# OWNER'S MANUAL 2025

READY TO RACE

## 125 SMC R

ITEM NO.: 3240173EN



# 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. 15) | Stamp of the contractual partner |
| Engine number (p. 15) | |

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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## 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<br>(68.0 °F) |
| Ambient air pressure | 1,013 mbar<br>(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 Usage definition

KTM sport motorcycles are designed and constructed to meet the normal demands of regular road operation but not for use on race courses or offroad.

**Note**

The motorcycle is only authorized for operation on public highways in the homologated version.

## 2.9 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.

## 3.1 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.

A list of services that have already been carried out on the vehicle can be found in the Service area on the international KTM website:

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

Authorized contractual partners will be happy to answer any questions regarding the services performed.

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

## 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

## 3.7 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).

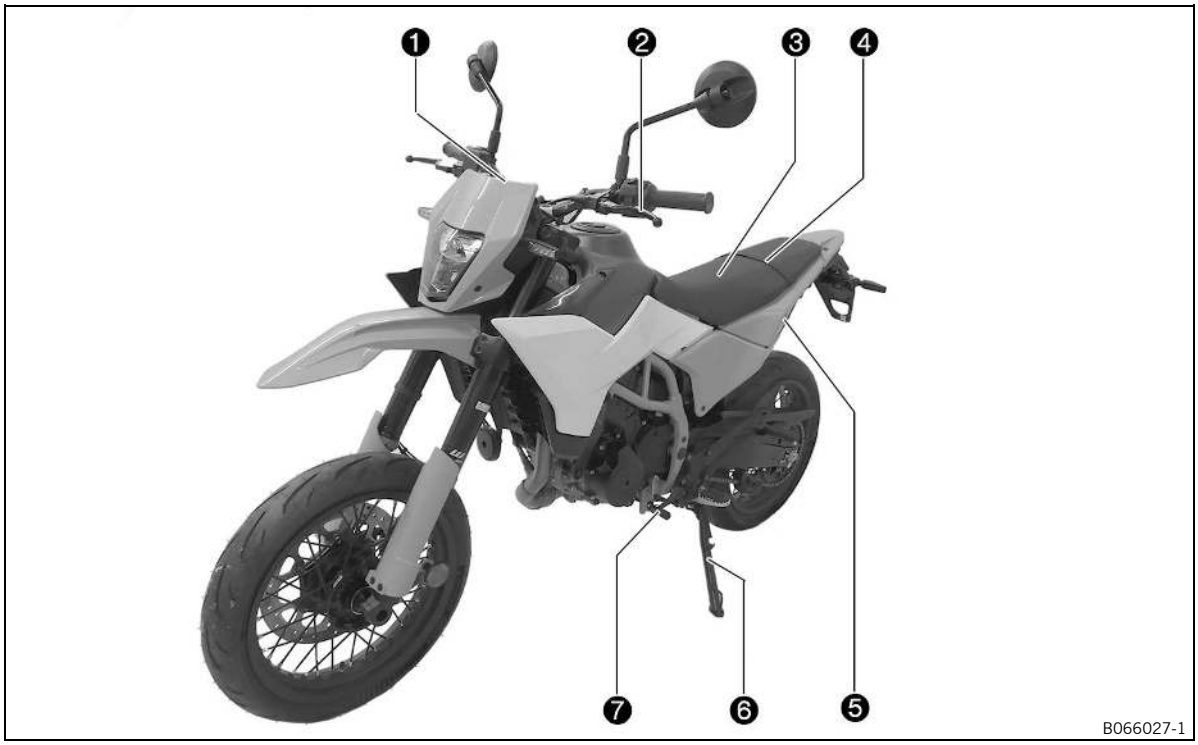
Each service at your authorized contractual partner extends your free Roadside Assistance until the next service or for a maximum of 12 months.

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:

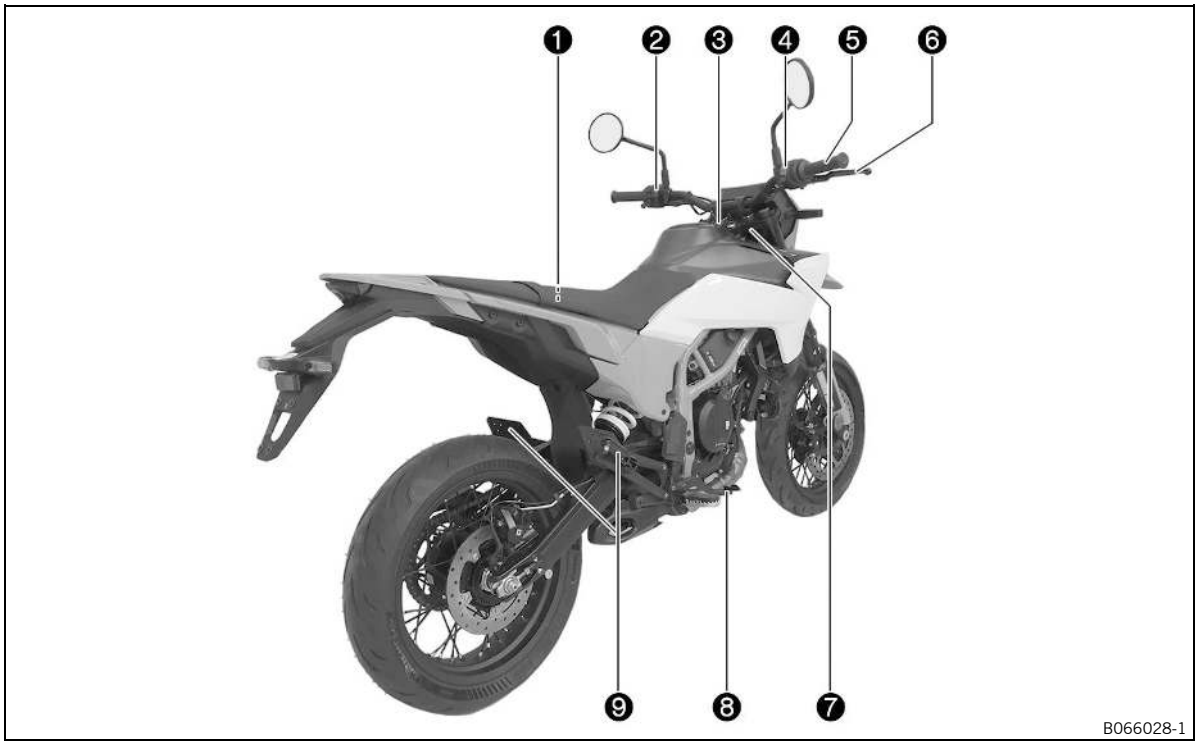
International KTM Website: https://www.ktm.com

## 4.1 View of vehicle, front left (example)



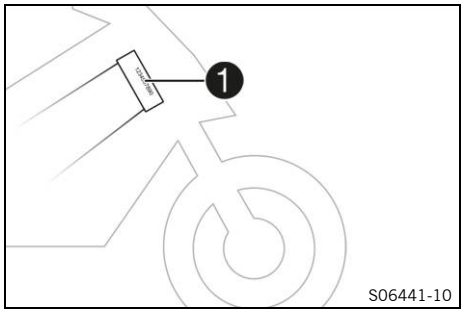

1. Dashboard
2. Clutch lever (p. 16)
3. Seat
4. Passenger strap (p. 22)
5. Seat lock (p. 21)
6. Side stand (p. 23)
7. Gear shift lever (p. 22)

## 4.2 View of vehicle, rear right (example)



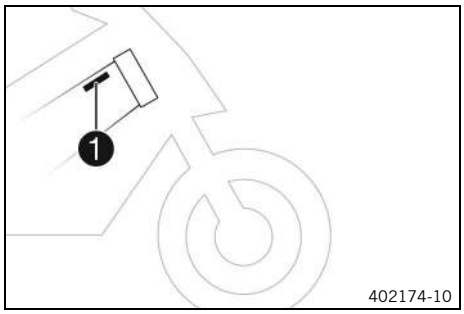

1 On-board tool kit (p. 21)
2 Light switch (p. 17)
2 Menu buttons (p. 17)
2 Turn signal switch (p. 17)
2 Horn button (p. 18)
3 Ignition and steering lock (p. 19)
4 Kill switch (p. 18)
4 Electric starter (p. 18)
5 Throttle grip (p. 16)
6 Handbrake lever (p. 16)
7 Vehicle identification number (p. 15)
7 Type approval label (p. 15)
8 Brake pedal (p. 23)
9 Passenger footpegs (p. 22)

## 5.1 Vehicle identification number



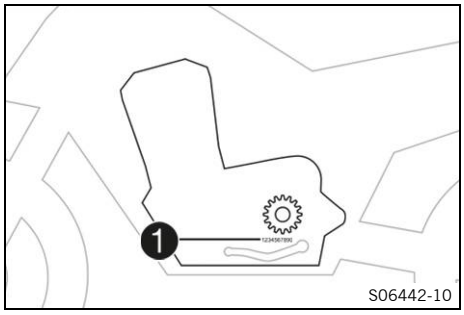

The vehicle identification number ❶ is stamped on the right-hand side of the steering head.

## 5.2 Type approval label



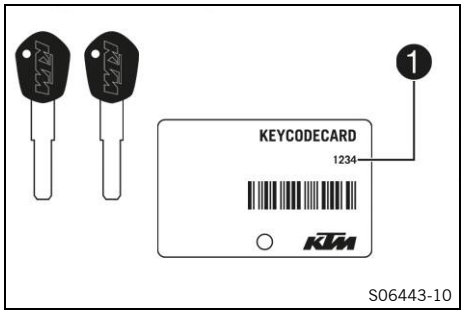

The type label ❶ is on the right of the frame behind the steering head.

## 5.3 Engine number




The engine number ❶ is located on the left side of the engine under the engine sprocket.

## 5.4 Key number

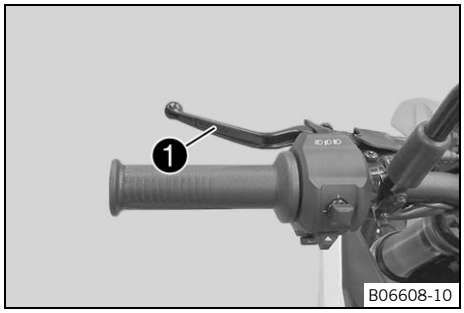



Key number ❶ for the ignition and steering lock is indicated on the **KEYCODECARD**.

**Note**

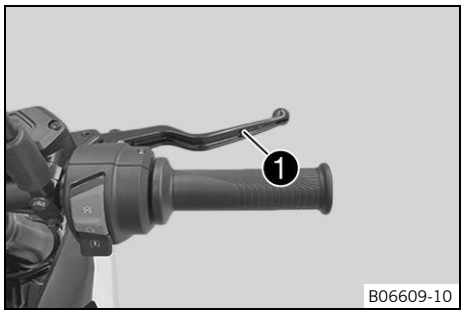
The key number is needed to order a replacement key. Keep **KEYCODECARD** in a safe place. If at least one ignition key is still available, a spare key can be produced. If an ignition key is no longer present, the entire lock system must be replaced.

## 6.1 Clutch lever



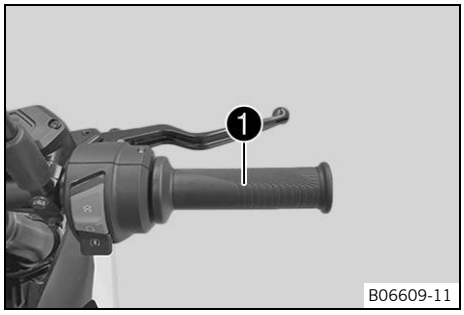

Clutch lever ❶ is fitted on the left side of the handlebar.

## 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



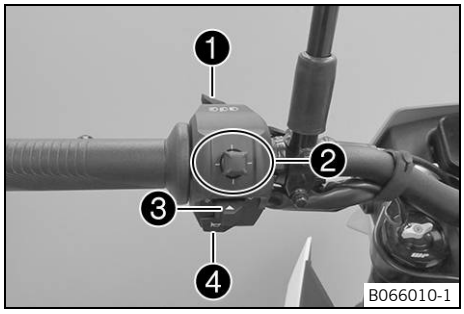

The throttle twist grip ❶ is fitted on the right side of the handlebar.

## 6.4 Switches on the left side of the handlebar

### 6.4.1 Combination switch

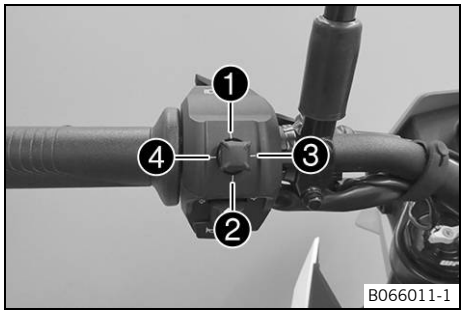
The combination switch is fitted on the left side of the handlebar.

**Overview of the left combination switch**




❶ Light switch 📖 (p. 17)
❷ Menu buttons 📖 (p. 17)
❸ Turn signal switch 📖 (p. 17)
❹ Horn button 📖 (p. 18)

### 6.4.2 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.

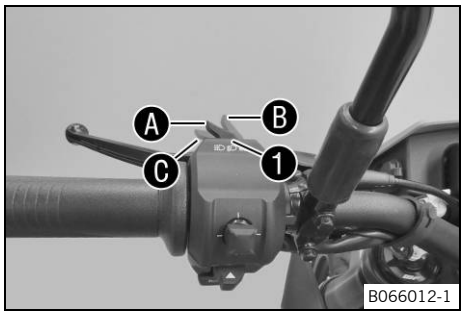
Button ❶ is the **UP** button.

Button ❷ is the **DOWN** button.

Button ❸ is the **RIGHT** button.

Button ❹ is the **LEFT** button.

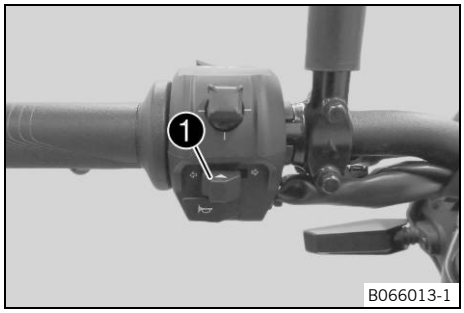
### 6.4.3 Light switch




Light switch ❶ is fitted on the left side of the handlebar.

| 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. |

### 6.4.4 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.

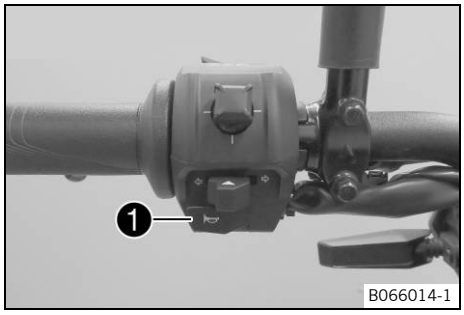
The **ATIR** function uses a time and distance counter.

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.

### 6.4.5 Horn button

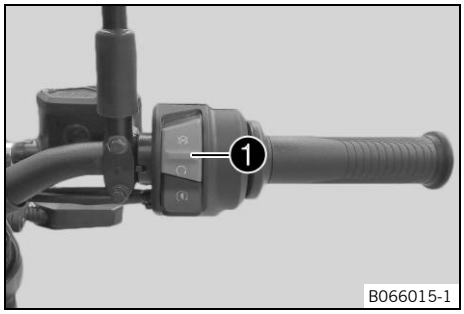



Horn button ❶ is fitted on the left side of the handlebar.

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

## 6.5 Switches on the right side of the handlebar

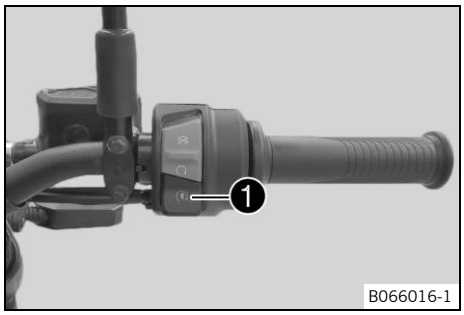
### 6.5.1 Kill switch




The emergency OFF switch ❶ is fitted on the right side of the handlebar.

| Condition | | Meaning |
|---|---|---|
| | Emergency OFF switch off | In this position, the ignition circuit is interrupted, a running engine stops, and cannot be started. |
| | Emergency OFF switch on | This position is required for operation; the ignition circuit is closed. |

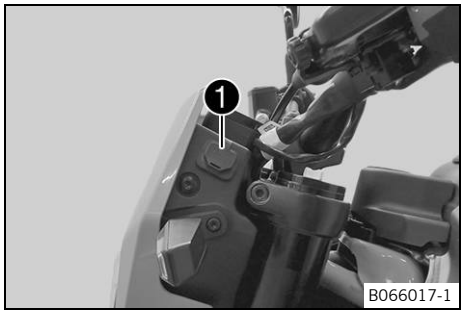
### 6.5.2 Electric starter




Electric starter ❶ is fitted on the right side of the handlebar.

| Condition | | Meaning |
|---|---|---|
| | Electric starter in the basic position | No function |
| | Electric starter pressed | In this position, the starter motor is actuated. |

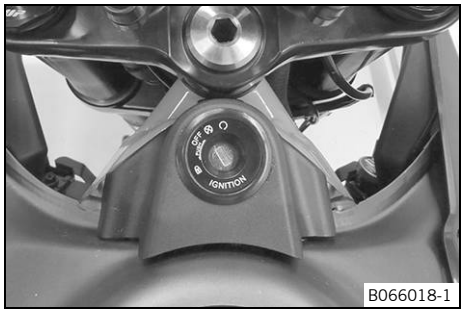
## 6.6 USB–C socket




The USB–C socket ❶ for the power supply to external devices is fitted on the left-hand side of the mask support.
The USB–C socket  is switched on with the ignition.

| USB–C socket | |
|---|---|
| Voltage | 5 V |
| Maximum current consumption | 2.1 A |

## 6.7 Ignition and steering lock




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

| Condition | | Meaning |
|---|---|---|
| | Ignition off **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 **ON** | In this position, the ignition circuit is closed, and the engine can be started. |
| | Lock steering **LOCK** | In this position, the ignition circuit is interrupted and the steering locked. The ignition key can be removed. |

## 6.8 Locking the steering

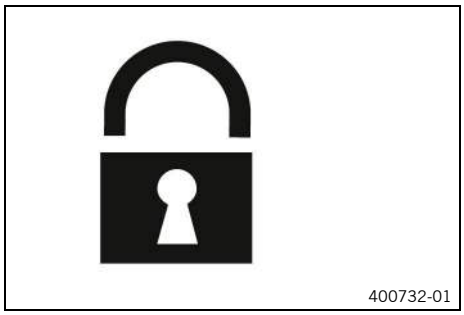
**NOTE**

**Material damage** The vehicle may be damaged if parked incorrectly.

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

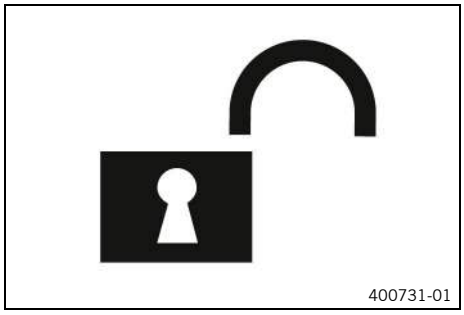
The components for parking the vehicle are designed only for the weight of the vehicle.

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




– Park the vehicle.
– Turn the handlebar all the way to the left.
– Insert the ignition key into the ignition and steering lock, press in, and turn to the left. Remove the ignition key.
  ✓ Steering is no longer possible.

## 6.9 Unlocking the steering




– Insert the ignition key into the ignition and steering lock, press in, and turn to the right. Remove the ignition key.
  ✓ The handlebar can now be moved again.

## 6.10 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**

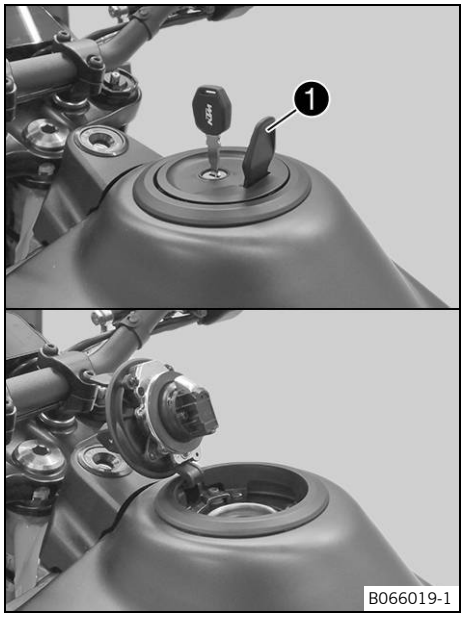
**Danger of poisoning** Fuel is harmful to health.

– 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.

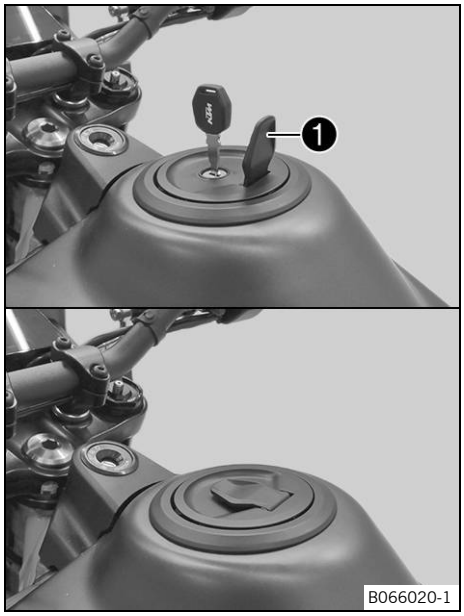
**NOTE**

**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.

## 6.11 Closing the fuel tank cap



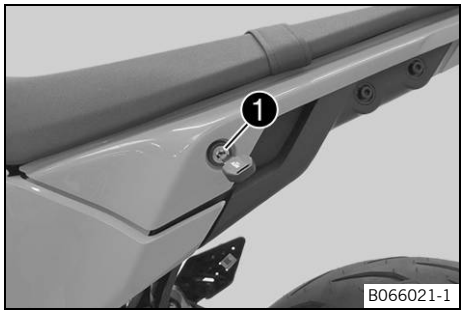

**WARNING**

**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.

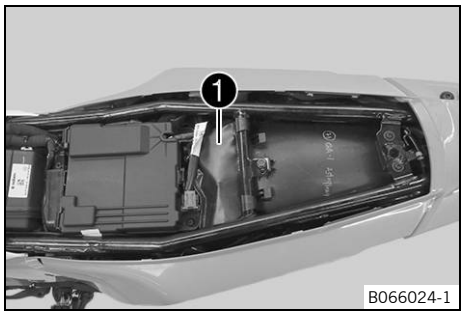
- Insert the ignition key into the lock.
- Push down the fuel tank cap and turn the ignition key counter-clockwise by 90° until the fuel tank cap lock engages.
- Remove ignition key and close cover 1.

## 6.12 Seat lock



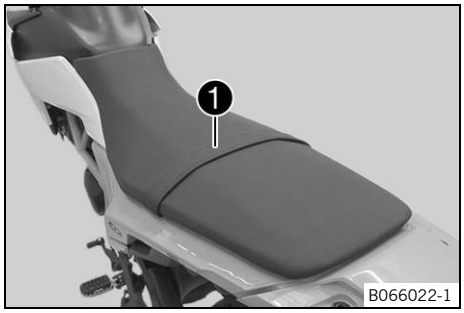

The seat lock 1 is located to the left of the seat.
The seat lock can be unlocked using the ignition key.

## 6.13 On-board tool kit



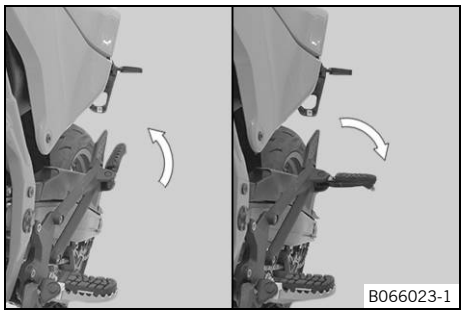

The tool set 1 is located under the seat.

## 6.14 Passenger strap




Supporting strap ❶ is used for maneuvering the motorcycle.
If you carry a passenger, the passenger can hold onto the grab handles during the trip.

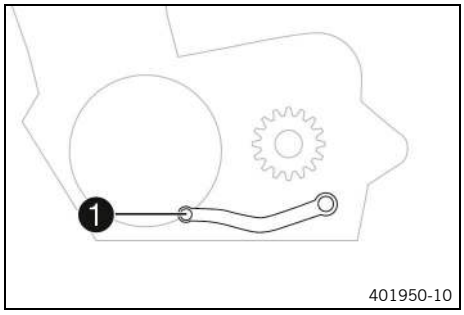
## 6.15 Passenger footpegs



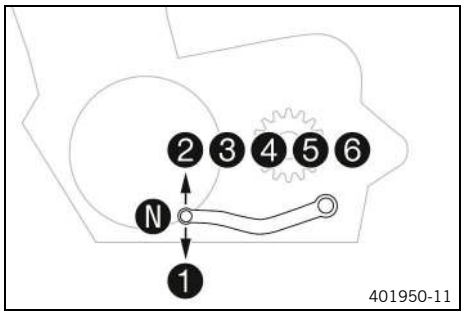

The passenger foot pegs can be folded up and down.

| Condition | Meaning |
|---|---|
| Passenger foot pegs folded up | For operation without a passenger. |
| Passenger foot pegs folded down | For operation with a passenger. |

## 6.16 Gear shift lever

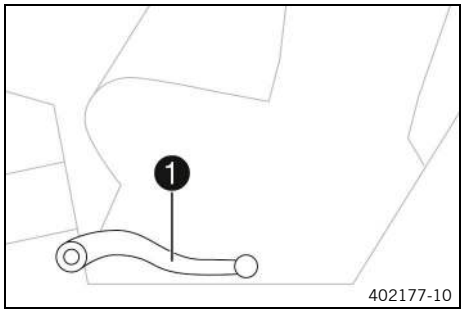



Gear shift lever ❶ is mounted on the left of the engine.



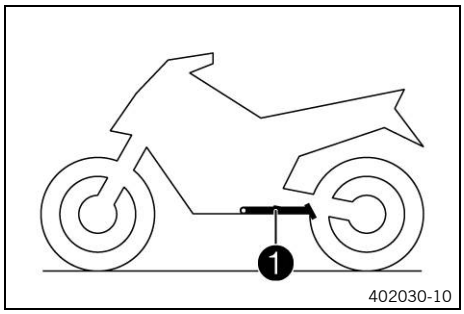

The gear positions can be seen in the figure.
The neutral or idle position is between the first and second gears.

## 6.17 Brake pedal




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

## 6.18 Side stand

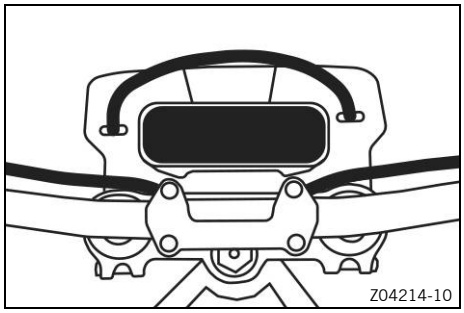



The side stand ❶ is located on the left of the vehicle.
The side stand is used for parking the motorcycle.

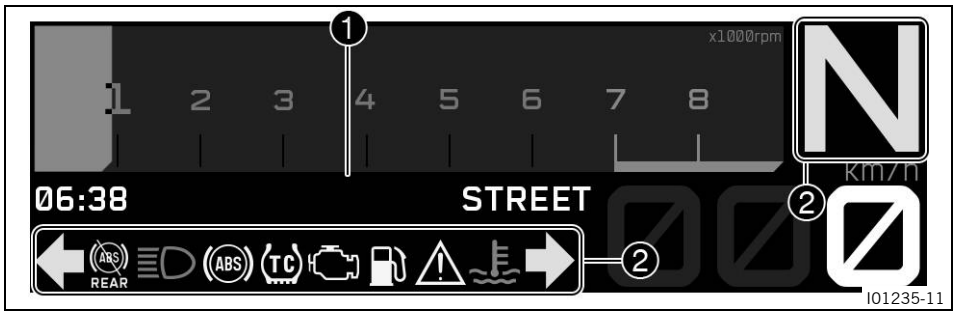
| Condition | Meaning |
|---|---|
| Side stand folded out | The vehicle can be supported on the side stand. The safety starting system is active. |
| Side stand folded in | This position is mandatory when riding the motorcycle. The safety starting system is inactive. |

**Note**
The side stand must be folded up during use.
The side stand is coupled with the safety starting system; follow the riding instructions.

## 7.1 dashboard




The combination instrument is attached in front of the handlebar.




The combination instrument is divided into two function areas.

Display ❶
❷ indicator lamps

## 7.2 activation and testing

### 7.2.1 Activating the combination instrument



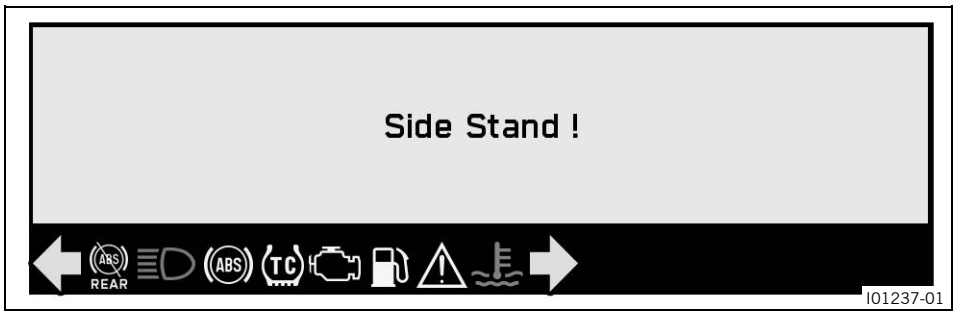

The dashboard is switched on with the ignition.

### 7.2.2 Display 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.

## 7.3 warnings



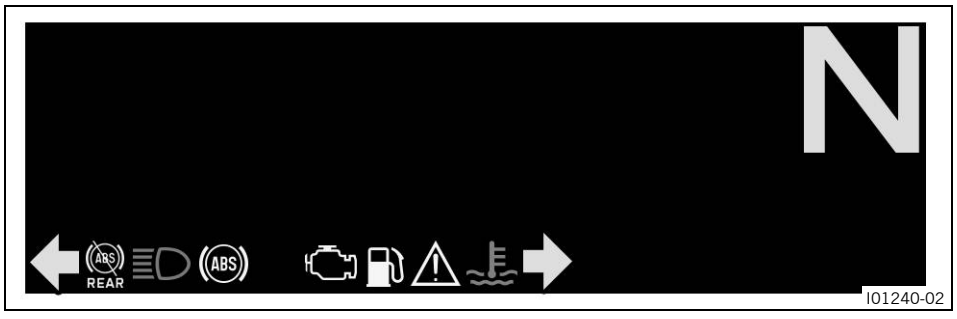

Warnings appear in the middle of the display; these are marked yellow or red depending on their relevance.
Yellow warnings indicate a malfunction or information which requires prompt intervention or an adjustment to the riding style.




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.

## 7.4 indicator lamps

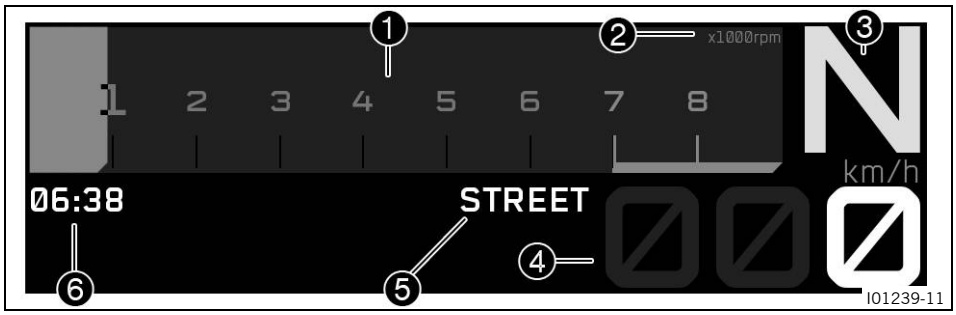



The indicator lamps offer additional information about the operating state of the motorcycle.
When the ignition is switched on, all indicator lamps light up briefly.

**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 ABS warning lamp lights up until a speed of approx. 6 km/h (approx. 4 mph) or more has been reached.

| Condition | | Meaning |
|---|---|---|
| | The turn signal indicator light flashes green with a steady blinking interval | The turn signal is switched on. |
| | The **OBD** failure 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. |
| | The ABS warning lamp 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. |
| | 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. |
| | The fuel level warning lamp lights up yellow | The fuel level has reached the reserve mark. |
| | Coolant temperature indicator light lights up blue | The engine is cold. |
| | Coolant temperature indicator light lights up red | Engine is hot. |

## 7.5 Standard Display




❶ speed (p. 27)

❶ shift light (p. 28)
The shift light is integrated in the rpm gauge display.

❷ Unit for the engine speed display

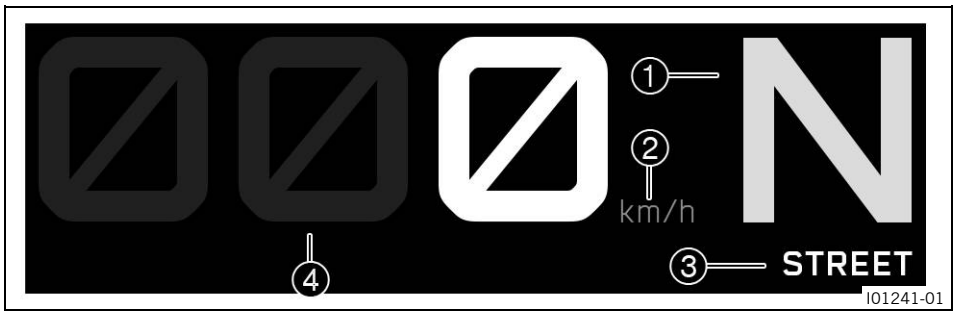
❸ Gear display

❹ Speed (p. 27)

❺ **Ride–Mode** display (p. 28)

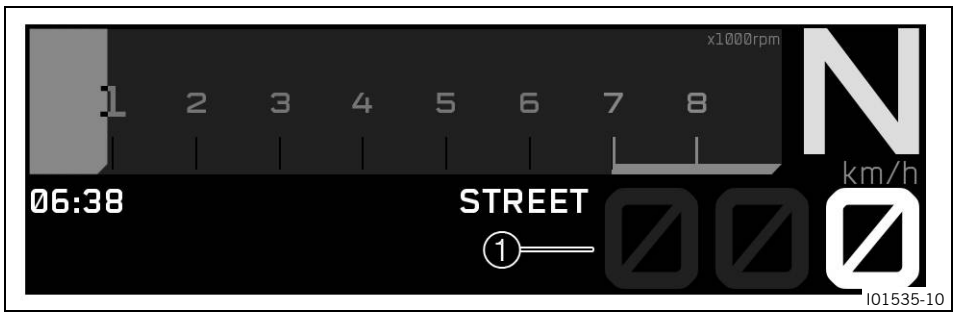
❻ time (p. 29)

## 7.6 Standard Reduced




❶ Gear display
❷ Unit of speed
❸ **Ride–Mode** display (p. 28)
❹ Speed (p. 27)

## 7.7 Speed



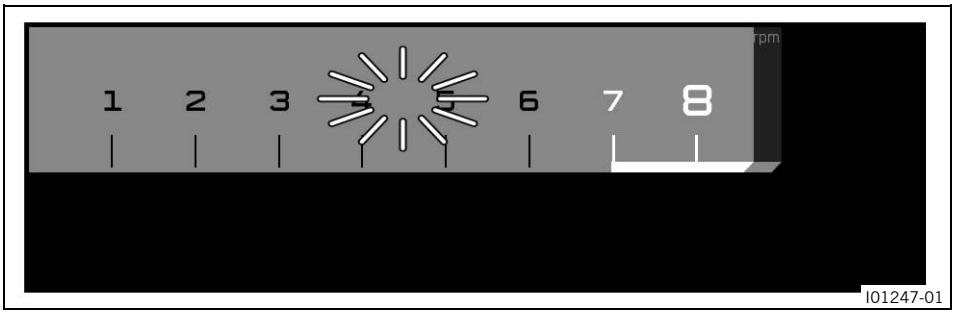

The speed is shown in area ❶ of the display.
Speed ❶ is shown in kilometers per hour **km/h** or in miles per hour **mph**.
The unit of speed can be configured in the **Distance** submenu.

## 7.8 speed




The engine speed is displayed in revolutions per minute.

## 7.9 shift light




The shift light is integrated in the rpm gauge display.

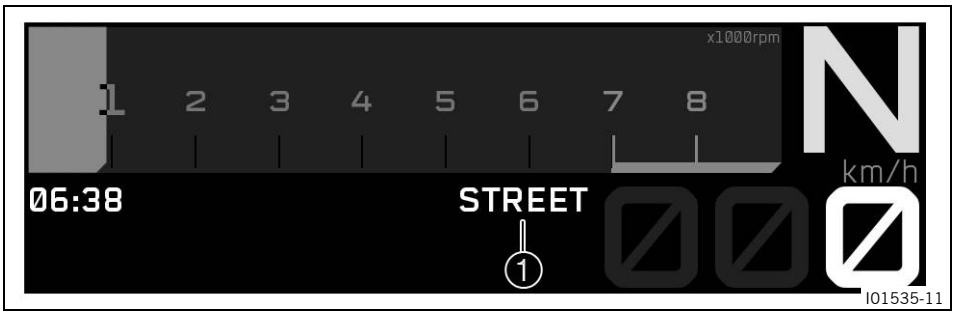
In the **Shift Light** submenu, the engine speed for the shift warning light can be set. During the run-in time (up to 1000 km / 621 miles), the shift light is always active. The shift warning light can only be deactivated, and the values for **RPM1** and **RPM2** can only be adjusted after this. In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

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

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

| | |
|---|---|
| Coolant temperature | > 35 °C<br>(> 95.0 °F) |
| **ODO** | > 1,000 km<br>(> 621.4 mi) |
| **RPM1** shift warning light | flashes |
| **RPM2** shift warning light | flashes and changes color |

## 7.10 Ride–Mode display




The **Ride Mode** setting is shown in area ❶ of the display.
The ride mode is displayed in submenu **Ride Mode**.

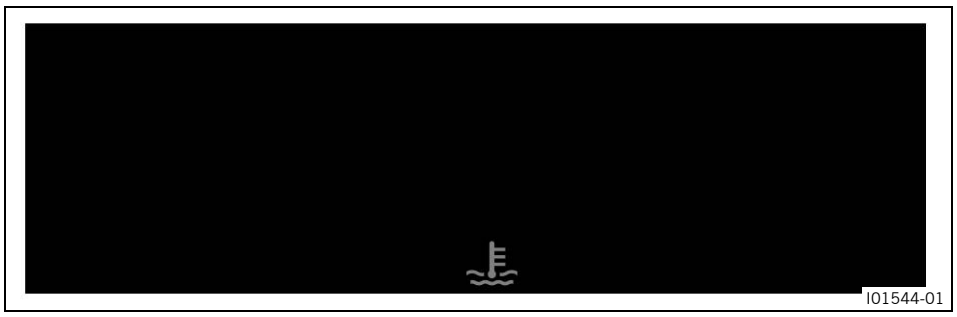
## 7.11 time




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.

## 7.12 coolant temperature display




The coolant temperature is displayed by a symbol . The color of symbol changes depending on the temperature. Symbol disappears when the engine has reached operating temperature.

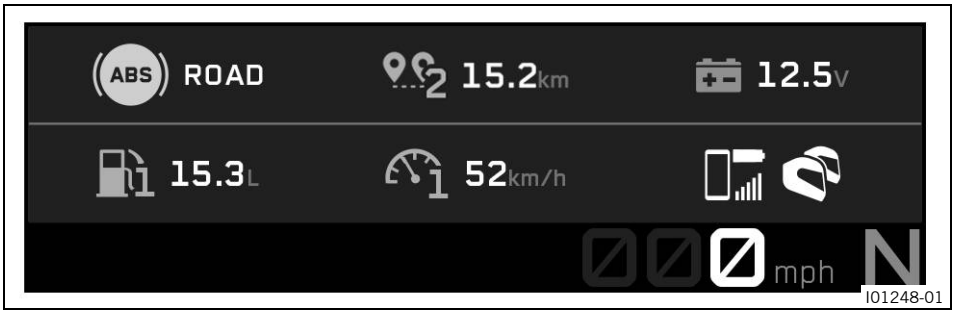
**NOTE**
**Engine failure** Overheating damages the engine.
- If the coolant temperature warning is displayed, stop immediately and take care not to endanger yourself or other traffic participants in the process.
- Allow the engine and cooling system to cool down.
- Check and, if necessary, correct the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

**Note**
If the coolant temperature gauge lights up red, the display also starts to flash and a warning is displayed.
If the cooling system overheats, the maximum engine speed is limited.

| Condition | | Meaning |
|---|---|---|
| | Coolant temperature gauge lights up blue. | The engine is cold. |
| | Coolant temperature gauge does not light up. | The engine is at operating temperature. |

| Condition | | Meaning |
|---|---|---|
|  | Coolant temperature gauge lights up red. | Engine is hot. |

## 7.13 Favorites display




Up to six items of information are shown on the **Favorites** indicator.
Press the **UP** or **DOWN** button to display the **Favorites**.
The **Favorites** display can be freely configured in the **Favorites** submenu.

## 7.14 Navigation display (optional)




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 menu **Navigation** (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).

## 7.15 Call display




**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 **RIGHT** button to accept an incoming call.
Press the **LEFT** 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.

## 7.16 Remote Control Mode (optional)




The **Remote Control Mode** indicator (optional) appears when **Remote Control Mode** is activated.
Pressing the **LEFT** button for approx. 3 seconds activates the **Remote Control Mode** (optional).
Pressing the **LEFT** button for approx. 3 seconds exits the **Remote Control Mode** (optional).
If **Remote Control Mode** (optional) is activated, you can navigate using the combination switch in the app on a cell phone.

**Note**

In **Remote Control Mode** (optional), you can only navigate within the app.

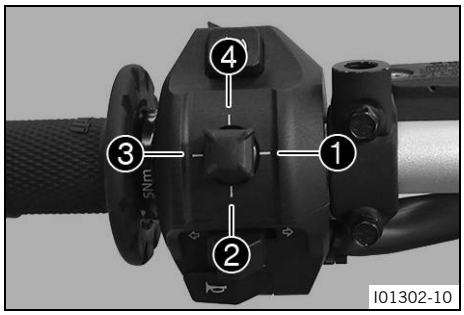
If **Remote Control Mode** (optional) is active, you cannot navigate in the combination instrument.

**Remote Control Mode** (optional) cannot be activated when a menu is open.

**Conditions for use:**

- The dashboard must be connected to a suitable cell phone.
- The **KTMconnect** app (optional) must be installed, connected and opened on a suitable cell phone (Android devices from version 7.0, iOS devices from version 14).

## 7.17 Menu



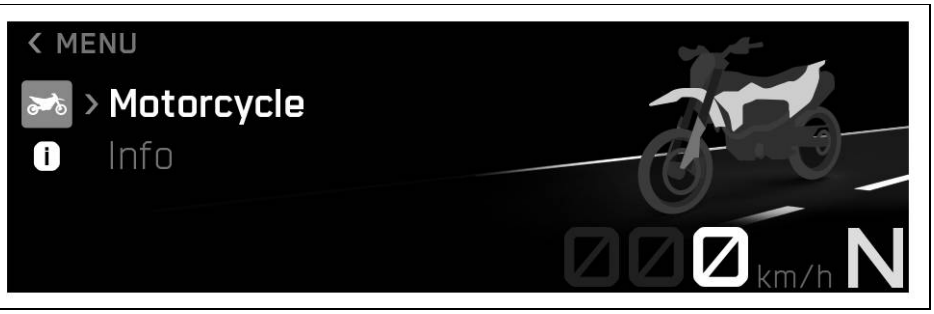

**Note**

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

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

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

### 7.17.1 Motorcycle




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

In **Motorcycle**, motorcycle-relevant settings can be adjusted, such as the ABS mode.

### 7.17.1.1 Ride Mode




– Press the **RIGHT** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Motorcycle** is marked.
– Pressing the **RIGHT** 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 **RIGHT** button to open the submenu.
– Activate the menu item using the **UP** or **DOWN** button.
– The **Ride Mode** is displayed.
  ✓ **Street** - Homologated performance with balanced response; the motorcycle traction control allows normal slip on the rear wheel.

### 7.17.1.2 Adjusting Ride Mode




– Press the **RIGHT** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Motorcycle** is marked.
– Pressing the **RIGHT** 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 **Configure Ride Mode** is marked.
– Press the **RIGHT** button to open the submenu.

In **Configure Ride Mode**, features of the **Ride Mode** such as ABS or **Display Mode** can be adjusted.

### 7.17.1.3 ABS




– Press the **RIGHT** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Motorcycle** is marked.
– Pressing the **RIGHT** button opens the menu.
– Press the **UP** or **DOWN** button until **Configure Ride Mode** is marked.
– Press the **RIGHT** button to open the submenu.
– Press the **UP** or **DOWN** button until **ABS** is highlighted.
– Press the **RIGHT** 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 **RIGHT** button to select the desired ABS mode.

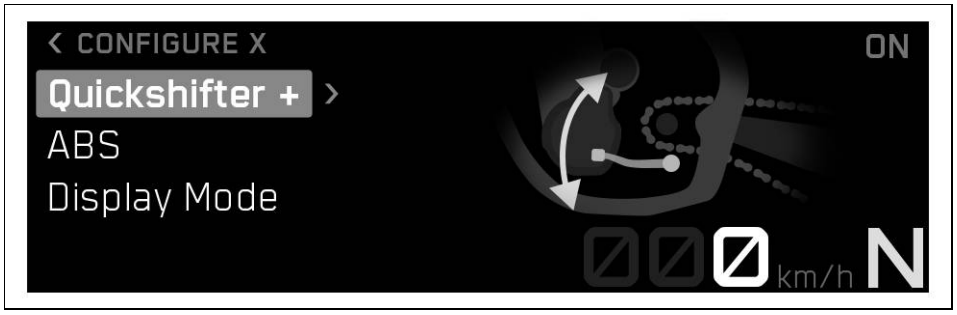
Do not open the throttle during the selection.

**Note**
The ABS mode can be switched during the journey.

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

**Note**
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.

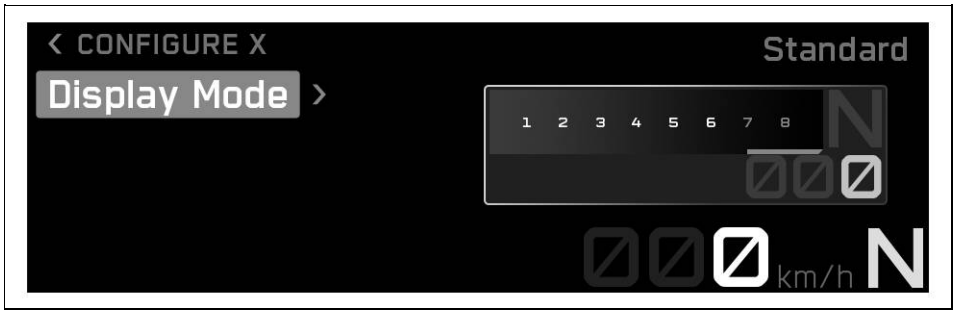
### 7.17.1.4 QUICKSHIFTER+ (optional)




Condition: Model with QUICKSHIFTER+ (optional)

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

### 7.17.1.5 Display Mode




- Press the **RIGHT** button when the menu is closed.
- Press the **UP** or **DOWN** button until **Motorcycle** is marked.
- Pressing the **RIGHT** button opens the menu.
- Press the **UP** or **DOWN** button until **Configure Ride Mode** is marked.
- Press the **RIGHT** button to open the submenu.
- Press the **UP** or **DOWN** button until **Display Mode** is highlighted.
- Press the **RIGHT** button to open the submenu.
- Activate the menu item using the **UP** or **DOWN** button.
- You can switch between the normal and minimum speedometer view by pressing the **RIGHT** button.

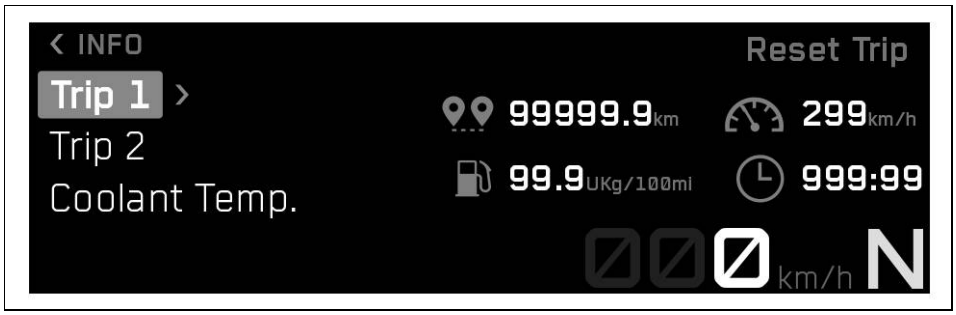
### 7.17.2 Bike info




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

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

#### 7.17.2.1 Trip 1




– Press the **RIGHT** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Bike Info** is highlighted.
– Pressing the **RIGHT** button opens the menu.
– Press the **UP** or **DOWN** button until **Trip 1** is highlighted.
– Press the **RIGHT** 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**.

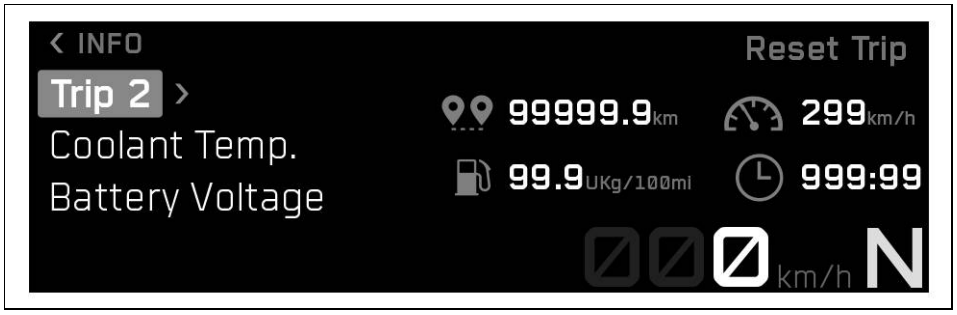
**Trip Time** shows the riding time on the basis of **Trip** and runs as soon as a speed signal is received.

**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.

### 7.17.2.2 Trip 2




– Press the **RIGHT** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Bike Info** is highlighted.
– Pressing the **RIGHT** button opens the menu.
– Press the **UP** or **DOWN** button until **Trip 2** is highlighted.
– Press the **RIGHT** 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.

### 7.17.2.3 Low Fuel Trip Meter




– Press the **RIGHT** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Bike Info** is highlighted.
– Pressing the **RIGHT** button opens the menu.
– Press the **UP** or **DOWN** button until **Low Fuel Trip Meter** is highlighted.

When the fuel level reaches the reserve mark, a warning appears on the display and the fuel level warning light lights up.

**Note**

This indicator shows the distance traveled since the beginning of the fuel reserve.

When the indicator is closed, the fuel level warning lamp continues to be lit up.

The display is automatically reset after refueling.

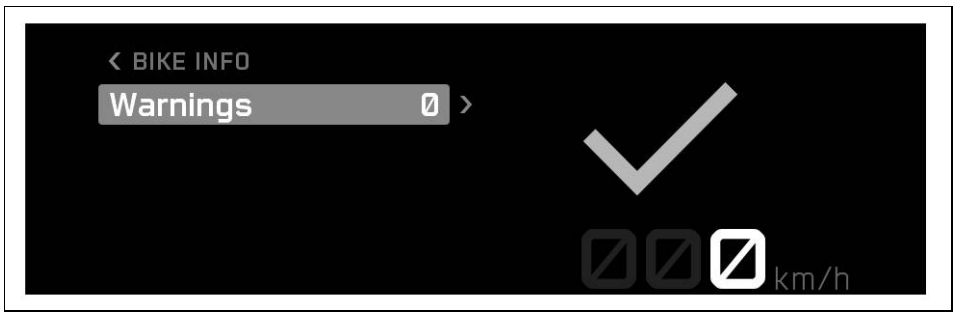
### 7.17.2.4 info




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

**Water** displays the coolant temperature.
**Battery** displays the battery voltage.
**Odometer** displays the total mileage.
**Date & Time** displays the time and the date.
**Service** displays when the next service is due.
**Warnings** displays warnings that have occurred until they are no longer active.

### 7.17.2.5 Warning




Condition: Message or warning is present

– Press the **RIGHT** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Bike Info** is highlighted.
– Pressing the **RIGHT** button opens the menu.
– Press the **UP** or **DOWN** button until **Warning** is highlighted.
– Press the **RIGHT** 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.

### 7.17.3 navigation




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

#### 7.17.3.1 Volume (optional)



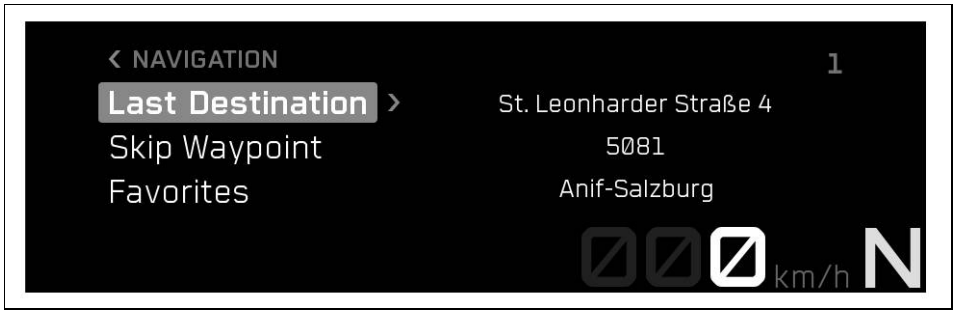

Condition: The **KTMconnect** app (optional) is installed and connected on a suitable cell phone (Android devices from version 7.0, iOS devices from version 14), The dashboard is connected to a suitable cell phone, For voice navigation: The dashboard is connected to a suitable communication system and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

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

### 7.17.3.2 Last Destination (optional)




Condition: Function **Bluetooth®** activated, The **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 **RIGHT** button when the menu is closed.
- Press the **UP** or **DOWN** button until **Navigation** is marked.
- Pressing the **RIGHT** button opens the menu.
- Press the **UP** or **DOWN** button until **Last Destination** is marked.
- Press the **RIGHT** button to open the submenu.
- Press the **UP** or **DOWN** button to select an address.
- Press the **RIGHT** button to confirm the selection and start navigation.

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

### 7.17.3.3 Skip Waypoint (optional)




Condition: Function **Bluetooth®** activated, The **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 **RIGHT** button when the menu is closed.
- Press the **UP** or **DOWN** button until **Navigation** is marked.
- Pressing the **RIGHT** button opens the menu.
- Press the **UP** or **DOWN** button until **Skip Waypoint** is marked.
- Press the **RIGHT** button to select the waypoint.
- Press the **RIGHT** button again to confirm the selection and the waypoint is removed.

### 7.17.3.4 Favorites (optional)




Condition: Function **Bluetooth®** activated, The **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 **RIGHT** button when the menu is closed.
- Press the **UP** or **DOWN** button until **Navigation** is marked.
- Pressing the **RIGHT** button opens the menu.
- Press the **UP** or **DOWN** button until **Favorites** is marked.
- Press the **RIGHT** button to open the submenu.
- Press the **UP** or **DOWN** button to select an address.
- Press the **RIGHT** button to confirm the selection and start navigation.

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

### 7.17.3.5 Point of Interest (optional)




Condition: Function **Bluetooth®** activated, The **KTMconnect** app (optional) is installed and opened 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

- Press the **RIGHT** button when the menu is closed.
- Press the **UP** or **DOWN** button until **Navigation** is marked.
- Pressing the **RIGHT** button opens the menu.
- Press the **UP** or **DOWN** button until **Point of Interest** is marked.
- Press the **RIGHT** button to confirm the selection.
- Press the **UP** or **DOWN** button to select an address.
- Press the **RIGHT** button to confirm the selection and start navigation.

**Note**
In **Point of Interest**, selected categories can be displayed in the **KTMconnect** app (optional).

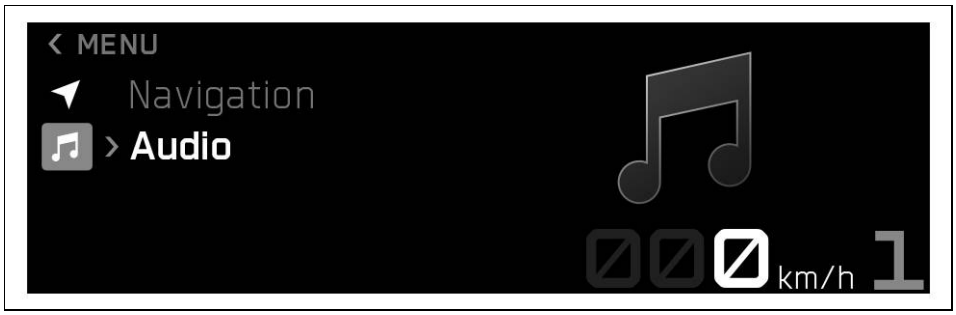
### 7.17.3.6 Stop Navigation (optional)




Condition: Function **Bluetooth®** activated, The **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 **RIGHT** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Navigation** is marked.
– Pressing the **RIGHT** button opens the menu.
– Press the **UP** or **DOWN** button until **Stop Navigation** is marked.
– Press the **RIGHT** button to confirm the selection and end navigation.

### 7.17.4 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

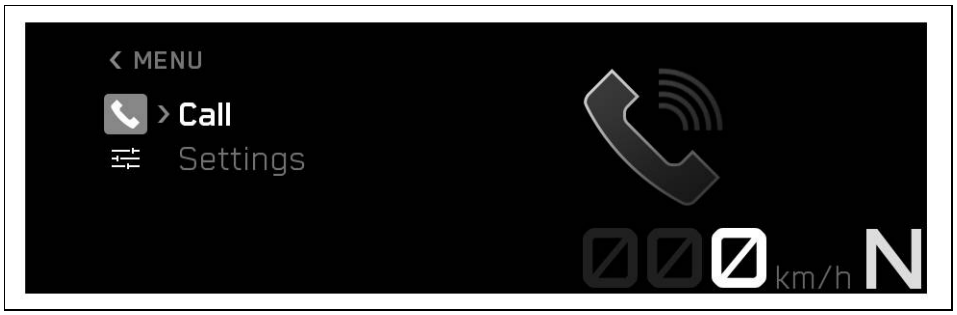
– Press the **RIGHT** button when the menu is closed.

**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 **RIGHT** 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.
– Press **RIGHT** 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.

### 7.17.5 call




Condition: Function **Bluetooth®** activated, Function **Bluetooth®** also activated on the device that is to be paired, Dashboard is connected to a suitable cell phone, Dashboard is connected to a suitable audio device

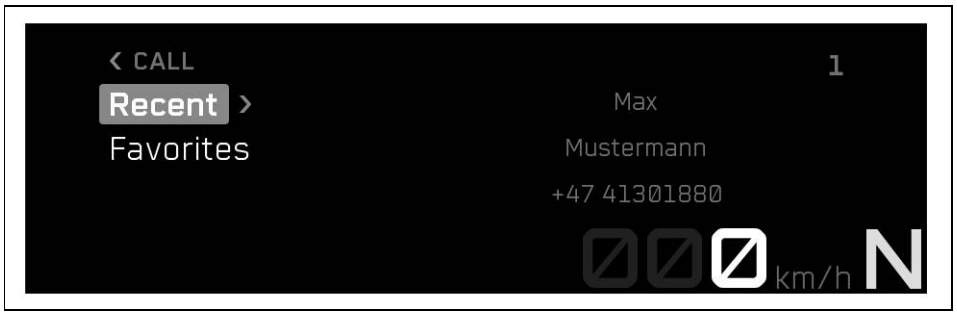
– Press the **RIGHT** button when the menu is closed.

**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 **Call** is highlighted.
– Pressing the **RIGHT** button opens the menu.

Press the **RIGHT** button to accept an incoming call.
Press the **LEFT** 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.

#### 7.17.5.1 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 **RIGHT** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Call** is highlighted.

**Note**

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

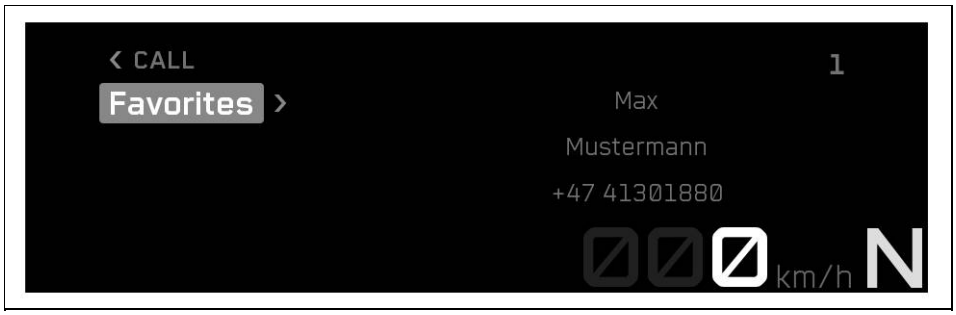
The call duration and contact are displayed. Depending on the cell phone settings, the contact is shown by name.

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

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

– Pressing the **RIGHT** button opens the menu.
– Press the **UP** or **DOWN** button until **Last Calls** is highlighted.
– Press the **RIGHT** 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 **RIGHT** button.

### 7.17.5.2 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 **RIGHT** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Call** is highlighted.

**Note**

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

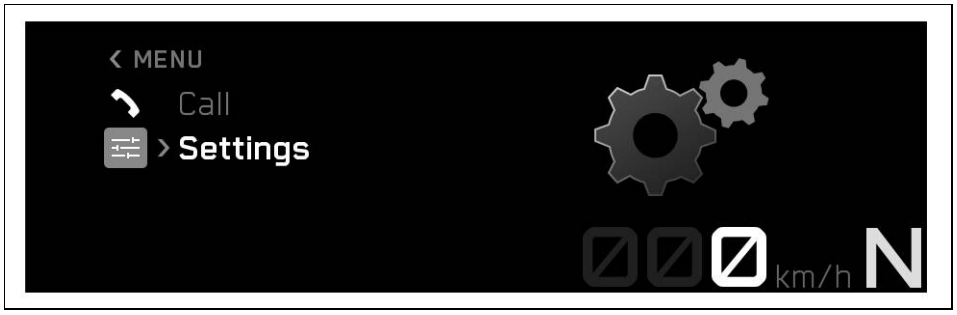
The call duration and contact are displayed. Depending on the cell phone settings, the contact is shown by name.

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

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

– Pressing the **RIGHT** button opens the menu.
– Press the **UP** or **DOWN** button until **Favorites** is highlighted.
– Press the **RIGHT** 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 **RIGHT** button.

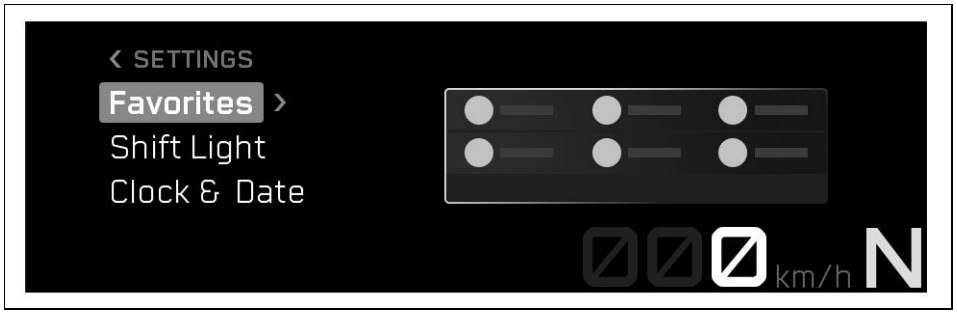
### 7.17.6 Settings




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

In menu **Settings**, favorites, **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.

#### 7.17.6.1 favorites




Condition: Motorcycle is stationary

– Press the **RIGHT** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Settings** is highlighted.
– Pressing the **RIGHT** button opens the menu.
– Press the **UP** or **DOWN** button until “Favorites” is highlighted.
– Press the **RIGHT** 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 **RIGHT** button.

Up to six information items can be selected in the **Favorites** submenu.

### 7.17.6.2 connectivity



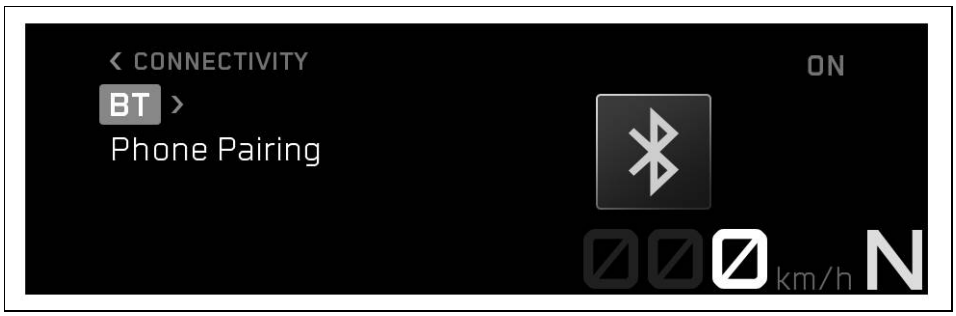

Condition: Motorcycle is stationary, Function **Bluetooth®** activated

– Press the **RIGHT** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Settings** is highlighted.
– Pressing the **RIGHT** button opens the menu.
– Press the **UP** or **DOWN** button until **Connectivity** is highlighted.
– Press the **RIGHT** button to open the submenu.

In the **Connectivity** submenu, a suitable cell phone or communication system can be paired with the dashboard via **Bluetooth®** and the audio and navigation functions 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.

### 7.17.6.3 Bluetooth




– Press the **RIGHT** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Settings** is highlighted.
– Press the **RIGHT** button to open the menu.
– Press the **UP** or **DOWN** button until **Connectivity** is highlighted.
– Press the **RIGHT** button to open the submenu.
– Press the **UP** or **DOWN** button until **Bluetooth** is highlighted.
– Press the **RIGHT** button to open the submenu.
– Activate the menu item using the **UP** or **DOWN** button.
– Press the **RIGHT** 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 combination instrument.

### 7.17.6.4 pairing a phone




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

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

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

**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 **RIGHT** 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 combination instrument via **Bluetooth®**.

**Note**
Not every cell phone and communication system is suitable for pairing with the combination instrument.
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.

### 7.17.6.5 headset pairing



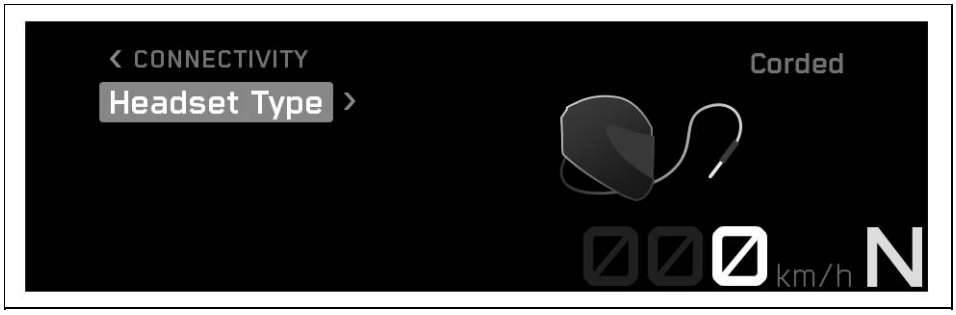

– Press the **RIGHT** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Settings** is highlighted.
– Press the **RIGHT** button to open the menu.
– Press the **UP** or **DOWN** button until **Connectivity** is highlighted.
– Press the **RIGHT** button to open the submenu.
– Press the **UP** or **DOWN** button until **Headset Pairing** is highlighted.
– Press the **RIGHT** button to open the submenu.
– Press the **UP** or **DOWN** button until **New Pairing** is marked.
– Press the **RIGHT** 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 headset is displayed in the **New Pairing** submenu. Press the **RIGHT** button to start the pairing.

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

### 7.17.6.6 Type of audio device




– Press the **RIGHT** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Settings** is highlighted.
– Press the **RIGHT** button to open the menu.
– Press the **UP** or **DOWN** button until **Connectivity** is highlighted.
– Press the **RIGHT** 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 **RIGHT** button to change the rider headset type.

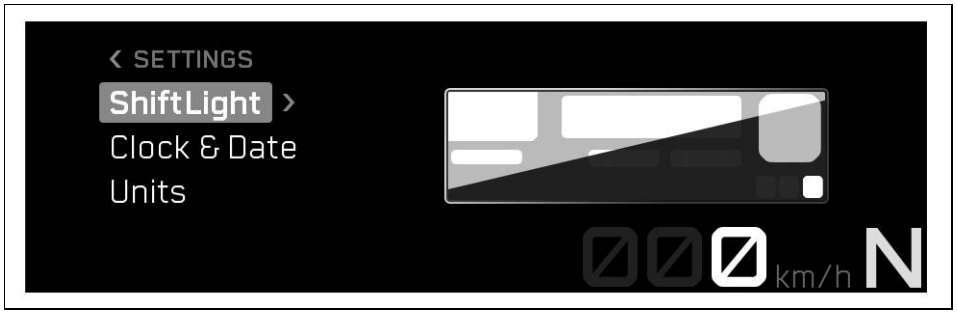
The connection type of the rider headset can be selected in the **Headset Type** submenu.

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**.

### 7.17.6.7 Shift Light

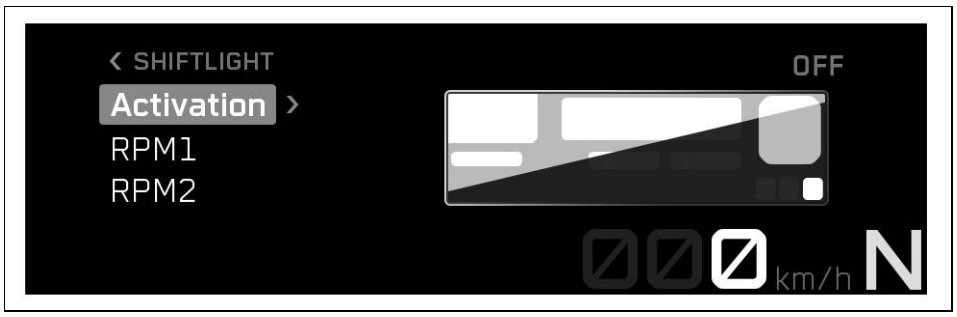



Condition: Motorcycle is stationary, **ODO** > 1000 km (621 mi)

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

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

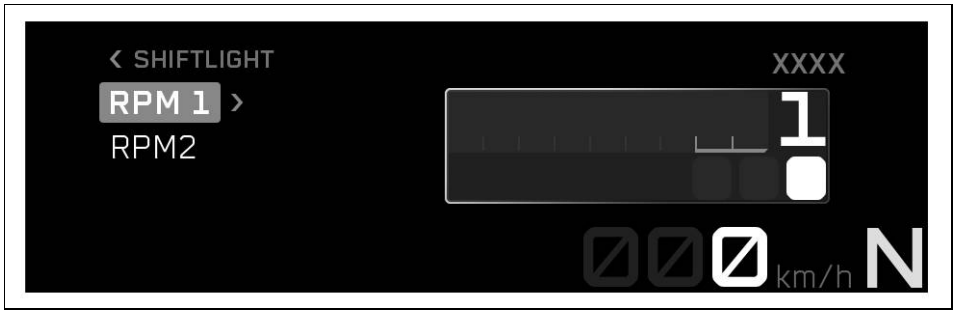
### 7.17.6.8 Shift Light Activation




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

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

### 7.17.6.9 RPM1




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

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

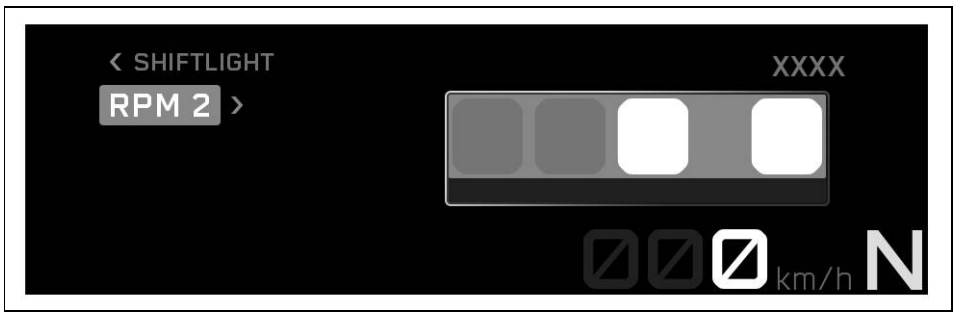
**RPM1** must not be larger than **RPM2**.

**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.

### 7.17.6.10 RPM2




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

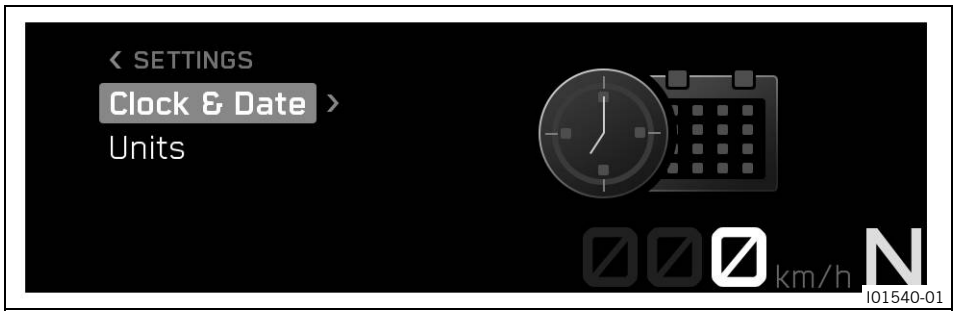
- Press the **RIGHT** button when the menu is closed.
- Press the **UP** or **DOWN** button until **Settings** is highlighted.
- Press **RIGHT** button to open the menu.
- Press the **UP** or **DOWN** button until **Shift Light** is highlighted.
- Press the **RIGHT** button to open the submenu.
- Press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

### 7.17.6.11 Setting the time and date

Condition: Motorcycle is stationary



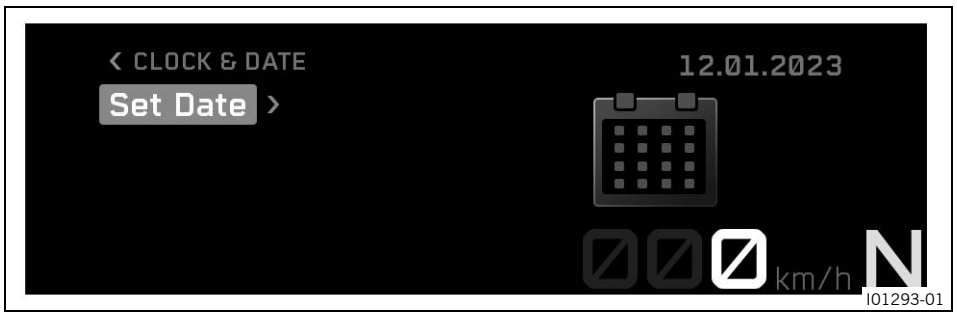

– Press the **RIGHT** button when the menu is closed.
– Press the **UP** or **DOWN** button until **Settings** appears.
– Pressing the **RIGHT** button opens the menu.
– Press the **UP** or **DOWN** button until **Clock & Date** is highlighted.
– Press the **RIGHT** button to open the submenu.

**Setting the clock**




– Press the **UP** or **DOWN** button until **Set Clock** is marked.
– Press the **RIGHT** button to open the submenu.
– Press the **UP** or **DOWN** button until the hour is set.
– Press the **RIGHT** button to select the hour.
– Press the **UP** or **DOWN** button until the minute is set.
– Press the **RIGHT** button to select the minute.
– Press the **LEFT** button to exit the menu.

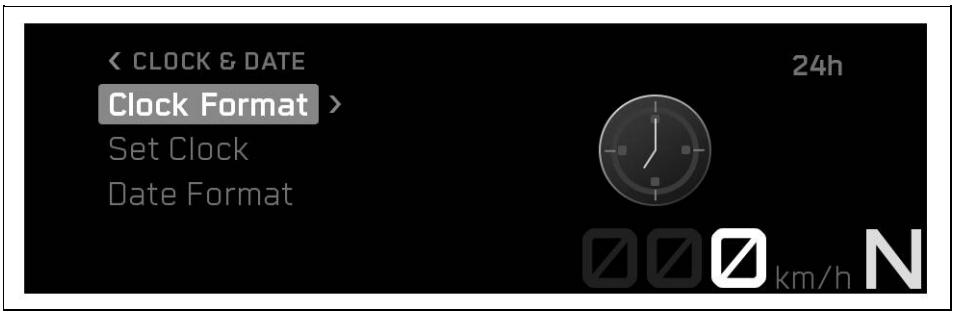
**Setting the date**




– Press the **UP** or **DOWN** button until **Set Date** is marked.
– Press the **RIGHT** button to open the submenu.

– Press the **UP** or **DOWN** button until the day is set.
– Press the **RIGHT** button to select the day.
– Press the **UP** or **DOWN** button until the month is set.
– Press the **RIGHT** button to select the month.
– Press the **UP** or **DOWN** button until the year is set.
– Press the **RIGHT** button to select the year.
– Press the **LEFT** button to exit the menu.

### 7.17.6.12 Clock format

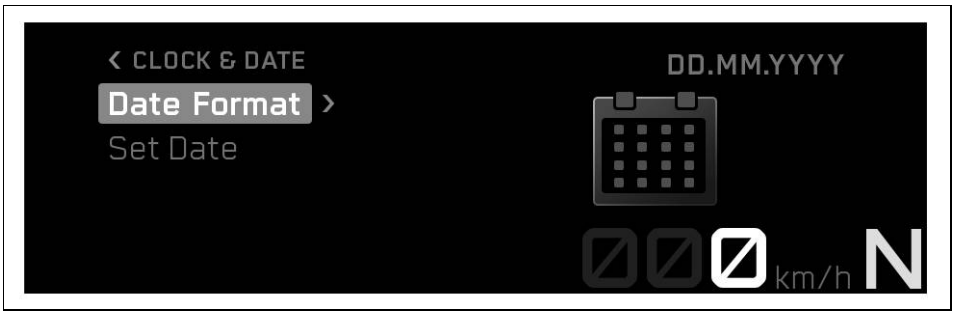



Condition: Motorcycle is stationary

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

**Note**
The possible settings are 24h and 12h.

### 7.17.6.13 Date format

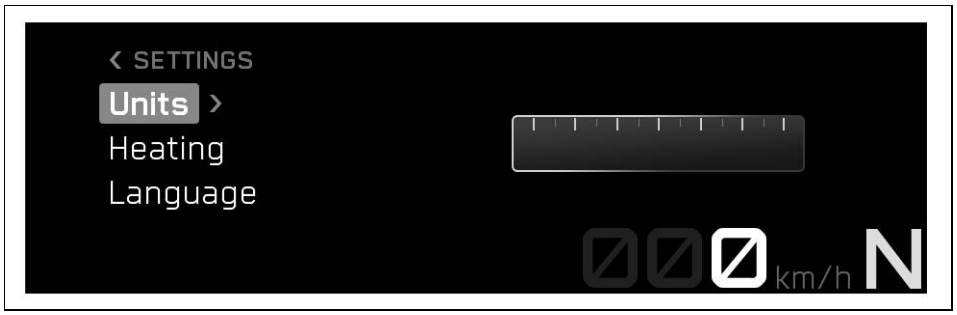



Condition: Motorcycle is stationary

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

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

### 7.17.6.14 Units

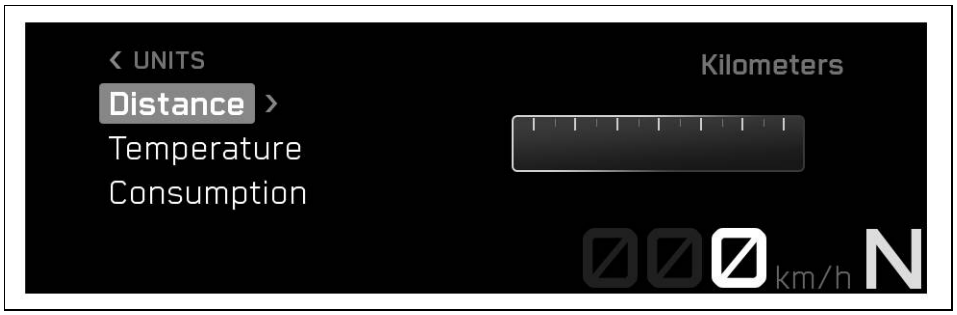



Condition: Motorcycle is stationary

- Press the **RIGHT** button when the menu is closed.
- Press the **UP** or **DOWN** button until **Settings** is highlighted.
- Pressing the **RIGHT** button opens the menu.
- Press the **UP** or **DOWN** button until **Units** is highlighted.
- Press the **RIGHT** button to open the submenu.

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

### 7.17.6.15 Distance

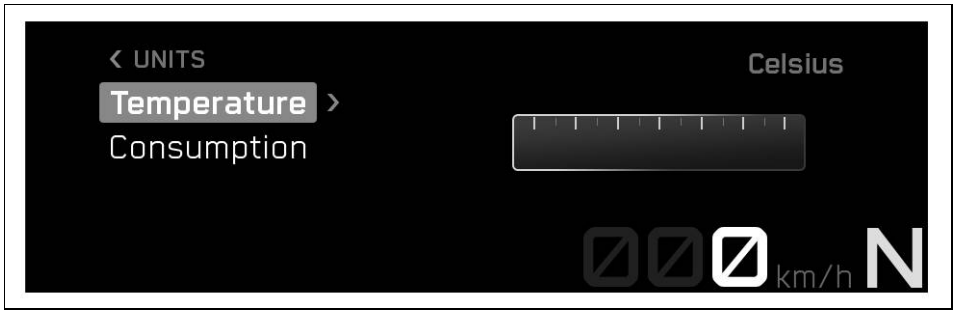



Condition: Motorcycle is stationary

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

**Note**
Kilometers and miles can be set.

### 7.17.6.16 Temperature

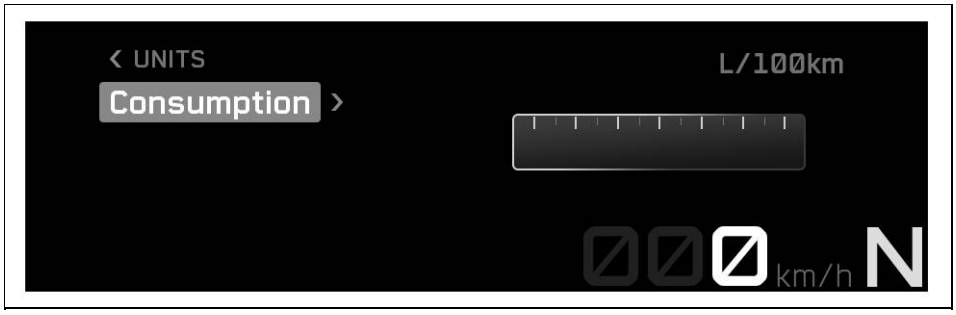



Condition: Motorcycle is stationary

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

**Note**
Celsius and Fahrenheit can be set.

### 7.17.6.17 Consumption




Condition: Motorcycle is stationary

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

**Note**
The following units can be selected: l/100 km, km/l, USG/100 mi, mi/USG, UKG/100 mi and mi/UKG.

### 7.17.6.18 Language




Condition: Motorcycle is stationary

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

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

### 7.17.6.19 Extra Functions




Condition: Motorcycle is stationary, Motorcycle with optional supplementary function

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

## 8.1 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<br>(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. 83)
– Adjust the basic position of the hand brake lever. (p. 87)
– 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. 57)

## 8.2 Running in the engine

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

| Maximum engine speed | |
|---|---|
| During first: 1,000 km (621.4 mi) | 7,500 rpm<br>(125.00 Hz) |

Avoid fully opening the throttle.

**Note**
During the running-in phase, the shift warning light is set to a specified value and cannot be changed.

## 8.3 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<br>(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.

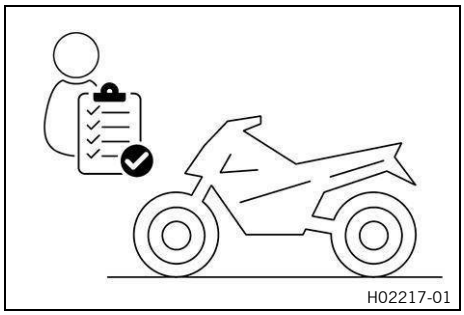
– Read the manufacturer information on maximum payload when mounting cases.

– 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 | 355 kg<br>(782.6 lb) |
| Maximum permissible front axle load | 135 kg<br>(297.6 lb) |
| Maximum permissible rear axle load | 220 kg<br>(485.0 lb) |

## 9.1 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.


H02217-01

- Check the engine oil level. (p. 118)
- Check the brake fluid level for the front brake. (p. 87)
- Check the brake fluid level for the rear brake. (p. 90)
- Check that the brake pads of the front brake are secured. (p. 89)
- Check that the brake pads of the rear brake are secured. (p. 92)
- Check that the brake system is functioning properly.
- Check the coolant level. (p. 112)
- Check the chain for dirt. (p. 76)
- Check the chain tension. (p. 77)
- Check the tire condition. (p. 98)
- Check the tire pressure. (p. 99)
- 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.

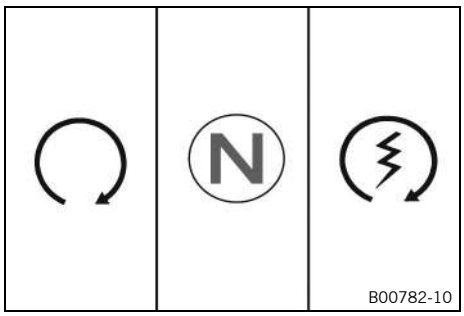
## 9.2 Starting

**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** 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**
**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.




– Unlock steering. (p. 19)
– Sit on the vehicle, take the weight off of the side stand, and move it all the way up with your foot.
– Press the kill switch into 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.

– Shift the transmission into the neutral position.
✓ The green idle indicator lamp **N** lights up.
✓ The **ABS** warning light lights up and goes out again after starting off.
– Briefly press start button .

| |
|---|
| Do not press the start button until the combination instrument function check has finished. |
| 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. |

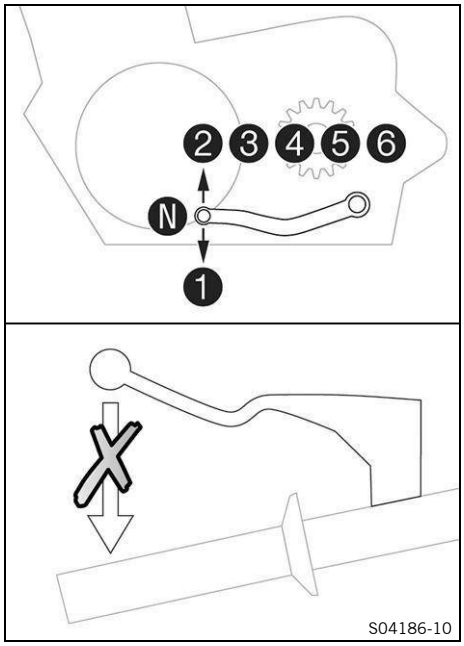
**Note**
This motorcycle is equipped with a safety starting system.
You can only start the engine if the transmission is in neutral or if the clutch lever is pulled when a gear is engaged.
If the side stand is folded out and you shift into gear and release the clutch lever, the engine stops.

## 9.3 Starting off

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

**Tip**
If the engine dies while starting off, only pull the clutch lever and press the start button. The transmission must not be shifted into neutral.

## 9.4 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.

## 9.5 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<br>(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**

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

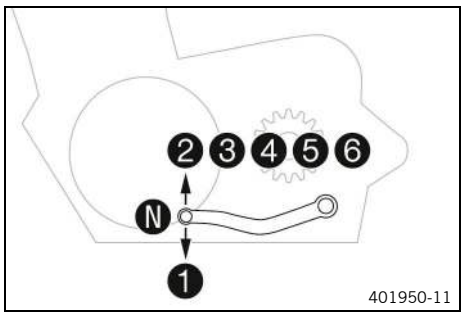
The QUICKSHIFTER+ can only be used if the function is enabled in the combination instrument.

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.

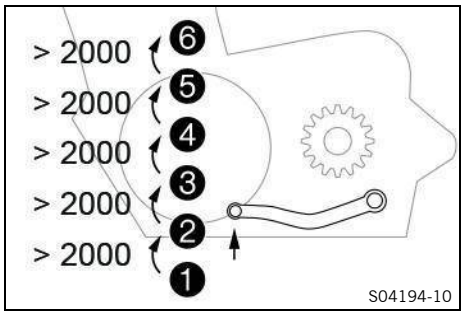



– Shift into a higher gear when conditions allow (incline, road situation, etc.).
– Release the throttle while simultaneously pulling the clutch lever, shift into the next gear, release the clutch lever, and open the throttle.

**Note**
The gear positions can be seen in the figure. The idle position is between the first and second gears. First gear is used for starting off or for steep inclines.

– 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.
– Switch off the engine if you are likely to be running at idle speed or stationary for a long time.
– If the engine stalls (e.g. at an intersection), just pull the clutch lever and press the start button. The transmission must not be shifted into neutral.
– If the oil pressure warning lamp lights up during a trip, stop as soon as it is safe to do so and switch off the engine. Contact an authorized contractual partner.
– If the malfunction indicator light 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, an operating safety (warning) message was detected.

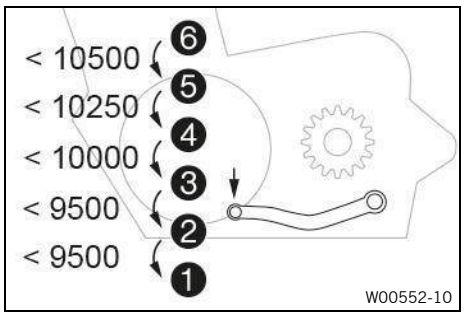
**Note**
All warnings which have occurred are displayed and stored in the **Warning** menu until these are no longer active.




– 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.

Pull the shift lever to the stop quickly without changing the throttle twist grip position.

**Note**
The minimum engine speed in rpm before shifting up is shown in the figure.




– If the QUICKSHIFTER+ is activated in the combination instrument, you can shift down in the engine speed range shown without pulling the clutch lever.

Press the shift lever to the stop quickly without changing the throttle twist grip position.

**Note**
The maximum engine speed in rpm before shifting down is shown in the figure.

## 9.6 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** 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** Higher total weight increases the stopping distance.
– Take the longer stopping distance into account when carrying a passenger or luggage with you.

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

– 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. Shift down one or two gears, but do not overrev the engine when doing so. This means that significantly less braking is required and means the brake system does not overheat.

## 9.7 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 emergency OFF switch and the ignition remains switched on in the ignition lock, the power supply to most electrical power consumers remains uninterrupted and 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. (p. 19)

## 9.8 Transport

**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.

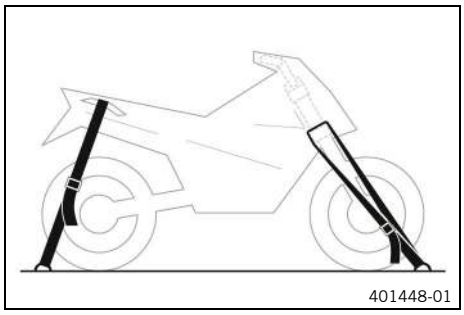
**NOTE**

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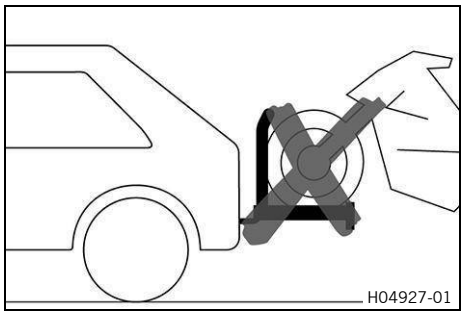
– Switch off the engine and remove the ignition key.
– Use tension belts or other suitable devices to secure the motorcycle against falling over or rolling away.

## 9.9 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.

## 9.10 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**

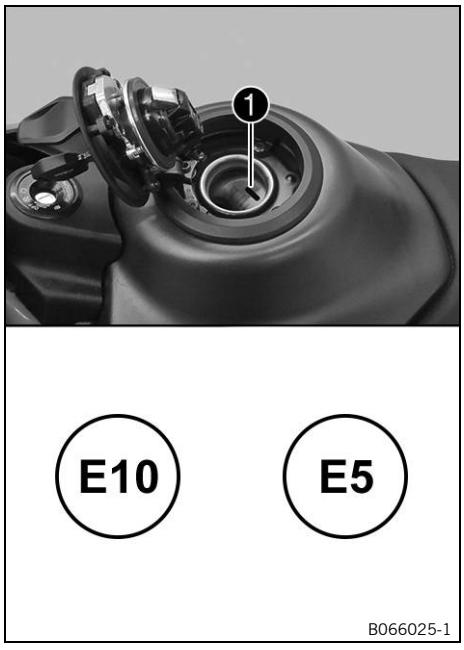
**Material damage** Inadequate fuel quality can lead to losses in performance and consequential damage.

- 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. 20)
- Fill the fuel tank with fuel up to the lower edge ❶ of the filler neck.

| Total fuel tank capacity, approx. | |
|---|---|
| Super unleaded (ROZ 95) (p. 144) | 9 l (2.4 liq. $gal_{US}$) |

- Close the fuel tank cap. (p. 21)

## 10.1 Service work

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.

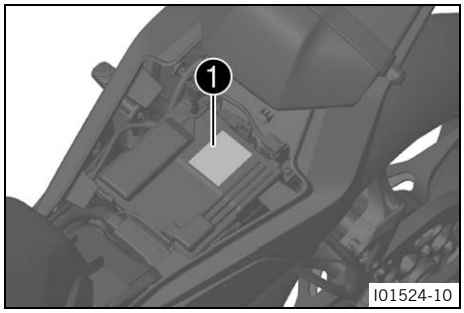
| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | | **Every 48 months** |
| | | | | | **Every 24 months** | |
| | | | | **Every 12 months** | | |
| | | | **every 15,000 km (9,320.6 mi)** | | | |
| | | **every 7,500 km (4,660.3 mi)** | | | | |
| | **after 1,000 km (621.4 mi)** | | | | | |
| Read 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. 89) | ○ | ● | ● | ● | ● | ● |
| Check that the brake pads of the rear brake are secured. (p. 92) | ○ | ● | ● | ● | ● | ● |
| Check the brake discs. (p. 86) | ○ | ● | ● | ● | ● | ● |
| Check the brake lines for damage and tightness. | ○ | ● | ● | ● | ● | ● |
| Check the brake fluid level for the front brake. (p. 87) | ○ | ● | ● | ● | | |
| Change the brake fluid for the front brake. | | | | | ● | ● |
| Check the brake fluid level for the rear brake. (p. 90) | ○ | ● | ● | ● | | |
| Change the brake fluid for the rear brake. | | | | | ● | ● |
| Change the engine oil and the oil filter, clean the oil screens. (p. 118) | ○ | ● | ● | ● | ● | ● |
| 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. | ○ | ● | ● | ● | ● | ● |
| Check the tire condition. (p. 98) | ○ | ● | ● | ● | ● | ● |
| Check the tire pressure. (p. 99) | ○ | ● | ● | ● | ● | ● |
| Check the chain, rear sprocket, and engine sprocket. (p. 79) | | ● | ● | ● | ● | ● |
| Check the chain tension. (p. 77) | ○ | ● | ● | ● | ● | ● |
| Grease all moving parts (e.g. side stand, hand lever, chain, etc.) and check for smooth operation. | ○ | ● | ● | ● | ● | ● |

| | after 1,000 km (621.4 mi) | every 7,500 km (4,660.3 mi) | every 15,000 km (9,320.6 mi) | Every 12 months | Every 24 months | Every 48 months |
|---|---|---|---|---|---|---|
| Check that the clutch cables are undamaged, routed without kinks, and set correctly. | ○ | ● | ● | ● | ● | ● |
| Check the valve clearance, change the spark plug. | | | ● | | | |
| Change the air filter, clean the air filter box. | | ● | ● | | | |
| Check the headlight setting. (p. 108) | ○ | ● | ● | | | |
| Check the tightness of the safety-relevant screws and nuts which are easily accessible. | ○ | ● | ● | ● | ● | ● |
| Clean the dust boots of the fork legs. (p. 75) | | ● | ● | | | |
| Check that the radiator fan is functioning properly. | ○ | ● | ● | ● | ● | ● |
| Check the coolant level. (p. 112) | ○ | ● | ● | ● | ● | |
| Checking the antifreeze. | | ● | ● | | ● | |
| Change the coolant. (p. 115) | | | | | | ● |
| 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. | ○ | ● | ● | ● | ● | ● |
| Enter electronic proof of service. | ○ | ● | ● | ● | ● | ● |

○ One-time interval

● Periodic interval

## 11.1 Fork/shock absorber




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

**Note**
The recommendations for the suspension setting are shown in table ❶. The table is attached to the battery cover.

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.

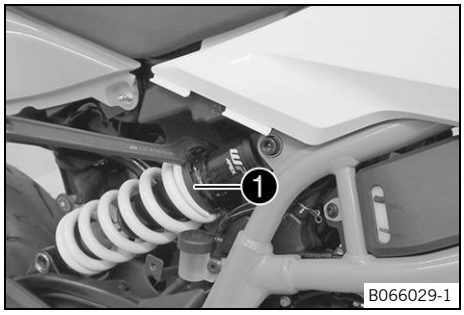
## 11.2 Adjusting the spring preload of the shock absorber

**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.

**Preparatory work**
– Remove the right side cover. (p. 80)

**Main work**




– Adjust the spring preload by turning the adjusting ring ❶ using a suitable hook wrench.

| Preload | |
|---|---|
| Standard | 10 mm<br>(0.39 in) |

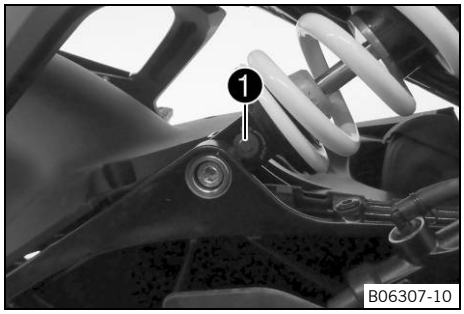
**Note**
The spring preload can be set to 10 different positions.

**Reworking**
– Install the right side cover. (p. 81)

## 11.3 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.



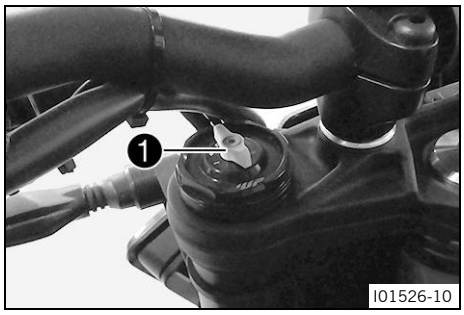

– Turn adjusting screw 1 clockwise up to the last perceptible click.
– Turn counterclockwise by the number of clicks corresponding to the shock absorber type.

| Rebound damping | |
|---|---|
| Standard | 10 clicks |

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

## 11.4 Adjusting the compression damping of the fork

**Note**
The hydraulic compression damping determines the fork suspension behavior.




– Turn white adjuster 1 clockwise as far as it will go.

**Note**
Adjuster 1 **COMP** is located at the upper end of the left fork leg.
The compression damping is located in left fork leg **COMP** (white adjuster). The rebound damping is located in right fork leg **REB** (red adjuster).

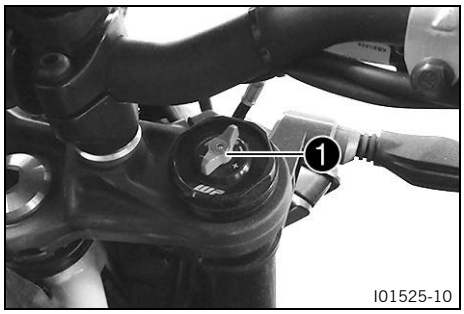
– Turn counterclockwise by the number of clicks corresponding to the fork type.

| Compression damping | |
|---|---|
| Standard | 10 clicks |

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

## 11.5 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**
Adjuster ❶ **REB** is located at the upper end of the right fork leg.
The rebound damping is located in right fork leg **REB** (red adjuster). The compression damping is located in left fork leg **COMP** (white adjuster).

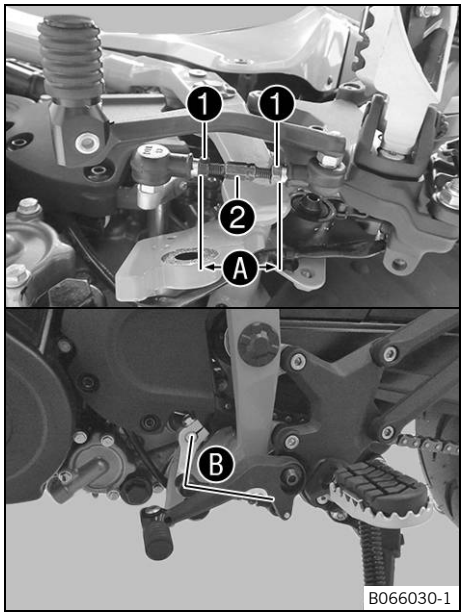
– Turn counterclockwise by the number of clicks corresponding to the fork type.

| Rebound damping | |
|---|---|
| Standard | 10 clicks |

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

## 11.6 Adjusting the shift lever

**Note**
The adjustment range of the shift lever is limited.




– Loosen nuts ❶.
– Adjust the shift lever by turning shift rod ❷.

| | |
|---|---|
| Shift rod adjustment range Ⓐ | 90 mm ... 102 mm (3.54 in ... 4.02 in) |
| Make the same adjustments on both sides. | |
| At least five screw threads must be screwed into the seating. | |

– Check adjusting angle Ⓑ.

| | |
|---|---|
| Adjusting angle Ⓑ shift rod - bell crank - shift lever | 90° (1.57 rad) |

– Tighten nuts ❶.

| |
|---|
| After the nuts have been tightened, the bearings of the shift rod must be central and aligned identically to each other in order to ensure freedom of movement in the bearing shells. |

– Check the shift lever to ensure it is functioning properly and can move freely.

## 12.1 Raising the motorcycle with rear lifting gear

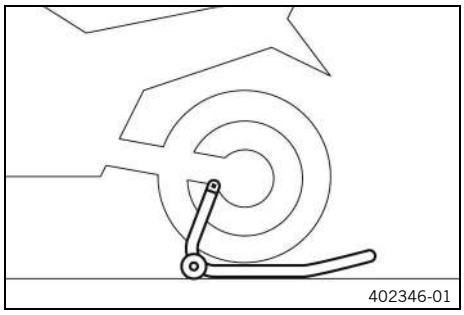
**NOTE**

**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 lifting gear.
– Insert the adapter in the rear lifting gear.

| |
|---|
| Retaining adapter (61029955244) |
| Rear wheel work stand (69329955000) |

– Stand the motorcycle upright, align the lifting gear with the link fork and the adapters, and raise the motorcycle.

## 12.2 Removing the rear of the motorcycle from the lifting gear

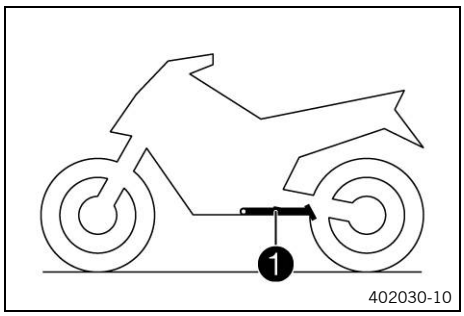
**NOTE**

**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 bushings kit.

## 12.3 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.

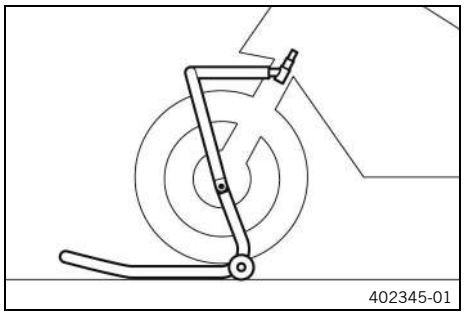
The components for parking the vehicle are designed only for the weight of the vehicle.

– 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. 73)
– Remove the front top fender. (p. 84)

**Main work**


402345-01

– Move the handlebar to the straight-ahead position. Position the lifting gear.

| |
|---|
| Always raise the motorcycle at the rear first. |

| |
|---|
| Mounting pin (69329965030) |
| Front wheel work stand, large (69329965100) |

– Lift the motorcycle at the front.

## 12.4 Taking the motorcycle off the front lifting gear

**NOTE**

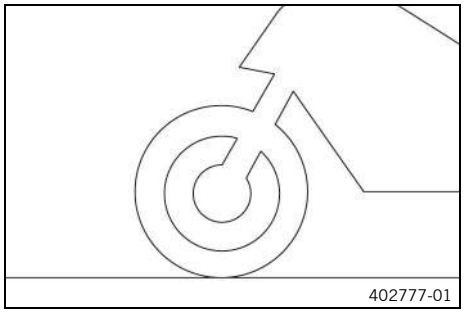
**Material damage** The vehicle may be damaged if parked incorrectly.

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**

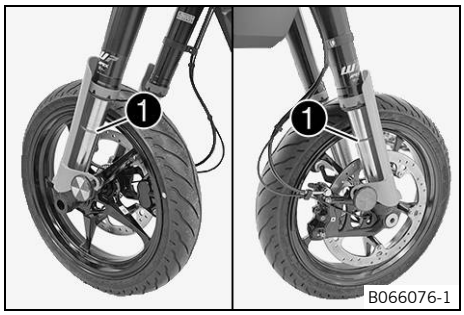

402777-01

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

**Reworking**

– Remove the rear of the motorcycle from the lifting gear. (p. 73)
– Install the front top fender. (p. 84)

## 12.5 Cleaning the dust boots of the fork legs




**Preparatory work**

– Raise the motorcycle with the rear lifting gear. (p. 73)

**Main work**

– Push dust boot ❶ downward on both fork legs.

**Note**

The dust boots remove dust and coarse dirt particles from the inside 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.

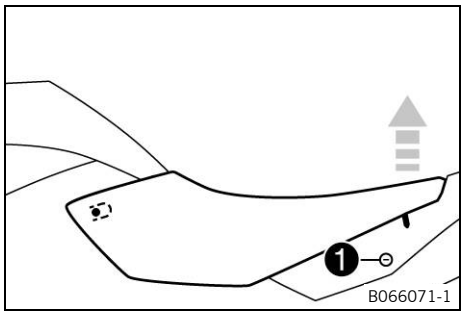
| Universal oil spray (p. 145) |
|---|

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

**Reworking**

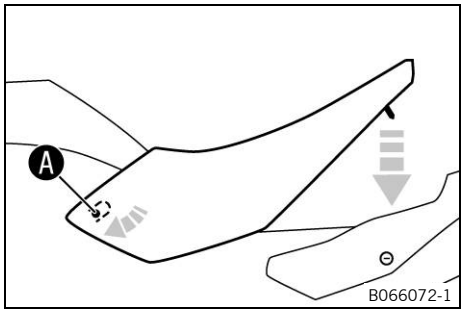
– Remove the rear of the motorcycle from the lifting gear. (p. 73)

## 12.6 Removing the seat



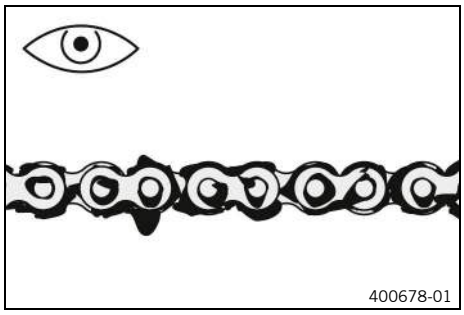

– Insert the ignition key in seat lock ❶ and turn it clockwise.
– Raise the rear of the seat, pull it towards the rear, and remove it upwards.

## 12.7 Mounting the seat




– Attach the front seat in area Ⓐ and lower at the rear.
– Check that the seat is correctly mounted.

## 12.8 Checking the chain for dirt




– Check the chain for coarse dirt accumulation.
  » If the chain is very dirty:
    – Clean the chain. (p. 76)

## 12.9 Cleaning the chain

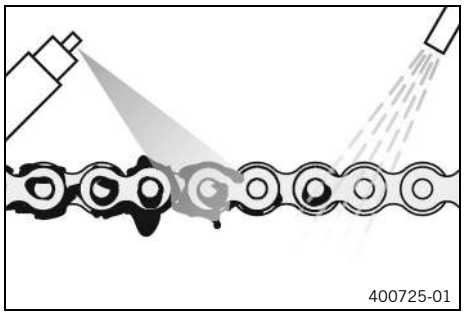
**WARNING**
**Danger of accidents** Oil, grease or wax on the brake discs reduces the brake action.
– Always keep the brake discs free of oil, fat and wax.
– Clean the brake discs with brake cleaner when necessary.

**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. 73)




**Main work**

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

| Chain cleaner (p. 149) |
|---|

– After drying, apply chain spray.

| Street chain spray (p. 145) |
|---|

**Reworking**

– Remove the rear of the motorcycle from the lifting gear. (p. 73)

## 12.10 Checking the chain tension

**WARNING**

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

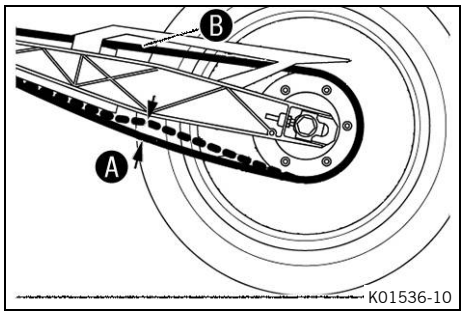
If the chain is tension is too high, the chain, front sprocket, rear sprocket, transmission, and rear wheel bearings wear more quickly. Some components may break if overloaded.

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. 73)




**Main work**

– Shift the transmission into the neutral position.
– In the area after the chain sliding guard, press the chain upward toward the link fork and measure chain tension A.

| Chain tension | 17 mm ... 20 mm (0.67 in ... 0.79 in) |
|---|---|
| The top part of chain B 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. 78)

**Reworking**

– Remove the rear of the motorcycle from the lifting gear. (p. 73)

## 12.11 Adjusting the chain tension

**WARNING**

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

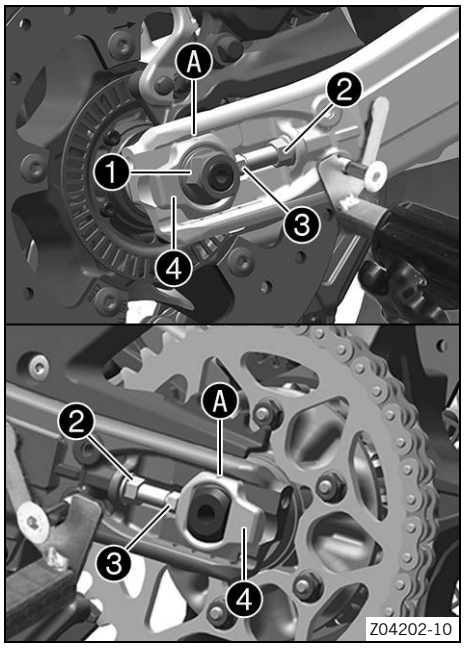
If the chain is tension is too high, the chain, front sprocket, rear sprocket, transmission, and rear wheel bearings wear more quickly. Some components may break if overloaded.

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. 73)
– Check the chain tension. (p. 77)




**Main work**

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

| | |
|---|---|
| Chain tension | 17 mm ... 20 mm<br>(0.67 in ... 0.79 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, so repeat this measurement at different positions on the chain. | |

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

| Nut, wheel spindle, rear | |
|---|---|
| M16 | 100 Nm<br>(73.8 ft·lb$_f$) |

**Reworking**

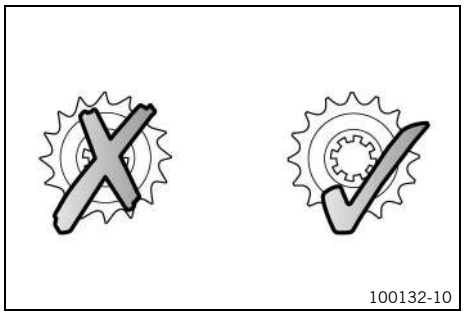
– Check the chain tension. (p. 77)
– Remove the rear of the motorcycle from the lifting gear. (p. 73)

## 12.12 Checking the chain, rear sprocket, and engine sprocket

**Preparatory work**

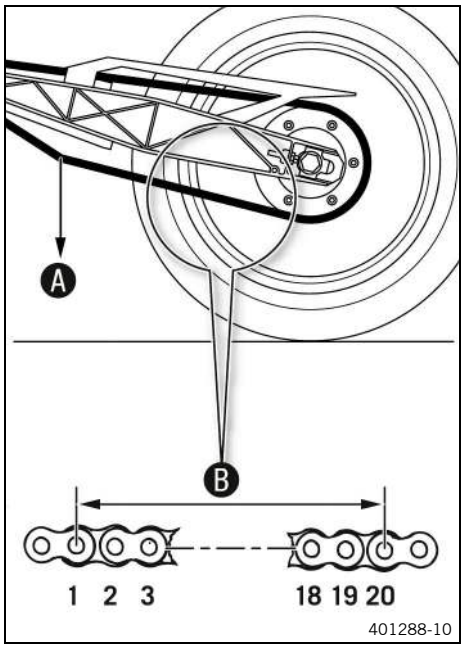
– Raise the motorcycle with the rear lifting gear. (p. 73)

**Main work**


100132-10

– 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. |



401288-10

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

| | |
|---|---|
| Weight, chain wear measurement | 15 kg<br>(33.1 lb) |

– Measure distance Ⓑ of 20 chain rollers in the lower chain section.

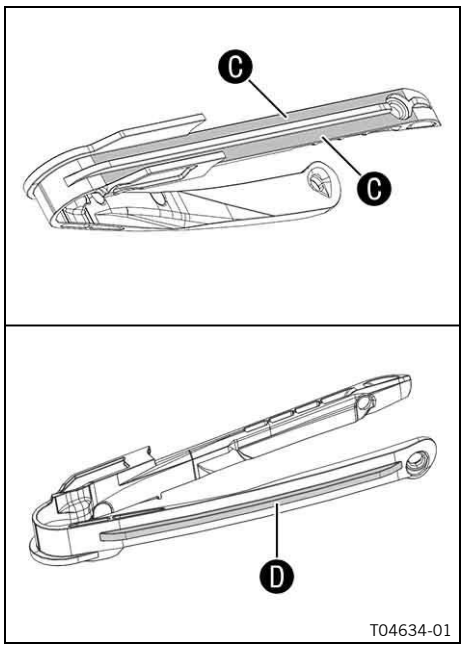
| | |
|---|---|
| Maximum distance Ⓑ from 20 chain rollers at the longest chain section | 301.6 mm<br>(11.874 in) |
| Chain wear is not always even, so repeat this measurement at different positions on the chain. | |

  » 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.



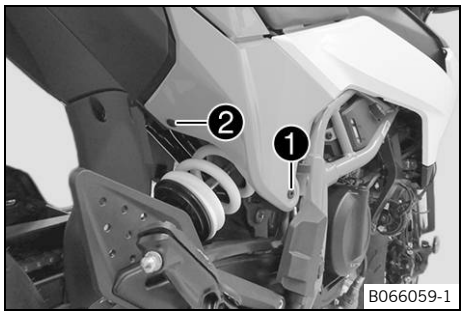

– Check the chain slider at the top for wear.
  » If continuous signs of wear to the chain are visible on the chain slider in the areas C marked:
    – Change the chain slider.
  » If the chain slider is highly worn on the underside in the marked area D:
    – Change the chain slider.
– Check that the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

| Screw, chain guard | |
|---|---|
| M6 | 9 Nm (6.6 ft·lb$_f$) |

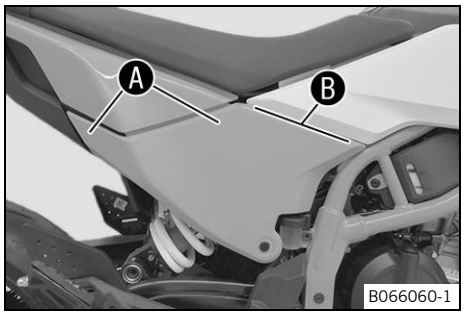
**Reworking**

– Remove the rear of the motorcycle from the lifting gear. (p. 73)

## 12.13 Removing the right side cover

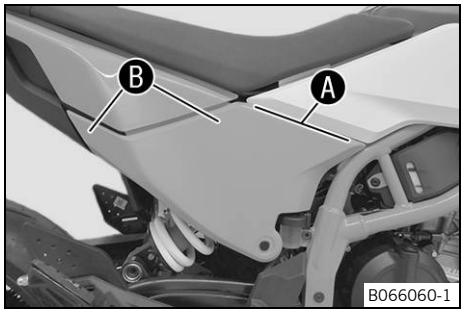



– Remove screw 1.
– Remove push/pull captive panel screw 2.

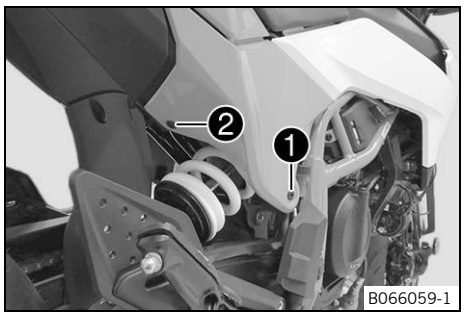



– Remove the side fairing from rubber bushings A and detach it from area B.

## 12.14 Installing the right side cover




– Attach side fairing in area Ⓐ and press it into rubber bushings Ⓑ.




– Mount and tighten screw ❶.

| Side cover screw | |
|---|---|
| M6 | 7 Nm<br>(5.2 ft·lb$_f$) |

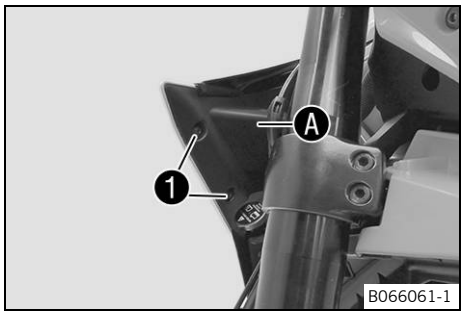
– Mount push/pull captive panel screw ❷.

## 12.15 Removing right fuel tank cover

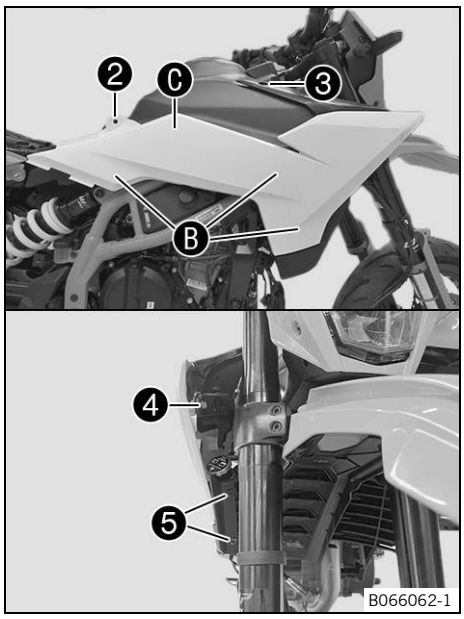
**Preparatory work**

– Remove the seat. (p. 75)
– Remove the right side cover. (p. 80)

**Main work**

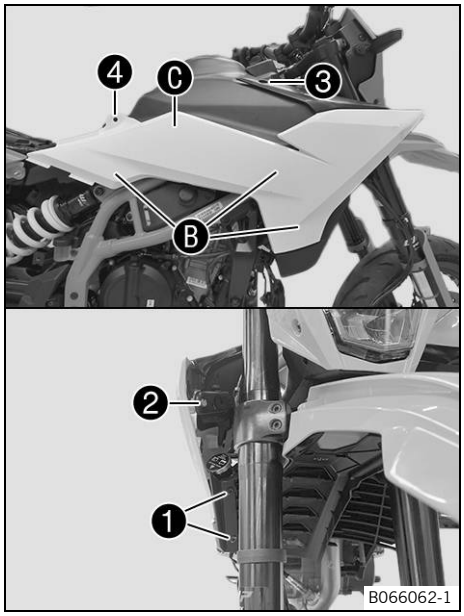



– Remove ❶ screws.
– Remove the fairing from rubber bushing Ⓐ and take it off.




– Remove screws ❷ and ❸.
– Remove screws ❹ and ❺.
– Remove the fuel tank fairing from rubber bushings Ⓑ, unhook it in area Ⓒ and take it off.

## 12.16 Installing the right fuel tank cover




**Main work**

– Attach fuel tank fairing in area Ⓐ and press it into rubber bushings Ⓑ.
– Mount and tighten screws ❶.

| Fuel tank cover screw | |
|---|---|
| M6 | 6 Nm (4.4 ft·lb$_f$) |

– Mount and tighten screw ❷.

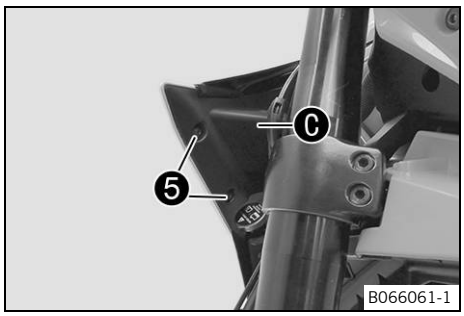
| Remaining screws on chassis | |
|---|---|
| M6 | 9 Nm (6.6 ft·lb$_f$) |

– Mount and tighten screw ❸.

| Fuel tank cover screw | |
|---|---|
| M6 | 6 Nm (4.4 ft·lb$_f$) |

– Mount and tighten screw ❹.

| Remaining screws on chassis | |
|---|---|
| M6 | 9 Nm (6.6 ft·lb$_f$) |



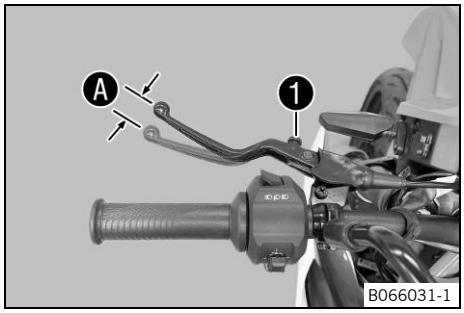

– Press the fairing into rubber bushing C.
– Mount and tighten screws 5.

| Fuel tank cover screw | |
|---|---|
| M6 | 6 Nm<br>(4.4 ft·lb$_f$) |

**Reworking**

– Install the right side cover. (p. 81)
– Mount the seat. (p. 76)

## 12.17 Adjusting the basic position of the clutch lever




– Adjust the basic position of the clutch lever to your hand size by turning adjusting wheel 1.
– Push the clutch lever forward and turn the adjusting wheel until a suitable position is reached in area A.

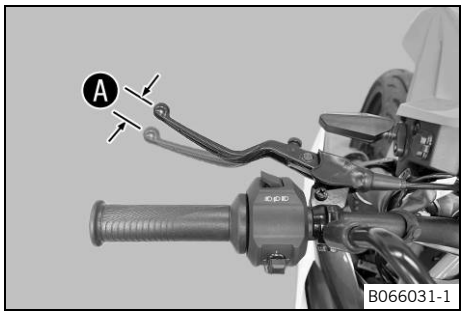
| Do not make any adjustments while riding. |
|---|

## 12.18 Checking the play in 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 play in the clutch lever A.

| Clutch lever play A | 1 mm … 3 mm<br>(0.04 in … 0.12 in) |
|---|---|

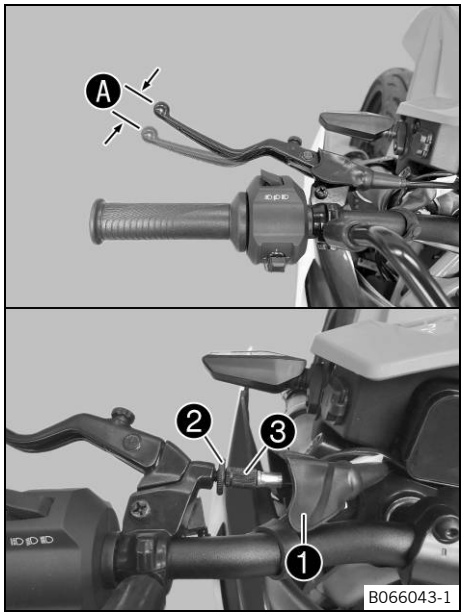
» If the play in the clutch lever does not meet the specified value:
  – Adjust play in the clutch lever. (p. 84)

– Move the handlebar back and forth over the entire steering range.

| The clutch lever play must not change. |
|---|

» If the clutch lever play changes:
  – Check the routing of the clutch cable.

## 12.19 Adjusting play in the clutch lever

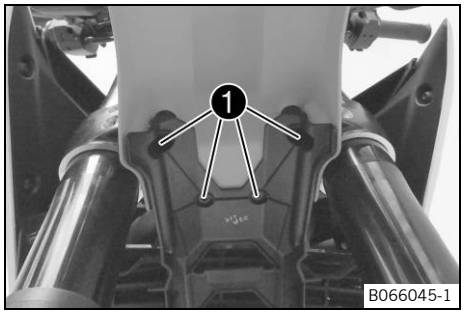



– Move the handlebar to the straight-ahead position.
– Push back boot ❶.
– Loosen lock nut ❷.
– Adjust the play in the clutch level Ⓐ by turning adjusting screw ❸.

| | |
|---|---|
| Clutch lever play Ⓐ | 1 mm ... 3 mm<br>(0.04 in ... 0.12 in) |

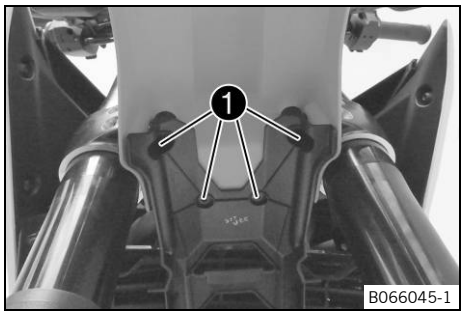
– Tighten lock nut ❷.
– Position bellows ❶.

## 12.20 Removing the front top fender




– Remove ❶ screws.
– Remove the front fender.

## 12.21 Installing the front top fender




– Position the front fender.
– Mount and tighten screws ❶.

| Screw, front fender on triple clamp | |
|---|---|
| M6 | 6 Nm<br>(4.4 ft·lb$_f$) |

## 13.1 Anti-lock braking system

**WARNING**

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

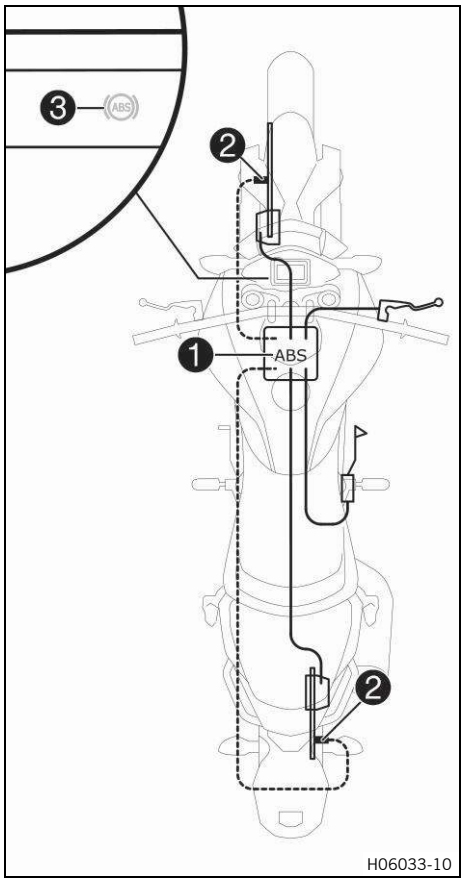
– Do not make any changes to the suspension travel.
– Only use spare parts on the brake system which have been approved and recommended by the vehicle manufacturer.
– Only use tires and wheels approved and recommended by the vehicle manufacturer with the corresponding speed rating.
– Maintain the specified 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** is a safety system that prevents the wheels locking when driving straight ahead or when cornering (within the limits of physics).

**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** 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.

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

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

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

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 light may also light up if the rotating speeds of the front and rear wheels differ greatly under extreme riding conditions, for example when doing a wheelie or if the rear wheel spins. This causes the ABS to switch off.

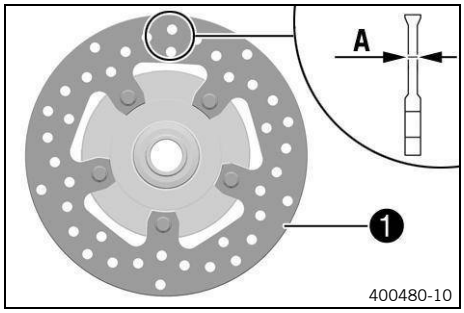
To reactivate the ABS, stop the vehicle and switch off the ignition. The ABS is reactivated when the vehicle is switched on again. The ABS warning light goes out after starting off.

## 13.2 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 brake discs of the front brake.

– Change the brake discs on the rear brake.

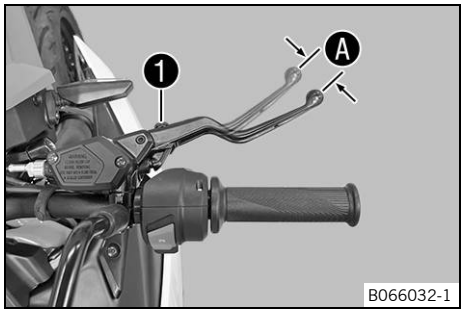
– Check the front and rear brake discs for damage, cracks, and deformation.

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

– Change the brake discs of the front brake.

– Change the brake discs on the rear brake.

## 13.3 Adjusting the basic position of the hand brake lever




– Adjust the basic position of the hand brake lever to your hand size by turning adjusting wheel 1.
– Push the hand brake lever forward and turn the adjusting wheel until a suitable position is reached in area A.

Do not make any adjustments while riding.

## 13.4 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.

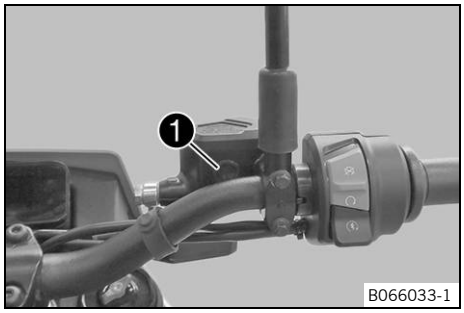
– Make sure that brake fluid for the front and rear brake is changed in accordance with the service schedule.
– Make sure that only clean, approved brake fluid from a tightly sealed container is used.

**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 the brake fluid level in level viewer 1.
  » If the brake fluid level has dropped below the **MIN** marking A:
    – Add brake fluid for the front brake. (p. 87)

## 13.5 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.

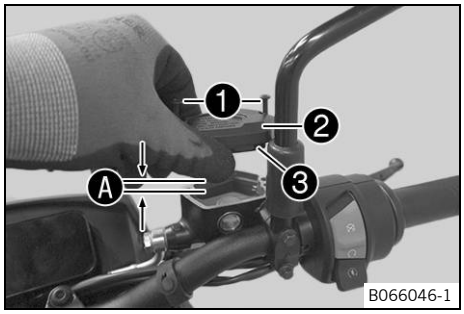
**Note**

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. 89)

**Main work**




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

| | |
|---|---|
| Level Ⓐ | 5 mm (0.20 in) |

Brake fluid DOT 5.1 (p. 146)

– Position the cover with diaphragm.
– Mount and tighten the screws.

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

## 13.6 Checking that the brake pads of the front brake are secured

**WARNING**

**Danger of accidents** Worn brake pads reduce the brake action.

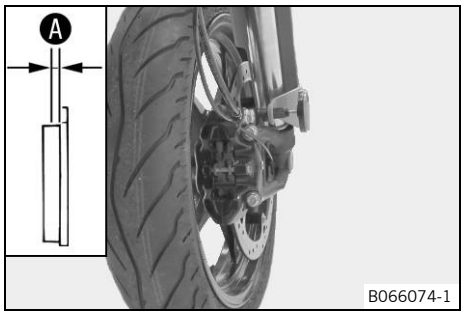
– Make sure that worn brake pads are replaced immediately.

**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 A.

| | |
|---|---|
| Minimum pad thickness A | ≥ 1 mm<br>(≥ 0.04 in) |

» If it is less than the minimum thickness:

– Change the front brake pads.

– Check the brake linings 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.

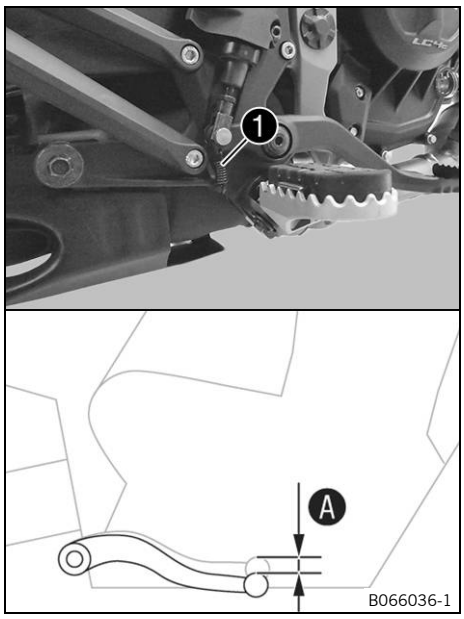
## 13.7 Checking the free travel of the brake pedal

**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 ❶.
– Move the brake pedal back and forth between the end stop and the brake pedal cylinder piston and check free travel Ⓐ.

| | |
|---|---|
| Free travel of brake pedal | 3 mm ... 5 mm<br>(0.12 in ... 0.20 in) |

» If the free travel does not meet the specifications:
– Adjust the free travel of the foot brake lever.

This must be performed by an authorized contractual partner.

– Attach spring ❶.

## 13.8 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.

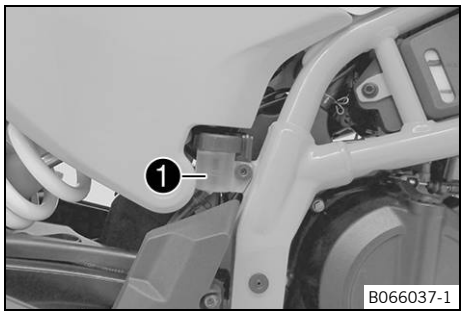
– Make sure that brake fluid for the front and rear brake is changed in accordance with the service schedule.
– Make sure that only clean, approved brake fluid from a tightly sealed container is used.

**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. 91)

## 13.9 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**

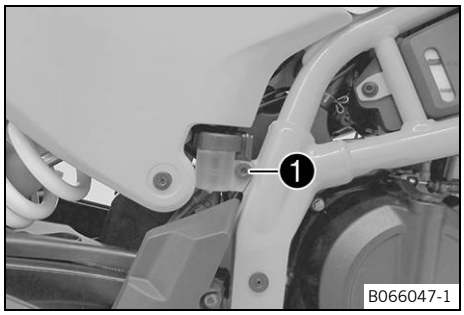
Avoid contact between brake fluid and painted parts. Brake fluid corrodes paint.

**Preparatory work**

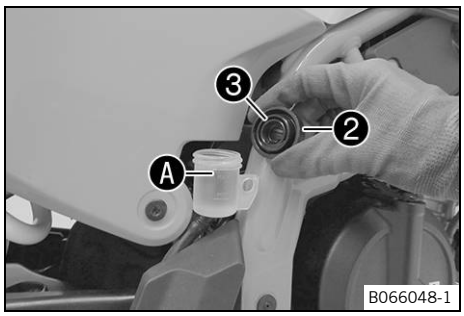
– Check that the brake pads of the rear brake are secured.
(p. 92)

**Main work**

Condition: Screw cap is locked




– Remove screw ❶ and take off the screw cap lock.

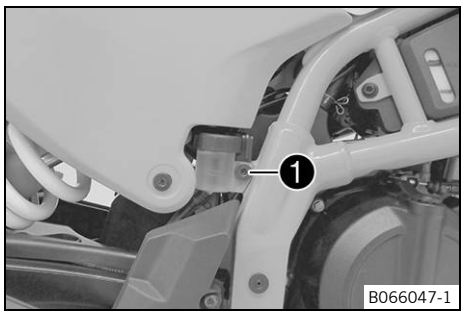



– Stand the vehicle upright.
– Remove screw cap ❷ with membrane ❸.
– Add brake fluid to mark Ⓐ.

| Brake fluid DOT 5.1 (p. 146) |
|---|

– Mount the screw cover with the membrane.

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



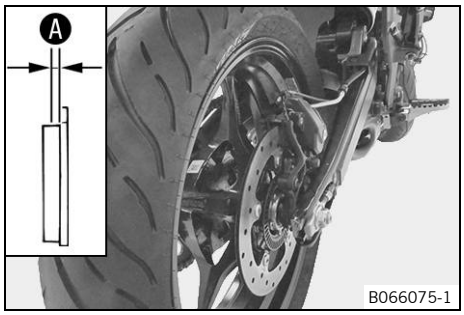

– Position the screw cap lock and mount and tighten screw ❶.

| Screw, compensating tank cap lock, rear brake | |
|---|---|
| M6 | 7 Nm<br>(5.2 ft·lb$_f$) |

## 13.10 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<br>(≥ 0.04 in) |
|---|---|

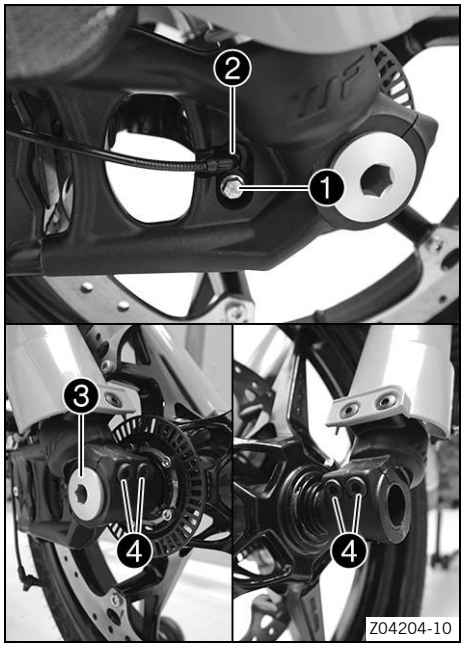
» If it is less than the minimum thickness:
– Change the rear brake pads.
– Check the brake linings for damage and cracking.
» If there is damage or cracking:
– Change the rear brake pads.
– Check that the brake pads are secured.
» If the brake pads are not secured correctly:
– Secure brake pads, replace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

## 14.1 Removing the front wheel

**Preparatory work**

– Raise the motorcycle with the rear lifting gear. (p. 73)
– Remove the front top fender. (p. 84)
– Lift the motorcycle with the front lifting gear. (p. 73)

**Main work**




– Remove screw ❶ and pull wheel speed sensor ❷ out of the hole.
– Loosen screw ❸ by four turns.
– Loosen screws ❹.
– Press on screw ❸ to push the wheel spindle out of the fork shoe.
– Remove ❹ screws.

**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.

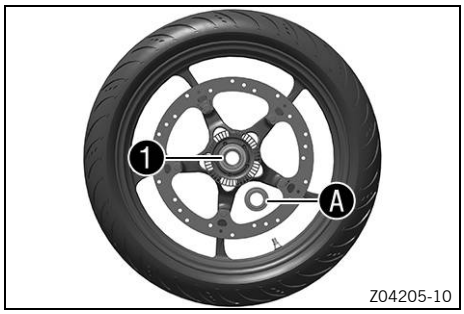
Do not actuate the hand brake lever when the front wheel is removed.

## 14.2 Installing the front wheel

**WARNING**

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

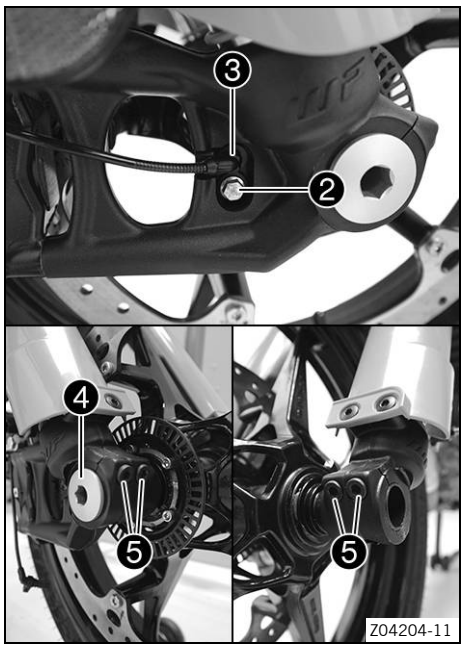
– Always keep the brake discs free of oil, fat and wax.
– Clean the brake discs with brake cleaner when necessary.




– Check the wheel bearing for damage and wear.
  » If the wheel bearing is damaged or worn:
    – Change the front wheel bearing.
– Remove the spacers.
– Clean and grease radial shaft seal ❶ and contact surfaces Ⓐ on the spacers.

Long-life grease (p. 145)

– Insert spacers.




– Clean the thread of the wheel spindle and screw ❹.
– Clean and grease wheel spindle.

| Long-life grease (p. 145) |
|---|

– Position the front wheel and insert the wheel spindle.
  ✓ The brake pads are positioned correctly.
– Mount and tighten screw ❹.

| Screw, wheel spindle, front | |
|---|---|
| M24 | 45 Nm (33.2 ft·lb$_f$) |

– Position wheel speed sensor ❸ in the hole.
– Mount and tighten screw ❷.

| Screw, wheel speed sensor holder | |
|---|---|
| M6 | 8 Nm (5.9 ft·lb$_f$) |

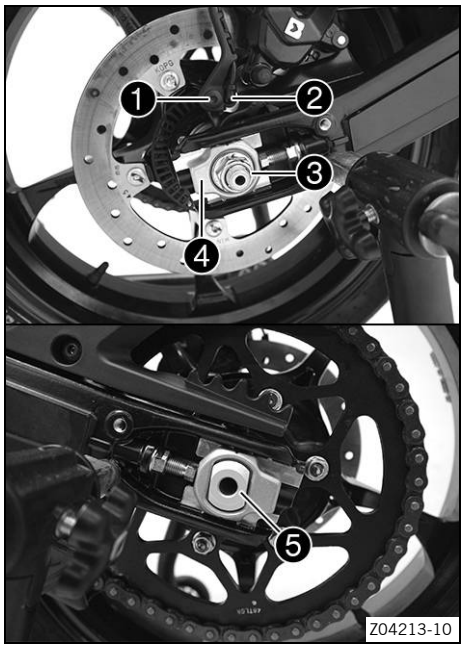
– Operate the hand brake lever repeatedly until the brake pads are in contact with the brake disc and a pressure point is reached.
– Take the motorcycle off the front lifting gear. (p. 74)
– Remove the rear of the motorcycle from the lifting gear. (p. 73)
– Install the front top fender. (p. 84)
– Operate the front brake and compress the fork a few times firmly.
  ✓ The fork legs straighten.
– Tighten screws ❺.

| Screw, fork shoe | |
|---|---|
| M8 | 15 Nm (11.1 ft·lb$_f$) |

## 14.3 Removing the rear wheel

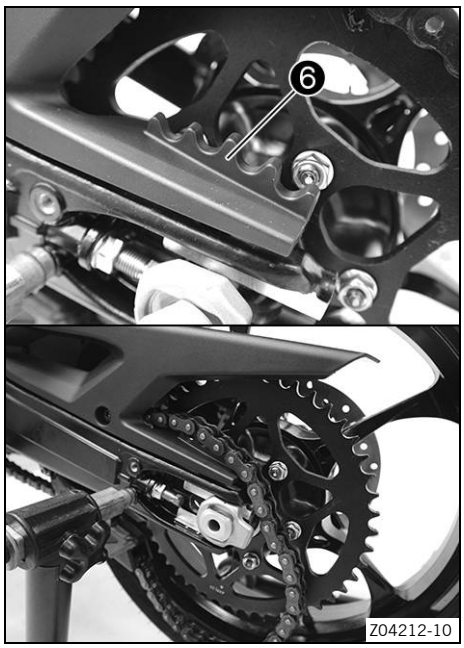
**Preparatory work**

– Raise the motorcycle with the rear lifting gear. (p. 73)




**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 with washer.
– Remove chain tension adjuster ❹.
– Hold the rear wheel and remove wheel spindle ❺ with the washer and chain adjuster ❹.




– Push the rear wheel forward as far as possible.

| Protect the components against damage by covering them. |
|---|

– Take the chain off the rear sprocket and place it on chain sprocket guard ❻.

**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.

– Pull the rear wheel back until the brake caliper bracket is suspended freely between the brake disc and rim.

| Do not actuate the brake pedal when the rear wheel is removed. |
|---|

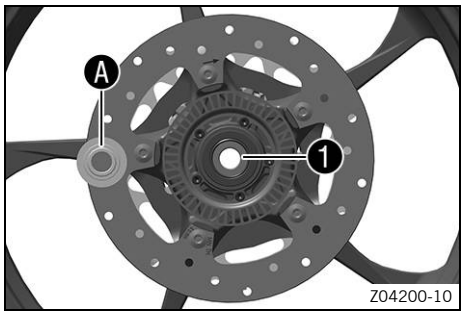
## 14.4 Installing the rear wheel

**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**

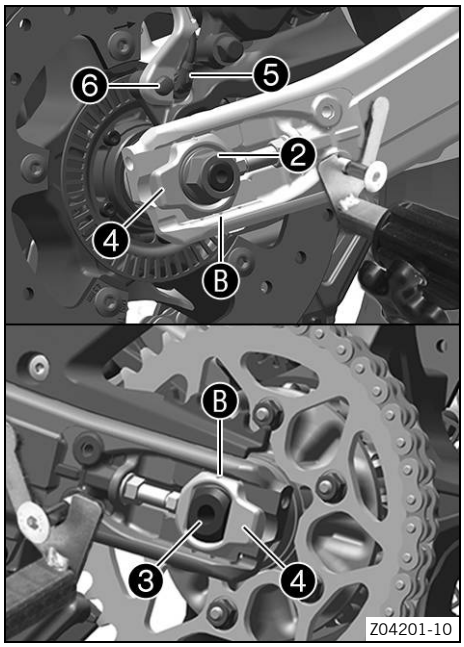
– Check the wheel bearing for damage and wear.
  » If the wheel bearing is damaged or worn:
    – Change the rear wheel bearing.
– Remove the spacers.
– Clean and grease radial shaft seal ❶ and contact surfaces Ⓐ on the spacers.

| Long-life grease (p. 145) |
|---|

– Clean the thread of the wheel spindle and axle nut.
– Clean and grease wheel spindle.

| Long-life grease (p. 145) |
|---|

– Clean the contact areas on the brake caliper bracket and link fork.
– Mount the damping rubber and rear sprocket carrier on the rear wheel.
– Position the rear wheel.
  ✓ Brake pads and brake caliper brackets are correctly positioned.
– Push the rear wheel forward as far as possible and lay the chain on the rear sprocket.
– Position the chain guard.




– Pull the rear wheel back and mount wheel spindle ❸ with the washer and chain adjuster ❹.

| Mount left and right chain adjusters ❹ in the same position. |
|---|

– Mount nut ❷ and the washer.
– Push the rear wheel forward so that the chain adjusters are in contact with the screws, and tighten nut ❷.

| 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 | |
|---|---|
| M16 | 100 Nm (73.8 ft·lb$_f$) |

– Position wheel speed sensor ❺ in the hole.
– Mount and tighten screw ❻.

| Screw, wheel speed sensor holder | |
|---|---|
| M6 | 8 Nm (5.9 ft·lb$_f$) |

**Reworking**

– Check the chain tension. (p. 77)
– Remove the rear of the motorcycle from the lifting gear. (p. 73)

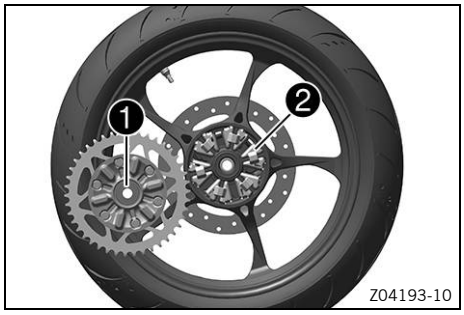
## 14.5 Checking the rear hub damping rubber pieces

**Note**
The engine power is transmitted from the rear sprocket to the rear wheel via the six damping rubber pieces. These 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. 73)
– Remove the rear wheel. (p. 94)

**Main work**




– Check bearing 1.
  » If the bearing is damaged or worn:
    – Change the rear wheel bearing.
– 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 upward and insert the wheel spindle in the hub.
– To check play A, hold the rear wheel tight and try to rotate the rear sprocket.

| | |
|---|---|
| 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. 95)
– Check the chain tension. (p. 77)
– Remove the rear of the motorcycle from the lifting gear. (p. 73)

## 14.6 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<br>(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**

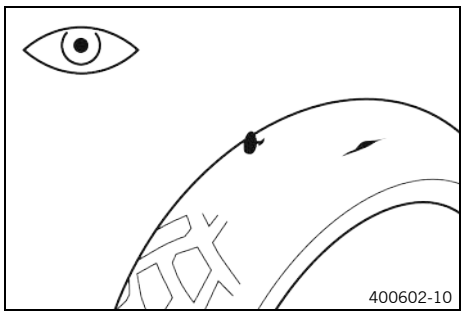
The type, condition, and pressure of the tires all have a major impact on the braking and handling of the motorcycle.

Worn tires have a negative effect on handling characteristics, especially on wet surfaces.

Tires must not be moved or loaded while they are cold.

Tires must not be stored or fitted when too cold.

Observe the tire manufacturer's specifications and recommendations.



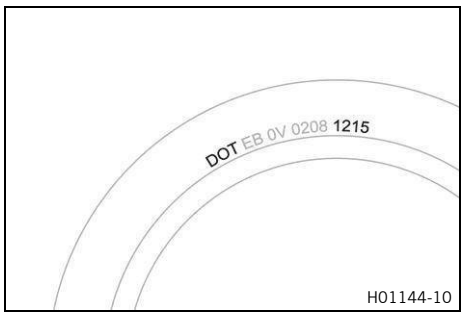

– Check the front and rear tires for cuts, embedded objects, and other damage.
  » If the tires have cuts, run-in objects, or other damage:
    – Change the tires.
– Check the tread depth.

| | |
|---|---|
| Minimum tread depth | ≥ 2 mm<br>(≥ 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.



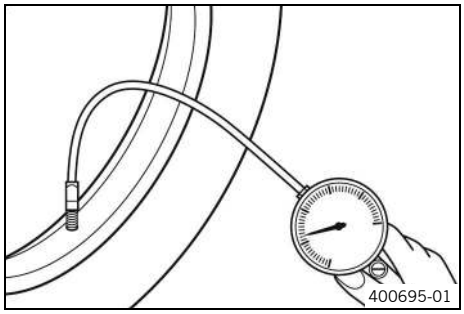

– Check the tire age.

**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.

## 14.7 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 | 2.0 bar (29.0 psi) |
| rear | 2.0 bar (29.0 psi) |

| Tire pressure with passenger / full payload | |
|---|---|
| front | 2.0 bar (29.0 psi) |
| rear | 2.2 bar (31.9 psi) |

» If the tire pressure does not meet specifications:
– Correct tire pressure.
– Mount the protection cap.

## 15.1 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.

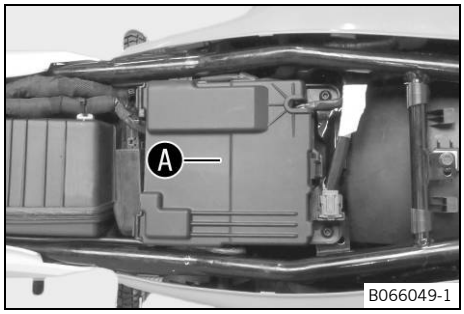
– Keep 12–V batteries out of the reach of children.
– Wear suitable protective clothing and safety glasses.
– Avoid contact with battery acid and battery gases.
– Keep sparks or open flames away from the 12 V battery.
– Only charge 12 V batteries in well-ventilated rooms.
– Rinse the affected area immediately 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.

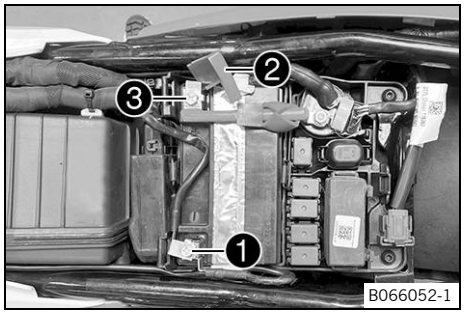
**Preparatory work**

– Remove the seat. (p. 75)

**Main work**

– Remove battery cover Ⓐ.




– Disconnect negative cable ❶ from the 12 V battery.
– Pull back positive terminal cover ❷.
– Disconnect positive cable ❸ from the 12-V battery.
– Pull the 12-V battery upwards and out of the battery compartment.

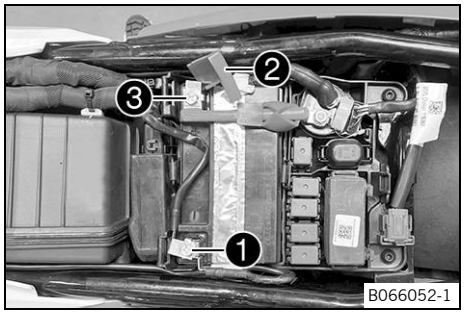
Never operate the motorcycle with a discharged 12-V battery or without a 12-V battery.

**Note**

In both cases, electrical components and safety devices can be damaged.

The vehicle will therefore no longer be roadworthy.

## 15.2 Installing the 12 V battery

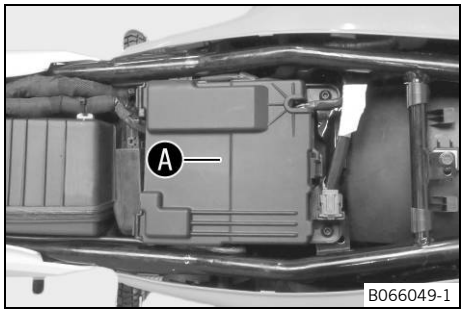



**Main work**

– Position the 12-V battery in the battery compartment.

| 12 V battery (ETZ-9-BS) (p. 147) |
|---|

– Position positive cable ❸ and mount and tighten the screw.
– Position positive terminal cover ❷.
– Position negative cable ❶ and mount and tighten the screw.




– Mount battery cover Ⓐ.

**Reworking**

– Mount the seat. (p. 76)
– Set the time and date. (p. 51)

## 15.3 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 seat. (p. 75)
– Disconnect the negative cable of the 12-V battery to avoid damage to the onboard electronics.

**Main work**


S06148-01

– Connect a charger to the 12 V battery. Connect the battery charger to the mains connection.

| |
|---|
| Charge the 12-V battery to a maximum of 10 % of the capacity specified on the battery housing. |

| |
|---|
| EU battery charger **TecMATE Optimate PRO** (A61029974044) |
| USA/CA battery charger **TecMATE Optimate PRO** (A61029974144) |
| Battery charger **TecMATE Optimate PRO** UK (A61029974244) |

**Note**

It is impossible to overcharge the 12–V battery using this battery charger.

**Note**

This battery charger is not suitable for lithium-ion batteries.

– Switch off the charger after charging and disconnect from the 12 V battery.

| | |
|---|---|
| The charging current, charging voltage, and charging time must not be exceeded. | |
| Recharge the 12 V battery regularly when the motorcycle is not being used. | 3 months |
| If the 12 V battery is depleted from starting the vehicle repeatedly, the battery must be charged immediately. | |

– Position the negative cable and mount and tighten the screw.

**Reworking**

– Mount the seat. (p. 76)
– Set the time and date. (p. 51)

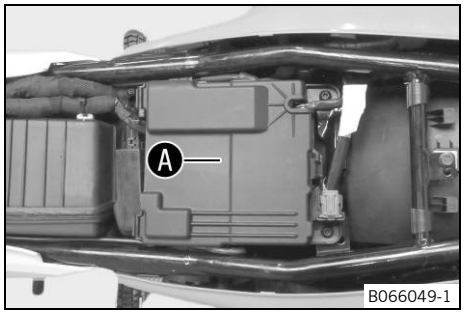
## 15.4 Changing the main fuse

**WARNING**
**Fire hazard** Incorrect fuses overload the electrical system.
– Use only fuses with the prescribed amperage.
– Do not bypass or repair fuses.

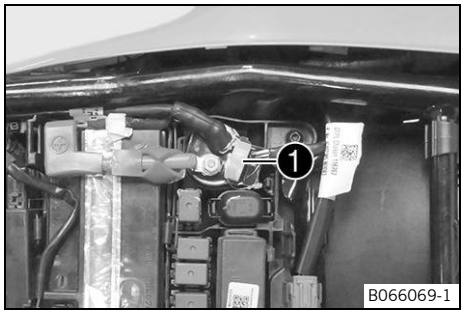
**Note**
The main fuse protects all electrical power loads of the vehicle. The main fuse is under the seat.

**Preparatory work**
– Remove the seat. (p. 75)

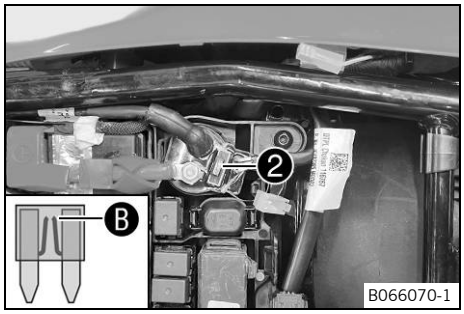
**Main work**




– Remove battery cover Ⓐ.




– Remove protection cap ❶.



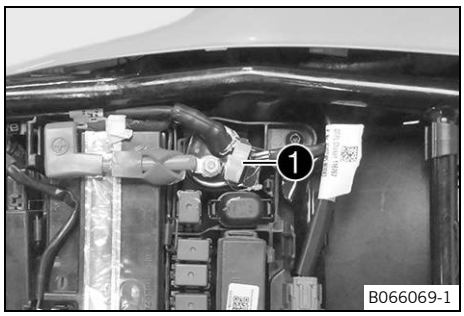

– Remove faulty main fuse ❷.

**Note**
A faulty fuse has a burned-out fuse wire Ⓑ.
A spare fuse is located in the fuse box.

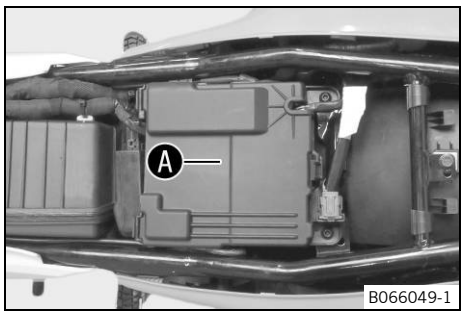
– Insert the main fuse.

| Fuse (75011088030) (p. 148) |
|---|

**Tip**
Put a spare fuse in the fuse box so that it is available if needed.




– Mount protection cap ❶.




– Install battery cover Ⓐ.

**Reworking**

– Mount the seat. (p. 76)
– Set the time and date. (p. 51)

## 15.5 Changing the ABS fuses

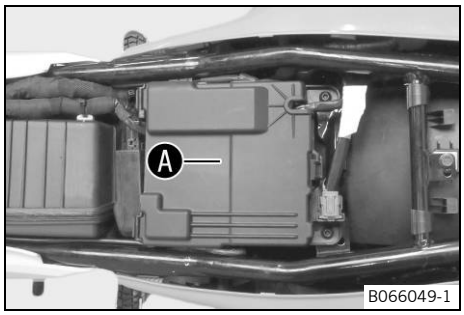
**WARNING**
**Fire hazard** Incorrect fuses overload the electrical system.
– Use only fuses with the prescribed amperage.
– Do not bypass or repair fuses.

**Note**
Two fuses for the ABS are located under the 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**

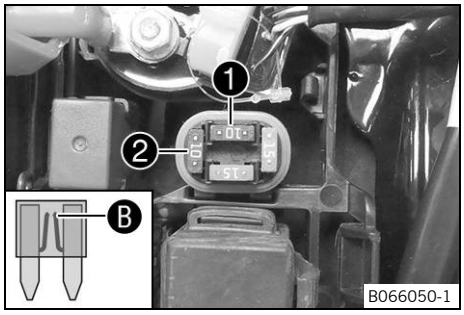
– Remove the seat. (p. 75)

**Main work**




– Remove battery cover Ⓐ.

**Changing the fuse of the ABS hydraulic unit**




– Take off the protection cap and remove fuse ❶.

**Note**
A faulty fuse has a burned-out fuse wire Ⓑ.

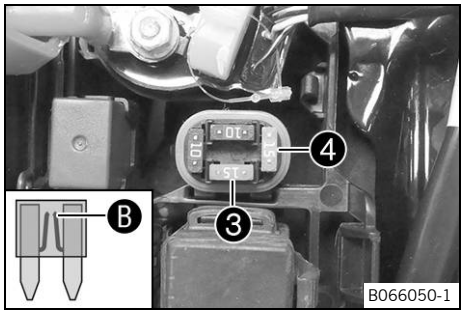
**WARNING**
**Fire hazard** Incorrect fuses overload the electrical system.
– Use only fuses with the prescribed amperage.
– Do not bypass or repair fuses.

– Insert the spare fuse with the correct rating.

Fuse (75011088010) (p. 148)

**Tip**
Insert spare fuse ❷ in the fuse box so that it is available if needed.

**Changing the fuse of the ABS return pump**




– Take off the protection cap and remove fuse ❸.

**Note**
A faulty fuse has a burned-out fuse wire Ⓑ.

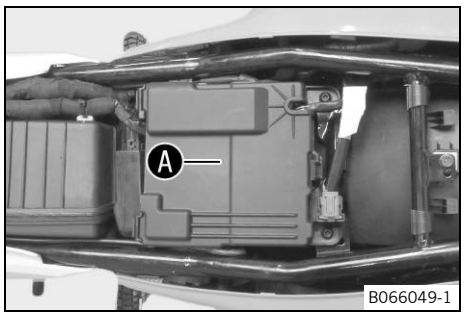
**WARNING**
**Fire hazard** Incorrect fuses overload the electrical system.
– Use only fuses with the prescribed amperage.
– Do not bypass or repair fuses.

– Insert the spare fuse with the correct rating.

Fuse (90111088025) (p. 148)

**Tip**
Insert spare fuse ❹ in the fuse box so that it is available if needed.

– Mount the protection cap.




– Install battery cover Ⓐ.

**Reworking**

– Mount the seat. (p. 76)

## 15.6 Changing the fuses of individual electrical power consumers

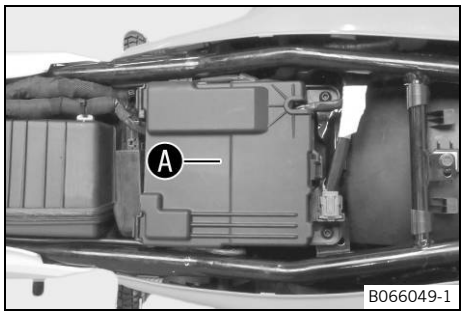
**Note**

The fuse box with the main fuse and the fuses of the individual electrical power consumers is located under the seat.

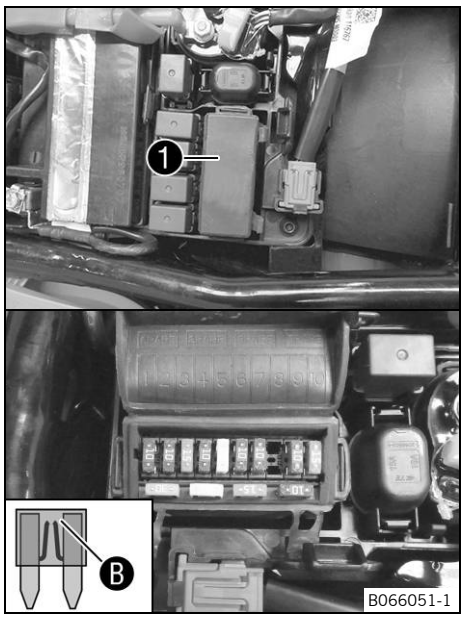
**Preparatory work**

– Remove the seat. (p. 75)

**Main work**




– Remove battery cover Ⓐ.




– Open fuse box cover 1.
– Remove the faulty fuse.

| |
|---|
| Fuse **1**- 10 A - combination instrument, brake light, high beam, tail light |
| Fuse **2** - 10 A - combination instrument |
| Fuse **3** - 15 A - main relay |
| Fuse **4** - 10 A - start auxiliary relay, horn |
| Fuse **5** - 20 A - radiator fan |
| Fuse **6** - 10 A - headlight unit, parking light, license plate lamp |
| Fuse **7** - 10 A - engine control unit, ABS control unit, Connectivity Unit |
| Fuse **8** - not assigned |
| Fuse **9** - 10 A - permanent positive for accessories (ACC1) |
| Fuse **10** - 10 A - ignition positive for accessories (ACC2), USB |
| Fuse **SPARE** - 10 A/15 A/20 A/30 A - spare fuses |

**Note**
A faulty fuse has a burned-out fuse wire B.

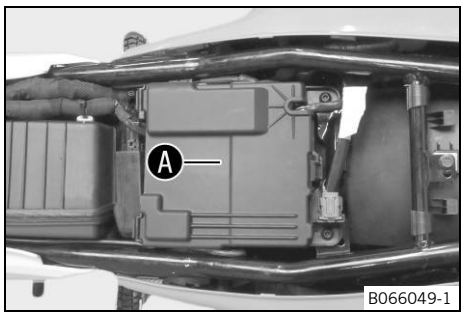
**WARNING**
**Fire hazard** Incorrect fuses overload the electrical system.
– Use only fuses with the prescribed amperage.
– Do not bypass or repair fuses.

– Insert the spare fuse with the correct rating.

| |
|---|
| Fuse (75011088010) (p. 148) |
| Fuse (75011088015) (p. 148) |
| Fuse (75011088020) (p. 148) |
| Fuse (75011088030) (p. 148) |

**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 1.

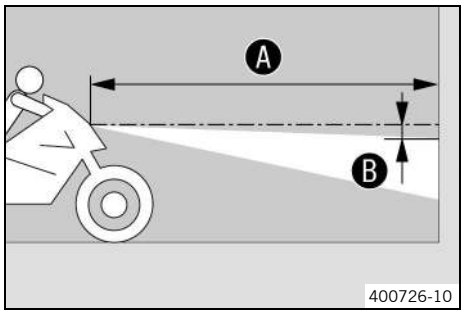



– Install battery cover A.

**Reworking**

– Mount the seat. (p. 76)

## 15.7 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<br>(2.0 in) |

– Position the vehicle upright at distance Ⓐ from the wall and switch on the low beam.

| | |
|---|---|
| Distance Ⓐ | 5 m<br>(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.

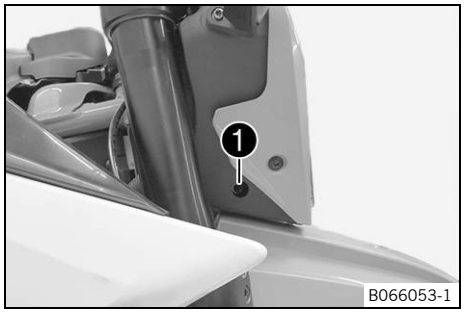
» If the boundary between light and dark does not meet specifications:
– Adjust headlight range. (p. 108)

## 15.8 Adjusting the headlight range

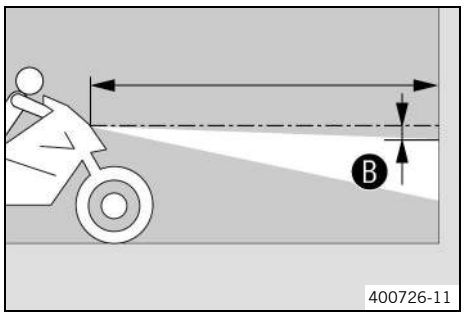
**Preparatory work**

– Check the headlight setting. (p. 108)

**Main work**




– Loosen screw ❶.

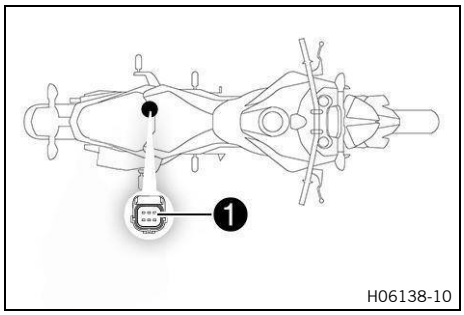



– Set the headlight to marking B.

The light-dark boundary must lie exactly on lower marking B when the motorcycle is ready to operate with the rider mounted along with any luggage and a passenger if applicable.

– Tighten screw 1.

## 15.9 Diagnostic connector




Diagnostics connector 1 is located under the seat.

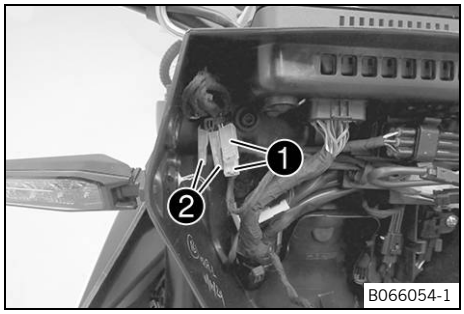
A diagnostic adapter for connection to a cross-manufacturer diagnostic interface has been connected at the factory.

**Note**

Unplug the diagnostics adapter to use the diagnostic tool.

Following completion of the diagnosis, plug the diagnostics adapter back in.

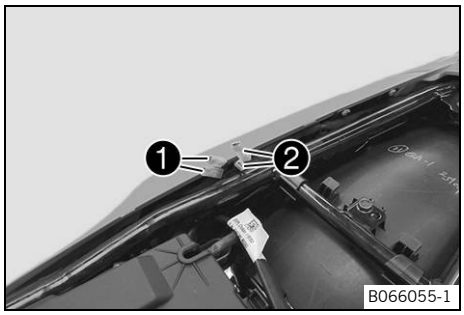
## 15.10 Front ACC1 and ACC2




**Installation location**

- The ACC1 1 and ACC2 2 power supplies are located behind the headlight mask.

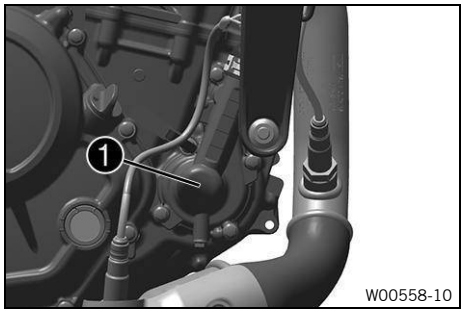
## 15.11 Rear ACC1 and ACC2



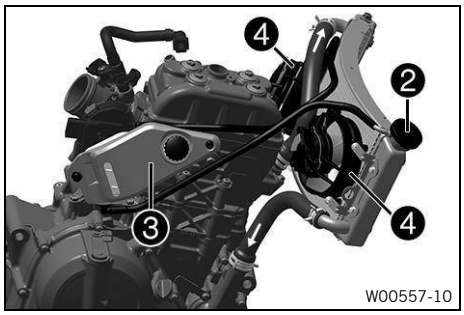

**Installation location**

- The ACC1 1 and ACC2 2 power supplies are located at the rear below the seat.

## 16.1 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.




The coolant is cooled by the air stream and two radiator fans ❹, which are activated at high temperature.
The lower the vehicle speed, the lower the cooling effect. Dirty cooling fins also reduce the cooling effect.

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

## 16.2 Checking the frost protection and coolant level

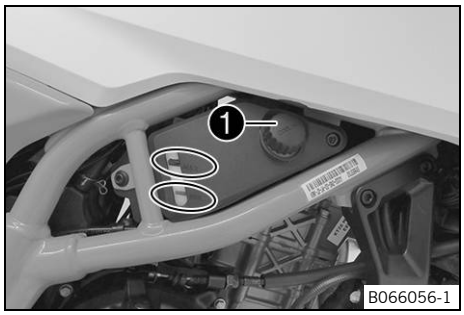
**WARNING**
**Health hazard** Coolant is harmful to health.
- Keep coolant out of the reach of children.
- Do not allow coolant to come into contact with skin, eyes, or clothing.
- Consult a doctor immediately if coolant has been ingested.
- Rinse the affected area immediately with plenty of water in 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 seat. (p. 75)
- Remove the right side cover. (p. 80)
- Remove right fuel tank cover. (p. 81)

**Main work**




– Stand the motorcycle upright on a level surface.
– Remove cap ❶ of the compensating tank.
– Check the frost protection in the coolant.

| |
|---|
| −45 °C ... −25 °C<br>(−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.

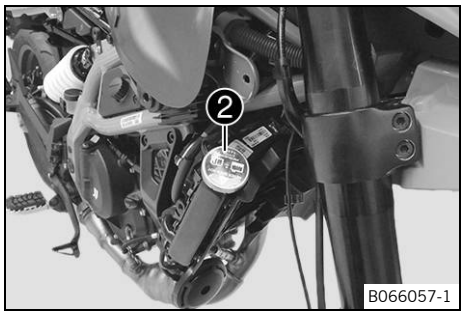
– Check the coolant level in the compensating tank.

| |
|---|
| The coolant level must be between the two markings. |

» If the coolant level does not meet the specifications:
– Correct the coolant level.

| coolant | |
|---|---|
| Coolant (p. 146)<br>Antifreeze protection to at least: −25 °C (−13.0 °F) | 1 l<br>(0.3 liq. $gal_{US}$) |

– Mount the cap of the compensating tank.




– Remove radiator cap ❷.
– Check the frost protection in the coolant.

| |
|---|
| −45 °C ... −25 °C<br>(−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 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.

| coolant | |
|---|---|
| Coolant (p. 146)<br>Antifreeze protection to at least: −25 °C (−13.0 °F) | 1 l<br>(0.3 liq. $gal_{US}$) |

» If you had to add more coolant than the specified amount:
> 0.20 l
(> 0.053 liq. $gal_{US}$)
– Fill/bleed the cooling system. (p. 113)

– Mount the radiator cap.

**Reworking**

– Install the right fuel tank cover. (p. 82)
– Install the right side cover. (p. 81)
– Mount the seat. (p. 76)

## 16.3 Checking the 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.

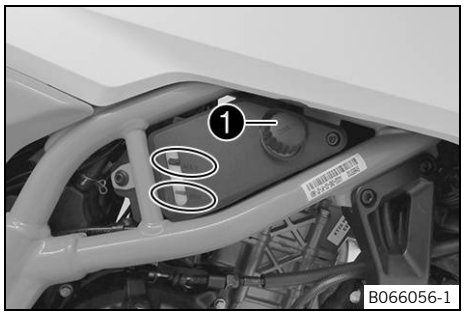
- Do not open the radiator, the radiator hoses, or other cooling system components if the engine or the cooling system are at operating temperature.
- Allow the cooling system and the engine to cool down before you open the radiator, the radiator hoses, or other components of the cooling system.
- In the event of scalding, rinse the area affected immediately with lukewarm water.

Condition: The engine is cold

**Preparatory work**

- Remove the seat. (p. 75)
- Remove the right side cover. (p. 80)
- Remove right fuel tank cover. (p. 81)

**Main work**

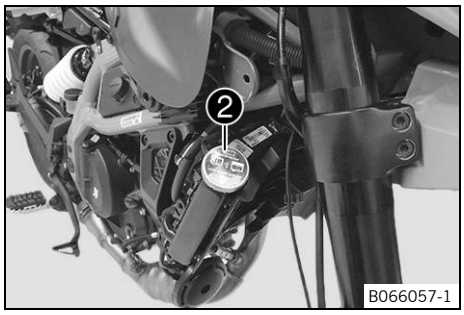



- Stand the motorcycle upright on a level surface.
- Check the coolant level in compensating tank ❶.

| The coolant level must be between the two markings. |
|---|

» If the coolant level does not meet the specifications:
  - Correct the coolant level.

| coolant | |
|---|---|
| Coolant (p. 146)<br>Antifreeze protection to at least: −25 °C (−13.0 °F) | 1 l<br>(0.3 liq. $gal_{US}$) |




- Remove radiator cap ❷ and 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:
  > 0.20 l
  (> 0.053 liq. $gal_{US}$)
  - Fill/bleed the cooling system. (p. 113)

- Mount the radiator cap.

**Reworking**

- Install the right fuel tank cover. (p. 82)
- Install the right side cover. (p. 81)
- Mount the seat. (p. 76)

## 16.4 Draining the coolant

**WARNING**

**Health hazard** Coolant is harmful to health.

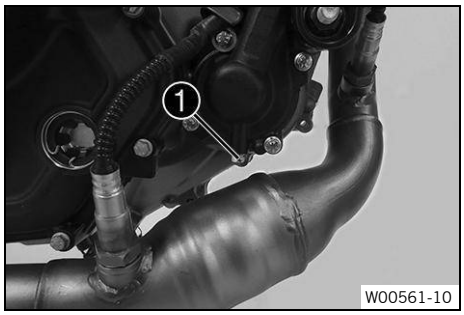
- Keep coolant out of the reach of children.
- Do not allow coolant to come into contact with skin, eyes, or clothing.
- Consult a doctor immediately if coolant has been ingested.
- Rinse the affected area immediately with plenty of water in the event of contact with skin.
- Rinse eyes thoroughly with 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 seal 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 | |
|---|---|
| M6 | 11 Nm<br>(8.1 ft·lb$_f$)<br>**Loctite® 243** |

## 16.5 Filling/bleeding the cooling system

**WARNING**

**Health hazard** Coolant is harmful to health.

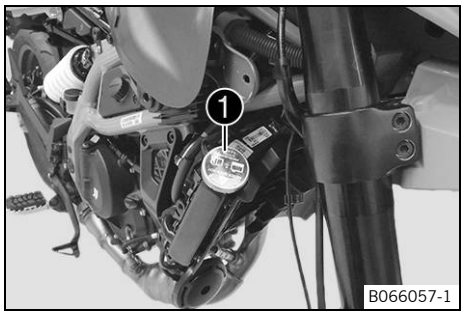
- Keep coolant out of the reach of children.
- Do not allow coolant to come into contact with skin, eyes, or clothing.
- Consult a doctor immediately if coolant has been ingested.
- Rinse the affected area immediately with plenty of water in the event of contact with skin.
- Rinse eyes thoroughly with 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.

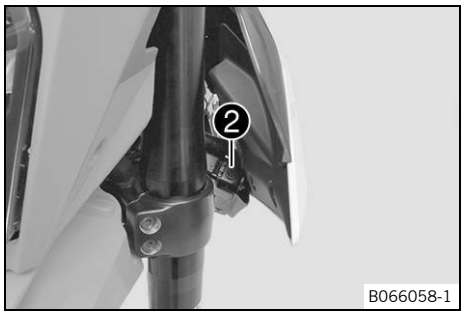
**Preparatory work**

– Remove the seat. (p. 75)
– Remove the right side cover. (p. 80)
– Remove right fuel tank cover. (p. 81)

**Main work**




– Remove radiator cap ❶.




– Loosen bleeder screw ❷.

| |
|---|
| 3 turns<br>(1,080°) |

– Tilt the vehicle slightly to the right.
– Pour in the coolant until it emerges without bubbles at the bleeder screw, and then mount and tighten the bleeder screw immediately.

| coolant | |
|---|---|
| Coolant (p. 146)<br>Antifreeze protection to at least: −25 °C (−13.0 °F) | 1 l<br>(0.3 liq. $gal_{US}$) |

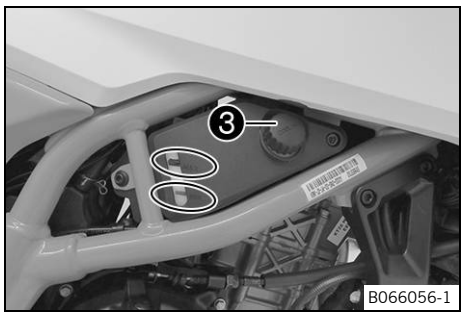
– Completely fill the radiator with coolant.
– Mount the radiator cap.
– Rest the vehicle on the side stand.

**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 allow it to warm 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.
– Remove cap ❸ of the compensating tank and top up the coolant level up to the **MAX** marking.
– Mount the cap of the compensating tank.

**Reworking**

– Install the right fuel tank cover. (p. 82)
– Install the right side cover. (p. 81)
– Mount the seat. (p. 76)

## 16.6 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**

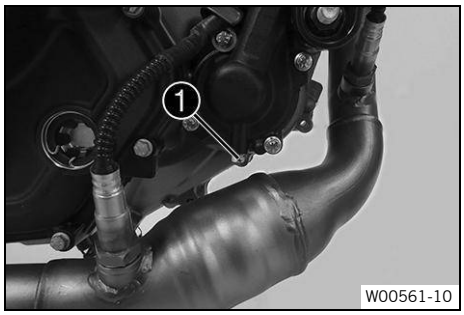
**Danger of scalding** The coolant heats up and is under high pressure when the vehicle is operated.

– 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

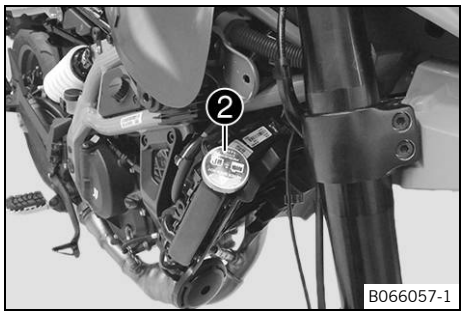
**Preparatory work**

– Remove the seat. (p. 75)
– Remove the right side cover. (p. 80)
– Remove right fuel tank cover. (p. 81)



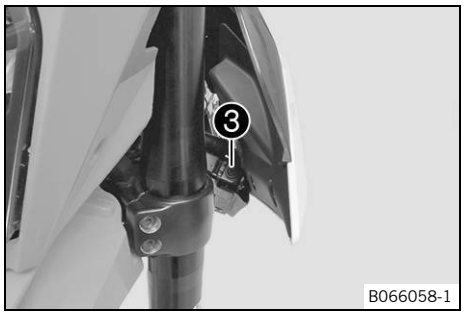

**Main work**

– Stand the motorcycle upright.
– Position an appropriate container under the engine.
– Remove screw ❶ with the seal ring.




– Remove radiator cap ❷.
– Completely drain the coolant.
– Mount screw ❶ with the new sealing ring and tighten.

| Screw plug, water pump drain hole | |
|---|---|
| M6 | 11 Nm<br>(8.1 ft·lb$_f$)<br>**Loctite® 243** |




– Loosen bleeder screw ❸.

| 3 turns<br>(1,080°) |
|---|

– Tilt the vehicle slightly to the right.
– Pour in the coolant until it emerges without bubbles at the bleeder screw, and then mount and tighten the bleeder screw immediately.

| coolant | |
|---|---|
| Coolant (p. 146)<br>Antifreeze protection to at least: −25 °C (−13.0 °F) | 1 l<br>(0.3 liq. gal$_{US}$) |

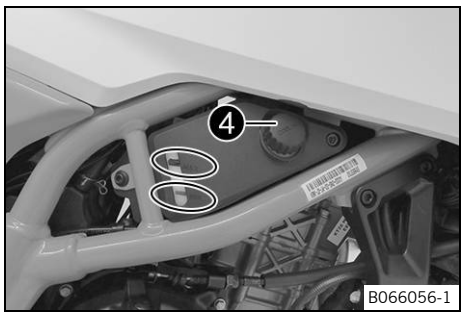
– Completely fill the radiator with coolant.
– Mount the radiator cap.
– Rest the vehicle on the side stand.

**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 allow it to warm up.



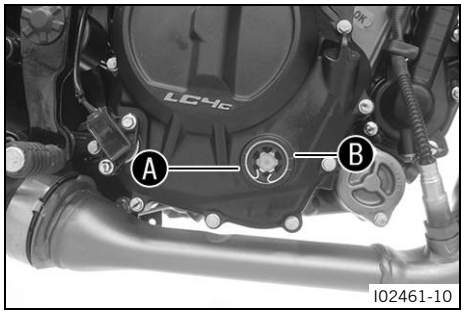

– Stop the engine and allow it to cool down.
– When the engine is cool, check the coolant level in the radiator and, if necessary, add coolant.
– Remove cap ❹ of the compensating tank and top up the coolant level up to the **MAX** marking.
– Mount the cap of the compensating tank.
– Install left tank cover in reverse order to removal.

## 17.1 Checking the engine oil level

**Note**
Oil consumption depends on the riding style and the operating conditions.

Condition: The engine is at operating temperature

**Preparatory work**
– Stand the motorcycle upright on a level surface.




**Main work**
– 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. |

» When the engine oil level is below the Ⓐ marking:
– Add engine oil. (p. 120)
» When the engine oil level is above the Ⓑ marking:
– Correct the engine oil level.

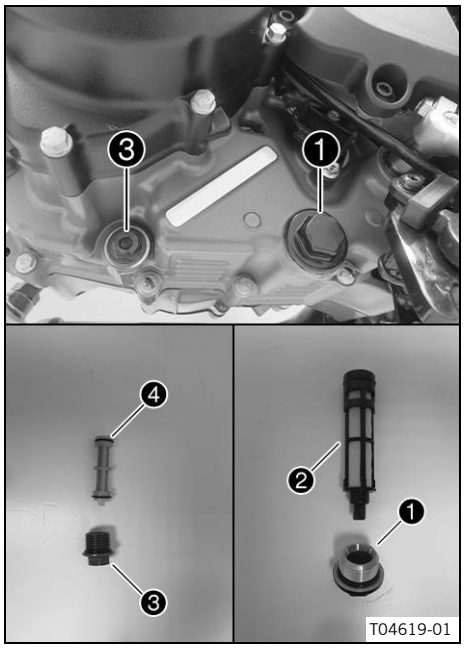
## 17.2 Changing the engine oil and oil filter, cleaning the oil screens

**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.

**Note**
Drain the engine oil while the engine is at operating temperature.

**Preparatory work**
– Stand the motorcycle on a level surface using the side stand.



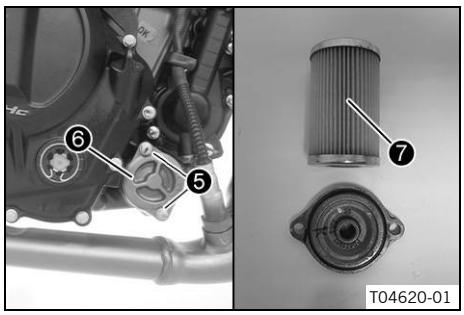

**Main work**

– Place an appropriate container under the engine.
– Remove oil drain plug ❶ with the O-ring.
– Remove oil screen ❷ with the O-ring.
– Remove screw plug ❸ with oil screen ❹.
– Allow the engine oil to drain completely.
– Thoroughly clean the oil drain plugs and oil screens.
– Position oil screen ❷ and mount and tighten oil drain plug ❶ with the O-ring.

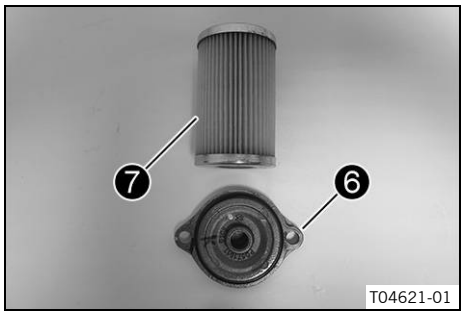
| Oil drain plug | |
|---|---|
| M24×1.5 | 12.5 Nm (9.22 ft·lb$_f$) |

– Mount and tighten screw plug ❸ with oil screen ❹ and the O-ring.

| Oil screen screw plug, small | |
|---|---|
| M17×1.5 | 11 Nm (8.1 ft·lb$_f$) |



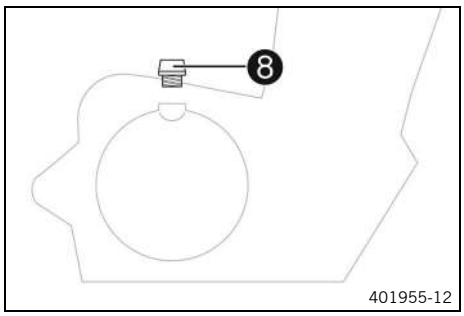

– Remove screws ❺.
– Take off oil filter cover ❻ with the O-ring.
– Pull oil filter ❼ out of the oil filter housing.
– Allow the engine oil to drain completely.
– Thoroughly clean the parts and the sealing surface.




– Insert new oil filter ❼.
– Oil the O-ring of the oil filter cover.
– Mount oil filter cover ❻.
– Mount and tighten the screws.

| Screw, oil filter cover | |
|---|---|
| M6 | 11 Nm (8.1 ft·lb$_f$) |

**Note**
Too little engine oil or poor-quality engine oil will result in premature wear of the engine.




– Remove filler plug ❽ with the O-ring, and fill up with engine oil.

| engine oil | |
|---|---|
| engine oil (SAE 5W/40) 📖 (p. 145) fully synthetic | 1.2 l (0.32 liq. $gal_{US}$) |

– Mount and tighten the oil plug together with the 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.

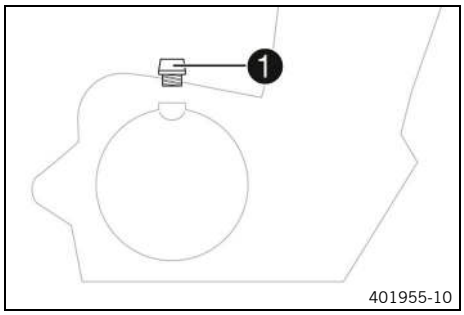
**Reworking**

– Check the engine oil level. 📖 (p. 118)

## 17.3 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 ❶ with the O-ring, and fill up with engine oil.

| engine oil (SAE 5W/40) 📖 (p. 145) 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 the oil plug together with the 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. 118)

## 18.1 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<br>(23.6 in) |

**NOTE**

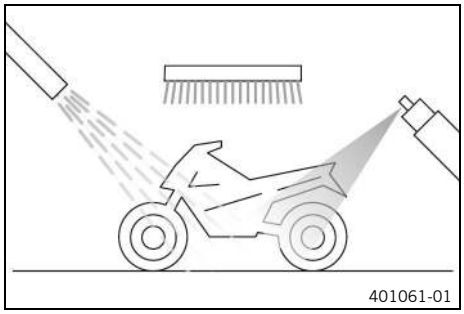
**Environmental hazard** Hazardous substances cause environmental damage.

– 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 motorcycle; always rinse the vehicle with water first. |

| |
|---|
| Environmentally neutral universal cleaning agent<br>(p. 149) |

**Note**

Use warm water containing standard motorcycle cleaner and a soft sponge.

Clean the motorcycle with cold water if it has been used on salted roads. Warm water enhances 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.

– Push back the sleeves of the handlebar controls to allow any water that has penetrated to evaporate.
– After the motorcycle has cooled off, lubricate all moving parts and pivot points.
– Clean the chain. (p. 76)

**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. 149)

– 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. 149)

– Treat all plastic parts and powder-coated parts with a mild cleaning and care product.

Cleaning agents for plastics, glass, lacquers, metals, windshields and visors (p. 149)

– Lubricate the ignition and steering lock.

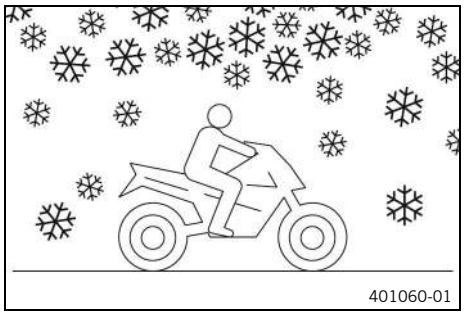
Universal oil spray (p. 145)

## 18.2 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, you must expect salt on the roads. You should therefore take precautions against aggressive road salt.


401060-01

– Clean the motorcycle. (p. 122)
– Clean the brakes.

| |
|---|
| After **EVERY** trip on salted roads, thoroughly clean the brake calipers and brake linings, after they have cooled down and without removing them, with cold water and dry them carefully. |
| 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.

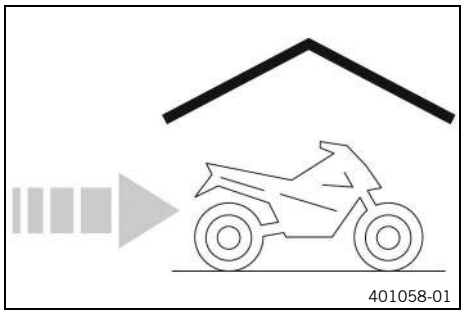
– Treat the engine, swingarm, and all other bare or zinc-plated parts (except the brake discs) with a wax-based anticorrosive.

| |
|---|
| Corrosion inhibitor must not come in contact with the brake discs as this would greatly reduce the braking force. |

– Clean the chain. (p. 76)

## 19.1 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 at the start of the season.


401058-01

– When refueling for the last time before taking the motorcycle out of service, add fuel additive.

| |
|---|
| Fuel additive (p. 144) |

– Refuel. (p. 67)

**Tip**
Fill the fuel tank completely as specified, using fuel with the lowest possible ethanol content.

– Clean the motorcycle. (p. 122)
– Change the engine oil and the oil filter, clean the oil screens. (p. 118)
– Check the frost protection and coolant level. (p. 110)
– Check the tire pressure. (p. 99)
– Remove the 12 V battery. (p. 100)
– Charge the 12 V battery.

| | |
|---|---|
| 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.

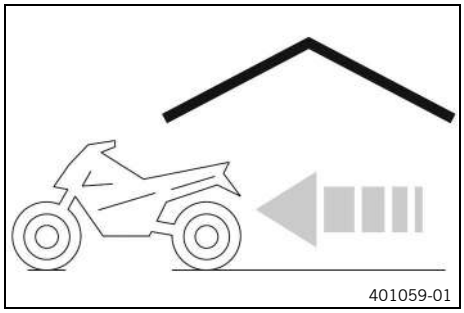
**Note**
KTM recommends jacking up the motorcycle.

– Raise the motorcycle with the rear lifting gear. (p. 73)
– Lift the motorcycle with the front lifting gear. (p. 73)

| |
|---|
| 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.

## 19.2 Preparing for use after storage




- Take the motorcycle off the front lifting gear. (p. 74)
- Remove the rear of the motorcycle from the lifting gear. (p. 73)
- Install the 12 V battery. (p. 101)
- Set the time and date. (p. 51)
- Perform checks and maintenance measures when preparing for use. (p. 59)
- Take a test ride.

## 20.1 troubleshooting

| Cause | Finding | Remedy |
|---|---|---|
| The engine does not turn over when the start button is actuated | Operating error<br>12 V battery discharged<br>Fuse **1**, **3**, **4**, or **7** is blown<br>No ground connection present on the starter motor | – Carry out the starting procedure. (p. 59)<br>– Charge the 12 V battery. (p. 101)<br>– Change the fuses of individual electrical power consumers. (p. 106)<br>– Check the ground connection. |
| The engine only turns over if the clutch lever is pulled | The vehicle is in gear<br>The vehicle is in gear and the side stand is folded out | – Shift the transmission into the neutral position.<br>– Shift the transmission into the neutral position. |
| The engine turns but does not start | Operating error<br>Quick-lock coupling not joined<br>Malfunction in the electronic fuel injection | – Carry out the starting procedure. (p. 59)<br>– Join quick-lock couplings.<br>– Read out the fault memory using the diagnostics tool. |
| Engine has too little power | Air filter is very dirty<br>Fuel filter is very dirty<br>Malfunction in the electronic fuel injection | – Change the air filter.<br>– Check the fuel pressure.<br>– Read out the fault memory using the diagnostics tool. |
| Engine overheats | Too little coolant in cooling system<br>Radiator fins very dirty<br>Foam formation in the cooling system<br>Thermostat defective<br>Fuse **5** blown<br>Defect in radiator fan system | – Check the transmission and cooling system for leaks.<br>– Check the coolant level. (p. 112)<br>– Clean the radiator fins.<br>– Drain the coolant. (p. 113)<br>– Fill/bleed the cooling system. (p. 113)<br>– Check the thermostat.<br>– Change the fuses of individual electrical power consumers. (p. 106)<br>– Check the radiator fan system. |
| The malfunction indicator light lights up yellow | Malfunction in the electronic fuel injection | – Read out the fault memory using the diagnostics tool. |
| The engine dies during the trip | Lack of fuel<br>Fuse **1**, **3**, **4**, or **7** is blown | – Refuel. (p. 67)<br>– Change the fuses of individual electrical power consumers. (p. 106) |
| The ABS warning light lights up | ABS fuse blown<br>Large difference in wheel speeds of the front and rear wheels<br>Malfunction in ABS | – Change the ABS fuses. (p. 104)<br>– Stop the vehicle, switch off the ignition, and start it again.<br>– Read out the ABS fault memory using the diagnostic tool. |
| High oil consumption | Engine vent hose bent<br>The engine oil level is too high<br>The engine oil is too thin (low viscosity) | – Route the vent hose without bends or change it if necessary.<br>– Check the engine oil level. (p. 118) |

| Cause | Finding | Remedy |
|---|---|---|
| | | – Change the engine oil and the oil filter, clean the oil screens. (p. 118) |
| Headlight and position light are not functioning | Fuse **6** blown | – Change the fuses of individual electrical power consumers. (p. 106) |
| Turn signal, brake light, and horn are not functional | Fuse **4** or **6** blown | – Change the fuses of individual electrical power consumers. (p. 106) |
| Time is not displayed or not correctly displayed | Fuse **2** blown | – Change the fuses of individual electrical power consumers. (p. 106) |
| 12 V battery discharged | Ignition was not switched off when vehicle was parked<br>The 12-V battery is not being charged by the alternator | – Charge the 12 V battery. (p. 101)<br>– Check the charging voltage.<br>– Check the open-circuit current. |
| The dashboard shows nothing on the display | Fuse **2** blown | – Change the fuses of individual electrical power consumers. (p. 106) |
| Speedometer in combination instrument is not functioning | Speedometer wiring harness is damaged or plug-in connector is oxidized | – Check the wiring harness and plug-in connector. |

## 21.1 Engine

### 21.1.1 Technical data - engine

| | |
|---|---|
| Design | 1-cylinder 4-stroke engine, water-cooled |
| Displacement | 125 cm³<br>(7.63 in³) |
| Stroke | 47.3 mm<br>(1.862 in) |
| Bore | 58 mm<br>(2.28 in) |
| Compression ratio | 12,3:1 |
| Control | SOHC, four valves controlled via rocker arm, chain drive |
| Valve diameter, intake | 22.5 mm<br>(0.886 in) |
| Valve diameter, exhaust | 19 mm<br>(0.75 in) |
| Valve clearance, intake, cold | 0.08 mm ... 0.12 mm<br>(0.0031 in ... 0.0047 in) |
| Valve clearance, exhaust, cold | 0.13 mm ... 0.17 mm<br>(0.0051 in ... 0.0067 in) |
| Crankshaft bearing | Slide bearing |
| Big (bottom) end bearing | Slide bearing |
| Piston | Cast aluminum |
| Piston rings | One compression ring, one tapered compression piston ring, one oil scraper ring |
| Engine lubrication | Pressure circulation lubrication |
| Primary transmission | 23:80 |
| Clutch | Clutch in oil bath/mechanically activated |
| Transmission | 6 speed transmission |
| Gear ratios | |
| 1st gear | 11:33 |
| 2nd gear | 15:29 |
| 3rd Gear | 18:26 |
| 4th Gear | 21:24 |
| 5th Gear | 23:22 |
| 6th gear | 24:21 |
| Mixture formation | Electronic fuel injection, 33 mm |
| Ignition system | Contactless controlled fully electronic ignition with digital ignition adjustment |
| Alternator | • 12 V<br>• 230 W (0.308 hp) |
| Spark plug | **Champion REK6ZMC** |
| Plug gap of spark plug | 1 mm<br>(0.04 in) |

| | |
|---|---|
| Cooling | Liquid cooling, permanent circulation of coolant by water pump |
| Idle speed | 1,550 rpm ... 1,650 rpm<br>(25.83 Hz ... 27.50 Hz) |
| Starting aid | Starter motor |

#### 21.1.1.1 Coolant capacity

| coolant | |
|---|---|
| Coolant (p. 146)<br>Antifreeze protection to at least: −25 °C (−13.0 °F) | 1 l<br>(0.3 liq. $gal_{US}$) |

#### 21.1.1.2 Filling quantity of engine oil

| engine oil | |
|---|---|
| engine oil (SAE 5W/40) (p. 145)<br>fully synthetic | 1.2 l<br>(0.32 liq. $gal_{US}$) |

## 21.2 Chassis

### 21.2.1 Technical data - chassis

| | |
|---|---|
| Frame | Lattice frame of steel tubes, powder-coated |
| Brake system | |
| front | Disc brake with four-pot brake caliper |
| rear | Disc brake with single-pot brake caliper, floating |
| Suspension travel: | |
| front | 230 mm<br>(9.06 in) |
| rear | 230 mm<br>(9.06 in) |
| Brake discs - diameter | |
| front | 320 mm<br>(12.60 in) |
| rear | 240 mm<br>(9.45 in) |
| Brake disc wear limit | |
| front | 4.5 mm<br>(0.177 in) |
| rear | 4.5 mm<br>(0.177 in) |
| Tire pressure when solo | |
| front | 2.0 bar<br>(29.0 psi) |
| rear | 2.0 bar<br>(29.0 psi) |
| Tire pressure with passenger / full payload | |

| | |
|---|---|
| front | 2.0 bar<br>(29.0 psi) |
| rear | 2.2 bar<br>(31.9 psi) |
| Final drive | 14:48<br>**Note**<br>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 | 63.1°<br>(1.101 rad) |
| Wheelbase | 1,453 mm<br>(57.20 in) |
| Seat Height unloaded | 861 mm<br>(33.90 in) |
| Ground clearance unloaded | 272 mm<br>(10.71 in) |
| Dry weight | 145.6 kg<br>(320.99 lb) |
| Maximum permissible front axle load | 135 kg<br>(297.6 lb) |
| Maximum permissible rear axle load | 220 kg<br>(485.0 lb) |
| Maximum permissible total weight | 355 kg<br>(782.6 lb) |

### 21.2.2 Technical data - tires

| Tire front | Rear tire |
|---|---|
| **110/70 R 17 M/C 54W TL**<br>MRF Steel radial | **150/60 R 17 M/C 66W TL**<br>MRF Steel radial |
| 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. | |

### 21.2.3 Fuel capacity

| | |
|---|---|
| Total fuel tank capacity, approx. | |
| Super unleaded (ROZ 95) (p. 144) | 9 l<br>(2.4 liq. $gal_{US}$) |
| Fuel reserve, approx. | |
| Super unleaded (ROZ 95) (p. 144) | 2 l<br>(0.5 liq. $gal_{US}$) |

## 21.3 Electrics

### 21.3.1 Battery

| | | |
|---|---|---|
| 12 V battery | ETZ-9-BS | Battery voltage: 12 V<br>Nominal capacity: 8 Ah<br>Maintenance-free |

### 21.3.2 Fuses

| | | |
|---|---|---|
| Fuse | 75011088010 | 10 A |
| Fuse | 75011088015 | 15 A |
| Fuse | 90111088025 | 25 A |
| Fuse | 75011088030 | 30 A |

### 21.3.3 Lamps

| | |
|---|---|
| Headlight | LED |
| Parking light | LED |
| Dashboard illumination and indicator lights | LED |
| Turn signal | LED |
| Brake/tail light | LED |
| License plate lighting | LED |

## 21.4 Fork

### 21.4.1 Technical data - fork

| | |
|---|---|
| Fork part number | A602C121Y201102 |

| | |
|---|---|
| Fork length | 858 mm<br>(33.78 in) |
| Compression damping | |
| Standard | 10 clicks |
| Rebound damping | |
| Standard | 10 clicks |
| Spring rate | |
| Medium (standard) | 5.5 N/mm<br>(31.41 $lb_f$/in) |
| Spring length with preload spacer(s) | 459 mm<br>(18.07 in) |

### 21.4.2 Fork capacity

| | |
|---|---|
| Fork oil per fork leg | |
| Fork oil (SAE 5) (p. 145) | 430 ±5 ml<br>(14.54 ±0.17 fl. $oz_{US}$) |

## 21.5 Shock absorber

### 21.5.1 Technical data - shock absorber

| | |
|---|---|
| Shock absorber part number | A602C421Y313102 |

| | |
|---|---|
| Rebound damping | |
| Standard | 10 clicks |
| Preload | |
| Standard | 10 mm<br>(0.39 in) |
| Static sag | 16.5 mm<br>(0.650 in) |
| Riding sag | 60 mm<br>(2.36 in) |
| Installation position | 347 mm<br>(13.66 in) |
| Spring length | 219.5 mm<br>(8.642 in) |

### 21.5.2 Capacity of shock absorber oil

| | |
|---|---|
| Shock absorber oil | |
| Shock absorber oil (50180751S1) (SAE 2.5)<br>(p. 145) | Fill to the maximum mark |

## 21.6 Tightening torque

### 21.6.1 engine tightening torques

| | | |
|---|---|---|
| Screw, crankshaft position sensor | M5×0.8 | 5.5 Nm<br>(4.06 ft·lb$_f$)<br>**Loctite® 243** |
| Oil spray jet | M5×0.8 | 5.5 Nm<br>(4.06 ft·lb$_f$)<br>**Loctite® 243** |
| Oil nozzle | M5×0.8 | 5.5 Nm<br>(4.06 ft·lb$_f$)<br>**Loctite® 243** |
| Screw, shift shaft sensor | M5×0.8 | 6 Nm<br>(4.4 ft·lb$_f$)<br>**Loctite® 243** |
| Stator screw | M5×0.8 | 7.5 Nm<br>(5.53 ft·lb$_f$)<br>**Loctite® 243** |
| Screw, retaining bracket, stator cable | M5×0.8 | 5.5 Nm<br>(4.06 ft·lb$_f$)<br>**Loctite® 243** |

| | |
|---|---|
| Screw, gear position sensor<br>M5 | 5.5 Nm<br>(4.06 ft·lb$_f$)<br>**Loctite® 243** |
| Screw, oil filter cover<br>M6 | 9 Nm<br>(6.6 ft·lb$_f$) |
| Screw plug, water pump drain hole<br>M6 | 11 Nm<br>(8.1 ft·lb$_f$)<br>**Loctite® 243** |
| Nut, water pump impeller<br>M6 | 8 Nm<br>(5.9 ft·lb$_f$)<br>**Loctite® 243** |
| TDC locking screw, balancer shaft<br>M6 | 11 Nm<br>(8.1 ft·lb$_f$)<br>**Loctite® 243** |
| Screw, retaining bracket<br>M6 | 11 Nm<br>(8.1 ft·lb$_f$)<br>**Loctite® 243** |
| Oil nozzle<br>M6×1 | 5.5 Nm<br>(4.06 ft·lb$_f$)<br>**Loctite® 243** |
| Screw, thermostat<br>M6 | 11 Nm<br>(8.1 ft·lb$_f$) |
| Screw, release for timing chain tensioner<br>M6 | 8 Nm<br>(5.9 ft·lb$_f$) |
| Chain shaft screw, cylinder head<br>M6 | 11 Nm<br>(8.1 ft·lb$_f$) |
| Screw, inlet sleeve<br>M6 | 9 Nm<br>(6.6 ft·lb$_f$) |
| Screw, clutch cover<br>M6 | 11 Nm<br>(8.1 ft·lb$_f$) |
| Screw, camshaft bearing bridge<br>M6 | 10 Nm<br>(7.4 ft·lb$_f$) |
| Screw, valve cover<br>M6 | 11 Nm<br>(8.1 ft·lb$_f$) |
| Screw, front sprocket plate<br>M6 | 5.5 Nm<br>(4.06 ft·lb$_f$)<br>**Loctite® 243** |
| Screw, engine case<br>M6×35 | 11 Nm<br>(8.1 ft·lb$_f$)<br>**Loctite® 243** |
| Screw, engine case<br>M6×70 | 11 Nm<br>(8.1 ft·lb$_f$)<br>**Loctite® 243** |
| Screw, engine case<br>M6×85 | 11 Nm<br>(8.1 ft·lb$_f$)<br>**Loctite® 243** |

| | | |
|---|---|---|
| Screw, freewheel gear retaining bracket<br>M6 | | 11 Nm<br>(8.1 ft·lb$_f$)<br>**Loctite® 243** |
| Screw, bearing retainer<br>M6 | | 11 Nm<br>(8.1 ft·lb$_f$)<br>**Loctite® 243** |
| Screw, ignition cover<br>M6 | | 11 Nm<br>(8.1 ft·lb$_f$) |
| Screw, timing chain tensioning rail<br>M6 | | 11 Nm<br>(8.1 ft·lb$_f$)<br>**Loctite® 243** |
| Shift star screw<br>M6 | | 11 Nm<br>(8.1 ft·lb$_f$)<br>**Loctite® 243** |
| Screw, engine vent plate<br>M6 | | 11 Nm<br>(8.1 ft·lb$_f$)<br>**Loctite® 243** |
| Detent arm screw<br>M6 | | 11 Nm<br>(8.1 ft·lb$_f$)<br>**Loctite® 243** |
| Screw, water pump cover<br>M6 | | 11 Nm<br>(8.1 ft·lb$_f$) |
| Screw, camshaft gear wheel<br>M6 | | 11 Nm<br>(8.1 ft·lb$_f$)<br>**Loctite® 243** |
| Screw, timing chain tensioner<br>M6 | | 11 Nm<br>(8.1 ft·lb$_f$) |
| Screw, oil pump<br>M6 | | 11 Nm<br>(8.1 ft·lb$_f$)<br>**Loctite® 243** |
| Screw, starter motor<br>M6 | | 11 Nm<br>(8.1 ft·lb$_f$) |
| Front sprocket screw<br>M6 | | 11 Nm<br>(8.1 ft·lb$_f$) |
| Screw, conrod bearing<br>M7×1<br>Long-life grease | 1. | 9.8 Nm<br>(7.23 ft·lb$_f$) |
| | 2. | 60°<br>(1.05 rad) |
| TDC locking screw, crankshaft<br>M8 | | 15.5 Nm<br>(11.43 ft·lb$_f$)<br>**Loctite® 243** |
| Stud, exhaust flange<br>M8 | | 21 Nm<br>(15.5 ft·lb$_f$) |
| Exhaust flange nut<br>M8 | | 21 Nm<br>(15.5 ft·lb$_f$) |
| Screw, spring thrust bearing of the shift shaft<br>M8×1.25 | | 20.5 Nm<br>(15.12 ft·lb$_f$)<br>**Loctite® 243** |

| | |
|---|---|
| Coolant temperature sensor<br>M10×1.5 | 13 Nm<br>(9.6 ft·lb$_f$) |
| Cylinder head screw<br>M10×1.25 | 43 Nm<br>(31.7 ft·lb$_f$)<br>Long-life grease |
| Oil pressure sensor<br>M10×1 | 12.5 Nm<br>(9.22 ft·lb$_f$) |
| Spark plug<br>M10×1 | 11 Nm<br>(8.1 ft·lb$_f$) |
| Screw, rotor<br>M12×1.5 | 119 Nm<br>(87.8 ft·lb$_f$) |
| Nut, inner clutch hub<br>M14LH×1 | 66 Nm<br>(48.7 ft·lb$_f$)<br>**Loctite® 243** |
| Screw plug, cam lever shaft<br>M14×1 | 9.5 Nm<br>(7.01 ft·lb$_f$)<br>**Loctite® 243** |
| Nut, primary gear wheel/timing chain sprocket<br>M16×1.5 | 109 Nm<br>(80.4 ft·lb$_f$)<br>**Loctite® 243** |
| Oil screen screw plug, small<br>M17×1.5 | 11 Nm<br>(8.1 ft·lb$_f$) |
| Screw plug, alternator cover TDC<br>M18×1.5 | 9 Nm<br>(6.6 ft·lb$_f$) |
| Oil drain plug<br>M24×1.5 | 12.5 Nm<br>(9.22 ft·lb$_f$) |
| Screw plug, alternator cover<br>M24×1.5 | 11 Nm<br>(8.1 ft·lb$_f$) |

### 21.6.2 Chassis tightening torques

| | |
|---|---|
| Oxygen sensor | 49 Nm<br>(36.1 ft·lb$_f$) |
| Remaining screws on chassis<br>M4 | 4 Nm<br>(3.0 ft·lb$_f$) |
| Screw, fuel tank lid<br>M5 | 5 Nm<br>(3.7 ft·lb$_f$) |
| Remaining screws on chassis<br>M5 | 5 Nm<br>(3.7 ft·lb$_f$) |
| Screw, tail light<br>M5 | 5 Nm<br>(3.7 ft·lb$_f$) |
| Screw, dashboard bracket on dashboard<br>M5 | 4 Nm<br>(3.0 ft·lb$_f$) |
| Screw, connector support on dashboard bracket<br>M5 | 7 Nm<br>(5.2 ft·lb$_f$) |
| Screw, turn signal on turn signal bracket<br>M5 | 6 Nm<br>(4.4 ft·lb$_f$) |

| | |
|---|---|
| Screw, phonic wheel on front wheel<br>M5×8 | 7 Nm<br>(5.2 ft·lb$_f$) |
| Screw, phonic wheel on rear wheel<br>M5×8 | 7 Nm<br>(5.2 ft·lb$_f$) |
| Spoke nipple<br>M5 | 4.5 Nm<br>(3.32 ft·lb$_f$) |
| Screw, side stand sensor<br>M6 | 5 Nm<br>(3.7 ft·lb$_f$) |
| Screw, bell crank shift lever<br>M6 | 16 Nm<br>(11.8 ft·lb$_f$) |
| Screw, chain slider guard<br>M6 | 9 Nm<br>(6.6 ft·lb$_f$) |
| Screw, brake fluid reservoir for rear brake<br>M6 | 7 Nm<br>(5.2 ft·lb$_f$) |
| Screw, radiator holder<br>M6 | 6 Nm<br>(4.4 ft·lb$_f$) |
| Screw, ignition coil<br>M6 | 8 Nm<br>(5.9 ft·lb$_f$) |
| Screw, front fender on triple clamp<br>M6 | 6 Nm<br>(4.4 ft·lb$_f$) |
| Screw, rear fender on triple clamp<br>M6 | 6 Nm<br>(4.4 ft·lb$_f$) |
| Screw, fuel tank<br>M6 | 11 Nm<br>(8.1 ft·lb$_f$) |
| Remaining screws on chassis<br>M6 | 9 Nm<br>(6.6 ft·lb$_f$) |
| Remaining nuts on chassis<br>M6 | 15 Nm<br>(11.1 ft·lb$_f$) |
| Screw, top main silencer<br>M6 | 11 Nm<br>(8.1 ft·lb$_f$) |
| Screw, ABS modulator on modulator bracket<br>M6×9 | 7 Nm<br>(5.2 ft·lb$_f$) |
| Screw, ABS modulator bracket on silent block<br>M6×8 | 7 Nm<br>(5.2 ft·lb$_f$) |
| Screw, air filter box<br>M6 | 7 Nm<br>(5.2 ft·lb$_f$) |
| Screw, ABS module retaining bracket on frame<br>M6 | 7 Nm<br>(5.2 ft·lb$_f$) |
| Screw, ignition lock (tamper-proof screw)<br>M6 | 10 Nm<br>(7.4 ft·lb$_f$) |
| Fuel tank cover screw<br>M6 | 6 Nm<br>(4.4 ft·lb$_f$) |
| Fuel tank cover screw<br>M6 | 7 Nm<br>(5.2 ft·lb$_f$) |
| Screw, radiator shield<br>M6 | 8 Nm<br>(5.9 ft·lb$_f$) |

| | |
|---|---|
| Screw, front sprocket cover M6×12 | 5 Nm (3.7 ft·lb$_f$) |
| Screw, front sprocket cover M6×16 | 11 Nm (8.1 ft·lb$_f$) |
| Screw, frame cover on frame M6×9 | 6 Nm (4.4 ft·lb$_f$) |
| Screw, air intake cover on frame M6×9 | 6 Nm (4.4 ft·lb$_f$) |
| Screw, snorkel on frame M6×12 | 7 Nm (5.2 ft·lb$_f$) |
| Screw, radiator tank to front frame M6×25 | 8 Nm (5.9 ft·lb$_f$) |
| Screw, radiator tank to rear frame M6×16 | 6 Nm (4.4 ft·lb$_f$) |
| Screw, regulator rectifier on frame M6×28 | 7 Nm (5.2 ft·lb$_f$) |
| Screw, seat lock on subframe M6×20 | 7 Nm (5.2 ft·lb$_f$) |
| Screw, license plate holder on subframe M6×15 | 7 Nm (5.2 ft·lb$_f$) |
| Screw, tail section on license plate holder support M6×9 | 7 Nm (5.2 ft·lb$_f$) |
| Screw, brake cylinder on footpeg bracket M6×16 | 10 Nm (7.4 ft·lb$_f$) |
| Screw, inner cover on mask support M6×19 | 6 Nm (4.4 ft·lb$_f$) |
| Screw, radiator shoud on radiator and fuel tank spoiler M6×9 | 6 Nm (4.4 ft·lb$_f$) |
| Screw, dashboard bracket on triple clamp M6 | 6 Nm (4.4 ft·lb$_f$) |
| Screw, brake line guide on bottom triple clamp M6×9 | 7 Nm (5.2 ft·lb$_f$) |
| Screw, chain sliding guard on link fork M6 | 7 Nm (5.2 ft·lb$_f$) |
| Screw, brake line bracket on swingarm M6×9 | 7 Nm (5.2 ft·lb$_f$) |
| Screw, handlebar weight on handlebar M6×45 | 9 Nm (6.6 ft·lb$_f$) |
| Screw, air filter on air box M6×10 | 7 Nm (5.2 ft·lb$_f$) |
| Screw, intake air temperature sensor on air box M6 | 5 Nm (3.7 ft·lb$_f$) |
| Screw, bottom triple clamp M8 | 12 Nm (8.9 ft·lb$_f$) |
| Screw, top triple clamp M8 | 17 Nm (12.5 ft·lb$_f$) |

| | |
|---|---|
| Screw, fork shoe<br>M8 | 15 Nm<br>(11.1 ft·lb$_f$) |
| Screw, front brake disc<br>M8 | 30 Nm<br>(22.1 ft·lb$_f$) |
| Screw, rear brake disc<br>M8 | 30 Nm<br>(22.1 ft·lb$_f$) |
| Handlebar clamp screw<br>M8 | 20 Nm<br>(14.8 ft·lb$_f$) |
| Screw, front brake caliper<br>M8 | 30 Nm<br>(22.1 ft·lb$_f$)<br>**Loctite® 243** |
| Nut, rear sprocket<br>M8 | 34 Nm<br>(25.1 ft·lb$_f$) |
| Screw, horn<br>M8 | 16 Nm<br>(11.8 ft·lb$_f$) |
| Passenger footrest support screw<br>M8 | 25 Nm<br>(18.4 ft·lb$_f$) |
| Screw, grip handle on subframe<br>M8×20 | 25 Nm<br>(18.4 ft·lb$_f$) |
| Remaining screws on chassis<br>M8 | 25 Nm<br>(18.4 ft·lb$_f$) |
| Remaining nuts on chassis<br>M8 | 30 Nm<br>(22.1 ft·lb$_f$) |
| Screw, bottom main silencer<br>M8 | 21 Nm<br>(15.5 ft·lb$_f$) |
| Screw, silencer on cylinder head<br>M8 | 21 Nm<br>(15.5 ft·lb$_f$) |
| Screw, footpeg bracket on top frame<br>M8×20 | 25 Nm<br>(18.4 ft·lb$_f$) |
| Screw, footpeg bracket on bottom frame<br>M8×30 | 25 Nm<br>(18.4 ft·lb$_f$) |
| Screw, engine fixing arm on frame<br>M8×25 | 25 Nm<br>(18.4 ft·lb$_f$) |
| Screw, tail end lower part on subframe<br>M8×19 | 10 Nm<br>(7.4 ft·lb$_f$) |
| Screw, rear fairing on subframe<br>M8×20 | 10 Nm<br>(7.4 ft·lb$_f$) |
| Screw, chain guide on swingarm, front<br>M8×40 | 10 Nm<br>(7.4 ft·lb$_f$) |
| Screw, chain guide on swingarm, rear<br>M8×22 | 10 Nm<br>(7.4 ft·lb$_f$) |
| Screw, engine bearer on engine<br>M10 | 44 Nm<br>(32.5 ft·lb$_f$)<br>**Loctite® 243** |
| Fitting, side stand<br>M10 | 32 Nm<br>(23.6 ft·lb$_f$) |
| Nut, side stand bracket<br>M10 | 36 Nm<br>(26.6 ft·lb$_f$) |

| | | |
|---|---|---|
| Top shock absorber screw<br>M10×58 | | 50 Nm<br>(36.9 ft·lb$_f$)<br>**Loctite® 620** |
| Screw, front footrest bracket / engine bearer<br>M10×1.25 | | 40 Nm<br>(29.5 ft·lb$_f$) |
| Nut, rear mirror<br>M10 | | 23 Nm<br>(17.0 ft·lb$_f$) |
| Remaining screws on chassis<br>M10 | | 46 Nm<br>(33.9 ft·lb$_f$) |
| Remaining nuts on chassis<br>M10 | | 50 Nm<br>(36.9 ft·lb$_f$) |
| Bottom shock absorber screw<br>M10×65 | | 50 Nm<br>(36.9 ft·lb$_f$)<br>**Loctite® 620** |
| Nut, mirror adapter<br>M10LH | | 27 Nm<br>(19.9 ft·lb$_f$) |
| Screw, engine on frame<br>M10 | | 45 Nm<br>(33.2 ft·lb$_f$) |
| Screw, subframe, bottom<br>M10×110 | | 45 Nm<br>(33.2 ft·lb$_f$)<br>**Loctite® 620** |
| Screw, subframe on frame<br>M10×30 | | 45 Nm<br>(33.2 ft·lb$_f$)<br>**Loctite® 620** |
| Nut, handlebar mount on top triple clamp<br>M10 | | 45 Nm<br>(33.2 ft·lb$_f$) |
| Screw, chain tension adjuster on swingarm<br>M10×50 | | 17 Nm<br>(12.5 ft·lb$_f$) |
| Nut, chain tension adjuster locknut on swingarm<br>M10 | | 17 Nm<br>(12.5 ft·lb$_f$) |
| Nut, swingarm pivot<br>M14 | | 100 Nm<br>(73.8 ft·lb$_f$) |
| Nut, wheel spindle, rear<br>M16 | | 100 Nm<br>(73.8 ft·lb$_f$) |
| Screw, top steering head<br>M22 | | 50 Nm<br>(36.9 ft·lb$_f$) |
| Adjusting ring, fork bearing<br>M22 | | 10 Nm<br>(7.4 ft·lb$_f$) |
| Screw, wheel spindle, front<br>M24 | | 45 Nm<br>(33.2 ft·lb$_f$) |
| Nut, steering head<br>M30 | 1. | 45 Nm<br>(33.2 ft·lb$_f$) |
| | 2. | Loosen by 2 turns |
| | 3. | 5 Nm<br>(3.7 ft·lb$_f$) |

## 22.1 Declarations of conformity

**Note**
The functional and equipment scope is model-dependent and may not include all wireless systems and application areas referred to.

**JNS Instruments Ltd.** hereby declares that the **320T1100** 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/320T1100

## 22.2 Country-specific declarations of conformity



A01740-01

## 23.1 Recycling




I02045-10

Further information is available at the following website.
Recycling information website: https://www.quefairedemesdechets.fr

## A Technical terms

| | | |
|---|---|---|
| ABS | Anti-lock braking system | Safety system that prevents locking of the wheels when driving 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 |
| | KTMconnect | System for remote communication with suitable cell phones and communication systems for telephony and audio |
| 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 5W/40 → 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<br>(−13.0 °F) |

## D Electrics

### 12 V battery (ETZ-9-BS)

**Product code**

- ETZ-9-BS

**Properties**

| | |
|---|---|
| • Battery voltage | 12 V |
| • Nominal capacity | 8 Ah |
| • Maintenance-free | |

### Turn signal (LED)

**Product code**

- LED

### Brake/tail light (LED)

**Product code**

- LED

### License plate lighting (LED)

**Product code**

- LED

### Dashboard illumination and indicator lights (LED)

**Product code**

- LED

### Parking light (LED)

**Product code**

- LED

### Headlight (LED)

**Product code**

- LED

## Fuse (75011088010)

**Product code**

- 75011088010

**Properties**

- 10 A

## Fuse (75011088015)

**Product code**

- 75011088015

**Properties**

- 15 A

## Fuse (75011088020)

**Product code**

- 75011088020

**Properties**

- 20 A

## Fuse (90111088025)

**Product code**

- 90111088025

**Properties**

- 25 A

## Fuse (75011088030)

**Product code**

- 75011088030

**Properties**

- 30 A

## 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.

| | |
|---|---|
|  | Coolant temperature indicator light lights up red |
|  | 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.

| | |
|---|---|
|  | The ABS warning lamp lights up yellow |
|  | The ABS rear warning light lights up yellow |
|  | The fuel level warning lamp lights up yellow |
|  | The **OBD** failure indicator light lights up yellow. |
|  | General warning light lights up yellow |

### F.1.3 Green and blue symbols

Green and blue symbols convey information.

| | |
|---|---|
|  | The high beam indicator lamp lights up blue |
|  | Coolant temperature indicator light lights up blue |
|  | The turn signal indicator light flashes green with a steady blinking interval |
|  | The idle indicator lamp lights up green |

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