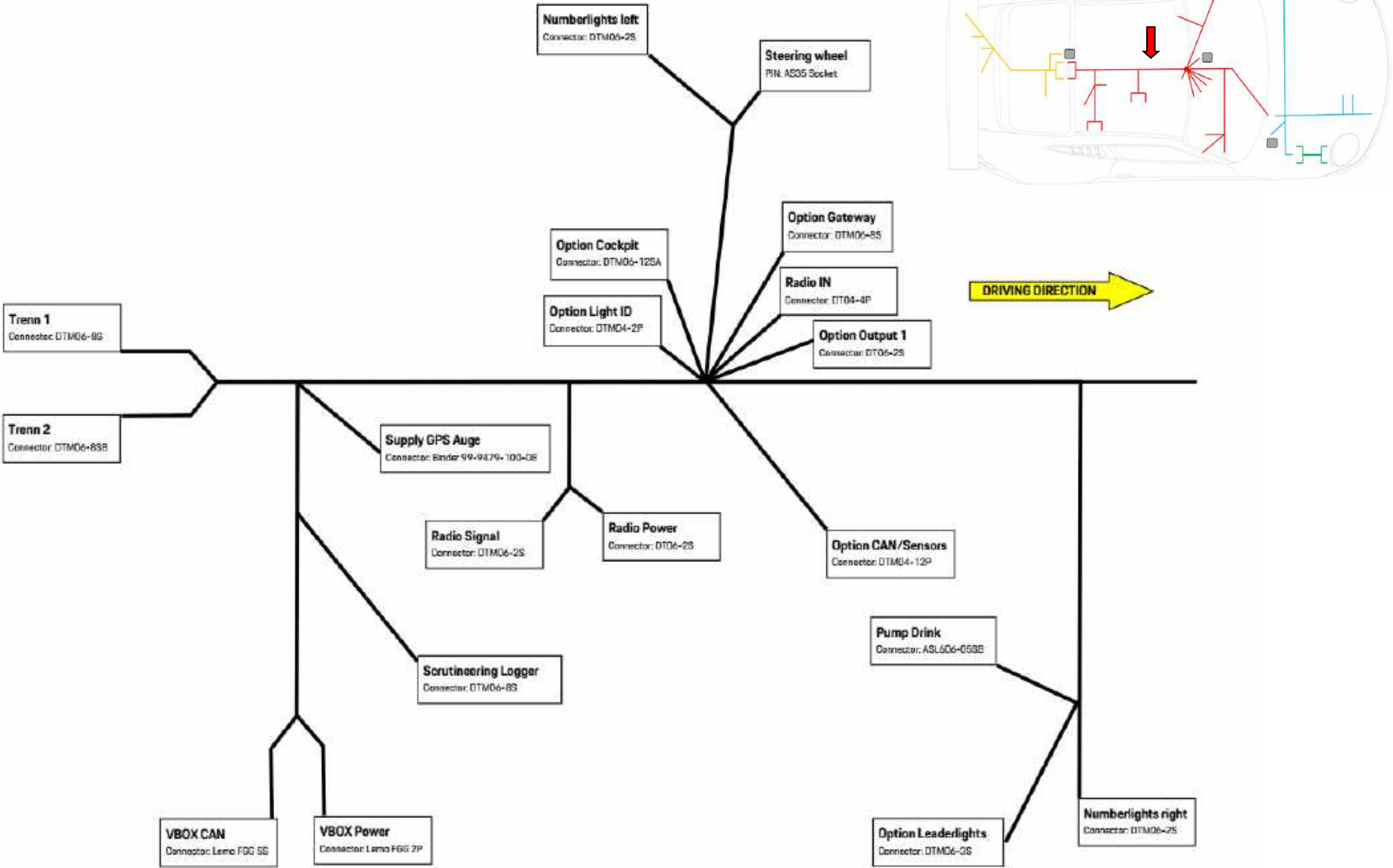
If the optionally available rear wiring loom is not used, a corresponding dummy controller must be connected to the separation point (rear IO) ↓

NOTE

The front IO control unit is located in the cars' front section. Weather conditions can cause moisture to get into the connector. After driving in wet conditions, the connector should be disconnected from the control unit and a check completed for moisture ingress. ↓

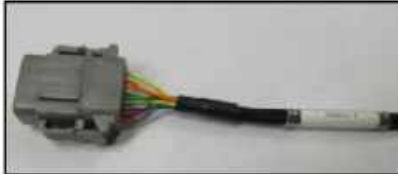


Overview - Main Wiring Loom (Cockpit)



Overview - Main Wiring Loom Connectors (Cockpit)

Trenn 1
Connector: DTM06-BS



Trenn 2
Connector: DTM06-BSB



Trenn 1 & Trenn 2:
Used for the rear wiring section of the 911 GT3 Cup MR Gen.II. **Not in use for the „trophy spec.“ Cup car.**

VBOX Power
Connector: Lemo FGG 2P



VBOX Power
Power supply (12V) for the optional VBOX video/datasystem

VBOX CAN
Connector: Lemo FGG 5S



VBOX CAN
CAN IN to the optional VBOX system.

Scrutineering Logger
Connector: DTM06-BS

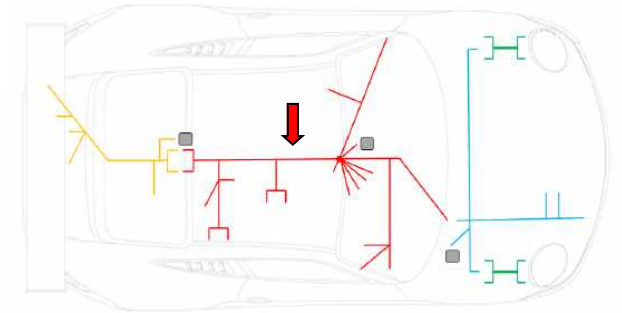


Scrutineering Logger
Connector for an optional datalogger (race series dependent).

Supply GPS Auge
Connector: Binder 99-9479-100-08



Supply GPS Auge
Power supply for the GPS system (race series dependent, e.g. VLN mandatory)



PINOUT Scrutineering Logger

1 +12V BATT	5 Sensor Press Airbox
2 GND	6 Sensor Press Airbox
3 CAN high	7 Sensor Press Airbox
4 CAN low	8 Sensor Press Airbox

Overview - Main Wiring Loom Connectors (Cockpit) (Cont.)

Radio Power

Connector: DT06-2S



Power Supply Radio

Power supply (12V) for a installed radio.

PINOUT Radio Power

1 +12V BATT
2 GND

Radio Signal

Connector: DTMD6-2S



Signal Radio

Signal push to talk of the radio

PINOUT Radio Signal

1 Signal (PTT)
2 n.c.

Option CAN/Sensors

Connector: DTMD4-12P



Option CAN/Sensors

Connect to the suitable connector at the main junction behind the switch panel to the connector „Option CAN/Sensors“.

PINOUT Option Can / Sensors

1 CAN 3 high	7 AI1
2 CAN 3 low	8 AI4
3 +5V sensor supply	9 AI19
4 GND sensor	10 GND
5 +12V BATT	11 n.c.
6 AI2	12 n.c.

Option Light ID

Connector: DTMD4-2P



Option light ID

Connect to the suitable connector at the main junction behind the switch panel with label „option light ID“

Option Cockpit

Connector: DTMD6-12SA



Option Cockpit

Only connected in the 911 GT3 Cup MR Gen.II. **Not connected in the „tropy spec“ Cup car.**

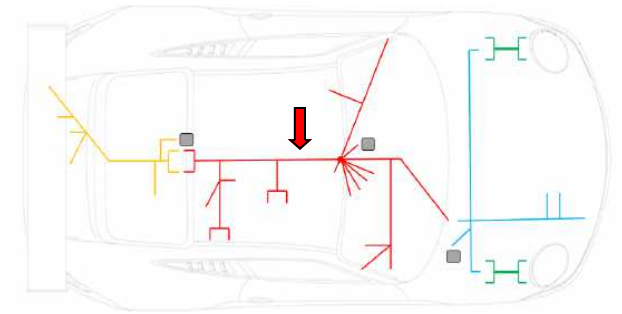
Option Output 1

Connector: DT06-2S



Option Output 1

Connect to the suitable connector of the vehicle with label „Option Output 1“



Overview - Main Wiring Loom Connectors (Cockpit) (Cont.)

Steering wheel

PIN: AS35 Socket



Steering wheel Socket

Connect to main connector Steering wheel PIN 14

Radio IN

Connector: DT04-4P



Radio IN

Connect to the labelled connector „Radio In“ in the car.

Option Gateway

Connector: DTM06-8S



Option Gateway

Only connected in the 911 GT3 Cup MR Gen.II. **Not connected in the „tropy spec“ Cup car.**

Numberlights Left/right

Connector: DTM06-2S



Numberlights left & right

Optional starting number light can be supplied with power.

PINOUT Numberlights left/right

1 +12V BATT
2 GND

Pump Drink

Connector: ASL606-06GB



Pump Drink

An optional drinking system can be supplied/switched on/off.

PINOUT Pump drink

1 +12V BATT
2 GND

Option Leaderlights

Connector: DTM06-3S



Option Leaderlights

An optional leaderlight can be supplied. Located to the A-pillar of passenger side.

PINOUT Option leaderlight

1 +12V BATT
2 GND
3 n.c.

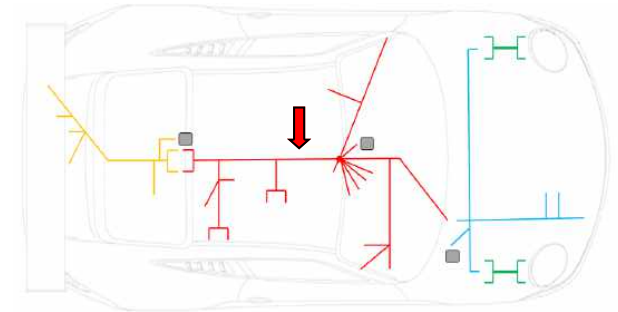
Terminal Front

Connector: DTM06-2S

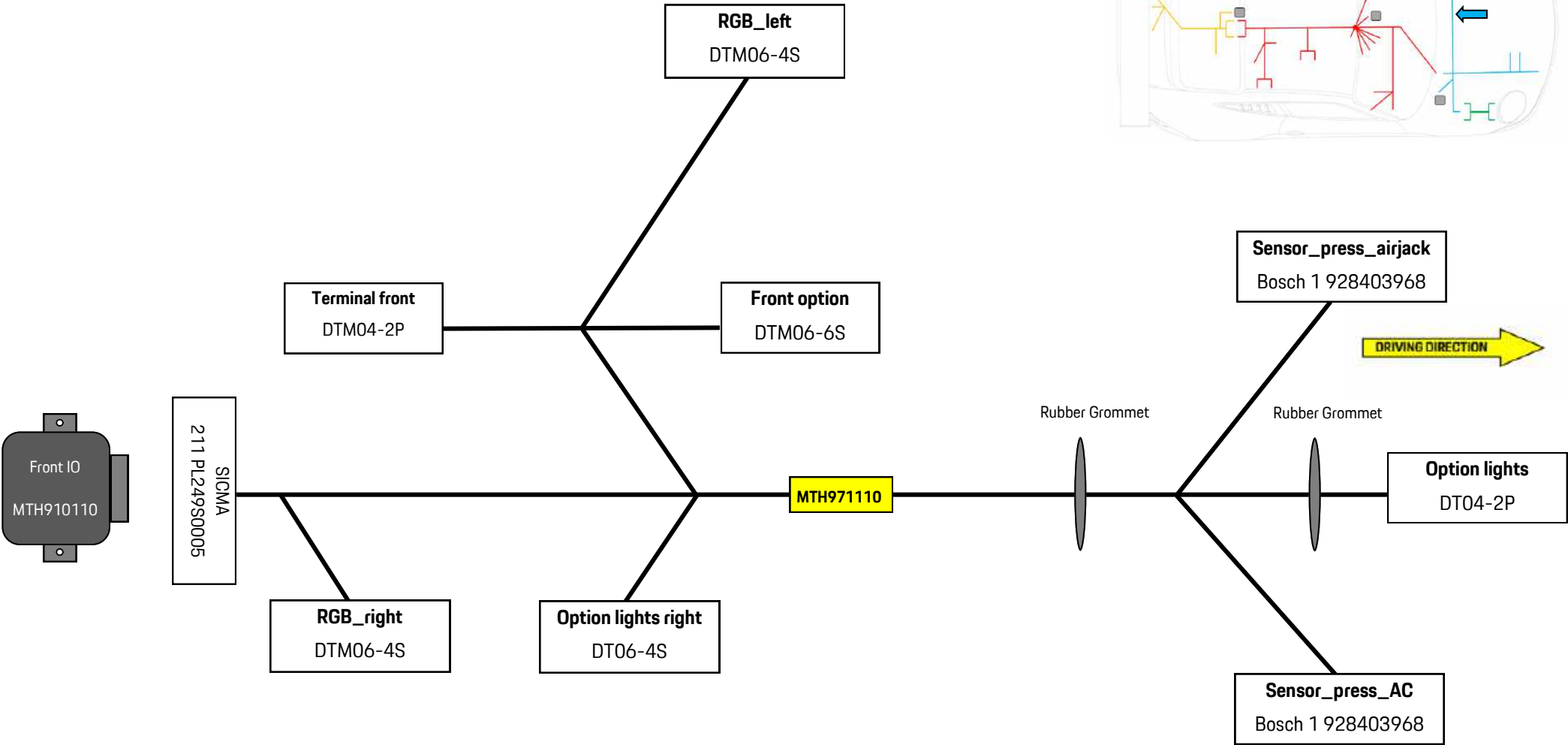


Terminal Front

Only connected in the 911 GT3 Cup MR Gen.II. Not connected in the „tropy spec“ Cup car.



Overview - Front Wiring Loom



Overview - Front Wiring Loom Connectors

Connector Front IO

Connector: SICMA 211PL24



Connector Front IO

Connector to the front IO gate-way

RGB_left

Connector: DTM06-4S



RGB_left

Connector for the left indicator ring.

RGB_right

Connector: DTM06-4S



RGB_right

Connector for the right indicator ring.

Sensor press AC

Connector:
Bosch 19284444403968



Sensor press AC

Connector for air conditioning
(option) pressure sensor.

PINOUT Sensor press AC

1 GND
2 Signal
3 +5V

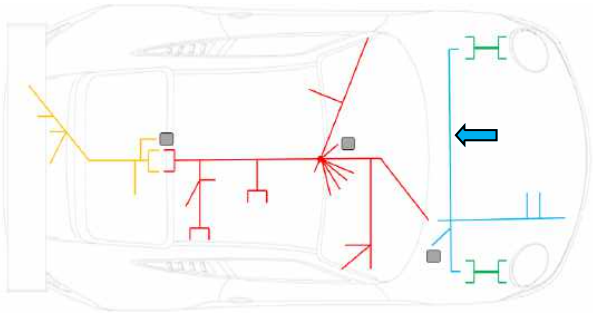
Optionlight right

Connector: DT06-4S



Optionlight right

Connector to the relevant
connector at the car wiring loom



Overview - Front Wiring Loom Connectors (Cont.)

Terminal Front

Connector: DTM04-2P



Terminal Front

Connector to the relevant connector on the wiring loom Cockpit labelled "Terminal Front"

Sensor press airjack

Connector:
Bosch 19284444403968



Sensor press airjack

Connector to pressure sensor of the airjack system (option auto-start).

PINOUT Sensor press airjack

- 1 GND
 - 2 Signal
 - 3 +5V

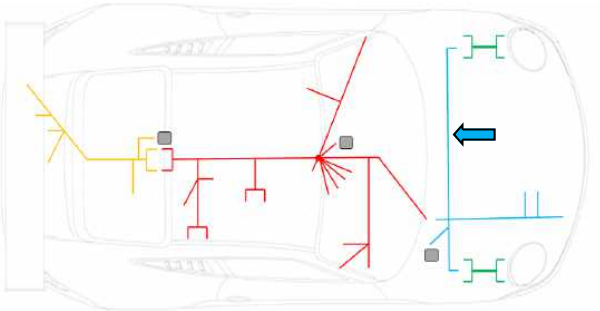
Front option

Connector: DT06-6S

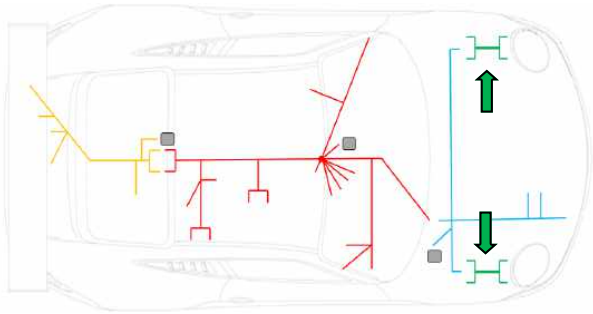
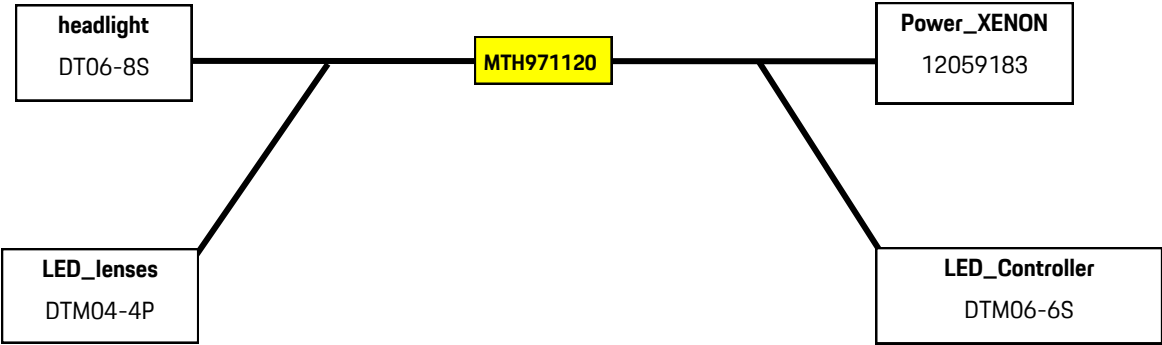


Front option

Connector to the optionally available 24h light bar



Overview - Headlight Wiring Loom



Power_XENON
Connector: Delphi12059183



Power_XENON
Power supply for the Xenon Headlight control unit.

PINOUT Power_XENON
1 GND
2 +12V BATT

LED_controller
Connector: DTM06-6S



LED_controller
Connector for the LED control

PINOUT LED_Controller
1 +12V BATT
2 GND
3 PWM Red
4 PWM Green
5 PWM Blue
6 12V Sig. White

LED_lenses
Connector: DTM04-4P



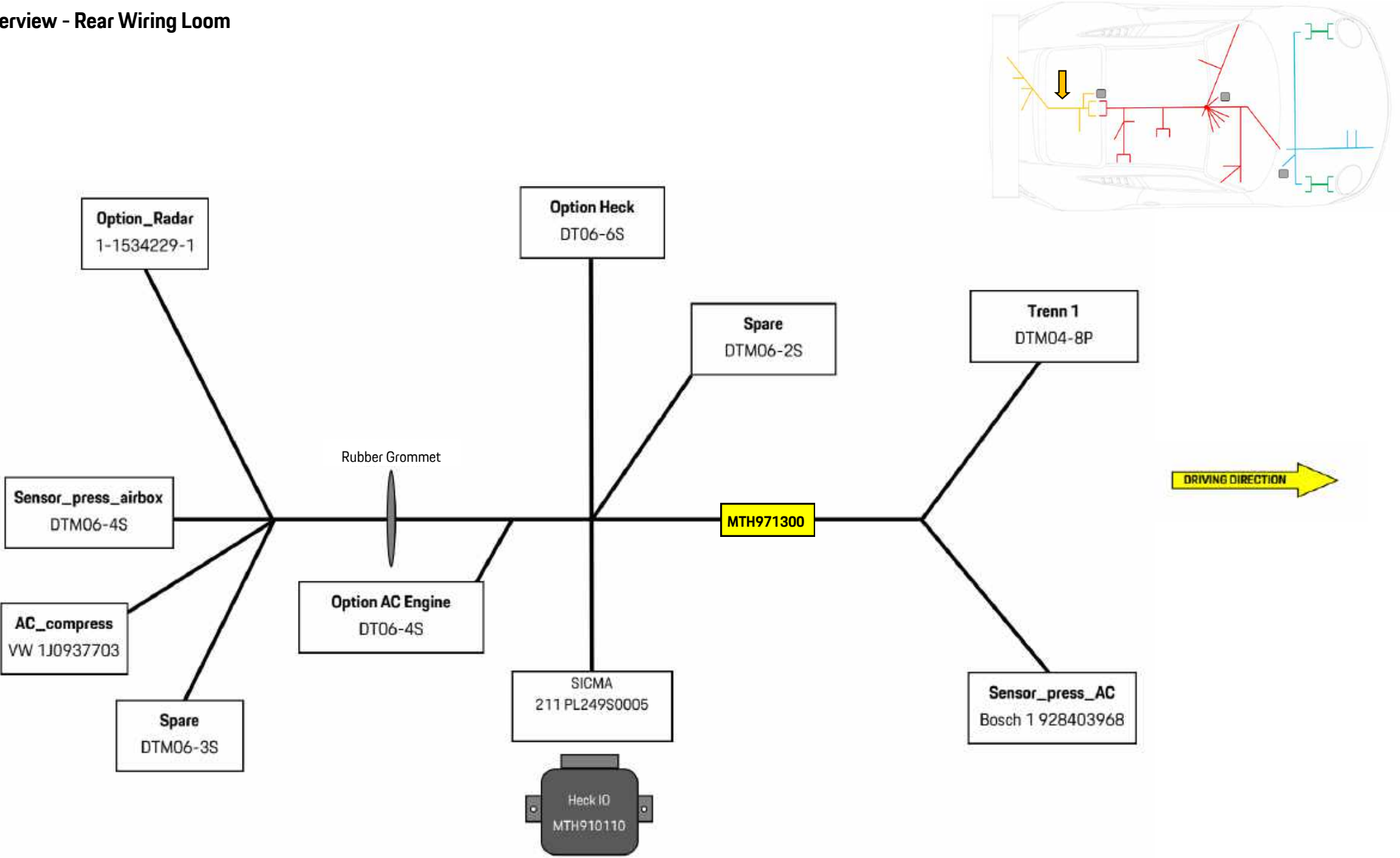
LED_lenses
Connector to the relevant connector "RGB_left/right" of the front loom

headlight
Connector: DT06-8S



headlight
Connector to the suitable connector on the car wiring loom

Overview - Rear Wiring Loom



Overview - Rear Wiring Loom Connectors

Connector Heck IO

Connector: SICMA 211PL24



Connector Heck IO

Connector to the rear IO gateway

Heck option

Connector: DTM06-6S



Heck option

Connector to the the suitable connector on the "Cockpit" wiring loom.

AC compressor

Connector: VW 1J0973703



AC compressor

Connector to the AC compressor

Sensor pres airbox

Connector: DTM06-4S



Sensor pres airbox

Connector to an additional pressure sensor

Spare1

Connector: DTM06-2S



Spare1

Power supply for an additional consumer

PINOUT Spare1

1 +12V BATT
2 GND

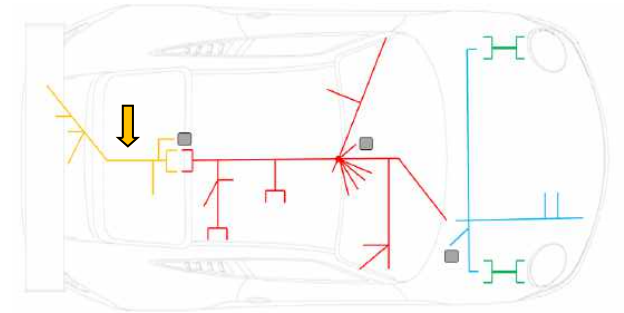
Spare2

Connector: DTM06-3S



Spare2

Power supply for the Xenon Headlight control unit.



Overview - Rear Wiring Loom Connectors (cont.)

Trenn1
Connector: DTM04-8P



Trenn1
Connector to the junction at the cockpit loom

Trenn2
Connector: DTM04-8PB



Trenn2
Connector to the junction at the cockpit loom

Option AC Engine
Connector: DT06-4S



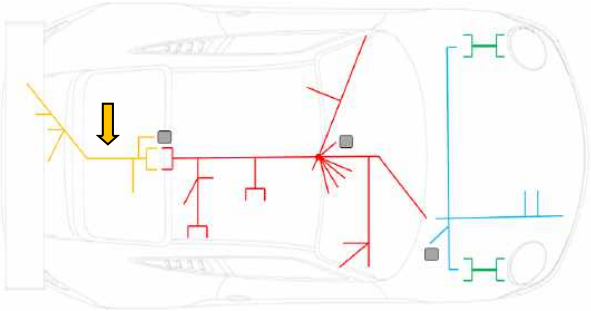
Option AC Engine
Connector for AC use

Option RADAR
Connector: 1-1534229-1



Option RADAR
Connector to an additional radar sensor

- PINOUT Option RADAR**
- 1 GND
 - 2 CAN_HI
 - 3 CAN_LO
 - 4 nc
 - 5 nc
 - 6 nc
 - 7 nc
 - 8 +12V BATT



6.3 Xenon Headlights

- The main headlights are developed for use in motorsports with daytime running lights/indicators included in the lamp ring are characterized by a long service life and low weight.

DANGER

For all work on the main headlights and the associated control units, the vehicle **MUST** be de-energized/battery disconnected! Danger to life due from high voltage!

WARNING

Every time the vehicle is prepared, the wiring loom of the Xenon lamp **MUST** be checked for damage. This connecting line supplies the xenon lamp with high voltage. Danger to life if damaged!

NOTE

The xenon lamps can be replaced. In the event of a defect, the headlight unit must be removed from the lamp ring. The D2S xenon lamp can then be replaced.

NOTE

The headlights can be adjusted according to your own needs using the three fastening / adjusting screws.

NOTE

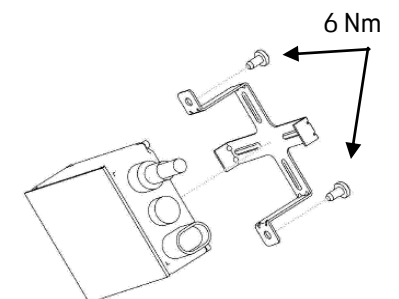
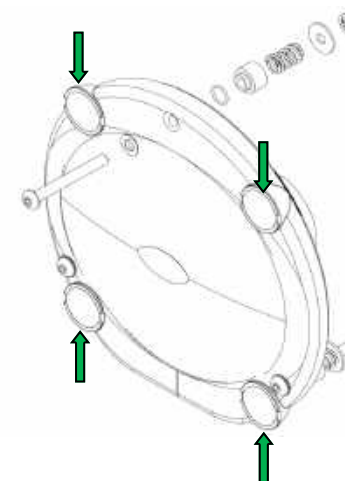
Both headlights have their own control unit. This is mounted on the bottom of the headlight housing.

NOTE

In addition to the "daytime running light" function, the four LEDs also perform the following functions::

- ⇒ Indicator
- ⇒ Alarm display for error memory entries (configurable in the ICD configuration)

The standard high beam function of the vehicle is no longer available with this type of headlight.



6.4 Intelligent Color Dis-

► The ICD display pages available on the 911 GT3 Cup MR Gen. II are presented and described on the following pages.

► A total of seven view pages can be called up. The name of the respective page is shown in the lower right area of the screen. The following display pages are available and can be changed using the yellow "Display" steering wheel button.

- ⇒ **Race**
- ⇒ **Quali**
- ⇒ **Warmup** (Not available while driving)
- ⇒ **Vitals** (Not available while driving)
- ⇒ **Controls** (Not available while driving)
- ⇒ **Chassis** (Not available while driving)

WARNING

Adjusting and operating the ICD while driving can distract from the surrounding environment. Control of the vehicle can be lost.

Only operate the ICD while driving if the traffic conditions allow.

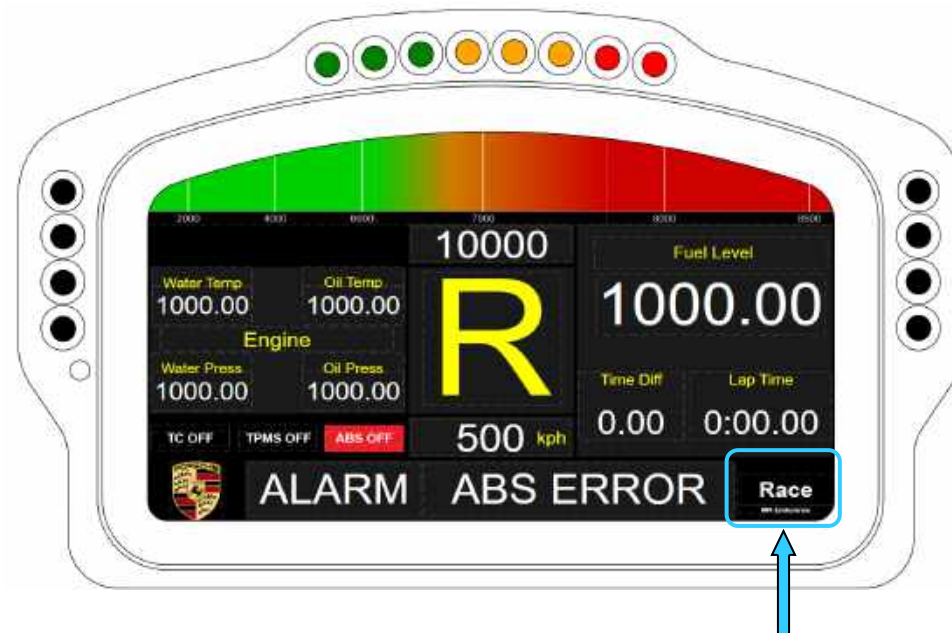
ATTENTION

In addition to displaying information for the driver, the ICD takes on numerous control and monitoring functions. Since the systems of the 911 GT3 Cup MR Gen. II are much more extensive than those of a standard 911 GT3 Cup Gen. II, only Cup MR-specific ICD setups provided by Manthey-Racing GmbH may be used to operate the vehicle.

Failure to observe inevitably leads to malfunctions and failure of the



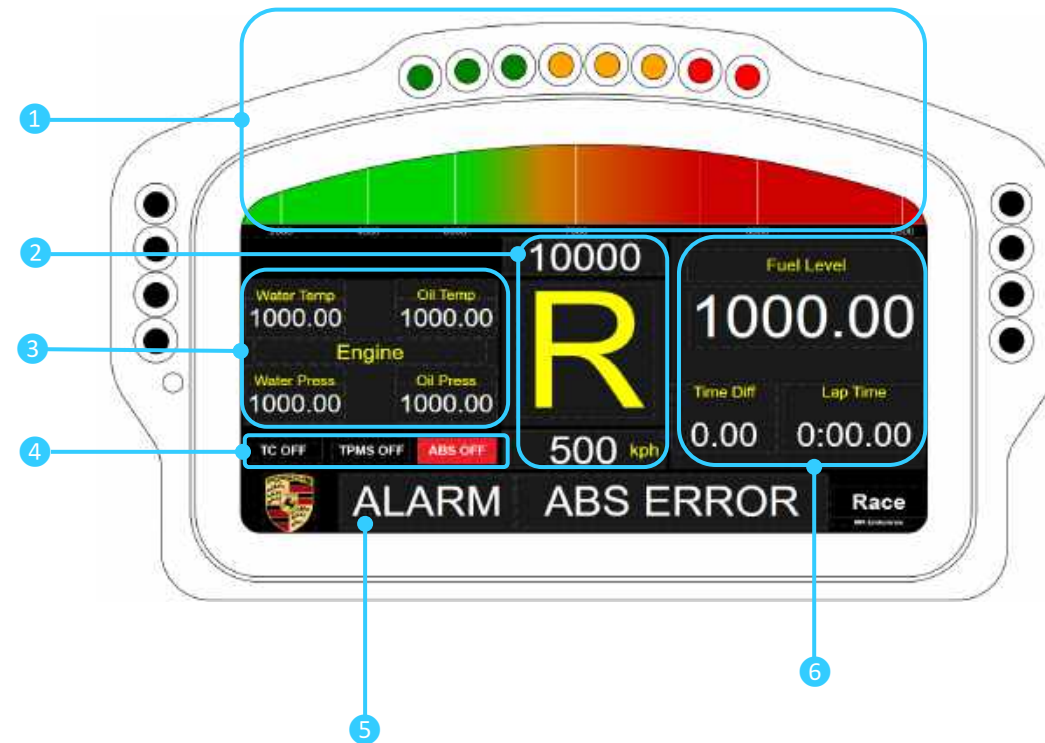
Due to the continual product optimization, the download area of Manthey-Racing GmbH should be checked at regular intervals for any software updates.



Display Page: "RACE" (Main Page)

► This display page is displayed as the default page. Vehicle-relevant information (vital signs), current operating conditions (gear display, speed) and performance-relevant information (lap time) are displayed.

- ❶ In the upper area of the ICD are the eight shift lights in the housing and a corresponding coloured speed band on the screen. The settings of the shift lights/rev range correspond to those of the 911 GT3 Cup Gen. II
- ❷ The displays for engine speed, engaged gear, and vehicle speed are shown in km/h in the centre of the main page.
- ❸ In the left area of the RACE main page, the driver is shown the most important vehicle vital signs.
- ❹ Compared to the RACE and QUALI pages of the 911 GT3 Cup Gen. II, the 911 GT3 Cup MR Gen. II shows the status display of the TPM system and the status displays for the traction control (optional) and the ABS.



Traction Control TC: Display TC OFF = Switch Position 0
Display 1 - 11 = Control levels of TC (1 Min. to 11 Max. Control)

ABS Display ABS OFF = Switch Position 0

- ❺ Status line for Alarm and Information messages.

- ❻ On the right side area of the RACE main page, the driver is shown information on the fuel level, current lap time, current lap time difference to the best lap time driven so far or a set reference lap.



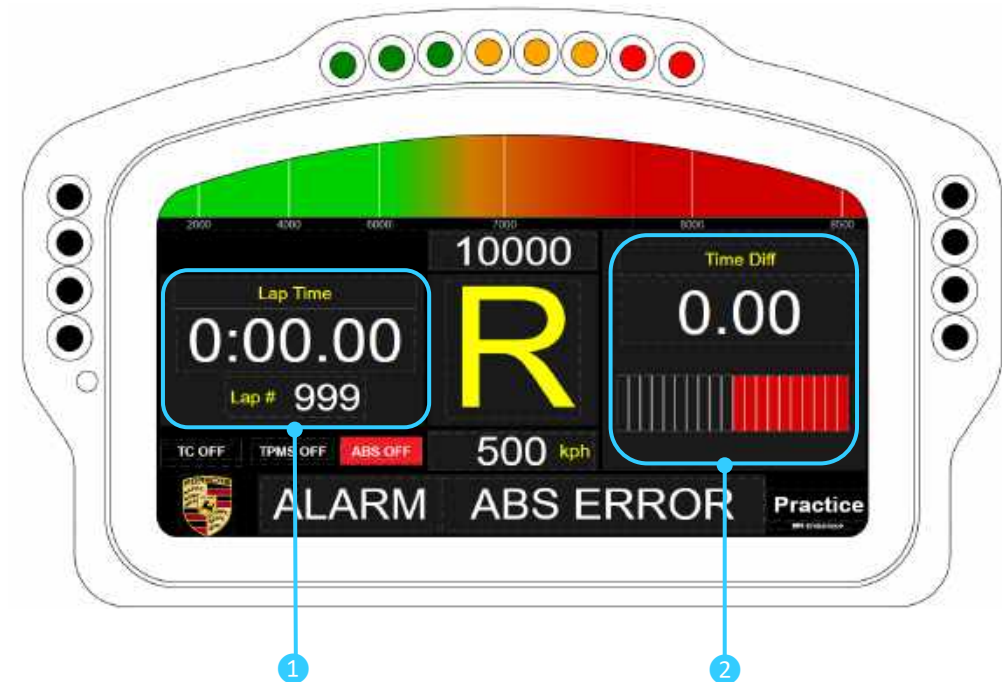
Display Page: "QUALI"

- Following the main "RACE" page, the driver has a second page called "QUALI" which is available while driving. On this page, the information is reduced to the essential performance-related information relating to the lap time.

- On the left side of the display, information on the number of laps completed is provided along with the current lap time (rolling lap time). If lap time recording is triggered via the IR beacon, the lap time just completed is frozen in the "Lap Time" display for 30 seconds. The display then returns to the rolling lap time.
- On the right side of the display, the driver is shown improvement or deterioration in their lap time in real time. This calculation is based on the current lap time compared to a reference lap or current best lap time.

Lap time improvement is shown in green on the bar scale with negative sign (-) in front of the calculated difference.

Lap time deterioration is shown in red on the bar scale with a positive sign (+) in front of the calculated difference.



Display Time Diff - Lap Time Improvement



Display Time Diff - Lap Time Deterioration



Display Page: "WARMUP"

► The "WARMUP" display page is only available when the vehicle is stationary. The primary function of this page is to be used as a monitoring page during the vehicle's warm-up phase. The advantage here is that the temperature values are made easy to read from outside the vehicle. The coloured bar scales under the temperature values assist with this.

- 1 The water temperature value is displayed on the left side of the screen. Values from 0°C to 120°C are displayed.

The bar scale shows temperature values from 60°C. The following temperature ranges are shown with the corresponding colours:

Temperatures from 60°C to 79°C → Yellow Bar scale → Below optimal temperature range

Temperatures from 80°C to 85°C → Green Bar scale → Target temperature reached

Temperatures from 86°C to 100°C → Yellow Bar scale → Above optimal temperature range, Risk of overheating!

Temperatures from 101° to 120°C → Red Bar scale → Danger of overheating - Switch off the engine. Danger of damage to engine!

- 2 The engine oil temperature value is displayed on the right side of the screen. Values from 0° to 120°C are displayed.

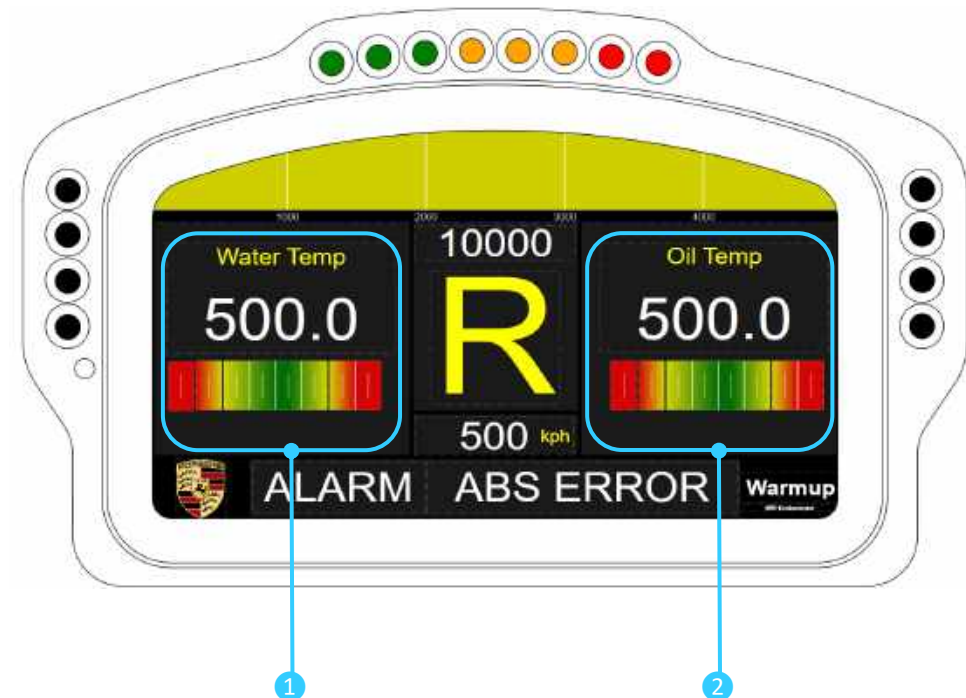
The bar scale shows temperature values from 60°C. The following temperature ranges are shown with the corresponding colours:

Temperatures from 60°C to 79°C → Yellow Bar scale → Below optimal temperature range

Temperatures from 80°C to 85°C → Green Bar scale → Target temperature reached

Temperatures from 86°C to 100°C → Yellow Bar scale → Above optimal temperature range, Risk of overheating!

Temperatures from 101° to 120°C → Red Bar scale → Danger of overheating - Switch off the engine. Danger of damage to engine!



Display Page: "VITALS"

- The display page "VITALS" is only available when the vehicle is stationary. This display serves only as a control and monitoring page of the vehicles most important vital signs for the mechanics.

1 Display Section: Engine Oil

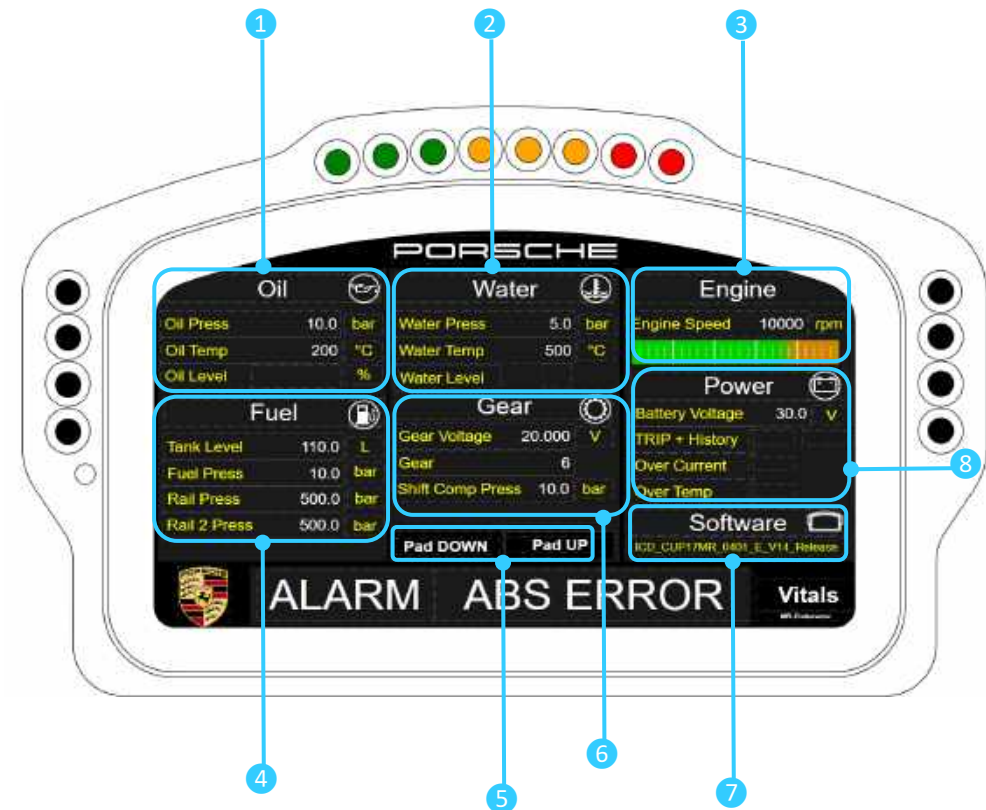
Variable	Channel Name	Resolution	Unit	Value Range
Oil Press	ecu_poil	0.1	bar	0 to 10
Oil Temp	ecu_toil	1	°C	-100 to 200
Oil Level	ecu_oillevel	1	%	-30 to 130

2 Display Section: Engine Water

Variable	Channel Name	Resolution	Unit	Value Range
Water Press	ecu_pwat	0.1	bar	0 to 5
Water Temp	ecu_tmot	1	°C	-40 to 200
Water Level	Dash_sw09_watlev_Button	"Low" Warning symbol		

3 Display Section: Engine Speed

Display	Value Range
Green	0 to 3,500 Rev/Min
Orange	4,000 to 5,000 Rev/Min



Display Page: "VITALS" (cont.)

4 Display Section: Fuel System

Variable	Channel Name	Resolution	Unit	Value Range
Tank Level	ecu_fuellevel_filt	0.1	Litre	0 to 110
Fuel Press	ecu_pfuel	0.1	bar	0 to 10
Rail Press	ecu_prail	0.1	bar	0 to 500
Rail 2 Press	ecu_prail2	0.1	bar	0 to 500

5 Display Section: Shift Paddles

Display	Value
Black Background	Shift paddle not actuated
Yellow Background	Shift paddle actuated

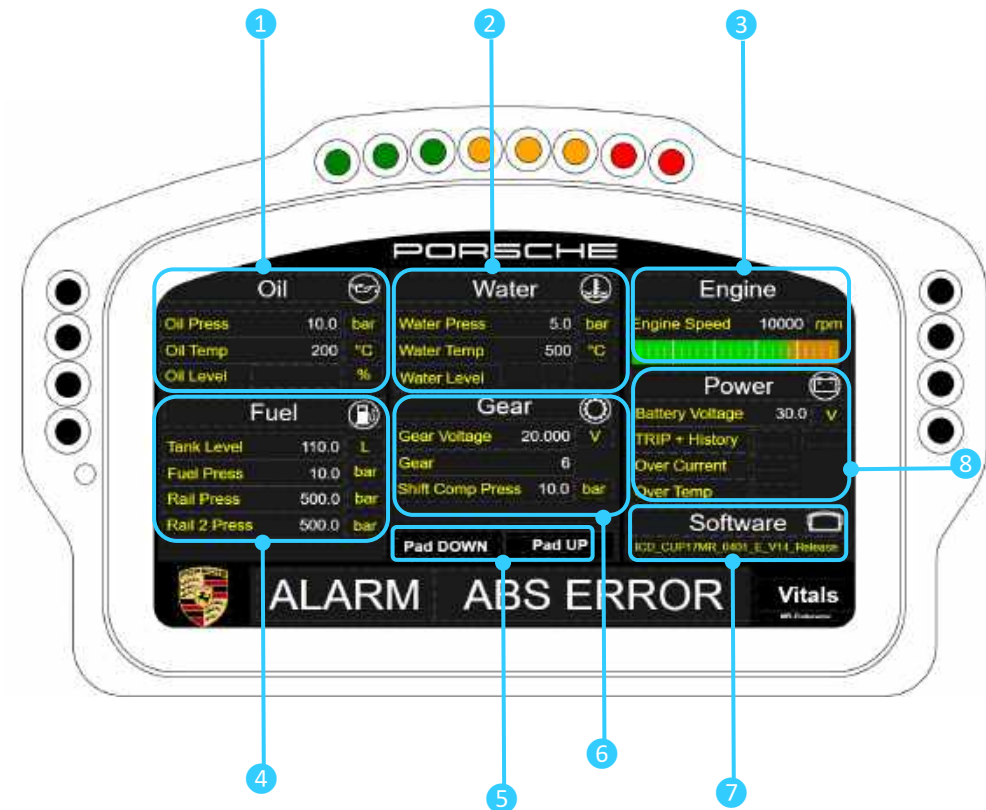
6 Display Section: Gearbox

Variable	Channel Name	Resolution	Unit	Value Range
Gear Voltage	ecu_ugearp	0.001	Volt	0 to 20
Gear	ecu_gear_pt	1	-	1 to 6, R, N
Shift Comp press	ecu_ml_prsvr	0,1	bar	0 to 10

7 Display Section: Current ICD Software Version

NOTE

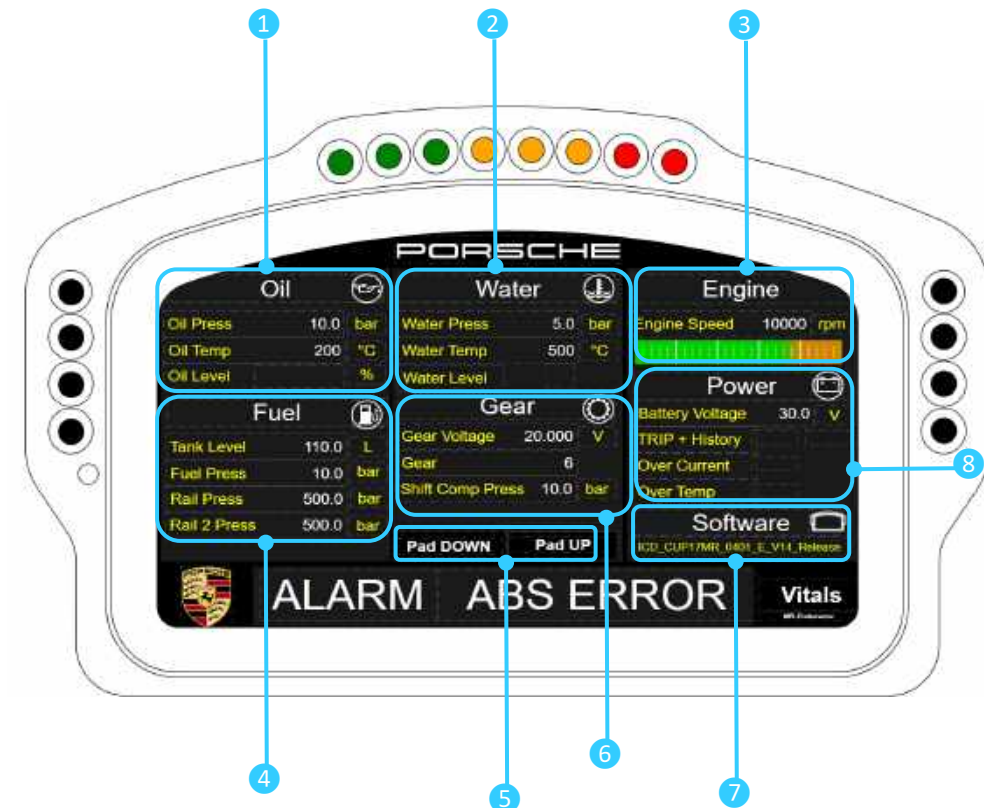
Check the Manthey-Racing website regularly for any available software updates.



Display Page: "VITALS" (cont.)

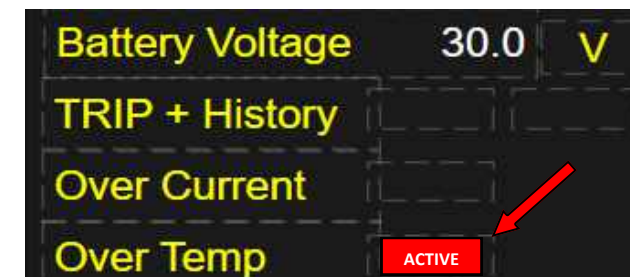
8 Display System: Power System

Variable	Channel Name	Resolution	Unit	Value Range
Battery Voltage	pcu_ubat	0.1	Volt	0 to 30
TRIP	pcu_error_alarm	"Active" Warning Symbol		
History	pcu_error_alarm_latched	"Active" Warning Symbol		
Over Current	pcu_output_current_alarm	"Active" Warning Symbol		
Over Temp	pcu_temp_alarm	"Active" Warning Symbol		



NOTE

If alarm entries relating to the the power system are active in the Power Control Unit (PCU), these will be indicated on the "Vitals" display page with an "ACTIVE" highlighted in red. ↓



Display Page: "Controls"

- The "Controls" display page is only available when the vehicle is stationary. The display serves as a control and monitoring page for the most important systems in the vehicle.

1 Display Section: Brake System

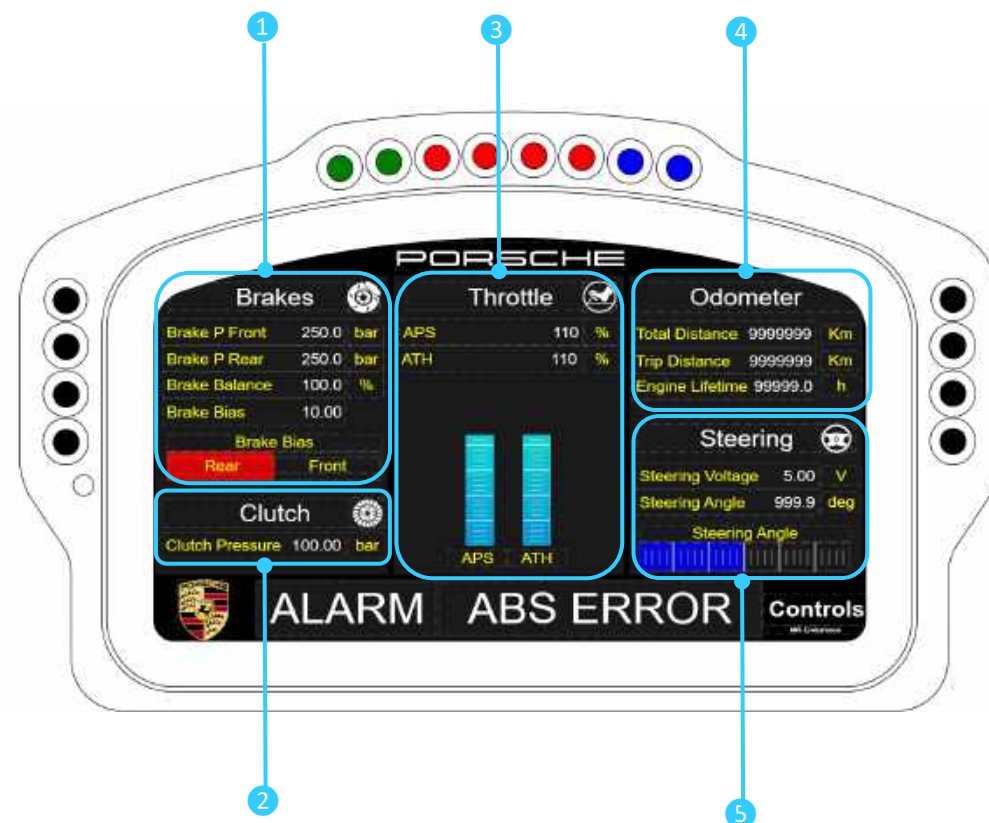
Variable	Channel Name	Resolution	Unit	Value Range
Brake P Front	abs_pbrake_f	0,1	bar	0 to 250
Brake P Rear	abs_pbrake_r	0,1	bar	0 to 250
Brake Balance	dash_brk_balance	0,1	%	Math. calculation of the brake balance.
Brake Bias	dash_brkbias	1	-	Brake Bias Adjuster Position
Brake Bias	dash_brkbias	Graphical representation of the brake force distribution between the front and rear axles.		

2 Display Display: Clutch

Variable	Channel Name	Resolution	Unit	Value Range
Clutch Pressure	ecu_pclutch	0,01	bar	0 bis 100

3 Display Display: Accelerator Pedal Position/Throttle Flap Position

Variable	Channel Name	Resolution	Unit	Value Range
APS	ecu_aps	1	%	0 to 110
ATH	ecu_athcan	1	%	0 bto 110
APS	ecu_aps	Graphical representation of the accelerator pedal position/throttle flap position.		
ATH	ecu_athcan			



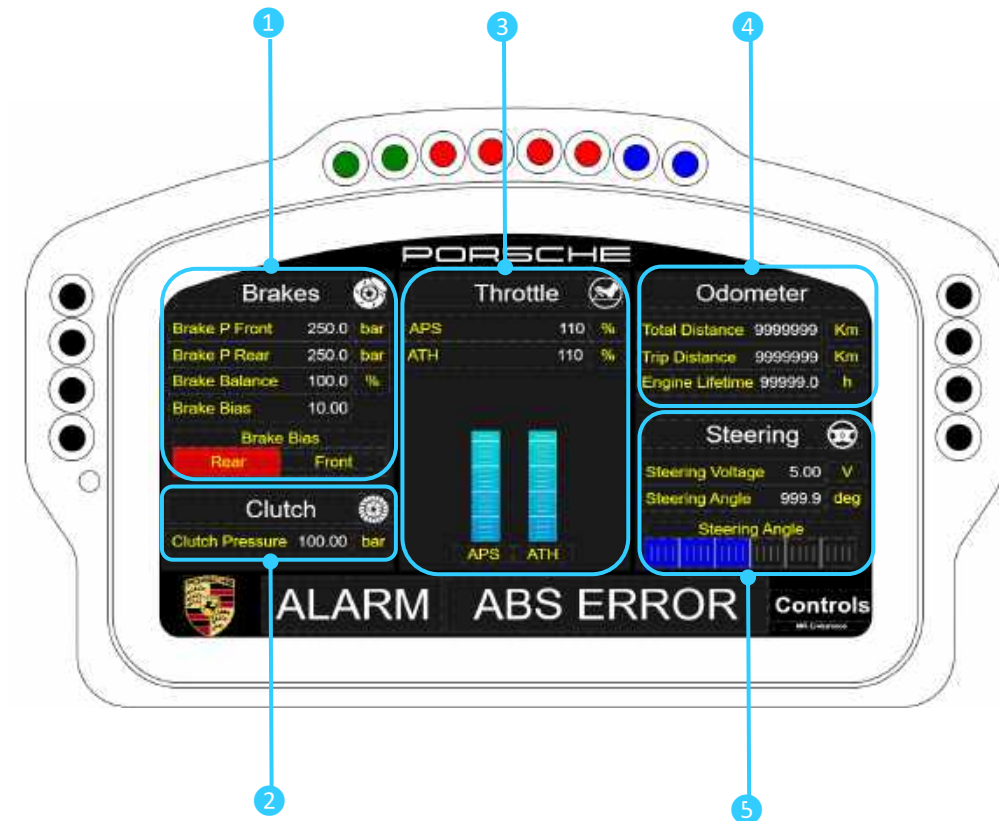
Display Page: "CONTROLS" (cont.)

4 Display Section: Odometer

Variable	Channel Name	Resolution	Unit	Value Range
Total Distance	Odometer	1	km	0 to 999999
Trip Distance	Odometer Trip	1	km	0 to 999999
Engine Lifetime	dash_enginelifetime	0.5	h	0 to 99999.0

5 Display Section: Steering

Variable	Channel Name	Resolution	Unit	Value Range
Steering Voltage	Input 5 Voltage	0.01	Volt	0 to 5
Steering Angle	dash_asteer	0.1	Deg	0 to 999.9
Steering Angle	dash_asteer	Graphical representation of the steering angle.		



Display Page: "CHASSIS"

► The "CHASSIS" display page is only available when the vehicle is stationary. The display serves as a control and monitoring page for the following systems:

- ⇒ Display of wheel speed
- ⇒ Display of tyre circumferences set via PI Toolset

1 Display Section: "Front Left" Wheel

Variable	Channel Name	Resolution	Unit	Value Range
Speed	dash_speed_fl	1	Km/h	0 to 500
Front Circ	Abs_circ_f	1	mm	0 to 5000
TPMS Press	TPMS_press_FL	0.1	bar	0 to 6.3

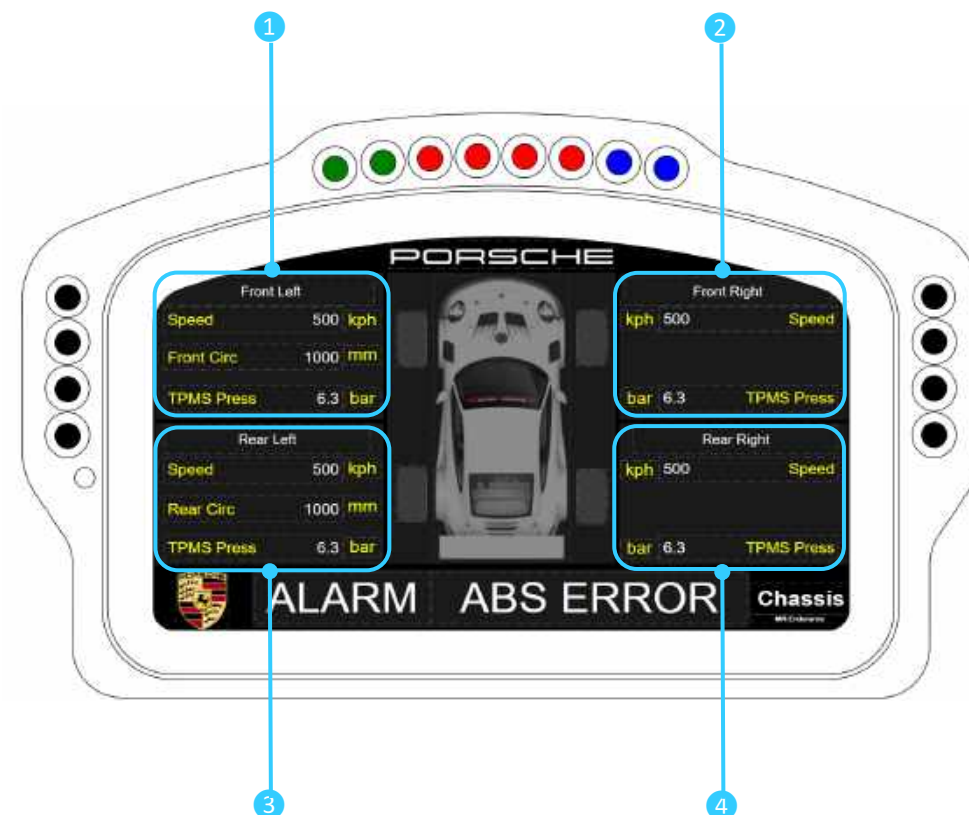


WARNING

The value set here for the tyres circumference on the front axle is used by the ABS and an optional built-in traction control as the basis for regulation. Incorrectly set values inevitably lead to malfunctions or failure of the ABS and TC systems!

2 Display Section: "Front Right" Wheel

Variable	Channel Name	Resolution	Unit	Value Range
Speed	dash_speed_fr	1	Km/h	0 to 500
TPMS Press	TPMS_press_FR	0.1	bar	0 to 6.3



Display Page: "CHASSIS" (cont.)

3 Display Section: "Rear Left" Wheel

Variable	Channel Name	Resolution	Unit	Value Range
Speed	dash_speed_rl	1	Km/h	0 to 500
Rear Circ	Abs_circ_r	1	mm	0 to 5000
TPMS Press	TPMS_press_RL	0.1	bar	0 to 6.3

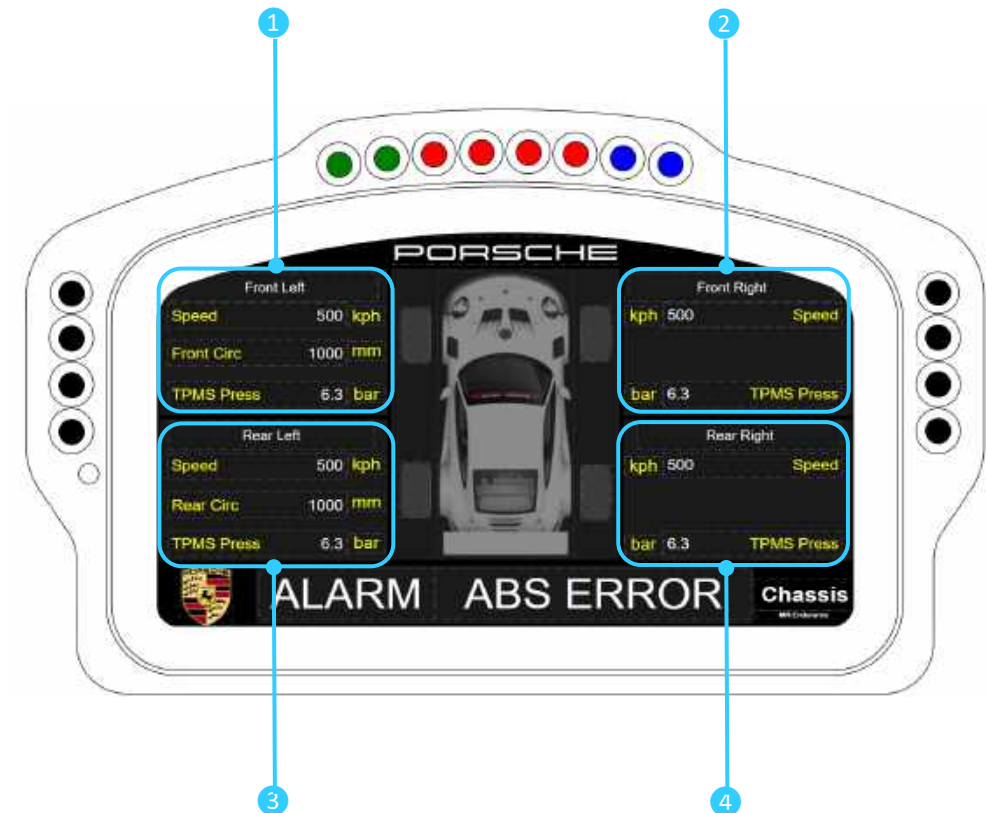


WARNING

The value set here for the tyre circumference on the rear axle is used by the ABS and an optional built-in traction control as the basis for regulation. Incorrectly set values inevitably lead to malfunctions or

4 Display Section: "Rear Right" Wheel

Variable	Channel Name	Resolution	Unit	Value Range
Speed	dash_speed_rr	1	Km/h	0 to 500
TPMS Press	TPMS_press_RR	0.1	bar	0 to 6.3

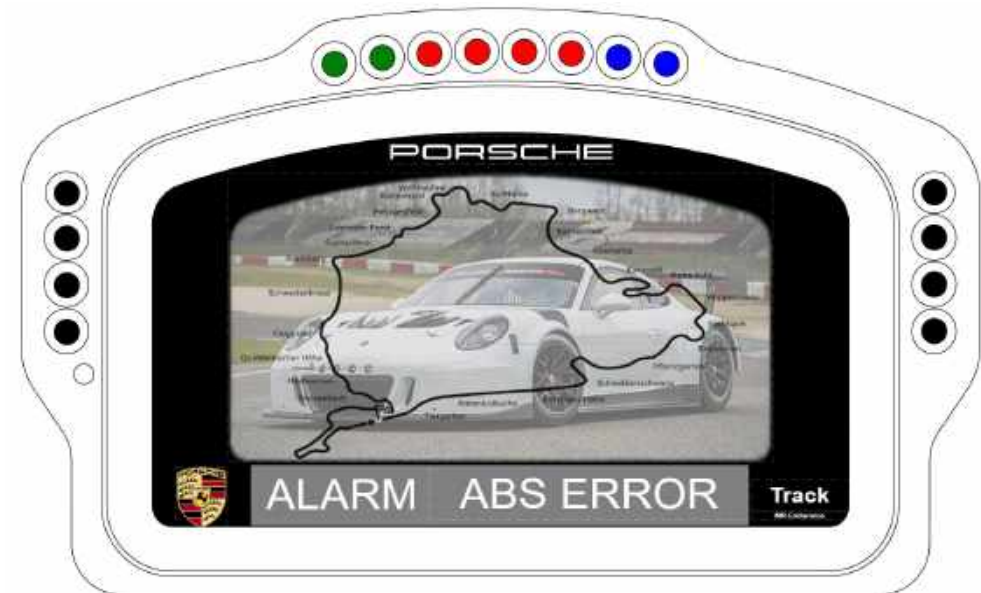
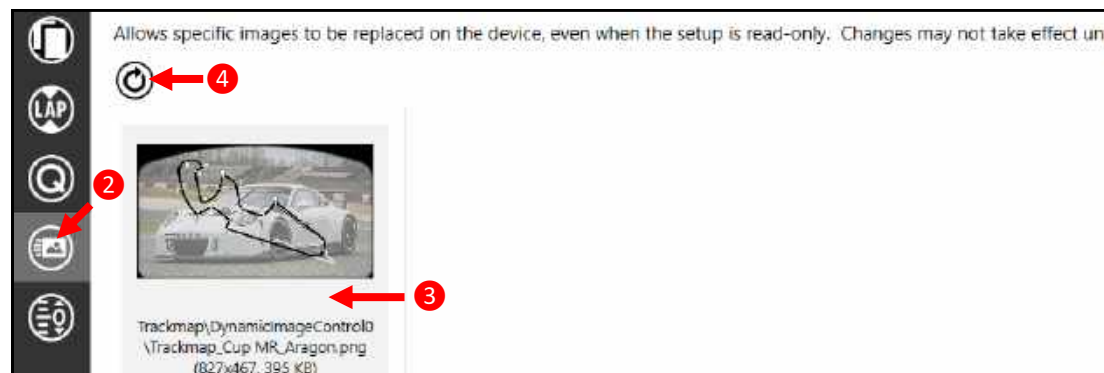
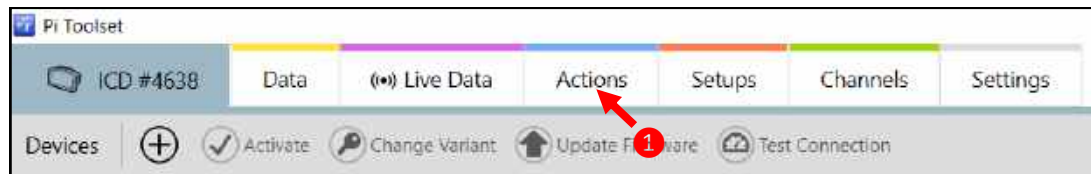


Display Page: "TRACK"

- The "TRACK" display page is only available when the vehicle is stationary. On this page, a track graphic in .bmp format with a resolution of 800x480 pixels can be loaded via PI Toolset.

The following procedure is used to set a track map graphic:

- ⇒ Connect your PC to the vehicle. Switch on "MAIN".
- ⇒ Establish a connection between the PC and ICD.
- ⇒ On the menu ribbon, select the "Actions" tab **1**.
- ⇒ On the left side menu, select the "Images" icon **2**.
- ⇒ Click on the display of the track graphic **3**. Load the desired track graphic.
- ⇒ Confirm the selection by clicking the "Refresh" icon **4**.
- ⇒ Turn off the ignition and MAIN switches. The new track map graphic is now saved in the system.



Display: Alarm Overlays

- While driving, additional information of high importance can be displayed to the driver for a short time. These messages are overlayed on the current display. A distinction is made between alarm and information messages.

Alarm messages (highlighted in red) are always prioritised. All message types can be acknowledged using the steering "ALARM" wheel button.

ALARM Water Temp:

When a temperature $> 110^{\circ}\text{C}$ is reached for a duration of 2 Seconds or more, the alarm message opposite will be displayed while driving. Additionally, the lower alarm LEDs will flash red for the duration

Warning	Channel Name	Resolution	Unit	Condition
ALARM Water Temp	ecu_tmot	1	$^{\circ}\text{C}$	tmot $> 110^{\circ}\text{C}$

ALARM Oil Press:

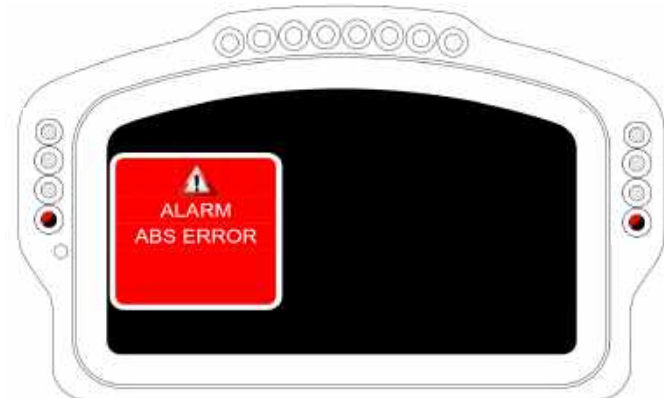
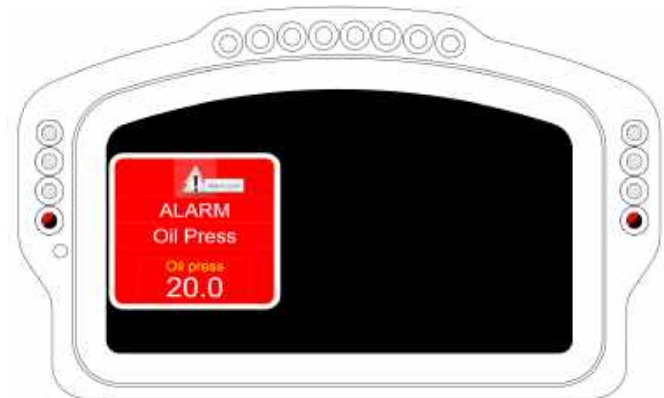
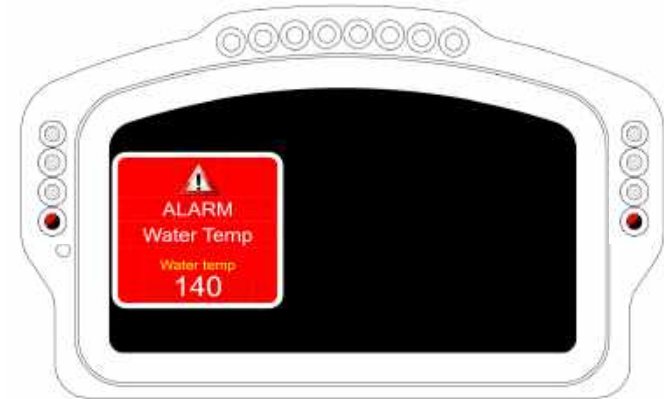
If the oil pressure drops while driving ($\text{rpm} > 1800 \text{ min}^{-1}$) below a value of 1.0 bar for a duration of 0.5 Seconds or longer, the alarm message opposite will be displayed. Additionally, the lower alarm LEDs will flash red for the duration of this status.

Warning	Channel Name	Resolution	Unit	Condition
ALARM Oil Press	ecu_poil	0,1	bar	poil $< 1,0 \text{ bar}$

ALARM ABS ERROR:

If there is an ABS fault, the alarm message opposite will be displayed. Reasons for ABS failure typically related to speed sensor or voltage supply errors. Additionally, the lower alarm LEDs will flash red for the

Warning	Channel Name	Resolution	Unit	Condition
ALARM ABS ERROR	abs_lamp	1	-	Drehzahlfühlerausfall etc.



Display: Alarm Overlays (cont.)

ALARM Flat Tyre:

If the TPM System measure a pressure drop of more than 0.8 bar/min in one of the four tyres while driving, the alarm message opposite will be displayed. Additionally, two lower alarm LEDs will alight solid red for the duration of this status. This indicates a puncture!

Warning	Channel Name	Resolution	Unit	Condition
ALARM Flat Tyre	tpms_alarm_hard	0,1	bar	Pressure Drop > 0.8 bar/min

ALARM Slow puncture:

If the TPM System measures a pressure drop of 0.3 bar/min in one of the four tyres while driving, the alarm message opposite will be displayed. Additionally, two lower alarm LEDs will alight solid red for the duration of this status. This indicates a slow puncture.

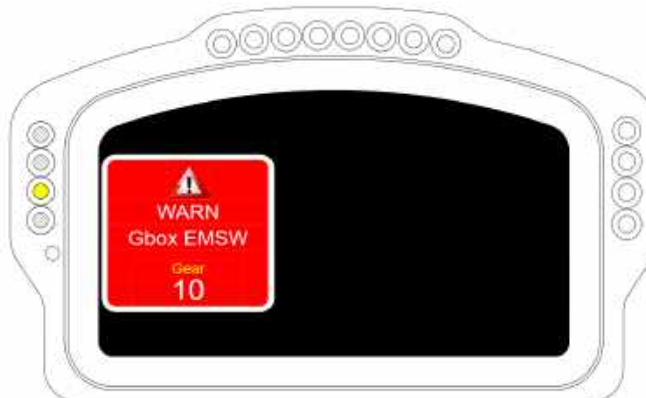
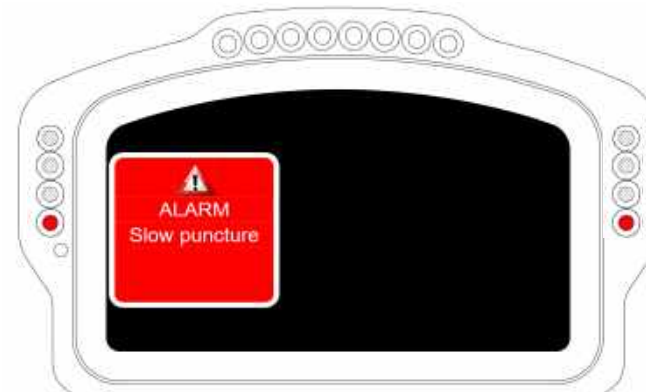
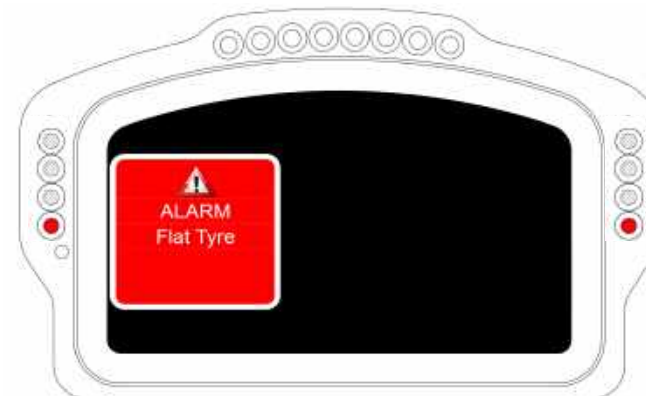
This warning can also be activated by a long safety car phase/CodeXX due to a pressure drop relative to the drop in tyre temperature. It is the responsibility of the driver to correctly assess this situation.

Warning	Channel Name	Resolution	Unit	Condition
ALARM low puncture	tpms_alarm_soft	0.1	bar	Pressure Drop 0.3 bar/min

WARN Gbox EMSW:

If the yellow "Gearbox Emergency" button on the switch plate is pressed (activated) and thus disabling all drivetrain protection functions the alarm message opposite will be displayed. Additionally, the third alarm LED on the left will alight solid yellow for the duration of this status.

Warning	Channel Name	Resolution	Unit	Condition
WARN Gbox EMSW	ecu_B_emsw	1	-	Gearbox Emergency switch activated



Display: Alarm Overlays (cont.)

ALARM Fuel Pressure:

If the fuel pressure on the low-pressure side is below 3.5 bar when the vehicle is stationary, the alarm message opposite will be displayed on the ICD. Additionally, two lower alarm LEDs will alight solid red for the duration of this status.

Warning	Channel Name	Resolution	Unit	Condition
ALARM Fuel Pressure	ecu_pfuel	0,1	bar	Fuel Pressure < 3,5 bar with ignition on (Vehicle stationary)

ALARM REFILL OIL:

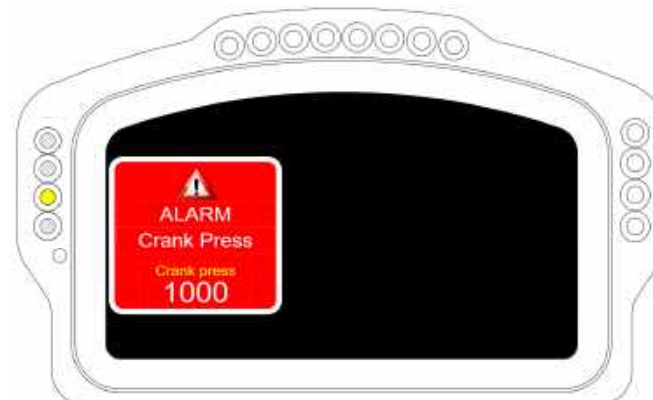
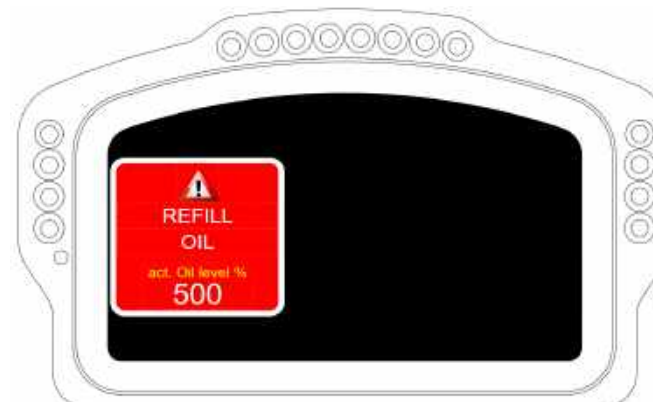
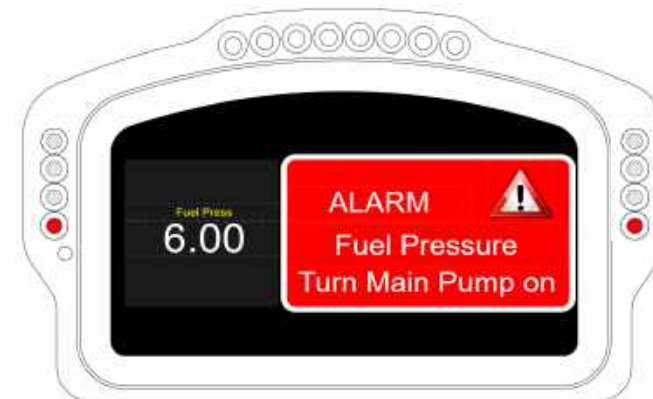
If the oil level drops to the minimum level while driving, the alarm message opposite will be displayed with the current oil level in percent. This message can be permanently acknowledged by the driver using the alarm button.

Warning	Channel Name	Resolution	Unit	Condition
ALARM REFILL OIL	alarm_oilvl_low	-	%	Oil level reaches MIN while driving

ALARM Crank Press:

If the engine control unit detects that the allowable crankcase pressure is not reached or exceeded while the engine is running the alarm message opposite will be displayed with the value of the pressure. Additionally, the third alarm LED on the left will alight solid yellow for the duration of this status.

Warning	Channel Name	Resolution	Unit	Condition
ALARM Crank Press	ecu_pcrank	-	bar	ecu_pcrank < 300 mbar ecu_pcrank > 800mbar



Display: Information Overlays

- The overlays for relaying general information are listed individually below. These information overlay are display in yellow, blue, and grey.

Circ Check!!! Toggle Ignition:

This message is displayed on the ICD when the vehicle is started. This highlights the importance that the correct tyre circumferences are entered to ensure proper functioning of the ABS and TC. If the wheel circumference is not correctly set, this message will also be activated while driving if the system detects a difference between the values entered and actual calculated wheel circumference values. The values must be checked and the ignition must be toggled.

Dry/Wet Conditions:

If the Dry/Wet switch is used to switch between the wheel circumferences (Slick/Rain) stored in the system, the selected tire variant and associated tire circumferences are displayed on the ICD for ap-

NOTE

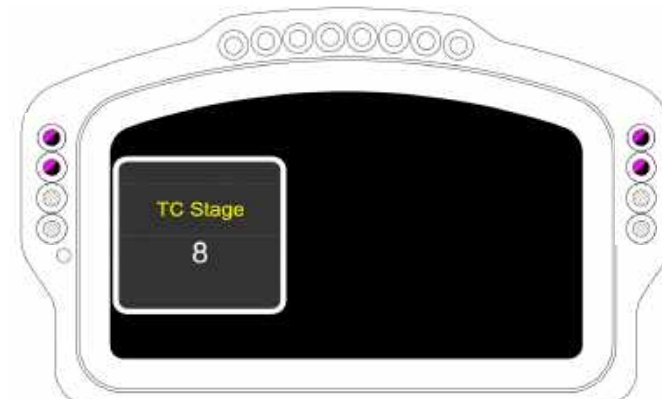
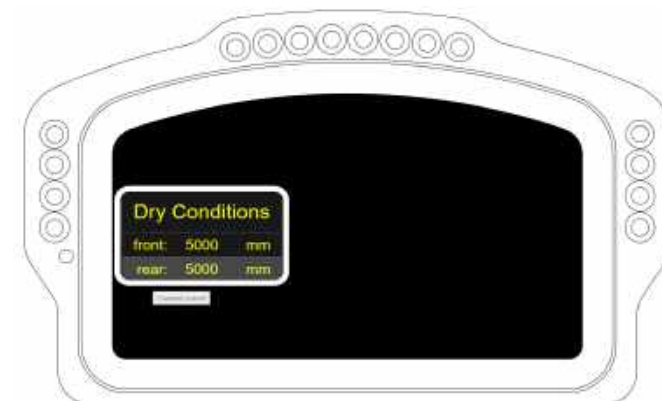
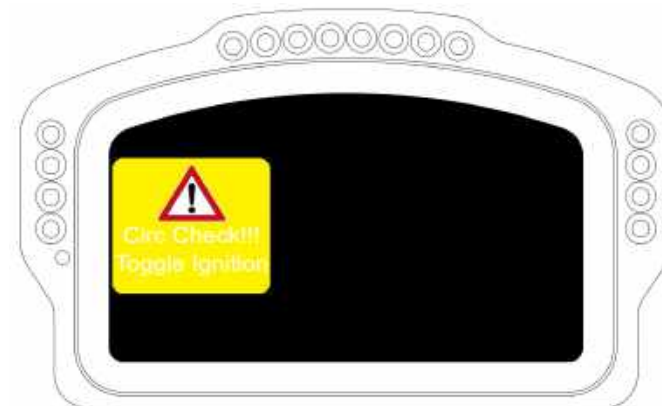
The ignition must be toggled so that the system can detect the change in wheel circumference.

TC Stage:

If the traction control level is adjusted using the 12-Position rotary switch on the switch plate in the optionally available traction control, the selected control level is displayed on the ICD for approx. 1.5

NOTE

When TC is intervening, this is indicated to the driver via the upper purple flashing alarm LEDs.



Display: Information Overlays (cont.)

PWR Steering Parking Mode:

If the "Mark" button on the steering wheel is pressed briefly (<0.75 seconds) with the ignition switched off, the power steering pump is activated for 30 seconds. A corresponding message is sent in the ICD. This function makes maneuvering easier. In addition to the display on the ICD, the two upper

NOTE

This function is only available with a battery voltage of more than 12.2 volts.

Low Fuel:

If the fuel level reaches 7.0 liters remaining, the driver is informed in the ICD.

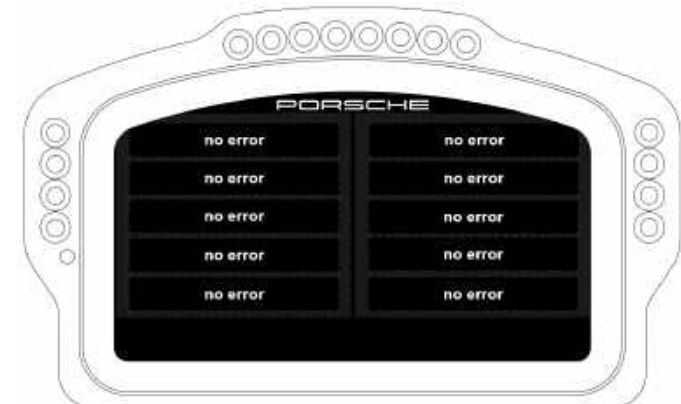
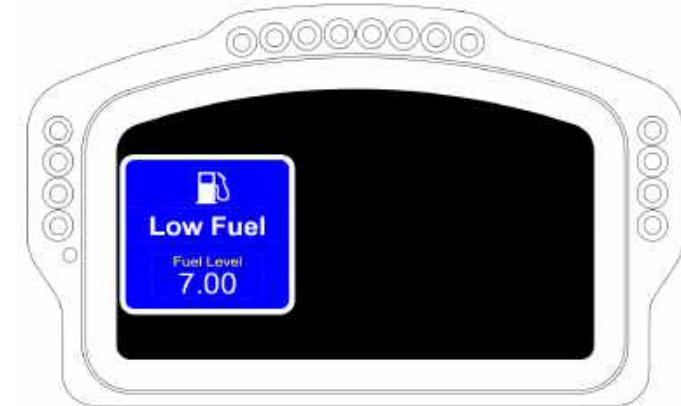
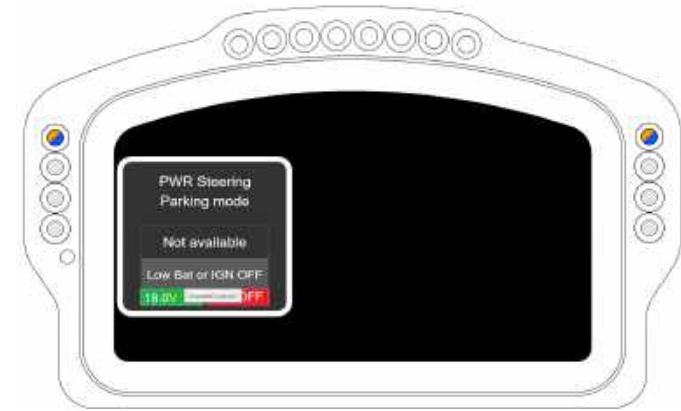
Variable	Channel Name	Resolution	Unit	Condition
WARN Low Fuel	dash_fuellevel_meas	0.1	Litre	Fuel Level < 7.0 Litres

Diagnosis Page:

This overlay is only available if alarms and the resulting error memory entries have occurred while driving. Any error entries will be displayed on this page.

To hide the diagnosis page, the following conditions must be applied;

⇒ Vehicle Speed = 0, Vehicle is stationary.



Display: Information Overlays (cont.)

Brake Bias:

If the driver adjusts the brake balance while driving using the adjuster, the currently set brake balance position is displayed for approx. 1 Second.

Variable	Channel Name	Resolution	Unit	Condition
Brake Bias	dash_brake_bias	0,25	-	



WARNING

Adjusting the brake balance results in a different braking behaviour! Adjust the setting to the present weather conditions. Brake balance setting must be adapted to the vehicle setup. New setting should be tested carefully.



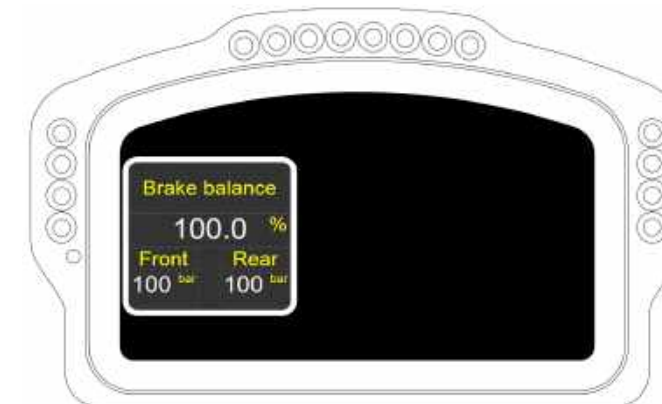
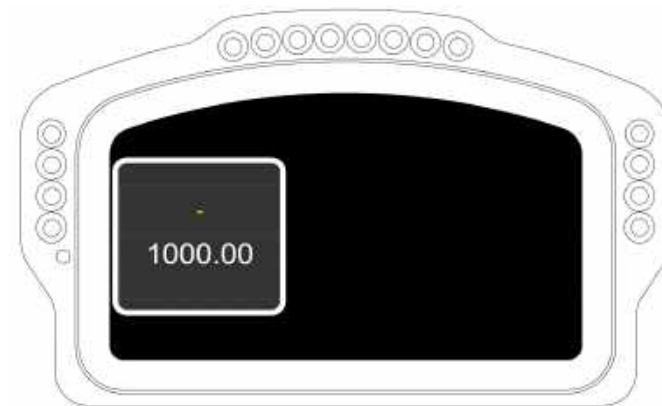
ATTENTION

The brake balance must not be adjusted using the adjuster while the brake pedal is pressed. There is a risk of mechanical damage to components of the adjustment mechanism.

To check the braking force distribution when the vehicle is stationary, the following process is used;

- ⇒ Vehicle is stationary.
- ⇒ "MAIN" switch on, Ignition off.
- ⇒ Apply >35 bar of brake pressure to the brakes on the front and rear axles.

Variable	Channel Name	Resolution	Unit	Value Range
Brake balance	dash_brk_balance	0,1	%	0 to 100
Front pressure	dash_pbrake_f	1	bar	0 to 100
Rear pressure	dash_pbrake_r	1	bar	0 to 100



Stored mathematical formula for calculation of the braking for distribution [%]

$$dash_brk_balance [\%] = \left(\frac{dash_pbrake_f[bar]}{(dash_pbrake_f[bar] + dash_pbrake_r[bar])} \right) * 100$$

Display: Information Overlays (cont.)

CodeXX Overlay:

In some race series, to neutralise the race - e.g. after an accident - a CodeXX (e.g. Code60 regulation) is listed in the regulations. The ICD of the 911 GT3 Cup MR Gen.II is equipped with this function

The CodeXX overlay can be activated by pressing the orange "PIT SPEED" steering wheel button for a long time (>1.5 seconds). This function is deactivated by pressing the "PIT SPEED" button again.

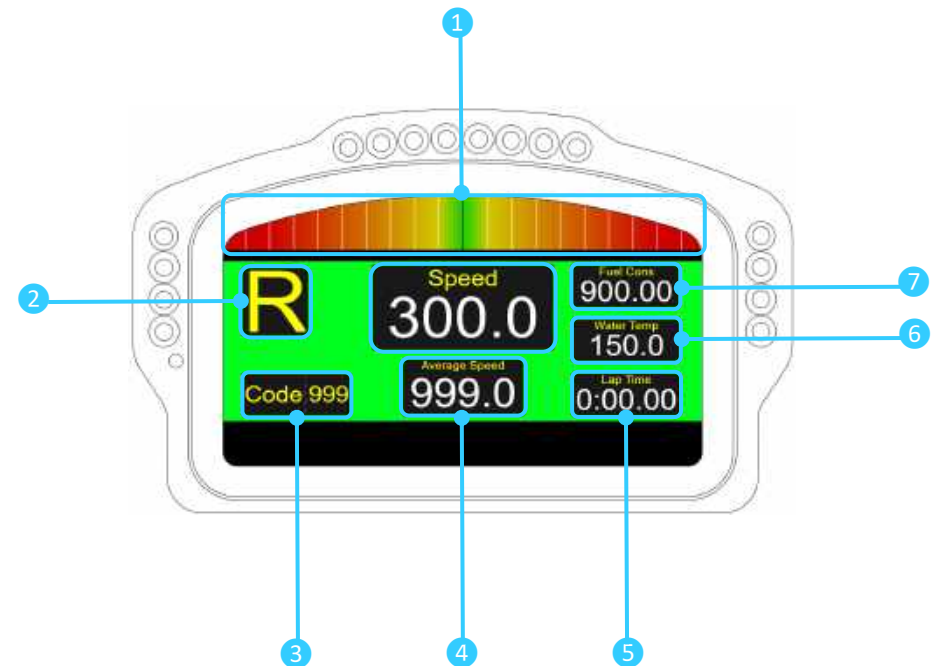
NOTE

The CodeXX function is only available from second gear. Activation is

- 1 The upper area of the ICD show the driver their compliance with the CodeXX speed stored in the system

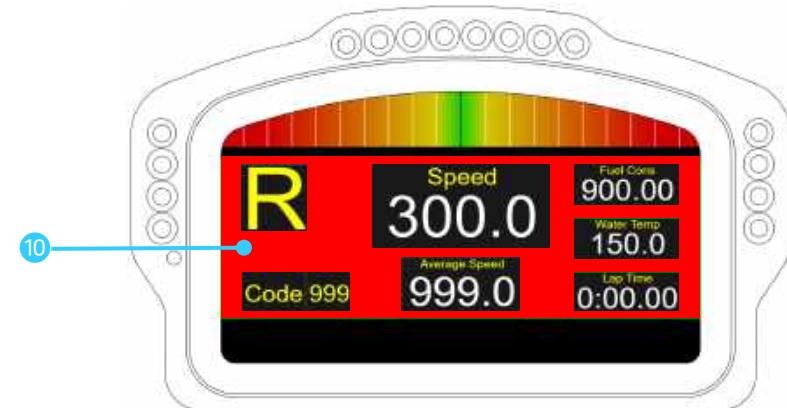
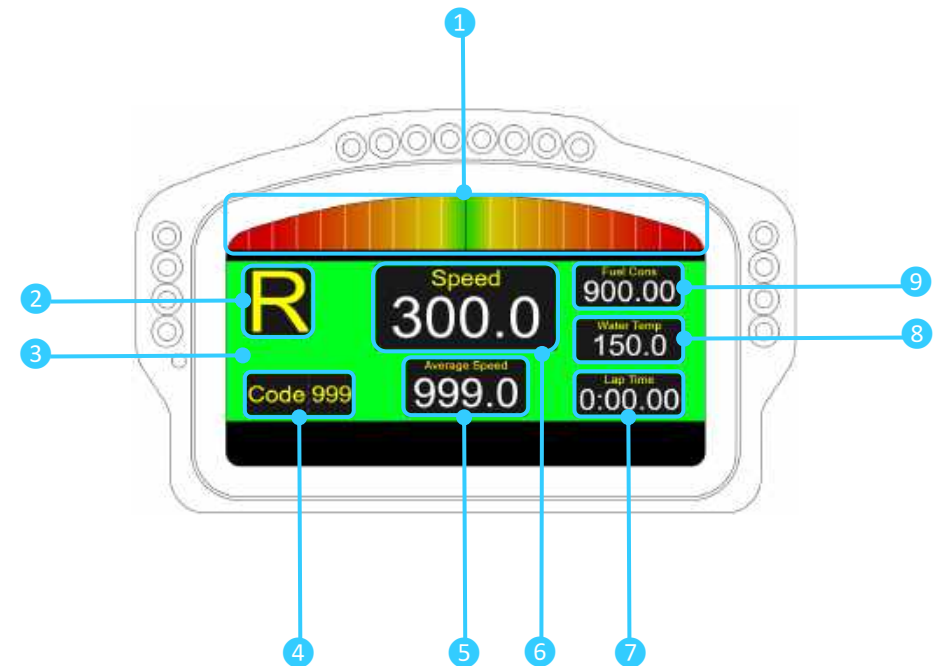
Further information on the setup of the CodeXX function can be found on page 107.

-  Bar Scale Colour: Green → Deviation from the stored CodeXX speed of **0 km/h** or under.
-  Bar Scale Colour: Yellow → Exceeding the stored specified CodeXX speed by up to **2km/h**
-  Bar Scale Colour: Orange → Exceeding the stored specified CodeXX speed by up to **7km/h**
-  Bar Scale Colour: Red → Exceeding the stored specified CodeXX speed by up to **16km/h**



- 2 Gear Display with currently engaged gear.
- 3 So long as the CodeXX speed set using the PI Toolset is maintained, this is signaled to the driver by a completely green display background.
- 4 Informs the driver of the CodeXX speed set in the system.
- 5 Average speed in km/h since the CodeXX was activated.
- 6 Current Speed
- 7 Current lap time (Rolling Lap Time)
- 8 Coolant temperature - During CodeXX phases, driving is often very slow and in the slipstream, for this reason and to allow for constant monitoring of the coolant temperature, it is perma-
- 9 Display of the fuel quantity consumed (Fuel Cons.) in this stint or since the display was last reset.
- 10 If the CodeXX speed set using the PI Toolset is exceeded, the background colour of the entire screen background changes to red - the driver is notified that the max. permitted speed is

Variable	Channel Name	Resolution	Unit	Value Range
Gear	ecu_gear_pt	1	-	1 to 6, R, N
Target Speed	Code_XX_Target_Speed	1	km/h	0 to 999
Average Speed	Code_XX_Average_Speed	0.1	km/h	0 to 999.0
Speed	ecu_speed	0.1	km/h	0 to 300
Lap Time	dash_laptime	-	0:00.00	0 to 1000
Water Temp	ecu_tmot	1	°C	-40 to 200
Fuel Cons	ecu_fuelcons	0.01	Liter	0 to 900



Display: Information Overlays (cont.)

Pit Speed-Overlay:

The pit speed mode can be activated and deactivated using the orange button on the steering wheel. Activation is only possible at a vehicle speed of more than 10 km/h.

NOTE

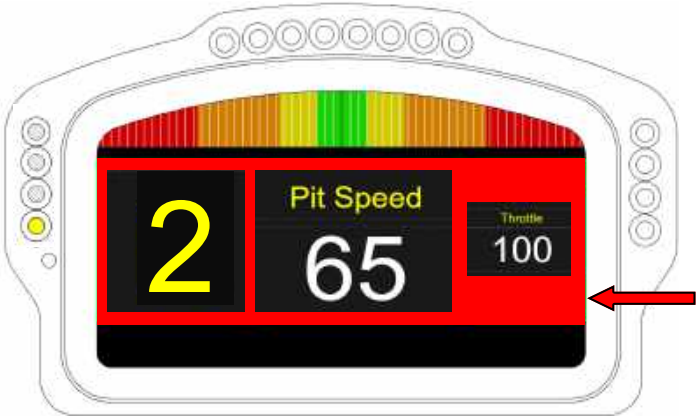
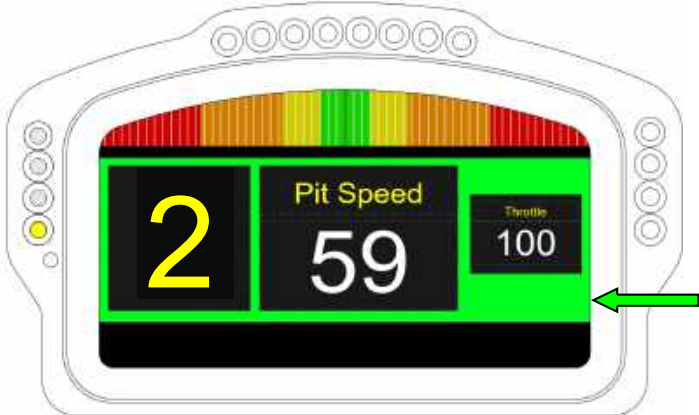
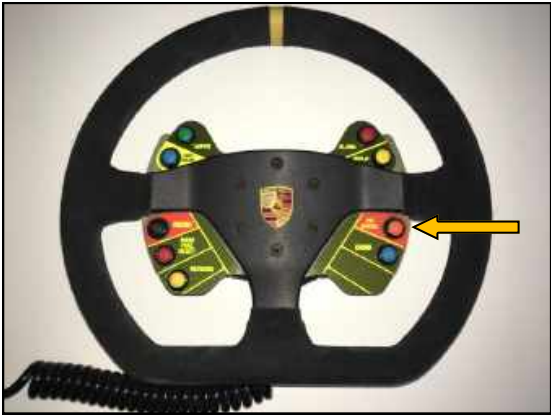
The pre-setting of the pit speed is done in the engine control unit using the RaceCon software (Bosch Motorsport).

If the preset maximum speed is observed, the background on the display page is coloured green. In addition to the centrally located speed display, the current gear selection (left) and the accelerator pedal position (right) are also displayed.

If the preset speed is exceeded, the background colour of the display page changes to red, signaling to the driver that they are driving faster than the set speed.

The active pit speed mode is also indicated to the driver via the lower left alarm LED. If the pit speed mode is deactivated by pressing the orange button again, the ICD returns to the previously displayed

Variable	Channel Name	Resolution	Unit	Condition
ALARM Pit Speed	ecu_B_pitspeed	1	Km/h	Vehicle Speed over 10 Km/h



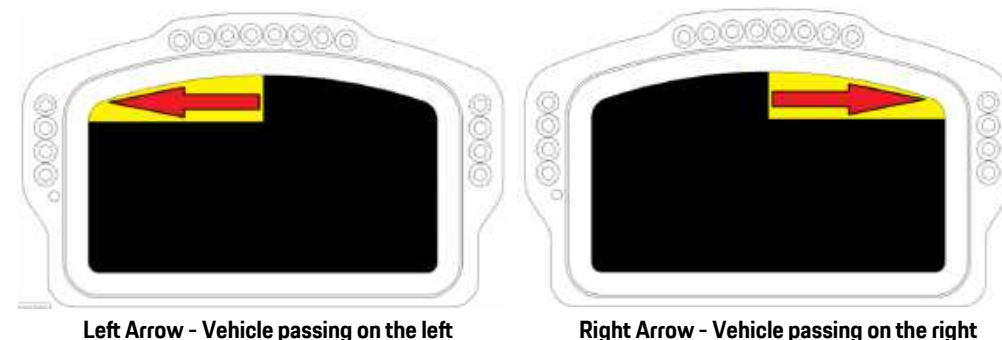
Display: Information Overlays (cont.)

Radar Overlay (only available with installed/active radar system)

The 911 GT3 Cup MR Gen. II can optionally be equipped with a radar system in the rear. This system is intended to support the driver in recognizing approaching vehicles at an early stage and informing them of any necessary action.

The following scenarios / actions are conceivable (example):

- ⇒ A vehicle of a higher vehicle class is approaching → Allow the vehicle to pass
- ⇒ A vehicle of the same class is approaching → Detect overtaking manoeuvres erkennen



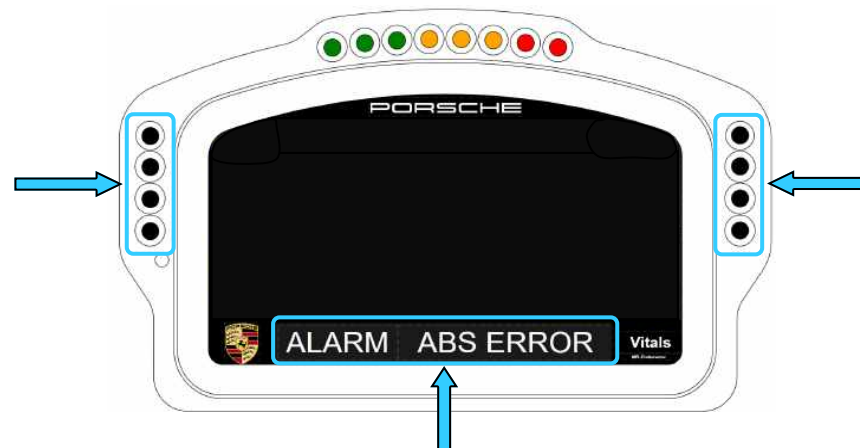
Additionally, the alarm LEDs inform the driver of the approach speed and the approximate remaining distance from the approaching vehicle. The following table outlines the assignment of the alarm LEDs

Active LEDs	LED Colour and Mode	Distance [m]	Approach Speed [km/h]	Approach Side	Description
	Upper Right LED— Solid Green	60 m	Slow < 10 km/h	Right	The system detects an approaching vehicle on the right side of the vehicle at far distance with a low approach speed.
	Upper Left LED — Solid Green	60 m	Slow < 10 km/h	Left	The system detects an approaching vehicle on the left side of the vehicle at far distance with a low approach speed.
	Both Upper Right LEDs — Solid Orange	40 m	Slow < 10 km/h	Right	The system detects an approaching vehicle on the right side of the vehicle at medium distance with a low approach speed.
	Both Upper Left LEDs — Solid Orange	40 m	Slow < 10 km/h	Left	The system detects an approaching vehicle on the left side of the vehicle at medium distance with a low approach speed.
	Both Upper Right LEDs — Solid Red	20 m	Slow < 10 km/h	Right	The system detects an approaching vehicle on the right side of the vehicle at medium distance with a low approach speed.
	Both Upper Left LEDs — Solid Red	20 m	Slow < 10 km/h	Left	The system detects an approaching vehicle on the left side of the vehicle at short distance with a low approach speed.

Active LEDs	LED Colour and Mode	Distance [m]	Approach Speed [km/h]	Approach Side	Description
	Upper Right LED— Slow - Flashing Green	60 m	Moderate ≥ 10 km/h	Right	The system detects an approaching vehicle on the right side of the vehicle at far distance with a moderate approach speed.
	Upper Left LED— Slow - Flashing Green	60 m	Moderate ≥ 10 km/h	Left	The system detects an approaching vehicle on the left side of the vehicle at far distance with a moderate approach speed.
	Both Upper Right LEDs— Slow - Flashing Orange	40 m	Moderate ≥ 10 km/h	Right	The system detects an approaching vehicle on the right side of the vehicle at medium distance with a moderate approach speed.
	Both Upper Left LEDs— Slow - Flashing Orange	40 m	Moderate ≥ 10 km/h	Left	The system detects an approaching vehicle on the left side of the vehicle at medium distance with a moderate approach speed.
	Both Upper Right LEDs— Slow - Flashing Red	20 m	Moderate ≥ 10 km/h	Right	The system detects an approaching vehicle on the right side of the vehicle at short distance with a moderate approach speed.
	Both Upper Left LEDs— Slow - Flashing Red	20 m	Moderate ≥ 10 km/h	Left	The system detects an approaching vehicle on the left side of the vehicle at short distance with a moderate approach speed.
	Upper Right LED— Fast - Flashing Green	60 m	High ≥ 20 km/h	Right	The system detects an approaching vehicle on the right side of the vehicle at far distance with a high approach speed.
	Upper Left LED— Fast - Flashing Green	60 m	High ≥ 20 km/h	Left	The system detects an approaching vehicle on the left side of the vehicle at far distance with a high approach speed.
	Both Upper Right LEDs— Fast - Flashing Orange	40 m	High ≥ 20 km/h	Right	The system detects an approaching vehicle on the right side of the vehicle at moderate distance with a high approach speed.
	Both Upper Left LEDs— Fast - Flashing Orange	40 m	High ≥ 20 km/h	Left	The system detects an approaching vehicle on the left side of the vehicle at moderate distance with a high approach speed.
	Both Upper Right LEDs— Fast - Flashing Red	20 m	High ≥ 20 km/h	Right	The system detects an approaching vehicle on the right side of the vehicle at short distance with a high approach speed.
	Both Upper Left LEDs— Fast - Flashing Red	20 m	High ≥ 20 km/h	Left	The system detects an approaching vehicle on the left side of the vehicle at short distance with a high approach speed.

Status Bar Display Messages

- Some alarm and information messages are not displayed as an overlay but only in the status bar in the ICD in connection with the corresponding activated alarm LEDs.



Alarm Label	Channel	Conditions	Message on Status Bar	Alarm-LEDs
Low Fuel Pressure	ecu_pfuel	ecu_pfuel < 2.5 bar at rpm > 1800 min ⁻¹	ALARM Fuel Press	
Oil Temperature	ecu_toil	ecu_toil > 120°C	ALARM Oil Temp	
Camshaft Control	dash_alarm_cam	dash_alarm_cam_ctrl > 0.0 [Camshaft control not enabled]	ALARM No Cam ctrl	
Oil Level Above Maximum	ecu_oillevel_high	Ecu_oillevel > 100% [Idle speed and oil > 80°C]	WARN Oil level > MAX	-
Gearbox Temperature	ecu_tgear	ecu_tgear ≥ 120°C	ALARM Gear Temp	
Compressor Pressure	ecu_ml_prsvr	ecu_ml_prsvr < 3.5 bar	ALARM	

Status Bar Display Messages (cont.)

Alarm Label	Channel	Conditions	Message on Status Bar	Alarm-LEDs
Water Pressure	ecu_pwat	ecu_pfuel < 0,15 bar If rpm > 5000 min ⁻¹ , tmot > 68°C and vehicle is in motion.	ALARM Water Press	
Battery Voltage	ecu_ub	ecu_ub < 12 Volt If rpm > 1700 min ⁻¹	ALARM Battery	
Water Level	dash_sw09_watlev	dash_sw09_watlev Button = released	ALARM Water Level	
Generator	dash_cond_alt_stopped	dash_cond_alt_stopped = 1,0	ALARM Check Belt	
Starter	dash_alarm_startbtn	dash_alarm_startbtn > 0,0	ERROR Starter	
DME Error	ecu_B_mildiag	ecu_B_mildiag > 0,0	ALARM ECU mildiag	
Low Speed	dash_cond_rpm	dash_cond_crank ≠ 0,0	WARN Low RPM	
Ignition Switched On	dash_cond_ign_ch	dash_cond_ign_ch > 0,0	WARN Ignition ON	

Lookup Tables - General

- The functions and setting options in the ICD setup are described on the following pages. Compared to the ICD setup of the base vehicle (911 GT3 Cup Gen. II), extended functions, e.g. for the optionally available radar system, the Code XX function and the use of the daytime running lights for vehicle identification / display of the vehicle status (Vitals) added.

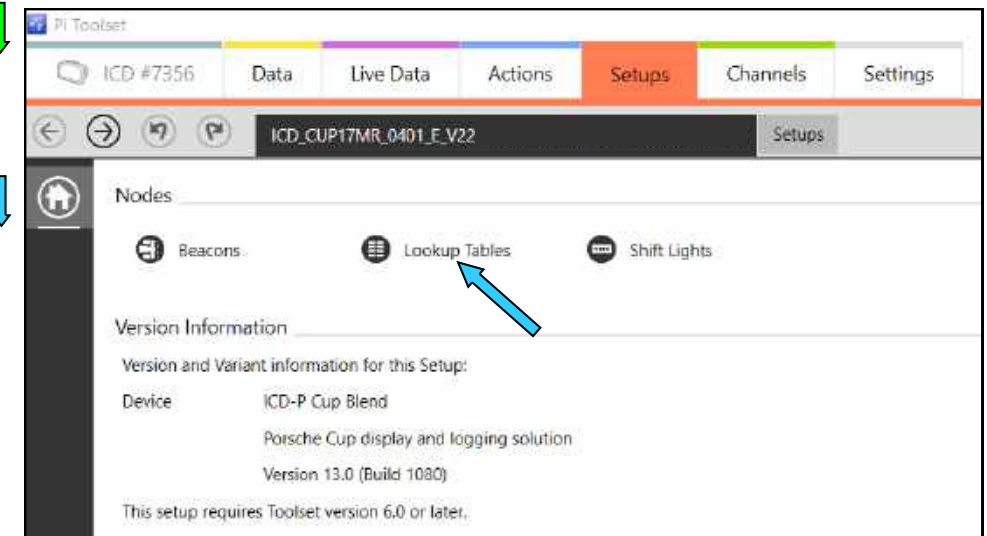
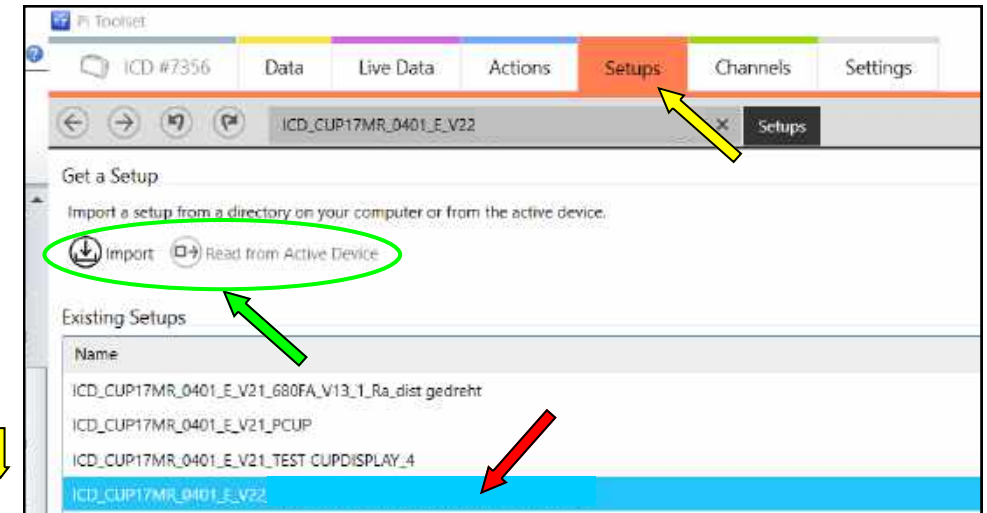
NOTE

The general settings of the PC and the work steps for connecting the PC to the ICD are not described here and can be found in the technical documentation of Porsche AG for the 911 GT3 Cup Gen. II if required.

- Open the "Setups" tab
- If the corresponding ICD setup is already saved in the setup list, it can be opened by double clicking.
- If the ICD setup is not yet listed in the setup list, it can either be loaded into the list from the vehicle via "**Read from Active Device**" or, if it is in a folder on the PC, via "**Import**" into the setup list be transmitted. It is then also opened by double-clicking the corresponding setup.
- By opening the lookup tables, extensive changes can be made in the system. These setting options are described in detail on the following pages.

NOTE

In general, the ICD setup of the 911 GT3 Cup MR Gen. II can be edited with the toolset versions Toolset 6.0 or Toolset 7.0. If the ICD setup has been opened and edited once with Toolset 7.0, it can **NO LONGER** be opened with Toolset 6.0!



Lookup Tables - Tyre Pressure Setup (dash_p_target)

- The desired air pressures (hot air pressures) for the tires on the front and rear axles can be entered in the lookup tables in the **"dash_p_target"** tab.

To set the required hot-air pressure [bar] at the front, enter the value with one decimal place and decimal point separators in Row 0

To set the required hot-air pressure [bar] at the rear, enter the value with one decimal place and decimal point separators in Row 1

NOTE

The default value for the front and rear axles is 1.9 bar

NOTE

The system will not accept value entered using a comma as the decimal separator

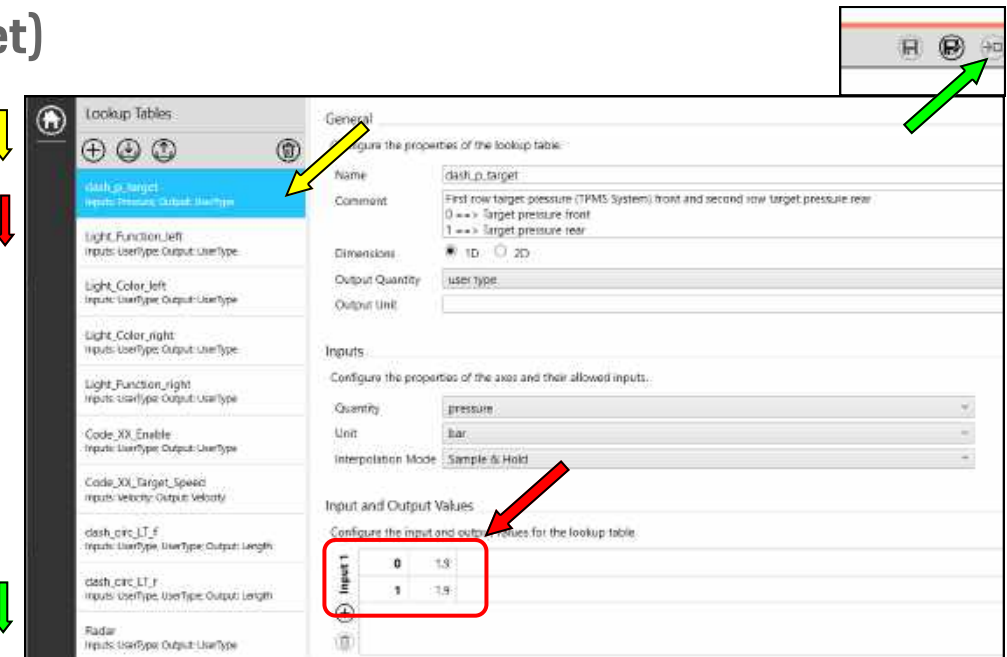
NOTE

If the preset values are changed, the setup with the new values must be transferred to the ICD using the **"Send Setup"** button. All data still stored on the ICD will be lost when the changed setup is transferred!

NOTE

The built-in TPMS sensors learn automatically. The procedure can take up to 120 seconds. The conditions necessary for learning are;

- ⇒ All sensors are recognised as being installed by the system
- ⇒ The vehicle speed is >60Km/h



Lookup Tables - Light_Function_left

- The four LEDs (daytime running lights) of both main headlights of the 911 GT3 Cup MR Gen. II can light up as an identification feature with a selectable color when the beacon signal is triggered. This function is particularly useful for night races, as this function makes it easier to identify the vehicle on the track and in the pit lane. This function can be set separately for the left and right main headlights.
- In addition, the LEDs on the main headlights can be used to display any fault memory entries / alarms.
- If the Color ID is to also be displayed when driving in the pit lane when the Pit Speed Limiter is active, this can also be set here.

Open the tab "Light_Function_left"

Procedure for setting the Color ID / display of the Error Monitor when crossing the timing signal for the LEDs of the left main headlight:

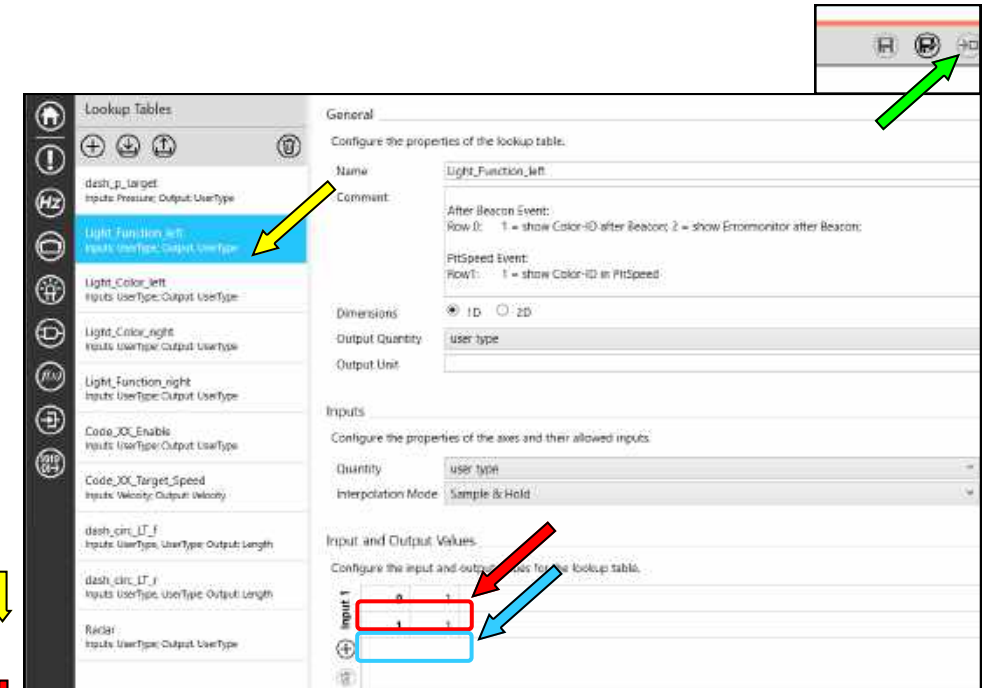
- ⇒ Enter in Row 0 the Value 1, if the Color ID should be displayed after crossing beacon signal
- ⇒ Enter in Row 0 the Value 2, if the Error Monitor should be displayed after crossing beacon signal

Procedure for setting the Color ID when the Pit Speed Limiter is active.

- ⇒ Enter in Row 1 the Value 1, if the Color ID is to be activated when the Pit Speed Limiter is activated (in the pitlane)

NOTE

If the preset values are changed, the setup with the new values must be transferred to the ICD using the "Send Setup" button. All data still stored on the ICD will be lost when the changed setup is transferred! Carry out a data backup beforehand!



The following alarms/errors can be displayed via the LEDs of the headlights when the beacon signal is crossed. The display then takes place with red glowing LEDs. There is no differentiation/specification of the alarm / error;

- ⇒ Alternator
- ⇒ Crankcase Pressure
- ⇒ Oil Level high
- ⇒ Oil level low
- ⇒ PCU
- ⇒ Fuel Pressure
- ⇒ Oil Pressure
- ⇒ Water Pressure
- ⇒ Gearbox Oil Temperature
- ⇒ Water Temperature
- ⇒ Oil Temperature
- ⇒ Battery Voltage
- ⇒ Water Level

Lookup Tables - Light_Function_right

► Similar to the settings of the "Light_Functions_left", these settings for the LEDs of the right main headlight can be adjusted via the "Light_Functions_right" tab.

Open the tab "Light_Function_right"

Procedure for setting the Color ID / display of the Error Monitor when crossing the timing signal for the LEDs of the left main headlight:

- ⇒ Enter in Row 0 the Value 1, if the Color ID should be displayed after crossing beacon signal
- ⇒ Enter in Row 0 the Value 2, if the Error Monitor should be displayed after crossing beacon signal

Procedure for setting the Color ID when the Pit Speed Limiter is active.

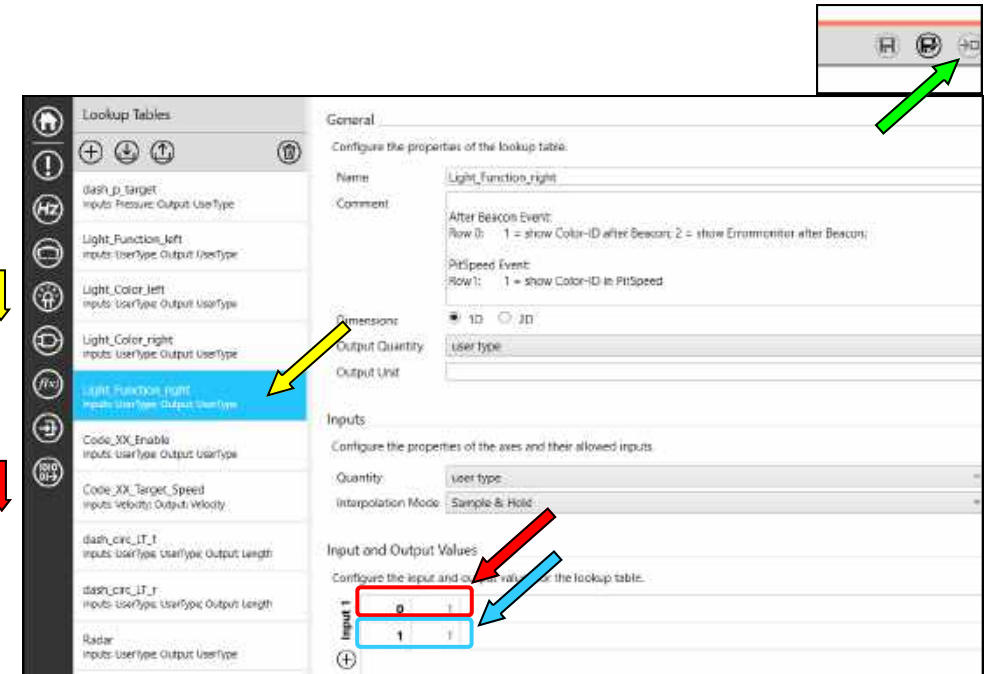
- ⇒ Enter in Row 1 the Value 1, if the Color ID is to be activated when the Pit Speed Limiter is activated (in the pitlane)

NOTE

If the preset values are changed, the setup with the new values must be transferred to the ICD using the "Send Setup" button. All data still stored on the ICD will be lost when the changed setup is transferred! Carry out a data backup beforehand!

NOTE

It is advisable to configure the LEDs of one headlight with the desired Color ID and the LEDs of the other headlight to display of any error entries (Alarms / Error Monitor).



The following alarms/errors can be displayed via the LEDs of the headlights when the beacon signal is crossed. The display then takes place with red glowing LEDs. There is no differentiation/specification of the alarm / error;

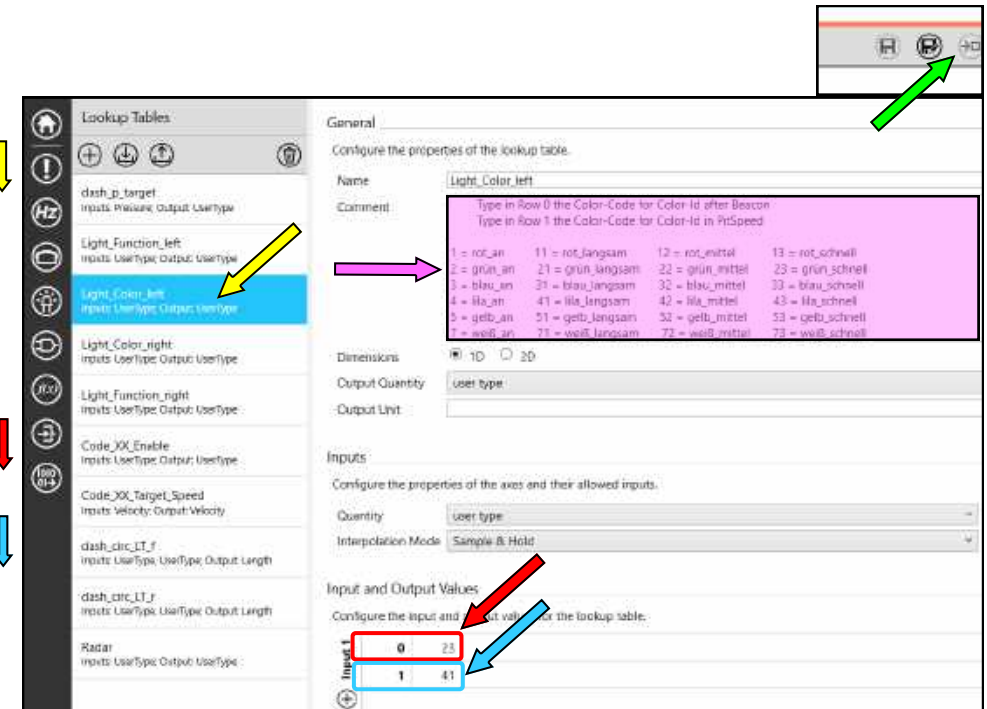
- ⇒ Alternator
- ⇒ Crankcase Pressure
- ⇒ Oil Level high
- ⇒ Oil level low
- ⇒ PCU
- ⇒ Fuel Pressure
- ⇒ Oil Pressure
- ⇒ Water Pressure
- ⇒ Gearbox Oil Temperature
- ⇒ Water Temperature
- ⇒ Oil Temperature
- ⇒ Battery Voltage
- ⇒ Water Level

Lookup Tables - Light_Color_left

- The colours of the LEDs can be set in the "Light_Color_left" tab for the left headlight.
- The colour values specified in the comment field can be set. In addition, a further differentiation can be made via the light frequency (static, slow flashing, medium flashing and fast flashing).

Procedure for setting the colour of the Color ID when crossing of the timing signal, and the Color ID upon activation of the Pit Speed Limiter.

- ⇒ Enter in Row 0 the necessary value for the desired colour/flash frequency of the Color ID when crossing the timing signal.
- ⇒ Enter in Row 1 the necessary value for the desired colour/flash frequency of the Color ID when activating the Pit Speed Limiter.



NOTE

All possible settings for the colour/flash frequency are listed in the

NOTE

If the preset values are changed, the setup with the new values must be transferred to the ICD using the **"Send Setup"** button. All data still stored on the ICD will be lost when the changed setup is transferred!

In the example above, following setup has been applied for the left headlight;

Row 0 (ColorID after Timing Signal) → Value Entered: 23 → LEDs flashing green quickly.

Row 1 (ColorID in Pit Speed) → Value Entered: 41 → LEDs flashing purple slowly.

Lookup Tables - Light_Color_right

- ▶ The colours of the LEDs can be set in the "Light_Color_right" tab for the right headlight.
- ▶ The colour values specified in the comment field can be set. In addition, a further differentiation can be made via the light frequency (static, slow flashing, medium flashing and fast flashing).

Procedure for setting the colour of the Color ID when crossing of the timing signal, and the Color ID upon activation of the Pit Speed Limiter.

- ⇒ Enter in Row 0 the necessary value for the desired colour/flash frequency of the Color ID when crossing the timing signal.
- ⇒ Enter in Row 1 the necessary value for the desired colour/flash frequency of the Color ID when activating the Pit Speed Limiter.

The screenshot shows the 'Lookup Tables' configuration for 'Light_Color_right'. The comment field contains the following text:

Type in Row 0 the Color-Code for Color-ID after Beacon
Type in Row 1 the Color-Code for Color-ID in PitSpeed

1 = rot_an	11 = rot_langsam	21 = rot_mittel	31 = rot_schnell
2 = grün_an	21 = grün_langsam	32 = grün_mittel	42 = grün_schnell
3 = blau_an	31 = blau_langsam	43 = blau_mittel	53 = blau_schnell
4 = lila_an	41 = lila_langsam	54 = lila_mittel	64 = lila_schnell
5 = gelb_an	51 = gelb_langsam	65 = gelb_mittel	75 = gelb_schnell
6 = weiß_an	71 = weiß_langsam	86 = weiß_mittel	96 = weiß_schnell

The 'Input and Output Values' section shows the following configuration:

Input	Output
0	53
1	41

NOTE

All possible settings for the colour/flash frequency are listed in the comment field.

NOTE

If the preset values are changed, the setup with the new values must be transferred to the ICD using the **"Send Setup"** button. All data still stored on the ICD will be lost when the changed setup is transferred! Carry out a data backup beforehand!

In the example above, following setup has been applied for the left headlight;

Row 0 (ColorID after Timing Signal) → Value Entered: 23 → LEDs flashing yellow quickly.

Row 1 (ColorID in Pit Speed) → Value Entered: 41 → LEDs flashing purple slowly.

Lookup Tables - Activation and Setup of the CodeXX Function

- To make the 911 GT3 Cup MR Gen. II attractive for endurance racing series with CodeXX regulations, this function has been installed ex works.

To activate this function, it must be enabled in the "**Code_XX_Enable**" tab

In the input area, change the Value 0 (function deactivated) to Value 1 (CodeXX active).

Open the tab "**Code_XX_Target_Speed**".

NOTE

Only whole numbers without decimal places are accepted by the system

NOTE

If the preset values are changed, the setup with the new values must be transferred to the ICD using the "**Send Setup**" button. All data still stored on the ICD will be lost when the changed setup is transferred! Carry out a data backup beforehand!

The top screenshot shows the 'Code_XX_Enable' tab. The 'Code_XX_Enable' function is selected in the list on the left. The 'Input and Output Values' section shows the input values 0 and 1, which are highlighted with a red box. A green arrow points to the 'Send Setup' button in the top right corner.

The bottom screenshot shows the 'Code_XX_Target_Speed' tab. The 'Code_XX_Target_Speed' function is selected in the list on the left. The 'Input and Output Values' section shows the input values 0 and 60, which are highlighted with a blue box. A red arrow points to the 'Send Setup' button in the top right corner.

Lookup Tables - Setting the Front Axle Tyre Circumferences

- In the "dash_circ_LT_f" tab in the Lookup Tables, the wheel circumference values can be entered for Slick and Rain tyres on the front axle.

The values for the front axle tyre circumferences [in mm] are entered in the input field.

Line 10 → Tyre circumference [in mm] for Slick tyres on the front axle.

Line 20 → Tyre circumference [in mm] for Rain tyres on the front axle.

NOTE

This value is entered without decimal places. In the comment field of the tab, some values for tyres from various manufacturers are stored as comments. These values do not claim to be accurate or correct!

NOTE

Contact the tyre manufacturer for sizes or obtain by measuring using a suitable method.

WARNING

Accuracy of the front axle tyre circumferences measured and entered into the system is critical! These values are utilised by both the ABS and optional Traction Control systems for calculating intervention control required!

NOTE

If the preset values are changed, the setup with the new values must be transferred to the ICD using the "Send Setup" button. All data still stored on the ICD will be lost when the changed setup is transferred! Carry out a data backup beforehand!

Lookup Tables

Name: dash_circ_LT_f

Comment: lookuptable WHEEL CIRCUMFERENCE FRONT:
Type in Row 10 your slick tires in and in Row 20 your rain tires.
Please ask your Tire support if the circumference are correct!!

Michelin (default)
Slicks:
10: 2020.0 mm = Michelin
Rain:
20: 2040.0 mm = Michelin

Slicks 680:
10: 2135

Pirelli (example)
Slicks:
10: 2118.0 mm = Pirelli DHC (SRO)
Rain:
20: 2184.0 mm = Pirelli WH (SRO)

Hankook (example)
Slicks:
10: 2073 mm =
Rain:
20: 2073 mm =

Slicks 680
10: 2097 mm

Yokohama 300/650R18 (example)
Slicks:
10: 2050.0 mm =
Rain:
20: 2230.0 mm =

Dunlop 305/680R18
Slicks:
10: 2150mm

Input and Output Values

Configure the input and output values for the lookup table.

Input 2: 0

Input 1: 10: 2135, 20: 2040

Lookup Tables - Setting the Rear Axle Tyre Circumferences

- In the "dash_circ_LT_r" tab in the Lookup Tables, the wheel circumference values can be entered for Slick and Rain tyres on the rear axle.

The values for the rear axle tyre circumferences [in mm] are entered in the input field.

Line 10 → Tyre circumference [in mm] for Slick tyres on the rear axle.

Line 20 → Tyre circumference [in mm] for Rain tyres on the rear axle.

NOTE

This value is entered without decimal places. In the comment field of the tab, some values for tyres from various manufacturers are stored as comments. These values do not claim to be accurate or correct!

NOTE

Contact the tyre manufacturer for sizes or obtain by measuring using a suitable method.

WARNING

Accuracy of the rear axle tyre circumferences measured and entered into the system is critical! These values are utilised by both the ABS and optional Traction Control systems for calculating intervention control required!

NOTE

If the preset values are changed, the setup with the new values must be transferred to the ICD using the "Send Setup" button. All data still stored on the ICD will be lost when the changed setup is transferred! Carry out a data backup beforehand!

The screenshot shows the 'Lookup Tables' configuration window. The 'dash_circ_LT_r' table is selected, showing its name, comment, and input/output fields. The input field is set to 'UserType' and the output is 'Length'. The table content includes a comment about tyre support and lists of tyre circumferences for Slick and Rain conditions for various manufacturers (Michelin, Pirelli, Hankook, Yokohama, Dunlop).

At the bottom, the 'Input 2' field is highlighted with a red box, showing the values 10 and 20, which correspond to the tyre circumferences for Slick and Rain conditions respectively.

Lookup Tables - Optional Radar Setup

► In the **"Radar"** tab in the Lookup Tables, the optionally available radar system can be activated

The radar system is activated by entering the value "1" into the input 1 field. A default value "2" (Radar OFF) is entered in the input field.

NOTE

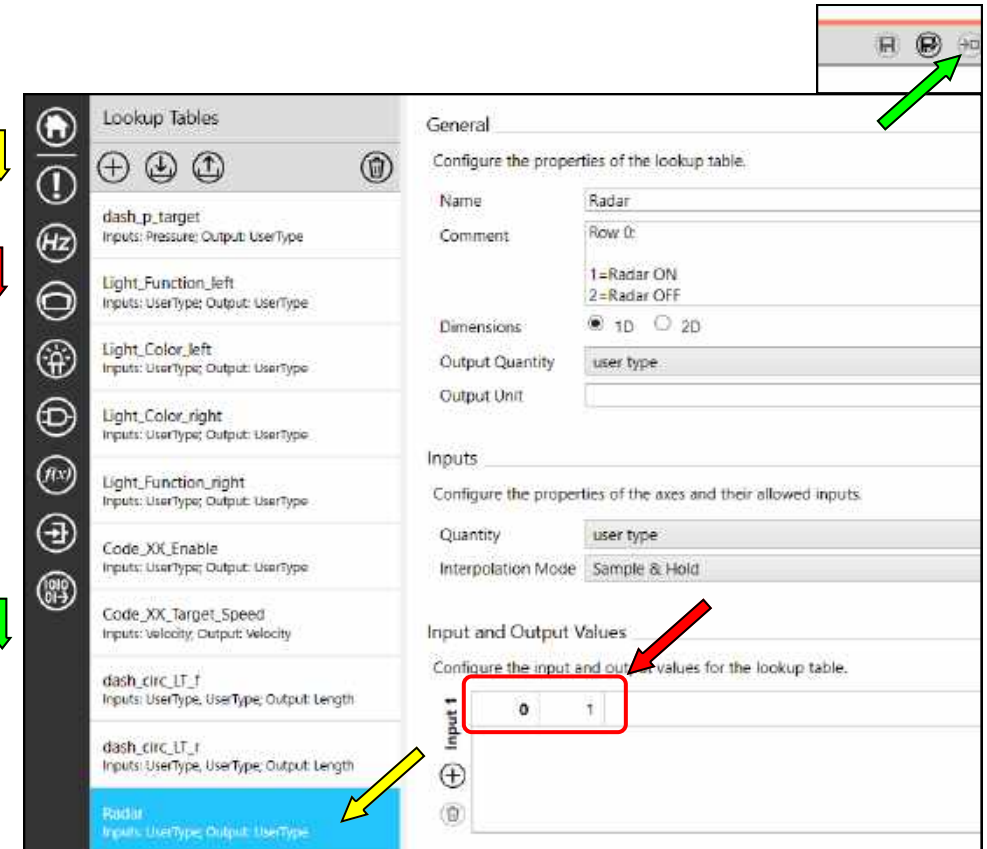
Activation is only required for a system that has been retrofitted.

NOTE

If the preset values are changed, the setup with the new values must be transferred to the ICD using the **"Send Setup"** button. All data still stored on the ICD will be lost when the changed setup is transferred!

NOTE

Further information on the radar system is available on page 97.



6.5 Traction Control (TC)

► For the 911 GT3 Cup MR Gen.II, a traction control that can be set in 12 levels is optionally available.

NOTE

The system can be set to 12 levels independently of ABS. Where "0" means that the system is deactivated. Stage 12 means maximum control interventions by the traction control.

NOTE

The "traction control" function is stored and programmed on the engine control unit. If the engine control unit is replaced, the "traction control" function is no longer available.

Programming is done exclusively by Manthey-Racing GmbH. The engine control unit must be sent in for programming.

NOTE

If the control level of the traction control is adjusted via the rotary selector switch, this change is displayed to the driver in the ICD for approx. 2 seconds. Control interventions are visually signaled to the driver via the LEDs on the side of the ICD. The upper LEDs flash purple for the duration of the intervention.

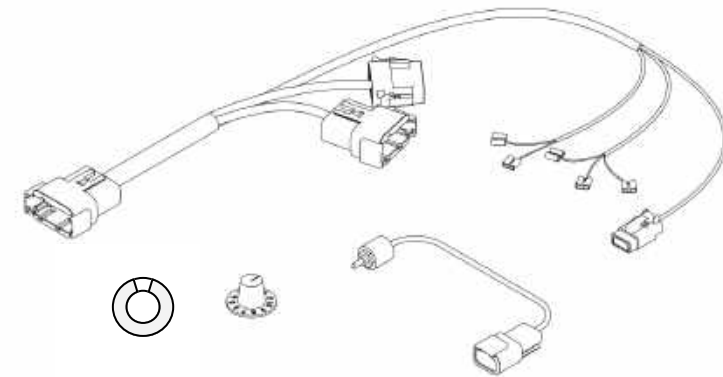
NOTE

In addition to an appropriately programmed engine control unit, the correct ICD setup is required for the correct functioning of the traction control. This can only be ordered through Manthey-Racing GmbH and is only available to customers with a 911 GT3 Cup MR Gen.II.



The following components are required for the use of the TC:

- ⇒ New dataset for the ECU
- ⇒ New ICD setup including TC function
- ⇒ Wiring loom with TC rotary switch



6.6 24H Lights

► Additional lighting is optionally available for the 911 GT3 Cup MR Gen.II.

NOTE

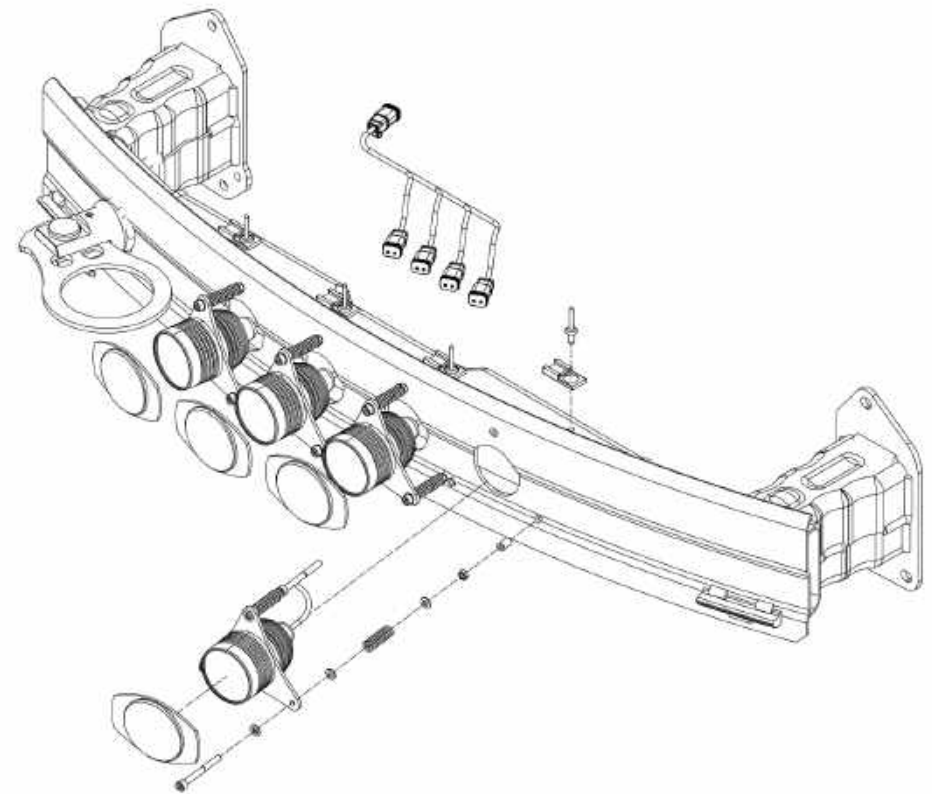
The front bumper must be modified for the installation of the LED lights. Either the existing front bumper must be sent in for modification or a new, modified bumper must be obtained from Manthey-Racing GmbH.

NOTE

The 24-hour lighting is operated via a toggle switch in the central switch plate. The corresponding toggle switch must be attached during assembly.

NOTE

The lighting can only be connected and operated if the front cable harness and the corresponding Front-IO (control unit) are installed.



7 Setup & Ride Height Measurement

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7.3	Ride Height Reference Points.....	81

7.1

Porsche 991 GT3 Cup MR Gen.II Set-Up advice Rundstrecke 03/04/19

Fuel	35 kg	vehicle weight [kg]	
Driver weight	75 kg		
Reifen	Slick		
Tyres [bar]			
FA left	2.00	FA right	2.00
RA left	2.00	RA right	2.00
1psi 0,0689 bar			
Aero Spec.	RW GT3 Cup MR II	Gurney	Pos. 7
Spoiler lip	GT3 Cup MR II		
Mech-Height			
[mm]			
Reference see Porsche GT3 Cup II Technical Handbook			
Aero-Height			
[mm]			
Antirollbar			
Camber			
[deg min]			
Check Clearance of trailing arm to chassis!			
Toe			
[min]			
Brake balance			
balance bar GT3 Cup II (adjustable)			
Spring			
Damper			
Tyres			
(Slick)			

7.2

Porsche 991 GT3 Cup MR Gen.II Set-Up advice NBR Nordschleife 03.04.2019

Fuel	35 kg	vehicle weight [kg]
------	-------	---------------------

Driver weight	75 kg
Reifen	Slick

Tyres [bar]	FA left	2.00	FA right	2.00
	RA left	2.00	RA right	2.00

1 psi 0,0689 bar

Aero Spec.	RW GT3 Cup MR II	Gurney	10mm	Pos.	7
------------	------------------	--------	------	------	---

Spoiler lip	GT3 Cup MR II	Target	Actual	Target	Actual
-------------	---------------	--------	--------	--------	--------

Mech-Height	FA left	94	FA right	94
[mm]	RA left	108	RA right	108

Measure Mech-Height at Reference Points
Reference see Porsche GT3 Cup II Technical Handbook

Aero-Height	FA left	74	FA right	74	Ref. Point
[mm]	RA left	88	RA right	88	Ref. Point

Antirollbar	FA Blade -GT3 Cup II	2	soft 1	2	stiff 7
	RA Blade -GT3 Cup II	5	soft 1	5	stiff 7

Camber	FA left	-4,0°	FA right	-4,0°
[deg min]	RA left	-3,7°	RA right	-3,7°

Check Clearance of trailing arm to chassis!

Toe	FA left	-1mm	FA right	-1mm
[mm]	RA left	+2,5mm	RA right	+2,5mm

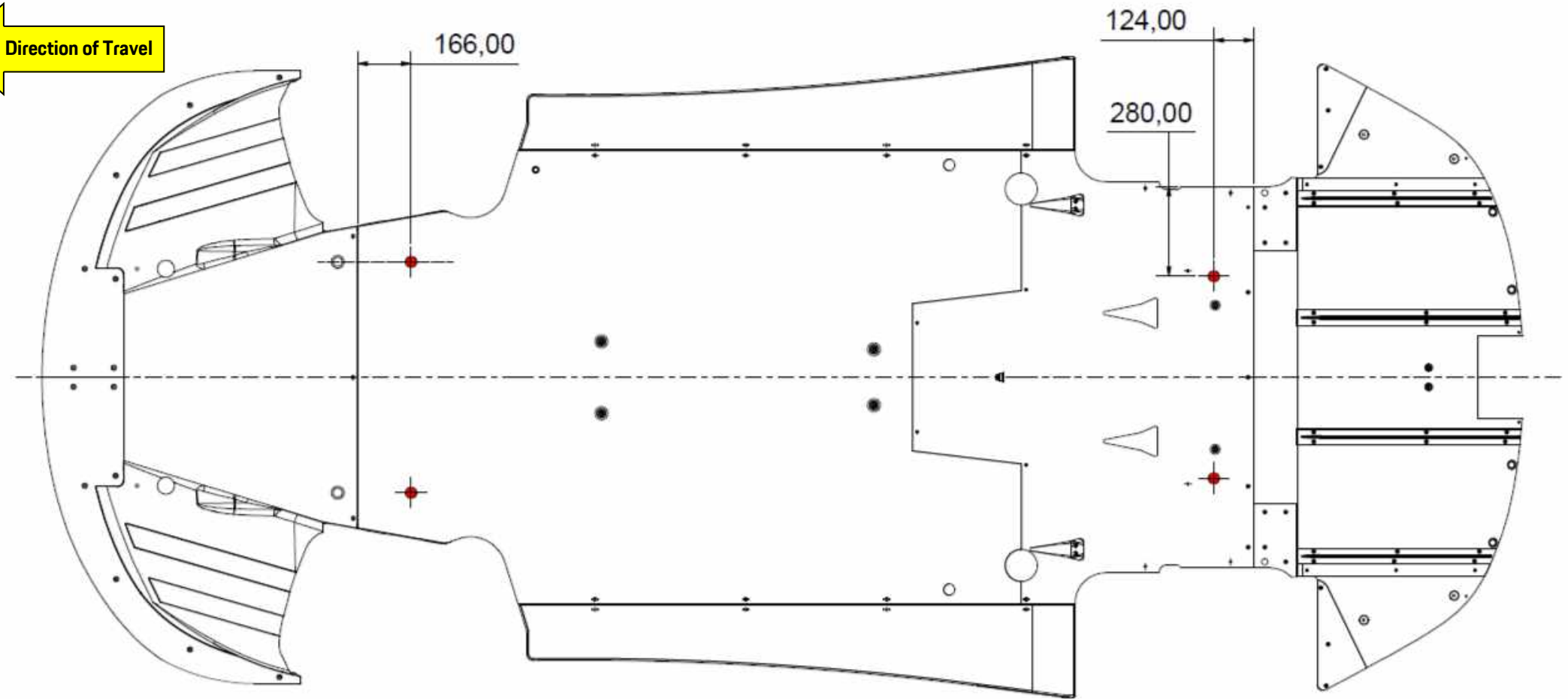
balance bar GT3 Cup II (adjustable)

Spring	FA Main	160/60/120	FA - Help	3/60/80
	RA Main	180/60/140	RA - Help	3/60/80

Damper	FA	KW 3way	LsB-HsB-Re	11--14 / 14
	RA	KW 3way	LsB-HsB-Re	7--11 / 9

Tyres	VA	30/65-18	Michelin	S8
(Slick)	HA	31/71-18	Michelin	S8

7.3 Ride Height Reference Points



NOTE

The specified measuring points are used for the vehicle alignment to set the driving height. A minimum ride height is not specified. If this is necessary for the corresponding racing series, then the measuring points given here also serve as reference points for measuring the minimum driving height.

8 Contacts

Technical support

Region Europe

Manthey-Racing GmbH
Rudolf-Diesel-Straße 11-13
53520 Meuspath
Germany

+49 2691 9338 807
techsupport@manthey-racing.de

8 Contacts

Sport and Spare Parts Sales

Porsche motorsports spare parts are sold via the Porsche Motorsport Portal. This requires the creation of a customer account and a user application. You can request this via the email address raceparts@porsche.de

Motorsport parts can alternatively be ordered from the following email addresses.

Region Europe/Asia

raceparts@porsche.de

Region North America

PMNAraceparts@porschemotorsport.com

Manthey-Racing GmbH

Manthey-Racing GmbH products can be ordered via:

Email: sales@manthey

Tel.: +49 2691 - 9338 851

Fax: +49 2961 - 9338 850

8 Contacts

Partners

BBS Motorsport GmbH

Im Mühlegrün 10
77716 Haslach i. K.
Germany

Tel.: +49 (0) 78 32 -960 95-0
Fax: +49 (0) 78 32 -960 95-27

E-Mail: info@bbs-motorsport-gmbh.com
Webseite: www.bbs-motorsport-gmbh.com

KW automotive GmbH

Aspachweg 14
74427 Fichtenberg
Germany

Tel.: +49 (0) 7971 9630 0
Fax: +49 (0) 7971 9630 191

E-Mail: info@kwautomotive.de
Webseite: www.kwsuspensions.de

RECARO Automotive Seating

Stuttgarter Straße 73
73230 Kirchheim unter Teck
Germany

Tel.: +49 (0) 7021 9350 00
Fax: +49 (0) 7021 9353 39

E-Mail: info@recaro-automotive.com
Website: www.recaro-automotive.com

SCHROTH Safety Products GmbH

Im Ohl 14
59757 Arnsberg
Germany

Tel.: +49 (0) 2932 9742 0
Fax: +49 (0) 2932 9742 42

E-Mail: germany@eu.schroth.com
Website: www.schroth.com

KRONTEC Maschinenbau GmbH

Walhallastraße 19
93083 Neutraubling
Germany

Tel.: +49 (0) 9401 5253 0
Fax: +49 (0) 9401 5252 10

E-Mail: info@krontec.de
Webseite: www.krontec.de

RACELOGIC

Unit 10-11 Swan Business Centre
Osier Way, Buckingham, Bucks MK18 1TB
United Kingdom (UK)

Tel.: +44 (0) 1280 8238 03
Fax: +44 (0) 1280 8235 95

E-Mail: sales@racelogic.co.uk
Website: www.racelogic.co.uk

SAFECRAFT RACING

3959 Van Dyke Road #203
Lutz, Florida 33558
United States of America (USA)

Tel.: +1 813 758 3571

E-Mail: info@safecrafttracing.com
Website: www.safecrafttracing.com

