OWNER'S MANUAL 2026

READY TO RACE

990 DUKE

ITEM NO.: 3240299EN



Dear KTM customer,

Congratulations on your decision to purchase a KTM motorcycle. You are now the owner of a state-of-the-art sports vehicle which, with proper care, will bring you pleasure for a long time to come.

We hope you enjoy your bike and have a safe journey at all times!

You can enter the serial numbers of your vehicle below to find the serial numbers more quickly if required:

Vehicle identification number (p. 17)	Stamp of the contractual partner
Engine number (p. 17)	

The owner's manual contained the latest information for this model series at the time of publication. However, minor differences due to further developments in design cannot be ruled out completely.

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12 100 6061

REG.NO. 12 100 6061

Issuing institution:
TÜV SÜD Management Service GmbH

KTM Sportmotorcycle GmbH
Stallhofnerstraße 3
5230 Mattighofen, Austria

This document is valid for:

990 DUKE EU (F9803ZC)

3240299en

21/01/2026

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1.1 Conventions

1.1.1 Icons

✓ Indicates a desired result (e.g. of a work step or a function).

✗ Indicates an undesired result (e.g. of a work step or a function).


All work marked with this symbol requires specialist knowledge and technical understanding. Ensure that this work is carried out or supervised by trained personnel from an authorized contractual partner, and that any special tools required are used.


Indicates a page reference.


Indicates information with more details.


Indicates a tip, e.g. to simplify work.

» Indicates the result from a test step.

◀ Indicates the end of an activity, including any rework.

1.1.2 Formatting

Proprietary name	Indicates a proprietary name.
Name ®	Indicates a protected name.
Brand ™	Indicates a brand available on the open market.
Underlined terms	Refer to technical details of the vehicle or indicate technical terms that are explained in the glossary.

1.1.3 Abbreviations

2–pc.	two-part
Part no.	Part number
or	respectively
approx.	circa
etc.	et cetera
poss.	possibly/possible
if necessary	if necessary
cmpl.	complete
min.	at least
no.	number
no fig.	no figure
s.	see
among others	among others/not limited to
and the like	and the like
etc.	et cetera
cf.	compare
e.g.	for example

2.1 Safety instructions

Function of the safety instruction

Safety instruction brings attention to dangers when handling the product. Hazards are classified, named, described, and supplemented with information on how to avoid them.

- If there is a safety instruction before a list of instructions, the danger exists throughout the entire activity.
- If there is a safety instruction immediately before an instruction, the next step presents a danger.

Safety instruction layout

All safety instructions are identified by a signal word and a warning symbol. The combination of signal word and warning symbol determines the degree of danger.



DANGER
Indicates an imminent danger that leads to serious injury or death.



WARNING
Indicates a potentially imminent danger that could lead to serious injury or death.



CAUTION
Indicates a potentially imminent danger that can lead to minor or slight injuries.



NOTE
Indicates a situation that can lead to damage to the product or the product environment.



NOTE
Indicates a situation that can lead to environmental damage.

2.2 Ban on tampering

No changes may be made to the noise control equipment and components.

Tampering that is prohibited

- Removing or disabling any devices or components used for noise control before the new vehicle is sold or delivered to the end customer.
- Removing or disabling any device or component used for noise control for purposes other than service, repair, or replacement during the service life of the vehicle.
- Use of the vehicle after a device or component used for noise control has been removed, disabled, or inadequately maintained.

Examples of prohibited tampering

- Removing or drilling through rear mufflers, baffle plates, manifolds, or other components that conduct exhaust gases.
- Removing or puncturing parts of the intake system.
- Replacing moving parts of the vehicle, or parts of the exhaust system or intake system, with parts other than those specified by the manufacturer.

2.3 Safe use

DANGER

Danger of accidents A rider who is not fit to ride poses a danger to themself and to others.

– Do not operate the vehicle if you are not fit to ride due to alcohol, drugs, or medication.
– Do not operate the vehicle if you are physically or mentally incapable of doing so.

DANGER

Danger of poisoning Exhaust gases are toxic and inhaling them may result in unconsciousness and death.

– Always ensure that there is sufficient ventilation when running the engine.
– Use suitable exhaust extraction when starting or running the engine in an enclosed space.

WARNING

Danger of burns Some vehicle components become hot when the vehicle is operated.

– Do not touch any parts such as the exhaust system, radiator, engine, damper, or brake system before the vehicle parts have cooled down.
– Allow the vehicle parts to cool down before performing any work on the vehicle.

The vehicle should only be used when it is in perfect technical condition, for its intended purpose, and in a safe and environmentally-friendly manner.

An appropriate driver's license is needed to drive the vehicle on public roads.

Have any faults that impair safety immediately remedied by an authorized contractual partner.

Adhere to the information and warning labels on the vehicle.

2.4 Protective clothing

WARNING

Risk of injury Missing or inadequate protective clothing increases the risk of injury.

– Wear appropriate protective clothing such as helmet, boots, gloves as well as pants and a jacket with protectors on all rides.
– Always wear protective clothing that is in good condition and meets the legal regulations.

2.5 Work rules

Unless specified otherwise, the ignition must be switched off during all work (models with ignition lock, models with transponder key) or the engine must be at a standstill (models without ignition lock or transponder key).

Special tools are required for some work. The tools are not part of the vehicle, but can be ordered using the number in parentheses. Example: bearing puller (15112017000)

Unless otherwise noted, normal conditions apply to all tasks and descriptions.

Ambient temperature	20 °C (68.0 °F)
Ambient air pressure	1,013 mbar (14.69 psi)
Relative air humidity	60 ±5 %

During assembly, use new parts to replace parts which cannot be reused (e.g. self-locking screws and nuts, expansion screws, seals, sealing rings, O-rings, pins, and lock washers).

A thread lock (e.g. **Loctite®**) is required for some screw connections. Observe the manufacturer's specific instructions for use.

If thread lock (e.g. **Precote®**) has already been applied to a new part, do not apply any additional thread lock.

After disassembly, clean the parts that are to be reused and check them for damage and wear. Replace damaged or worn parts.

After completing a repair or service, check the operating safety of the vehicle.

2.6 Environment

Handling the vehicle responsibly reduces the risk of conflict with other road users and the surrounding area. The future of motorcycling also depends on using motorcycles legally, being environmentally conscious and respecting the rights of others.

When disposing of used oil, other operating and auxiliary fluids, and used components, the laws and regulations of the respective country must be observed.

As motorcycles are not subject to the EU regulations governing the disposal of end-of-life vehicles, there are no legal regulations that pertain to the disposal of an end-of-life motorcycle. More information is available from the authorized contractual partner.

2.7 Owner's manual

Read this owner's manual carefully and in full before riding off for the first time. The owner's manual contains information and tips on how to operate, handle, and service your vehicle, as well as advice on optimum tuning and how to avoid injuries.

Tip

Save this owner's manual on your smartphone, for example, so that you can access it at any time.

An authorized contractual partner will be happy to assist you if you are unsure.

The owner's manual is an important component of the vehicle. If the vehicle is sold, the owner's manual must be downloaded again by the new owner.

The owner's manual can be downloaded multiple times using the QR code or the link on the delivery certificate.

The owner's manual is also available for download from your authorized contractual partner and on the KTM website.

International KTM Website: https://www.ktm.com

A printed copy can be ordered from the following address.

Website for printed copy: https://print.ktm.com

2.8 Roadside Assistance

For peace of mind when traveling with your vehicle in Europe, we offer Roadside Assistance free of charge in selected countries (handled in cooperation with a contracting partner).

Each service at your authorized contractual partner extends your free Roadside Assistance until the next service or for a maximum of 12 months.

In the event of a breakdown, call the KTM Assistance Center hotline or contact them directly via the KTMconnect app.

The applicable conditions and benefits can be found on the KTM website:

International KTM Website: https://www.ktm.com

2.9 Use definition – intended use

The vehicle is designed and constructed to withstand the usual demands of regular traffic and use on race courses.

This vehicle is not suitable for offroad use.

Note

This vehicle is only authorized for operation on public roads in its homologated version.

2.10 Improper use

The vehicle may only be used as intended.

Improper use can result in danger to people, property and the environment.

Any use of the vehicle beyond the intended and defined use constitutes misuse.

Improper use includes the use of operating and auxiliary materials that do not meet the required specifications for the respective use.

3 Important notes

3.1 Manufacturer's warranty, implied warranty

The work prescribed in the service schedule must only be carried out by an authorized contractual partner and then confirmed in the electronic proof of service, as otherwise all warranty claims will be void. Damage or secondary damage caused by tampering with and/or conversions on the vehicle are not covered by the manufacturer's warranty.

3.2 Auxiliary material, operating material

Use operating materials and auxiliary materials in accordance with the operating instructions and specifications.

3.3 Spare parts, accessories

For safety reasons, only spare parts and accessories approved by KTM may be used. They may only be installed by an authorized contractual partner. KTM accepts no liability for other products and any resulting damage or loss.

Certain spare parts and accessory products are specified in parentheses in the descriptions. Authorized contractual partners will be happy to help.

The current **KTM PowerParts** are listed for each vehicle on the KTM website.

International KTM Website: https://www.ktm.com

3.4 Service

A prerequisite for perfect operation and prevention of premature wear is that the service, care, and tuning work is properly carried out as described in the owner's manual. An incorrect suspension setting can lead to damage and breakage of chassis components.

Use of the vehicle under difficult conditions, such as dusty environments, heavy rain, high heat or with a heavy load, can lead to increased wear of components such as the air filter, powertrain, brake systems, or suspension components. For this reason, it may be necessary to inspect or replace components before the next scheduled service interval.

The prescribed running-in times and service intervals must be observed, otherwise the long-term durability of the vehicle will be severely impaired.

The relevant mileage or time interval is whichever occurs first.

3.5 Figures

Some of the figures in this document contain optional extras.

For clarity, some components may be shown disassembled or may not be shown at all. Disassembly is not always absolutely necessary in order to carry out the activities described. The textual information takes precedence.

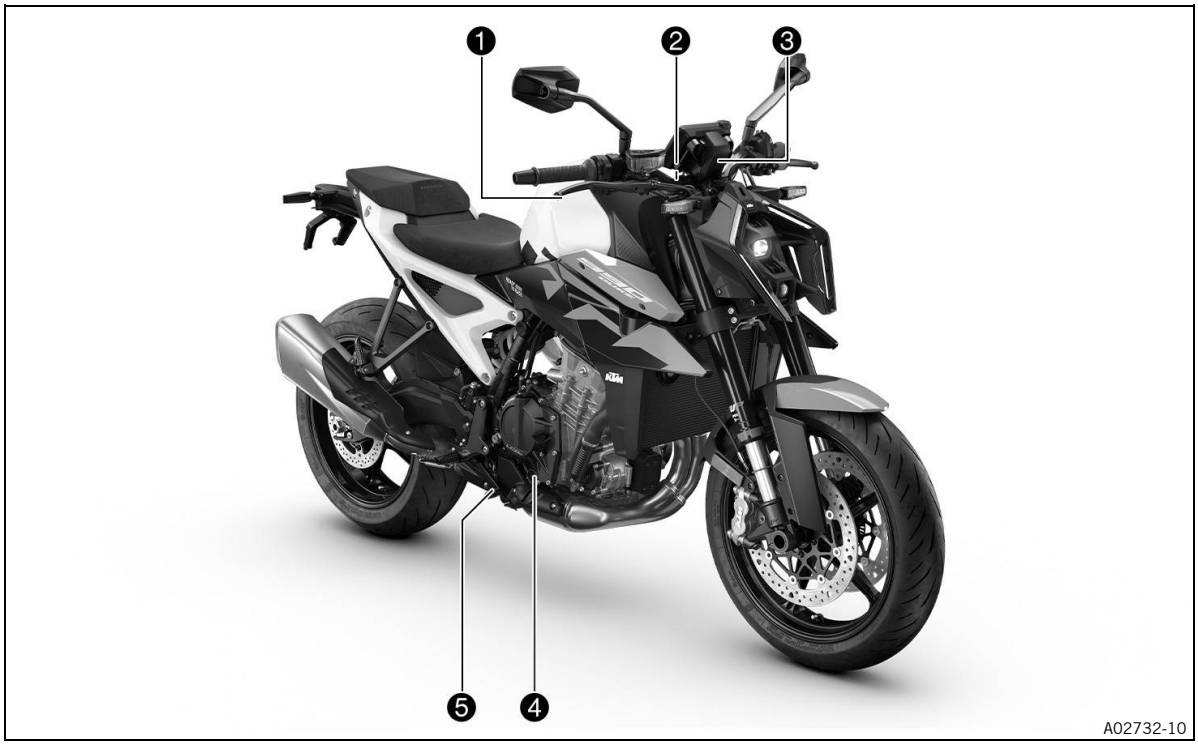
3.6 Customer service

Authorized contractual partners will be happy to answer questions about the vehicle and KTM.

A list of authorized contractual partners can be found on the KTM website.

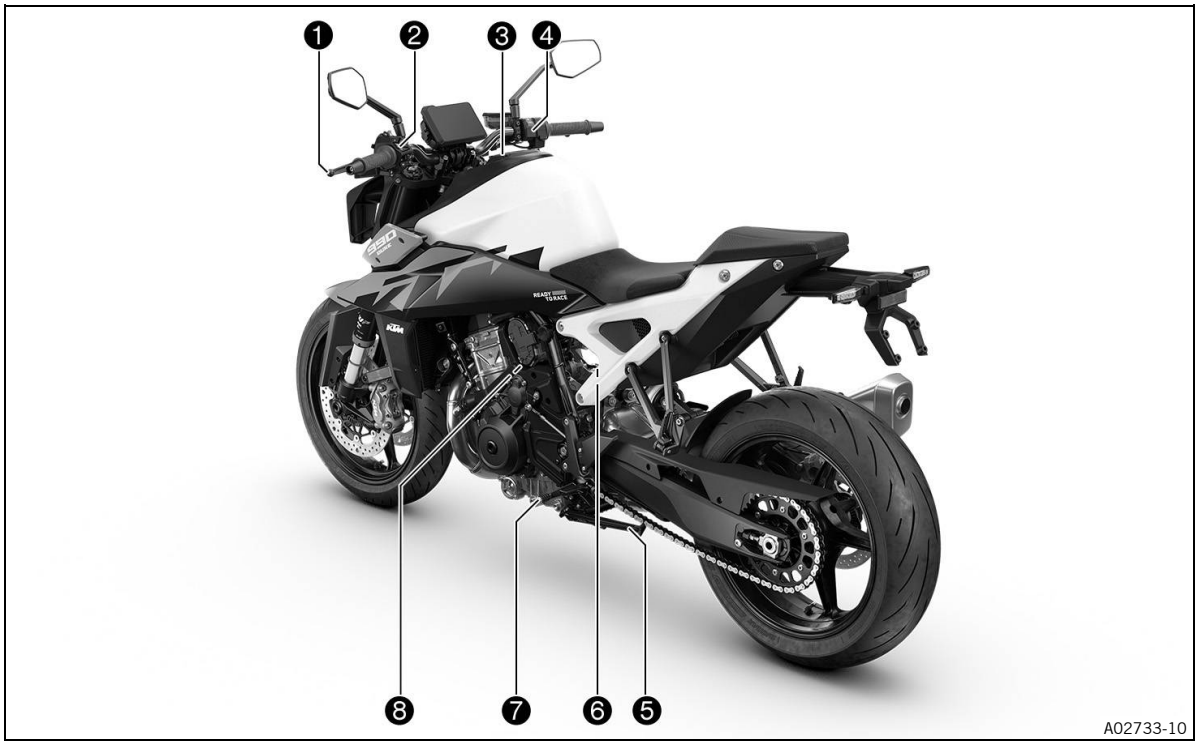
International KTM Website: https://www.ktm.com

4.1 View of vehicle, front right (example)



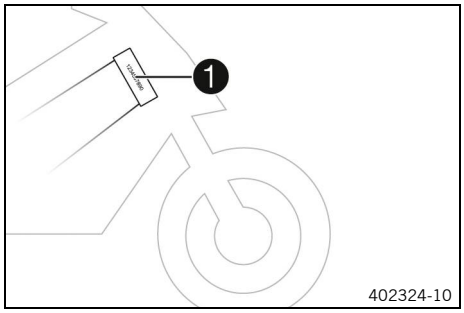
1. Handbrake lever (p. 19)
2. Ignition and steering lock (p. 24)
3. dashboard (p. 28)
4. Level viewer, engine oil
5. Brake pedal (p. 27)

4.2 View of vehicle, rear left (example)



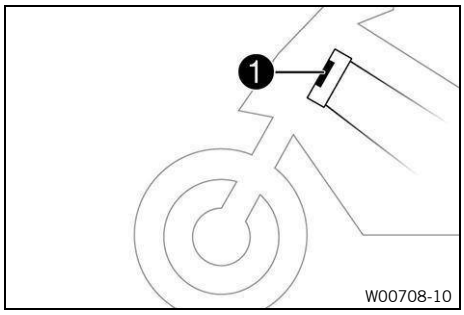
1. Clutch lever (p. 19)
2. Combination switch (p. 19)
3. Fuel tank cap
4. Start button/kill switch (p. 24)
5. Side stand (p. 27)
6. Seat lock (p. 26)
7. Gear shift lever (p. 26)
8. Engine number (p. 17)

5.1 Vehicle identification number



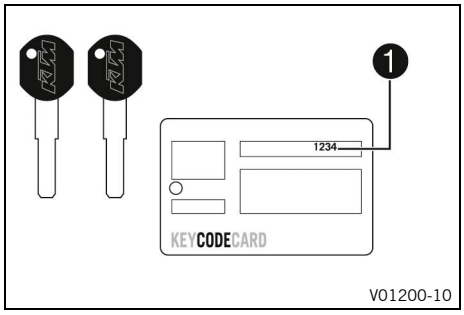
The vehicle identification number ❶ is stamped on the right-hand side of the steering head.
The vehicle identification number is also shown on the type label.

5.2 Type approval label



The type approval label ❶ is located on the steering head on the left.

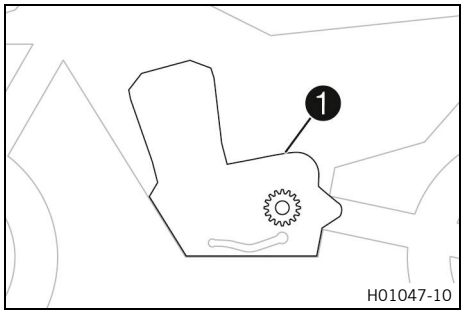
5.3 Key number



The key number ❶ for the lock system can be found on the key card.

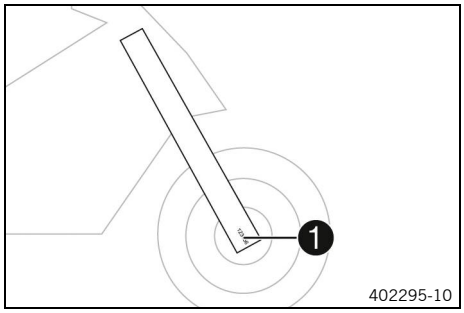
Note
The key number is required to order a spare key and should therefore be kept in a safe place.

5.4 Engine number



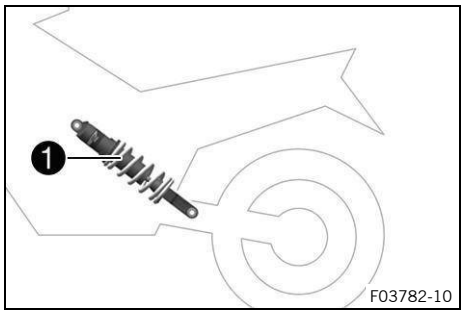
The engine number ❶ is stamped on the right side of the engine.

5.5 Fork part number



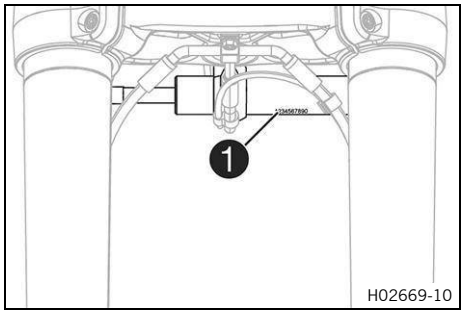
Fork part number ❶ is stamped on the inside of the fork shoe.

5.6 Shock absorber part number



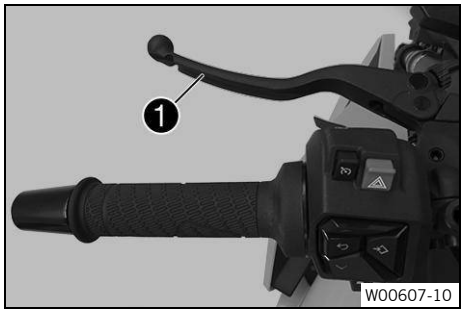
The shock absorber part number ❶ is stamped on the top of the shock absorber.

5.7 Steering damper article number



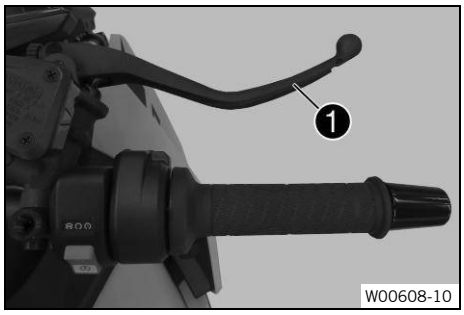
Steering damper article number ❶ is embossed on the underside of the steering damper.

6.1 Clutch lever



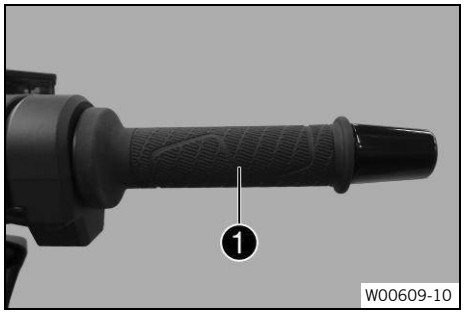
Clutch lever ❶ is fitted on the left side of the handlebar.

6.2 Handbrake lever



Hand brake lever ❶ is fitted on the right side of the handlebar.
The front brake is engaged using the hand brake lever.

6.3 Throttle grip

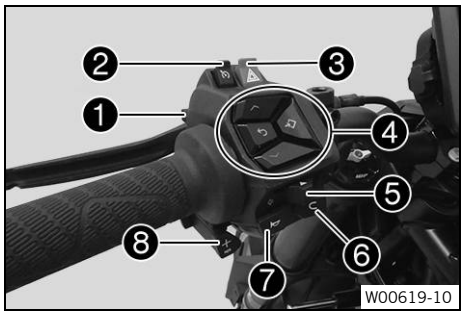


The throttle twist grip ❶ is fitted on the right side of the handlebar.

6.4 Combination switch

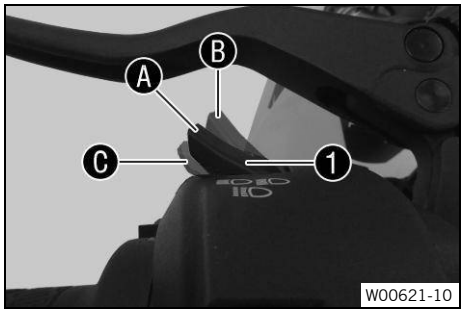
The combination switch is fitted on the left side of the handlebar.

Overview of the left combination switch



❶ Light switch 📖 (p. 20)
❷ Cruise control switches (optional) 📖 (p. 21)
❸ Hazard warning flasher switch 📖 (p. 20)
❹ Menu buttons 📖 (p. 22)
❺ Turn signal switch 📖 (p. 23)
❻ **Custom Switch** display 📖 (p. 40)
❼ Horn button 📖 (p. 23)
❽ **+RES-/–SET** button 📖 (p. 22)

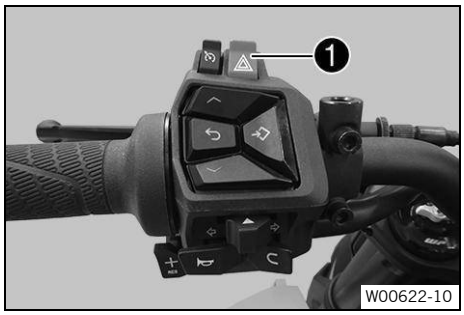
6.5 Light switch



The light switch ❶ is fitted on the combination switch on the left.

Condition		Meaning
	Light switch in position Ⓐ.	In this position, the low beam and the tail light are switched on.
	Light switch in position Ⓑ.	In this position, the high beam and the tail light are switched on.
	Light switch in position Ⓒ.	The headlight flasher is operated in this position.

6.6 Hazard warning flasher switch



The hazard warning flasher switch ❶ is fitted on the right side of the combination switch.

The hazard warning flasher is used to indicate emergency situations.

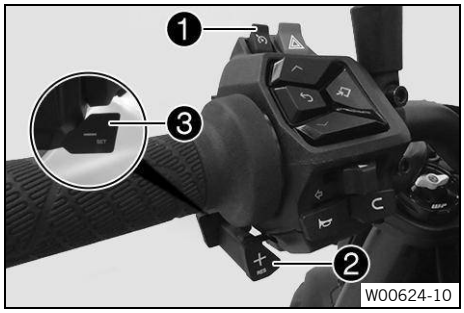
Condition	Meaning
Hazard warning flasher switch △ not activated.	The hazard blinker is off.
Hazard warning flasher switch △ pressed	All four turn signals and the green turn signal indicator lights in the combination instrument flash.

Note

The hazard warning flasher can be activated or deactivated while the ignition is switched on or up to 60 seconds after the ignition is switched off.

Only keep the hazard warning flasher activated as long as necessary as it depletes the 12-V battery.

6.7 Cruise control switches (optional)



Cruise control buttons ❶, ❷ and ❸ are located on the left side of the combination switch.

Condition	Meaning
Cruise control switch in the basic position.	No function.
Press cruise control switch briefly.	Cruise control function is switched on or off. The operating mode is displayed on the combination instrument.
Press cruise control switch **RES/+** briefly.	The last saved speed is reapplied. Every subsequent brief pressing increases the target speed by 1 km/h or 1 mph.
Press and hold cruise control switch **RES/+**.	The target speed increases in increments of 5 km/h or 5 mph.
Press cruise control switch **SET/–** briefly.	The cruise control function is activated and the current speed is maintained. Every subsequent brief press reduces the target speed by 1 km/h or 1 mph.
Press and hold cruise control switch **SET/–**.	The target speed decreases in increments of 5 km/h or 5 mph.

WARNING

Danger of accidents The cruise control system function is not suitable for all riding situations.

The selected cruise speed will not be reached if the engine power is not sufficient for a gradient.

The selected target speed will be exceeded if the engine braking effect is not sufficient on an incline.

– Do not use the cruise control systems function on winding roads.
– Do not use the cruise control systems on slippery road surfaces (e.g. rain, ice or snow), where there is poor visibility or on unpaved surfaces (e.g. sand, stones or gravel).
– Do not use the cruise control systems function if the traffic does not permit a constant speed.

Note

After activating the cruise control function, the throttle grip can be turned back to the basic position. The selected speed will be maintained.

If the cruise speed is exceeded for less than 30 seconds by turning the throttle grip, the cruise control remains activated.

To switch off the cruise control function, push the **cruise control switch** to the left.

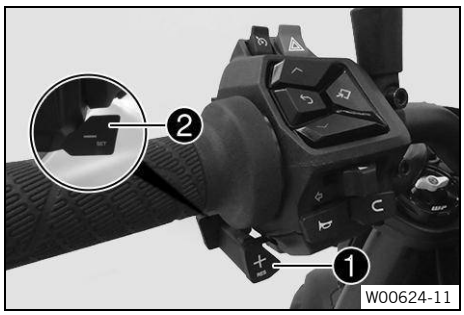
In addition, the cruise control system function is deactivated when one of the following events occurs:

- Operating the handbrake lever
- Operating the foot brake lever
- Operating the clutch lever
- Turning the throttle grip beyond the basic position
- Control of the motorcycle traction control (**MTC**)
- Slip at the rear wheel or lifting front wheel

- A malfunction occurring, which impairs the cruise control system function
- Exceeding the target speed for more than 30 seconds when overtaking

The cruise control system function is only available when motorcycle traction control (**MTC**) is activated.
When motorcycle traction control (**MTC**) is switched off, the cruise control system function is also switched off.
With the cruise control system function active, menu items **Ride Mode**, **Throttle Response**, and **Track** are not available.
The cruise control system function cannot be activated during rapid acceleration.
The cruise control function can only be activated in 2nd, 3rd, 4th, 5th and 6th gear.
The control range is from 30 to 160 km/h or from 18 to 100 mph.

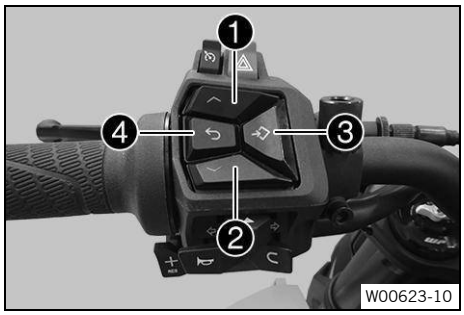
6.8 +RES-/–SET button



The **+RES** button ❶ is fitted on the front left of the handlebar.
The **–SET** button ❷ is fitted on the rear left of the handlebar.

Note
The **+RES** and **–SET** buttons are used to control the cruise control when the cruise control function is activated.
If the cruise control function is deactivated, the **+RES** and **–SET** buttons in the main display or in the **Slip Adjuster** menu can be used to adjust the **Slip Adjuster**.

6.9 Menu buttons



The menu buttons are fitted in the middle of the left combination switch.
The menu buttons are used to control the display on the combination instrument.
Button ❶ is the **UP** button.
Button ❷ is the **DOWN** button.
Button ❸ is the **SET** button.
Button ❹ is the **BACK** button.

6.10 Turn signal switch



Turn signal switch ❶ is fitted on the left side of the handlebar.

Condition		Meaning
⇦	Turn signal switch pressed to the left.	Left turn signal on.
⇨	Turn signal switch pressed to the right.	Right turn signal on.

To switch off the turn signal, press turn signal switch ❶ towards the switch case.

Note

An automatic turn signal switch-off function (**ATIR**) is available as a software feature.

The **ATIR** function uses a time and distance counter.

If the turn signal has been on for at least 10 seconds and 150 meters of riding distance, the turn signal is switched off.

If the vehicle is stationary, both counters are stopped.

If the turn signal switch is reactivated, both counters are reset.

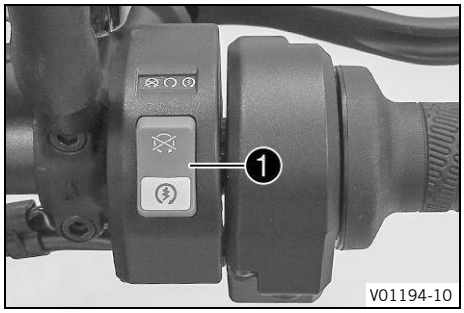
6.11 Horn button



Horn button ❶ is fitted on the left side of the handlebar.

Condition	Meaning
Horn buttons in the basic position	No function
Horn buttons pressed	The horn is operated in this position.

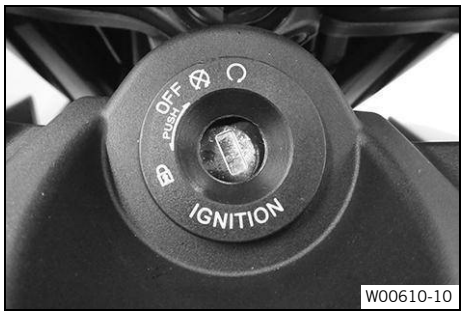
6.12 Start button/kill switch



The start button/kill switch ❶ is fitted on the right side of the combination switch.

Condition		Meaning
	Start button/kill switch off (upper position)	In this position, the ignition circuit is interrupted, a running engine stops, and cannot be started. A message appears on the display.
	Start button/kill switch on (middle position)	This position is required for operation; the ignition circuit is closed.
	Starter motor on (lower position)	In this position, the starter motor is actuated.

6.13 Ignition and steering lock



The ignition and steering lock is located in front of the upper triple clamp.

Condition		Meaning
	Ignition off	In this position, the ignition circuit is interrupted, a running engine stops, and an engine at a standstill will not start. The ignition key can be removed.
	Ignition on	In this position, the ignition circuit is closed, and the engine can be started.
	Steering locked	In this position, the ignition circuit is interrupted and the steering locked. The ignition key can be removed.

6.14 Opening the fuel tank cap

DANGER

Fire hazard Fuel is highly flammable.

The fuel in the fuel tank expands when warm and can escape if overfilled.

- Do not refuel the vehicle in the vicinity of open flames, glowing, or smoldering objects.
- Make sure that nobody smokes in the vicinity of the vehicle during the refueling process.
- Switch off the engine for refueling.
- Make sure that no fuel is spilled; particularly not on hot parts of the vehicle.
- If any fuel is spilled, wipe it up immediately.
- Do not overfill the fuel tank.

WARNING

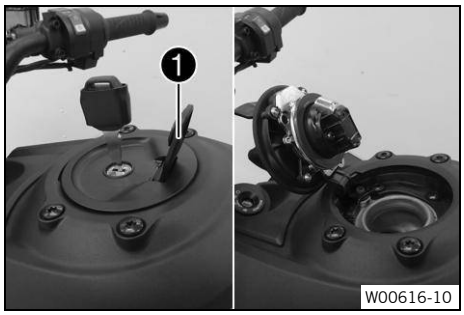
Danger of poisoning Fuel is harmful to health.

- Do not allow fuel to come into contact with skin, eyes, or clothing.
- Consult a doctor immediately if fuel has been ingested.
- Do not inhale fuel vapors.
- Rinse the affected area immediately with plenty of water in the event of contact with skin.
- Rinse eyes thoroughly with water and consult a doctor immediately if fuel comes into contact with eyes.
- If fuel spills on to your clothing, change the clothing.
- Store fuel properly in a suitable container and keep out of the reach of children.

NOTE

Environmental hazard Improper handling of fuel is dangerous to the environment.

- Do not allow fuel to enter the groundwater, the soil, or the sewage system.



- Lift cover ❶ of the fuel tank filler cap and insert the ignition key into the lock.

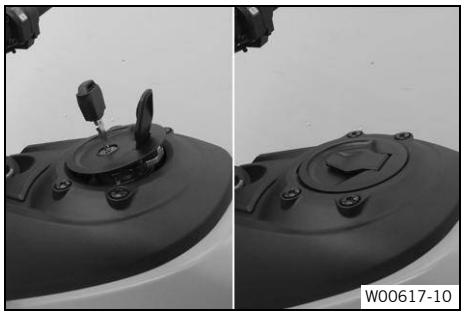
NOTE

Danger of damage The ignition key may break if overloaded.

- Push down on the fuel tank filler cap to take pressure off the ignition key.

- Turn the ignition key 90° clockwise.
- Lift the fuel tank filler cap.

6.15 Closing the fuel tank cap



- Fold down the fuel tank filler cap.
- Turn the ignition key 90° clockwise.
- Push down the fuel tank filler cap and turn the ignition key counterclockwise until the lock closes.

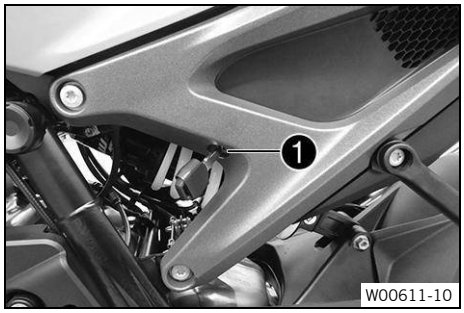
WARNING

Fire hazard Fuel is highly flammable and a health hazard.

- Check that the fuel tank filler cap is locked correctly after closing.
- If fuel spills on to your clothing, change the clothing.
- Rinse the affected area immediately with plenty of water in the event of contact with skin.

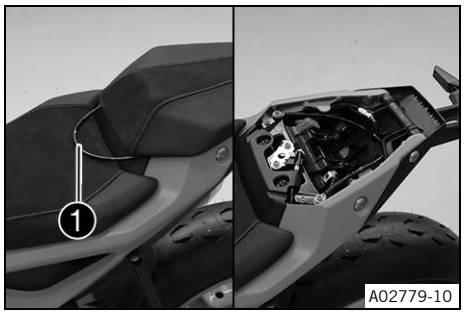
- Remove the ignition key and close the cover.

6.16 Seat lock



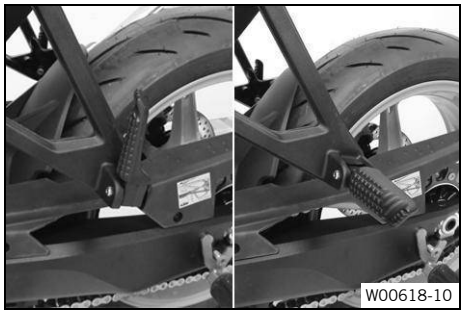
The seat lock ❶ is on the left-hand side of the vehicle.
The seat lock can be locked with the ignition key.

6.17 Passenger strap



The passenger strap ❶ is located under the passenger seat and is used for maneuvering the motorcycle.
If you carry a passenger, the passenger can hold onto the grab handles during the trip.
If the passenger strap is not needed, it can be stowed underneath the passenger seat.

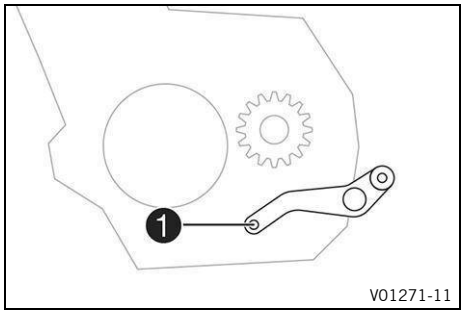
6.18 Passenger footpegs



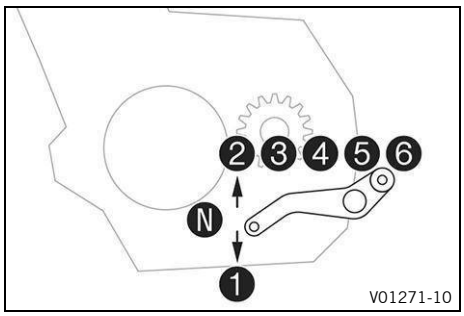
The passenger foot pegs can be folded up and down.

Condition	Meaning
Passenger foot pegs folded up	For operation without a passenger (solo).
Passenger foot pegs folded down	For operation with a passenger.

6.19 Gear shift lever

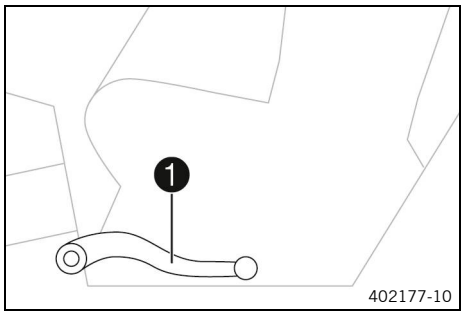


Gear shift lever ❶ is mounted on the left of the engine.



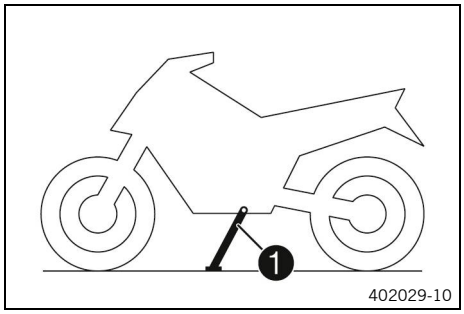
The gear positions can be seen in the figure.
The neutral or idle position is between the first and second gears.

6.20 Brake pedal



Brake pedal ❶ is located in front of the right footpeg.
The rear brake is operated with the brake pedal.

6.21 Side stand



The side stand ❶ is located on the left of the vehicle.
The side stand is used for parking the motorcycle.

Condition	Meaning
Side stand folded out	The vehicle can be supported on the side stand. The safety starting system is active.
Side stand folded in	This position is mandatory when riding the motorcycle. The safety starting system is inactive.

Note
The side stand must be folded up during motorcycle use.
The side stand is coupled with the safety starting system.
See the instructions in the section on “Stopping, parking”.

7.1 dashboard



The combination instrument is attached in front of the handlebar.
The combination instrument is divided into two function areas.

❶ indicator lamps (p. 30)
Display ❷

CAUTION
Danger of burns Parts of the combination instrument become hot in certain situations.
The display in particular can heat up considerably at ambient temperatures above 55 °C (131 °F) during long periods of inactivity, e.g. at traffic lights, or in direct sunlight.
– Do not touch the combination instrument with bare hands in the situations referred to.
– Where appropriate protective clothing.
– In the event of burns, rinse the area affected immediately with lukewarm water.

7.2 demo mode

7.2.1 Activation



Demo mode is activated in the factory and allows you to test optional software functions.
Once a distance has been covered, demo mode is automatically deactivated as soon as the ignition is turned off.

Distance until demo mode is deactivated	1,500 km (932.1 mi)

The demo modes are shown in area ❶ of the display.

Note

Notifications about the remaining distance until the demo mode is deactivated are displayed at regular intervals.

All optional software functions will be deactivated and no longer displayed when demo mode ends. The optional software features are available from authorized dealers.

Functions included in demo mode

- **TECH PACK** including riding mode **TRACK**, MTC+MSR, deactivatable **ABS** on the rear wheel, adjustable characteristics of the throttle response, adjustable motorcycle traction control
- **QUICKSHIFTER+**
- **ETTC**
- Cruise control

7.3 activation and testing

7.3.1 Activation



The dashboard is switched on with the ignition.

Note

The brightness of the displays is controlled by an ambient light sensor in the combination instrument.

7.3.2 Test

The welcome text appears on the display and all the indicator lights are briefly activated for a function check.

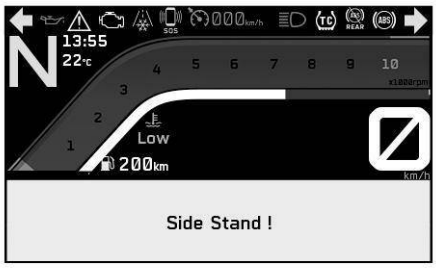
Note

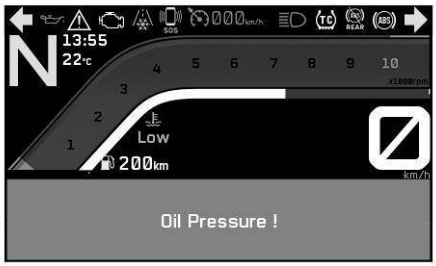
The malfunction indicator lamp always lights up as long as the engine is not running. If the engine is running and the failure indicator light lights up, stop (taking care not to endanger yourself or other road users in the process) and contact an authorized dealer.

The oil pressure warning lamp always lights up as long as the engine is not running. If the engine is running and the oil pressure warning lamp lights up, stop immediately (taking care not to endanger yourself or other road users in the process) and switch off the engine.

The ABS warning lamp and TC indicator lamp light up until a speed of approx. 6 km/h (approx. 4 mph) or faster has been reached.

7.4 warnings





I00700-10

Warnings appear in the middle of the display; these are marked yellow or red depending on their relevance.

Yellow warnings indicate a malfunction or information which requires prompt intervention or an adjustment to the riding style.

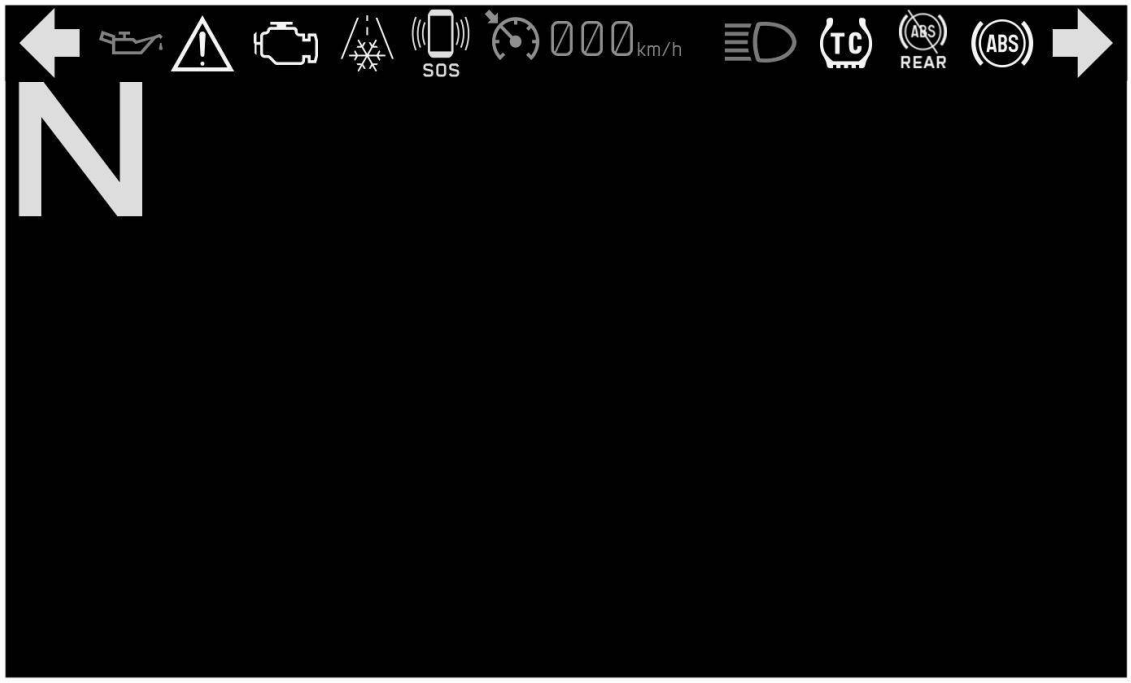
Red warnings indicate a malfunction or information which requires immediate intervention.

Note

Warnings can be hidden by pressing any button.

All the existing warnings are displayed in the **Warning** submenu until they are no longer active.

7.5 indicator lamps



I00701-10

The indicator lamps offer additional information about the operating state of the motorcycle.

When the ignition is switched on, all indicator lamps light up briefly, except for the TC indicator lamp .

Note

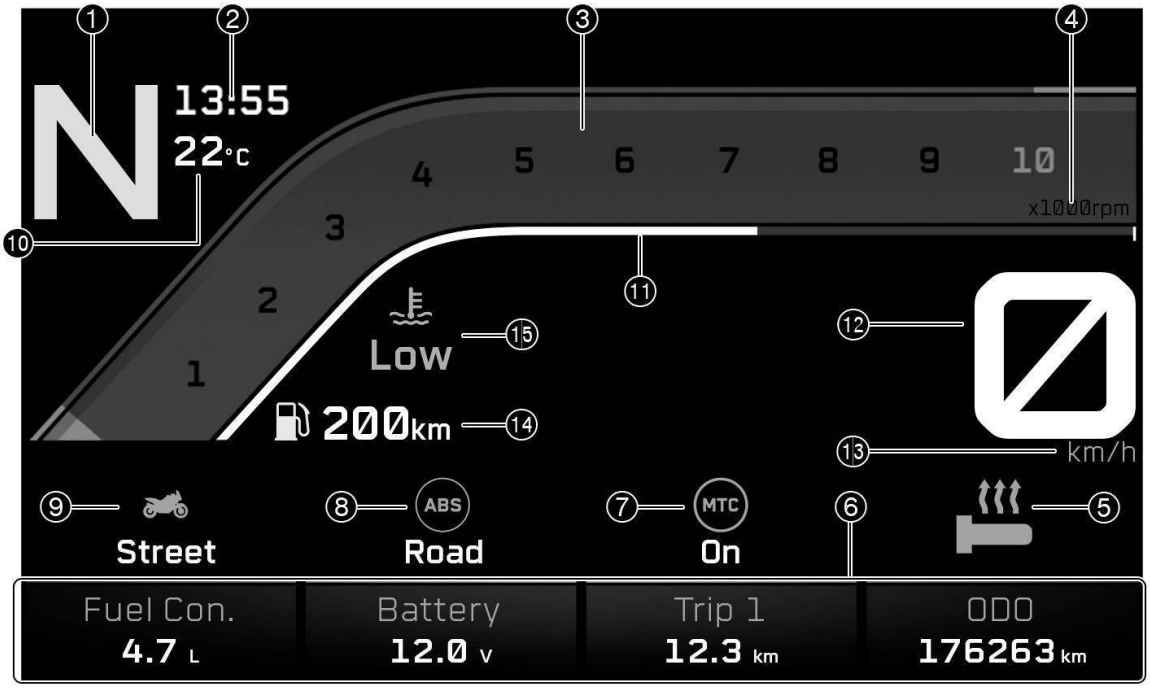
The malfunction indicator lamp always lights up as long as the engine is not running. If the engine is running and the failure indicator light lights up, stop (taking care not to endanger yourself or other road users in the process) and contact an authorized dealer.

The oil pressure warning lamp always lights up as long as the engine is not running. If the engine is running and the oil pressure warning lamp lights up, stop immediately (taking care not to endanger yourself or other road users in the process) and switch off the engine.

The ABS warning lamp and TC indicator lamp light up until a speed of approx. 6 km/h (approx. 4 mph) or faster has been reached.

Condition		Meaning
	The turn signal indicator light flashes green with a steady blinking interval	The turn signal is switched on.
	The malfunction indicator light lights up yellow	The **OBD** has detected a malfunction in the vehicle electronics. Come safely to a halt, and contact an authorized dealer.
	ABS warning light lights up yellow	Status or error messages relating to **ABS**.
	The ABS rear warning light lights up yellow	**ABS** is deactivated on the rear wheel.
	The idle indicator lamp lights up green	The transmission is in the neutral position.
	TC indicator lamp lights up/flashes yellow	**MTC** is not enabled or is currently intervening. The TC indicator lamp also lights up if a malfunction is detected. Contact an authorized contractual partner. The TC indicator lamp flashes if **MTC** makes an active intervention.
	The oil pressure warning light lights up red	The oil pressure is too low. Stop immediately, taking care not to endanger yourself or other road users in the process, and switch off the engine.
	The alarm system indicator lamp lights up or flashes red	Status or error message of the alarm system.
	The cruise control system indicator lamp (optional) lights up yellow	The cruise control system function is switched on, but cruise control is not activated.
	The cruise control system indicator lamp (optional) lights up green	The cruise control system function is switched on and cruise control is activated.
	The high beam indicator lamp lights up blue	The high beam is switched on.
	General warning light lights up yellow	A note/warning note on operating safety has been detected. This is also shown in the display.
	Ice warning is active on the display.	The warning lamp lights up when there is increased risk of icy roads.

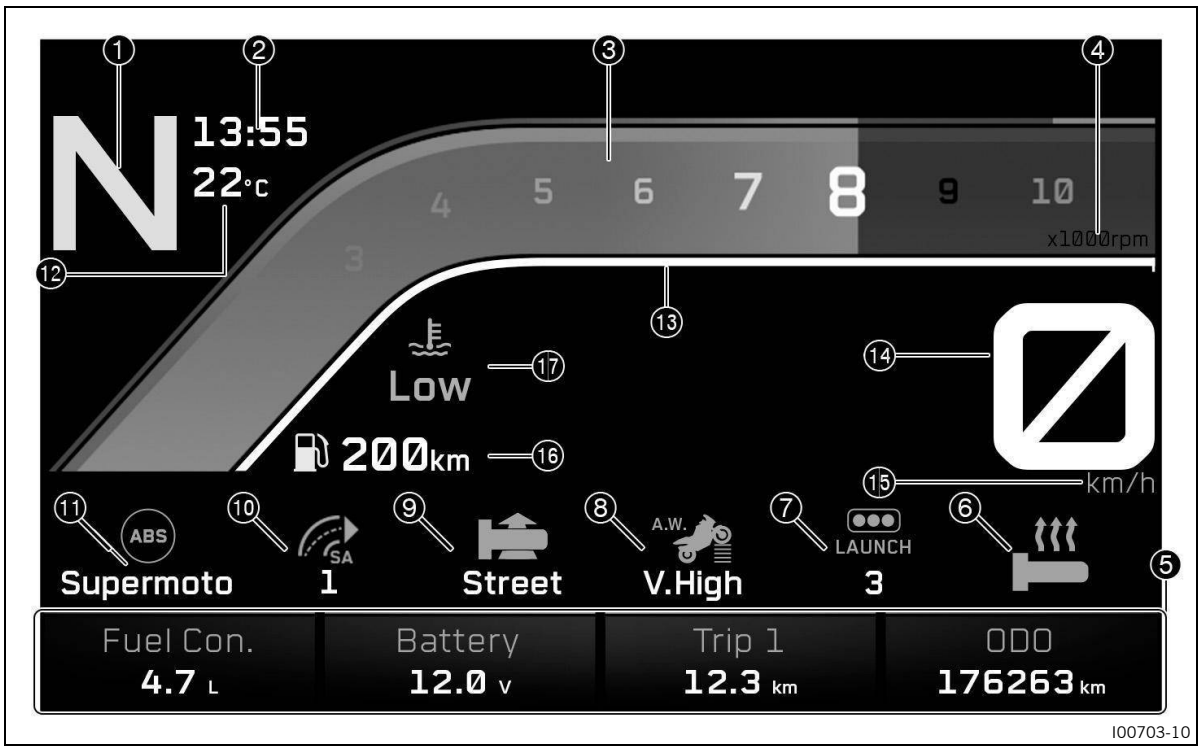
7.6 Display



1. Gear display
2. time (p. 37)
3. speed (p. 35)
3. shift light (p. 36)
   The shift light is integrated in the rpm gauge display.
4. Unit for the engine speed display
5. heated grip (optional) (p. 39)
6. **Favorites** display (p. 39)
7. **MTC** display (p. 38)
8. **ABS** display (p. 38)
9. **Ride–Mode** display (p. 37)
10. ambient air temperature indicator (p. 37)
11. fuel level display (p. 39)
12. speed display (p. 36)
13. Unit of speed
14. Fuel range display
15. coolant temperature indicator (p. 38)

7.7 Performance Display (optional)

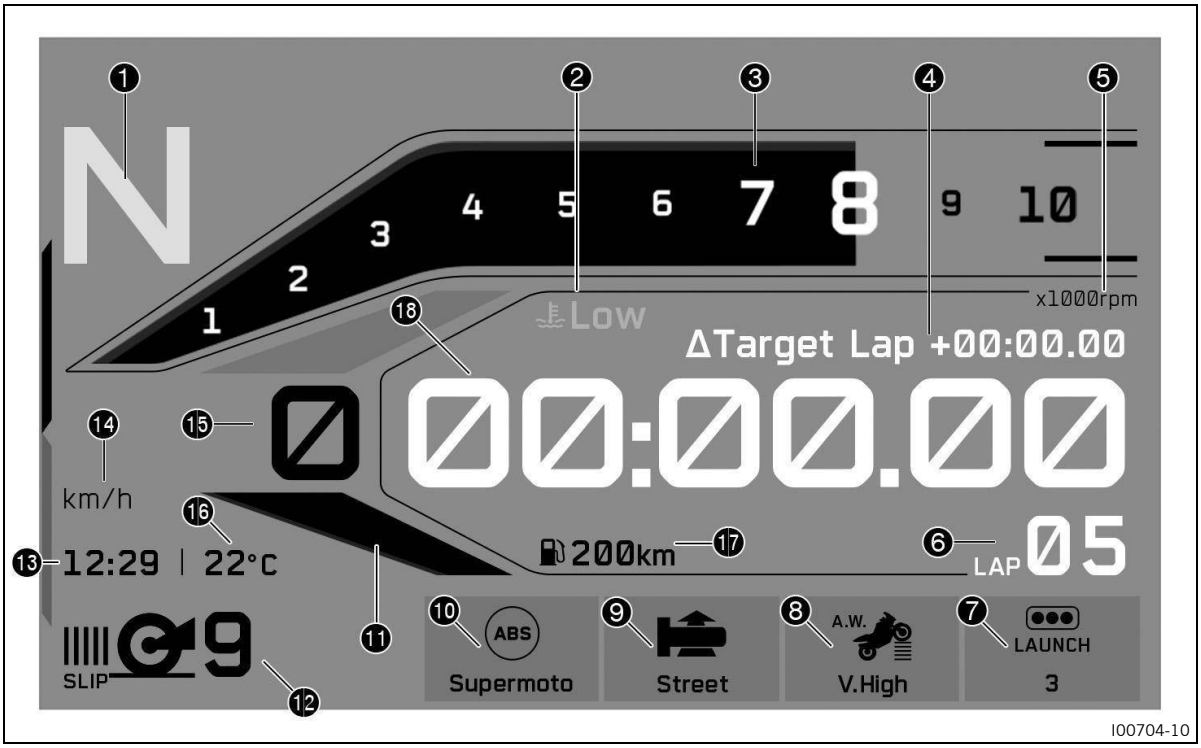
Note
The figure shows the start screen of the combination instrument in active riding mode **Performance** (optional). If the menu is open, the speed and the selected gear are still displayed.



1. Gear display
2. time (p. 37)
3. speed (p. 35)
3. shift light (p. 36)
   The shift light is integrated in the rpm gauge display.
4. Unit for the engine speed display
5. **Favorites** display (p. 39)
6. heated grip (optional) (p. 39)
7. Launch control (optional)
8. Anti Wheelie Mode (optional)
9. Throttle Response (optional)
10. Spin Adjuster (optional)
11. **ABS** display (p. 38)
12. ambient air temperature indicator (p. 37)
13. fuel level display (p. 39)
14. speed display (p. 36)
15. Unit of speed
16. Fuel range display
17. coolant temperature indicator (p. 38)

7.8 Track display (optional)

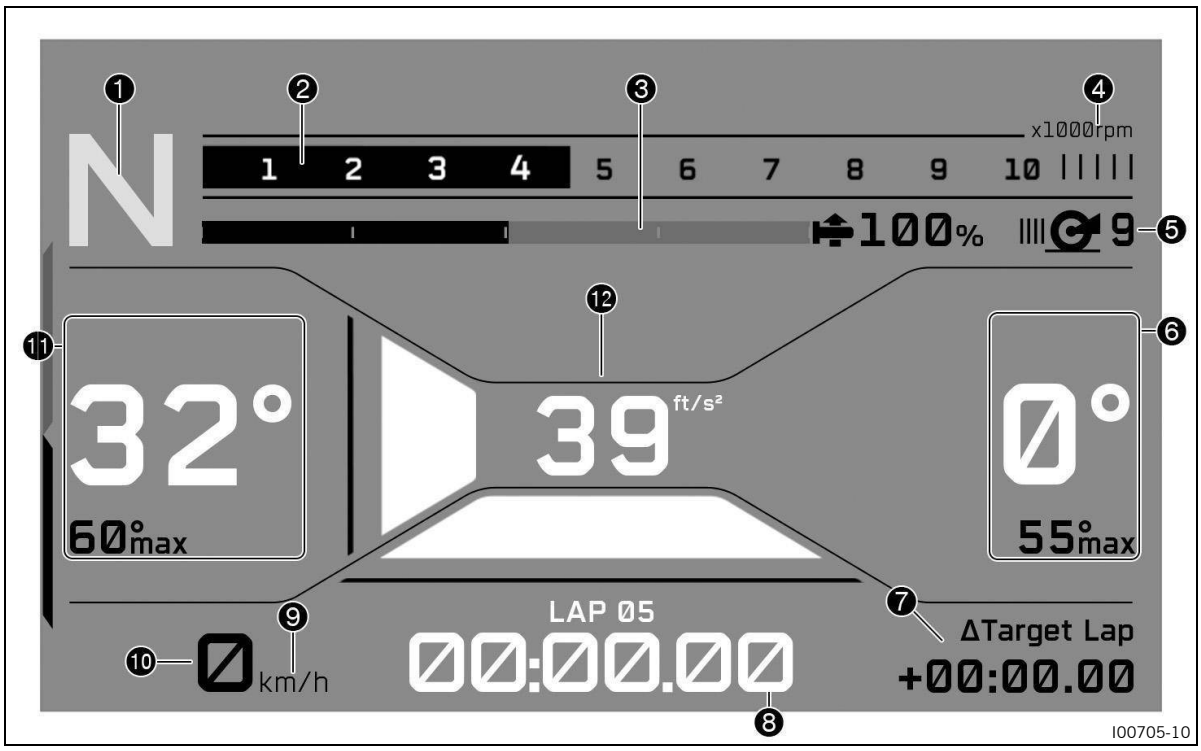
Note
The figure shows the start screen of the combination instrument in active riding mode **TRACK** (optional). If the menu is open, the speed and the selected gear are still displayed.



1. Gear display
2. coolant temperature indicator (p. 38)
3. speed (p. 35)
3. shift light (p. 36)
   The shift light is integrated in the rpm gauge display.
4. Delta for target lap, best lap or last lap
5. Unit for the engine speed display
6. Lap indicator
7. Launch control (optional)
8. Anti Wheelie Mode (optional)
9. Throttle Response (optional)
10. **ABS** display (p. 38)
11. fuel level display (p. 39)
12. Spin Adjuster (optional)
13. time (p. 37)
14. Unit of speed
15. speed display (p. 36)
16. ambient air temperature indicator (p. 37)
17. Fuel range display
18. Lap Time (optional)

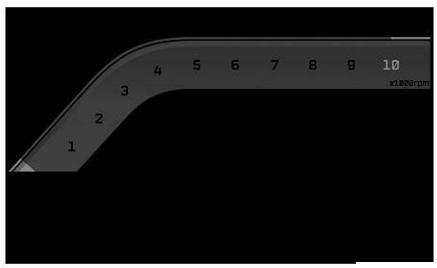
7.9 Telemetry Display (optional)

Note
The figure shows the start screen of the combination instrument in active riding mode **TRACK** (optional). If the menu is open, the speed and the selected gear are still displayed.



1. Gear display
2. speed (p. 35)
2. shift light (p. 36)
   The shift light is integrated in the rpm gauge display.
3. Throttle Response (optional)
4. Unit for the engine speed display
5. Spin Adjuster (optional)
6. Lean Angle Right (optional)
7. Delta for target lap, best lap or last lap
8. Lap Time (optional)
9. Unit of speed
10. speed display (p. 36)
11. Lean Angle Left (optional)
12. Acceleration Indicator (optional)

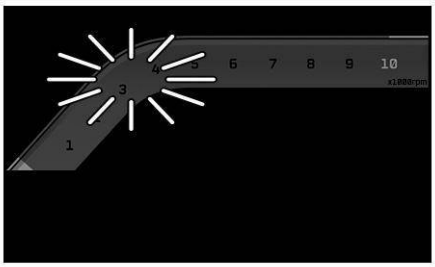
7.10 speed

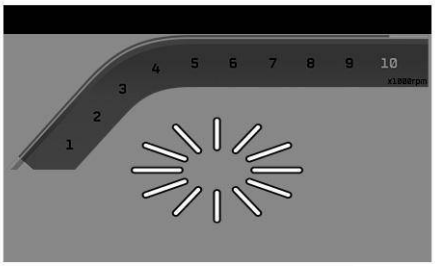


I00706-10

The engine speed is displayed in revolutions per minute.

7.11 shift light





I00707-10

The shift warning light is integrated in the display.

In the **Shift Light** submenu, the engine speed for the shift warning light can be set. During the run-in time (up to 1000 km / 621 miles), the shift light is always active. The shift warning light can only be deactivated, and the values for **RPM1** and **RPM2** can only be adjusted after this. At **RPM1**, the engine speed display flashes and at **RPM2**, the display flashes.

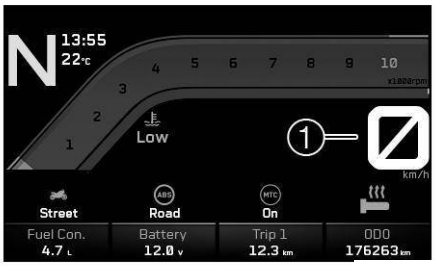
Note

After the first service, the shift warning light is deactivated when the engine is warm and in sixth-gear.

Coolant temperature	≤ 35 °C (≤ 95.0 °F)
ODO	< 1,000 km (< 621.4 mi)
The shift warning light always flashes at	6,500 rpm (108.33 Hz)

Coolant temperature	> 35 °C (> 95.0 °F)
ODO	> 1,000 km (> 621.4 mi)
RPM1 shift warning light	Rpm bar flashes
RPM2 shift warning light	Display flashes

7.12 speed display



I00709-10

The speed is shown in area ❶ of the display.

Speed is shown in kilometers per hour **km/h** or in miles per hour **mph**.

The unit of speed can be configured in the **Distance** submenu.

7.13 cruise control indicator (optional)



I00710-10

The operating state of the active cruise control is shown in the area ❶ of the display.

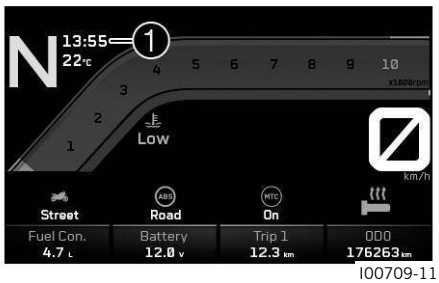
Cruise control is operated using the cruise control tip switch.

Note

If the cruise control system function is switched on but cruise control is not activated, the cruise control system indicator lamp lights up yellow.

If the cruise control system function is switched on and cruise control is activated, the cruise control system indicator lamp lights up green.

7.14 time



I00709-11

The time is shown in area ❶ of the display.

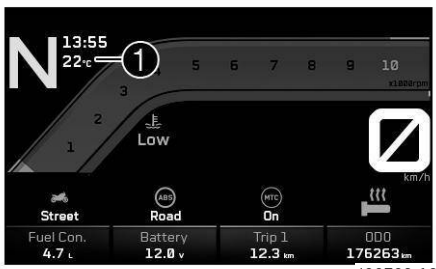
The time can be displayed in 24-hour format or 12-hour format in all languages.

The format of the time can be configured in the **Clock Format** menu.

Note

The time must be reset if the 12 V battery was disconnected from the vehicle or the fuse was removed.

7.15 ambient air temperature indicator



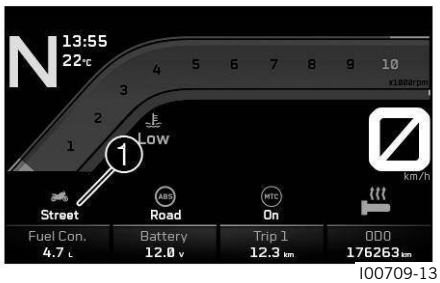
I00709-12

The ambient temperature is shown in area ❶ of the display.

The ambient air temperature is displayed in **°C** or **°F**.

The unit of the ambient air temperature can be configured in the **Temperature** submenu.

7.16 Ride–Mode display

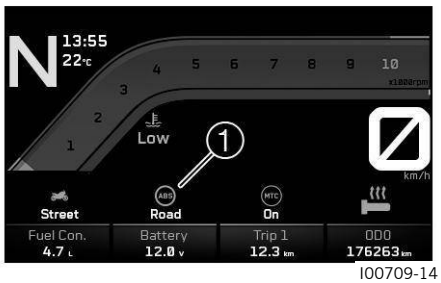


I00709-13

The **Ride Mode** (p. 140) setting is shown in area ❶ of the display.

The drive mode can be configured in the **Ride Mode** submenu.

7.17 ABS display



I00709-14

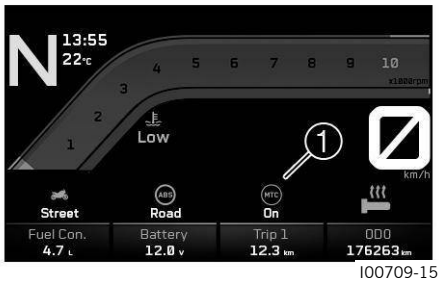
The ABS mode setting is shown in the ❶ area of the display.
ABS can be configured separately in the **ABS** submenu.

Note

When the ABS mode **Road** is active, ABS controls both wheels.

When the **Supermoto** ABS mode is active, ABS only controls the front wheel. The rear wheel is not controlled by ABS and may lock during braking maneuvers.

7.18 MTC display

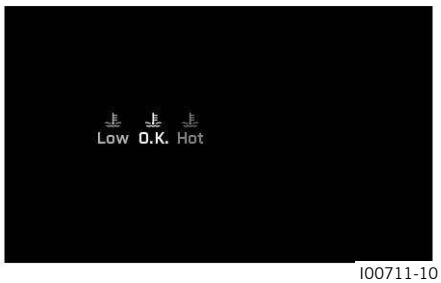


I00709-15

The ❶ area of the display indicates whether **MTC** (p. 141) is switched on or off.

The motorcycle traction control can be switched on or off in the **MTC** submenu.

7.19 coolant temperature indicator



I00711-10

The coolant temperature is displayed by a symbol. The symbol changes between **LOW**, **OK** and **HOT** depending on the temperature.

NOTE

Engine failure Overheating damages the engine.

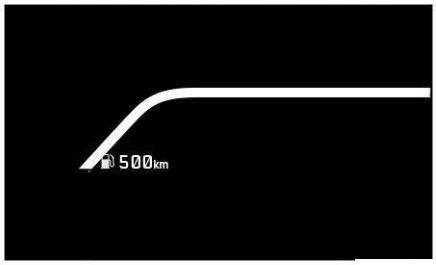
- If the coolant temperature warning is displayed, stop immediately and take care not to endanger yourself or other traffic participants in the process.
- Allow the engine and cooling system to cool down.
- Check and, if necessary, correct the coolant level on the cooling system while it is in a cooled state.

Note

If the coolant temperature indicator shows **HOT**, the display also starts to flash and a warning is displayed.

If the cooling system overheats, the maximum engine speed is limited.

7.20 fuel level display



I00712-10

The fuel level display consists of the fuel range display and a bar. The higher the bar is filled, the more fuel there is in the fuel tank.

Note

If the fuel level is getting low, the last segment flashes red and the following warning **LOW FUEL** also appears.

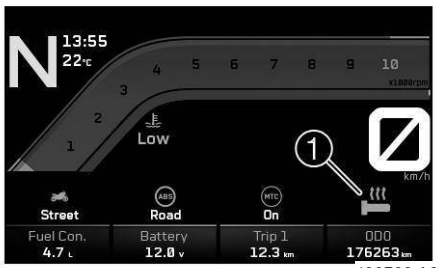
The fuel level is displayed with a slight delay to prevent the indicator from constantly moving while riding.

The fuel level display is not updated while the side stand is folded out or the emergency OFF switch is switched off.

Once the side stand is folded up and the kill switch is switched on, the fuel level display is next updated after 2 minutes.

The fuel level display flashes if the combination instrument does not receive a signal from the fuel level sensor.

7.21 heated grip (optional)

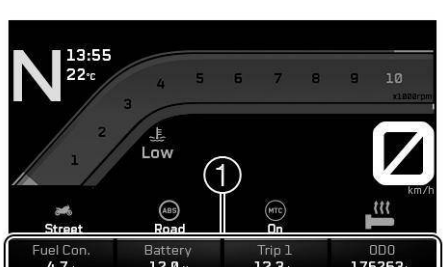


I00709-16

The status of the heated grip is shown in area ❶ of the display.

The grip heater can be configured in sub-menu **Heated Grips**.

7.22 Favorites display

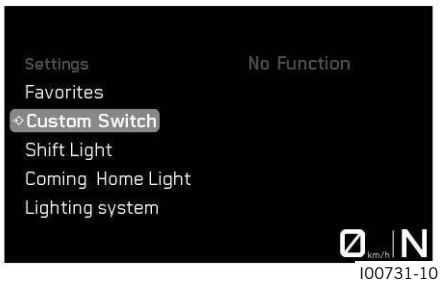


I00709-17

Up to four items of information are displayed in the **Favorites** display ❶.

The **Favorites** display can be freely configured in the **Favorites** submenu.

7.23 Custom Switch display

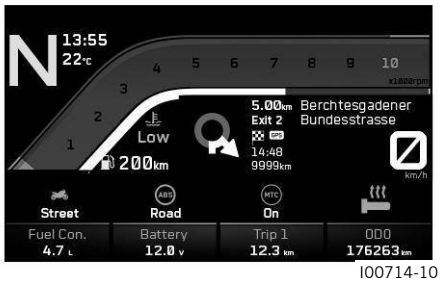


I00731-10

Pressing the **C** button calls up the configured menu.
Press the **BACK** button to close the **Custom Switch** display.

Note
The **Custom Switch** display can be configured in the **Settings** menu under **Custom Switch**. Any information can be selected.

7.24 Navigation display (optional)

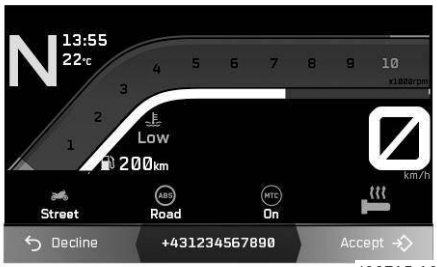


I00714-10

The **Navigation** indicator (optional) appears when the navigation function is activated.
In the **Navigation** display (optional), the direction arrow, the distance from the destination, the estimated arrival time of the cell phone, the distance to the next waypoint, and the street name are displayed.
The **Navigation** display (optional) can be switched on or off in the **Navigation** submenu (optional).

Conditions for use:
- The dashboard is connected to a suitable cell phone.
- The **KTMconnect** app (optional) is installed and connected on a suitable cell phone (Android devices from version 7.0, iOS devices from version 14).

7.25 Call display



I00715-10

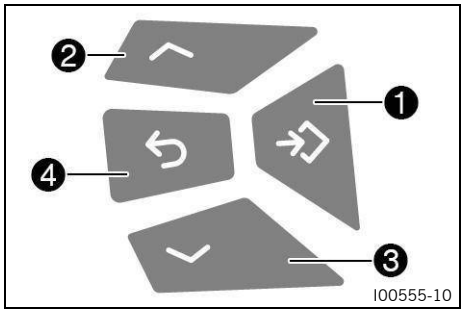
WARNING
Danger of accidents Headphone volume which is too high distracts attention from traffic activity.
– Always select headphone volume which is low enough for you to still clearly hear acoustic signals.

The **Call** indicator appears for incoming or active calls.
Press the **SET** button to accept an incoming call.
Press the **BACK** button to reject an incoming call.
Press the **UP** button to increase the audio volume.
Press the **DOWN** button to reduce the audio volume.

Note
It is not possible to change the audio volume using the combination switch with every cell phone.
The call duration and contact are displayed. Depending on the cell phone settings, the contact is shown by name.
You cannot navigate in the menu during an active phone conversation.

Condition for use:
- The dashboard is connected to a suitable cell phone.

7.26 Menu



Note

Press the **SET** button ❶ on the start screen to open the menu.

Navigate through the menu using the **UP** button ❷ or the **DOWN** button ❸.

By pressing the **BACK** button ❹, the menu structure jumps one step back, or the menu is closed.

7.26.1 Lap timer

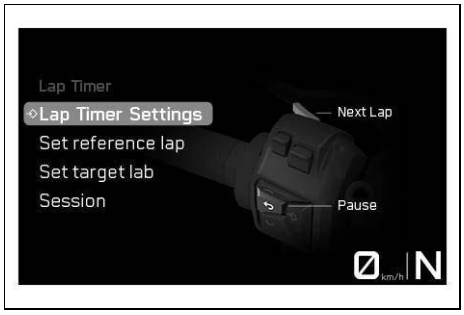


Condition: Ride mode **TRACK** activated

– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Lap Timer** is highlighted. Pressing the **SET** button opens the menu.

The timed laps can be displayed and reference laps can be set in the **Lap Timer** menu.

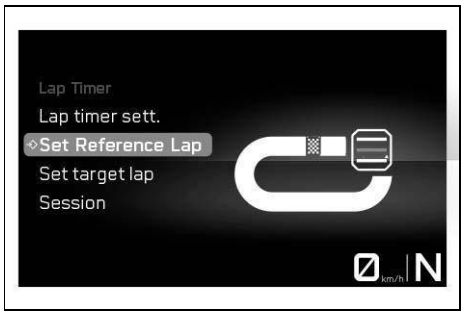
7.26.2 Lap Timer settings



Condition: Ride mode **TRACK** activated

– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Lap Timer** is highlighted. Pressing the **SET** button opens the menu.
– Press the **UP** or **DOWN** button until **Lap Timer Settings** is highlighted. **Lap Timer** can be switched on and off.

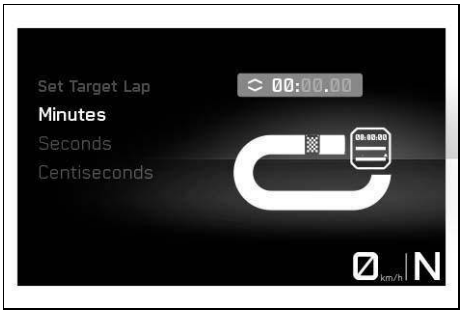
7.26.3 Set Reference Lap



Condition: Ride mode **TRACK** activated

– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Lap Timer** is highlighted. Pressing the **SET** button opens the menu.
– Press the **UP** or **DOWN** button until **Set Reference Lap** is highlighted. A reference lap can be set.

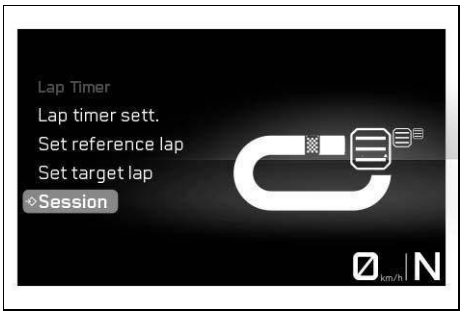
7.26.4 Set Target Lap Time



Condition: Ride mode **TRACK** activated

– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Lap Timer** is highlighted. Pressing the **SET** button opens the menu.
– Press the **UP** or **DOWN** button until **Set Target Lap Time** is highlighted. A target lap can be set.

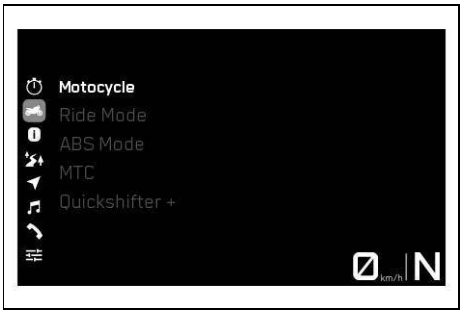
7.26.5 Session



Condition: Ride mode **TRACK** activated

– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Lap Timer** is highlighted. Pressing the **SET** button opens the menu.
– Press the **UP** or **DOWN** button until **Session** is highlighted. All lap times are displayed here.

7.26.6 Motorcycle



– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Motorcycle** is highlighted. Pressing the **SET** button opens the menu.

In **Motorcycle**, motorcycle-relevant settings can be found, such as the ride mode, ABS mode, Spin Adjuster and MTC.

7.26.7 Ride Mode



– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Motorcycle** is highlighted. Pressing the **SET** button opens the menu.

WARNING

Danger of accidents An incorrectly selected ride mode makes it more difficult to control the vehicle.

The riding modes are each only suitable for certain conditions.

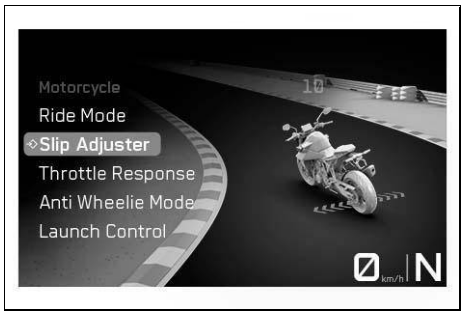
– Always select a riding mode that suits the surface on which you are riding, the weather and the riding situation.

– Press the **UP** or **DOWN** button until **Ride Mode** is highlighted. Press the **SET** button to open the submenu.
– Activate the menu item using the **UP** or **DOWN** button.

– Press the **SET** button to select the riding mode, which changes coordinated settings for the engine and motorcycle traction control.
  - ✓ **Street** - Homologated performance with balanced response; the Motorcycle Traction Control allows normal slip on the rear wheel.
  - ✓ **Rain** - Reduced homologated performance for better ridability; the Motorcycle Traction Control allows less slip on the rear wheel.
  - ✓ **Sport** - Homologated performance with very direct response; the Motorcycle Traction Control allows greater slip on the rear wheel.
  - ✓ **Track** (optional) - Response and Motorcycle Traction Control can be adjusted individually.
  - ✓ **Performance** (optional) - Response and Motorcycle Traction Control can be adjusted individually.

The ride mode can be configured in submenu **Ride Mode**.

7.26.8 Slip Adjuster (optional)



Condition: Ride mode **Track** (optional) or **Performance** (optional) is activated, **MTC+MSR** (optional) is activated

– Press the **SET** button when the menu is closed.

WARNING

Danger of accidents An incorrectly selected ride mode makes it more difficult to control the vehicle.

The riding modes are each only suitable for certain conditions.

– Always select a riding mode that suits the surface on which you are riding, the weather and the riding situation.

– Press the **UP** or **DOWN** button until **Motorcycle** is marked on the display. Pressing the **SET** button opens the menu.
– Press the **UP** or **DOWN** button until **Slip Adjuster** is highlighted. Press the **SET** button to open the submenu.
– Activate the menu item using the **UP** or **DOWN** button.
– Press the **SET** button to set the maximum permitted slip for the motorcycle traction control.

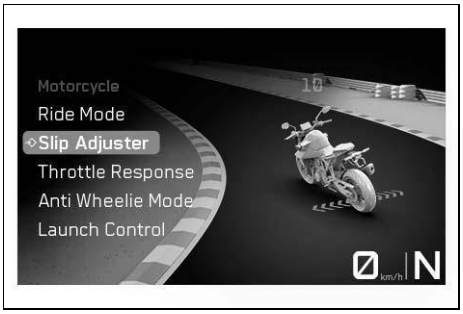
Do not open the throttle during the selection.

The spin adjuster is a motorcycle traction control function.

The slip adjustment allows the motorcycle traction control to be tuned through nine levels to the desired characteristic map.

Level 0 allows maximum slip on the rear wheel, and level 9 allows the minimum.

If the cruise control function is deactivated, buttons **UP** and **DOWN** or buttons **+RES** and **–SET** in the main display or in sub-menu **Slip Adjuster** can be used to set **Slip Adjuster**.



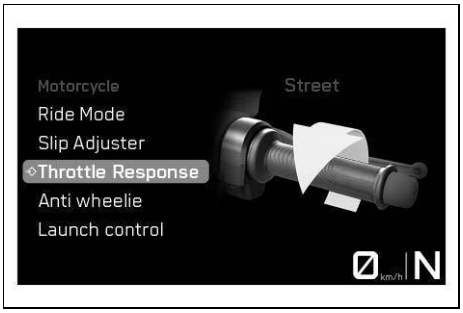
Note

The Spin Adjuster is only available in ride mode **Track** (optional) or **Performance** (optional).

The spin adjuster is only available when motorcycle traction control is activated.

– Press and hold the **DOWN** button or **–SET** button for approximately 2 seconds.	Slip adjustment level 0 is activated.

7.26.9 Throttle Response (optional)



Condition: Ride mode **Track** (optional) or **Performance** (optional) is activated

– Press the **SET** button when the menu is closed.

WARNING

Danger of accidents An incorrectly selected ride mode makes it more difficult to control the vehicle.

The riding modes are each only suitable for certain conditions.

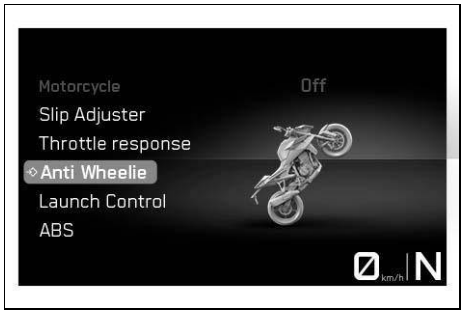
– Always select a riding mode that suits the surface on which you are riding, the weather and the riding situation.

– Press the **UP** or **DOWN** button until **Motorcycle** is marked on the display. Pressing the **SET** button opens the menu.
– Press the **UP** or **DOWN** button until **Throttle Response** is marked on the display. Press the **SET** button to open the submenu.
– Activate the menu item using the **UP** or **DOWN** button.
– The characteristic map of the throttle response can be adjusted by pressing the **SET** button.

Do not open the throttle when adjusting the throttle response.

✓ Street – balanced response.
✓ Sport – extremely direct response.
✓ Track – very direct response.

7.26.10 Anti wheelie mode (optional)



Condition: Ride mode **Track** (optional) or **Performance** (optional) is activated

– Press the **SET** button when the menu is closed.

WARNING

Danger of accidents An incorrectly selected ride mode makes it more difficult to control the vehicle.

The riding modes are each only suitable for certain conditions.

– Always select a riding mode that suits the surface on which you are riding, the weather and the riding situation.

– Press the **UP** or **DOWN** button until **Motorcycle** is marked on the display. Pressing the **SET** button opens the menu.

WARNING

Danger of accidents Electronic driving aids can only influence the vehicle within the limits of its physical capabilities.

– Even when using electronic driving aids, always adapt your riding style to the road conditions, the traffic situation and your own ability.

– The **Anti Wheelie Mode** (optional) is a partial function of the traction control, which counteracts the lifting of the front wheel. The intervention time can be set at various levels in the menu. At a higher level with later intervention, the front wheel is more likely to lift.

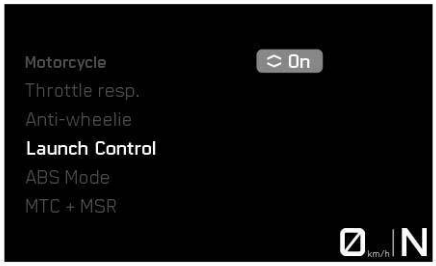
WARNING

Danger of accidents When Anti Wheelie Mode is disabled, the motorcycle traction control no longer counteracts the raising of the front wheel.

– Only switch off the Anti Wheelie Mode if you have the appropriate experience.

– Press the **UP** or **DOWN** button until **Anti Wheelie Mode** is highlighted. Press the **SET** button to open the submenu
– The **UP** can be adjusted by pressing the **DOWN**or **Anti Wheelie Mode** button.

7.26.11 Launch Control (optional)



– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Motorcycle** is highlighted. Pressing the **SET** button opens the menu.
– Press the **UP** or **DOWN** button until **Launch Control** is highlighted. Press the **SET** button to open the submenu.
– Activate the menu item using the **UP** or **DOWN** button.
– Switch **SET** on or off by pressing the **Launch Control** button.

7.26.12 ABS



– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Motorcycle** is highlighted. Pressing the **SET** button opens the menu.
– Press the **UP** or **DOWN** button until **ABS** is highlighted. Press the **SET** button to open the submenu.
– Activate the menu item using the **UP** or **DOWN** button.

WARNING

Danger of accidents An incorrectly selected ABS mode makes it more difficult to control the vehicle.

The ABS modes are each only suitable for certain conditions.

– Always select an ABS mode that suits the ground and the riding situation.

– Press the **SET** button to select the desired ABS mode.

Do not open the throttle during the selection.

Note

The ABS mode can be switched during the journey.

When the ABS mode **Road** is active, ABS controls both wheels.

When the **Supermoto** ABS mode is active, ABS only controls the front wheel. The rear wheel is no longer controlled by ABS and may lock during braking maneuvers. The indicator lamp **ABS REAR** lights up.

7.26.13 MTC (optional)



Condition: Cruise control function deactivated

- Press the **SET** button when the menu is closed.
- Press the **UP** or **DOWN** button until **Motorcycle** is highlighted. Pressing the **SET** button opens the menu.
- Press the **UP** or **DOWN** button until **MTC** is highlighted. Press the **SET** button to open the submenu.
- Activate the menu item using the **UP** or **DOWN** button.
- Switch **SET** on or off by pressing the **MTC** button.

Do not open the throttle when switching on or off.

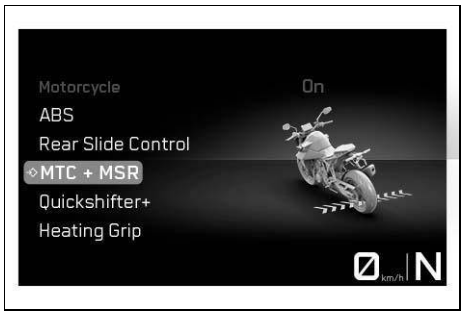
Note

Press the **SET** button briefly when activating the motorcycle traction control.

Hold down the **SET** button when switching off the motorcycle traction control.

After the ignition is switched on, motorcycle traction control is enabled again.

7.26.14 MTC+MSR (optional)



Condition: Model with **MTC+MSR**, Cruise control function (optional) is deactivated

- Press the **SET** button when the menu is closed.
- Press the **UP** or **DOWN** button until **Motorcycle** is highlighted. Pressing the **SET** button opens the menu.
- Press the **UP** or **DOWN** button until **MTC+MSR** is highlighted. Press the **SET** button to open the submenu.
- Activate the menu item using the **UP** or **DOWN** button.
- Switch **SET** on or off by pressing the **MTC+MSR** button.

Do not open the throttle when switching on or off.

Note

Press the **SET** button briefly when activating the motorcycle traction control and the engine traction torque control.

Hold down the **SET** button when switching off the motorcycle traction control and engine traction torque control.

When ABS mode **Supermoto** is active, the **MSR** is not active.

After the ignition is switched on, the motorcycle traction control and engine traction torque control are enabled again.

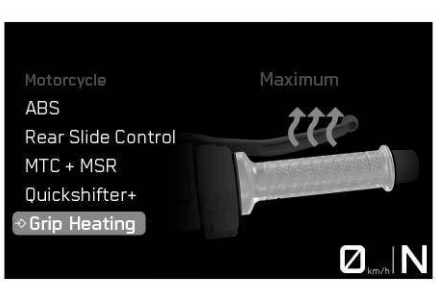
7.26.15 QUICKSHIFTER+ (optional)



Condition: Model with QUICKSHIFTER+

- Press the **SET** button when the menu is closed.
- Press the **UP** or **DOWN** button until **Motorcycle** is highlighted. Pressing the **SET** button opens the menu.
- Press the **UP** or **DOWN** button until **QUICKSHIFTER+** is highlighted. Press the **SET** button to open the submenu.
- Activate the menu item using the **UP** or **DOWN** button.
- Press the **SET** button to switch QUICKSHIFTER+ button on or off.

7.26.16 Grip Heating (optional)



Condition: Model with grip heater, Menu **Heated Grips** (optional) enabled in settings

- Press the **SET** button when the menu is closed.
- Press the **UP** or **DOWN** button until **Motorcycle** is highlighted. Pressing the **SET** button opens the menu.
- Press the **UP** or **DOWN** button until **Heating** is highlighted. Press the **SET** button to open the submenu.
- Press the **UP** or **DOWN** button until **Grip Heating** is highlighted. Press the **SET** button to open the submenu.
- Activate the menu item using the **UP** or **DOWN** button.
- Press the **SET** button to select the heating level or to switch the heated grip on or off.

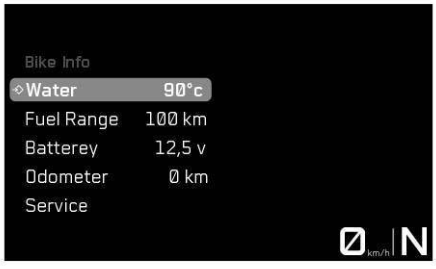
7.26.17 Bike info



- Press the **SET** button when the menu is closed.
- Press the **UP** or **DOWN** button until **Bike Info** is highlighted. Pressing the **SET** button opens the menu.

General information and warnings that may be present can be called up in **Bike Info**.

7.26.18 Bike info



- Press the **SET** button when the menu is closed.
- Press the **UP** or **DOWN** button until **Bike Info** is highlighted. Press the **SET** button to open the menu.

Water displays the coolant temperature.

Fuel Range indicates the possible fuel range you can cover with the fuel reserve.

Battery displays the battery voltage.

Odometer displays the total mileage.

Service displays when the next service is due.

Warnings displays warnings that have occurred until they are no longer active.

7.26.19 Warning



Condition: Message or warning is present

– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Bike Info** is highlighted. Pressing the **SET** button opens the menu.
– Press the **UP** or **DOWN** button until **Warning** is highlighted. Press the **SET** button to open the submenu.
– Use the **UP** or **DOWN** button to navigate through the warnings.

Note
The warnings that have occurred are saved in the display until they are no longer active.

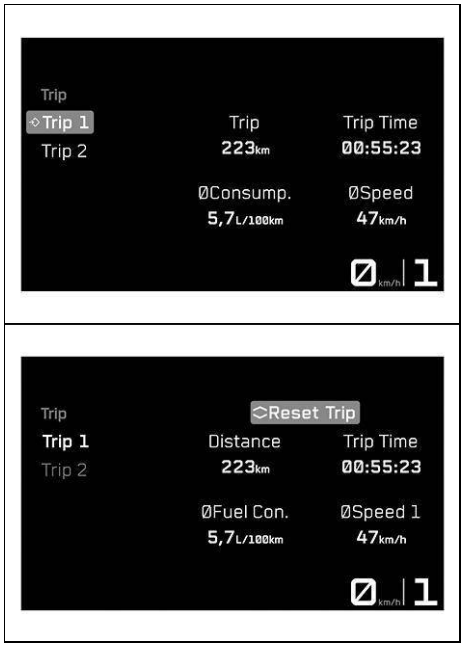
7.26.20 Trip info



– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Trip** is highlighted. Pressing the **SET** button opens the menu.

General information on the distance traveled, trip time, average fuel consumption, and average speed can be accessed in menu **Trip**.

7.26.21 Trip 1



– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Trip** is highlighted. Press the **SET** button to open the menu.
– Press the **UP** or **DOWN** button until **Trip 1** is highlighted. Press the **SET** button to open the submenu.

Information on **Trip 1** can be viewed in the **Trip 1** submenu.

Note

Trip displays the distance since the last reset, e.g. between two refueling stops. **Trip** runs along and counts to **9999**.

Trip Time shows the riding time on the basis of **Trip** and runs as soon as a speed signal is received.

ØConsump. indicates the average fuel consumption based on **Trip**.

ØSpeed indicates the average speed based on **Trip** and **Trip Time**.

Press **Reset Trip** to reset all entries in the **Trip 1** menu.

7.26.22 Trip 2





– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Trip** is highlighted. Press the **SET** button to open the menu.
– Press the **UP** or **DOWN** button until **Trip 2** is highlighted. Press the **SET** button to open the submenu.

Information on **Trip 2** can be viewed in the **Trip 2** submenu.

Note

Trip displays the distance since the last reset, e.g. between two refueling stops. **Trip** runs along and counts to **9999**.

Trip Time shows the riding time on the basis of **Trip** and runs as soon as a speed signal is received.

ØConsump. indicates the average fuel consumption based on **Trip**.

ØSpeed indicates the average speed based on **Trip** and **Trip Time**.

Press **Reset Trip** to reset all entries in the **Trip 2** menu.

7.26.23 Navigation (optional)



Condition: Function **Bluetooth®** activated, The **KTMconnect** app (optional) is installed and connected on a suitable cell phone (Android devices from version 7.0, iOS devices from version 14), The dashboard is connected to a suitable cell phone, GPS function is activated on the connected cell phone, For voice navigation: The dashboard is connected to a suitable communication system and an appropriate language package has been downloaded in the **KTMconnect Navigation** app (optional)

– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Navigation** is marked. Pressing the **SET** button opens the menu.

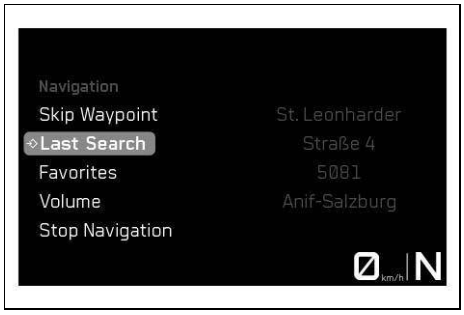
7.26.24 Skip Waypoint (optional)



Condition: Function **Bluetooth®** activated, **KTMconnect** app (optional) is installed and opened on a suitable cell phone, The dashboard is connected to a suitable cell phone, GPS function is activated on the connected cell phone, Navigation with at least one interim destination has been started in the **KTMconnect** app (optional)

– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Navigation** is marked. Pressing the **SET** button opens the menu.
– Press the **UP** or **DOWN** button until **Skip Waypoint** is marked. Press the **SET** button to select the waypoint.
– Press the **SET** button again to confirm the selection and the waypoint is removed.

7.26.25 Last search (optional)

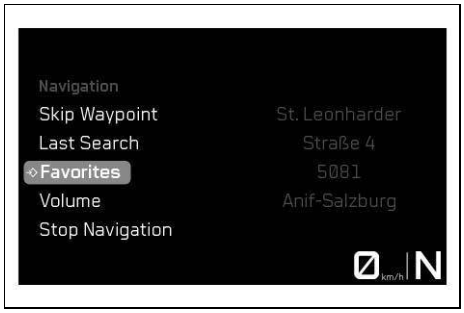


Condition: Function **Bluetooth®** activated, **KTMconnect** app (optional) is installed and opened on a suitable cell phone (Android devices from version 7.0, iOS devices from version 13), The dashboard is connected to a suitable cell phone, GPS function is activated on the connected cell phone

– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Navigation** is marked. Pressing the **SET** button opens the menu.
– Press the **UP** or **DOWN** button until **Last Search** is marked. Press the **SET** button to open the submenu.
– Press the **UP** or **DOWN** button to select an address.
– Press the **SET** button to confirm the selection and start navigation.

Note
The last 10 addresses searched for in the **Last Search** app (optional) are saved in **KTMconnect**.

7.26.26 Favorites (optional)



Condition: Function **Bluetooth®** activated, **KTMconnect** app (optional) is installed and opened on a suitable cell phone (Android devices from version 7.0, iOS devices from version 13), The dashboard is connected to a suitable cell phone, GPS function is activated on the connected cell phone, Favorites are saved in the **KTMconnect** app (optional)

– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Navigation** is marked. Pressing the **SET** button opens the menu.
– Press the **UP** or **DOWN** button until **Favorites** is marked. Press the **SET** button to open the submenu.
– Press the **UP** or **DOWN** button to select an address.
– Press the **SET** button to confirm the selection and start navigation.

Note
10 addresses in the **Favorites** app (optional) can be stored in **KTMconnect**.

7.26.27 Volume (optional)



Condition: The **KTMconnect** app (optional) is installed and connected on a suitable cell phone (Android devices from version 7.0, iOS devices from version 14), Dashboard is connected to a suitable cell phone, For voice navigation: the dashboard is connected to a suitable communication system and an appropriate language package has been downloaded in the **KTMconnect** app (optional)

– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Navigation** is marked. Pressing the **SET** button opens the menu.



WARNING

Danger of accidents Headphone volume which is too high distracts attention from traffic activity.

– Always select headphone volume which is low enough for you to still clearly hear acoustic signals.

– Press the **UP** or **DOWN** button until **Volume** is marked. Press the **SET** button to open the submenu.
– Press the **UP** button to increase the volume of the activated voice navigation.
– Press the **DOWN** button to reduce the volume of the activated voice navigation.

7.26.28 Stop Navigation (optional)



Condition: Function **Bluetooth®** activated, **KTMconnect** app (optional) is installed and opened on a suitable cell phone (Android devices from version 7.0, iOS devices from version 13), The dashboard is connected to a suitable cell phone

– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Navigation** is marked. Pressing the **SET** button opens the menu.
– Press the **UP** or **DOWN** button until **Stop Navigation** is marked. Press the **SET** button to confirm the selection.
– Press the **SET** button again to confirm the selection and end navigation.

7.26.29 audio



Condition: Function **Bluetooth®** activated, The dashboard is connected to a suitable cell phone., The dashboard is connected to a suitable communication system or the **Headset Type Corded** is selected

– Press the **SET** button when the menu is closed.

WARNING

Danger of accidents Headphone volume which is too high distracts attention from traffic activity.

– Always select headphone volume which is low enough for you to still clearly hear acoustic signals.

– Press the **UP** or **DOWN** button until **Audio** is highlighted. Press the **SET** button to open the menu.
– Press and hold **UP** button to increase the audio volume.
– Press and hold **DOWN** button to reduce the audio volume.
– Press **UP** button briefly to change to the next audio track.
– Briefly pressing the **DOWN** button once or twice replays the current audio track from the start or changes to the previous audio track, depending on the cell phone model.
– Press **SET** button to play or pause the audio track.

Note

With some cell phones, the cell phone audio player needs to be started before playback is possible.

The audio function can be added to **Custom Switch** for easier operation.

7.26.30 call



WARNING

Danger of accidents Headphone volume which is too high distracts attention from traffic activity.

– Always select headphone volume which is low enough for you to still clearly hear acoustic signals.

– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Call** is highlighted. Pressing the **SET** button opens the menu.

Note

It is not possible to change the audio volume using the combination switch with every cell phone.

The call duration and contact are displayed. Depending on the cell phone settings, the contact is shown by name.

If necessary, accessing contacts must be enabled on the cell phone.

You cannot navigate in the menu during an active phone conversation.

– Press the **SET** button to accept an incoming call.
– Press the **BACK** button to reject an incoming call.
– Press and hold **UP** button to increase the audio volume.
– Press and hold **DOWN** button to reduce the audio volume.

The last calls and favorites can be called up in the **Call** menu.

7.26.31 Last Calls



WARNING

Danger of accidents Headphone volume which is too high distracts attention from traffic activity.

– Always select headphone volume which is low enough for you to still clearly hear acoustic signals.

– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Call** is highlighted. Pressing the **SET** button opens the menu.

Note

It is not possible to change the audio volume using the combination switch with every cell phone.

The call duration and contact are displayed. Depending on the cell phone settings, the contact is shown by name.

If necessary, accessing contacts must be enabled on the cell phone.



You cannot navigate in the menu during an active phone conversation.

– Press the **UP** or **DOWN** button until **Last Calls** is highlighted. Press the **SET** button to open the submenu.
– Press the **UP** or **DOWN** button until the desired person is marked. This person can be called by pressing the **SET** button.

7.26.32 favorites



WARNING

Danger of accidents Headphone volume which is too high distracts attention from traffic activity.

– Always select headphone volume which is low enough for you to still clearly hear acoustic signals.

– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Call** is highlighted. Pressing the **SET** button opens the menu.

Note

It is not possible to change the audio volume using the combination switch with every cell phone.

The call duration and contact are displayed. Depending on the cell phone settings, the contact is shown by name.

If necessary, accessing contacts must be enabled on the cell phone.

You cannot navigate in the menu during an active phone conversation.

– Press the **UP** or **DOWN** button until **Favorites** is highlighted. Press the **SET** button to open the submenu.
– Press the **UP** or **DOWN** button until the desired person is marked. This person can be called by pressing the **SET** button.

7.26.33 Settings

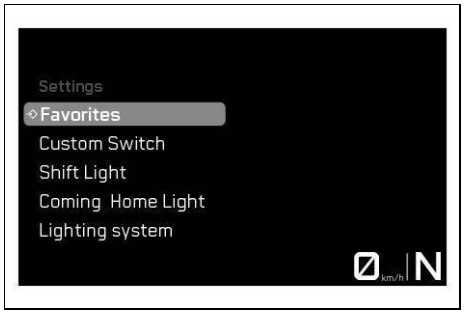


Condition: Motorcycle is stationary

– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Settings** is highlighted. Pressing the **SET** button opens the menu.

In menu **Settings**, favorites, quick selections, **Connectivity** (optional), and the shift light can be configured. Settings can be made for units or various values. Several functions can be enabled or disabled.

7.26.34 favorites

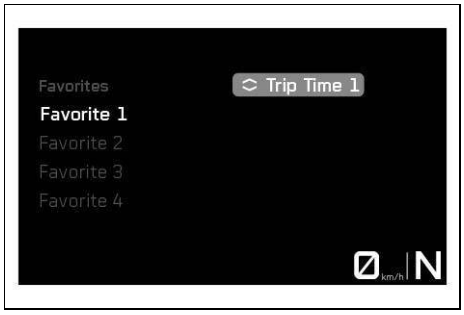


Condition: Motorcycle is stationary

- Press the **SET** button when the menu is closed.
- Press the **UP** or **DOWN** button until **Settings** is highlighted.
- Press the **SET** button to open the menu.
- Press the **UP** or **DOWN** button until “Favorites” is highlighted. Press the **SET** button to open the submenu.
- Access menu item with the **UP** or **DOWN** button, and add the selected information to the Favorites display using the **SET** button.

Up to four sets of information can be selected in the **Favorites** menu.

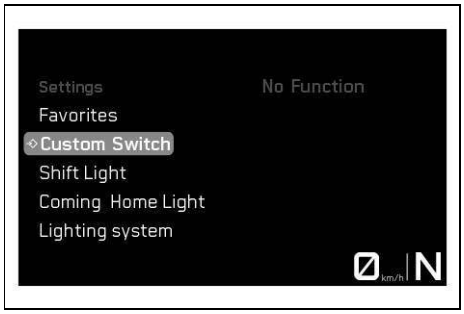
7.26.35 Favorites–display 1 – 4



Condition: Motorcycle is stationary

- Press the **SET** button when the menu is closed.
- Press the **UP** or **DOWN** button until **Settings** is highlighted.
- Press the **SET** button to open the menu.
- Press the **UP** or **DOWN** button until **Favorites** is highlighted. Press the **SET** button to open the submenu.
- Press the **UP** or **DOWN** button to select **Favorite 1**, **Favorite 2**, **Favorite 3**, or **Favorite 4**. Press the **SET** button to open the submenu.
- Press the **UP** or **DOWN** button to select the desired information. Press the **SET** button to confirm the selection.

7.26.36 Custom Switch



Condition: Motorcycle is stationary

- Press the **SET** button when the menu is closed.
- Press the **UP** or **DOWN** button until **Settings** is highlighted.
- Press the **SET** button to open the menu.
- Press the **UP** or **DOWN** button until **Custom Switch** is highlighted. Press the **SET** button to open the submenu.
- Activate the menu item using the **UP** or **DOWN** button.
- Press the **SET** button to set a direct selection submenu for **Custom Switch**.

Note

When the menu is closed, the submenu defined in **C** is opened by pressing the **Custom Switch** button.

7.26.37 connectivity



Condition: Motorcycle is stationary, Function **Bluetooth®** activated

– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Connectivity** is highlighted. Pressing the **SET** button opens the menu.

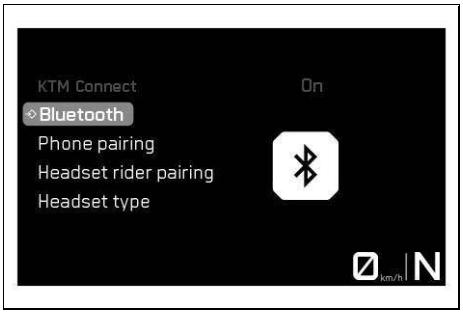
A suitable cell phone or communication system can be paired with the dashboard via **Bluetooth®** in menu **Connectivity** and the audio function and navigation function can be configured.

Note

Not every cell phone and communication system is suitable for pairing with the dashboard.

The standard **Bluetooth®** 4.0 must be supported.

7.26.38 Bluetooth



Condition: Motorcycle is stationary

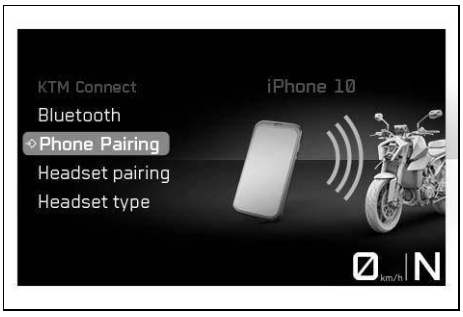
– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Settings** is highlighted.
– Press the **SET** button to open the menu.
– Press the **UP** or **DOWN** button until **Connectivity** is highlighted. Press the **SET** button to open the submenu.
– Press the **UP** or **DOWN** button until **Bluetooth** is highlighted. Press the **SET** button to open the submenu.
– Activate the menu item using the **UP** or **DOWN** button.
– Press the **SET** button to switch the **Bluetooth®** function on or off.

Note

The function **Bluetooth®** must be activated to pair a suitable cell phone or communication system with the vehicle.

Not every cell phone and communication system is suitable for pairing with the dashboard.

7.26.39 pairing a phone



Condition: Motorcycle is stationary, Function **Bluetooth®** activated, Function **Bluetooth®** also activated on the device that is to be paired

– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Settings** is highlighted. Press the **SET** button to open the menu.
– Press the **UP** or **DOWN** button until **Connectivity** is highlighted. Press the **SET** button to open the submenu.
– Press the **UP** or **DOWN** button until “Pair phone” is highlighted. Press the **SET** button to open the submenu.

Note

Only one cell phone can be paired with the vehicle at a time.

– Press the **UP** or **DOWN** button until **New Pairing** is marked. Press the **SET** button to open the submenu.

– The vehicle starts the search for a suitable cell phone. If the search is successful, the name of the cell phone is displayed again in the pairing menu. Press the **SET** button to start the pairing.

Note

The cell phone must be visible via **Bluetooth®** in order for the cell phone to be found by the vehicle.

Not every cell phone is suitable for pairing with the vehicle.

– A message appears on the combination instrument indicating that the vehicle is now ready for pairing. The pairing is successfully completed by confirming the **Passkey** on the cell phone and on the dashboard.

Note

Follow the instructions in the app when connecting with **KTMconnect**. Confirmation may be required on the combination instrument.

– Press the **UP** or **DOWN** button until “Delete pairing” is highlighted. The paired device can be deleted by pressing the **SET** button.
– Move the previously paired device into the range of the vehicle while the **Bluetooth®** function is active.
  ✓ The device is automatically connected with the vehicle.
  ✗ If the device is not automatically connected with the vehicle after approx. 30 seconds:
    – Switch on the vehicle again or repeat the **New Pairing** procedure.

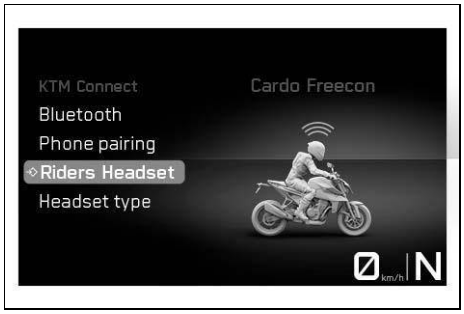
In submenu **Phone Pairing**, a suitable cell phone can be paired with the dashboard via **Bluetooth®**.

Note

Not every cell phone and communication system is suitable for pairing with the dashboard.

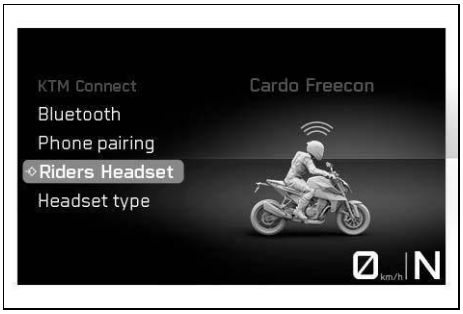
Make sure the end device is in the correct pairing mode for call management. If the end device is only paired for media playback, the call function may not work.

7.26.40 headset pairing



Condition: Motorcycle is stationary, Function **Bluetooth®** activated, Function **Bluetooth®** also activated on the device that is to be paired

– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Settings** is highlighted. Press the **SET** button to open the menu.
– Press the **UP** or **DOWN** button until **Connectivity** is highlighted. Press the **SET** button to open the submenu.
– Press the **UP** or **DOWN** button until **Riders Headset** is highlighted. Press the **SET** button to open the submenu.
– Press the **UP** or **DOWN** button until **New Pairing** is marked. Press the **SET** button to open the submenu.
– The vehicle starts searching for a suitable communication system. If the search was successful, the name of the rider's audio device is displayed in the **New Pairing** submenu. Press the **SET** button to start the pairing.



The communication system must be in pairing mode for the communication system to be found by the vehicle. Follow the instructions in the communication system owner's manual.

Note

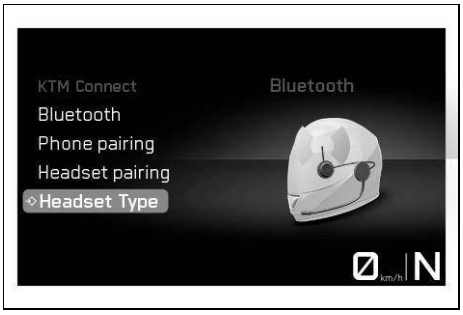
Press the **UP** or **DOWN** button until **Delete Pairing** is highlighted. The paired device can be deleted by pressing the **SET** button.

Not every communication system is suitable for pairing with the vehicle.

– Move the previously paired device into the range of the vehicle while the **Bluetooth®** function is active.
  ✓ The device is automatically connected with the vehicle.
  ✗ If the device is not automatically connected with the vehicle after approx. 30 seconds:
    – Switch on the vehicle again or repeat the **New Pairing** procedure.

In the **Riders Headset** submenu, a suitable rider communication system can be paired with the vehicle.

7.26.41 Type of audio device



Condition: Motorcycle is stationary

– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Settings** is highlighted. Press the **SET** button to open the menu.
– Press the **UP** or **DOWN** button until **Connectivity** is highlighted. Press the **SET** button to open the submenu.
– Press the **UP** or **DOWN** button until **Headset Type** is highlighted.
– Activate the menu item using the **UP** or **DOWN** button.
– Press the **SET** button to change the rider audio device type.

The connection mode for the rider headset can be selected in the **Headset Type** menu.

The communication system is connected to the vehicle wirelessly via **Bluetooth Headset** in **Bluetooth®** display mode.

The communication system is connected directly to the smartphone in display mode **Corded Headset**.

Note

The **Riders Headset** menu item is only available in **Headset Type Bluetooth**.

7.26.42 Shift Light



Condition: Motorcycle is stationary, **ODO** > 1,000 km (621 miles)

– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Settings** is highlighted. Press the **SET** button to open the menu.
– Press the **UP** or **DOWN** button until **Shift Light** is highlighted. Press the **SET** button to open the submenu.

The shift warning light can be configured in the **Shift Light** submenu.

7.26.43 Shift light state



Condition: Motorcycle is stationary, **ODO** > 1,000 km (621 miles)

– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Settings** is highlighted. Press the **SET** button to open the menu.
– Press the **UP** or **DOWN** button until **Shift Light** is highlighted. Press the **SET** button to open the submenu.
– Activate the menu item using the **UP** or **DOWN** button.
– Press the **SET** button to switch the shift warning light on or off.

7.26.44 RPM1



Condition: Motorcycle is stationary, **ODO** > 1,000 km (621 miles)

– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Settings** is highlighted. Press the **SET** button to open the menu.
– Press the **UP** or **DOWN** button until **Shift Light** is highlighted. Press the **SET** button to open the submenu.
– Press the **UP** or **DOWN** button until **RPM1** is highlighted. Press the **SET** button to open the submenu.
– Activate the menu item using the **UP** or **DOWN** button.
– Set the value for **SET** by pressing the **RPM1** button.

RPM1 must not be larger than **RPM2**.

Note

RPM1 can be set in intervals of 500 between 5,500 and 10,000 rpm.

If the engine speed reaches the set value **RPM1**, the engine speed display flashes as a shift warning light.

7.26.45 RPM2



Condition: Motorcycle is stationary, **ODO** > 1,000 km (621 miles)

– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Settings** is highlighted. Press the **SET** button to open the menu.
– Press the **UP** or **DOWN** button until **Shift Light** is highlighted. Press the **SET** button to open the submenu.
– Press the **UP** or **DOWN** button until **RPM2** is highlighted. Press the **SET** button to open the submenu.
– Activate the menu item using the **UP** or **DOWN** button.
– Set the value for **SET** by pressing the **RPM2** button.

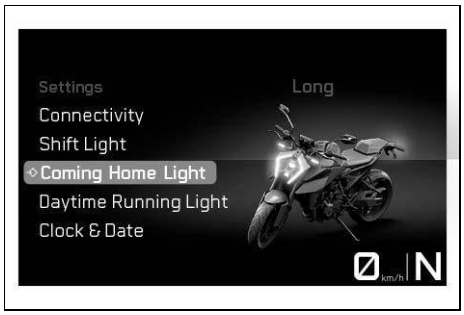
RPM2 must not be smaller than **RPM1**.

Note

RPM2 can be set in intervals of 500 between 7,000 and 10,000 rpm.

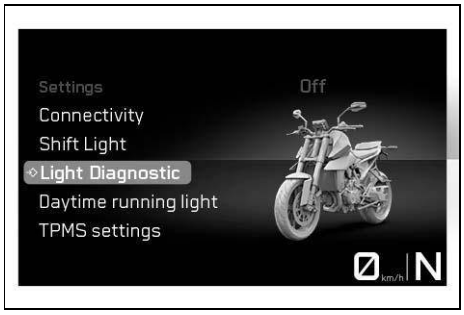
If the engine speed reaches the set value **RPM2**, the screen flashes as a shift warning light.

7.26.46 Coming Home Light



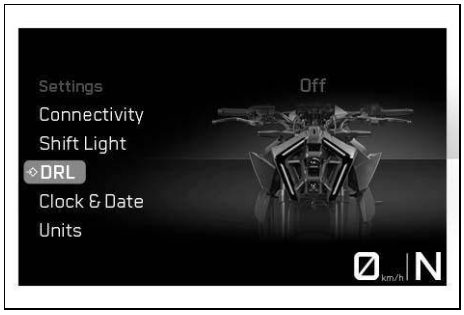
– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Settings** is highlighted. Pressing the **SET** button opens the menu.
– Press the **UP** or **DOWN** button until **Coming Home Light** is highlighted. Press the **SET** button to open the submenu.
– Press the **UP** or **DOWN** button to adjust **Coming Home Light**. The setting options are off, short and long.

7.26.47 Light Diagnostic



– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Settings** is highlighted. Pressing the **SET** button opens the menu.
– Press the **UP** or **DOWN** button until **Light Diagnostic** is highlighted. Press the **SET** button to open the submenu.
– Press **UP** or **DOWN** button to activate or deactivate **Light Diagnostic**.

7.26.48 Daytime Running Light



- Press the **SET** button when the menu is closed.
- Press the **UP** or **DOWN** button until **Settings** is highlighted. Pressing the **SET** button opens the menu.
- Press the **UP** or **DOWN** button until **Daytime Running Light** is marked. Press the **SET** button to open the submenu.
- Press **UP** or **DOWN** button to activate or deactivate **Daytime Running Light**.

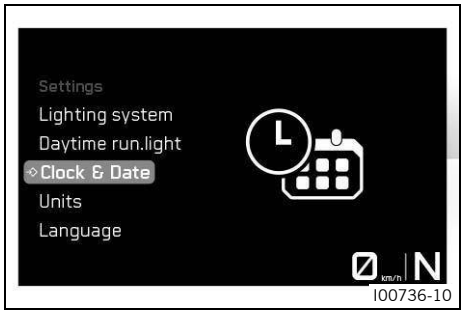
7.26.49 TPMS Settings (optional)



- Press the **SET** button when the menu is closed.
- Press the **UP** or **DOWN** button until **Settings** is highlighted. Pressing the **SET** button opens the menu.
- Press the **UP** or **DOWN** button until **TPMS Settings** (optional) is highlighted. Press the **SET** button to open the submenu.
- Press the **UP** or **DOWN** button to activate or deactivate the warnings from **TPMS Settings** (optional).

7.26.50 Setting the time and date

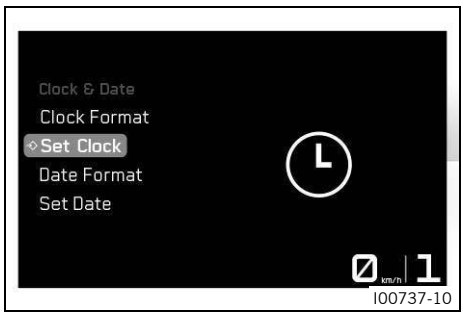
Condition: Motorcycle is stationary



I00736-10

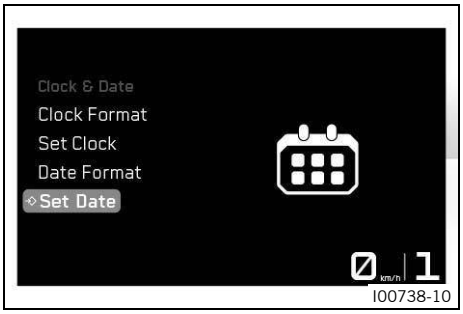
- Press the **SET** button when the menu is closed.
- Press the **UP** or **DOWN** button until **Settings** appears. Pressing the **SET** button opens the menu.
- Press the **UP** or **DOWN** button until **Clock & Date** is highlighted. Press the **SET** button to open the submenu.

Setting the clock



I00737-10

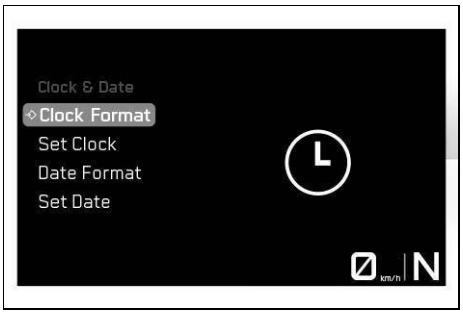
- Press the **UP** or **DOWN** button until **Set Clock** is marked.
- Press the **SET** button to open the submenu.
- Press the **UP** or **DOWN** button until the hour is set. Press the **SET** button to select the hour.
- Press the **UP** or **DOWN** button until the minute is set. Press the **SET** button to select the minute.
- Press the **BACK** button to exit the menu.



Setting the date

– Press the **UP** or **DOWN** button until **Set Date** is marked.
– Press the **SET** button to open the submenu.
– Press the **UP** or **DOWN** button until the day is set. Press the **SET** button to select the day.
– Press the **UP** or **DOWN** button until the month is set. Press the **SET** button to select the month.
– Press the **UP** or **DOWN** button until the year is set. Press the **SET** button to select the year.
– Press the **BACK** button to exit the menu.

7.26.51 Clock format

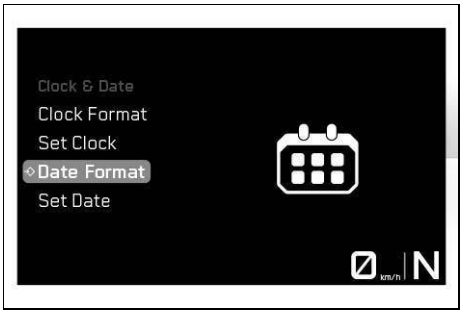


Condition: Motorcycle is stationary

– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Settings** is highlighted. Press the **SET** button to open the menu.
– Press the **UP** or **DOWN** button until **Clock & Date** is highlighted. Press the **SET** button to open the submenu.
– Press the **UP** or **DOWN** button until **Clock Format** is highlighted. Press the **SET** button to open the submenu.
– Activate the menu item using the **UP** or **DOWN** button.
– Press the **SET** button to select the time format.

Note
The possible settings are 24h and 12h.

7.26.52 Date format

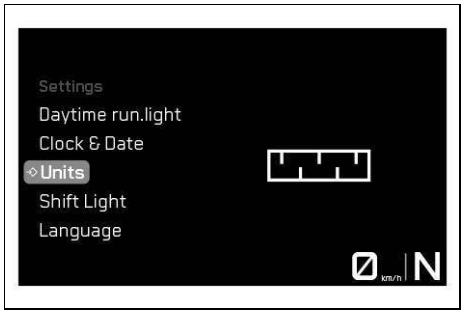


Condition: Motorcycle is stationary

– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Settings** is highlighted. Press the **SET** button to open the menu.
– Press the **UP** or **DOWN** button until **Clock & Date** is highlighted. Press the **SET** button to open the submenu.
– Press the **UP** or **DOWN** button until **Date Format** is highlighted. Press the **SET** button to open the submenu.
– Activate the menu item using the **UP** or **DOWN** button.
– Press the **SET** button to select the date format.

Note
The possible settings are DD.MM.YYYY, MM.DD.YYYY and YYYY.MM.DD.

7.26.53 Units

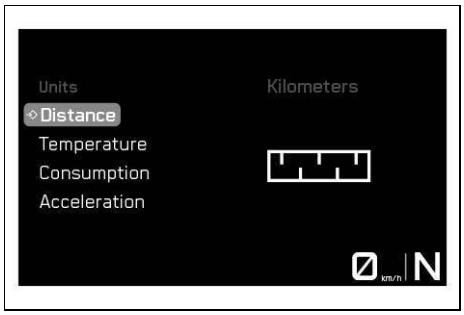


Condition: Motorcycle is stationary

– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Settings** is highlighted. Press the **SET** button to open the menu.
– Press the **UP** or **DOWN** button until **Units** is highlighted. Press the **SET** button to open the submenu.

The **Units** submenu allows settings to be made for units or various values.

7.26.54 Distance

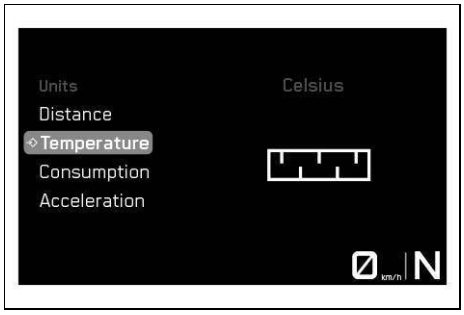


Condition: Motorcycle is stationary

– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Settings** is highlighted. Press the **SET** button to open the menu.
– Press the **UP** or **DOWN** button until **Units** is highlighted. Press the **SET** button to open the submenu.
– Press the **UP** or **DOWN** button until **Distance** is marked. Press the **SET** button to open the submenu.
– Activate the menu item using the **UP** or **DOWN** button.
– Press the **SET** button to confirm the desired unit.

Note
Kilometers and miles can be set.

7.26.55 Temperature

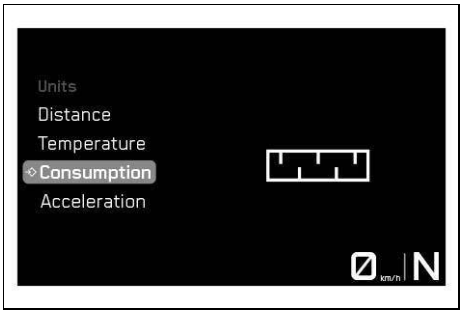


Condition: Motorcycle is stationary

– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Settings** is highlighted. Press the **SET** button to open the menu.
– Press the **UP** or **DOWN** button until **Units** is highlighted. Press the **SET** button to open the submenu.
– Press the **UP** or **DOWN** button until **Temperature** is marked. Press the **SET** button to open the submenu.
– Activate the menu item using the **UP** or **DOWN** button.
– Press the **SET** button to confirm the desired unit.

Note
Celsius or Fahrenheit can be set.

7.26.56 Consumption

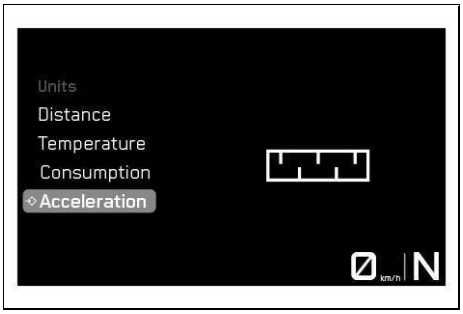


Condition: Motorcycle is stationary

– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Settings** is highlighted. Press the **SET** button to open the menu.
– Press the **UP** or **DOWN** button until **Units** is highlighted. Press the **SET** button to open the submenu.
– Press the **UP** or **DOWN** button until **Consumption** is marked. Press the **SET** button to open the submenu.
– Activate the menu item using the **UP** or **DOWN** button.
– Press the **SET** button to confirm the desired unit.

Note
You can set it to l/100 km, km/l, USG/100 mi, mi/USG, mi/l, l/100 mi, UKG/100 mi or mi/UKG.

7.26.57 Acceleration

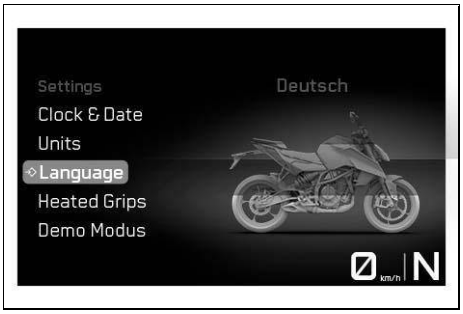


Condition: Motorcycle is stationary

– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Settings** is highlighted. Press the **SET** button to open the menu.
– Press the **UP** or **DOWN** button until **Units** is highlighted. Press the **SET** button to open the submenu.
– Press the **UP** or **DOWN** button until acceleration is highlighted. Press the **SET** button to open the submenu.
– Activate the menu item using the **UP** or **DOWN** button.
– Press the **SET** button to confirm the desired unit.

Note
m/s^2 and ft/s^2 settings can be adjusted.

7.26.58 Language

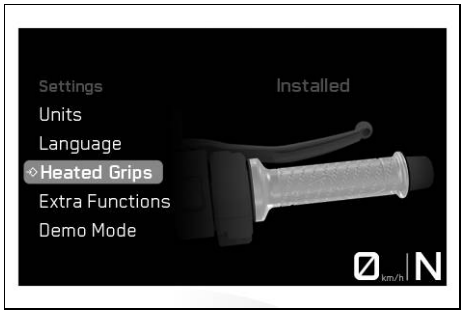


Condition: Motorcycle is stationary

– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Settings** is highlighted.
– Press the **SET** button to open the menu.
– Press the **UP** or **DOWN** button until **Language** is highlighted. Press the **SET** button to open the submenu.
– Activate the menu item using the **UP** or **DOWN** button.
– Press the **SET** button to confirm the desired language.

Note
The menu languages are US English, UK English, German, Italian, French, and Spanish.

7.26.59 Heating (optional)



Condition: Motorcycle is stationary

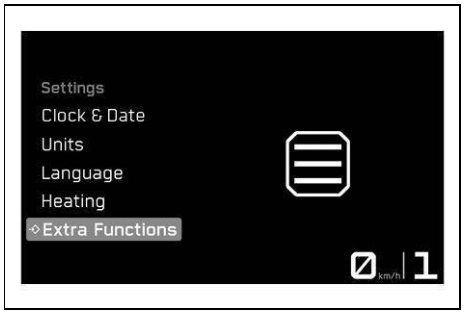
– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Settings** is highlighted. Press the **SET** button to open the menu.
– Press the **UP** or **DOWN** button until **Heating** is highlighted. Press the **SET** button to open the submenu.

The heated grip can be configured in the **Heating** submenu.

Note

In the **Settings** menu, the **Heating** submenu only controls the visibility of **Heated Grips** in the menu.

7.26.60 Extra Functions



Condition: Motorcycle is stationary, Motorcycle with optional supplementary function

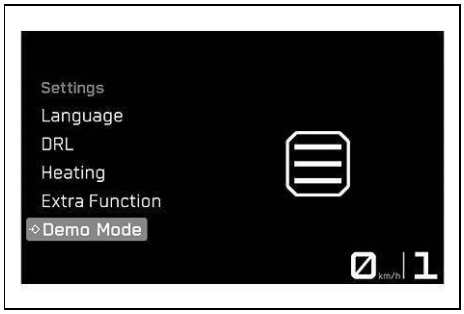
– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Settings** is highlighted.
– Press the **SET** button to open the menu.
– Press the **UP** or **DOWN** button until **Extra Functions** is highlighted. Press the **SET** button to open the submenu.
– Use the **UP** or **DOWN** button to navigate through the extra functions.

Note

The optional extra functions are listed.

The current **KTM PowerParts** and available software are listed on the KTM website.

7.26.61 Demo mode



Condition: Motorcycle is stationary, Motorcycle with demo mode

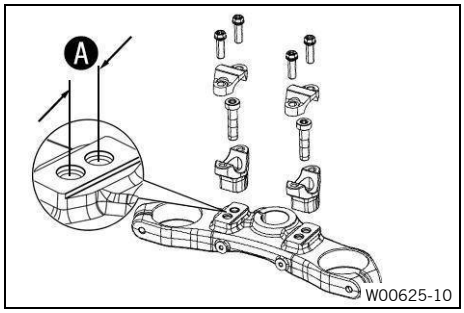
– Press the **SET** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Settings** is highlighted.
– Press the **SET** button to open the menu.
– Press the **UP** or **DOWN** button until **Demo Mode** is highlighted. Press the **SET** button to open the submenu.
– Use the **UP** or **DOWN** button to navigate through the demo mode functions.

Note

The activated demo mode functions (p. 28) are listed.

After the demo mode expires, the optional software functions are available from authorized partners.

8.1 Handlebar position



On the upper triple clamp there are two holes at a distance of Ⓐ apart.

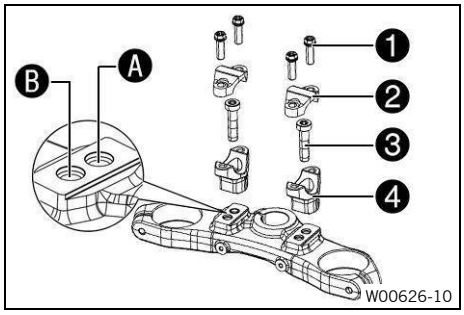
Hole distance Ⓐ	15 mm (0.59 in)

The handlebar can be mounted in two different positions. This allows the handlebar to be mounted in the most comfortable position for the rider.

Note
KTM recommends the front handlebar position when using the vehicle on a race track.

8.2 Adjusting the handlebar position

WARNING
Danger of accidents A repaired handlebar poses a safety risk.
If the handlebar is bent or straightened, the material becomes fatigued. The handlebar may break as a result.
– Change the handlebar if the handlebar is damaged or bent.



– Remove screws ❶. Take off the handlebar clamps ❷. Position the handlebar so that screws ❸ are accessible.

Protect the components against damage by covering them.
Do not kink the cables or lines.

– Remove screws ❸. Take off handlebar supports ❹.
– Move the handlebar supports into the desired position Ⓐ or Ⓑ. Mount and tighten screws ❸.

Mount the left and right handlebar supports in the same position.

Screw, handlebar mount	
M10	45 Nm (33.2 ft·lb$_f$) **Loctite® 243**

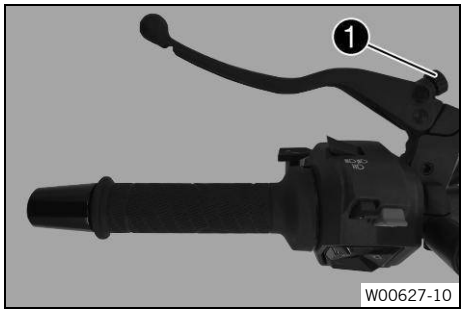
– Position the handlebar.

Make sure the cables and wiring are routed correctly.

– Position the handlebar clamps. Mount screws ❶ and tighten evenly.

Handlebar clamp screw	
M8	20 Nm (14.8 ft·lb$_f$)

8.3 Adjusting the basic position of the clutch lever



– Push clutch lever forward.
– Adjust the basic position of the clutch lever to your hand size by turning adjusting screw ❶.

Only turn the adjusting screw by hand, and do not use force.
Do not make any adjustments while riding.

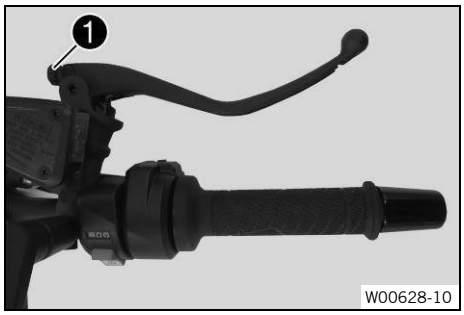
Note

When the adjusting screw is turned clockwise, the clutch lever moves away from the handlebar.

When the adjusting screw is turned counterclockwise, the clutch lever moves closer to the handlebar.

The range of adjustment is limited.

8.4 Adjusting the basic position of the hand brake lever



– Push hand brake lever forward.
– Adjust the basic position of the hand brake lever to your hand size by turning adjusting screw ❶.

Only turn the adjusting screw by hand, and do not use force.
Do not make any adjustments while riding.

Note

Turn the adjusting screw clockwise to increase the distance between the hand brake lever and the handlebar.

Turn the adjusting screw counterclockwise to decrease the distance between the hand brake lever and the handlebar.

The range of adjustment is limited.

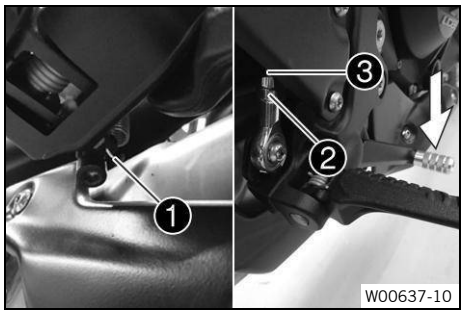
8.5 Adjusting the basic position of the brake pedal

WARNING

Danger of accidents The brake system fails in the event of overheating.

If there is no free travel on the brake lever, pressure builds up in the brake system.

– Set the free travel on the brake lever as specified.



– Detach spring ❶.
– Loosen nut ❷.

Tip

Press the foot brake lever downwards to make this easier.

– Turn the push rod ❸ to set the basic position of the foot brake lever.

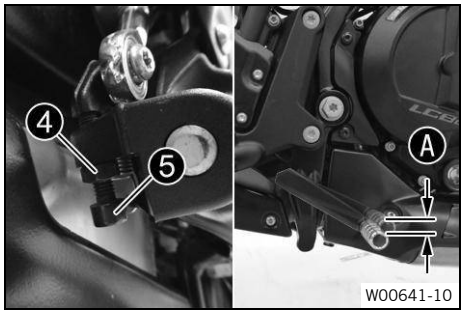
The screw must be screwed in by at least five full turns.

Note

The range of adjustment is limited.

Screwing the push rod into the ball joint adjusts the foot brake lever downwards.

Screwing the push rod out of the ball joint adjusts the brake lever upwards.

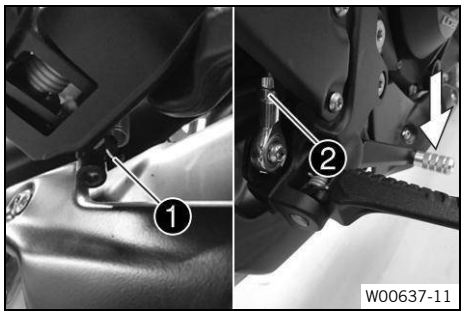


– Loosen nut ❹ and turn screw ❺ correspondingly until the free travel Ⓐ is present. If necessary, adjust the basic position of the brake pedal.

Free travel of brake pedal	3 mm ... 5 mm (0.12 in ... 0.20 in)

– Hold screw ❺ and tighten nut ❹.

Remaining nuts on chassis	
M6	10 Nm (7.4 ft·lb$_f$)



– Tighten nut ❷.

Nut, push rod, brake pedal	
M6	10 Nm (7.4 ft·lb$_f$)

Tip

Press the foot brake lever downwards to make this easier.

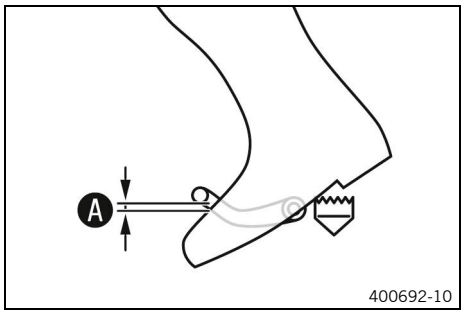
– Attach spring ❶.

8.6 Checking the basic position of the gear shift lever

Note

When driving, the gear shift lever must not touch the rider's boot when in the basic position.

If the shift lever is permanently touching the boot, the transmission will be subject to excessive load; this can cause a malfunction of the quickshifter + (optional).



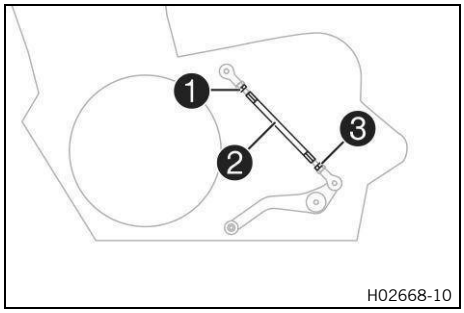
– Sit on the vehicle in the riding position and measure the distance Ⓐ between the upper edge of your boot and the shift lever.

Distance between the gear shift lever and upper edge of boot	10 mm ... 20 mm (0.39 in ... 0.79 in)

» If the distance does not meet the specifications:

– Adjust the basic position of the gear shift lever. (p. 69)

8.7 Adjusting the basic position of the gear shift lever



– Loosen nut ❶ while holding stud ❷.
– Loosen nut ❸ while holding stud ❷.

Note
Nut ❸ has an LH thread.

– Turn stud ❷ to adjust the shift lever.

The gear shift lever must not come into contact with any other vehicle components during the shift procedure.

Note
The range of adjustment is limited.

– Tighten nut ❸ while holding stud ❷.

Nut, shift rod	
M6LH	6 Nm (4.4 ft·lb$_f$)

– Tighten nut ❶ while holding stud ❷.

Nut, shift rod	
M6	6 Nm (4.4 ft·lb$_f$)

9.1 Notes on preparing for first use

DANGER

Danger of accidents A rider who is not fit to ride poses a danger to themself and to others.

– Do not operate the vehicle if you are not fit to ride due to alcohol, drugs, or medication.
– Do not operate the vehicle if you are physically or mentally incapable of doing so.

WARNING

Danger of accidents The brake system fails in the event of overheating.

If the brake pedal is not released, the brake pads grind continuously.

– Take your foot off the brake pedal when you are not braking.

WARNING

Danger of accidents Non-approved or non-recommended tyres and wheels impact the handling characteristic.

– Only use tires and wheels approved and recommended by the vehicle manufacturer with the corresponding speed rating.

WARNING

Danger of accidents New tires have reduced road grip.

The contact surface on new tires is not yet roughened.

– Run in new tires with moderate riding and only gradually increase the lean angle.

Run-in distance	200 km (124.3 mi)

WARNING

Danger of accidents Different tire profiles on the front and rear wheels can make it more difficult to control the vehicle.

– Make sure that only tires of the same tread type are mounted to the front and rear wheel.

WARNING

Risk of injury Missing or inadequate protective clothing increases the risk of injury.

– Wear appropriate protective clothing such as helmet, boots, gloves as well as pants and a jacket with protectors on all rides.
– Always wear protective clothing that is in good condition and meets the legal regulations.

Note

When using the vehicle, remember that others may feel disturbed by excessive noise.

– Ensure that the pre–delivery inspection has been carried out by an authorized contractual partner.
  ✓ The delivery certificate is transferred upon vehicle handover.
– Read the entire owner's manual before riding for the first time.
– Get to know the controls.
– Adjust the basic position of the clutch lever. (p. 67)
– Adjust the basic position of the hand brake lever. (p. 67)
– Adjust the basic position of the brake pedal. (p. 67)
– Get used to the handling characteristics of the motorcycle on suitable terrain before undertaking a more challenging ride. Also, ride as slowly as possible to get a better feeling for the motorcycle.
– Hold the handlebar firmly with both hands and keep your feet on the footpegs when riding.
– Run in the engine. (p. 71)

9.2 Running in the engine

– During the running-in time, do not exceed the specified engine speed.

Maximum engine speed	
During the first: 1,000 km (621.4 mi)	6,500 rpm (108.33 Hz)
After the first: 1,000 km (621.4 mi)	9,800 rpm (163.33 Hz)

Avoid fully opening the throttle.

9.3 Loading the vehicle

WARNING
Fire hazard The hot exhaust system may burn luggage.
– Fasten your luggage in such a way that it cannot be burned or singed by the hot exhaust system.

WARNING
Danger of accidents A high payload alters the handling characteristic and increases the stopping distance.
– Adapt your speed to your payload.

WARNING
Danger of accidents Carrying luggage alters handling characteristics.
– Adapt your speed to your payload.
– Ride more slowly if your vehicle is loaded with cases or other luggage.

Maximum speed with luggage	130 km/h (80.8 mph)

WARNING
Danger of accidents Items of luggage that have slipped or are incorrectly fastened can obscure the lighting system.
– Check that your luggage is fixed properly at regular intervals.
– Make sure that the lighting system is not covered by luggage.

WARNING
Danger of accidents Total weight and axle loads influence the handling characteristic.
The total weight consists of: operational vehicle with a full tank, rider and, if applicable, a passenger with protective clothing and helmet, and, if applicable, mounted luggage.
– Do not exceed the maximum permissible total weight or the axle loads.

WARNING
Danger of accidents Improper mounting of cases, tank rucksacks or other luggage impairs the handling characteristics.
Luggage mounted incorrectly can slip while the vehicle is in motion.
– Mount and secure all luggage according to the manufacturer's instructions.
– Check that your luggage is fixed properly at regular intervals.

WARNING

Danger of accidents The luggage system will be damaged if it is overloaded.

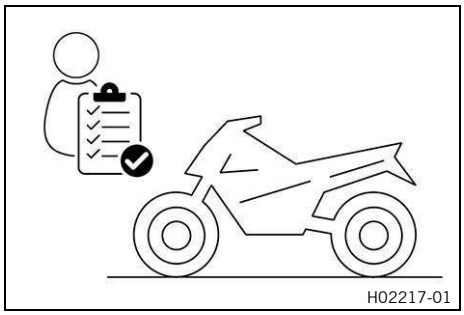
– Read the manufacturer information on maximum payload when mounting cases.

– If luggage is carried, ensure it is fixed firmly as close as possible to the center of the vehicle and ensure even weight distribution between the front and rear wheels.
– The maximum permissible total weight and the maximum permissible axle loads must not be exceeded.

Maximum permissible total weight	390 kg (859.8 lb)
Maximum permissible front axle load	165 kg (363.8 lb)
Maximum permissible rear axle load	270 kg (595.2 lb)

10.1 Checks and maintenance measures when preparing for use

Note
Before every trip, check the condition of the vehicle and ensure that it is roadworthy.
The vehicle must be in perfect technical condition when it is being operated.


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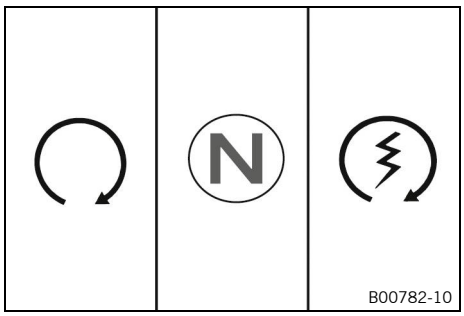
- Check the engine oil level. (p. 142)
- Check the brake fluid level for the front brake. (p. 103)
- Check the brake fluid level for the rear brake. (p. 105)
- Check that the brake pads of the front brake are secured. (p. 104)
- Check that the brake pads of the rear brake are secured. (p. 107)
- Check that the brake system is functioning properly.
- Check the coolant level in the compensating tank. (p. 134)
- Check the chain for dirt. (p. 92)
- Check the chain tension. (p. 93)
- Check the tire condition. (p. 116)
- Check the tire pressure. (p. 117)
- Check the settings of all controls and ensure that they can be operated smoothly.
- Check that the electrical equipment is functioning properly.
- Check that luggage is properly secured.
- Sit on the motorcycle and check the rear mirror setting.
- Check the fuel level.

10.2 Starting the vehicle

DANGER
Danger of poisoning Exhaust gases are toxic and inhaling them may result in unconsciousness and death.
- Always ensure that there is sufficient ventilation when running the engine.
- Use suitable exhaust extraction when starting or running the engine in an enclosed space.

WARNING
Danger of accidents Electronic components and safety devices will be damaged if the 12-V battery is discharged or missing.
If the 12-V battery is discharged or defective, malfunctions in the vehicle electronics can occur, especially when starting.
- Never operate the vehicle with a discharged 12-V battery or without a 12-V battery.

NOTE
Engine failure Running a cold engine at high engine speeds negatively impacts the service life of the engine.
- Always warm up the engine at low engine speeds.



– Take the motorcycle off the side stand and sit on the motorcycle.
– Make sure that the start button/kill switch is in the middle position ◯.
– Switch on the ignition by turning the ignition key to position ◯.

To avoid malfunctions in the control unit communication, do not switch the ignition off and on in rapid succession.

✓ After you switch on the ignition, you can hear the fuel pump working for about two seconds. The function check of the combination instrument is run at the same time.
✓ The ABS warning light lights up and goes out again after starting off.

– Shift the transmission into the neutral position.
✓ The green idle indicator lamp **N** lights up.
– Briefly press the start button/kill switch into lower position ◯.

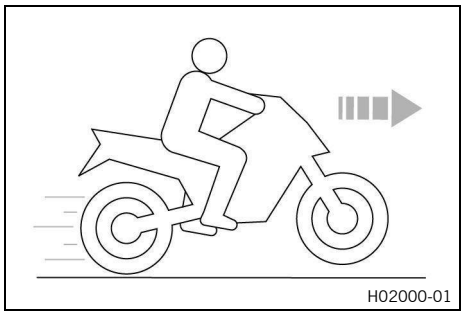
Only press the start button/emergency OFF switch into the lower position ◯ when the combination instrument function check has been completed.
Do not open the throttle to start.
If the starting attempt is unsuccessful, wait for 15 seconds before making another attempt at starting.
After 6 unsuccessful starting attempts, do not try again, and check the vehicle for other malfunctions instead.

Note
This motorcycle is equipped with a safety starting system. You can only start the engine if the transmission is in neutral or if the clutch lever is pulled when a gear is engaged. If the side stand is folded out and you shift into gear releasing the clutch lever, the engine stops.

10.3 Starting off

– Pull the clutch lever, shift into first gear, release the clutch lever slowly and at the same time carefully open the throttle.

10.4 Launch–Control (optional)



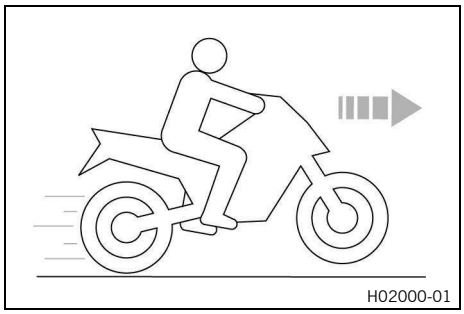
Launch Control is an optional vehicle electronics function.
Launch control adjusts the engine speed in order to achieve the best possible acceleration.
Launch control can be used for starting off for a maximum of three times in succession. Launch control is temporarily deactivated after the third starting off in order to protect the engine, transmission and cooling system from overloading.
Launch control is also deactivated if all conditions for activation are no longer met.
Launch control is enabled again in the following cases: the engine runs for at least three minutes, the engine is switched off for 20 minutes or a distance of 1.5 km (0.93 mi) has been covered.

10.5 Starting off with launch control (optional)

WARNING

Danger of accidents Launch Control enables powerful acceleration which may overwhelm a novice rider. Public roads are neither a safe place nor a necessary environment for the use of Launch Control.

– Only use the launch control if you have the necessary experience.
– Do not use launch control on public roads.


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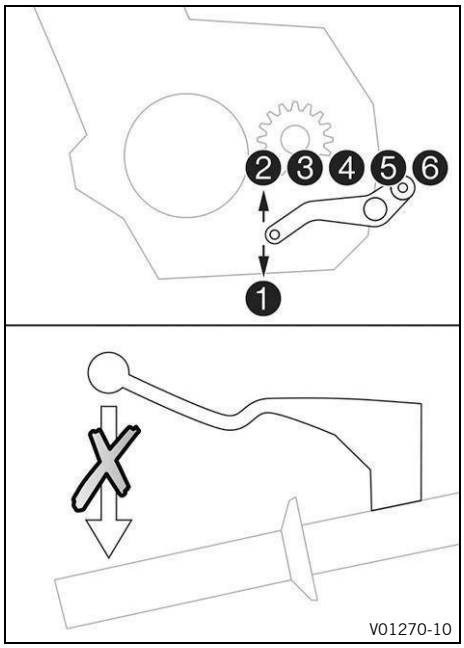
Condition: Ride mode **TRACK** (optional) is activated, The vehicle is in first gear, TC indicator lamp does not light up, Coolant temperature: > 60 °C (> 140.0 °F), Total riding distance covered: > 1,000 km (> 621.4 mi)

– Activate launch control in the combination instrument.
  ✓ The number of available starts is indicated on the start screen.
– Apply full throttle with the clutch lever pulled.
  ✓ The engine speed is adjusted.

9,000 rpm (150.00 Hz)

  ✓ The TC indicator lamp flashes quickly.
– Release clutch lever quickly but in a controlled manner.

10.6 Quickshifter+ (optional)



If the **QUICKSHIFTER+** is activated, you can shift up and down without actuating the clutch.

Because there is no need to close the throttle grip, uninterrupted gear shifts are possible.

The QUICKSHIFTER+ uses the shift shaft position to check whether or not a shift should be initiated, and sends a corresponding signal to the engine control unit.

If the QUICKSHIFTER+ is disabled in the combination instrument, the clutch needs to be actuated in the normal way for each shift.

10.7 Shifting, riding

WARNING

Risk of injury The passenger may fall from the vehicle if they act incorrectly.

– Ensure that the passenger sits correctly on the passenger seat, places his or her feet on the passenger foot pegs and holds on to the rider or the grab handles.

WARNING

Danger of accidents Not adapting the riding style constitutes a major risk.

– Comply with traffic regulations and ride defensively and with foresight to detect sources of danger as early as possible.

WARNING

Danger of accidents Total weight and axle loads influence the handling characteristic.

The total weight consists of: operational vehicle with a full tank, rider and, if applicable, a passenger with protective clothing and helmet, and, if applicable, mounted luggage.

– Do not exceed the maximum permissible total weight or the axle loads.

WARNING

Danger of accidents Improper mounting of cases, tank rucksacks or other luggage impairs the handling characteristics.

Luggage mounted incorrectly can slip while the vehicle is in motion.

– Mount and secure all luggage according to the manufacturer's instructions.
– Check that your luggage is fixed properly at regular intervals.

WARNING

Danger of accidents Adjustments to the vehicle distract attention from traffic activity.

– Make all adjustments when the vehicle is at a standstill.

WARNING

Danger of accidents Abrupt load alterations can cause the vehicle to become out of control.

– Avoid abrupt load alterations and sudden braking actions unless a hazardous situation arises.

WARNING

Danger of accidents Cold tires have reduced road grip.

– Ride the first miles carefully on every journey at moderate speed until the tires reach operating temperature.

WARNING

Danger of accidents New tires have reduced road grip.

The contact surface on new tires is not yet roughened.

– Run in new tires with moderate riding and only gradually increase the lean angle.

Run-in distance	200 km (124.3 mi)

WARNING

Danger of accidents A fall can damage the vehicle more seriously than it may first appear.

– Check the vehicle after a fall as you do when preparing for use.

WARNING

Danger of accidents An incorrect ignition key position causes malfunctions.

– Do not change the ignition key position while riding.

WARNING

Danger of accidents If you downshift at high engine speed, the rear wheel blocks and the engine races.

– Do not downshift to a lower gear at high engine speeds.

NOTE

Engine failure Overheating damages the engine.

– If the coolant temperature warning is displayed, stop immediately and take care not to endanger yourself or other traffic participants in the process.
– Allow the engine and cooling system to cool down.
– Check and, if necessary, correct the coolant level on the cooling system while it is in a cooled state.

NOTE

Engine failure Unfiltered intake air has a negative effect on the service life of the engine.

Dust and dirt can enter the engine if there is no air filter or if the air filter is mounted incorrectly.

– Only operate the vehicle if an air filter is correctly fitted.

NOTE

Transmission damage Incorrect use of the QUICKSHIFTER+ will damage the transmission.

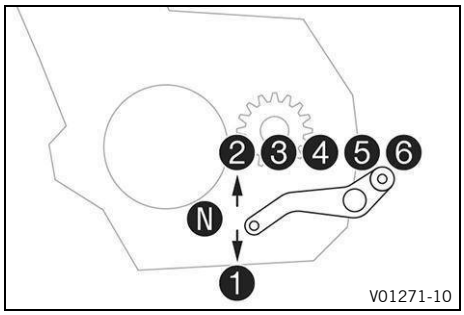
The QUICKSHIFTER+ can only be used if the function is enabled in the combination instrument.

The QUICKSHIFTER+ is not active if you pull the clutch lever.

– Only use the QUICKSHIFTER+ in the permitted speed range shown.

Note

If you hear unusual noises while riding, stop immediately in a safe manner, switch off the engine, and contact an authorized contractual partner.



– Shift into a higher gear when conditions allow (incline, road situation, etc.).
– Release the throttle while simultaneously pulling the clutch lever, shift into the next gear, release the clutch lever, and open the throttle.

Note

You can see the positions of the 6 forward gears in the figure. The neutral or idle position is between the first and second gears. First gear is used for starting off or for steep inclines.

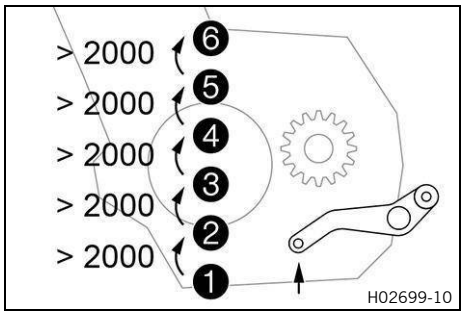
The operating temperature is reached when 5 bars of the temperature indicator light up.

– After reaching maximum speed by fully opening the throttle twist grip, turn the throttle back so that it is ¾ open. This will reduce the speed slightly, but the fuel consumption will be considerably lower.
– Accelerate only up to a speed suitable for the road surface and weather conditions. In particular, you should not change gear on bends and should only accelerate very cautiously.
– Brake if necessary and close the throttle at the same time in order to shift down.
– Pull clutch lever and shift into a lower gear, release the clutch lever slowly, and open the throttle or shift again.

– If the engine stalls (e.g., at a crossroads), just pull clutch lever and press the start button/emergency OFF switch into the lower position. The transmission must not be shifted into neutral.
– Switch off the engine if you are likely to be running at idle speed or stationary for a long time.
– If the oil pressure warning lamp lights up during a trip, stop immediately and switch off the engine. Contact an authorized contractual partner.
– If malfunction indicator lamp lights up during a trip, please contact an authorized contractual partner as soon as possible.
– If the general warning lamp lights up during a trip, the display shows a message.

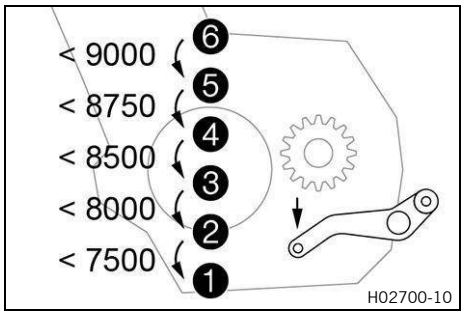
Note
Very important messages are stored in the **Warnings** menu.

– If the ice warning appears in the combination instrument, the roads may be icy. Adjust your speed to the road conditions.



– If the **QUICKSHIFTER+** (optional) is activated in the combination instrument, you can shift up in the engine speed range indicated without pulling the clutch lever.

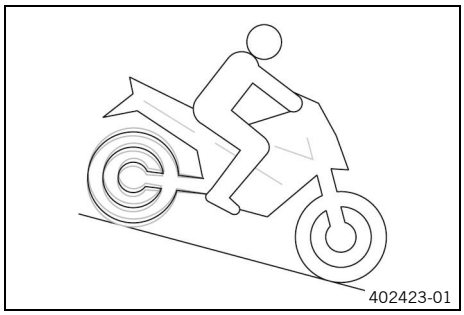
Note
The minimum engine speed in rpm before shifting up is shown in the figure.
Pull the shift lever to the stop quickly without changing the throttle twist grip position.



– If the **QUICKSHIFTER+** (optional) is activated in the dashboard, you can shift down in the rev range indicated without pulling the clutch lever.

Note
The maximum engine speed in rpm before shifting down is shown in the figure.
Press the shift lever to the stop quickly without changing the throttle twist grip position.

10.8 Engine traction torque control



The **MSR** is a function of the engine control.
If the engine braking effect is too great, the **MSR** prevents the rear wheel from locking or sliding away on a sloping position.
To avoid slip of the rear wheel, the **MSR** only opens the throttle valve as far as absolutely necessary.

The **MSR** is applied on surfaces, where the friction coefficient is to low to open the slipper clutch.
To further increase ride safety, the **MSR** is slope dependent.

Note
When the **ABS** or active ABS mode **Supermoto** is switched off, the **MSR** is not active.

10.9 Braking

WARNING
Danger of accidents A spongy pressure point on the front or rear brake reduces the brake action.
– Do not drive the vehicle if the brake system has a spongy pressure point.

WARNING
Danger of accidents The brake system fails in the event of overheating.
If the brake pedal is not released, the brake pads grind continuously.
– Take your foot off the brake pedal when you are not braking.

WARNING
Danger of accidents Braking with excessive force locks the wheels.
The ABS effectiveness is only ensured if it is switched on.
– Leave the ABS switched on in order to benefit from the protective effect.

WARNING
Danger of accidents Moisture and dirt impair the brake system.
– Brake carefully several times to dry out and remove dirt from the brake pads and the brake discs.

WARNING
Danger of accidents The rear wheel can lock due to the engine braking effect.
– Pull the clutch when performing emergency braking or braking on slippery surfaces.

WARNING
Danger of accidents Salt on the roads impairs the brake system.
– Brake carefully several times to remove salt from the brake linings and the brake discs.

WARNING
Danger of accidents ABS may increase the stopping distance in certain situations.
– Adapt your braking to the riding situation and the road conditions.

WARNING
Danger of accidents Higher total weight increases the stopping distance.
– Take the longer stopping distance into account when carrying a passenger or luggage with you.

– When braking, release the throttle and apply the front and rear brakes at the same time.

Note
When the **ABS** is enabled, maximum braking power can be applied even on surfaces with low road grip such as sandy, wet, or slippery terrain without the danger of the wheels locking.

WARNING
Danger of accidents The rear wheel can lock due to the engine braking effect.
– Pull the clutch when performing emergency braking or braking on slippery surfaces.

WARNING
Danger of accidents Banked or laterally sloping ground reduces the maximum possible delay.
– If possible finish braking before going into a bend.

– Always finish braking before you go into a bend. Shift into a lower gear that suits the speed.
– Use the brake action of the engine on long downhill stretches. To do so, shift back one or two gears, but do not overrev the engine. This means that significantly less braking is required and means the brake system does not overheat.

10.10 Stop, park

WARNING
Risk of injury People who act without authorization endanger themselves and others.
– Never leave the vehicle unattended while the engine is running.
– Lock the steering and remove the ignition key if you leave the vehicle unattended.

WARNING
Danger of burns Some vehicle components become hot when the vehicle is operated.
– Do not touch any parts such as the exhaust system, radiator, engine, damper, or brake system before the vehicle parts have cooled down.
– Allow the vehicle parts to cool down before performing any work on the vehicle.

NOTE
Fire hazard Hot vehicle components pose a fire hazard and explosion risk.
– Do not park the vehicle near materials which are highly flammable or explosive.
– Allow the vehicle to cool down before covering it.

NOTE
Material damage The vehicle may be damaged if parked incorrectly.
Damage can occur if the vehicle rolls away or falls over.
The components for parking the vehicle are designed only for the weight of the vehicle.
– Park the vehicle on a firm and level surface.
– Make sure that nobody sits on the vehicle when it is parked on a stand.

– Brake the motorcycle.
– Shift the transmission into the neutral position.
– Switch off the ignition by turning the ignition key to position ⊗.

Note
If the engine is switched off with the kill switch and the ignition remains switched on at the ignition lock, power continues to flow to most electrical loads. This discharges the 12-V battery. You should therefore always switch off the engine with the ignition lock – the kill switch is intended for emergencies only.

– Park the motorcycle on a firm surface.
– Swing side stand forward with your foot as far as it will go and lean the vehicle on it.
– Lock the steering by turning the handlebar fully to the left, pressing down the ignition key to position ⊗ and turning it to position 🔒. To make the steering lock engage more easily, move the handlebar a little to the left and right. Remove the ignition key.

10.11 Transportation

NOTE

Fire hazard Hot vehicle components pose a fire hazard and explosion risk.

– Do not park the vehicle near materials which are highly flammable or explosive.
– Allow the vehicle to cool down before covering it.

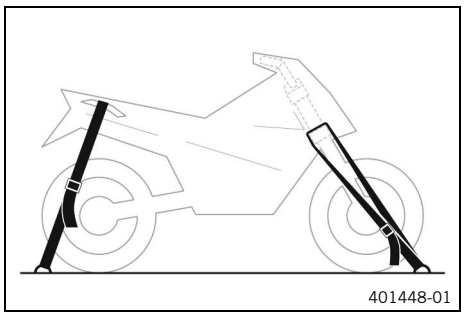
NOTE

Material damage The vehicle may be damaged if parked incorrectly.

Damage can occur if the vehicle rolls away or falls over.

The components for parking the vehicle are designed only for the weight of the vehicle.

– Park the vehicle on a firm and level surface.
– Make sure that nobody sits on the vehicle when it is parked on a stand.


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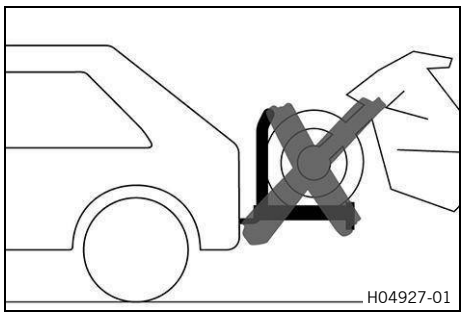
– Switch off the engine.
– Use tension belts or other suitable devices to secure the motorcycle against falling over or rolling away.

10.12 Towing in the event of a breakdown

NOTE

Danger of damage Damage to the powertrain and transmission can occur when towing with a towing vehicle.

– Do not use towing equipment where the wheels of the broken down vehicle remain on the road and rotate as it is towed.
– Always transport a broken down vehicle on a trailer or on the loading area of a transport vehicle.


H04927-01

– Ensure that the broken down vehicle is properly secured on the trailer or transport vehicle.
– Observe local regulations for the recovery of broken down vehicles.

10.13 Refueling

DANGER

Fire hazard Fuel is highly flammable.

The fuel in the fuel tank expands when warm and can escape if overfilled.

– Do not refuel the vehicle in the vicinity of open flames, glowing, or smoldering objects.
– Make sure that nobody smokes in the vicinity of the vehicle during the refueling process.
– Switch off the engine for refueling.
– Make sure that no fuel is spilled; particularly not on hot parts of the vehicle.
– If any fuel is spilled, wipe it up immediately.
– Do not overfill the fuel tank.

WARNING

Danger of poisoning Fuel is harmful to health.

– Do not allow fuel to come into contact with skin, eyes, or clothing.
– Consult a doctor immediately if fuel has been ingested.
– Do not inhale fuel vapors.
– Rinse the affected area immediately with plenty of water in the event of contact with skin.
– Rinse eyes thoroughly with water and consult a doctor immediately if fuel comes into contact with eyes.
– If fuel spills on to your clothing, change the clothing.
– Store fuel properly in a suitable container and keep out of the reach of children.

NOTE

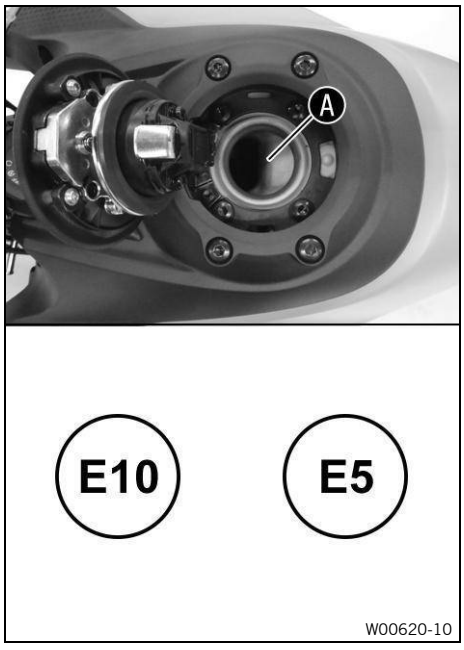
Material damage Inadequate fuel quality can lead to losses in performance and consequential damage.

– Refuel only with clean fuel that meets the specified standards.

NOTE

Environmental hazard Improper handling of fuel is dangerous to the environment.

– Do not allow fuel to enter the groundwater, the soil, or the sewage system.



– Switch off the engine.
– Open the fuel tank cap. (p. 24)
– Fill the fuel tank with fuel up to the lower edge Ⓐ of the filler neck.

Fuel tank capacity, approx.	
Super unleaded (ROZ 95) (p. 174)	14.8 l (3.91 liq. gal_{US})

– Close the fuel tank cap. (p. 25)

11.1 Service schedule

Any further work that results from the service work must be ordered separately and invoiced separately.
Different service intervals may apply in your country, depending on the local operating conditions.
Individual service intervals and scopes may change in the course of technical developments. The most up-to-date service schedule is available for authorized contractual partners for the electronic proof of service. Your authorized contractual partner will be happy to advise you.

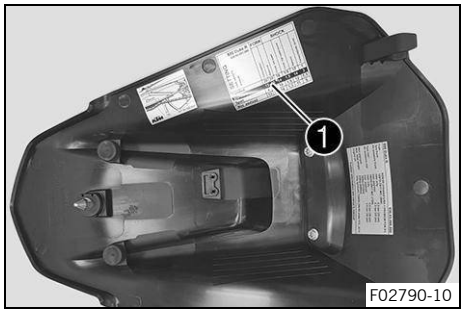
	After 1,000 km (621.4 mi)	Every 15,000 km (9,320.6 mi)	Every 30,000 km (18,641.1 mi)	Every 12 months	Every 24 months	Every 48 months
Read out the fault memory using the diagnostics tool.	○	●	●	●	●	●
Program the shift shaft sensor.	○	●	●	●	●	●
Check that the electrical equipment is functioning properly.	○	●	●	●	●	●
Check that the brake pads of the front brake are secured. (p. 104)	○	●	●	●	●	●
Check that the brake pads of the rear brake are secured. (p. 107)	○	●	●	●	●	●
Check the brake discs. (p. 102)	○	●	●	●	●	●
Check the brake lines for damage and tightness.	○	●	●	●	●	●
Check the brake fluid level for the front brake. (p. 103)	○	●	●	●		
Change the brake fluid for the front brake.					●	●
Check the brake fluid level for the rear brake. (p. 105)	○	●	●	●		
Change the brake fluid for the rear brake.					●	●
Check the free travel of the clutch lever. (p. 145)	○	●	●	●	●	●
Check the free travel of the brake pedal. (p. 105)	○	●	●	●	●	●
Change the engine oil and the oil filter, clean the oil screens. (p. 142)	○	●	●	●	●	●
Check all hoses (e.g. fuel, cooling, bleeder, drainage, etc.) and boots for cracking, leaks, and correct routing.		●	●	●	●	●
Empty the drainage hoses.	○	●	●	●	●	●
Check the cables for damage and that there are no kinks in the routing.		●	●	●	●	●
Check the frame.			●			
Check the swingarm.			●			
Check the swingarm bearing for play.		●	●			
Check the steering head bearing play.	○	●	●			
Check the wheel bearing for play.		●	●			
Check the shock absorber and fork for leaks. Perform a fork service and shock absorber service as needed, when possible and depending on how the vehicle is used.	○	●	●	●	●	●
Check the tire condition. (p. 116)	○	●	●	●	●	●
Check the tire pressure. (p. 117)	○	●	●	●	●	●
Check the chain, rear sprocket, engine sprocket, and chain guide. (p. 95)		●	●	●	●	●

	After 1,000 km (621.4 mi)	Every 15,000 km (9,320.6 mi)	Every 30,000 km (18,641.1 mi)	Every 12 months	Every 24 months	Every 48 months
Check the chain tension. (p. 93)	○	●	●	●	●	●
Grease all moving parts (e.g. side stand, hand lever, chain, etc.) and check for smooth operation.	○	●	●	●	●	●
Change the spark plugs.			●			
Check the valve clearance.			●			
Change the air filter, clean the air filter box.		●	●			
Check the fuel pressure and dampers of the fuel tank rollers.		●	●	●	●	●
Check the headlight setting. (p. 129)	○	●	●			
Check the tightness of the safety-relevant screws and nuts which are easily accessible.	○	●	●	●	●	●
Clean the dust boots of the fork legs. (p. 89)		●	●			
Check the frost protection and coolant level. (p. 132)	○	●	●	●	●	
Change the coolant.						●
Check that the radiator fan is functioning properly.	○	●	●	●	●	●
Final check: Check the vehicle is roadworthy and take a test ride.	○	●	●	●	●	●
Read out the fault memory after the test ride using the diagnostics tool.	○	●	●	●	●	●
Set the service interval display.	○	●	●	●	●	●
Make a service entry in the contractual partner portal.	○	●	●	●	●	●

○ One-time interval

● Periodic interval

12.1 Fork/shock absorber



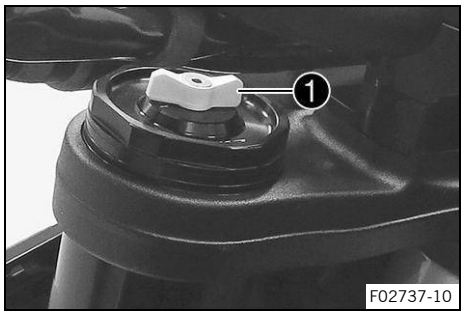
The fork and the shock absorber offer many options of adapting the chassis to the riding style and payload.

Note
The recommendations for the suspension setting are shown in table ❶.

These adjustments should be understood as guide values and should always be the basis for one's personal suspension setting. Do not change the adjustments at random, as otherwise the riding characteristics could deteriorate, particularly at high speeds.

12.2 Adjusting the compression damping of the fork

Note
The hydraulic compression damping determines the fork suspension behavior.



– Turn white adjuster ❶ clockwise as far as it will go.

Note
The adjuster ❶ **COMP** (white adjuster) is located at the upper end of the left fork leg.
Rebound damping **REB** is located in the right fork leg (red adjuster).

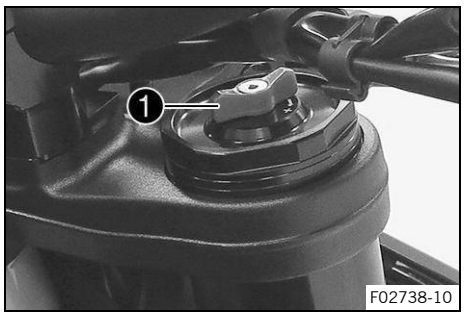
– Turn counterclockwise by the number of clicks corresponding to the fork type.

Compression damping	
Comfort	4 clicks
Standard	3 clicks
Sport	1 click
Full payload	3 clicks

Note
Turning clockwise increases damping; turning counterclockwise reduces damping during compression.

12.3 Adjusting the rebound damping of the fork

Note
The hydraulic rebound damping determines the fork suspension behavior.



– Turn red adjuster ❶ clockwise as far as it will go.

Note
The adjuster ❶ **REB** (red adjuster) is located at the upper end of the right fork leg.
Compression damping **COMP** is located in the left fork leg (white adjuster).

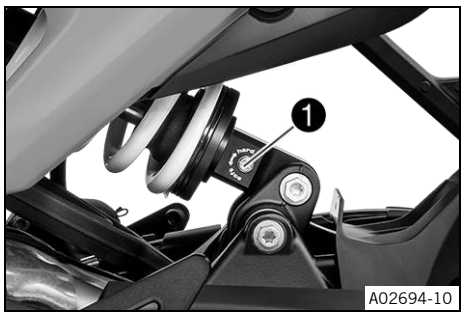
– Turn counterclockwise by the number of clicks corresponding to the fork type.

Rebound damping	
Comfort	4 clicks
Standard	3 clicks
Sport	2 clicks
Full payload	3 clicks

Note
Turning clockwise increases damping; turning anticlockwise reduces damping on rebound.

12.4 Adjusting the rebound damping of the shock absorber

CAUTION
Risk of injury Parts of the shock absorber will move erratically if the shock absorber is detached incorrectly.
The shock absorber is filled with highly compressed nitrogen.
– Please follow the description provided.



– Turn adjusting screw ❶ clockwise up to the last perceptible click.
– Turn counterclockwise by the number of clicks corresponding to the shock absorber type.

Rebound damping	
Comfort	4 clicks
Standard	3 clicks
Sport	2 clicks
Full payload	2 clicks

Note
Turning clockwise increases damping; turning anticlockwise reduces damping on rebound.

12.5 Adjusting the spring preload of the shock absorber

WARNING

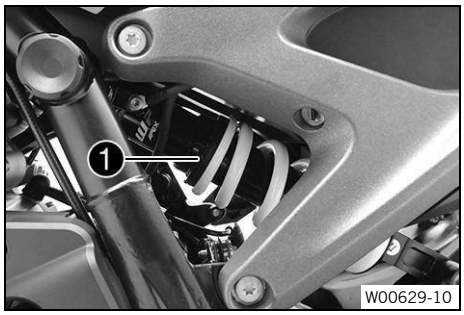
Danger of accidents Modifications to the suspension settings that are not properly coordinated can impair the handling and overload components.

– Only make adjustments within the recommended range.
– Ride slowly to start with after making adjustments to get the feel of the new handling characteristics.

Note

The spring preload defines the initial status of the spring operation on the shock absorber.

The best spring preload setting is achieved when it is set for the weight of the rider and that of any luggage and a passenger, thus ensuring an ideal compromise between handling and stability.



– Adjust the spring preload by turning at adjusting device ❶ using the hook wrench from the tool set.

Preload	
Comfort	3 clicks
Standard	3 clicks
Sport	4 clicks
Full payload	6 clicks

Note

The spring preload can be set to 10 different positions.

13.1 Raising the motorcycle with rear lifting gear

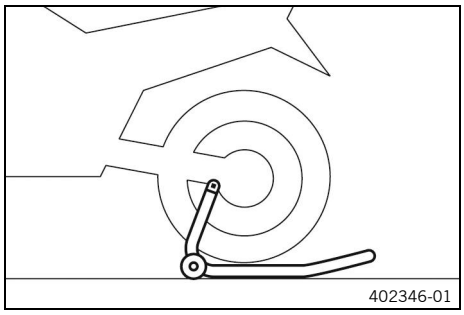
NOTE

Material damage The vehicle may be damaged if parked incorrectly.

Damage can occur if the vehicle rolls away or falls over.

The components for parking the vehicle are designed only for the weight of the vehicle.

– Park the vehicle on a firm and level surface.
– Make sure that nobody sits on the vehicle when it is parked on a stand.



– Mount the supports of the wheel stand.
– Insert the adapter in the rear wheel stand.

Retaining adapter (63529955000)
Rear wheel work stand (69329955000)

– Stand the motorcycle upright, align the wheel stand with the swingarm and the adapters, and raise the motorcycle.

13.2 Removing the rear of the motorcycle from the lifting gear

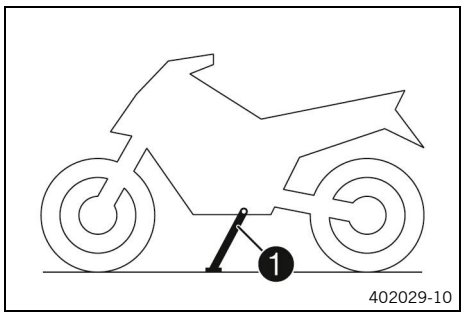
NOTE

Material damage The vehicle may be damaged if parked incorrectly.

Damage can occur if the vehicle rolls away or falls over.

The components for parking the vehicle are designed only for the weight of the vehicle.

– Park the vehicle on a firm and level surface.
– Make sure that nobody sits on the vehicle when it is parked on a stand.



– Secure the motorcycle against falling over.
– Remove the rear lifting gear and lean the vehicle on side stand ❶.
– Remove the retaining adapter from the link fork.

13.3 Lifting the motorcycle with the front lifting gear

NOTE

Material damage The vehicle may be damaged if parked incorrectly.

Damage can occur if the vehicle rolls away or falls over.

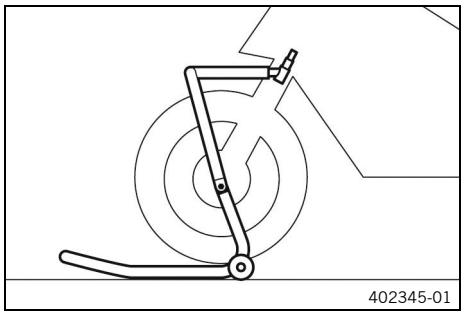
The components for parking the vehicle are designed only for the weight of the vehicle.

– Park the vehicle on a firm and level surface.
– Make sure that nobody sits on the vehicle when it is parked on a stand.

Preparatory work

– Raise the motorcycle with the rear lifting gear. (p. 88)
– Remove the brake manifold of the front brake. (p. 108)

Main work


402345-01

– Move the handlebar to the straight-ahead position. Position wheel stand at the front.

Always raise the motorcycle at the rear first.

Front wheel work stand, small (61129965100)

– Lift the motorcycle at the front.

13.4 Taking the motorcycle off the front lifting gear

NOTE

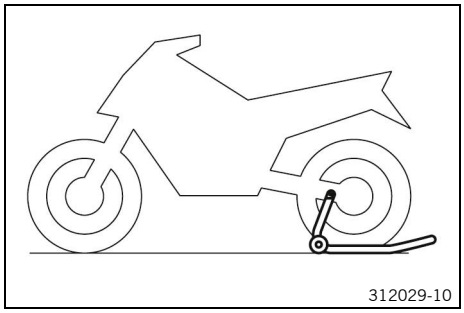
Material damage The vehicle may be damaged if parked incorrectly.

Damage can occur if the vehicle rolls away or falls over.

The components for parking the vehicle are designed only for the weight of the vehicle.

– Park the vehicle on a firm and level surface.
– Make sure that nobody sits on the vehicle when it is parked on a stand.

Main work


312029-10

– Secure the motorcycle against falling over.
– Remove the front lifting gear.

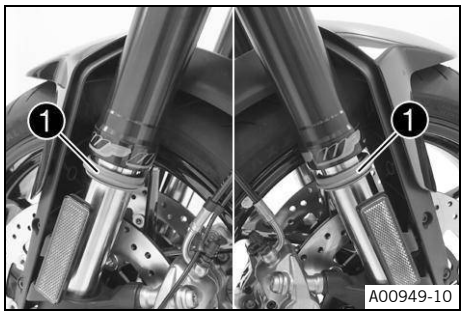
Reworking

– Mount the brake manifold of the front brake. (p. 108)

13.5 Cleaning the dust boots of the fork legs

Preparatory work

– Raise the motorcycle with the rear lifting gear. (p. 88)
– Remove the brake manifold of the front brake. (p. 108)
– Lift the motorcycle with the front lifting gear. (p. 88)



Main work

– Push dust boot ❶ downward on both fork legs.

Note

The dust boots should remove dust and coarse dirt particles from the inner fork tubes. Over time, dirt can accumulate behind the dust boots. If this dirt is not removed, the oil seals behind can start to leak.

WARNING

Danger of accidents Oil, grease or wax on the brake discs reduces the brake action.

– Always keep the brake discs free of oil, fat and wax.
– Clean the brake discs with brake cleaner when necessary.

– Clean and oil the dust boots and the inner fork tube of both fork legs.

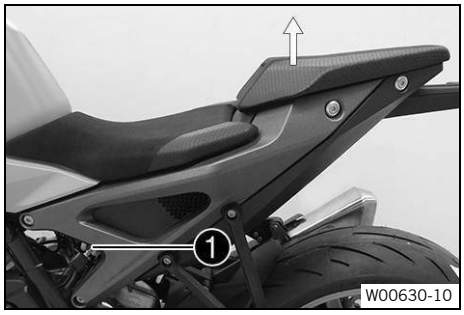
Universal oil spray 📖 (p. 175)

– Press the dust boots back into their installation position.
– Remove excess oil.

Reworking

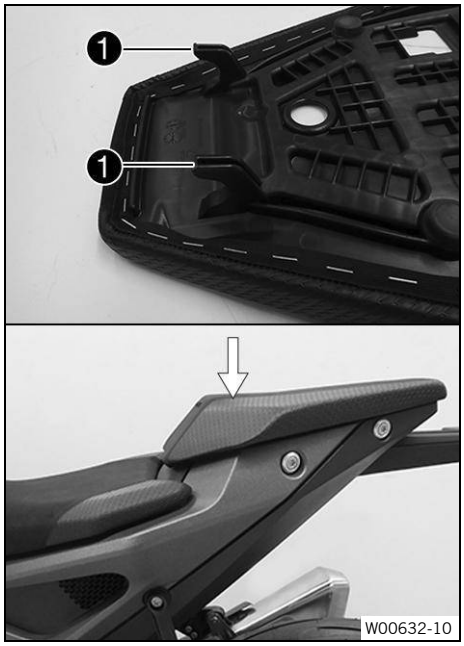
– Take the motorcycle off the front lifting gear. 📖 (p. 89)
– Mount the brake manifold of the front brake. 📖 (p. 108)
– Remove the rear of the motorcycle from the lifting gear. 📖 (p. 88)

13.6 Removing the passenger seat



– Insert the ignition key in seat lock ❶ and turn it clockwise.
– Raise the front of the passenger seat cover, push it toward the fuel tank, and remove it upward.
– Remove the ignition key from the seat lock.

13.7 Mounting the passenger seat



– Hook holding lugs ❶ of the passenger seat onto the storage compartment, lower the front and push backward.
– Press the passenger seat downward until it clicks into place.

WARNING

Danger of accidents The seat can come loose from the anchoring if it is not mounted correctly.

– After assembly, check whether the seat is correctly locked and cannot be pulled up.

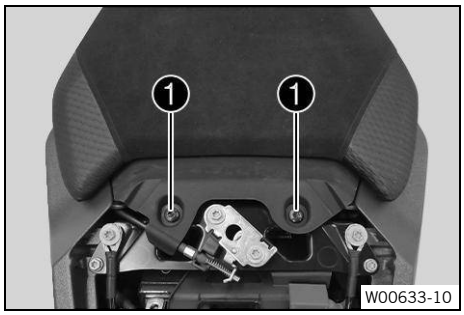
– Check that the passenger seat is mounted correctly.

13.8 Remove the front rider's seat

Preparatory work

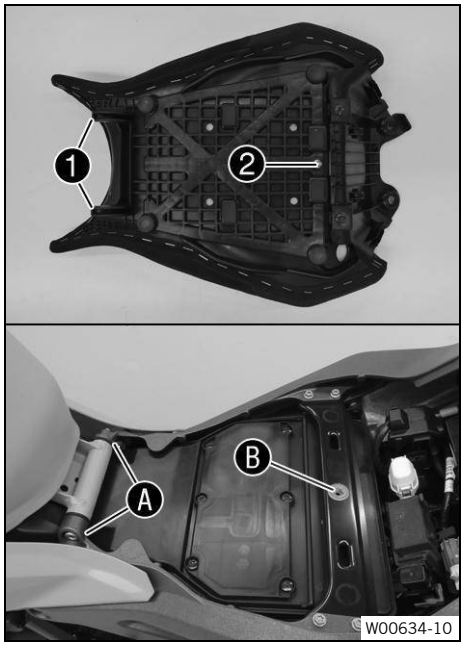
– Remove the passenger seat. (p. 90)

Main work



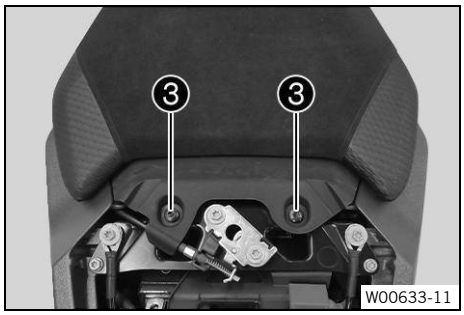
– Remove screws ❶.
– Lift the rear of the front rider's seat and carefully release it from the quick-release fastener, pull it back and remove it upward.

13.9 Mounting the front rider's seat



Main work

– Push the front rider's seat forward and lower at the rear.
  ✓ The holding lugs ❶ engage in the loops Ⓐ on the rear frame.
  ✓ Holding lug ❷ engages in quick-release coupling Ⓑ of the cross member.



– Mount and tighten screws ❸.

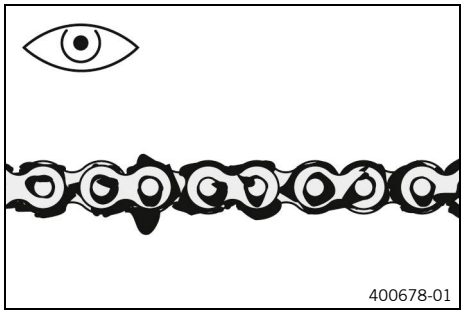
Remaining screws on chassis	
M6	10 Nm (7.4 ft·lb$_f$)

– Check that the front rider's seat is mounted correctly.

Reworking

– Mount the passenger seat. (p. 91)

13.10 Checking the chain for dirt



– Check the chain for coarse dirt accumulation.
  » If the chain is very dirty:
    – Clean the chain. (p. 93)

13.11 Cleaning the chain

WARNING

Danger of accidents Oil, grease or wax on the brake discs reduces the brake action.

– Always keep the brake discs free of oil, fat and wax.
– Clean the brake discs with brake cleaner when necessary.

WARNING

Danger of accidents Lubricants on the tires reduces the road grip.

– Remove lubricants from the tires using a suitable cleaning agent.

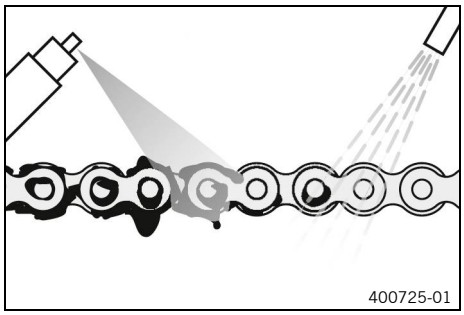
NOTE

Environmental hazard Hazardous substances cause environmental damage.

– Dispose of oils, grease, filters, fuel, cleaning agents, brake fluid, etc. correctly and in accordance with the applicable regulations.

Note

The service life of the chain depends largely on its maintenance.



Preparatory work

– Raise the motorcycle with the rear lifting gear. (p. 88)

Main work

– Rinse off the loose dirt with a gentle jet of water.
– Remove old grease residues with a chain cleaner.

Chain cleaner (p. 180)

– After drying, apply chain spray.

Street chain spray (p. 175)

Reworking

– Remove the rear of the motorcycle from the lifting gear. (p. 88)

13.12 Checking the chain tension

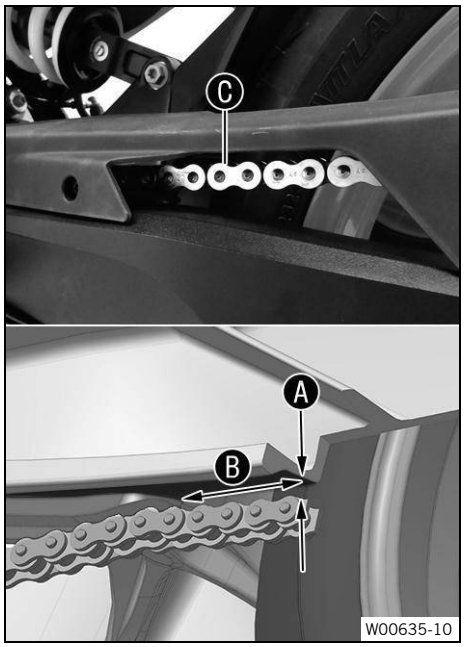
WARNING

Danger of accidents Incorrect chain tension can damage components and result in an accident.

If the chain is tension is too high, the chain, front sprocket, rear sprocket, transmission, and rear wheel bearings wear more quickly. Some components may break if overloaded.

If the chain is too loose, the chain may fall off the front sprocket or the rear sprocket. This can damage the rear wheel or the engine.

– Check the chain tension regularly.
– Set the chain tension in accordance with the specification.



Preparatory work

– Raise the motorcycle with the rear lifting gear. (p. 88)

Main work

– Shift the transmission into the neutral position.
– Push the chain behind the chain sliding piece up and determine the chain tension Ⓐ between the link fork and the upper edge of the chain.

Distance Ⓑ from the chain sliding piece	2.5 cm (0.98 in)
Measure the distance from the flat part of the link fork directly above the chain, not from the edge of the link fork.	
Chain tension	2 mm ... 5 mm (0.08 in ... 0.20 in)
The top part of chain Ⓒ must be taut.	
Chain wear is not always even, so repeat this measurement at different positions on the chain.	

» If the chain tension does not meet the specification:
– Adjust the chain tension. (p. 94)

Reworking

– Remove the rear of the motorcycle from the lifting gear. (p. 88)

13.13 Adjusting the chain tension

WARNING

Danger of accidents Incorrect chain tension can damage components and result in an accident.

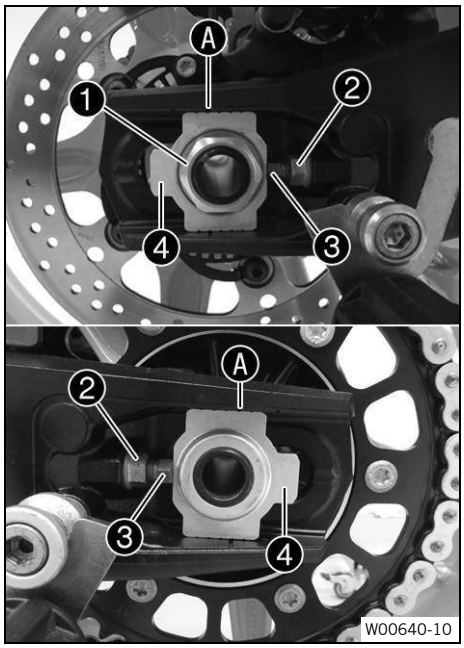
If the chain is tension is too high, the chain, front sprocket, rear sprocket, transmission, and rear wheel bearings wear more quickly. Some components may break if overloaded.

If the chain is too loose, the chain may fall off the front sprocket or the rear sprocket. This can damage the rear wheel or the engine.

– Check the chain tension regularly.
– Set the chain tension in accordance with the specification.

Preparatory work

– Raise the motorcycle with the rear lifting gear. (p. 88)
– Check the chain tension. (p. 93)



Main work

– Loosen nut ❶.
– Loosen nuts ❷.
– Adjust the chain tension by turning adjusting screws ❸ on the left and right.

Chain tension	2 mm … 5 mm (0.08 in … 0.20 in)
In order for the rear wheel to be correctly aligned, the markings on the left and right chain adjusters must be in the same position relative to reference markings Ⓐ.	
The upper part of the chain must be taut.	
Chain wear is not always even. Repeat this measurement at different chain positions.	

– Tighten nuts ❷.
– Make sure that chain tension adjusters ❹ are fitted correctly on adjusting screws ❸.
– Tighten nut ❶.

Nut, wheel spindle, rear	
M25×1.5	90 Nm (66.4 ft·lb$_f$) Long-life grease

Note
Chain tension adjusters ❹ can be turned.

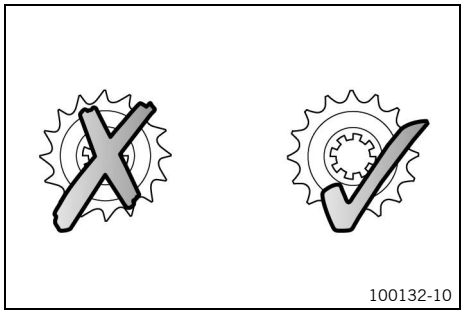
Reworking

– Check the chain tension. (p. 93)
– Remove the rear of the motorcycle from the lifting gear. (p. 88)

13.14 Checking the chain, rear sprocket, front sprocket, and chain guide

Preparatory work

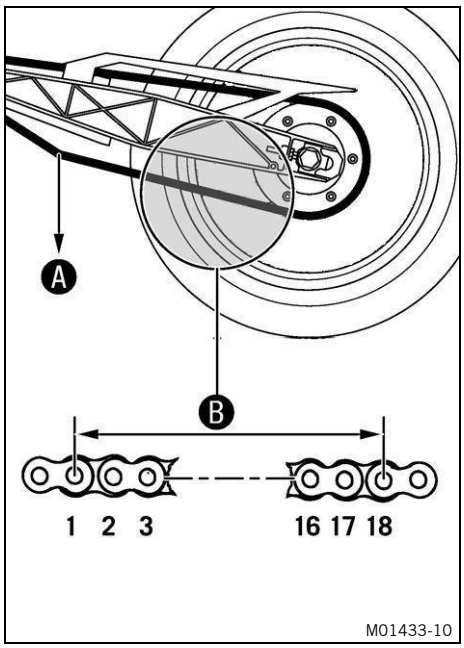
– Raise the motorcycle with the rear lifting gear. (p. 88)



Main work

– Check the rear sprocket and the front sprocket for wear.
  » If the rear sprocket and engine sprocket are worn:
    – Change the drivetrain kit.

Always replace the front sprocket, rear sprocket, and chain together.



– Shift the transmission into the neutral position.
– Pull on the lower chain section with specified weight Ⓐ.

Weight, chain wear measurement	15 kg (33.1 lb)

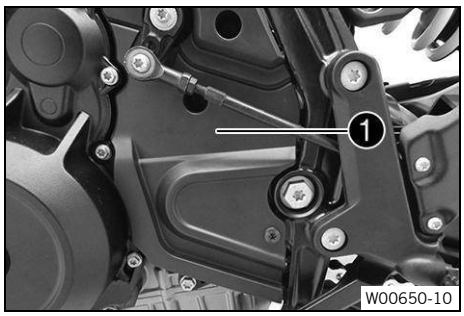
– Measure distance Ⓑ of chain rollers in the lower chain section.

Chain wear is not always even, so repeat this measurement at different positions on the chain.	
Maximum distance Ⓑ of chain rollers at the longest chain section	272 mm (10.71 in)

» If distance Ⓑ is greater than the specified measurement:
– Change the drivetrain kit.

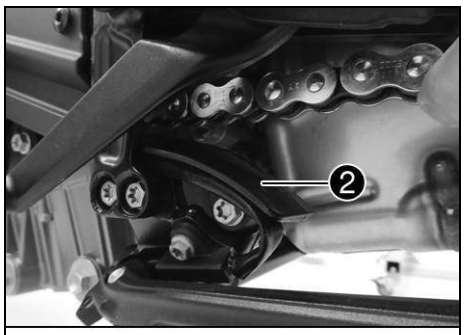
When installing a new chain, also replace the rear sprocket and front sprocket.

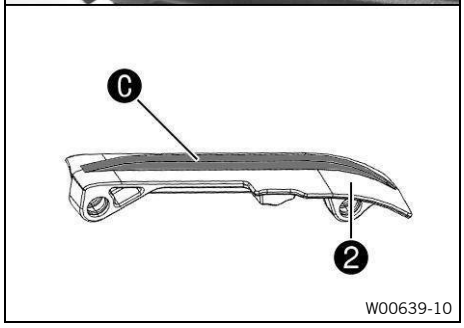
Note
New chains wear out faster on old, worn sprockets.
For safety reasons, the chain has no chain joint.



– Check the engine sprocket cover ❶ for tightness.
» If the engine sprocket cover is loose:
– Tighten the screws on the engine sprocket cover.

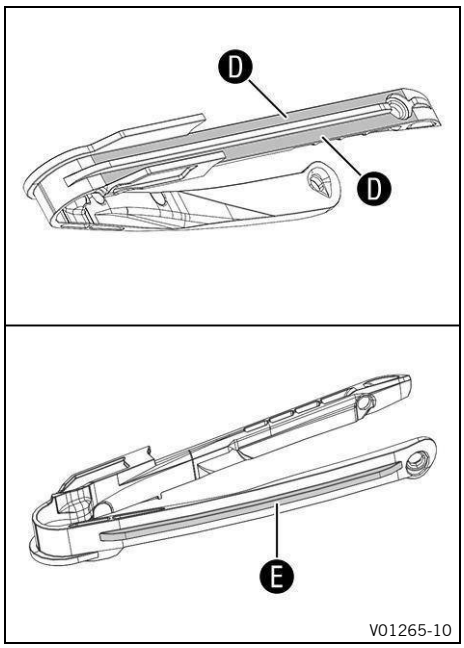
Screw, front sprocket cover	
M5	5 Nm (3.7 ft·lb$_f$) **Loctite® 243**





– Check chain sliding piece ❷ for wear.
» If the chain sliding piece is highly worn in the marked area Ⓒ:
– Change the chain slider.
– Check that chain sliding piece ❷ is firmly seated.
» If the chain slider is loose:
– Tighten the screws on the chain slider.

Remaining screws on chassis	
M8	25 Nm (18.4 ft·lb$_f$)



– Check the chain slider at the top for wear.
  » If continuous signs of wear to the chain are visible on the chain slider in the areas D marked:
    – Change the chain slider.
  » If the chain slider is highly worn in the marked area E:
    – Change the chain slider.
– Check that the chain slider is firmly seated.
  » If the chain slider is loose:
    – Tighten the screws of the chain slider.

Remaining screws on chassis	
M5	5 Nm (3.7 ft·lb$_f$)

Reworking

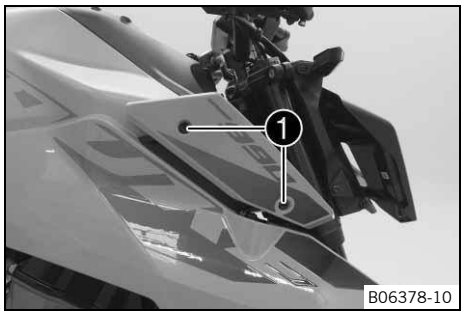
– Remove the rear of the motorcycle from the lifting gear. (p. 88)

13.15 Removing the right tank spoiler

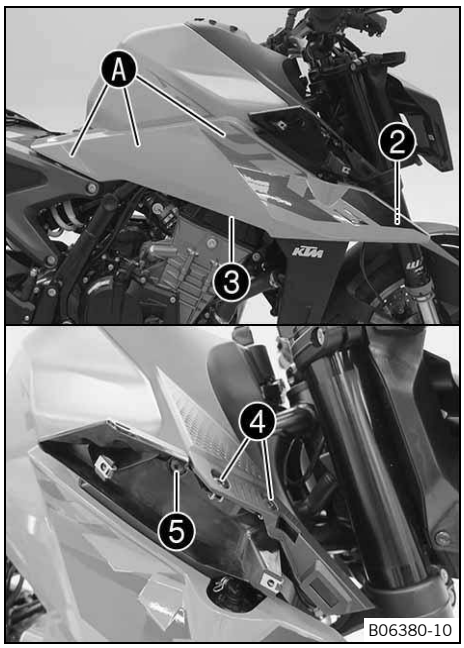
Preparatory work

– Remove the passenger seat. (p. 90)
– Remove the front rider's seat. (p. 91)

Main work

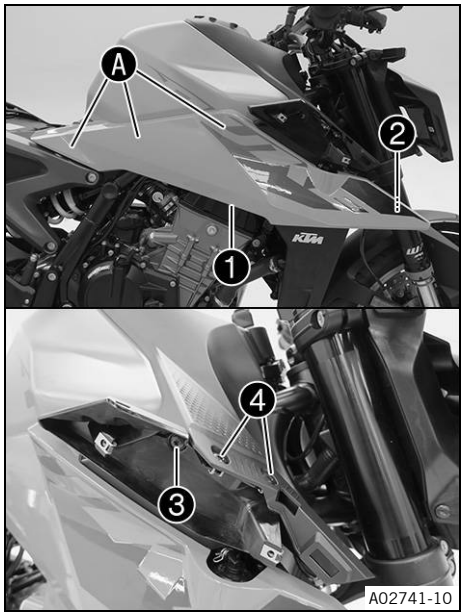


– Remove screws 1.



– Remove screw ❷ and screw ❸.
– Remove screws ❹ and screw ❺.
– Detach the fuel tank spoiler in the areas Ⓐ and carefully remove it.

13.16 Installing the right tank spoiler



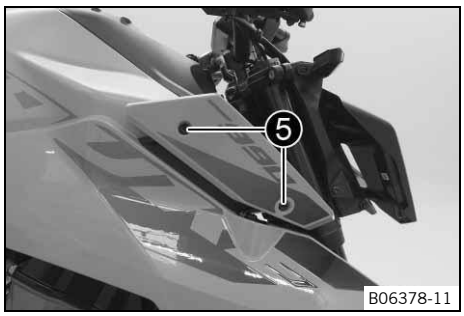
Main work

– Attach the fuel tank spoiler in the areas Ⓐ and engage it.
– Mount and tighten screw ❶ and screw ❷.

Screw, trim	
M5	3.5 Nm (2.58 ft·lb$_f$)

– Mount and tighten screw ❸ and screws ❹.

Screw, trim	
M5	3.5 Nm (2.58 ft·lb$_f$)



– Mount and tighten screws ❺.

Screw, trim	
M5	3.5 Nm (2.58 ft·lb$_f$)

Reworking

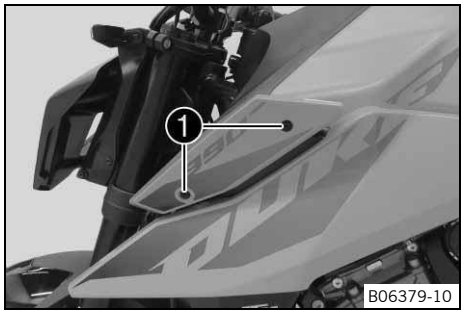
– Mount the front rider's seat. (p. 92)
– Mount the passenger seat. (p. 91)

13.17 Removing the left tank spoiler

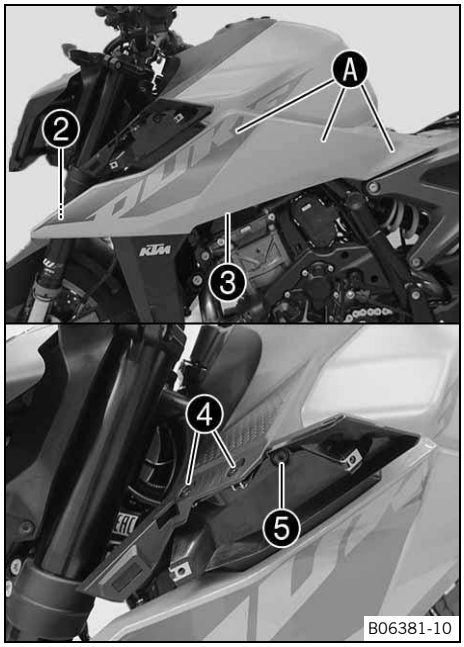
Preparatory work

– Remove the passenger seat. (p. 90)
– Remove the front rider's seat. (p. 91)

Main work

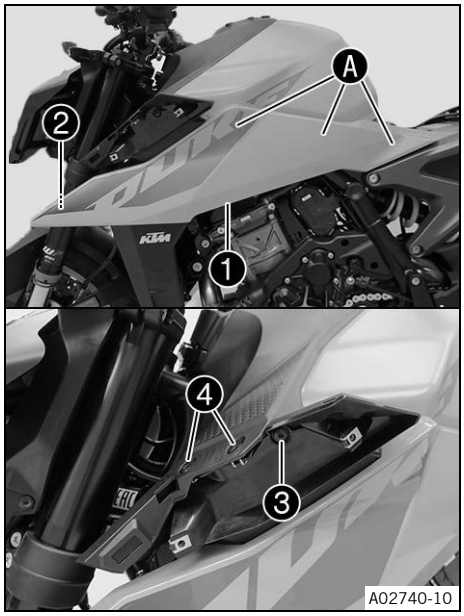


– Remove screws ❶.



– Remove screw ❷ and screw ❸.
– Remove screws ❹ and screw ❺.
– Detach the fuel tank spoiler in the areas Ⓐ and carefully remove it.

13.18 Installing the left tank spoiler



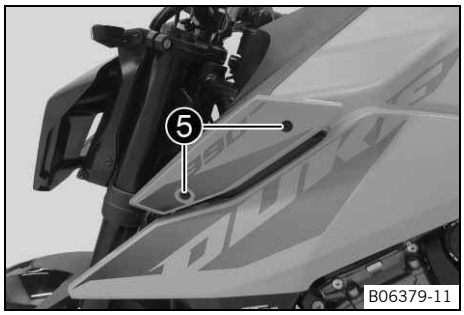
Main work

– Attach the fuel tank spoiler in the areas Ⓐ and engage it.
– Mount and tighten screw ❶ and screw ❷.

Screw, trim	
M5	3.5 Nm (2.58 ft·lb$_f$)

– Mount and tighten screw ❸ and screws ❹.

Screw, trim	
M5	3.5 Nm (2.58 ft·lb$_f$)



– Mount and tighten screws ❺.

Screw, trim	
M5	3.5 Nm (2.58 ft·lb$_f$)

Reworking

– Mount the front rider's seat. (p. 92)
– Mount the passenger seat. (p. 91)

14.1 Anti-lock braking system

WARNING

Danger of accidents Changes to the vehicle impair the function of the ABS.

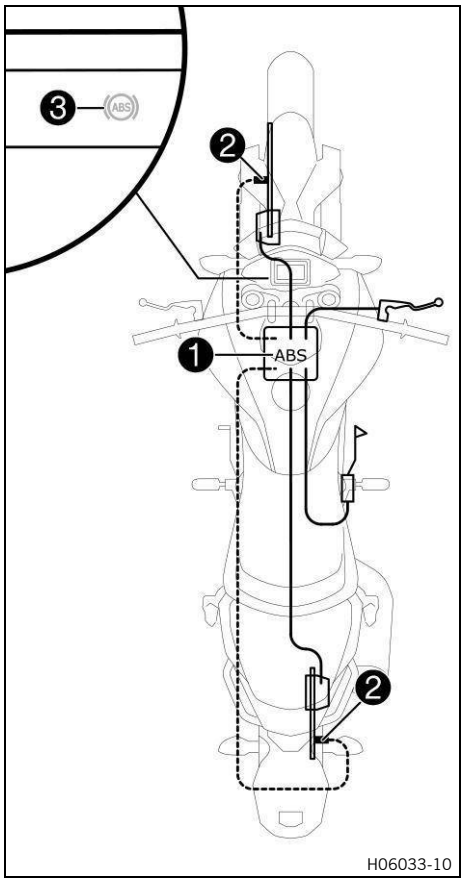
– Do not make any changes to the suspension travel.
– Only use spare parts on the brake system which have been approved and recommended by the vehicle manufacturer.
– Only use tires and wheels approved and recommended by the vehicle manufacturer with the corresponding speed rating.
– Maintain the specified tire pressure.
– Ensure that service work and repairs are performed professionally.

WARNING

Danger of accidents Driving aids can reduce the probability of a fall only within physical limits.

It is not always possible to compensate for certain riding situations, for example with luggage loaded with a high center of gravity, varying road surfaces, steep descents or full braking without disengaging the gear.

– Adapt your riding style to the road conditions and your driving ability.



The **ABS** module ❶, which consists of a hydraulic unit, ABS control unit, and return pump, is installed under the fuel tank. One wheel speed sensor ❷ is located in each case on the front and the rear wheel.

WARNING

Danger of accidents An incorrectly selected ABS mode makes it more difficult to control the vehicle.

The ABS modes are each only suitable for certain conditions.

– Always select an ABS mode that suits the ground and the riding situation.

The **ABS** is a safety system that prevents the wheels locking when driving straight ahead or when cornering (within the limits of physics).

The ABS control is dependent on the riding mode. ABS has two operating modes: the **Road** and **Supermoto** ABS modes.

In ABS mode **Road**, ABS controls both wheels.

In ABS mode **Supermoto**, there is no ABS control on the rear wheel.

Note

The curve dependent control is only active in ABS mode **Road**.

The ABS operates with two independent brake circuits (front and rear brakes). When the ABS control unit detects a locking tendency in a wheel, ABS begins regulating the brake pressure. The control function causes a slight pulsing of the hand and foot brake levers.

The ABS warning light ❸ must light up after the ignition is switched on and go out after starting off. If it does not go out after starting off or if it is lit while riding, this indicates a fault in the ABS. In this case, the ABS is no longer enabled and the wheels may lock during braking. The brake system itself stays functional; only ABS control is not available.

The ABS warning lamp may also light up if the rotating speeds of the front and rear wheels differ greatly under extreme riding conditions, for example when making "wheelies" or if the rear wheel spins. This causes the ABS to switch off.

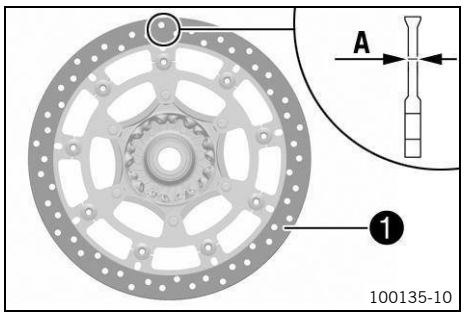
To reactivate the ABS, stop the vehicle and switch off the ignition. The ABS is reactivated when the vehicle is switched on again. The ABS warning light goes out after starting off.

14.2 Checking the brake discs

WARNING

Danger of accidents Worn-out brake discs reduce the braking action.

– Make sure that worn-out brake discs are replaced immediately.



– Check the brake disc thickness of the front and rear brake disc at several places on the disc to see if they conform to measurement Ⓐ.

Brake disc wear limit	
front	4.5 mm (0.177 in)
rear	4.5 mm (0.177 in)

Note

Wear will reduce the thickness of the brake disc at contact surface ❶ of the brake linings.

» If the brake disc thickness is less than the specified value.

– Change the front brake discs.

– Change the brake discs on the rear brake.

– Check the front and rear brake discs for damage, cracks, and deformation.

» If the brake disc shows signs of damage, cracks, or deformation:

– Change the front brake discs.

– Change the brake discs on the rear brake.

14.3 Checking the brake fluid level for the front brake

WARNING

Danger of accidents Brake fluid which is too old or of the wrong type impairs the function of the brake system.

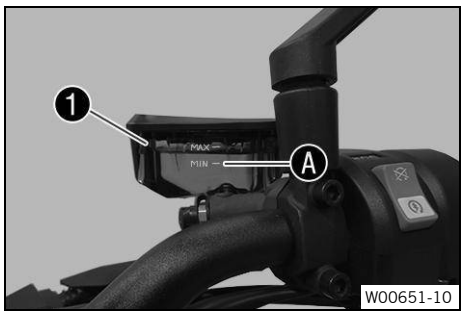
– Make sure that brake fluid for the front and rear brake is changed in accordance with the service schedule.
– Make sure that only clean, approved brake fluid from a tightly sealed container is used.

WARNING

Danger of accidents An insufficient brake fluid level will cause the brake system to fail.

If the brake fluid level drops below the specified marking or the specified value, the brake system has a leak or the brake pads are worn down.

– Have the brake system checked and make sure that the problem has been eliminated before the vehicle is used again.



– Move the brake reservoir mounted on the handlebar to a horizontal position.
– Check brake fluid level in brake fluid reservoir 1.
  » If the brake fluid level has dropped below **MIN** marking A:
    – Add brake fluid for the front brake. (p. 103)

14.4 Adding brake fluid for the front brake

WARNING

Danger of accidents Brake fluid which is too old or of the wrong type impairs the function of the brake system.

– Make sure that brake fluid for the front and rear brake is changed in accordance with the service schedule.
– Make sure that only clean, approved brake fluid from a tightly sealed container is used.

WARNING

Danger of accidents An insufficient brake fluid level will cause the brake system to fail.

If the brake fluid level drops below the specified marking or the specified value, the brake system has a leak or the brake pads are worn down.

– Have the brake system checked and make sure that the problem has been eliminated before the vehicle is used again.

WARNING

Health hazard Brake fluid is a harmful substance.

– Keep brake fluid out of the reach of children.
– Wear suitable protective clothing and safety glasses.
– Do not allow brake fluid to come into contact with the skin, the eyes, or clothing.
– Consult a doctor immediately if brake fluid has been ingested.
– Rinse the affected area with plenty of water in the event of contact with the skin.
– Rinse eyes thoroughly with water immediately and consult a doctor if brake fluid comes into contact with the eyes.
– If brake fluid spills on to your clothing, change the clothing.

NOTE

Environmental hazard Hazardous substances cause environmental damage.

– Dispose of oils, grease, filters, fuel, cleaning agents, brake fluid, etc. correctly and in accordance with the applicable regulations.

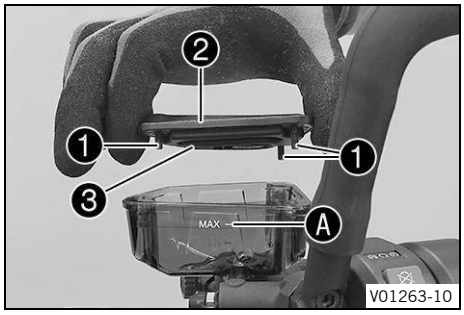
Note

Avoid contact between brake fluid and painted parts. Brake fluid corrodes paint.

Preparatory work

– Check that the brake pads of the front brake are secured. (p. 104)

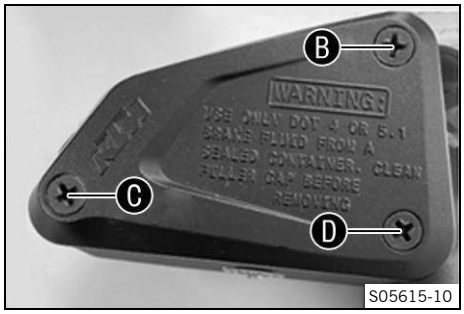
Main work



– Move the brake reservoir mounted on the handlebar to a horizontal position.
– Remove screws ❶.
– Take off cover ❷ with diaphragm ❸.
– Add brake fluid up to the **MAX** marking Ⓐ.

Brake fluid DOT 5.1 (p. 176)

– Position cover ❷ with diaphragm ❸.



– Mount screws ❶ and tighten in the order Ⓑ, Ⓒ, Ⓓ.

Brake fluid reservoir cover, front	
M4	1 Nm (0.7 ft·lb$_f$)

Immediately clean up any brake fluid that has overflowed or spilled with water.

14.5 Checking that the brake pads of the front brake are secured

WARNING

Danger of accidents Worn brake pads reduce the brake action.

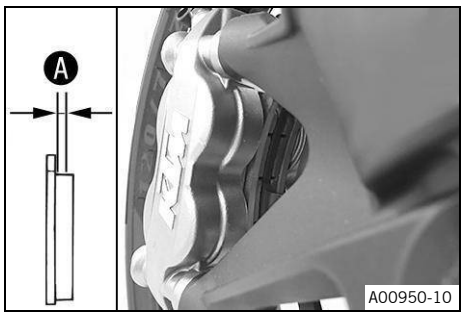
– Make sure that worn brake pads are replaced immediately.

WARNING

Danger of accidents Damaged brake discs reduce the braking action.

If the brake linings are not changed in time, the brake lining carriers grind against the brake disc. As a consequence, the brake action is greatly reduced and the brake discs are destroyed.

– Check the brake linings regularly.



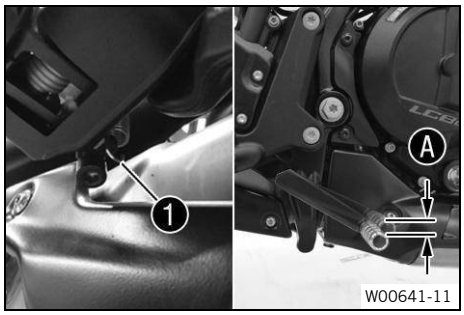
– Check all brake pads on both brake calipers for their lining thickness Ⓐ.

Minimum pad thickness Ⓐ	≥ 1 mm (≥ 0.04 in)

» If it is less than the minimum thickness:
– Change the front brake pads.
– Check the brake pads for damage and cracking.
» If there is damage or cracking:
– Change the front brake pads.
– Check that the brake pads are secured.
» If the brake pads are not secured correctly:
– Secure brake pads, replace with new parts if necessary.

14.6 Checking the free travel of the brake pedal

WARNING
Danger of accidents The brake system fails in the event of overheating.
If there is no free travel on the brake lever, pressure builds up in the brake system.
– Set the free travel on the brake lever as specified.



– Detach spring Ⓛ.
– Move the brake pedal back and forth between the end stop and the brake pedal cylinder piston actuation and check free travel Ⓐ.

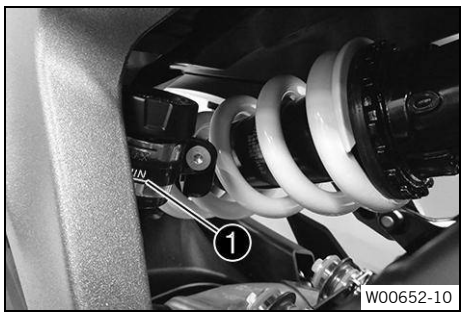
Free travel of brake pedal	3 mm ... 5 mm (0.12 in ... 0.20 in)

» If the free travel does not meet the specifications:
– Adjust the basic position of the brake pedal. (p. 67)
– Attach spring Ⓛ.

14.7 Checking the brake fluid level for the rear brake

WARNING
Danger of accidents Brake fluid which is too old or of the wrong type impairs the function of the brake system.
– Make sure that brake fluid for the front and rear brake is changed in accordance with the service schedule.
– Make sure that only clean, approved brake fluid from a tightly sealed container is used.

WARNING
Danger of accidents An insufficient brake fluid level will cause the brake system to fail.
If the brake fluid level drops below the specified marking or the specified value, the brake system has a leak or the brake pads are worn down.
– Have the brake system checked and make sure that the problem has been eliminated before the vehicle is used again.



– Stand the vehicle upright.
– Check the brake fluid level in the brake fluid reservoir.
  » If the fluid level reaches the **MIN** marking ❶:
    – Add brake fluid for the rear brake. (p. 106)

14.8 Adding brake fluid for the rear brake

WARNING

Danger of accidents Brake fluid which is too old or of the wrong type impairs the function of the brake system.

– Make sure that brake fluid for the front and rear brake is changed in accordance with the service schedule.
– Make sure that only clean, approved brake fluid from a tightly sealed container is used.

WARNING

Danger of accidents An insufficient brake fluid level will cause the brake system to fail.

If the brake fluid level drops below the specified marking or the specified value, the brake system has a leak or the brake pads are worn down.

– Have the brake system checked and make sure that the problem has been eliminated before the vehicle is used again.

WARNING

Health hazard Brake fluid is a harmful substance.

– Keep brake fluid out of the reach of children.
– Wear suitable protective clothing and safety glasses.
– Do not allow brake fluid to come into contact with the skin, the eyes, or clothing.
– Consult a doctor immediately if brake fluid has been ingested.
– Rinse the affected area with plenty of water in the event of contact with the skin.
– Rinse eyes thoroughly with water immediately and consult a doctor if brake fluid comes into contact with the eyes.
– If brake fluid spills on to your clothing, change the clothing.

NOTE

Environmental hazard Hazardous substances cause environmental damage.

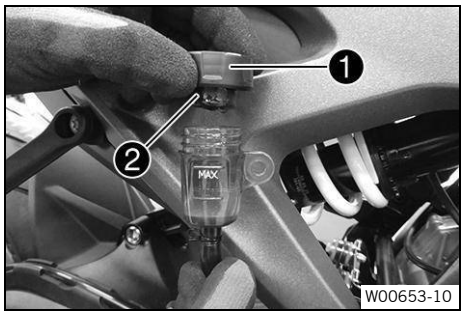
– Dispose of oils, grease, filters, fuel, cleaning agents, brake fluid, etc. correctly and in accordance with the applicable regulations.

Note

Avoid contact between brake fluid and painted parts. Brake fluid corrodes paint.

Preparatory work

– Check that the brake pads of the rear brake are secured. (p. 107)



Main work

– Stand the vehicle upright.
– Loosen the brake fluid reservoir screw.
– Guide the brake fluid reservoir to the front.
– Remove screw cover ❶ with insert and membrane ❷.
– Add brake fluid up to the **MAX** marking.

Brake fluid DOT 5.1 (p. 176)

– Mount and tighten screw cover with insert and membrane.

Immediately clean up any brake fluid that has overflowed or spilled using water.

– Guide the brake fluid reservoir to the bracket and mount it with the screw.

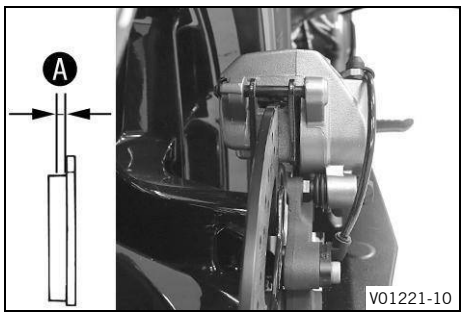
Remaining screws on chassis	
M5	5 Nm (3.7 ft·lb$_f$)

Do not kink the brake fluid hose.

14.9 Checking that the brake pads of the rear brake are secured

WARNING
Danger of accidents Worn brake pads reduce the brake action.
– Make sure that worn brake pads are replaced immediately.

WARNING
Danger of accidents Damaged brake discs reduce the braking action.
If the brake linings are not changed in time, the brake lining carriers grind against the brake disc. As a consequence, the brake action is greatly reduced and the brake discs are destroyed.
– Check the brake linings regularly.

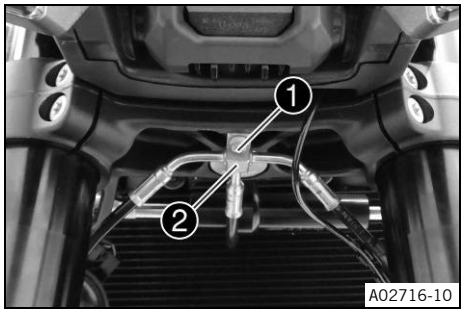


– Check all brake pads on both brake calipers for their lining thickness Ⓐ.

Minimum pad thickness Ⓐ	≥ 1 mm (≥ 0.04 in)

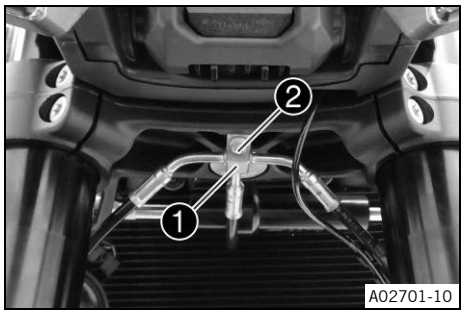
» If it is less than the minimum thickness:
– Change the rear brake pads.
– Check the brake pads for damage and cracking.
» If there is damage or cracking:
– Change the rear brake pads.
– Check that the brake pads are secured.
» If the brake pads are not secured correctly:
– Secure brake pads, replace with new parts if necessary.

14.10 Removing the brake manifold of the front brake



– Remove the screw ❶.
– Push the brake manifold ❷ carefully to the side.

14.11 Mounting the brake manifold of the front brake



– Position the brake manifold ❶.
– Mount and tighten screw ❷.

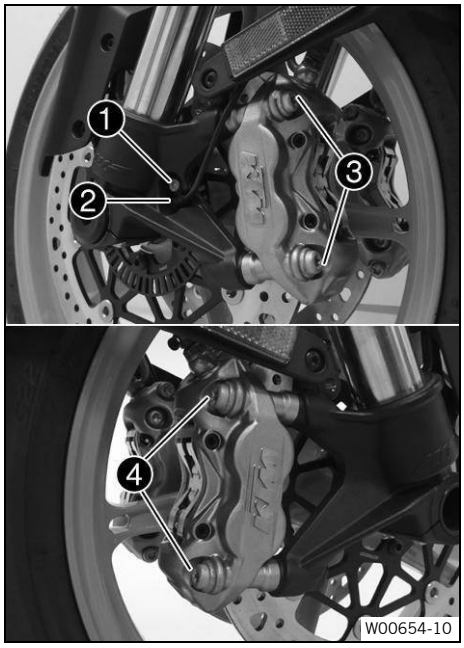
Remaining screws on chassis	
M6	10 Nm (7.4 ft·lb$_f$)

15.1 Removing the front wheel

Preparatory work

– Raise the motorcycle with the rear lifting gear. (p. 88)
– Remove the brake manifold of the front brake. (p. 108)
– Lift the motorcycle with the front lifting gear. (p. 88)

Main work

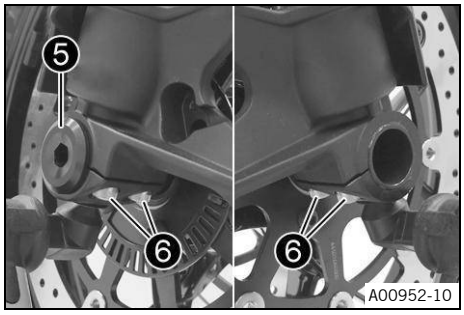


– Remove screw ❶ and pull wheel speed sensor ❷ out of the hole.
– Remove screws ❸.
– Press back the brake linings by slightly tilting the left brake caliper laterally on the brake disc.
– Pull the left brake caliper carefully back from the brake disc and hang to the side.

Do not operate the hand brake lever if the brake caliper has been removed.

– Remove screws ❹.
– Press back the brake linings by slightly tilting the right brake caliper laterally on the brake disc.
– Pull the right brake caliper carefully back from the brake disc and hang to the side.

Do not operate the hand brake lever if the brake caliper has been removed.



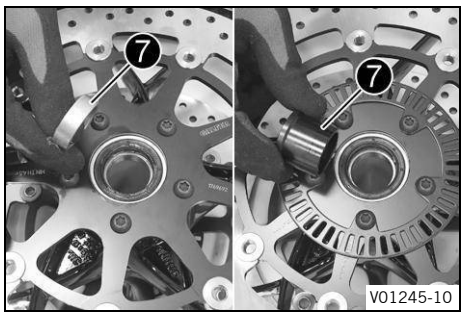
– Loosen screw ❺ by four turns.
– Loosen screws ❻.
– Press on screw ❺ to push the wheel spindle out of the fork shoe.
– Remove screw ❺.

WARNING

Danger of accidents Damaged brake discs reduce the braking action.

– Always lay the wheel down in such a way that the brake disc is not damaged.

– Hold front wheel and remove wheel spindle. Take the front wheel out of the fork.



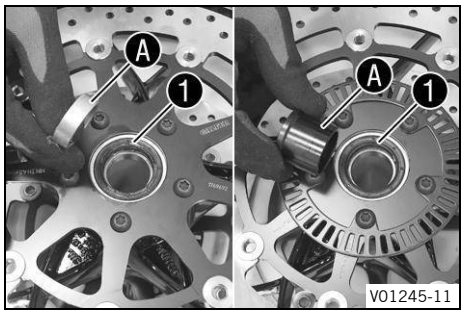
– Remove spacers 7.

15.2 Installing the front wheel

WARNING

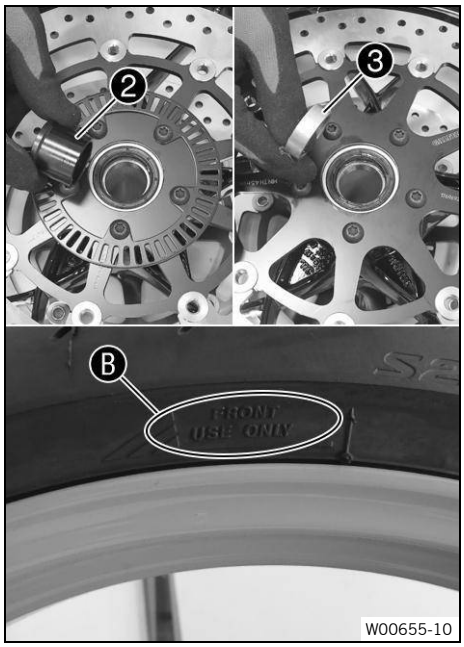
Danger of accidents Oil, grease or wax on the brake discs reduces the brake action.

– Always keep the brake discs free of oil, fat and wax.
– Clean the brake discs with brake cleaner when necessary.



– Check the wheel bearing for damage and wear.
  » If the wheel bearing is damaged or worn:
    – Change the front wheel bearing.
– Clean and grease radial shaft seal 1 and contact surfaces A on the spacers.

Long-life grease (p. 175)

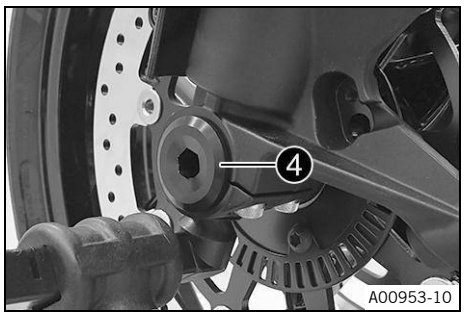


– Insert wide spacer 2 on the left in the direction of travel.
– Insert narrow spacer 3 on the right in the direction of travel.

Note

Arrow B indicates the direction of travel of the front wheel.

The wheel speed sensor wheel is on the left viewed in the direction of travel.



– Clean screw ❹ and the wheel spindle.
– Grease wheel spindle lightly.

Long-life grease (p. 175)

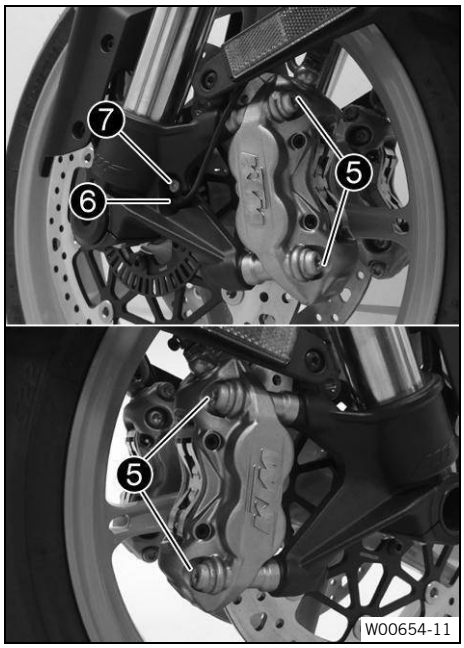
– Jack up the front wheel into the fork, position it, and insert the wheel spindle.
– Mount and tighten screw ❹.

Screw, wheel spindle, front	
M25×1.5	45 Nm (33.2 ft·lb$_f$)

Tip

Temporarily tighten one of the axle clamp screws so that the axle does not rotate with it.

Loosen the axle clamp screw again before compression to allow the fork legs to align.



– Position both brake calipers.
  ✓ The brake linings are correctly positioned.
– Mount screws ❺ on both sides but do not tighten yet.

Screw, front brake caliper	
M10×1.25	45 Nm (33.2 ft·lb$_f$) **Loctite® 243**

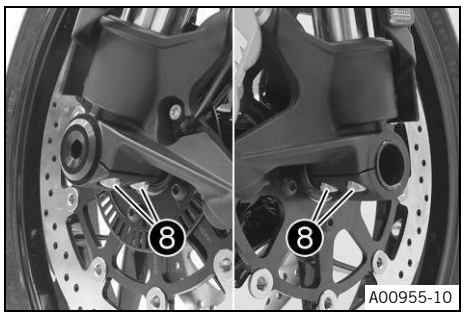
– Operate the hand brake lever repeatedly until the brake pads are in contact with the brake disc and a pressure point is reached. Secure the hand brake lever in the activated position.
  ✓ The brake calipers straighten.
– Tighten screws ❺ on both sides.

Screw, front brake caliper	
M10×1.25	45 Nm (33.2 ft·lb$_f$) **Loctite® 243**

– Position wheel speed sensor ❻ in the hole.
– Mount and tighten screw ❼.

Screw, wheel speed sensor	
M6	6 Nm (4.4 ft·lb$_f$)

– Remove the locking piece of the hand brake lever.
– Take the motorcycle off the front lifting gear. (p. 89)
– Remove the rear of the motorcycle from the lifting gear. (p. 88)



– Operate the front brake and compress the fork a few times firmly.
  ✓ The fork legs straighten.
– Tighten screws ❽.

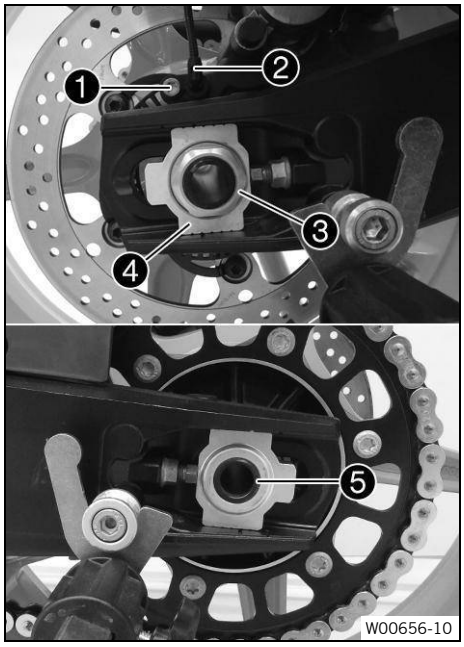
Screw, fork shoe	
M8	15 Nm (11.1 ft·lb$_f$)

15.3 Removing the rear wheel

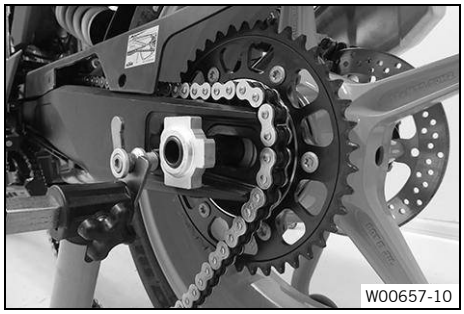
Preparatory work

– Raise the motorcycle with the rear lifting gear. (p. 88)

Main work



– Manually press the brake caliper toward the brake disc to push back the brake pistons.
– Remove screw ❶ and pull wheel speed sensor ❷ out of the hole.
– Remove nut ❸. Remove chain tension adjuster ❹.
– Pull out wheel spindle ❺ far enough to allow the rear wheel to be pushed forward.



– Push the rear wheel forward as far as possible. Remove the chain from the rear sprocket.

  Protect the components against damage by covering them.

– Hold the rear wheel and remove wheel spindle.
– Pull the rear wheel back until the brake caliper bracket is suspended freely between the brake disc and rim.

WARNING

Danger of accidents Damaged brake discs reduce the braking action.

– Always lay the wheel down in such a way that the brake disc is not damaged.

– Take the rear wheel out of the swingarm.

Do not actuate the brake pedal when the rear wheel is removed.

15.4 Installing the rear wheel

WARNING

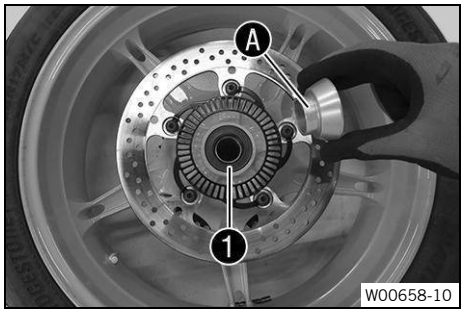
Danger of accidents Oil, grease or wax on the brake discs reduces the brake action.

– Always keep the brake discs free of oil, fat and wax.
– Clean the brake discs with brake cleaner when necessary.

WARNING

Danger of accidents There is no braking effect to start with at the rear brake after installing the rear wheel.

– Actuate the foot brake several times before going on a ride until you can feel a firm pressure point.



Main work

– Check the rear hub damping rubber pieces. (p. 115)
– Check the wheel bearing for damage and wear.
  » If the wheel bearing is damaged or worn:
    – Change the rear wheel bearing.
– Remove spacer.
– Clean and grease shaft seal ring 1 and contact surface A of the spacer.

Long-life grease (p. 175)

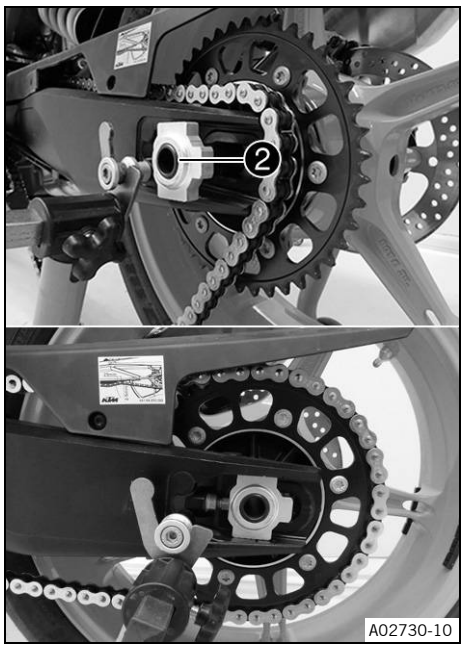
– Insert a spacer.
– Clean and grease the thread of the wheel spindle and nut.

Long-life grease (p. 175)

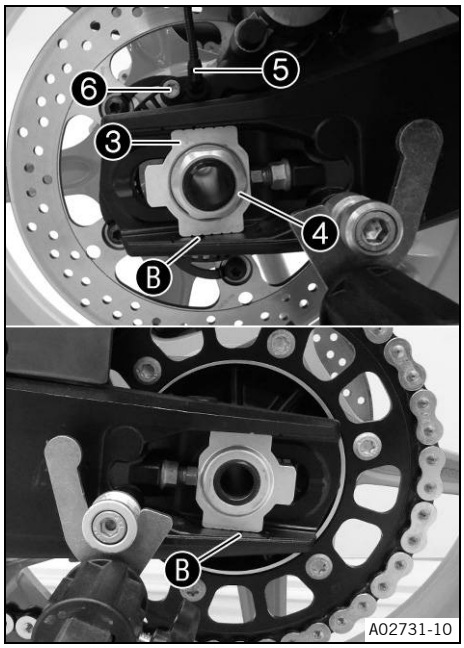
– Clean and lightly grease the wheel spindle.

Long-life grease (p. 175)

– Clean the contact areas on the brake caliper bracket and link fork.



– Lift the rear wheel into the link fork, position it, and insert wheel spindle ❷.
  ✓ The brake pads are positioned correctly.
– Place the chain on the sprocket.



– Position chain tension adjuster ❸. Mount nut ❹ but do not tighten yet.

Mount the left and right chain adjusters in the same position.

– Make sure that chain adjusters ❸ are fitted correctly on the adjusting screws. Tighten nut ❹.

In order for the rear wheel to be correctly aligned, the markings on the left and right chain adjusters must be in the same position relative to reference markings Ⓑ.

Nut, wheel spindle, rear	
M25×1.5	90 Nm (66.4 ft·lb$_f$) Long-life grease

– Position wheel speed sensor ❺ in the hole.
– Mount and tighten screw ❻.

Screw, wheel speed sensor	
M6	6 Nm (4.4 ft·lb$_f$)

– Actuate the brake pedal repeatedly until the brake pads are in contact with the brake disc and a pressure point is achieved.

Reworking

– Check the chain tension. (p. 93)
– Remove the rear of the motorcycle from the lifting gear. (p. 88)

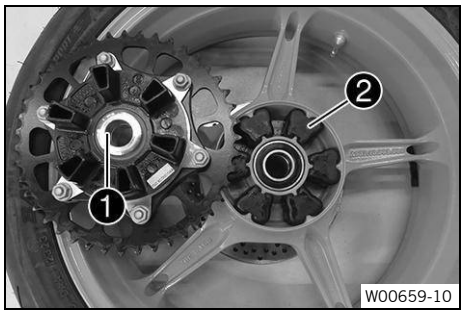
15.5 Checking the rear hub damping rubber pieces

Note
The engine power is transmitted from the rear sprocket to the rear wheel via the 6 damping rubber pieces. They eventually wear out during operation. If the damping rubber pieces are not changed in time, the rear sprocket carrier and the rear hub will be damaged.

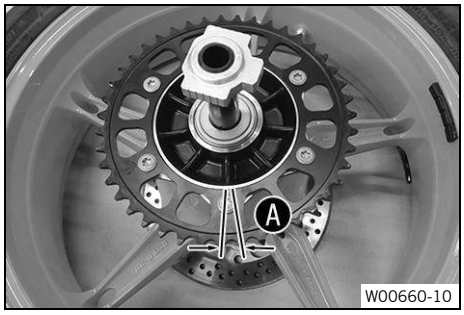
Preparatory work

– Raise the motorcycle with the rear lifting gear. (p. 88)
– Remove the rear wheel. (p. 112)

Main work



– Check bearing 1.
  » If the bearing is damaged or worn:
    – Change the bearing of the rear sprocket carrier.
– Check damping rubber pieces 2 of the rear hub for damage and wear.
  » If the damping rubber pieces of the rear hub are damaged or worn:
    – Change all the damping rubber pieces of the rear hub.



– Lay the rear wheel on a workbench with the rear sprocket facing upwards and insert the wheel spindle in the hub.
– To check play A, hold the rear wheel tight and try to turn the rear sprocket with your hand.

Play of damping rubber pieces on rear wheel	≤ 5 mm (≤ 0.20 in)

Note
Measure the play on the outside of the rear sprocket.

  » If clearance A is larger than the specified value:
    – Change all the damping rubber pieces of the rear hub.

Reworking

– Install the rear wheel. (p. 113)
– Check the chain tension. (p. 93)
– Remove the rear of the motorcycle from the lifting gear. (p. 88)

15.6 Checking the tire condition

WARNING

Danger of accidents If a tire bursts while riding, the vehicle becomes uncontrollable.

– Ensure that damaged or worn tires are replaced immediately.

WARNING

Danger of accidents Non-approved or non-recommended tyres and wheels impact the handling characteristic.

– Only use tires and wheels approved and recommended by the vehicle manufacturer with the corresponding speed rating.

WARNING

Danger of accidents New tires have reduced road grip.

The contact surface on new tires is not yet roughened.

– Run in new tires with moderate riding and only gradually increase the lean angle.

Run-in distance	200 km (124.3 mi)

WARNING

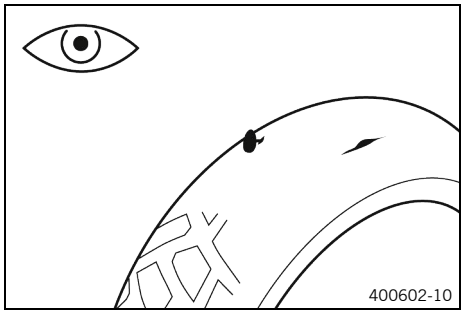
Danger of accidents Different tire profiles on the front and rear wheels can make it more difficult to control the vehicle.

– Make sure that only tires of the same tread type are mounted to the front and rear wheel.

Note

The type, condition, and pressure of the tires all have a major impact on the braking and handling of the motorcycle.

Worn tires have a particularly adverse effect on braking and handling on wet surfaces.



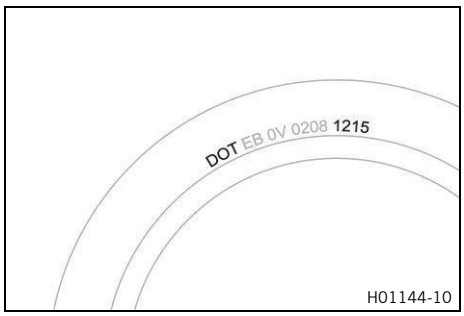
– Check the front and rear tires for cuts, embedded objects, and other damage.
  » If the tires have cuts, run-in objects, or other damage:
    – Change the tires.
– Check the tread depth.

Minimum tread depth	≥ 2 mm (≥ 0.08 in)

Note

Observe the minimum tread depth required by national law.

» If the tread depth is less than the minimum tread depth:
  – Change the tires.



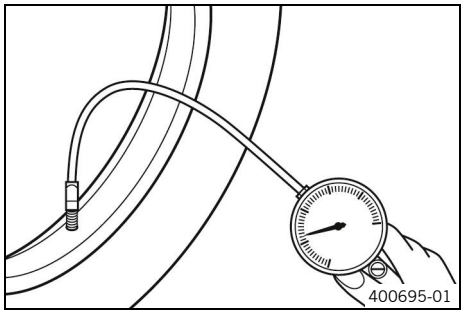
– Check the tire age.

Note
The tire date of manufacture is usually contained in the tire label and is indicated by the last four digits of the **DOT** number. The first two digits indicate the week of manufacture and the last two digits the year of manufacture.
KTM recommends that the tires be changed after 5 years at the latest, regardless of the actual state of wear.

» If the tires are older than five years:
– Change the tires.

15.7 Checking the tire pressure

Note
Low tire pressure leads to abnormal wear and the tire overheating.
Correct tire pressure ensures optimal riding comfort and maximum tire service life.



– Remove the protection cap.
– Check the tire pressure when the tires are cold.

Tire pressure when solo	
front	2.3 bar (33.4 psi)
rear	2.5 bar (36.3 psi)

Tire pressure with passenger / full payload	
front	2.3 bar (33.4 psi)
rear	2.6 bar (37.7 psi)

» If the tire pressure does not meet specifications:
– Correct tire pressure.
– Mount the protection cap.

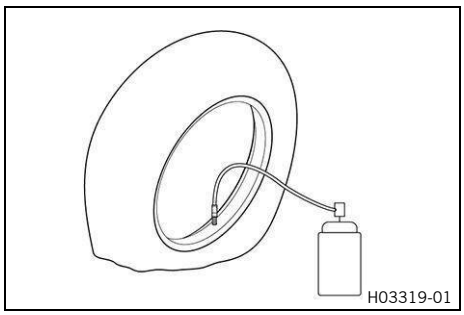
15.8 Using tire repair spray

WARNING
Danger of accidents Incorrect use of tire repair spray will result in the repaired tire losing pressure.
Tire repair spray cannot be used for all types of damage.
– Observe the instructions and specifications of the manufacturer of the tire repair spray.
– After repairing a tire with tire repair spray, ride slowly and carefully.
– Ride no further than the nearest authorized dealer and have the tire replaced.

NOTE

Material damage Tire repair spray damages the tire pressure sensor.

– Note that after using tire repair spray, the tire pressure sensor may need to be replaced.



Tire repair spray should only be used in an emergency.

Transporting the broken-down vehicle to the nearest authorized dealer is recommended instead of repairing it.

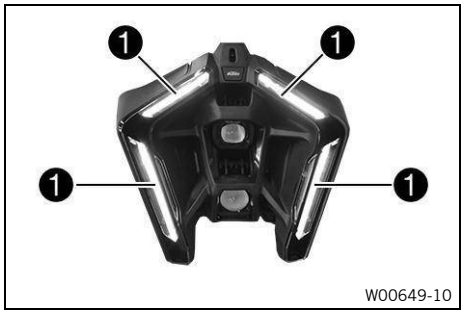
16.1 daytime running light

WARNING

Danger of accidents When visibility is poor, the daytime running light is not a substitute for the low beam.

Automatic switching between the daytime running light and low beam may only be partially available when visibility is impaired due to fog, snow or rain.

- Ensure that the appropriate type of lighting is always selected.
- If necessary switch off the daytime running lights using the menu before going on a ride or when stopped so that the low beam is switched on permanently.
- Make sure that the daytime running light is deactivated with the diagnostic tool when the menu item is not available, but the low beam is required.
- Note the legal regulations regarding the daytime running light.



W00649-10

The daytime running light 1 (**DRL**) is integrated in the main headlight.

The daytime running light 1 (**DRL**) must only be switched on when visibility conditions are good.

The daytime running light 1 (**DRL**) is activated on the dashboard.

This is controlled by the ambient light sensor in the combination instrument. When visibility conditions are good, the low beam is switched off and the daytime running light is switched on.

Note

The position light lights up with all types of lighting.

16.2 Low beam



A02746-10

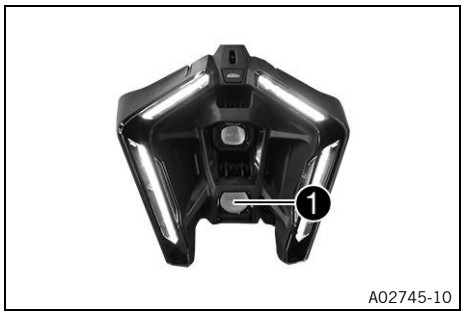
The low beam 1 is integrated into the main headlight.

The low beam 1 is activated when the ignition is switched on.

To save power in the 12-V battery, the low beam 1 is deactivated again after 5 seconds if the engine is not started.

If the ignition is inadvertently switched off during the trip, the low beam 1 stays on.

16.3 high beam



A02745-10

The high beam 1 is integrated in the main headlight.

16.4 Removing the 12 V battery

WARNING

Danger of accidents Electronic components and safety devices will be damaged if the 12-V battery is discharged or missing.

If the 12-V battery is discharged or defective, malfunctions in the vehicle electronics can occur, especially when starting.

– Never operate the vehicle with a discharged 12-V battery or without a 12-V battery.

WARNING

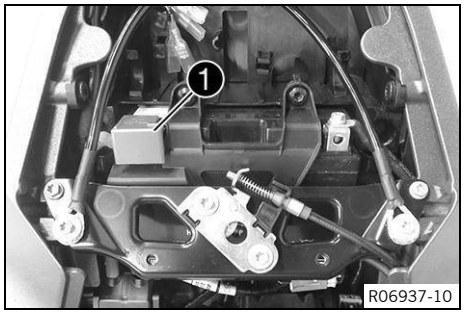
Risk of injury Battery acid and battery gases cause chemical burns.

– Keep 12–V batteries out of the reach of children.
– Wear suitable protective clothing and safety glasses.
– Avoid contact with battery acid and battery gases.
– Keep sparks or open flames away from the 12 V battery.
– Only charge 12 V batteries in well-ventilated rooms.
– Rinse the affected area immediately with plenty of water in the event of contact with skin.
– Rinse eyes with water for at least 15 minutes and consult a doctor immediately if battery acid and battery gases get into the eyes.

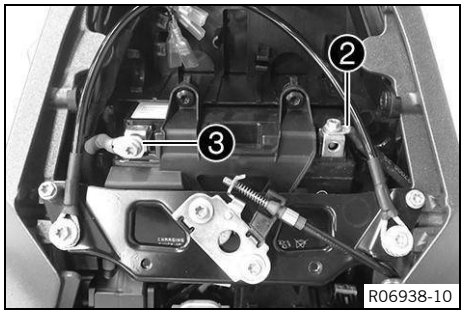
Preparatory work

– Remove the passenger seat. (p. 90)
– Remove the front rider's seat. (p. 91)

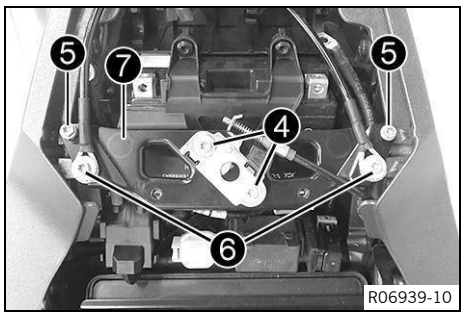
Main work



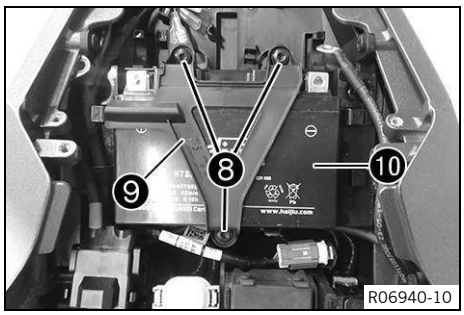
– Remove positive terminal cover ❶.



– Disconnect negative cable ❷ from the 12 V battery.
– Disconnect positive cable ❸ from the 12-V battery.



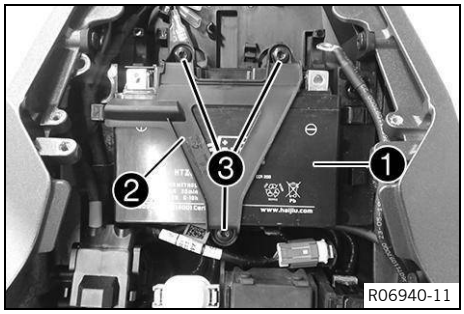
– Remove screws ❹ with the seat lock and secure to the front.
– Remove screws ❺.
– Remove screws ❻ and remove the retaining cable.
– Remove cross member ❼.



– Remove screws ❽ and remove battery support ❾.
– Take the battery ❿ out of the battery compartment.

16.5 Installing the 12 V battery

Main work

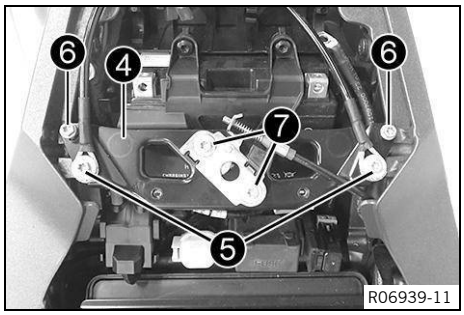


– Position 12-V battery ❶ in the battery compartment.

12 V battery (HTZ12A-BS) (p. 177)

✓ The battery terminals face opposite the direction of travel.
– Position battery support bracket ❷.
– Mount and tighten screws ❸.

Screw, battery holding bracket	
M5	3.5 Nm (2.58 ft·lb$_f$)



– Position cross member ❹.
– Mount screws ❺ with the retaining cable but do not tighten yet.

Remaining screws on chassis	
M6	10 Nm (7.4 ft·lb$_f$)

– Mount and tighten screws ❻.

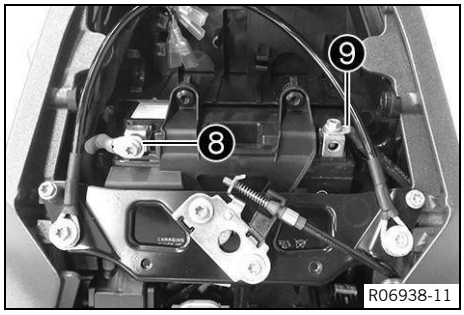
Remaining screws on chassis	
M6	10 Nm (7.4 ft·lb$_f$)

– Tighten screws ❺.

Remaining screws on chassis	
M6	10 Nm (7.4 ft·lb$_f$)

– Position the seat lock and mount and tighten screws ❼.

Remaining screws on chassis	
M6	10 Nm (7.4 ft·lb$_f$)

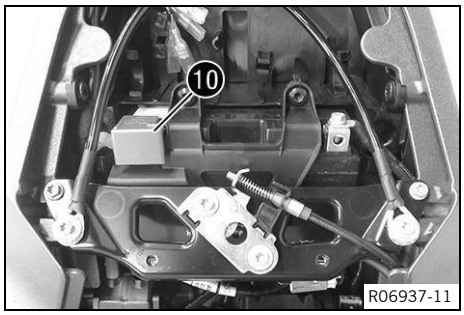


– Connect positive cable ❽ to the 12 V battery.

Screw, battery terminal	
M6×12	4.5 Nm (3.32 ft·lb$_f$)

– Connect negative cable ❾ to the 12 V battery.

Screw, battery terminal	
M6×12	4.5 Nm (3.32 ft·lb$_f$)



– Mount positive terminal cover ❿.

Reworking

– Mount the front rider's seat. (p. 92)
– Mount the passenger seat. (p. 91)
– Set the time and date. (p. 61)

16.6 Charging the 12 V battery

WARNING

Risk of injury Battery acid and battery gases cause chemical burns.

– Keep 12–V batteries out of the reach of children.
– Wear suitable protective clothing and safety glasses.
– Avoid contact with battery acid and battery gases.
– Keep sparks or open flames away from the 12 V battery.
– Only charge 12 V batteries in well-ventilated rooms.
– Rinse the affected area immediately with plenty of water in the event of contact with skin.
– Rinse eyes with water for at least 15 minutes and consult a doctor immediately if battery acid and battery gases get into the eyes.

NOTE

Environmental hazard 12–V batteries contain environmentally-hazardous materials.

– Do not dispose of 12–V batteries as household waste.
– Dispose of 12–V batteries at a collection point for used batteries.

NOTE

Environmental hazard Hazardous substances cause environmental damage.

– Dispose of oils, grease, filters, fuel, cleaning agents, brake fluid, etc. correctly and in accordance with the applicable regulations.

Note

Even when there is no load on the 12 V battery, it discharges steadily each day.

The state of charge and the method of charging are very important for the service life of the 12 V battery.

Rapid recharging with a high charging current shortens the service life of the battery.

If the charging current, charging voltage, or charging time is exceeded, electrolyte escapes through the safety valves. This reduces the capacity of the 12-V battery.

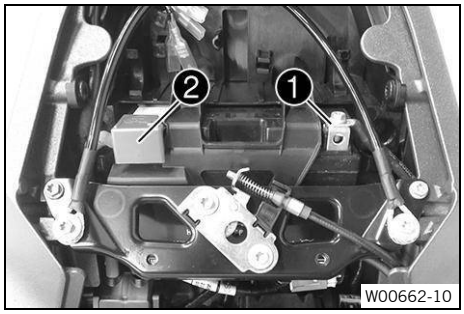
If the 12-V battery is left in a discharged state for an extended period, it will become deeply discharged and sulfating occurs, destroying the battery.

The 12 V battery is maintenance-free. The acid level does not have to be checked.

Preparatory work

– Remove the passenger seat. (p. 90)

Main work



– Disconnect negative cable ❶ from the 12 V battery to avoid damaging the onboard electronics.
– Remove positive terminal cover ❷.



– Connect a charger to the 12 V battery. Connect the battery charger to the mains connection.

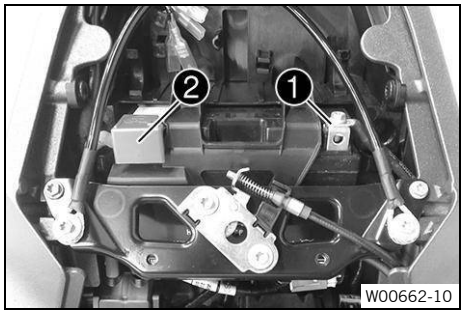
EU battery charger **TecMATE Optimate PRO** (A61029974044)
Work material (Alternative 1 / 2)
USA/CA battery charger **TecMATE Optimate PRO** (A61029974144)
Work material (Alternative 2 / 2)
Battery charger **TecMATE Optimate PRO** UK (A61029974244)

Note
After charging, the battery charger can remain on the vehicle, ensuring that the battery voltage is maintained during the maintenance charging cycle.

Note
It is impossible to overcharge the 12–V battery using this battery charger.

– Disconnect the battery charger from the mains connection and the 12-V battery after charging.

The charging current, charging voltage, and charging time must not be exceeded.	
If the 12 V battery is depleted from starting the vehicle repeatedly, the battery must be charged immediately.	
Recharge the 12 V battery regularly when the motorcycle is not being used.	3 months



– Mount positive terminal cover ❷.
– Connect negative cable ❶ to the 12 V battery.

Reworking

– Mount the passenger seat. (p. 91)
– Set the time and date. (p. 61)

16.7 Changing the main fuse

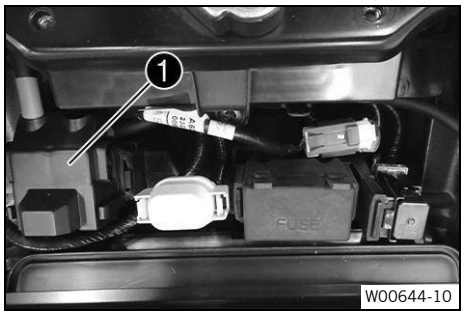
WARNING
Fire hazard Incorrect fuses overload the electrical system.
– Use only fuses with the prescribed amperage.
– Do not bypass or repair fuses.

Note
The main fuse protects all electrical power loads of the vehicle. The main fuse is under the front rider's seat.

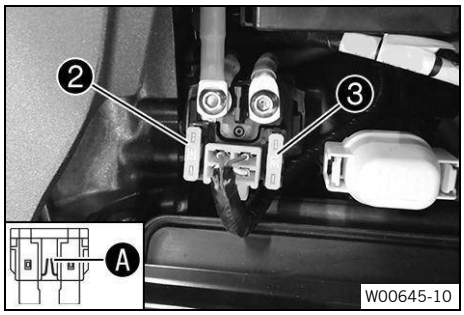
Preparatory work

– Remove the passenger seat. (p. 90)
– Remove the front rider's seat. (p. 91)

Main work



– Remove protection cap ❶.



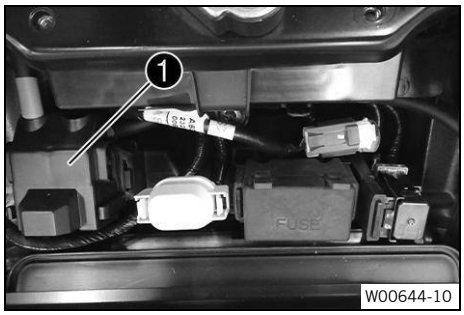
– Remove faulty main fuse ❷.

Note
A faulty fuse has a burned-out fuse wire Ⓐ.
A spare fuse ❸ is located in the starter relay.

– Insert the main fuse.

Fuse (58011109130) (p. 178)

Tip
Insert a new spare fuse into the starter relay to have it available when needed.



– Mount protection cap ❶.

Reworking

– Mount the passenger seat. (p. 91)
– Set the time and date. (p. 61)

16.8 Changing the ABS fuses

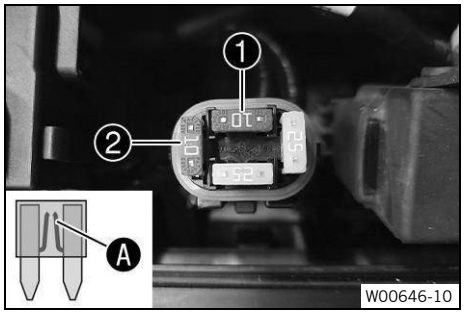
WARNING
Fire hazard Incorrect fuses overload the electrical system.
– Use only fuses with the prescribed amperage.
– Do not bypass or repair fuses.

Note
Two fuses for the ABS are located under the rider's seat. These fuses protect the return pump and the hydraulic unit of the ABS. The third fuse, which protects the ABS control unit, is located in the fuse box.

Preparatory work
– Remove the passenger seat. (p. 90)
– Remove the front rider's seat. (p. 91)

Main work
– Select one of the following alternatives.

Changing the fuse of the ABS hydraulic unit



– Remove the protection cap and fuse ❶.

Note
A faulty fuse has a burned-out fuse wire Ⓐ.

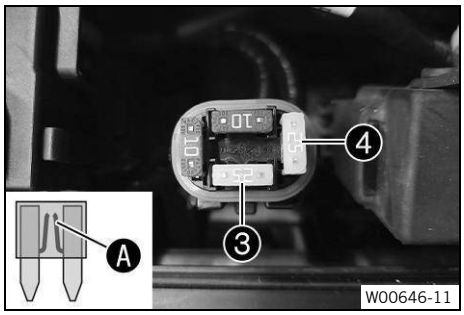
– Insert the spare fuse with the correct rating.

Fuse (75011088010) (p. 178)

Tip
Insert spare fuse ❷ in the fuse box so that it is available if needed.

– Mount the protection cap.

Changing the fuse of the ABS return pump



– Remove the protection cap and fuse ❸.

Note
A faulty fuse has a burned-out fuse wire Ⓐ.

– Insert the spare fuse with the correct rating.

Fuse (75011088025) (p. 178)

Tip
Insert spare fuse ❹ in the fuse box so that it is available if needed.

– Mount the protection cap.

Reworking
– Mount the front rider's seat. (p. 92)
– Mount the passenger seat. (p. 91)

16.9 Changing the fuses of individual electrical power consumers

WARNING

Fire hazard Incorrect fuses overload the electrical system.

– Use only fuses with the prescribed amperage.
– Do not bypass or repair fuses.

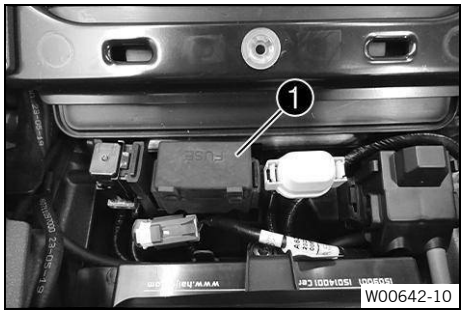
Note

The fuse box containing the fuses of individual electrical power consumers is located under the rider's seat.

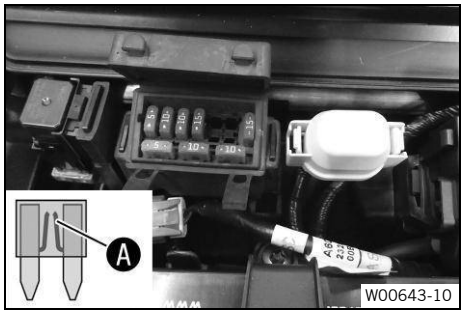
Preparatory work

– Remove the passenger seat. (p. 90)

Main work



– Open fuse box cover ❶.



– Remove the faulty fuse.

Fuse **1** - 5 A - ignition, vehicle system control unit, alarm system
Fuse **2** - 10 A - ACC1
Fuse **3** - 10 A - power supply power relay
Fuse **4** - 15 A - ACC2, USB charging port, HCU (optional)
Fuse **SPARE** - 5 A/10 A/15 A - spare fuses

Note

A faulty fuse has a burned-out fuse wire Ⓐ.

– Insert the spare fuse with the correct rating.

Fuse (75011088005) (p. 178)
Fuse (75011088010) (p. 178)
Fuse (75011088015) (p. 178)

Tip

Put a spare fuse in the fuse box so that it is available if needed.

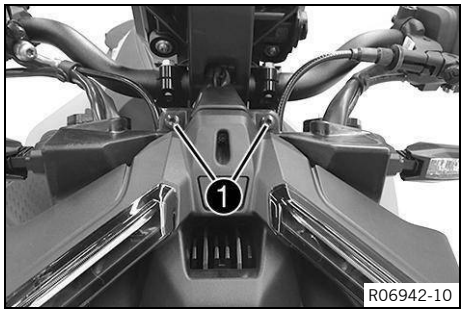
– Check the function of the electrical power consumer.
– Close the fuse box cover.

Reworking

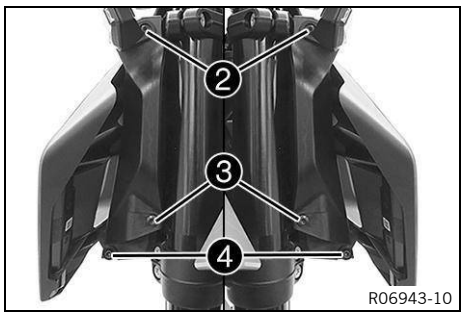
– Mount the passenger seat. (p. 91)

16.10 Removing the mask support cover with headlight

Note
The mask support cover with headlight must be removed in order to gain access to the ACC1 and ACC2 power supply.

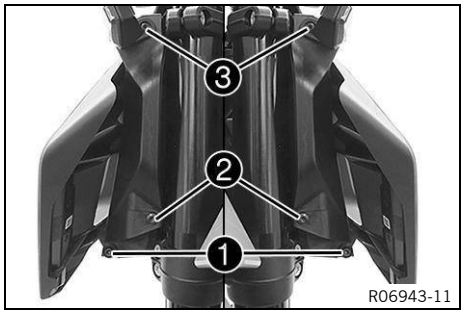


– Remove screws ❶.



– Remove screws ❷, ❸ and ❹.
– Take off the mask support cover together with the headlight and place them on a soft cloth.

16.11 Mounting the mask support cover with headlight



– Position the headlights in the mask support.
– Mount screw ❶ and bushing and tighten.

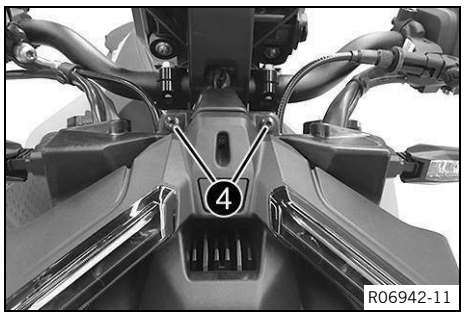
Screw, lower mask support	
M6	6 Nm (4.4 ft·lb$_f$)

– Mount and tighten screws ❷.

Screw, mask support	
M5	3.5 Nm (2.58 ft·lb$_f$)

– Mount and tighten screws ❸.

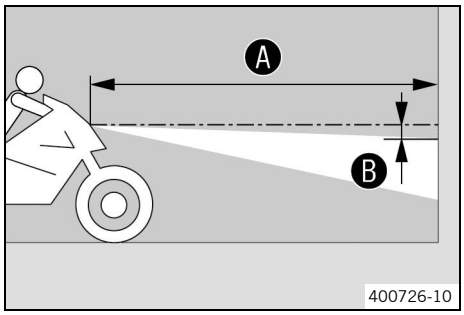
Screw, mask support	
M5	3.5 Nm (2.58 ft·lb$_f$)



– Mount and tighten screws ❹.

Remaining screws on chassis	
M5	5 Nm (3.7 ft·lb$_f$)

16.12 Checking the headlight setting



– Park the vehicle on a horizontal surface in front of a light-colored wall and make a mark at the height of the center of the low beam headlight.
– Make another mark at a distance Ⓑ under the first marking.

Distance Ⓑ	5 cm (2.0 in)

– Position the vehicle upright at distance Ⓐ from the wall and switch on the low beam.

Distance Ⓐ	5 m (16 ft – 5 in)

– Get on the motorcycle, together with any luggage or passenger.
– Check the headlight adjustment.

The light-dark boundary must lie exactly on the lower marking when the motorcycle is ready to operate with the rider mounted along with any luggage and a passenger if applicable.

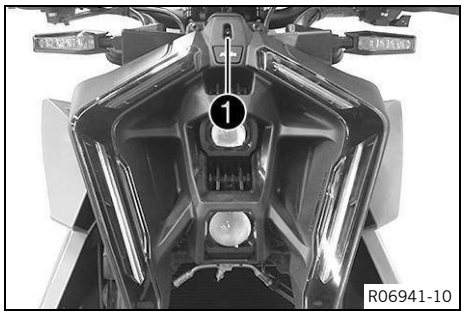
» If the boundary between light and dark does not meet specifications:
  – Adjust headlight range. (p. 129)

16.13 Adjusting the headlight range

Preparatory work

– Check the headlight setting. (p. 129)

Main work



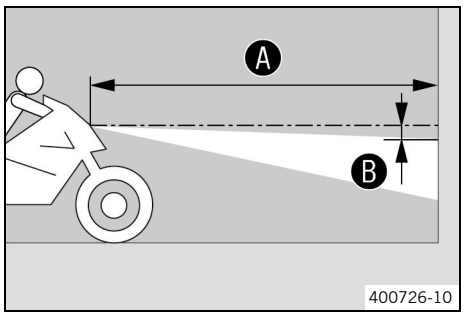
– Turn adjusting screw ❶ to adjust the headlight range.

Screw ❶ also secures the headlight. Ensure the screw is always screwed in far enough.

Note

Turn clockwise to increase the headlight range; turn counterclockwise to reduce the headlight range.

If you have a load, you may have to correct the headlight range.



– Park the vehicle on a horizontal surface in front of a light-colored wall and make a mark at the height of the center of the low beam headlight.
– Make another mark at a distance Ⓑ under the first marking.

Distance Ⓑ	5 cm (2.0 in)

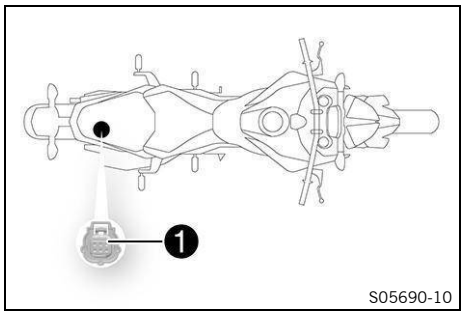
– Position the vehicle upright at distance Ⓐ from the wall and switch on the low beam.

Distance Ⓐ	5 m (16 ft – 5 in)

– Get on the motorcycle, together with any luggage or passenger.
– Check the headlight adjustment.

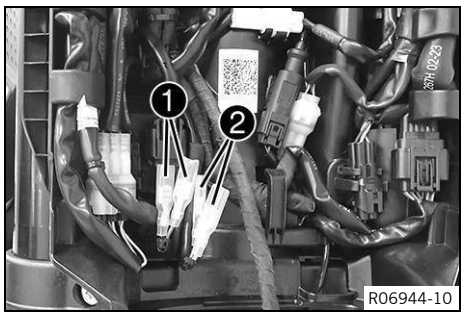
The light-dark boundary must lie exactly on the lower marking when the motorcycle is ready to operate with the rider mounted along with any luggage and a passenger if applicable.

16.14 Diagnostic connector



Diagnostics connector ❶ is located under the passenger seat.

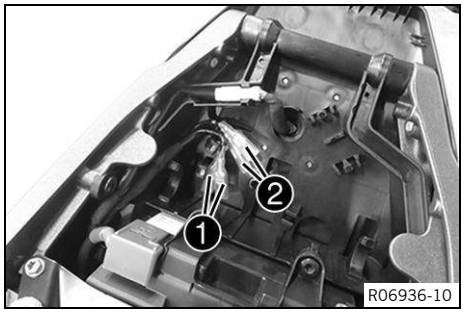
16.15 Front ACC1 and ACC2



Installation location

- The front power supplies ACC1 ❶ and ACC2 ❷ are located behind the headlight brackets.

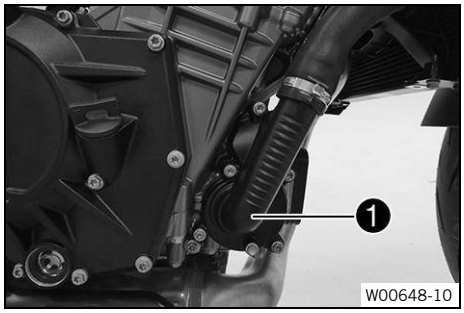
16.16 Rear ACC1 and ACC2



Installation location

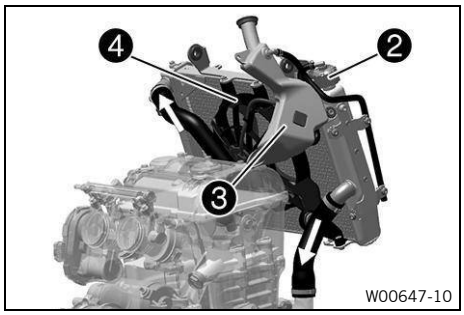
- The rear power supplies ACC1 ❶ and ACC2 ❷ are located under the passenger seat next to the battery compartment.

17.1 Cooling system



Water pump ❶ in the engine circulates the coolant.
The pressure resulting from the warming of the cooling system is regulated by a valve in radiator cap ❷. Heat expansion causes excess coolant to flow into compensating tank ❸. When the temperature falls, this surplus coolant is sucked back into the cooling system. This ensures that operating the vehicle at the specified coolant temperature will not result in a risk of malfunctions.

115 °C (239.0 °F)



The coolant is cooled by the air stream and a radiator fan ❹, which is activated at high temperature.
The lower the vehicle speed, the lower the cooling effect. Dirty cooling fins also reduce the cooling effect.

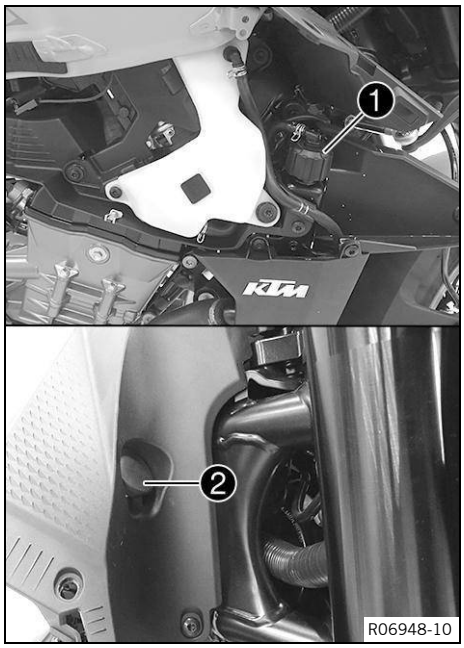
17.2 Checking the frost protection and coolant level

WARNING
Health hazard Coolant is harmful to health.
- Keep coolant out of the reach of children.
- Do not allow coolant to come into contact with skin, eyes, or clothing.
- Consult a doctor immediately if coolant has been ingested.
- Rinse the affected area immediately with plenty of water in the event of contact with skin.
- Rinse eyes thoroughly with water and consult a doctor immediately if coolant comes into contact with eyes.
- If coolant spills on to your clothing, change the clothing.
- Store coolant properly in a suitable container and keep out of the reach of children.

WARNING
Danger of scalding The coolant heats up and is under high pressure when the vehicle is operated.
- Do not open the radiator, the radiator hoses, or other cooling system components if the engine or the cooling system are at operating temperature.
- Allow the cooling system and the engine to cool down before you open the radiator, the radiator hoses, or other components of the cooling system.
- In the event of scalding, rinse the area affected immediately with lukewarm water.

Condition: The engine is cold

Preparatory work
- Remove the passenger seat. (p. 90)
- Remove the front rider's seat. (p. 91)
- Remove the right tank spoiler. (p. 97)
- Stand the motorcycle upright on a level surface.

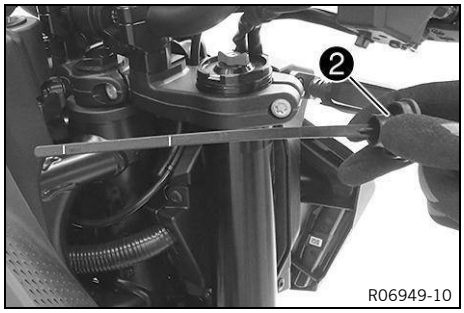


Main work

– Remove radiator cap ❶ and cap ❷ of the compensating tank.
– Check the frost protection in the coolant.

Antifreeze	−45 °C ... −25 °C (−49.0 °F ... −13.0 °F)

» If the frost protection in the coolant does not match the specified value:
– Correct the frost protection in the coolant.



– Check the coolant level in the compensating tank.

The coolant level must be between **MIN** and **MAX**.

» If the coolant level in the reservoir is not correct, but the reservoir is not yet empty:
– Replenish coolant up to a level between **MIN** and **MAX**.

Coolant	
Coolant (p. 176) Antifreeze protection to at least: −25 °C (−13.0 °F)	1.9 l (0.50 liq. gal_{US})

» If there is no coolant in the compensating tank:
– Check the transmission and cooling system for leaks.

Do not start the motorcycle.

– Fill/bleed the cooling system. (p. 136)

– Mount cap ❷ on the compensating tank.
– Check the coolant level in the radiator.

The radiator must be filled completely.

» If the coolant level does not meet the specifications:
– Check the coolant level and the reason for the loss.
» If you had to add more coolant than the specified amount:
> 0.50 l
(> 0.132 liq. gal_{US})
– Fill/bleed the cooling system. (p. 136)

– Mount radiator cap ❶.

Reworking

– Install the right tank spoiler. (p. 98)
– Mount the front rider's seat. (p. 92)
– Mount the passenger seat. (p. 91)

17.3 Checking the coolant level in the compensating tank

WARNING

Health hazard Coolant is harmful to health.

– Keep coolant out of the reach of children.
– Do not allow coolant to come into contact with skin, eyes, or clothing.
– Consult a doctor immediately if coolant has been ingested.
– Rinse the affected area immediately with plenty of water in the event of contact with skin.
– Rinse eyes thoroughly with water and consult a doctor immediately if coolant comes into contact with eyes.
– If coolant spills on to your clothing, change the clothing.
– Store coolant properly in a suitable container and keep out of the reach of children.

WARNING

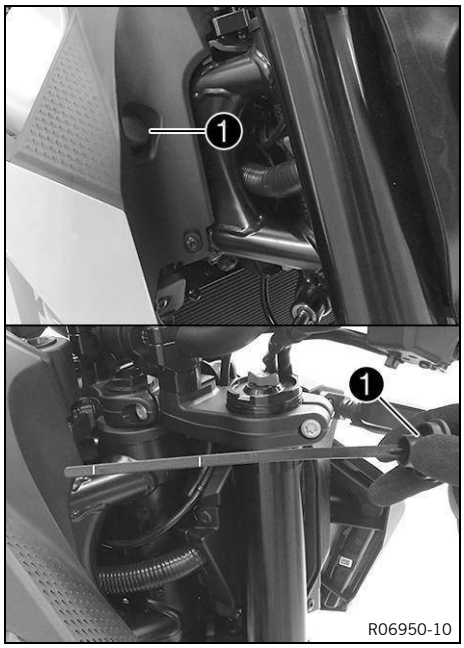
Danger of scalding The coolant heats up and is under high pressure when the vehicle is operated.

– Do not open the radiator, the radiator hoses, or other cooling system components if the engine or the cooling system are at operating temperature.
– Allow the cooling system and the engine to cool down before you open the radiator, the radiator hoses, or other components of the cooling system.
– In the event of scalding, rinse the area affected immediately with lukewarm water.

Condition: The engine is cold, Radiator is completely full

Preparatory work

– Stand the motorcycle upright on a level surface.



Main work

– Check the coolant level in the compensating tank.

The coolant level must be between **MIN** and **MAX**.

» If the coolant level in the reservoir is not correct, but the reservoir is not yet empty:

– Remove cap ❶ of the compensating tank.

– Replenish coolant up to a level between **MIN** and **MAX**.

Coolant	
Coolant 📖 (p. 176) Antifreeze protection to at least: −25 °C (−13.0 °F)	1.9 l (0.50 liq. gal_{US})

– Mount the cap of the compensating tank.

» If there is no coolant in the compensating tank:

– Check the transmission and cooling system for leaks. 🔧

Do not start the motorcycle.

– Fill/bleed the cooling system. 🔧 📖 (p. 136)

17.4 Draining the coolant 🔧

WARNING

Health hazard Coolant is harmful to health.

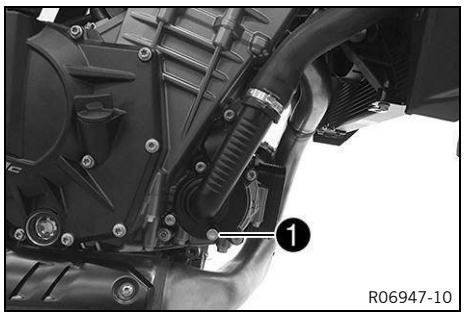
– Keep coolant out of the reach of children.
– Do not allow coolant to come into contact with skin, eyes, or clothing.
– Consult a doctor immediately if coolant has been ingested.
– Rinse the affected area immediately with plenty of water in the event of contact with skin.
– Rinse eyes thoroughly with water and consult a doctor immediately if coolant comes into contact with eyes.
– If coolant spills on to your clothing, change the clothing.
– Store coolant properly in a suitable container and keep out of the reach of children.

WARNING

Danger of scalding The coolant heats up and is under high pressure when the vehicle is operated.

– Do not open the radiator, the radiator hoses, or other cooling system components if the engine or the cooling system are at operating temperature.
– Allow the cooling system and the engine to cool down before you open the radiator, the radiator hoses, or other components of the cooling system.
– In the event of scalding, rinse the area affected immediately with lukewarm water.

Condition: The engine is cold



– Stand the motorcycle upright.
– Position an appropriate container under the engine.
– Remove screw 1 with the sealing ring.
– Remove the radiator cap.
– Completely drain the coolant.
– Mount screw 1 with the new sealing ring and tighten.

Screw plug, water pump drain hole	
EJOT ALtracs® Plus – 60×14	8 Nm (5.9 ft·lb$_f$) **Loctite® 243**

– Mount the radiator cap.

17.5 Filling/bleeding the cooling system

WARNING

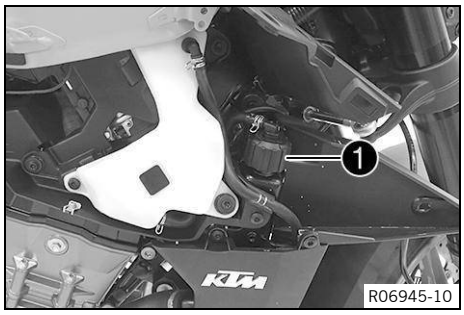
Health hazard Coolant is harmful to health.

– Keep coolant out of the reach of children.
– Do not allow coolant to come into contact with skin, eyes, or clothing.
– Consult a doctor immediately if coolant has been ingested.
– Rinse the affected area immediately with plenty of water in the event of contact with skin.
– Rinse eyes thoroughly with water and consult a doctor immediately if coolant comes into contact with eyes.
– If coolant spills on to your clothing, change the clothing.
– Store coolant properly in a suitable container and keep out of the reach of children.

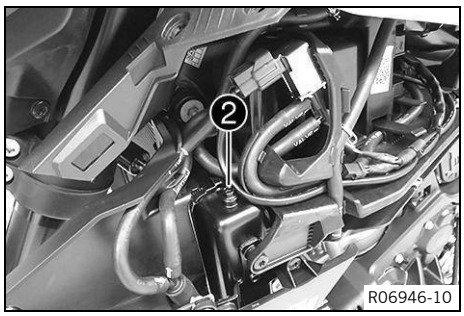
Preparatory work

– Remove the passenger seat. (p. 90)
– Remove the front rider's seat. (p. 91)
– Remove the right tank spoiler. (p. 97)
– Remove the left tank spoiler. (p. 99)

Main work



– Remove radiator cap 1.



– Remove bleeder screw ❷.
– Tilt the vehicle slightly to the right.
– Pour in coolant until it emerges without bubbles at the vent hole, and then mount and tighten bleeder screw ❷ immediately.

Coolant	
Coolant 📖 (p. 176) Antifreeze protection to at least: −25 °C (−13.0 °F)	1.9 l (0.50 liq. gal_{US})

– Completely fill the radiator with coolant. Mount radiator cap ❶.
– Rest the vehicle on the side stand.
– Check the coolant level in the compensating tank. 📖 (p. 134)

DANGER

Danger of poisoning Exhaust gases are toxic and inhaling them may result in unconsciousness and death.

– Always ensure that there is sufficient ventilation when running the engine.
– Use suitable exhaust extraction when starting or running the engine in an enclosed space.

– Start the engine and run it until the 5th bar of the temperature indicator lights up.
– Stop the engine and allow it to cool down.
– When the engine is cool, check the coolant level in the radiator and, if necessary, add coolant.
– Check the coolant level in the compensating tank. 📖 (p. 134)

Reworking

– Install the right tank spoiler. 📖 (p. 98)
– Install the left tank spoiler. 📖 (p. 100)
– Mount the front rider's seat. 📖 (p. 92)
– Mount the passenger seat. 📖 (p. 91)

17.6 Changing the coolant

WARNING

Health hazard Coolant is harmful to health.

– Keep coolant out of the reach of children.
– Do not allow coolant to come into contact with skin, eyes, or clothing.
– Consult a doctor immediately if coolant has been ingested.
– Rinse the affected area immediately with plenty of water in the event of contact with skin.
– Rinse eyes thoroughly with water and consult a doctor immediately if coolant comes into contact with eyes.
– If coolant spills on to your clothing, change the clothing.
– Store coolant properly in a suitable container and keep out of the reach of children.

WARNING

Danger of scalding The coolant heats up and is under high pressure when the vehicle is operated.

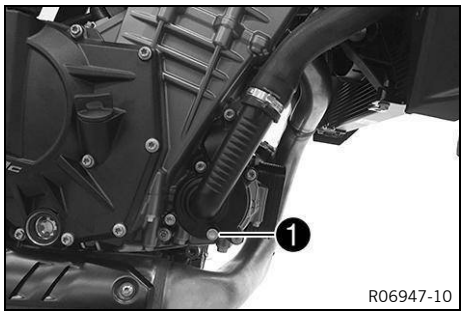
– Do not open the radiator, the radiator hoses, or other cooling system components if the engine or the cooling system are at operating temperature.
– Allow the cooling system and the engine to cool down before you open the radiator, the radiator hoses, or other components of the cooling system.
– In the event of scalding, rinse the area affected immediately with lukewarm water.

Condition: The engine is cold

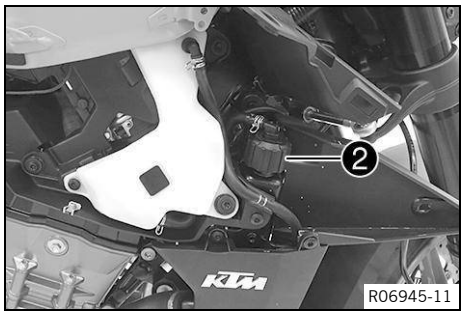
Preparatory work

– Remove the passenger seat. (p. 90)
– Remove the front rider's seat. (p. 91)
– Remove the right tank spoiler. (p. 97)
– Remove the left tank spoiler. (p. 99)

Main work

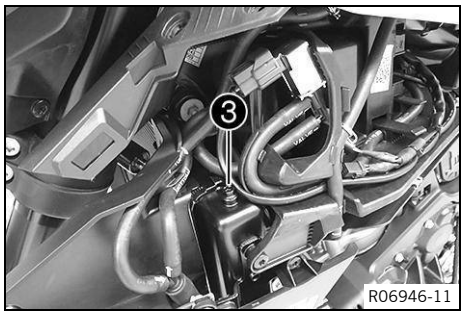


– Stand the motorcycle upright.
– Position an appropriate container under the engine.
– Remove screw 1 with the sealing ring.



– Remove radiator cap 2.
– Completely drain the coolant.
– Mount screw 1 with the new sealing ring and tighten.

Screw plug, water pump drain hole	
EJOT ALtracs® Plus – 60×14	8 Nm (5.9 ft·lb$_f$) **Loctite® 243**



– Remove bleeder screw 3.
– Tilt the vehicle slightly to the right.
– Pour in coolant until it emerges without bubbles at the vent hole, and then mount and tighten bleeder screw 3 immediately.

Coolant	
Coolant (p. 176) Antifreeze protection to at least: −25 °C (−13.0 °F)	1.9 l (0.50 liq. gal$_{US}$)

– Completely fill the radiator with coolant. Mount radiator cap 2.
– Rest the vehicle on the side stand.

DANGER

Danger of poisoning Exhaust gases are toxic and inhaling them may result in unconsciousness and death.

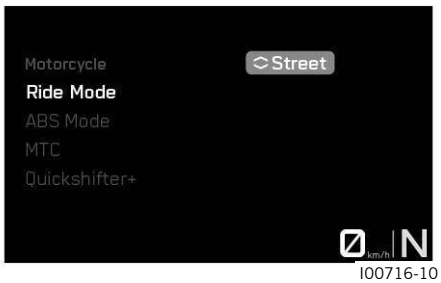
– Always ensure that there is sufficient ventilation when running the engine.
– Use suitable exhaust extraction when starting or running the engine in an enclosed space.

– Start the engine and run it until the 5th bar of the temperature indicator lights up.
– Stop the engine and allow it to cool down.
– After the engine has cooled down, check the coolant level in the radiator and in the compensating tank again and add more coolant if necessary.

Reworking

– Install the right tank spoiler. (p. 98)
– Install the left tank spoiler. (p. 100)
– Mount the front rider's seat. (p. 92)
– Mount the passenger seat. (p. 91)

18.1 Ride Mode



I00716-10

WARNING

Danger of accidents An incorrectly selected ride mode makes it more difficult to control the vehicle.

The riding modes are each only suitable for certain conditions.

– Always select a riding mode that suits the surface on which you are riding, the weather and the riding situation.

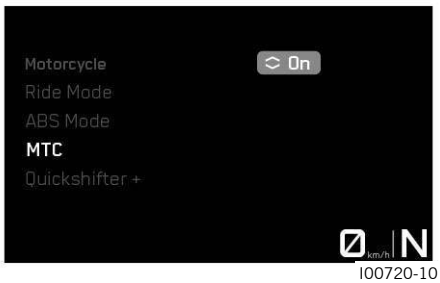
The following settings for the vehicle can be selected in the dashboard via sub-menu **Ride Mode**: **Street**, **Rain**, **Sport**, **Track** (optional) and **Performance** (optional).

The most recently selected ride mode appears on the display.

The riding mode can also be changed while riding with the throttle grip closed.

Condition	Meaning
Street	Homologated performance with balanced response; the motorcycle traction control allows normal slip on the rear wheel.
Rain	Reduced homologated performance for better ridability; the motorcycle traction control allows less slip on the rear wheel.
Sport	Homologated performance with very direct response; the motorcycle traction control allows greater slip on the rear wheel.
Track (optional)	Throttle response and motorcycle traction control can be adjusted individually.
Performance (optional)	Throttle response and motorcycle traction control can be adjusted individually.

18.2 Motorcycle traction control (optional)



I00720-10

The motorcycle traction control (**MTC**) (optional) lowers the engine torque in case of loss of traction in the rear wheel. Depending on the riding mode (p. 140), different amounts of slip are allowed when traction control is activated.

Note

When motorcycle traction control is switched off, the rear wheel may spin during strong acceleration and on surfaces with low grip, resulting in a risk of falling.

After the ignition is switched on, motorcycle traction control is enabled again.

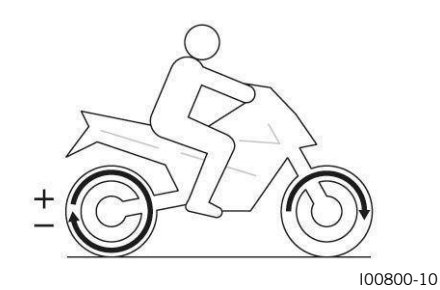
In the combination instrument, the motorcycle traction control can be switched on or off via the **MTC** submenu (optional).

Note

When the motorcycle traction control is active, the TC indicator lamp flashes.

When motorcycle traction control is switched off, the TC indicator lamp lights up.

18.3 slip adjustment (optional)


I00800-10

The spin adjuster is a motorcycle traction control function.

The slip adjustment allows the motorcycle traction control to be tuned through nine levels to the desired characteristic map.

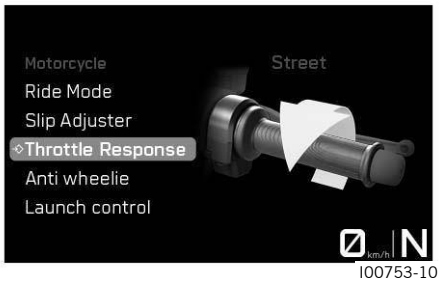
Level 1 allows the maximum slip on the rear wheel, and level 9 the minimum.

The slip adjustment can be set while riding with a closed menu using the **UP** or **DOWN** button.

Note

The slip adjustment is only available in **TRACK** riding mode (optional).

18.4 Throttle Response (optional)



I00753-10

In the combination instrument the characteristics of the throttle response can be adjusted via the **Throttle Response** submenu.

The **Throttle Response** can also be set while riding with a closed throttle grip.

Note

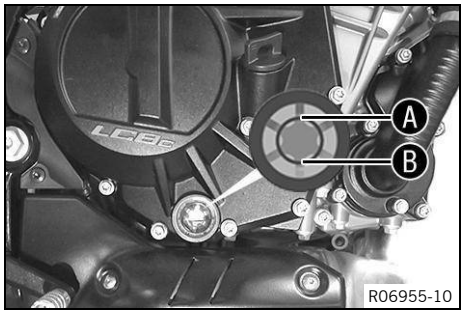
Throttle Response is only available in riding mode **TRACK** (optional).

Condition	Meaning
TRACK	Very direct response.
SPORT	Extremely direct response
STREET	Balanced response.

19.1 Checking the engine oil level

Note
Oil consumption depends on the riding style and the operating conditions.

Condition: The engine is at operating temperature



– Stand the motorcycle upright on a level surface.
– Check the engine oil level.

After switching off the engine, wait one minute before checking the level.
The engine oil must be between marking Ⓐ and marking Ⓑ of the oil level viewer.

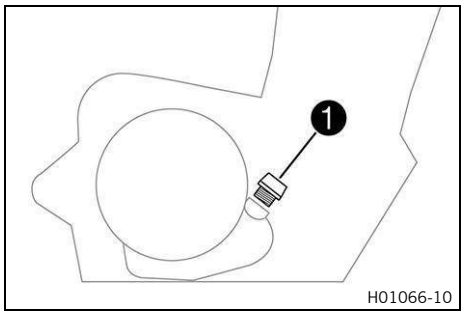
» If the engine oil level is below the marking Ⓑ:
  – Add engine oil. (p. 144)
» If the engine oil level is above the marking Ⓐ:
  – Correct engine oil level.

19.2 Changing the engine oil and oil filter, cleaning the oil screens

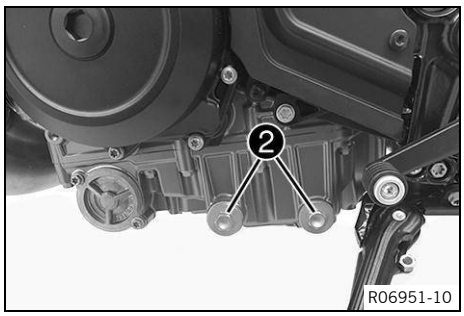
WARNING
Danger of scalding Engine and gear oil heat up when the motorcycle is operated.
– Wear suitable protective clothing and safety gloves.
– In the event of scalding, rinse the area affected immediately with lukewarm water.

NOTE
Environmental hazard Hazardous substances cause environmental damage.
– Dispose of oils, grease, filters, fuel, cleaning agents, brake fluid, etc. correctly and in accordance with the applicable regulations.

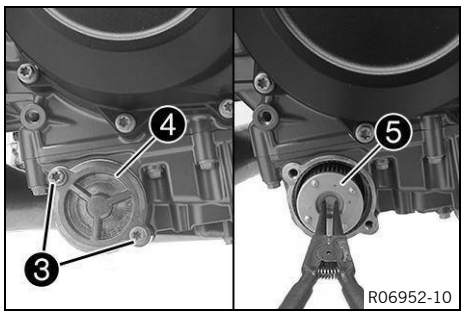
Condition: The engine is at operating temperature



Main work
– Rest the motorcycle on its side stand on a horizontal surface.
– Position an appropriate container under the engine.
– Remove oil filler plug ❶ with the O-ring from the clutch cover.



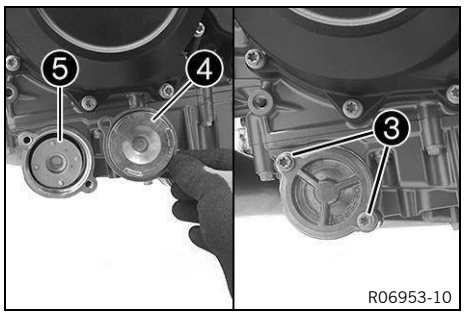
– Remove oil drain plugs ❷ along with the magnets, the O-rings, and the oil screens.



– Remove screws ❸.
– Take off oil filter cover ❹ with the O-ring.
– Pull oil filter ❺ out of the oil filter housing.

Lock ring plier (51012011000)

– Allow the engine oil to drain completely.
– Thoroughly clean the parts and the sealing surfaces.

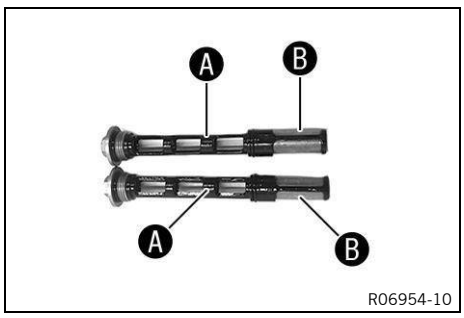


– Insert new oil filter ❺.

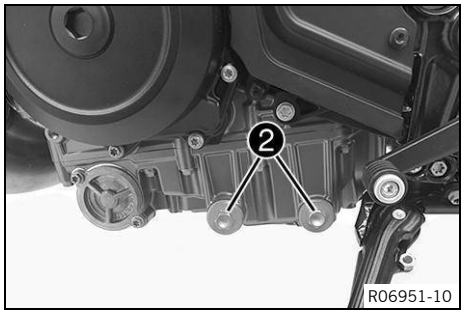
Only insert the oil filter by hand.

– Oil the O-ring of the oil filter cover.
– Position oil filter cover ❹.
– Mount and tighten screws ❸.

Screw, oil filter cover	
M6	10 Nm (7.4 ft·lb$_f$)



– Thoroughly clean magnets Ⓐ and oil screens Ⓑ of the oil drain plugs.

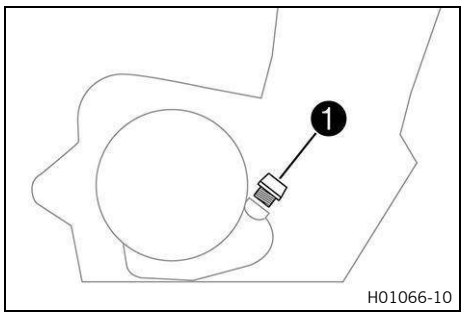


– Mount the oil drain plugs ❷ with magnets and new seal rings, and tighten.

Plug, oil screen	
M20×1.5	20 Nm (14.8 ft·lb$_f$)

– Fill up with engine oil at the clutch cover.

engine oil	
engine oil (SAE 10W/50) (p. 175) fully synthetic	2.6 l (0.69 liq. gal$_{US}$)



– Mount and tighten oil plug 1 with O-ring.

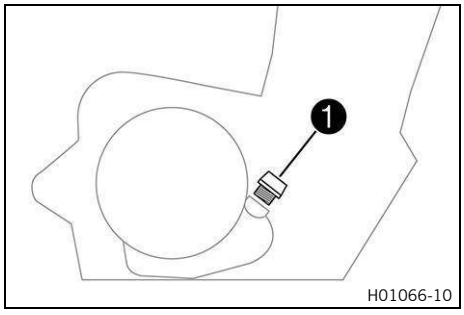
DANGER
Danger of poisoning Exhaust gases are toxic and inhaling them may result in unconsciousness and death.
– Always ensure that there is sufficient ventilation when running the engine.
– Use suitable exhaust extraction when starting or running the engine in an enclosed space.

– Start the engine and check it for leaks.

Reworking
– Check the engine oil level. (p. 142)

19.3 Adding engine oil

Note
Too little engine oil or poor-quality engine oil will result in premature wear of the engine.



Main work
– Remove filler plug 1 with the O-ring, and fill up with engine oil.
– Fill engine oil to the middle of the level viewer.

engine oil (SAE 10W/50) (p. 175)
fully synthetic

Note
In order to achieve optimal engine oil performance, it is not advisable to mix different engine oils.
KTM recommends changing the engine oil if necessary.

– Mount and tighten oil plug 1 with O-ring.

DANGER
Danger of poisoning Exhaust gases are toxic and inhaling them may result in unconsciousness and death.
– Always ensure that there is sufficient ventilation when running the engine.
– Use suitable exhaust extraction when starting or running the engine in an enclosed space.

– Start the engine and check it for leaks.

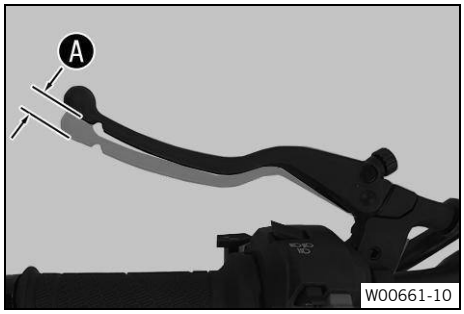
Reworking
– Check the engine oil level. (p. 142)

19.4 Checking the free travel of the clutch lever

NOTE

Clutch damage If there is no free travel by the clutch lever, the clutch will slip.

– Check the free travel of the clutch lever each time before using the vehicle.
– Adjust the free travel of the clutch lever when necessary in accordance with the specification.



– Check the clutch lever for smooth operation.
– Move the handlebar to the straight-ahead position.
– Pull the clutch lever until resistance is perceptible, and determine the free travel Ⓐ.

Free travel of clutch lever Ⓐ	5 mm (0.20 in)

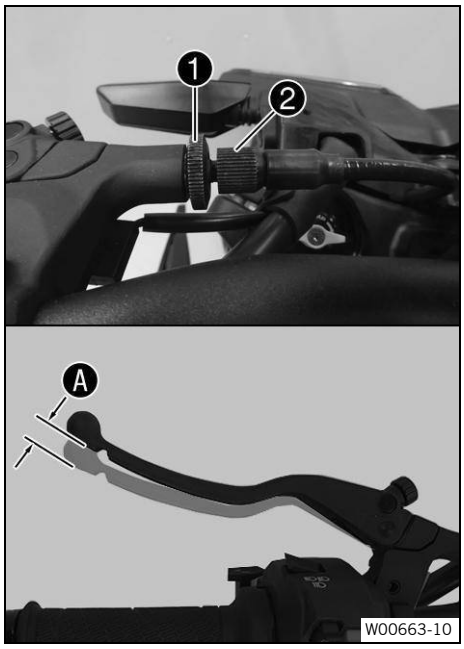
» If the free travel of the clutch lever does not meet specifications:
– Set the free travel of the clutch lever. (p. 145)

– Move the handlebar back and forth over the entire steering range.

The free travel of the clutch lever must not change.

» If the free travel of the clutch lever changes:
– Check the routing of the clutch cable.

19.5 Adjusting the free travel of the clutch lever



– Move the handlebar to the straight-ahead position.
– Loosen lock nut ❶.
– Adjust the free travel Ⓐ by turning adjusting screw ❷.

Free travel of clutch lever Ⓐ	5 mm (0.20 in)

– Tighten lock nut ❶.

20.1 Cleaning the motorcycle

NOTE

Material damage Components can be damaged or destroyed if a high-pressure cleaner is used incorrectly.

The high pressure forces water into the electrical components, socket connectors, clutch cables, and bearings, etc.

Too high a pressure can cause malfunctions and destroy components.

– Do not direct the water jet directly on to electrical components, socket connectors, clutch cables, or bearings.
– Maintain a minimum distance between the nozzle of the high-pressure cleaner and the component.

Minimum distance	60 cm (23.6 in)

NOTE

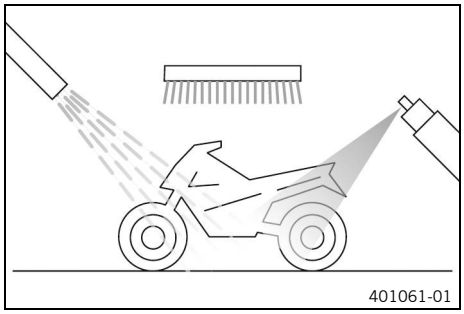
Environmental hazard Hazardous substances cause environmental damage.

– Dispose of oils, grease, filters, fuel, cleaning agents, brake fluid, etc. correctly and in accordance with the applicable regulations.

Note

Clean the motorcycle regularly to maintain its value and appearance over a long period.

Avoid direct sunshine when cleaning the motorcycle.


401061-01

– Seal the exhaust system to prevent water from entering into it.
– Remove loose dirt first with a soft jet of water.
– Spray the heavily soiled parts with a standard commercial motorcycle cleaner and clean using a brush.

Never apply motorcycle cleaner to a dry vehicle; always rinse the vehicle with water first.

Environmentally neutral universal cleaning agent (p. 180)

Note

Use warm water containing standard motorcycle cleaner and a soft sponge.

If the vehicle was driven in road salt, clean it with cold water. Warm water would enhance the corrosive effects of salt.

– After rinsing the motorcycle with a gentle spray of water, allow it to dry thoroughly.
– Remove the cover from the exhaust system.

WARNING

Danger of accidents Moisture and dirt impair the brake system.

– Brake carefully several times to dry out and remove dirt from the brake pads and the brake discs.

– After cleaning, ride the vehicle a short distance until the engine warms up.

Note
The heat produced causes water to evaporate at inaccessible locations in the engine and on the brake system.

– After the motorcycle has cooled off, lubricate all moving parts and pivot points.
– Clean the chain. (p. 93)

WARNING
Danger of accidents Oil, grease or wax on the brake discs reduces the brake action.
– Always keep the brake discs free of oil, fat and wax.
– Clean the brake discs with brake cleaner when necessary.

– Treat bare metal (except for brake discs and the exhaust system) with an anticorrosive.

Preserving materials (p. 180)

– Treat all painted parts with a mild paint care product.

Do not polish parts that were matte when delivered as this would strongly impair the material quality.

Shine spray with beading effect (p. 180)

– Treat the plastic parts and powder-coated parts with a mild cleaning and care product.

Cleaning agents for plastics, glass, lacquers, metals, windshields and visors (p. 180)

– Oil the ignition and steering lock, tank lock, and seat lock.

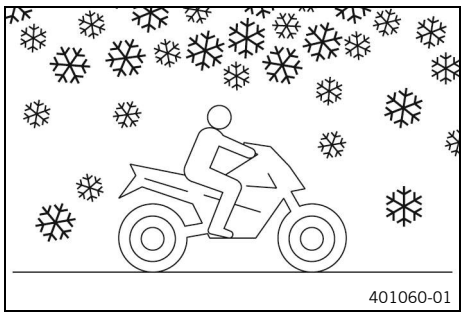
Universal oil spray (p. 175)

20.2 Checks and maintenance steps for winter operation

WARNING
Danger of accidents Salt on the roads impairs the brake system.
– Brake carefully several times to remove salt from the brake linings and the brake discs.

WARNING
Danger of accidents Oil, grease or wax on the brake discs reduces the brake action.
– Always keep the brake discs free of oil, fat and wax.
– Clean the brake discs with brake cleaner when necessary.

Note
If you use the motorcycle in winter, salt can be expected on the roads. You should therefore take precautions against aggressive road salt.


401060-01

– Clean the motorcycle. (p. 146)
– Clean brake system.

After every trip on salted roads, thoroughly wash the brake calipers and brake pads with cold water and dry carefully. This should be done after the parts are cooled down and while they are installed.
After riding on salted roads, thoroughly clean the vehicle with cold water and dry it well.

Note
Warm water enhances the corrosive effects of salt.

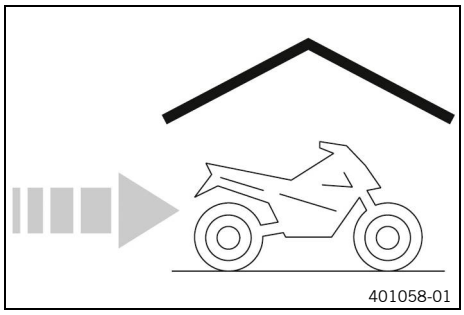
– Treat the engine, swingarm, and all other bare or zinc-plated parts (except the brake discs) with a wax-based anticorrosive.

Corrosion inhibitor must not come in contact with the brake discs as this would greatly reduce the braking force.

– Clean the chain. (p. 93)

21.1 Storage

Note
If the vehicle will not be ridden for an extended period, additional steps are recommended.
Before storing the motorcycle, check all parts for function and wear. If service, repairs, or replacements are necessary, you should do this during the storage period (less overload of the authorized partner). This allows you to avoid long waiting periods when the next season starts.


401058-01

– When refueling for the last time before taking the motorcycle out of service, add fuel additive.

Fuel additive (p. 174)

– Refuel. (p. 82)

Tip
Fill the fuel tank completely as specified, using fuel with the lowest possible ethanol content.

– Clean the motorcycle. (p. 146)
– Change the engine oil and the oil filter, clean the oil screens. (p. 142)
– Check the frost protection and coolant level. (p. 132)
– Check the tire pressure. (p. 117)
– Remove the 12 V battery. (p. 120)
– Charge the 12 V battery. (p. 122)

Storage temperature of the 12 V battery without direct sunlight	0 °C ... 35 °C (32.0 °F ... 95.0 °F)

– Store the vehicle in a dry location that is not subject to large fluctuations in temperature.

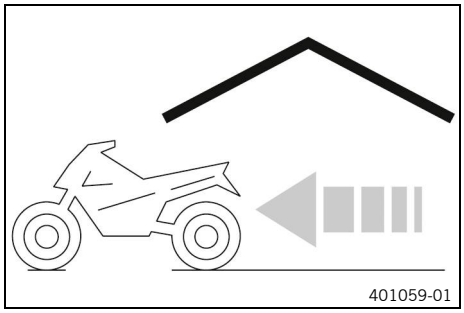
Note
KTM recommends jacking up the motorcycle.

– Raise the motorcycle with the rear lifting gear. (p. 88)
– Lift the motorcycle with the front lifting gear. (p. 88)

Cover the motorcycle with a tarp or cover that is permeable to air.
Do not use non-porous materials because they prevent humidity from escaping and thus cause corrosion.

Note
Avoid running the engine of a motorcycle in storage for a short time only. Since the engine cannot warm up properly, the water vapor produced during combustion condenses and causes valves and the exhaust system to rust.

21.2 Preparing for use after storage



- Take the motorcycle off the front lifting gear. (p. 89)
- Remove the rear of the motorcycle from the lifting gear. (p. 88)
- Charge the 12 V battery. (p. 122)
- Install the 12 V battery. (p. 121)
- Set the time and date. (p. 61)
- Perform checks and maintenance measures when preparing for use. (p. 73)
- Take a test ride.

22.1 troubleshooting

Cause	Finding	Remedy
The dashboard shows nothing on the display	Fuse **1** blown Main fuse blown 12 V battery discharged	– Change the fuses of individual electrical power consumers. (p. 127) – Set the time and date. (p. 61) – Change the main fuse. (p. 124) – Charge the 12 V battery. (p. 122) – Check the open-circuit current.
Engine does not rotate if the start button/emergency OFF switch is pressed into the lower position	Operating error 12 V battery discharged Faulty safety starting system Electronic fault	– Carry out the starting procedure. (p. 73) – Charge the 12 V battery. (p. 122) – Check the open-circuit current. – Read out the fault memory using the diagnostics tool. – Read out the fault memory using the diagnostics tool.
The engine only turns over if the clutch lever is pulled	The vehicle is in gear Faulty safety starting system	– Shift the transmission into the neutral position. – Read out the fault memory using the diagnostics tool.
The engine turns over although a gear is engaged	Faulty safety starting system	– Read out the fault memory using the diagnostics tool.
The engine turns but does not start	Quick-lock coupling not joined Malfunction in the electronic fuel injection The fuel quality is insufficient	– Join quick-lock couplings. – Read out the fault memory using the diagnostics tool. – Add suitable fuel.
The engine dies during the trip	Lack of fuel Malfunction in the electronic fuel injection	– Refuel. (p. 82) – Read out the fault memory using the diagnostics tool.
Malfunction indicator lamp lights up or flashes	Malfunction in the electronic fuel injection	– Read out the fault memory using the diagnostics tool.
The ABS warning light lights up	ABS fuse blown Large difference in wheel speeds of the front and rear wheels Malfunction in ABS	– Change the ABS fuses. (p. 125) – Stop the vehicle, switch off the ignition, and start it again. – Read out the ABS fault memory using the diagnostic tool.
High oil consumption	The engine oil level is too high The engine oil is too thin (low viscosity)	– Check the engine oil level. (p. 142) – Change the engine oil and the oil filter, clean the oil screens. (p. 142)
12 V battery discharged	The hazard warning flasher is switched on The 12-V battery is not being charged by the alternator Ignition was not switched off when vehicle was parked	– Switch off the hazard warning flasher. – Charge the 12 V battery. (p. 122) – Check the charging voltage. – Check the open-circuit current.

Cause	Finding	Remedy
		– Charge the 12 V battery. (p. 122)

23.1 Engine

23.1.1 Technical data - engine

Design	2-cylinder 4-stroke in-line engine, water-cooled
Displacement	950 cm³ (57.97 in³)
Stroke	70.4 mm (2.772 in)
Bore	92.5 mm (3.642 in)
Compression ratio	13.5:1
Control	DOHC, 4 valves per cylinder controlled via cam lever, chain drive
Valve diameter, intake	37 mm (1.46 in)
Valve diameter, exhaust	30 mm (1.18 in)
Valve clearance, cold	
Intake at: 20 °C (68.0 °F)	0.10 mm ... 0.15 mm (0.0039 in ... 0.0059 in)
Exhaust at: 20 °C (68.0 °F)	0.15 mm ... 0.20 mm (0.0059 in ... 0.0079 in)
Crankshaft bearing	Plain bearing
big (bottom) end bearing	Plain bearing
Piston	Forged light alloy
Piston rings	1 compression ring, 1 lower compression ring, 1 oil ring with spring expander
Engine lubrication	Pressure circulation lubrication with 2 trochoidal pumps
Primary transmission	42:76
Clutch	Multi-disc clutch in oil bath/mechanically operated
Transmission	6 speed transmission, claw shift
Gear ratios	
1st gear	13:37
2nd gear	17:34
3rd gear	20:31
4th gear	22:28
5th gear	24:26
6th gear	23:22
Mixture formation	Electronic fuel injection
Ignition system	Contactless controlled fully electronic ignition with digital ignition adjustment
Alternator	• 14 V • 400 W (0.536 hp)
Spark plug	NGK LMAR9AI–10

Plug gap of spark plug	1.0 mm (0.039 in)
Cooling	Liquid cooling, permanent circulation of coolant by water pump
idle speed	1,550 rpm ... 1,650 rpm (25.83 Hz ... 27.50 Hz)
Starting aid	Starter motor

23.1.2 Capacities - engine

engine oil	
engine oil (SAE 10W/50) (p. 175) fully synthetic	2.6 l (0.69 liq. gal_{US})
Coolant	
Coolant (p. 176) Antifreeze protection to at least: −25 °C (−13.0 °F)	1.9 l (0.50 liq. gal_{US})

23.2 Chassis

23.2.1 Technical data - chassis

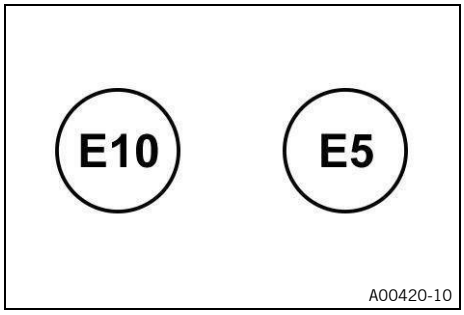
Frame	Lattice frame made of chrome molybdenum steel tubing, powder-coated
Fork	**WP suspension APEX**
Shock absorber	**WP APEX**
Suspension travel:	
front	140 mm (5.51 in)
rear	150 mm (5.91 in)
Brake system	
front	Double disc brake with radially mounted four-piston brake calipers, floating brake discs
rear	Disc brake with single-piston brake caliper, floating
Brake discs - diameter	
front	300 mm (11.81 in)
rear	240 mm (9.45 in)
Brake disc wear limit	
front	4.5 mm (0.177 in)
rear	4.5 mm (0.177 in)
Tire pressure when solo	
front	2.3 bar (33.4 psi)

rear	2.5 bar (36.3 psi)
Tire pressure with passenger / full payload	
front	2.3 bar (33.4 psi)
rear	2.6 bar (37.7 psi)
Final drive	16:43 **Note** Modifications to the transmission ratio are not permitted and can lead to malfunctions.
Chain	5/8 x 1/4" (520) X–ring
Steering head angle	65.9° (1.150 rad)
Wheelbase	1,481 mm (58.31 in)
Seat Height unloaded	823 mm (32.40 in)
Ground clearance unloaded	195 mm (7.68 in)
Roadworthy weight	190 kg (418.9 lb)
Maximum permissible front axle load	165 kg (363.8 lb)
Maximum permissible rear axle load	270 kg (595.2 lb)
Maximum permissible total weight	390 kg (859.8 lb)

23.2.2 Technical data - tires

Tire front	Rear tire
120/70 ZR 17 M/C 58W TL Bridgestone Battlax S22	**180/55 ZR 17 M/C 73W TL** Bridgestone Battlax S22
The tires specified represent one of the possible series production tires. For alternative manufacturers, if any, contact an authorized manufacturer or qualified tire dealership. If local road approval regulations apply, these and the respective technical specifications must be observed.	

23.2.3 Fuel



Please observe the labels on EU fuel pumps.

23.2.4 Capacities - vehicle

Fuel tank capacity, approx.	
Super unleaded (ROZ 95) (p. 174)	14.8 l (3.91 liq. gal_{US})

23.3 Electrics

23.3.1 Battery

12 V battery	HTZ12A-BS	Battery voltage: 12 V Nominal capacity: 10 Ah Maintenance-free
Button cell	CR 2032	3 V

23.3.2 Fuses

Fuse	75011088075	7.5 A
Fuse	75011088010	10 A
Fuse	75011088015	15 A
Fuse	75011088025	25 A
Fuse	58011109130	30 A

23.3.3 Lamps

Low beam/high beam	LED
Daytime running light/position light	LED
Dashboard illumination and indicator lights	LED
Turn signal	LED
Tail light	LED
Brake light	LED
License plate lighting	LED

23.4 Fork

23.4.1 Technical data - fork

Fork part number	A607C126X201102

Fork	**WP suspension APEX**
Compression damping	
Comfort	4 clicks
Standard	3 clicks
Sport	1 click
Full payload	3 clicks
Rebound damping	
Comfort	4 clicks
Standard	3 clicks
Sport	2 clicks
Full payload	3 clicks
Spring rate	
Standard	7.5 N/mm (42.83 lb_f/in)
Spring length with preload spacer(s)	400 mm (15.75 in)
Fork length	765 mm (30.12 in)

23.4.2 Fork oil capacity

Fork oil per fork leg	
Fork oil (SAE 5) (p. 175)	490 ±5 ml (16.57 ±0.17 fl. oz_{US})

23.5 Shock absorber

23.5.1 Technical data - shock absorber

Shock absorber part number	A607C426X313102

Shock absorber	**WP APEX**
Rebound damping	
Comfort	4 clicks
Standard	3 clicks
Sport	2 clicks
Full payload	2 clicks
Preload	
Comfort	8 mm (0.31 in)
Standard	8 mm (0.31 in)

Sport	9 mm (0.35 in)
Full payload	11 mm (0.43 in)
Spring rate	
Standard	59 N/mm (336.9 lb_f/in)
Spring length	189 mm (7.44 in)
Gas assisted	12 bar (174 psi)
Installation position	387 mm (15.24 in)

23.5.2 Capacities - shock absorber

Shock absorber oil	
Shock absorber oil (50180751S1) (SAE 2.5) (p. 175)	Fill to the maximum mark

23.6 Tightening torque

23.6.1 engine tightening torques

Hose clip, intake flange M4	2.5 Nm (1.84 ft·lb_f)
Remaining screws for engine M5	6 Nm (4.4 ft·lb_f)
Screw, gear position sensor M5	6 Nm (4.4 ft·lb_f) **Loctite® 243**
Oil spray tube, crank chamber evacuation M5	2 Nm (1.5 ft·lb_f)
Oil spray tube, camshaft lubrication M5	2 Nm (1.5 ft·lb_f)
Screw, cam lever axial lock M5	6 Nm (4.4 ft·lb_f) **Loctite® 243**
Screw, crankshaft position sensor M5	6 Nm (4.4 ft·lb_f) **Loctite® 243**
Screw, thermostat case M5	6 Nm (4.4 ft·lb_f) **Loctite® 243**
Screw, shift shaft sensor M5	6 Nm (4.4 ft·lb_f) **Loctite® 243**

Securing screw, balancer shaft M5	5 Nm (3.7 ft·lb$_f$) **Loctite® 243**
Pressure sensor, throttle valve body M5×14	5 Nm (3.7 ft·lb$_f$)
Screw, fuel rail M5×30	3 Nm (2.2 ft·lb$_f$)
Screw, bearing flange M5	6 Nm (4.4 ft·lb$_f$) **Loctite® 243**
Remaining screws for engine M6	10 Nm (7.4 ft·lb$_f$)
Screw, oil filter cover M6	10 Nm (7.4 ft·lb$_f$)
Screw, suction pump cover M6	10 Nm (7.4 ft·lb$_f$) **Loctite® 243**
Screw, pressure pump cover M6	10 Nm (7.4 ft·lb$_f$) **Loctite® 243**
Detent arm screw M6	10 Nm (7.4 ft·lb$_f$) **Loctite® 243**
Screw, upper guide rail M6	8 Nm (5.9 ft·lb$_f$) **Loctite® 243**
Screw, clutch cover M6	10 Nm (7.4 ft·lb$_f$)
Screw, engine case M6×35	12 Nm (8.9 ft·lb$_f$)
Screw, engine case M6×60	12 Nm (8.9 ft·lb$_f$)
Bell crank M6	14 Nm (10.3 ft·lb$_f$) **Loctite® 243**
Screw, starter motor M6	10 Nm (7.4 ft·lb$_f$)
Stator screw M6	10 Nm (7.4 ft·lb$_f$) **Loctite® 243**
Screw, valve cover M6	10 Nm (7.4 ft·lb$_f$)
Screw, water pump cover M6	10 Nm (7.4 ft·lb$_f$) **Loctite® 243**
Screw, water pump impeller M6	10 Nm (7.4 ft·lb$_f$) **Loctite® 243**

Screw, cylinder head M6	10 Nm (7.4 ft·lb$_f$)
Screw, ignition cover M6×30	10 Nm (7.4 ft·lb$_f$)
Screw, camshaft bearing bridge M6	10 Nm (7.4 ft·lb$_f$)
Screw, timing chain shaft M6	10 Nm (7.4 ft·lb$_f$)
Screw, shift shaft retaining bracket M6	10 Nm (7.4 ft·lb$_f$) **Loctite® 243**
Screw, main shaft bearing support M6	10 Nm (7.4 ft·lb$_f$) **Loctite® 243**
Screw, oil pump unit M6	10 Nm (7.4 ft·lb$_f$)
Screw, oil pan M6×30	10 Nm (7.4 ft·lb$_f$)
Screw, oil pan M6×40	10 Nm (7.4 ft·lb$_f$)
Screw, oil pan M6×70	10 Nm (7.4 ft·lb$_f$)
Screw, oil pan M6×80	10 Nm (7.4 ft·lb$_f$)
Screw, oil/water heat exchanger M6	10 Nm (7.4 ft·lb$_f$) **Loctite® 243**
Screw, ignition coil M6	8 Nm (5.9 ft·lb$_f$)
Screw, clutch release lever M6	10 Nm (7.4 ft·lb$_f$) **Loctite® 243**
Screw, clutch cable retaining bracket M6	10 Nm (7.4 ft·lb$_f$) **Loctite® 243**
Nut, starter motor cable M6	5 Nm (3.7 ft·lb$_f$)
Screw, bleeder flange M6	8 Nm (5.9 ft·lb$_f$) **Loctite® 243**
Clutch cover, damping plate M6	8 Nm (5.9 ft·lb$_f$)
Shift mechanism support M6	10 Nm (7.4 ft·lb$_f$)
Clutch pressure cap M6	8 Nm (5.9 ft·lb$_f$)

Screw, bearing flange M6		10 Nm (7.4 ft·lb$_f$) **Loctite® 243**
Screw, timing chain shaft, cylinder head M6		10 Nm (7.4 ft·lb$_f$)
Remaining screws for engine M8		20 Nm (14.8 ft·lb$_f$)
Screw, engine case M8×65		27 Nm (19.9 ft·lb$_f$)
Screw, engine case M8×90		27 Nm (19.9 ft·lb$_f$)
Slide rail screw M8×25		15 Nm (11.1 ft·lb$_f$) **Loctite® 243**
Stud, exhaust flange M8		15 Nm (11.1 ft·lb$_f$) **Loctite® 243**
Exhaust flange nut M8		15 Nm (11.1 ft·lb$_f$)
Screw plug, locking screw M8		15 Nm (11.1 ft·lb$_f$)
Knock sensor screw M8		20 Nm (14.8 ft·lb$_f$)
Oil hole screw plug M8		8 Nm (5.9 ft·lb$_f$) **Loctite® 243**
Screw, reduction jet, clutch lubrication M8		5 Nm (3.7 ft·lb$_f$) **Loctite® 243**
Screw, conrod bearing M9×1 engine oil	1.	5 Nm (3.7 ft·lb$_f$)
	2.	15 Nm (11.1 ft·lb$_f$)
	3.	90° (1.57 rad)
Screw, release for timing chain tensioner M10×1		8 Nm (5.9 ft·lb$_f$)
Oil pressure sensor M10×1		10 Nm (7.4 ft·lb$_f$)
Spark plug M10		11 Nm (8.1 ft·lb$_f$)
Coolant temperature sensor M10×1.25		10 Nm (7.4 ft·lb$_f$)
Screw plug, cam lever shaft M10×1		8 Nm (5.9 ft·lb$_f$)
Screw, cylinder head M11×115 engine oil	1.	5 Nm (3.7 ft·lb$_f$)

Screw, cylinder head M11×115 engine oil	2.	23 Nm (17.0 ft·lb$_f$)
	3.	90° (1.57 rad)
	4.	90° (1.57 rad)
Screw, rotor M12×1.5		90 Nm (66.4 ft·lb$_f$) Long-life grease
Nut, engine sprocket M20×1.5		120 Nm (88.5 ft·lb$_f$) **Loctite® 243**
Nut, inner clutch hub M20×1.5		135 Nm (99.6 ft·lb$_f$)
Plug, oil screen M20×1.5		20 Nm (14.8 ft·lb$_f$)
Screw plug, timing chain tensioner M24×1.5		25 Nm (18.4 ft·lb$_f$)
Screw plug, alternator cover M24×1.5		8 Nm (5.9 ft·lb$_f$)
Screw plug, water pump drain hole **EJOT ALtracs® Plus** – 60×14		8 Nm (5.9 ft·lb$_f$) **Loctite® 243**

23.6.2 Chassis tightening torques

Throttle valve body hose clamp	2.8 Nm (2.07 ft·lb$_f$)
Radiator hose hose clamp	2.2 Nm (1.62 ft·lb$_f$)
Remaining nuts on chassis M4	3 Nm (2.2 ft·lb$_f$)
Remaining screws on chassis M4	3 Nm (2.2 ft·lb$_f$)
Screw, fixed grip, left M4	3 Nm (2.2 ft·lb$_f$)
Brake fluid reservoir cover, front M4	1 Nm (0.7 ft·lb$_f$)
Screw, combination switch, right M5	3.5 Nm (2.58 ft·lb$_f$)
Screw, heat guard M5	7 Nm (5.2 ft·lb$_f$)
Remaining screws on chassis M5	5 Nm (3.7 ft·lb$_f$)
Screw, air filter box M5	3 Nm (2.2 ft·lb$_f$)
Screw, brake fluid reservoir for rear brake M5	5 Nm (3.7 ft·lb$_f$)

Screw, mask support M5	3.5 Nm (2.58 ft·lb$_f$)
Screw, throttle twist grip M5	3.5 Nm (2.58 ft·lb$_f$)
Screw, combination switch, left M5	3.5 Nm (2.58 ft·lb$_f$)
Remaining nuts on chassis M5	5 Nm (3.7 ft·lb$_f$)
Screw, trim M5	3.5 Nm (2.58 ft·lb$_f$)
Screw, support roller M5	4 Nm (3.0 ft·lb$_f$) **Loctite® 243**
Screw, front sprocket cover M5	5 Nm (3.7 ft·lb$_f$) **Loctite® 243**
Screw, front rider's seat M5×12	3 Nm (2.2 ft·lb$_f$)
Screw, fuel level sensor M5	3 Nm (2.2 ft·lb$_f$)
Screw, battery holding bracket M5	3.5 Nm (2.58 ft·lb$_f$)
Fuel tank cover screw M5	3.5 Nm (2.58 ft·lb$_f$)
Screw, lower rear panel M5	3 Nm (2.2 ft·lb$_f$)
Screw, dashboard trim M5	3.5 Nm (2.58 ft·lb$_f$)
Screw, mask support cable protection M5	3.5 Nm (2.58 ft·lb$_f$)
Screw, turn signal M5	3 Nm (2.2 ft·lb$_f$)
Screw, heat protection electrics M5	3.5 Nm (2.58 ft·lb$_f$)
Screw, ride-by-wire throttle clamping screw M5	3.5 Nm (2.58 ft·lb$_f$)
Screw, combination switch clamping screw M5	4.5 Nm (3.32 ft·lb$_f$)
Screw connection, evaporative canister bracket in frame M5	3.5 Nm (2.58 ft·lb$_f$)
Screw, air deflector radiator on ABS carrier M5	3.5 Nm (2.58 ft·lb$_f$)
Screw, control unit reservoir M5	3.5 Nm (2.58 ft·lb$_f$)
Nut, push rod, brake pedal M6	10 Nm (7.4 ft·lb$_f$)
Screw, combination instrument M6	8 Nm (5.9 ft·lb$_f$)

Screw, side stand sensor M6	10 Nm (7.4 ft·lb$_f$) **Loctite® 243**
Screw, battery terminal M6×12	4.5 Nm (3.32 ft·lb$_f$)
Screw, battery terminal M6×20	4.5 Nm (3.32 ft·lb$_f$)
Screw, foot brake lever stub M6	10 Nm (7.4 ft·lb$_f$) **Loctite® 243**
Screw, seat lock M6	10 Nm (7.4 ft·lb$_f$) **Loctite® 243**
Nut, cable on starter motor M6	5 Nm (3.7 ft·lb$_f$)
Screw, ground wire to starter motor M6	6 Nm (4.4 ft·lb$_f$)
Screw, ground wire on frame M6	6 Nm (4.4 ft·lb$_f$)
Remaining nuts on chassis M6	10 Nm (7.4 ft·lb$_f$)
Remaining screws on chassis M6	10 Nm (7.4 ft·lb$_f$)
Screw, fuel tank spoiler M6	3 Nm (2.2 ft·lb$_f$)
Screw, brake cylinder on the rear brake system M6	10 Nm (7.4 ft·lb$_f$) **Loctite® 243**
Screw, license plate holder M6	6 Nm (4.4 ft·lb$_f$)
Screw, push rod ball joint on the rear brake cylinder M6	10 Nm (7.4 ft·lb$_f$) **Loctite® 243**
Screw, radiator bracket, bottom M6	5 Nm (3.7 ft·lb$_f$)
Screw, magnetic holder on side stand M6	2 Nm (1.5 ft·lb$_f$) **Loctite® 243**
Nut, shift rod M6	6 Nm (4.4 ft·lb$_f$)
Nut, shift rod M6LH	6 Nm (4.4 ft·lb$_f$)
Screw, ignition lock (tamper-proof screw) M6	Tighten until the head breaks off **Loctite® 243**
Screw, shift lever stub M6	10 Nm (7.4 ft·lb$_f$) **Loctite® 243**

Screw, shift rod M6	10 Nm (7.4 ft·lb$_f$) **Loctite® 243**
Screw, front brake assembly M6	8 Nm (5.9 ft·lb$_f$)
Screw, angle sensor M6	6 Nm (4.4 ft·lb$_f$)
Screw, wheel speed sensor M6	6 Nm (4.4 ft·lb$_f$)
Screw, clutch lever assembly M6	8 Nm (5.9 ft·lb$_f$)
Screw, shift shaft deflector on shift shaft M6	10 Nm (7.4 ft·lb$_f$) **Loctite® 243**
Screw, fuel tank rollers M6	10 Nm (7.4 ft·lb$_f$) **Loctite® 243**
Screw, subframe brace M6	10 Nm (7.4 ft·lb$_f$) **Loctite® 243**
Screw, lower mask support M6	6 Nm (4.4 ft·lb$_f$)
Screw, activated carbon filter holder M6	6 Nm (4.4 ft·lb$_f$)
License plate holder support screw M6	6 Nm (4.4 ft·lb$_f$)
Nut, hand brake lever M6	5.5 Nm (4.06 ft·lb$_f$)
Screw, dashboard clamp M6	1.5 Nm (1.11 ft·lb$_f$)
Screw, horn on cooler retaining bracket M6	6 Nm (4.4 ft·lb$_f$)
Screw, control unit M6	6 Nm (4.4 ft·lb$_f$)
Screw, voltage regulator M6	6 Nm (4.4 ft·lb$_f$)
Screw, starter relay clamping screw M6	3.5 Nm (2.58 ft·lb$_f$)
Screw connection, purge valve M6	7 Nm (5.2 ft·lb$_f$)
Screw, reservoir to heat protection M6	6 Nm (4.4 ft·lb$_f$)
Screw, ABS modulator bracket M6	6 Nm (4.4 ft·lb$_f$)
Screw, ABS modulator M6	8 Nm (5.9 ft·lb$_f$)
Screw, wheel speed sensor M6	6 Nm (4.4 ft·lb$_f$)

Screw, main silencer clamp M8		15 Nm (11.1 ft·lb$_f$)
Screw, manifold clamp M8		15 Nm (11.1 ft·lb$_f$)
Nut, manifold on cylinder head M8	Tighten the nuts evenly. Do not bend the metal.	13 Nm (9.6 ft·lb$_f$)
Remaining nuts on chassis M8		25 Nm (18.4 ft·lb$_f$)
Remaining screws on chassis M8		25 Nm (18.4 ft·lb$_f$)
Screw, rear brake disc M8		28 Nm (20.7 ft·lb$_f$) **Loctite® 2701**
Screw, front brake disc M8		28 Nm (20.7 ft·lb$_f$) **Loctite® 2701**
Screw, main silencer fastening M8		15 Nm (11.1 ft·lb$_f$)
Screw, spring holder plate on the side stand bracket M8		15 Nm (11.1 ft·lb$_f$)
Screw, footrest bracket, rear M8×30		25 Nm (18.4 ft·lb$_f$) **Loctite® 243**
Screw, top triple clamp M8		15 Nm (11.1 ft·lb$_f$)
Screw, bottom triple clamp M8		12 Nm (8.9 ft·lb$_f$)
Screw, fork shoe M8		15 Nm (11.1 ft·lb$_f$)
Screw, steering stem M8		20 Nm (14.8 ft·lb$_f$) **Loctite® 243**
Screw, grab handle M8×20		25 Nm (18.4 ft·lb$_f$) **Loctite® 243**
Handlebar clamp screw M8		20 Nm (14.8 ft·lb$_f$)
Screw, steering damper on triple clamp M8		8 Nm (5.9 ft·lb$_f$) **Loctite® 243**
Screw, steering damper on frame M8		8 Nm (5.9 ft·lb$_f$) **Loctite® 243**
Screw, engine fixing arm linkage bracket M8		25 Nm (18.4 ft·lb$_f$) **Loctite® 243**

Screw, foot brake lever M8	25 Nm (18.4 ft·lb$_f$) **Loctite® 2701**
Screw, shift lever M8	25 Nm (18.4 ft·lb$_f$) **Loctite® 2701**
Screw, presilencer on frame M8	15 Nm (11.1 ft·lb$_f$) **Loctite® 243**
Screw, cross member M8×20	25 Nm (18.4 ft·lb$_f$) **Loctite® 243**
Screw, cross member in rear M8×35	25 Nm (18.4 ft·lb$_f$) **Loctite® 243**
Screw, passenger seat bracket M8	25 Nm (18.4 ft·lb$_f$) **Loctite® 243**
Nut, rear sprocket screw M8	35 Nm (25.8 ft·lb$_f$) **Loctite® 2701**
Screw, main silencer clamp M8	15 Nm (11.1 ft·lb$_f$)
Screw, main silencer holder M8×40	25 Nm (18.4 ft·lb$_f$) **Loctite® 243**
Screw, main silencer holder M8×45	25 Nm (18.4 ft·lb$_f$) **Loctite® 243**
Screw, main silencer holder M8×60	25 Nm (18.4 ft·lb$_f$) **Loctite® 243**
Pin, brake linings M8	8 Nm (5.9 ft·lb$_f$)
Screw, chain slider M8	25 Nm (18.4 ft·lb$_f$)
Screw, resonator retaining bracket M8	15 Nm (11.1 ft·lb$_f$)
Screw, front footrest bracket M10×24	45 Nm (33.2 ft·lb$_f$) **Loctite® 243**
Screw, front brake caliper M10×1.25	45 Nm (33.2 ft·lb$_f$) **Loctite® 243**
Subframe screw M10	50 Nm (36.9 ft·lb$_f$) **Loctite® 243**

Engine mounting bolt M10	45 Nm (33.2 ft·lb$_f$) **Loctite® 243**
Banjo bolt, brake line M10×1	25 Nm (18.4 ft·lb$_f$)
Remaining nuts on chassis M10	45 Nm (33.2 ft·lb$_f$)
Remaining screws on chassis M10	45 Nm (33.2 ft·lb$_f$)
Screw, handlebar mount M10	45 Nm (33.2 ft·lb$_f$) **Loctite® 243**
Screw, side stand M10	35 Nm (25.8 ft·lb$_f$) **Loctite® 243**
Screw, side stand bracket M10	45 Nm (33.2 ft·lb$_f$) **Loctite® 243**
Screw, main silencer holder M10×24	30 Nm (22.1 ft·lb$_f$) **Loctite® 243**
Screw, resonator retaining bracket to engine M10×24	45 Nm (33.2 ft·lb$_f$)
Screw, headlight support at bottom M10	3 Nm (2.2 ft·lb$_f$)
Brake light switch screw M10	23 Nm (17.0 ft·lb$_f$)
Top shock absorber screw M12	80 Nm (59.0 ft·lb$_f$) **Loctite® 243**
Bottom shock absorber screw M12	80 Nm (59.0 ft·lb$_f$) **Loctite® 243**
Screw, swingarm pivot M12	100 Nm (73.8 ft·lb$_f$)
Screw, coupling rod to frame M12×80	80 Nm (59.0 ft·lb$_f$)
Screw, triangle cantilever to swingarm M12	80 Nm (59.0 ft·lb$_f$)
Oxygen sensor M18×1.5	50 Nm (36.9 ft·lb$_f$)
Screw, steering head M20×1.5	18 Nm (13.3 ft·lb$_f$)
Bushing, shock absorber support M20LH×1.5	10 Nm (7.4 ft·lb$_f$) Long-life grease
Screw, adjusting ring M24×1.5	10 Nm (7.4 ft·lb$_f$)

Screw, wheel spindle, front M25×1.5	45 Nm (33.2 ft·lb$_f$)
Nut, wheel spindle, rear M25×1.5	90 Nm (66.4 ft·lb$_f$) Long-life grease
Remaining screws on chassis **EJOT PT®** – K45×12	1 Nm (0.7 ft·lb$_f$)
Screw, headlight **EJOT PT®** – K50×14	4 Nm (3.0 ft·lb$_f$)
Remaining screws on chassis **EJOT PT®** – K50×12	1 Nm (0.7 ft·lb$_f$)
Remaining screws on chassis **EJOT PT®** – K50×14	1 Nm (0.7 ft·lb$_f$)
Remaining screws on chassis **EJOT PT®** – K50×16	2 Nm (1.5 ft·lb$_f$)
Remaining screws on chassis **EJOT PT®** – K50×18	2 Nm (1.5 ft·lb$_f$)

24.1 Declarations of conformity

Note
The functional and equipment scope is model-dependent and may not include all wireless systems and application areas referred to.

Polaris hereby declares that the **Connectivity Control Unit "CCU–2"** wireless system conforms with the relevant guidelines. The full text of the Declaration of Conformity is available at the following Internet address.
Certification website: https://www.ktm.com/ccu-2

Schrader Electronics Ltd hereby declares that the **Tyre Pressure Monitoring System** wireless system conforms with the relevant guidelines. The full text of the Declaration of Conformity is available at the following Internet address.
Certification website: https://www.ktm.com/tpms

24.2 Country-specific declarations of conformity



E02299-01

25.1 Recycling



I02045-10

Further information is available at the following website.
Recycling information website: https://www.quefairdemesdechets.fr

25 Recycling

A Technical terms

ABS	Anti-lock braking system	Safety system that prevents locking of the wheels when riding straight ahead without the influence of lateral forces.
ATIR	Automatic Turn Indicator Reset	Software, which automatically switches the indicator off according to a time or travel distance counter
DRL	Daytime Running Light	Light that increases the visibility of the vehicle during the day, but unlike the low beam is not focused and does not illuminate the road ahead.
ETTC	Engine traction torque control	Auxiliary function of the engine control, which prevents rear wheel locking with excessive engine braking effect, by lightly opening the throttle valve
	KTMconnect	System for remote communication with suitable cell phones and communication systems for telephony and audio
MTC	Motorcycle Traction Control	Additional engine management function, where the engine torque is reduced in the event of rear wheel slip.
OBD	On-board diagnosis	Vehicle system, which monitors the specified parameters of the vehicle electronics
	QUICKSHIFTER+	Engine electronics function for shifting up and down without clutch actuation

B Fuels

Super unleaded

Standards

• ROZ 95	→ DIN EN 228

Fuel additive

Recommended supplier

MOTOREX®

- **FUEL STABILIZER**

C Operating supplies

Street chain spray

Recommended supplier

MOTOREX®

- **CHAINLUBE ROAD STRONG**

Fork oil

Recommended supplier

MOTOREX®

- **RACING FORK OIL**

Standards

- SAE 5 → SAE

Universal oil spray

Recommended supplier

MOTOREX®

- **JOKER 440 SYNTHETIC**

Long-life grease

Recommended supplier

MOTOREX®

- **Bike Grease 2000**

engine oil

Recommended supplier

MOTOREX®

- **POWER SYNT 4T**

Standards

→ JASO T903 MA2

- SAE 10W/50 → SAE

Properties

- fully synthetic

Shock absorber oil

Order details

- 50180751S1

Standards	
• SAE 2.5	→ SAE

Brake fluid DOT 5.1

Recommended supplier	
MOTOREX®	
• **BRAKE FLUID DOT 5.1**	
Standards	
→ DOT	

Coolant

Recommended supplier	
MOTOREX®	
• **COOLANT M3.0**	
Properties	
• Antifreeze protection to at least	−25 °C (−13.0 °F)

D Electrics

Low beam/high beam (LED)

Product code

- LED

Button cell (CR 2032)

Product code

- CR 2032

Properties

- 3 V

12 V battery (HTZ12A-BS)

Product code

- HTZ12A-BS

Properties

• Battery voltage	12 V
• Nominal capacity	10 Ah
• Maintenance-free	

Turn signal (LED)

Product code

- LED

Brake light (LED)

Product code

- LED

License plate lighting (LED)

Product code

- LED

Dashboard illumination and indicator lights (LED)

Product code

- LED

Tail light (LED)

Product code

- LED

Fuse (75011088010)

Product code

- 75011088010

Properties

- 10 A

Fuse (75011088015)

Product code

- 75011088015

Properties

- 15 A

Fuse (75011088025)

Product code

- 75011088025

Properties

- 25 A

Fuse (58011109130)

Product code

- 58011109130

Properties

- 30 A

Fuse (75011088005)

Product code

- 75011088005

Properties

- 5 A

Fuse (75011088075)

Product code

- 75011088075

Properties

- 7.5 A

Daytime running light/position light (LED)

Product code

- LED

E Cleaning agents

Shine spray with beading effect

Recommended supplier

MOTOREX®

- **MOTO SHINE MS1**

Chain cleaner

Recommended supplier

MOTOREX®

- **CHAIN CLEAN**

Preserving materials

Recommended supplier

MOTOREX®

- **MOTO PROTECT**

Cleaning agents for plastics, glass, lacquers, metals, windshields and visors

Recommended supplier

MOTOREX®

- **QUICK CLEANER**

Environmentally neutral universal cleaning agent

Recommended supplier

MOTOREX®

- **MOTO CLEAN UNIVERSAL**

F Icons

F.1 Symbol colors

F.1.1 Red symbols

Red symbols indicate a fault status that requires immediate intervention.

	The oil pressure warning light lights up red

F.1.2 Yellow and orange symbols

Yellow and orange symbols indicate a malfunction status that requires prompt intervention. Active driving aids are also represented by yellow or orange symbols.

	Ice warning is active on the display.
	ABS warning light lights up yellow
	The ABS rear warning light lights up yellow
	The malfunction indicator light lights up yellow
	TC indicator lamp lights up/flashes yellow
	The cruise control system indicator lamp (optional) lights up yellow
	General warning light lights up yellow

F.1.3 Green and blue symbols

Green and blue symbols convey information.

	The turn signal indicator light flashes green with a steady blinking interval
	The high beam indicator lamp lights up blue
	The cruise control system indicator lamp (optional) lights up green
	The idle indicator lamp lights up green

+

+RES-/-SET button
operation 22

1

12 V battery
charging 122
installation 121
removing 120

A

ABS 101

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3240299en

21/01/2026



KTM Sportmotorcycle GmbH
5230 Mattighofen/Austria
https://www.ktm.com