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OWNER'S MANUAL 2017

1290 Super Adventure T

Art. no. 3213543en

KTM

DEAR KTM CUSTOMER

Congratulations on your decision to purchase a KTM motorcycle. You are now the owner of a state-of-the-art sports motorcycle that will give you enormous pleasure if you service and maintain it properly.

We hope you enjoy your new vehicle!

Please enter the serial numbers of your vehicle below.

Chassis number (📖 p. 22)	Dealer's stamp
Engine number (📖 p. 23)	
Key number (📖 p. 23)	

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

All specifications are non-binding. KTM Sportmotorcycle GmbH specifically reserves the right to modify or delete technical specifications, prices, colors, forms, materials, services, designs, equipment, etc., without prior notice and without specifying reasons, to adapt these to local conditions, as well as to stop production of a particular model without prior notice. KTM accepts no liability for delivery options, deviations from illustrations and descriptions, misprints, and other errors. The models portrayed partly contain special equipment that does not belong to the regular scope of supply.

3213543en

01/2017

DEAR KTM CUSTOMER

REG.NO. 12 100 6061

ISO 9001(12 100 6061)
According to the international quality management standard ISO 9001, KTM uses quality assurance processes that lead to the maximum possible quality of the products.
Issued by: TÜV Management Service

KTM Sportmotorcycle GmbH
5230 Mattighofen, Austria

This document is valid for the following models:

1290 Super Adventure T EU (F9903QA)

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1 MEANS OF REPRESENTATION

1.1 Symbols used

The meaning of specific symbols is described below.

Indicates an expected reaction (e.g. of a work step or a function).

Indicates an unexpected reaction (e.g. of a work step or a function).

All work marked with this symbol requires specialist knowledge and technical understanding. In the interest of your own safety, have these jobs performed by an authorized KTM workshop. There, your motorcycle will be optimally cared for by specially trained experts using the specialist tools required.

Indicates a page reference (more information is provided on the specified page).

Indicates information with more details or tips.

Indicates the result of a testing step.

1.2 Formats used

The typographical formats used in this document are explained below.

Specific name	Identifies a proprietary name.
Name®	Identifies a protected name.
Brand™	Identifies 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.

2 SAFETY ADVICE

2.1 Use definition - intended use

KTM sport motorcycles are designed and constructed to meet the normal demands of regular road and light offroad operation (dirt roads), but not for use on race courses.

Info

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

2.2 Misuse

The vehicle must only be used as intended.
Dangers can arise for people, property and the environment through use not as intended.
Any use of the vehicle beyond the intended and defined use constitutes misuse.
Misuse also includes the use of operating and auxiliary fluids which do not meet the required specification for the respective use.

2.3 Safety advice

A number of safety instructions need to be followed to operate the vehicle safely. Therefore, read this manual carefully. The safety instructions are highlighted in the text and are referred to at the relevant passages.

Info

The vehicle has various information and warning labels at prominent locations. Do not remove information/warning labels. If they are missing, you or others may not recognize dangers and may therefore be injured.

2.4 Degrees of risk and symbols

Danger
Indicates a danger that will immediately and invariably lead to fatal or serious permanent injury if the appropriate measures are not taken.

Warning
Indicates a danger that is likely to lead to fatal or serious injury if the appropriate measures are not taken.

Caution
Indicates a danger that may lead to minor injuries if the appropriate measures are not taken.

Note
Indicates a danger that will lead to considerable machine and material damage if the appropriate measures are not taken.

Warning
Indicates a danger that will lead to environmental damage if the appropriate measures are not taken.

2.5 Tampering warning

Tampering with the noise control system is prohibited. Federal law prohibits the following acts or the causing thereof:

1 The removal or rendering inoperative by any person other than for purposes of maintenance, repair, or replacement, of any device or element of design incorporated into any new vehicle for the purpose of noise control prior to its sale or delivery to the ultimate purchaser or while it is in use, or

2 the use of the vehicle after such device or element of design has been removed or rendered inoperative by any person.

Among those acts presumed to constitute tampering are the acts listed below:

1 Removal or puncturing of the main silencer, baffles, header pipes or any other components which conduct exhaust gases.
2 Removal or puncturing of parts of the intake system.
3 Lack of proper maintenance.
4 Replacing moving part of the vehicle, or parts of the exhaust or intake system, with parts other than those specified by the manufacturer.

2.6 Safe operation

Danger

Danger of accidents A rider who is not fit to ride poses a danger to him or herself and 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 impaired.

Danger

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

– Always make sure there is sufficient ventilation when running the engine.
– Use an effective exhaust extraction system when starting or running the engine in an enclosed space.

Warning

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

– Do not touch any parts such as the exhaust system, radiator, engine, shock absorber, or brake system before the vehicle parts have cooled down.
– Let the vehicle parts cool down before you perform any work on the vehicle.

Only operate the vehicle when it is in perfect technical condition, in accordance with its intended use, and in a safe and environmentally compatible manner.
The vehicle should only be used by trained persons. An appropriate driver's license is needed to ride the vehicle on public roads.
Have malfunctions that impair safety promptly eliminated by an authorized KTM workshop.
Adhere to the information and warning labels on the vehicle.

2.7 Protective clothing

Warning

Risk of injury Missing or poor protective clothing presents an increased safety risk.

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

In the interest of your own safety, KTM recommends that you only operate the vehicle while wearing protective clothing.

2.8 Work rules

Special tools are necessary for some of the work. These are not included with the vehicle and can be ordered under the number in parentheses. Ex: valve spring mounter (59029019000)
During assembly, non-reusable parts (e.g. self-locking screws and nuts, seals and seal rings, O-rings, pins, lock washers) must be replaced by new parts.
Where thread lockers are used on screw connections (e.g., **Loctite®**), follow the instructions for use from the manufacturer.
Parts that you want to reuse following repairs and servicing should be cleaned and checked for damage and wear. Change damaged or worn parts.
Following repairs or servicing, the vehicle must be checked for roadworthiness.

2.9 Environment

If you use your motorcycle responsibly, you can ensure that problems and conflicts do not occur. To protect the future of the motorcycle sport, make sure that you use your motorcycle legally, display environmental consciousness, and respect the rights of others.
When disposing of used oil, other operating and auxiliary fluids, and used components, comply with the laws and regulations of the respective country.
Because motorcycles are not subject to the EU regulations governing the disposal of used vehicles, there are no legal regulations that pertain to the disposal of an end-of-life motorcycle. Your authorized KTM dealer will be glad to advise you.

2.10 Owner's Manual

It is important that you read this Owner's Manual carefully and completely before making your first trip. The Owner's Manual contains useful information and many tips on how to operate, handle, and maintain your motorcycle. Only then will you find out how to customize the vehicle ideally for your own use and how you can protect yourself from injury.
Keep the Owner's Manual in an accessible place to enable you to refer to it as needed.
If you would like to know more about the vehicle or have questions on the material you read, please contact an authorized KTM dealer.
The Owner's Manual is an important component of the vehicle and should be handed over to the new owner if the vehicle is sold.

3 IMPORTANT NOTES

3.1 Warranty

The work specified in the service schedule may only be performed in an authorized KTM workshop and must be recorded in both the Service & Warranty Booklet and in **KTM Dealer.net**, otherwise any warranty coverage will become void. No warranty claims can be considered for damage resulting from manipulations and/or alterations to the vehicle.
Additional information on the manufacturer or implied warranty and the procedures involved can be found in the service & warranty booklet.

3.2 Operating and auxiliary substances

Warning

Environmental hazard Improper handling of fuel is a danger to the environment.

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

Use operating and auxiliary substances (such as fuel and lubricants) as specified in the Owner's Manual.

3.3 Spare parts, accessories

For your own safety, only use spare parts and accessory products that are approved and/or recommended by KTM and have them installed by an authorized KTM workshop. 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. Your authorized KTM dealer will be glad to advise you.

The current **KTM PowerParts** for your vehicle can be found on the KTM website.
International KTM Website: http://www.ktm.com

3.4 Service

A prerequisite for perfect operation and prevention of premature wear is that the service, care and tuning work on the engine and chassis are properly carried out as described in the owner's manual. Poor adjustment and tuning of the engine and suspension can lead to damage and breakage of components.
Using the motorcycle in extreme operating conditions, e.g. on very muddy and wet roads or in a dusty and dry environment, can lead to above-average wear of components, such as the drive train, brakes or air filter. For this reasons, it may be necessary to service or replace worn parts before the interval listed in the service schedule is reached.
It is imperative that you adhere to the stipulated run-in times and service intervals. If you observe these exactly, you will ensure a much longer service life for your motorcycle.

3.5 Figures

The figures contained in the manual may depict special equipment.
In the interest of clarity, some components may be shown disassembled or may not be shown at all. It is not always necessary to disassemble the component to perform the activity in question. Please follow the instructions in the text.

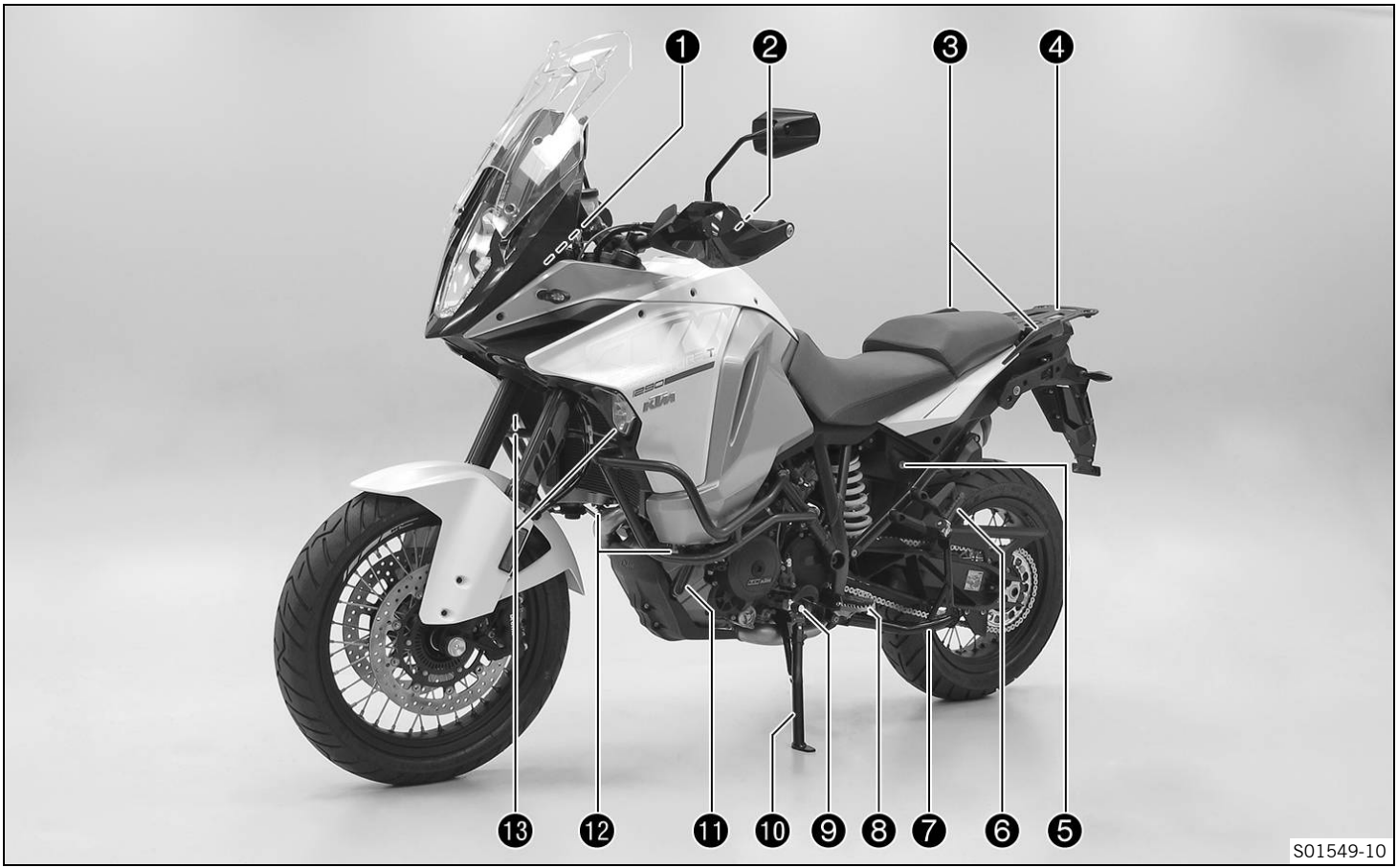
3.6 Customer service

Your authorized KTM dealer will be happy to answer any questions you may have on your vehicle and KTM.

A list of authorized KTM dealers can be found on the KTM website.
International KTM Website: http://www.ktm.com

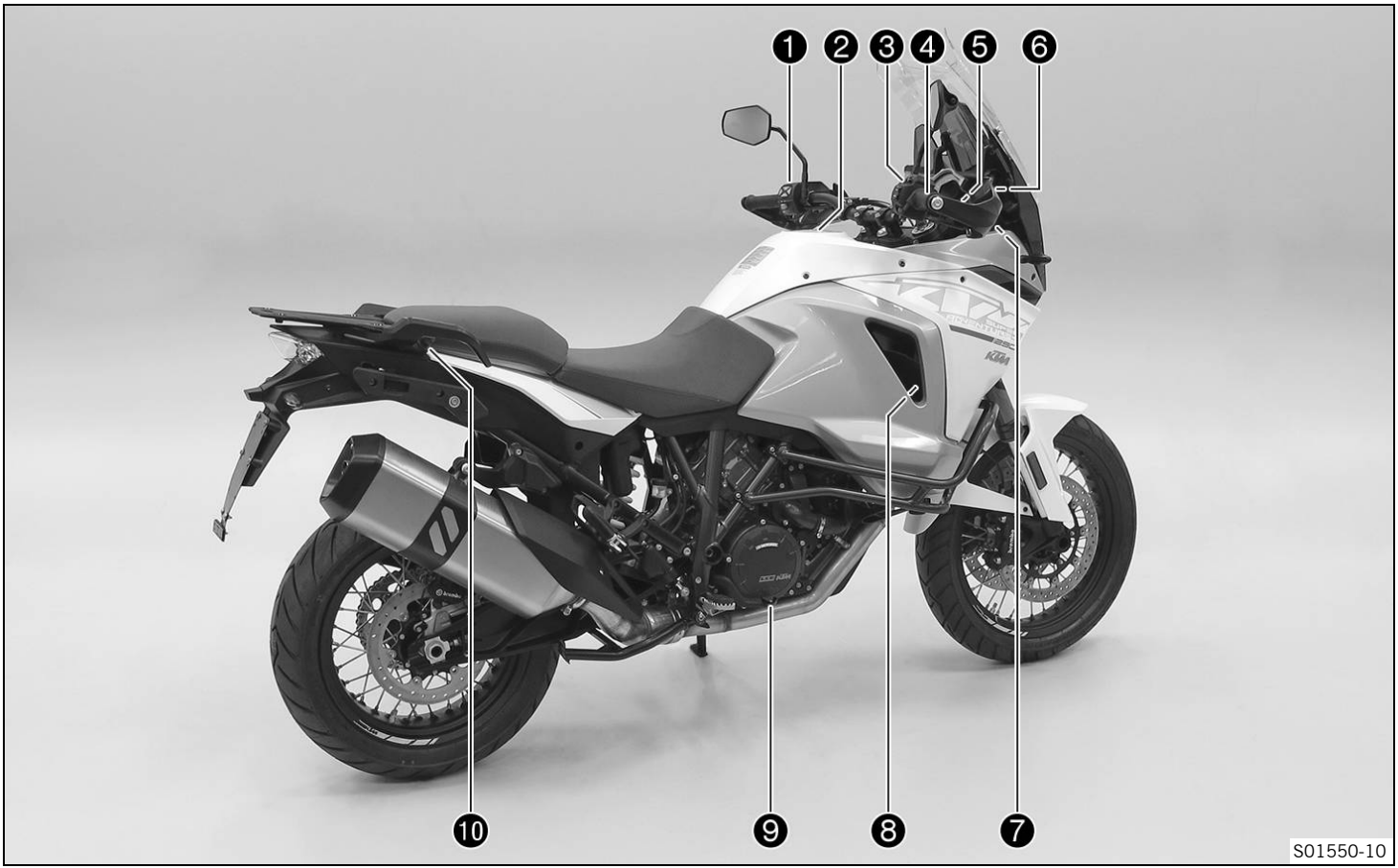
4 VIEW OF VEHICLE

4.1 View of vehicle, front left (example)



1	Socket for electrical accessories (📖 p. 38)
2	Clutch lever (📖 p. 26)
3	Grab handles (📖 p. 43)
4	Luggage rack plate (📖 p. 44)
5	Seat lock (📖 p. 43)
6	Passenger footrest (📖 p. 45)
7	Center stand (📖 p. 47)
8	Rider footrests (📖 p. 77)
9	Shift lever (📖 p. 45)
10	Side stand (📖 p. 47)
11	Engine oil level viewer
12	Fuel cocks (📖 p. 41)
13	Cornering headlight (📖 p. 177)

4.2 View of vehicle, rear right side (example)

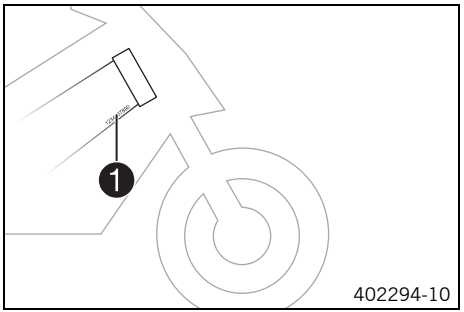


4 VIEW OF VEHICLE

1	Combination switch, left side (📖 p. 27)
2	Filler cap
3	Combination switch, right (📖 p. 30)
4	Throttle grip (📖 p. 27)
5	Hand brake lever (📖 p. 26)
6	Windshield locking lever
7	Storage compartment
8	Cooling system compensating tank
9	Foot brake lever (📖 p. 46)
10	Passenger seat heating switch (📖 p. 44)

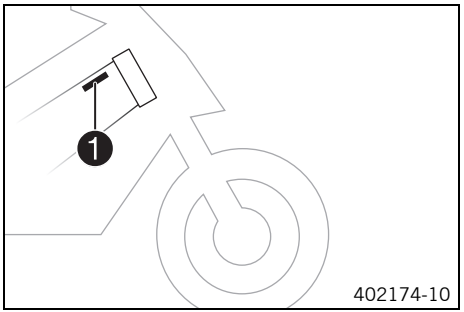
5 SERIAL NUMBERS

5.1 Chassis number



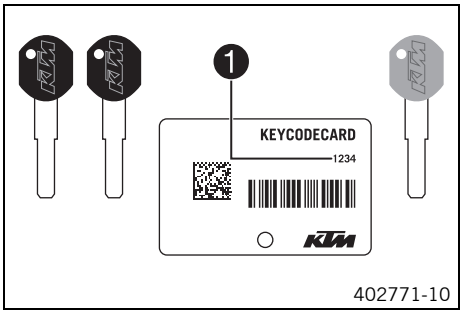
The chassis number ❶ is stamped on the bottom right of the frame behind the steering head.
The chassis number is also shown on the type label.

5.2 Type label



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

5.3 Key number



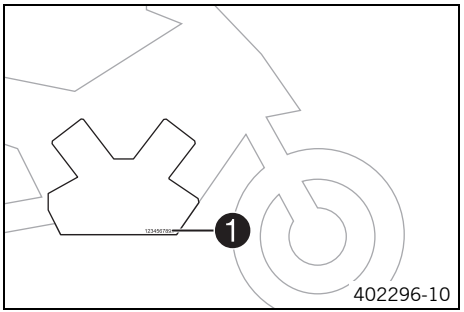
The key number **Code number** ❶ can be found on the **KEYCODECARD**.

Info

You need the key number to order a spare key. Keep the **KEYCODECARD** in a safe place.

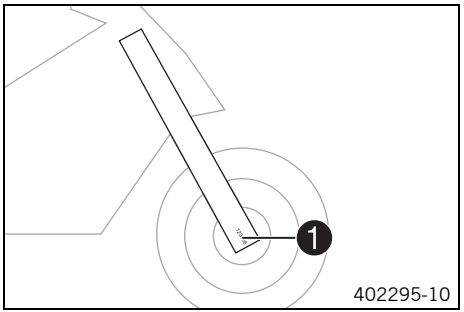
Use the orange programming key to activate and deactivate the black ignition key. Keep the orange programming key in a safe place: it must only be used for learning and programming functions.

5.4 Engine number



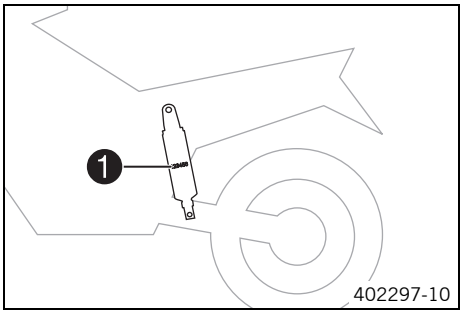
The engine number ❶ is stamped on the right side of the engine.

5.5 Fork part number



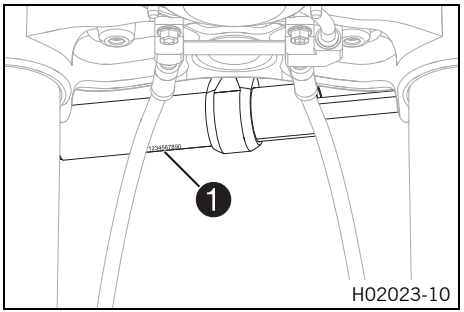
The fork part number ❶ is stamped on the inner side of the fork stub.

5.6 Shock absorber article number



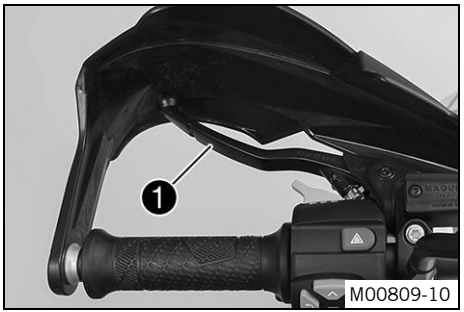
The shock absorber article number ❶ is marked on a sticker on the shock absorber case under the spring.

5.7 Steering damper article number



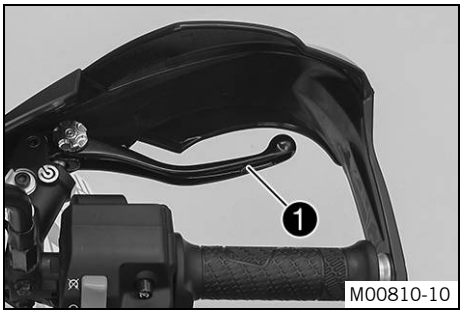
Steering damper article number ❶ is embossed on the underside of the steering damper.

6.1 Clutch lever



The clutch lever ❶ is fitted on the left side of the handlebar.
The clutch is hydraulically operated and self-adjusting.

6.2 Hand brake lever

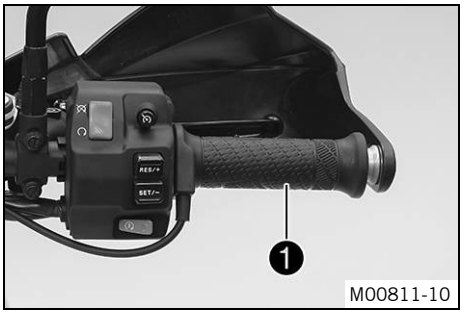


The hand brake lever ❶ is fitted on the right side of the handlebar.
The hand brake lever is used to activate both the front brake and rear brake at the same time.

Info

When the ABSmode **"offroad"** is switched on, only the front brake is activated.
When ABS is switched off, only the front brake is activated.

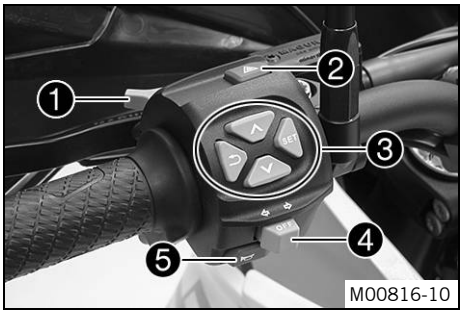
6.3 Throttle grip



The throttle 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, left side

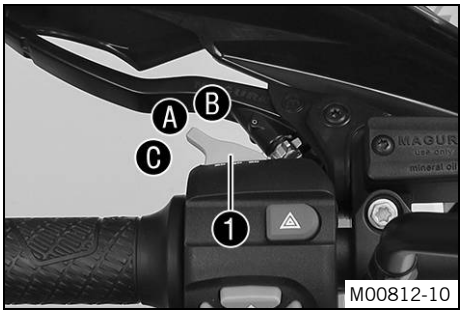


The left combination switch is fitted on the left side of the handlebar.

Overview of the left combination switch

1	Light switch (📖 p. 28)
2	Hazard warning flasher switch (📖 p. 28)
3	Menu switch (📖 p. 29)
4	Turn signal switch (📖 p. 29)
5	Horn button (📖 p. 30)

6.4.2 Light switch

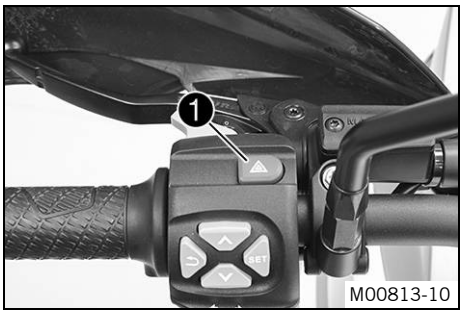


The light switch ❶ is fitted on the combination switch on the left.

Possible states

	Low beam on – Light switch in position Ⓐ. In this position, the low beam and tail light are switched on.
	High beam on – Push the light switch to position Ⓑ. In this position, the high beam and the tail light are switched on.
	Headlight flasher. – Push the light switch into position Ⓒ.

6.4.3 Hazard warning flasher switch



The hazard warning flasher switch ❶ is fitted on the combination switch on the left.
The hazard warning flasher is used to indicate emergency situations.

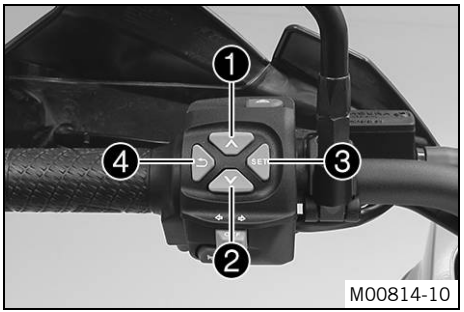
Info

The hazard warning flasher can be activated or deactivated while the ignition is switched on or up to 60 seconds after the ignition is switched off.
Only keep the hazard warning flasher activated as long as necessary as it depletes the battery.

Possible states

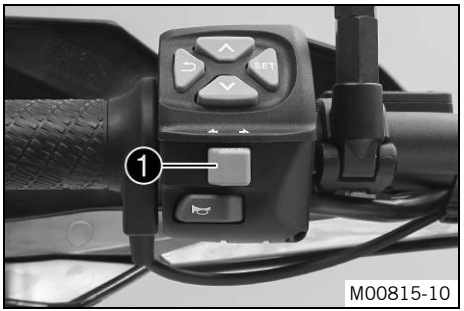
	Hazard warning flasher on – All four turn signals and the green turn signal indicator lights in the combination instrument flash.

6.4.4 Menu switch



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

6.4.5 Turn signal switch



The turn signal switch ❶ is fitted on the combination switch on the left.

Possible states

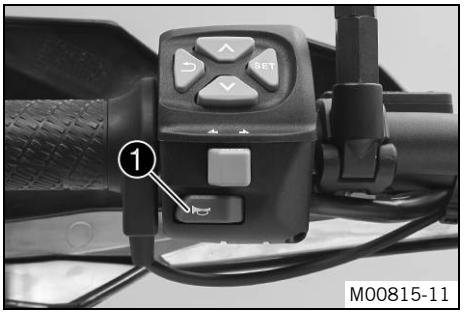
OFF	Turn signal off – Push the turn signal switch toward the switch housing.
⇦	Left turn signal, on – Turn signal switch pressed to the left. The turn signal switch returns automatically to the central position after use.
⇨	Right turn signal, on – Turn signal switch pressed to the right. The turn signal switch returns automatically to the central position after use.

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

Info

An automatic turn signal switch-off function (**ATIR**) is fitted as a standard 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.

6.4.6 Horn button



The horn button ❶ is fitted on the combination switch on the left.

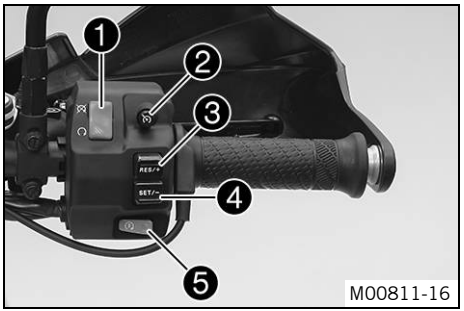
Possible states

- Horn button in basic position.
- Horn button pressed – The horn is operated in this position.

6.5 Switches on the right side of the handlebar

6.5.1 Combination switch, right

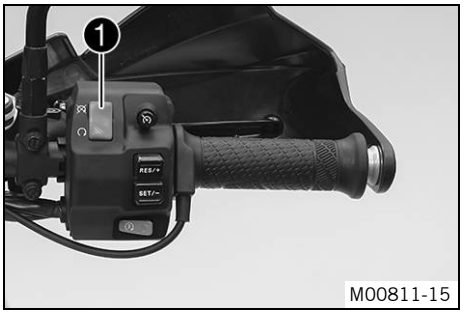
The right combination switch is fitted on the right side of the handlebar.



Overview of the right combination switch

1	Emergency OFF switch (📖 p. 31)
2	Switch for the cruise control system (📖 p. 32)
3	Upper button of the cruise control system (📖 p. 33)
4	Lower button of the cruise control system (📖 p. 34)
5	Electric starter button (📖 p. 35)

6.5.2 Emergency OFF switch

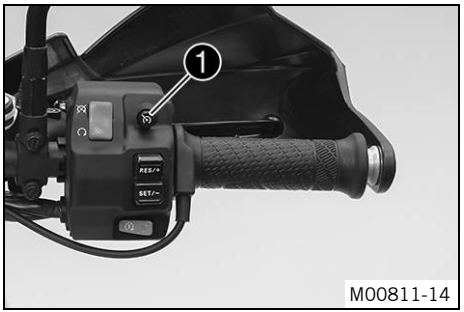


The emergency OFF switch ❶ is fitted on the right side of the combination switch.

Possible states

	Emergency OFF switch off – In this position, the ignition circuit is interrupted, a running engine stops, and a non-running engine cannot be started. A message appears on the matrix display.
	Emergency OFF switch on – This position is required for operation; the ignition circuit is closed.

6.5.3 Switch for the cruise control system



The switch ❶ for the cruise control system is fitted on the right side of the combination switch.

Possible states

- Cruise control system switch in the home position. – In this position, the cruise control system function is switched off.
- Cruise control system switch in the pressed position. – In this position, the cruise control system function is switched on. The cruise control system indicator lamp lights up in the combination instrument.

Info

After activation of the cruise control system function, the throttle grip can be turned back to the home position. The selected speed will be maintained.

To turn off the cruise control system function press the cruise control system switch again.
In addition, the cruise control system function is immediately deactivated when one of the following events occurs:

– Operating the hand brake lever
– Operating the foot brake lever
– Operating the clutch lever
– Shifting gears
– Turning the throttle grip beyond the home position
– Control of the motorcycle traction control (**MTC**)
– Also functions with deactivated motorcycle traction control (**MTC**) – if the front wheel speed does not agree with the engine speed (slip at the rear wheel of lifting front wheel)

– A fault occurring, which impairs the cruise control system function

Warning

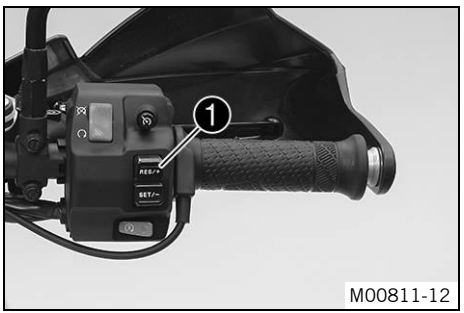
Danger of accidents The cruise control system function is not suitable for all driving situations.

The selected target speed will not be reached,if the engine power is not sufficient for a gradient.
The selected target speed will be exceeded if the engine braking effect is not sufficient on a decline.

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

The cruise control system function cannot be activated during rapid acceleration.
The cruise control system function can only be activated in 4th, 5th and 6th gear.
The control range is from 40 to 200 km/h or from 25 to 125 mph.

6.5.4 Upper button of the cruise control system



The upper button ❶ of the cruise control system is fitted on the right side of the combination switch.

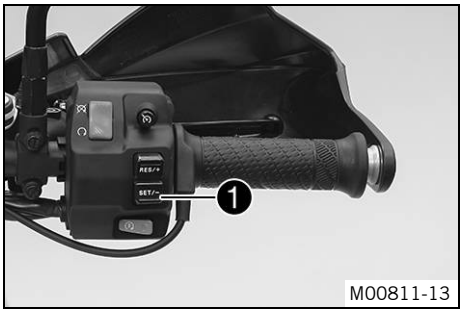
Possible states

- Upper button of the cruise control system RES/+ in the home position.
- Upper button of the cruise control system RES/+ is pressed. – The last saved speed is reached and maintained. Each time the button is touched again, the target speed is increased by 1 km/h or 1 mph.
- Upper button of the cruise control system RES/+ is held in the pressed position. – The target speed increases in increments of 5 km/h or 5 mph.

Info

The target speed is shown on the segment display of the combination instrument. After activation of the cruise control system function the throttle grip can be turned back to the home position.

6.5.5 Lower button of the cruise control system



The lower button ❶ of the cruise control system is fitted on the right side of the combination switch.

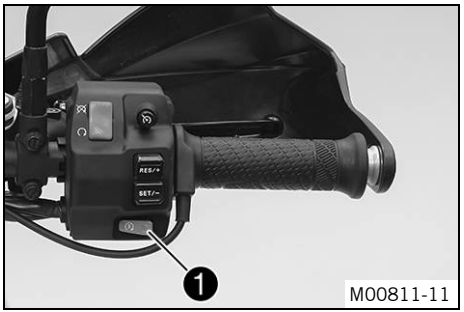
Possible states

- Lower button of the cruise control system SET/– in the home position.
- Lower button of the cruise control system SET/– is pressed. – The cruise control system function is activated and the current speed is maintained. Every time the button is touched the target speed is decreased by 1 km/h or 1 mph.
- Lower button of the cruise control system SET/– is is held in the pressed position. – The target speed decreases in increments of 5 km/h or 5 mph.

Info

The target speed is shown on the segment display of the combination instrument. After activation of the cruise control system function the throttle grip can be turned back to the home position.

6.5.6 Electric starter button

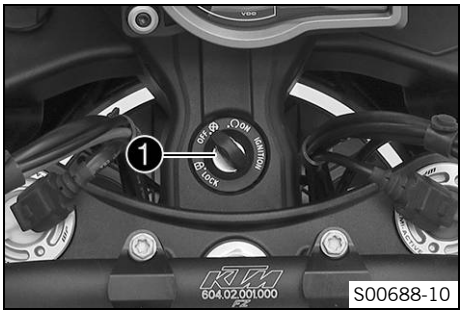


The electric starter button ❶ is fitted on the right side of the handlebar.

Possible states

- Electric starter button ⓘ in basic position.
- Electric starter button ⓘ is pressed – In this position, the electric starter is actuated.

6.6 Ignition/steering lock



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

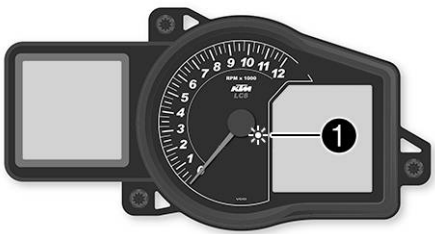
Info

The ignition may only be switched on using a black ignition key.
With the orange programming key, you can activate or deactivate the black ignition key.

Possible states

	Ignition off **OFF** – In this position, the ignition circuit is interrupted, a running engine stops, and a non-running engine will not start. The black ignition key can be removed.
	Ignition on **ON** – In this position, the ignition circuit is closed and the engine can be started.
	Steering locked **LOCK** – In this position, the ignition circuit is interrupted and the steering locked. The black ignition key can be removed.

6.7 Immobilizer



The electronic immobilizer secures the vehicle against unauthorized use.
The immobilizer is activated automatically and the engine electronics are locked when the ignition key is withdrawn.
Immobilizer indicator lamp ❶ can indicate errors by flashing.
If the optional alarm system is installed, immobilizer indicator lamp ❶ flashes when the alarm system is switched on.

Info
The ignition key contains electronic components. Never attach multiple ignition keys to a single key ring; this may cause mutual interference.

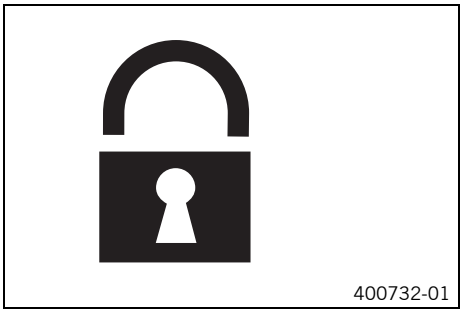
A lost black ignition key must be deactivated to prevent unauthorized persons from operating the vehicle.
The black ignition keys are activated when delivered.
Another two spare ignition keys (key number on the **KEYCODECARD**) can be ordered from an authorized KTM workshop; they need to be activated for use.

6.8 Locking the steering

Note

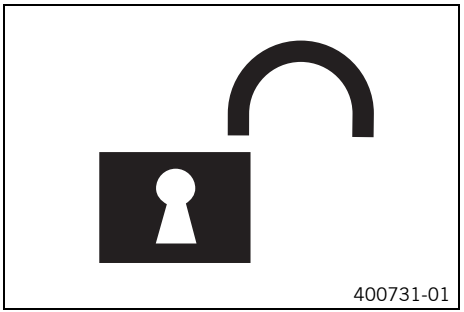
Danger of damage The parked vehicle can roll away or fall over.

– Park the vehicle on a firm and level surface.


400732-01

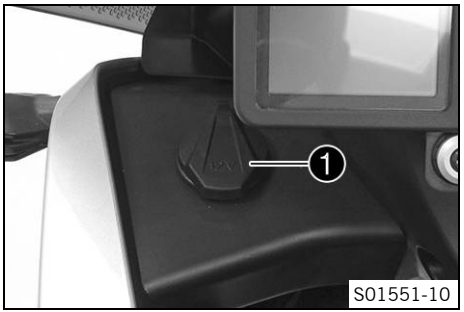
– Park the vehicle.
– Turn the handlebar all the way to the left.
– Insert the key into the ignition/handlebar lock, press in, and turn to the left. Remove the key.
  ✔ Steering is no longer possible.

6.9 Unlocking the steering


400731-01

– Insert the key into the ignition/handlebar lock, press in, and turn to the right. Remove the key.
  ✔ You can now steer the bike again.

6.10 Socket for electrical accessories



Socket ❶ for electrical accessories is fitted to the left of the combination instrument. It is connected to permanent positive and fuse-protected.

Socket for electrical accessories	
Voltage	12 V
Maximum current consumption	10 A

6.11 Opening the filler 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 or lit cigarettes.
- 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 off immediately.
- Observe the specifications for refueling.

Warning

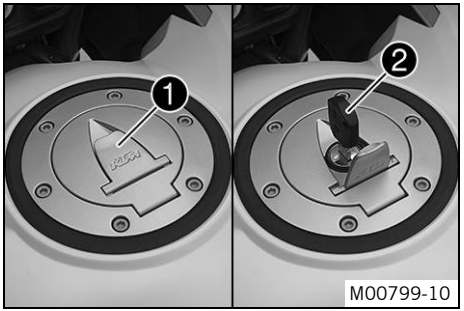
Danger of poisoning Fuel is poisonous and a health hazard.

- Avoid skin, eye and clothing contact with fuel.
- Immediately consult a doctor if you swallow fuel.
- Do not inhale fuel vapors.
- In case of skin contact, rinse the affected area with plenty of water.
- Rinse the eyes thoroughly with water, and consult a doctor in case of fuel contact with the eyes.
- Change your clothing in case of fuel spills on them.
- Keep fuels correctly in a suitable canister, and out of the reach of children.

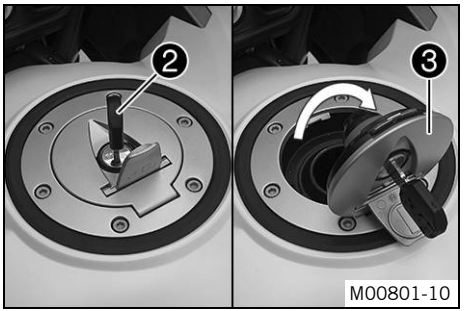
Warning

Environmental hazard Improper handling of fuel is a danger to the environment.

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



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



Note

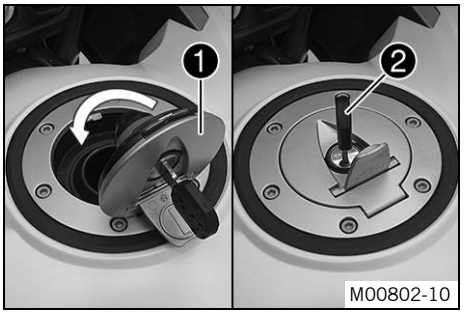
Danger of damage The ignition key may break if overloaded.

Damaged ignition keys must be replaced.

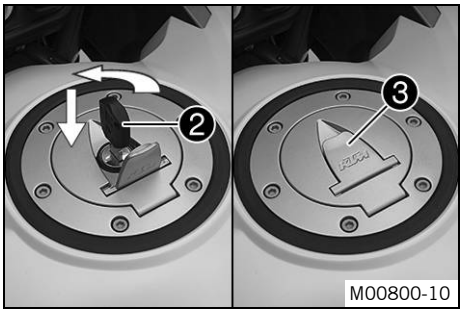
– Push down on the filler cap to take pressure off the ignition key.

– Turn ignition key ❷ clockwise.
– Fold open filler cap ❸.

6.12 Closing the filler cap



– Fold down filler cap ❶.
– Turn ignition key ❷ clockwise.



– Push down the filler cap and turn the ignition key ❷ counterclockwise until the tank lock closes.

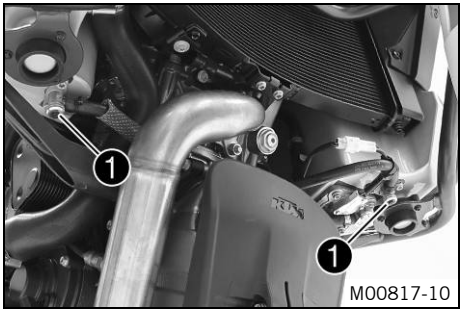
Warning

Fire hazard Fuel is highly flammable, toxic and a health hazard.

– Check the filler cap is locked correctly after closing.
– Change your clothing in case of fuel spills on them.
– Rinse the affected area immediately with plenty of water in the event of contact with the skin.

– Remove ignition key ❷ and close cover ❸.

6.13 Fuel cocks



A fuel cock ❶ is located on each side of the fuel tank.

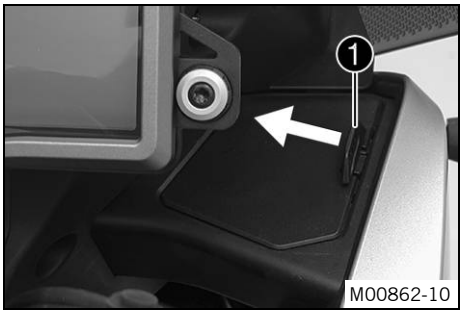
Info

The fuel cocks must always be open during operation.
The fuel cocks are only closed to remove the fuel tank.

Possible states

- Fuel cocks are closed – Level equalization cannot take place and the fuel supply to the throttle valve body is shut off.
- Fuel cocks are open – Level equalization can take place and the fuel supply to the throttle valve body is open.

6.14 Opening the storage compartment



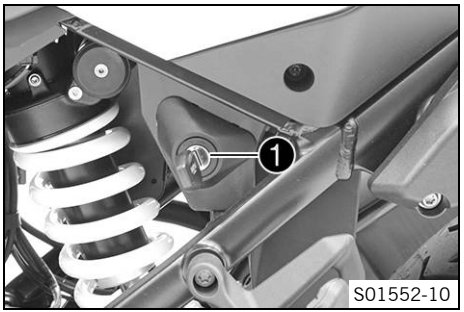
– Press lock ❶ in the direction of the arrow and lift the cover at the same time.

6.15 Closing the storage compartment

– Press cover ❶ downward.

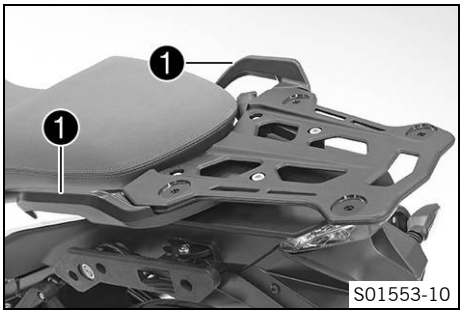
✔ The lock engages audibly.

6.16 Seat lock



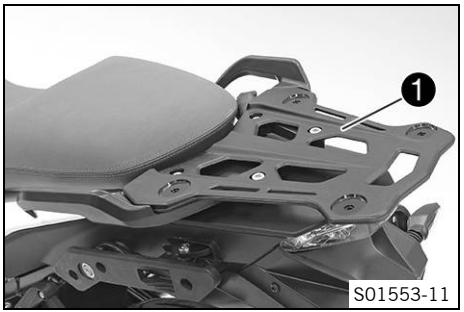
The seat lock ❶ is located on the left side of the vehicle.
It can be unlocked using the ignition key.

6.17 Grab handles



The passenger can hold onto grab handles ❶ during the trip.

6.18 Luggage rack plate

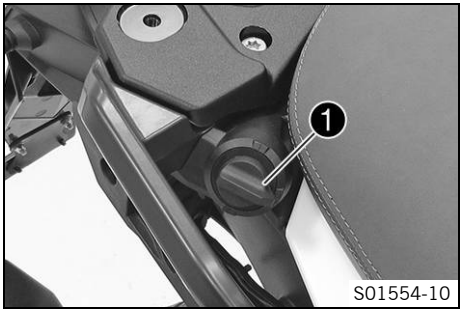


The luggage rack plate ❶ is located behind the seat.
The base plate of a luggage system can be mounted on the luggage rack plate (optional).
The luggage rack plate may not be loaded with more than the specified weight.

Maximum permissible load on luggage rack plate	8 kg (18 lb.)

Info
Follow the instructions provided by the luggage manufacturer.

6.19 Passenger seat heating switch

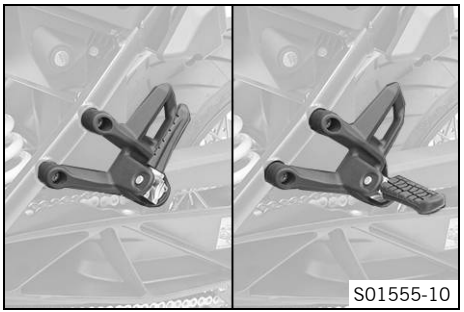


The passenger seat heating switch ❶ is located next to the right grab handle.

Possible states

- The passenger seat heating switch is turned to position **0** – In this position, the passenger seat heating is switched off.
- The passenger seat heating switch is turned to position **1** – In this position, the passenger seat heating is switched to a lower level.
- The passenger seat heating switch is turned to position **2** – In this position, the passenger seat heating is switched to a higher level.

6.20 Passenger footrest

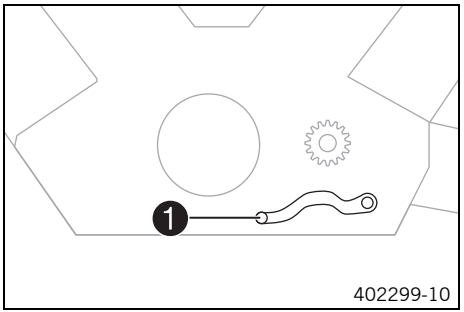


The passenger footrests are foldable.

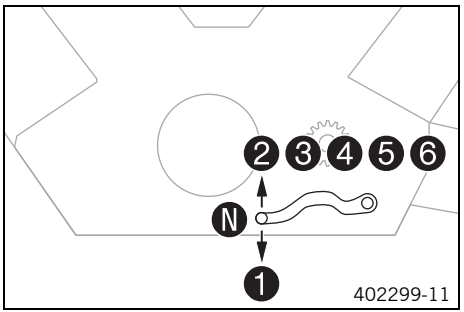
Possible states

- Passenger footrest folded in – For operation without a passenger.
- Passenger footrest folded out – For operation with a passenger.

6.21 Shift lever

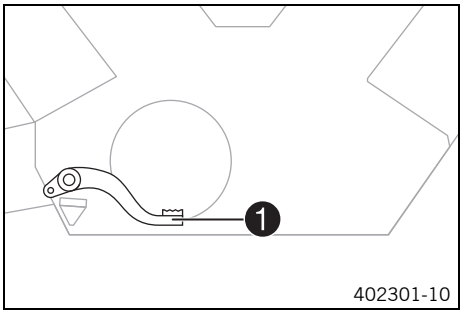


The shift lever ❶ is fitted on the left side of the engine.



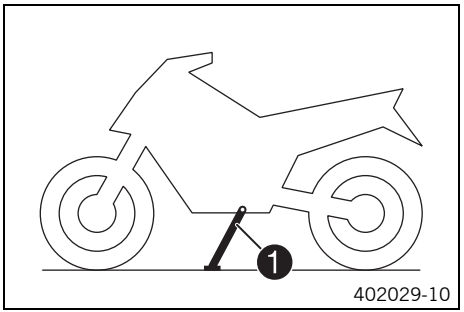
The gear positions can be seen in the figure.
The idle position is between the first and second gears.

6.22 Foot brake lever



Foot brake lever ❶ is located in front of the right footrest.
The rear brake is activated using the foot brake lever.

6.23 Side stand



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

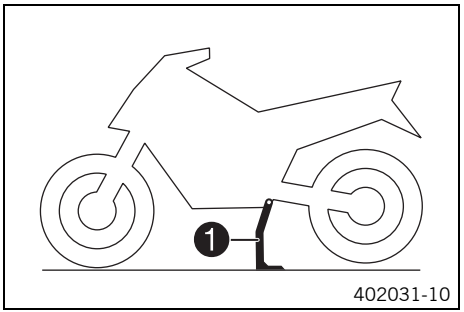
Info

The side stand must be folded up during motorcycle use.
The side stand is coupled with the safety starting system. See the instructions in the "Stopping, parking" chapter.

Possible states

- 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.

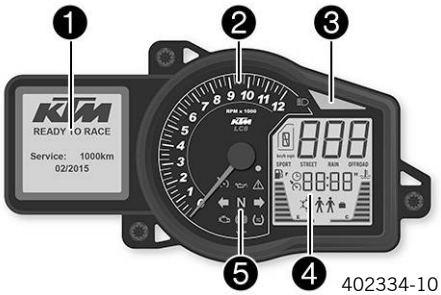
6.24 Center stand



In addition to the side stand, the vehicle is equipped with a center stand ❶.

7 COMBINATION INSTRUMENT

7.1 Overview



1	Matrix display (📖 p. 49)
2	Tachometer
3	Shift warning light (📖 p. 53)
4	Segment display
5	Indicator lamps (📖 p. 50)

7.2 Activation and test

Activation
The combination instrument is activated when the ignition is switched on.

Info
The brightness of the displays is controlled by a brightness sensor in the combination instrument.

Test
The segment display, the indicator lamps, and the tachometer are briefly activated for a function test.
The welcome text and information on the next service (📖 p. 54) appear on the matrix display.

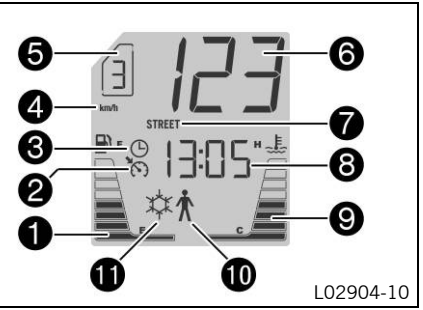
Info
If the battery was disconnected, the time and date must be set.

7.3 Matrix display

The matrix display is controlled using the menu switch (📖 p. 29).
After the ignition is switched on, the display shows when the next service (📖 p. 54) is due. If the General warning lamp ⚠ lights up among the indicator lamps (📖 p. 50), the corresponding message appears in the matrix display. The **SET** button is used to confirm receipt of the information and the message is cleared.

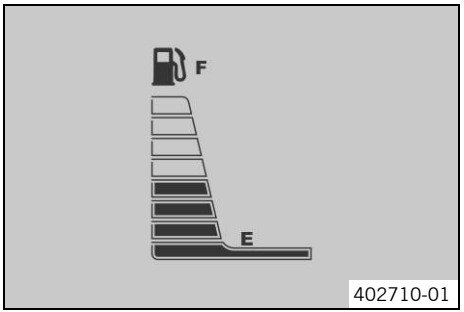
Messages appear	10 s

7.4 Segment display



1	Fuel level display (📖 p. 50)
2	Cruise control system symbol
3	Time symbol
4	Unit for the speedometer
5	Gear display
6	Speed
7	**"Drive Mod"** (📖 p. 211)
8	Target speed of the cruise control system or time
9	Coolant temperature
10	Set loading condition
11	Ice warning

7.5 Fuel level display



The fuel level display shows the filling level of the fuel tank.

Info

The fuel level is displayed with a slight delay to prevent the indicator from constantly moving while riding.
The fuel level display is not updated while the side stand is folded out or the emergency off switch is switched off.
Once the side stand is folded up and emergency OFF switch is switched on, the fuel level display is next updated after 2 minutes.
The fuel level display flashes if the combination instrument does not receive a signal from the fuel level sensor.

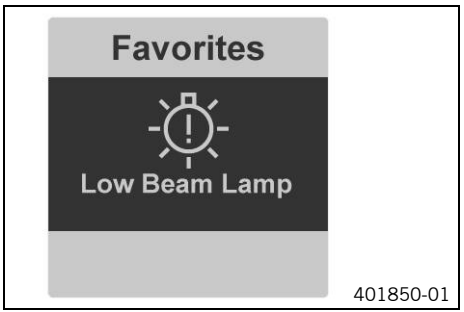
7.6 Indicator lamps

Possible states

	The high beam indicator lamp lights up blue – The high beam is switched on.
	The immobilizer indicator lamp lights up or flashes red – Status or error message for immobilizer/alarm system.
	The oil pressure warning lamp lights up red – Engine oil pressure is too low.
	The general warning lamp lights up yellow – An operating safety (warning) message was detected. This is also shown on the matrix display.
	The left turn signal lamp flashes green simultaneously with the turn signal – The left turn signal is switched on.
N	The idle indicator lamp lights up green – The transmission is shifted to neutral.

	The right turn signal lamp flashes green simultaneously with the turn signal – The right turn signal is switched on.
	The engine warning lamp lights up/flashes yellow – The engine control unit has detected a fault.
	The ABS lamp lights up/flashes yellow – ABS is not active. The ABS lamp also lights up when a fault is detected.
	The TC lamp lights up/flashes yellow – The motorcycle traction control is not enabled or is currently intervening. The TC lamp also lights up when an error is detected. In addition, the TC lamp flashes if the **HHC** (optional) is active.
	The cruise control system lamp lights up yellow – The cruise control system function is switched on, but the speed control is not active.
	The cruise control system lamp lights up green – The cruise control system function is switched on and the speed control is active.

7.7 Message on the matrix display



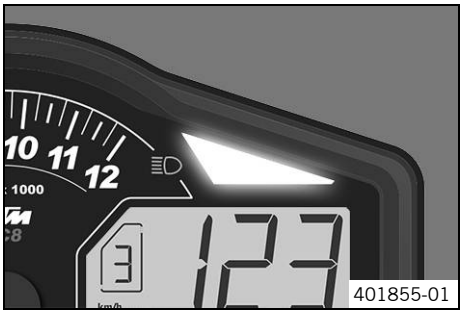
Possible states

	Engine malfunction – The engine control unit has detected a fault. Visit an authorized KTM workshop.
	General message – General message on operating safety. Visit an authorized KTM workshop.
	ABS warning – ABS is not available. Visit an authorized KTM workshop.
	Motorcycle traction control – The motorcycle traction control is not available. Visit an authorized KTM workshop.

	Engine oil pressure – Engine oil pressure is too low. Switch off the engine immediately. Contact an authorized KTM workshop.
	Engine oil level – The engine oil level is too low. Check the engine oil level and correct it.
	Tire air pressure – The tire pressure is incorrect, or the system has failed. Check the tire air pressure.
	Lighting system – An element of the lighting system has failed. Change the faulty light, or visit an authorized KTM workshop.
	Cooling water temperature – The cooling water temperature is too high. Switch off the engine. Contact an authorized KTM workshop.
	Fuel reserve – The fuel supply is dwindling. Refuel at the next opportunity.
	Icy road symbol – The roads may be icy. Adjust your speed to the road conditions.
	Battery voltage – The battery voltage is too low. Recharge the battery with a suitable battery charger.
	Service – A service is due. Contact an authorized KTM workshop.
	Emergency OFF switch – The emergency OFF switch is off.

The messages are displayed in the **"Warning"** menu.

7.8 Shift warning light



The shift warning light flashes or lights up when the transmission should be shifted.
In the **"Shift Light"** menu, the engine speed for the shift warning light can be set. The shift warning light flashes over **"RPM1"** and lights up continuously over **"RPM2"**.

Info

In 6th gear, the shift warning light is deactivated when the engine is warm after the first service.
The shift warning light can be turned on and off in the **"Settings"** menu.

Engine oil temperature	> 35 °C (> 95 °F)
"ODO"	> 1,000 km (> 620 mi)
The shift warning light flashes	> **"RPM1"**
The shift warning light is continuously lit	> **"RPM2"**

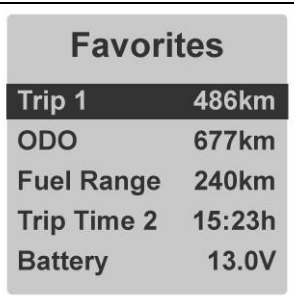
Engine oil temperature	≤ 35 °C (≤ 95 °F)
"ODO"	< 1,000 km (< 620 mi)
The shift warning light always lights up at	6,500 rpm

7.9 service display

After the ignition is switched on, the service display appears briefly.
The service intervals depend on the distance traveled or the elapsed time. The event that occurs first is given priority.
The exact service intervals can be found in the service schedule.

7.10 Matrix display menu

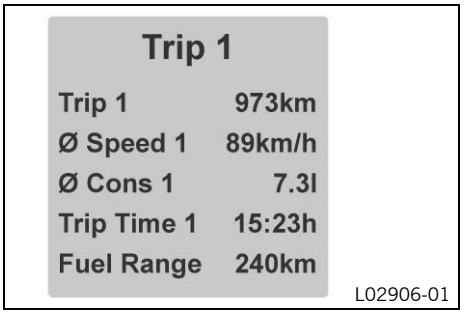
7.10.1 "Favorites"



– Press the **UP** or **DOWN** button until the **"Favorites"** menu appears on the matrix display. Pressing the **SET** button opens the menu.
– Press the **UP** or **DOWN** button to select the menu item and activate it with the **SET** button.
– Pressing the **BACK** button twice always opens the **"Favorites"** menu.

In the **"Favorites"** menu, you can directly open five menus.
In the **"Set Favorites"** menu, the **"Favorites"** menu can be configured.

7.10.2 "Trip 1"

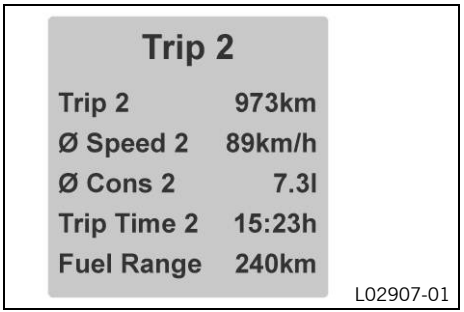


– Press the **UP** or **DOWN** button until the **"Trip 1"** menu appears on the matrix display.

"Trip 1" shows the distance since the last reset, such as between two refueling stops.
"Trip 1" runs continuously and counts the distance up to **9999**.
"Ø Speed 1" indicates the average speed based on **"Trip 1"** and **"Trip Time 1"**.
"Ø Cons 1" indicates the average fuel consumption based on **"Trip 1"** and **"Trip Time 1"**.
"Trip Time 1" indicates the riding time based on **"Trip 1"** and starts running as soon as a speed signal comes in.
"Fuel Range" indicates the possible range with the fuel reserve.

Press and hold the button SET for 3–5 seconds.	All entries in the **"Trip 1"** menu are cleared.

7.10.3 "Trip 2"



– Press the **UP** or **DOWN** button until the **"Trip 2"** menu appears on the matrix display.

"Trip 2" shows the distance since the last reset, such as between two refueling stops.
"Trip 2" runs continuously and counts the distance up to **9999**.
"Ø Speed 2" indicates the average speed based on **"Trip 2"** and **"Trip Time 2"**.
"Ø Cons 2" indicates the average fuel consumption based on **"Trip 2"** and **"Trip Time 2"**.
"Trip Time 2" indicates the riding time based on **"Trip 2"** and starts running as soon as a speed signal comes in.
"Fuel Range" indicates the possible range with the fuel reserve.

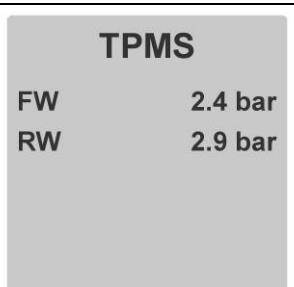
Press and hold the button SET for 3–5 seconds.	All entries in the **"Trip 2"** menu are cleared.

7.10.4 "General Info"

– Press the **UP** oder **DOWN** button until the **"General Info"** menu appears on the matrix display.

"Air Temp" indicates the ambient air temperature.
"Date" indicates the date.
"ODO" indicates the total distance covered.
"Battery" indicates the battery voltage.
"Oil Temp" indicates the engine oil temperature.

7.10.5 "TPMS"



Condition

- Model with **TPMS**.

Warning

Danger of accidents The tire pressure control system does not eliminate the necessity to check the tires before going on a ride.

To avoid false alarms, the tire pressure values are evaluated over a period of several minutes.

– Check the tire pressure before every ride.
– Correct the tire pressure if the tire pressure deviates from the specified value.
– Even if the tire pressure values are correct, stop the vehicle immediately if its behavior indicates a pressure loss in the tires.

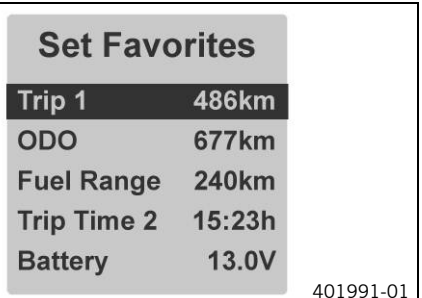
– Press the **UP** or **DOWN** button until the **"TPMS"** menu appears on the matrix display.

Guideline

Tire air pressure, solo/with passenger/full payload	
Front: with cold tires	2.4 bar (35 psi)
Rear: with cold tires	2.9 bar (42 psi)

The **"TPMS"** menu displays the tire pressure of the front and rear tires.
"FW" indicates the tire air pressure at the front.
"RW" indicates the tire air pressure at the rear.

7.10.6 "Set Favorites"



Condition

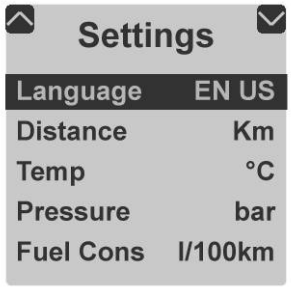
- The vehicle is stationary.

– Press the **UP** or **DOWN** button until the **"Set Favorites"** menu appears on the matrix display. Pressing the **SET** button opens the menu.

– Press the **UP** or **DOWN** button to select the menu. Press the **SET** button to set the menu for quick selection.

In the **"Set Favorites"** menu, the **"Favorites"** menu can be configured.

7.10.7 "Settings"



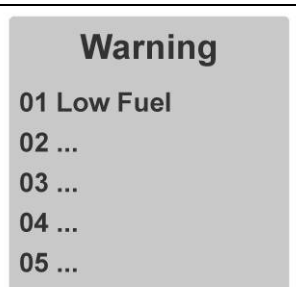
Condition

- The vehicle is stationary.

– Press the **UP** or **DOWN** button until the **"Settings"** menu appears on the matrix display. Pressing the **SET** button opens the menu.

Setting for units or various values are made in the **"Settings"** menu. Some functions can be enabled or disabled.

7.10.8 "Warning"



Condition

- Message or warning

– Press the **UP** or **DOWN** button until the **"Warning"** menu appears on the matrix display. Pressing the **SET** button opens the menu.

– Use the **UP** or **DOWN** button to navigate through the warnings.

In the **"Warning"** menu, warnings that occurred are displayed and stored until they are no longer active.

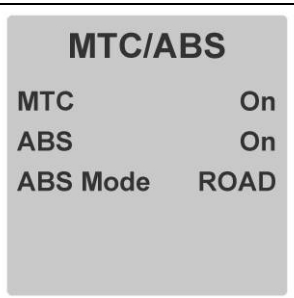
7.10.9 "Heating"

– Press **UP** or **DOWN** button till the **"Heating"** menu appears on the matrix display. Pressing the **SET** button opens the menu.
– Use the **UP** or **DOWN** button to navigate through the menu. Select a heating level for the heated grip or rider seat heating with the **SET** button.

Info

The status of the passengers seat heating is displayed with **Seat Pil**.
The passenger's seat heating can only be switched on of off by the switch next to the grab handle.

7.10.10 "MTC/ABS"



Condition

- The vehicle is stationary.

Warning

Voiding of the government approval for road use and the insurance coverage If the ABS is switched off completely, the vehicle's approval for road use is invalidated.

– Only operate the vehicle in closed-off areas remote from public road traffic if the ABS is switched off completely.

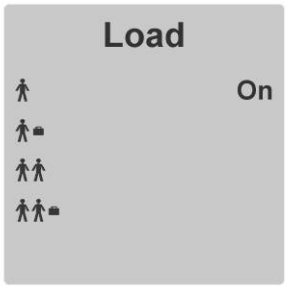
– Press the **UP** or **DOWN** button until the **"MTC"**/**"ABS"** menu appears on the matrix display.

In the **"MTC/ABS"** menu, **"MTC"** and **"ABS"** can be switched off.
In **"ABS Mode"**, a choice can be made between **"Road"** and **"Offroad"**.

Info

After the ignition is switched on, motorcycle traction control and ABS are enabled again.
When the **"Offroad"** ABS mode is enabled, ABS only controls the front wheel. The rear wheel is not controlled by ABS and may lock during braking maneuvers.
When the **"Road"** ABS mode is enabled, the brakes are also applied to the rear wheel when the front brake is activated. ABS can intervene on both wheels.

7.10.11 "Load"



401833-01

Condition

- The vehicle is stationary.
- Engine is running.

– Press the **UP** or **DOWN** button until the **"Load"** menu appears on the matrix display. Pressing the **SET** button opens the menu.

– Press the **UP** or **DOWN** button to select a loading condition and activate it with the **SET** button.

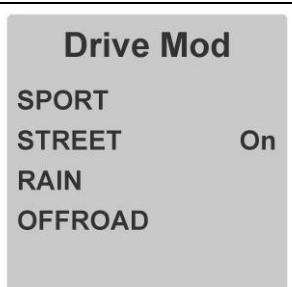
In the **"Load"** menu you can select from four loading conditions.
The setting of the spring preload and the rebound is matched to the load condition.

7.10.12 "Damping"

– Press the **UP** or **DOWN** button until the **"Damping"** menu appears on the matrix display. Pressing the **SET** button opens the menu.
– Press the **UP** or **DOWN** button to select a damping setting and activate it with the **SET** button.

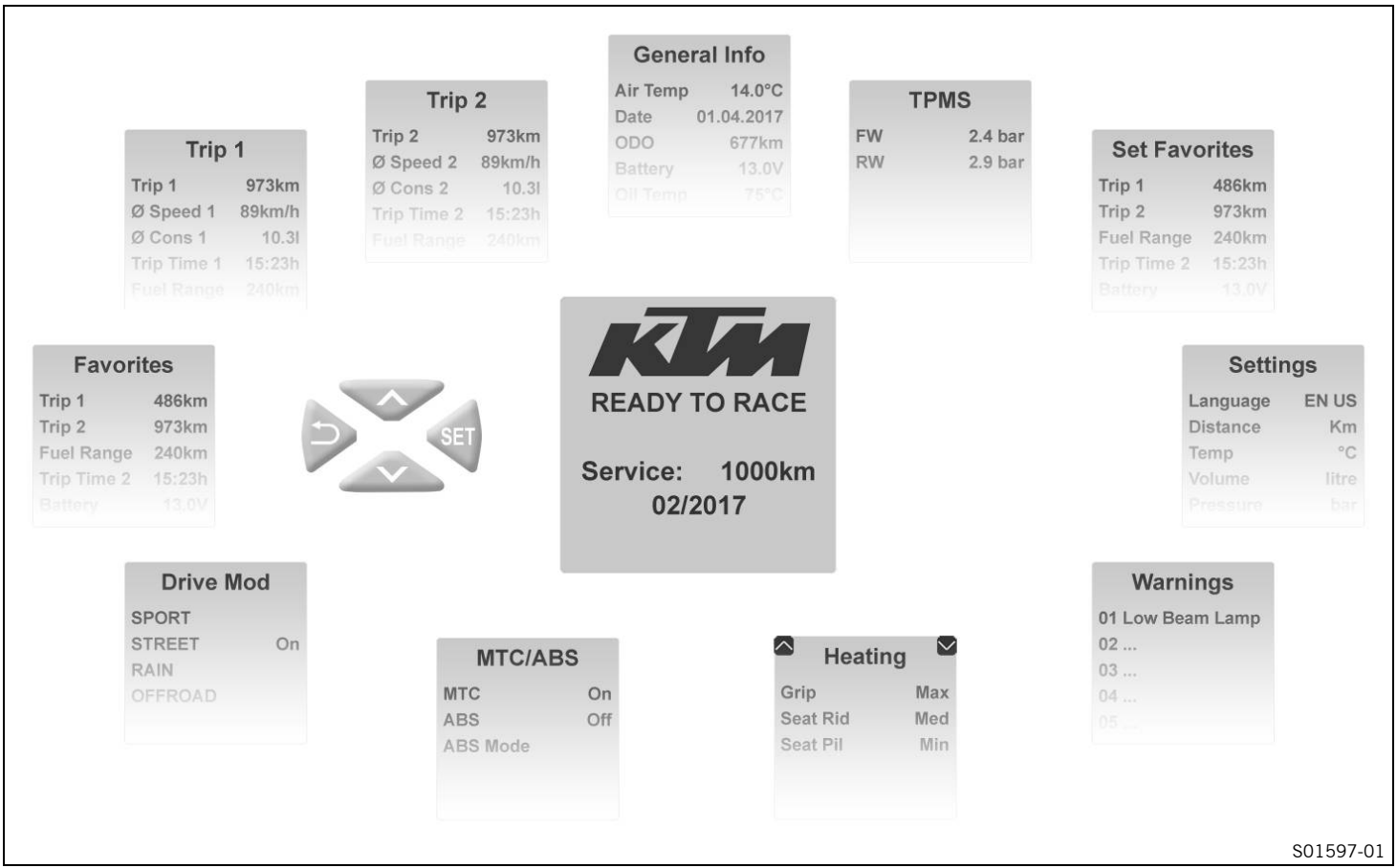
In the **"Damping"** menu the settings for **"SPORT"**, **"STREET"**, **"COMFORT"** and **"OFFROAD"** are available.

7.10.13 "Drive Mod"



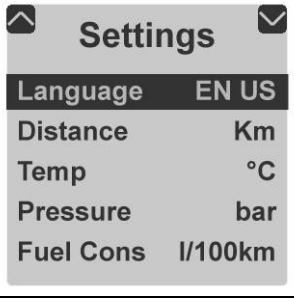
– Press the **UP** or **DOWN** button until the **"Drive Mod"** menu appears on the matrix display. Pressing the **SET**button opens the menu.
– Use the **UP** or **DOWN** button to navigate through the menu. The **SET**button can be used to select engine and motorcycle traction control settings that are coordinated with each other.
  ✓ SPORT – homologated performance with very direct response; the motorcycle traction control allows greater slip on the rear wheel
  ✓ STREET – homologated performance with balanced response; the motorcycle traction control allows normal slip on the rear wheel
  ✓ RAIN – reduced homologated performance for better ridability; the motorcycle traction control allows normal slip on the rear wheel
  ✓ OFFROAD – reduced homologated performance for better ridability; the motorcycle traction control allows high slip on the rear wheel

7.10.14 menu overview



KTM start screen
Menu buttons
"Favorites"
"Trip 1"
"Trip 2"
"General Info"
"TPMS"
"Set Favorites"
"Settings"
"Warning" (only active if there are messages)
"Heating"
"MTC/ABS"
"Drive Mod"

7.10.15 "Language"



Condition

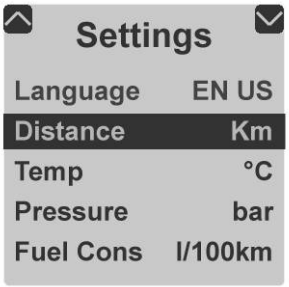
- The vehicle is stationary.

– Press the **UP** or **DOWN** button until the **"Settings"** menu appears on the matrix display. Pressing the **SET** button opens the menu.

– Press the **SET** button again to select the language.

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

7.10.16 "Distance"



Condition

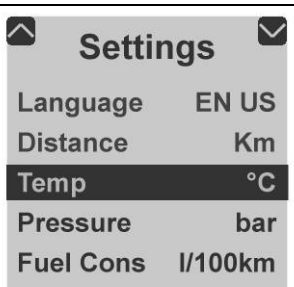
- The vehicle is stationary.

– Press the **UP** or **DOWN** button until the **"Settings"** menu appears on the matrix display. Pressing the **SET** button opens the menu.

– Press the **UP** or **DOWN** button until **"Distance"** is highlighted in black on the matrix display. Pressing the **SET** button again sets the unit of measure.

Select kilometers **"km"** or miles **"mi"** for the distance.

7.10.17 "Temp"



Condition

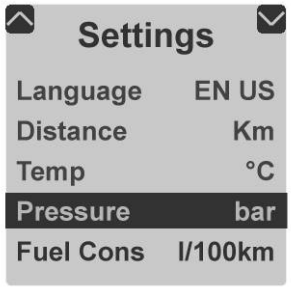
- The vehicle is stationary.

– Press the **UP** or **DOWN** button until the **"Settings"** menu appears on the matrix display. Pressing the **SET** button opens the menu.

– Press the **UP** or **DOWN** button until **"Temp"** is highlighted in black on the matrix display. Pressing the **SET** button again sets the unit of measure.

Select **"°C"** or **"°F"** for the temperature indicator.

7.10.18 "Pressure"



Condition

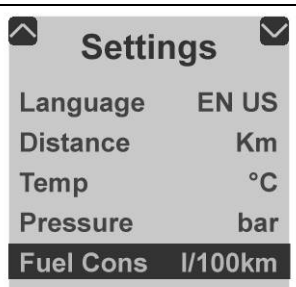
- The vehicle is stationary.

– Press the **UP** or **DOWN** button until the **"Settings"** menu appears on the matrix display. Pressing the **SET** button opens the menu.

– Press the **UP** or **DOWN** button until **">Pressure"** is highlighted in black on the matrix display. Pressing the **SET** button again sets the unit of measure.

Select **"bar"** or **"psi"** for the tire pressure display.

7.10.19 "Fuel Cons"



Condition

- The vehicle is stationary.

– Press the **UP** or **DOWN** button until the **"Settings"** menu appears on the matrix display. Pressing the **SET** button opens the menu.

– Press the **UP** or **DOWN** button until **"Fuel Cons"** is highlighted in black on the matrix display. Pressing the **SET** button again sets the unit of measure.

Select one of the available consumption displays.

7.10.20 "Clock/Date"

Condition

- The vehicle is stationary.

– Press the **UP** or **DOWN** button until the **"Settings"** menu appears on the matrix display. Pressing the **SET** button opens the menu.

– Press the **UP** or **DOWN** button until **"Clock/Date"** is highlighted in black on the matrix display. Pressing the **SET** button again opens the menu.

– Use the **UP** or **DOWN** button to navigate through the menu. Use the **SET** button to set the time and date.

If the battery was removed, the time and date must be set in the matrix display.

7.10.21 "Shift Light"

Condition

- The vehicle is stationary.

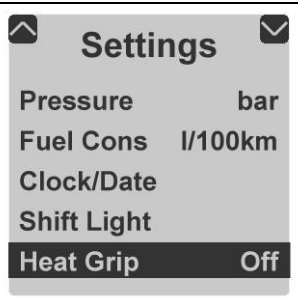
– Press the **UP** or **DOWN** button until the **"Settings"** menu appears on the matrix display. Pressing the **SET** button opens the menu.

– Press the **UP** or **DOWN** button until **"Shift Light"** is highlighted in black on the matrix display. Pressing the **SET** button again opens the menu.

– Press the **UP** or **DOWN** button to select the function. Use the **SET** button to set the engine speed for the shift warning light.

When the engine speed reaches **"RPM 1"**, the shift warning light flashes.
When the engine speed reaches **"RPM 2"**, the shift warning light lights up continuously.
Switch the **"Shift Light"** function on or off.

7.10.22 "Heat Grip"



Condition

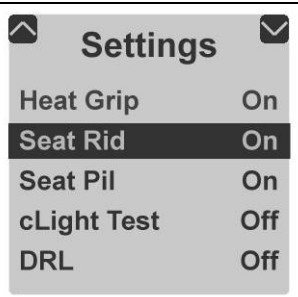
- The vehicle is stationary.

– Press the **UP** or **DOWN** button until the **"Settings"** menu appears on the matrix display. Pressing the **SET** button opens the menu.

– Press the **UP** or **DOWN** button until **"Heat Grip"** is highlighted in black on the matrix display. Pressing the **SET** button again opens the menu.

Switch the heat grips menu on and off.

7.10.23 "Seat Rid"



Condition

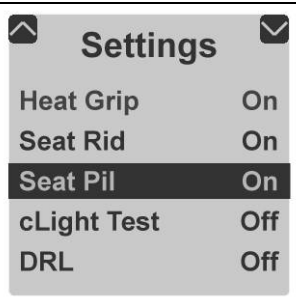
- The vehicle is stationary.

– Press the **UP** or **DOWN** button until the **"Settings"** menu appears on the matrix display. Pressing the **SET** button opens the menu.

– Press the **UP** or **DOWN** button until **"Seat Rid"** is highlighted in black on the matrix display. Pressing the **SET**button again switches the seat heating menu for the rider on or off.

Switch the seat heating menu for the rider's seat on or off.

7.10.24 "Seat Pil"



Condition

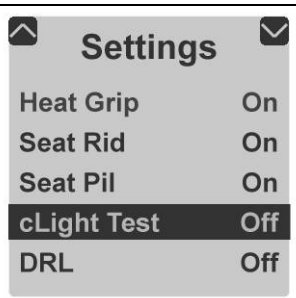
- The vehicle is stationary.

– Press the **UP** or **DOWN** button until the **"Settings"** menu appears on the matrix display. Pressing the **SET** button opens the menu.

– Press the **UP** or **DOWN** button until **"Seat Pil"** is highlighted in black on the matrix display. Pressing the **SET** button again switches the seat heating menu for the pillion seat on or off.

Switch the indicator for the pillion seat heating on or off.

7.10.25 "cLightTest"



Condition

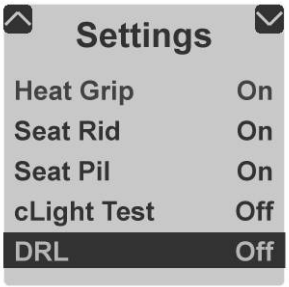
- The vehicle is stationary.

– Press the **UP** or **DOWN** button until the **"Settings"** menu appears on the matrix display. Pressing the **SET** button opens the menu.

– Press the **UP** or **DOWN** button until **"cLightTest"** is highlighted in black on the matrix display. Pressing the **SET** button again starts the cornering light test.

The left-hand cornering light segments light up in succession, starting with the lower segment.
If the left cornering light test is complete, the upper segment lights up continuously.
By pressing the **SET** button again the right cornering light test is repeated.
If the test of the right light curve is complete, the upper segment lights up continuously.
By pressing the **SET** button again the test is ended and the cornering light switched off.

7.10.26 "DRL"



Condition

- The vehicle is stationary.

– Press the **UP** or **DOWN** button until the **"Settings"** menu appears on the matrix display. Pressing the **SET** button opens the menu.

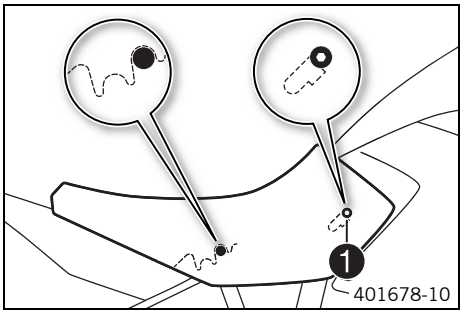
– Press the **UP** or **DOWN** button until **"DRL"** is highlighted in black on the matrix display. Pressing the **SET** button again switches the daytime running light on or off.

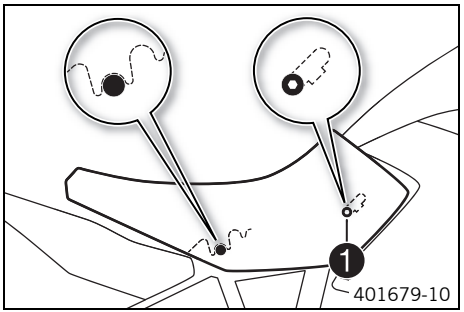
Switch the daytime running light on or off.

Info

Note the legal regulations regarding the daytime running light.

8.1 Adjusting the front rider's seat





Preparatory work

– Remove the passenger seat. (📖 p. 109)

Lower the front rider's seat:

– Attach the front rider's seat to the fuel tank at the recesses ❶, and push the front rider's seat down and forward at the same time.

Raise the front rider's seat:

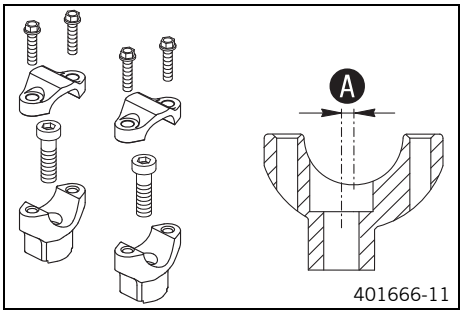
– Attach the front rider's seat to the fuel tank at the recesses ❶, and push the rider's seat up and forward at the same time.

– Finally, check that the front rider's seat is correctly mounted.

Finishing work

– Mount the passenger seat. (📖 p. 110)

8.2 Handlebar position



The holes on the handlebar support are placed at a distance of Ⓐ from the center.

Hole distance Ⓐ	3.5 mm (0.138 in)

The handlebar can be mounted in two different positions. In this way, the handlebar can be mounted in the position that is most comfortable for the rider.

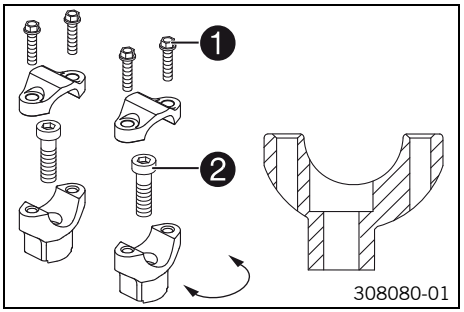
8.3 Adjusting the handlebar position

Warning

Danger of accidents A repaired handlebar poses a safety risk.

If the handlebar is bent or straightened, the material becomes fatigued. The handlebar may break as a result.

– Change the handlebar if the handlebar is damaged or bent.



– Remove screws ❶. Remove the handlebar clamps. Remove the handlebar and lay it to one side.

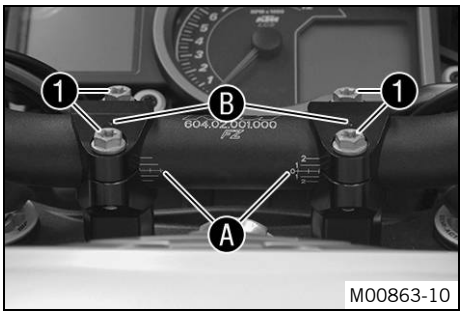
Info
Cover the components to protect them against damage.
Do not bend the cables and lines.

– Remove screws ❷. Take off the handlebar supports.
– Place the handlebar supports in the required position. Mount and tighten screws ❷.

Guideline

Screw, handlebar support	M10	40 Nm (29.5 lbf ft)	**Loctite® 243™**

Info
Position the left and right handlebar supports evenly.



– Position the handlebar.

Info
Make sure the cables and wiring are positioned correctly.

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

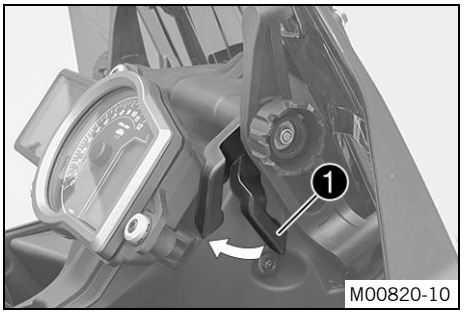
Guideline

Screw, handlebar clamp	M8	20 Nm (14.8 lbf ft)

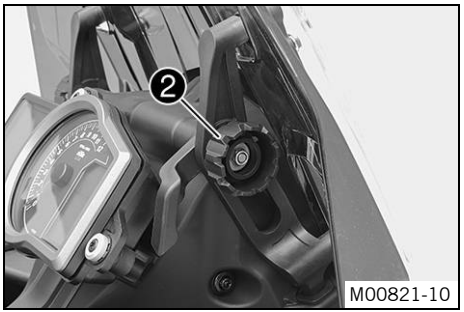
✓ The markings Ⓐ of the handlebar scale are located centrally between the handlebar clamps.
✓ Markings Ⓑ face backwards.

Info
Make sure the gap widths are even.

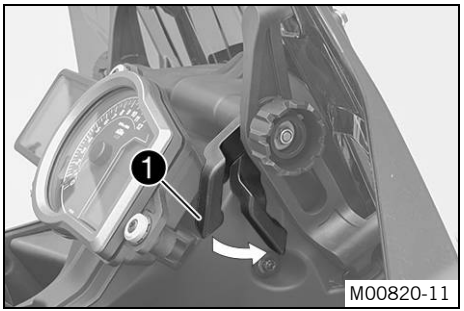
8.4 Adjusting the wind shield



– Pull clamping lever ❶ in the direction of the arrow.
✔ The windshield is unlocked.



– To bring the windshield in the required position, turn the handwheel ❷ .

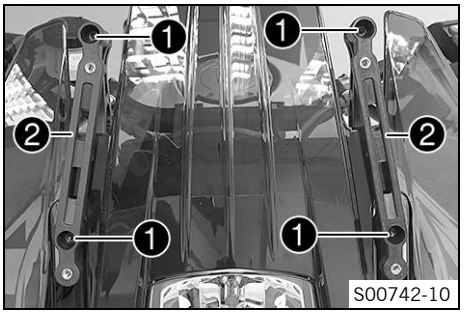


– Push clamping lever ❶ in the direction of the arrow.
  ✓ The windshield is locked.

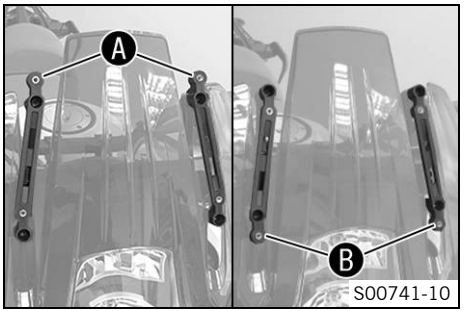
8.5 Adjusting the windshield adapter position

Info
To mount the windshield higher or lower the windshield adapter can be mounted in two positions.

Preparatory work
– Remove the wind shield. (📖 p. 145)

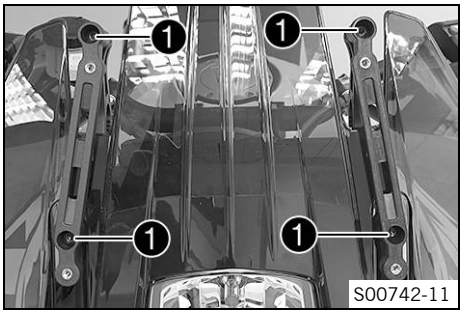


Main work
– Remove screws ❶.
– Take off windshield adapter ❷.



– Adjust windshield adapter to the desired position Ⓐ or Ⓑ.

Info
The handling side is marked on the rear of the windshield adapter.



– Mount and tighten screws ❶.

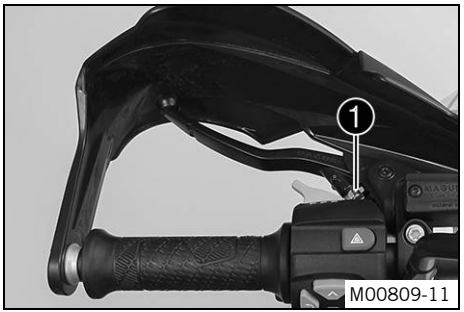
Guideline

Screw, cover part	M5	3.5 Nm (2.58 lbf ft)

Finishing work

– Install the wind shield. (📖 p. 145)

8.6 Adjusting basic position of clutch lever



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

Info

Turn the adjusting screw clockwise to increase the distance between the clutch lever and the handlebar.
Turn the adjusting screw counterclockwise to decrease the distance between the clutch lever and the handlebar.
The range of adjustment is limited.
Turn the adjusting screw by hand only, and do not apply any force.
Do not make any adjustments while riding!

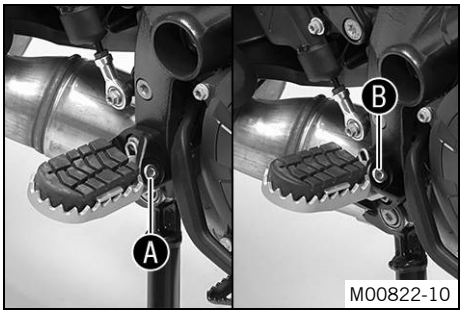
8.7 Adjusting the basic position of the hand brake lever

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

Info

Push the hand brake lever forward and turn the adjusting wheel.
Do not make any adjustments while riding.

8.8 Rider footrests



The rider footrests can be mounted in one of two positions.

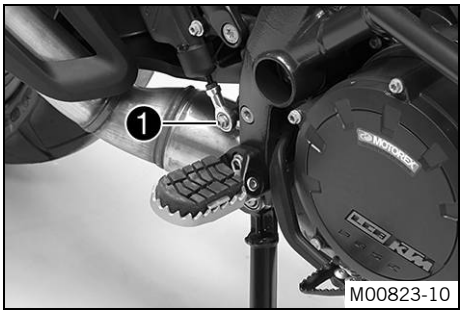
Possible states

- Rider footrests, low Ⓐ
- Rider footrests, high Ⓑ

8.9 Adjusting the footrests

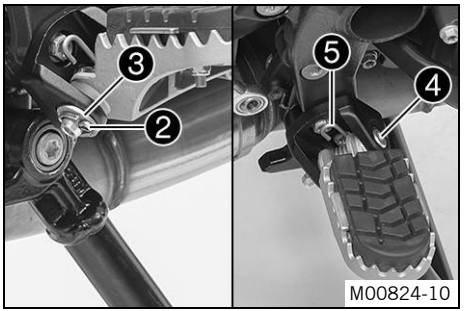
Info

The operations on the footrest brackets are the same for the left and right sides.



– Remove screw ❶.

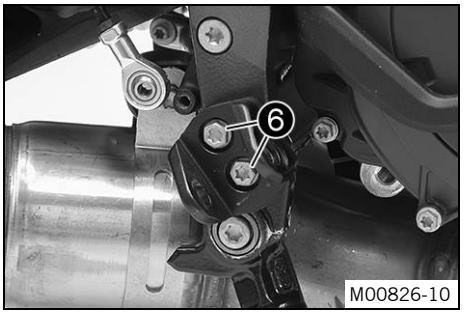
✓ The foot brake lever swings up to the stop.



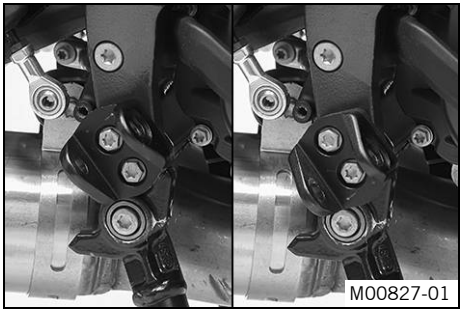
– Remove cotter pin ❷ with washer ❸.
– Carefully remove the pin ❹ of the rider footrest.

Info
The spring is under high tension and can pop out when the pin is removed.

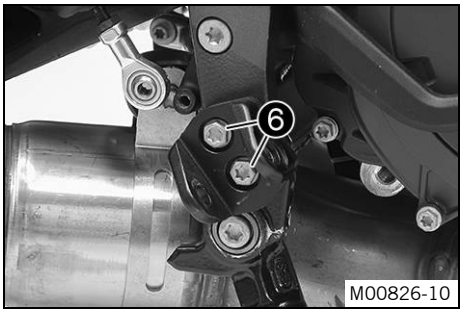
– Take off the rider footrest ❺ with the spring.



– Remove screws ❻.



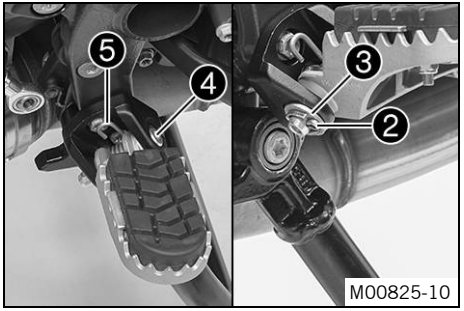
– Adjust the footrest bracket to the desired position.



– Mount and tighten screws ❻.

Guideline

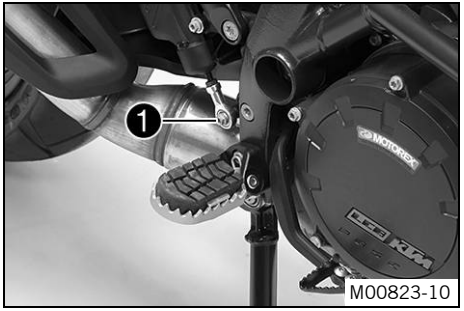
Screw, front footrest bracket	M8	25 Nm (18.4 lbf ft)	**Loctite® 243™**



– Mount the rider footrest with spring ❺ and pin ❹.

Pliers for footrest spring (58429083000)

– Mount washer ❸ and cotter pin ❷.



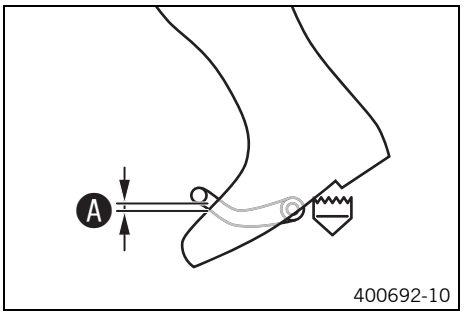
– Position the foot brake lever.
– Mount and tighten screw ❶.

Guideline

Screw, ball joint of push rod on foot brake cylinder	M6	10 Nm (7.4 lbf ft)	**Loctite® 243™**

8.10 Checking the basic position of the shift lever

Info
When driving, the shift lever must not touch the driver's boot when in the basic position.
When the shift lever keeps touching the boot, the transmission will be subject to an excessive load.

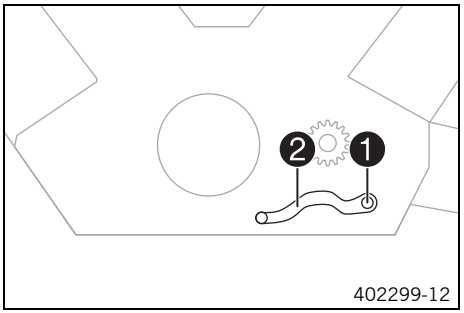


– Sit on the vehicle in the riding position and determine distance Ⓐ between the upper edge of your boot and the shift lever.

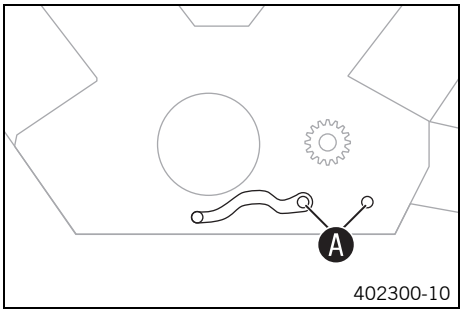
Distance between shift lever and upper edge of boot	10... 20 mm (0.39... 0.79 in)

» If the distance does not meet specifications:
– Adjust the basic position of the shift lever. 🔧 (📖 p. 80)

8.11 Adjusting the basic position of the shift lever 🔧



– Remove screw ❶ with the washers and take off shift lever ❷.



– Clean gear teeth Ⓐ of the shift lever and shift shaft.
– Mount the shift lever on the shift shaft in the required position and engage the gearing.

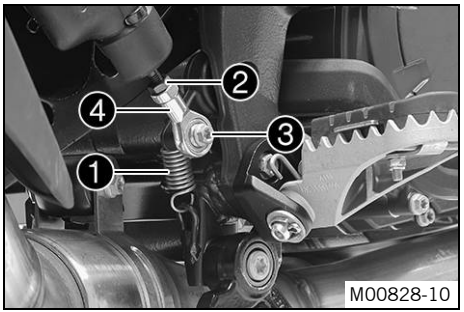
Info
The range of adjustment is limited.
The shift lever must not come into contact with any other vehicle components during the shift procedure.

– Mount and tighten screw ❶ with washers.

Guideline

Screw, shift lever	M6	18 Nm (13.3 lbf ft)	**Loctite® 243™**

8.12 Adjusting the basic position of the foot brake lever



– Disconnect spring ❶.
– Loosen nut ❷.
– Remove screw ❸.
– To adjust the basic position of the foot brake lever to individual requirements, turn ball joint ❹ accordingly.

Info
The range of adjustment is limited.
The screw must be screwed into the ball joint by at least 5 turns.

– Hold ball joint ❹ and tighten nut ❷.

Guideline

Remaining chassis nuts	M6	10 Nm (7.4 lbf ft)

– Mount and tighten screw ❸.

Guideline

Screw, ball joint of push rod on foot brake cylinder	M6	10 Nm (7.4 lbf ft)	**Loctite® 243™**

– Attach spring ❶.

9.1 Advice on first use

Danger

Danger of accidents A rider who is not fit to ride poses a danger to him or herself and 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 impaired.

Warning

Risk of injury Missing or poor protective clothing presents an increased safety risk.

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

Warning

Danger of crashing Different tire tread patterns on the front and rear wheel impair the handling characteristic.

Different tire tread patterns can make the vehicle significantly more difficult to control.

– Make sure that only tires with a similar tire tread pattern are fitted to the front and rear wheel.

Warning

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

– Only use tires/wheels approved by KTM with the corresponding speed index.

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 at alternating angles.
  Running-in phase 200 km (124 mi)

Warning

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

If the foot brake lever is not released, the brake linings drag continuously.

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

Info

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

– Make sure that the pre-delivery inspection work has been carried out by an authorized KTM workshop.
  ✓ You receive a delivery certificate and the Service and Warranty Booklet at vehicle handover.
– Before your first trip, read the entire Owner's Manual carefully.
– Get to know the controls.
– Adjust the motorcycle to your requirements, as described in the "Ergonomics" chapter.
– Get used to handling the motorcycle on a suitable piece of land before making a longer trip. Try also to ride as slowly as possible and in a standing position to get a better feeling for the motorcycle.
– Hold the handlebar firmly with both hands and keep your feet on the footrests when riding.
– Run the engine in.

9.2 Running in the engine

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

Guideline

Maximum engine speed	
During the first: 1,000 km (620 mi)	6,500 rpm
After the first: 1,000 km (620 mi)	10,250 rpm

– Avoid fully opening the throttle!

Info
If the maximum engine speed is exceeded before the first service, the shift warning light flashes.

9.3 Loading the vehicle

Warning
Danger of accidents Total weight and axle loads influence the handling characteristic.
The overall weight consists of: motorcycle ready for operation and with a full tank, driver and passenger with protective clothing and helmet, and luggage.

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

Warning
Danger of accidents Improper mounting of cases or the tank rucksack impairs the handling characteristic.

– Mount and secure cases and tank rucksack according to the manufacturer's instructions.

Warning
Danger of accidents Unstable handling characteristics at high speed.

– Adapt your speed according to your payload. Ride more slowly if your motorcycle is loaded with cases or other baggage.
Maximum speed with luggage 150 km/h (93.2 mph)

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

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

Warning
Danger of accidents Luggage which has slipped impairs visibility.
If the tail light is covered, you are less visible to traffic behind you, especially when it is dark.

– Check that your luggage is fixed properly at regular intervals.

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 Pieces of luggage which have slipped impair the handling characteristic.

– Check that your luggage is fixed properly at regular intervals.

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.

– If you are carrying baggage, make sure 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.
– Do not exceed the maximum permitted total weight and the axle loads.
Guideline

Maximum permissible total weight	462 kg (1,019 lb.)
Maximum permissible front axle load	175 kg (386 lb.)
Maximum permissible rear axle load	300 kg (661 lb.)

10 RIDING INSTRUCTIONS

10.1 Checks and maintenance measures when preparing for use

Info

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.

- Check the engine oil level. (📖 p. 213)
- Check the brake fluid level of the front brake. (📖 p. 153)
- Check the rear brake fluid level. (📖 p. 156)
- Check the front brake linings. (📖 p. 155)
- Check the rear brake linings. (📖 p. 159)
- Check that the brake system is functioning properly.
- Check the coolant level in the compensating tank. (📖 p. 207)
- Check the chain for dirt. (📖 p. 113)
- Check the chain tension. (📖 p. 115)
- Check the tire condition. (📖 p. 172)
- Check the tire air pressure. (📖 p. 174)
- Check the spoke tension. (📖 p. 174)
- Check the settings of all controls and ensure that they can be operated smoothly.
- Check that the electrical equipment is functioning properly.
- Check that the floating luggage system (optional) can move freely.
- Check that luggage is properly secured.
- Check the setting of the rear mirror.
- Check the fuel level.

10.2 Starting

Danger

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

– Always make sure there is sufficient ventilation when running the engine.
– Use an effective exhaust extraction system when starting or running the engine in an enclosed space.

Caution

Danger of accidents Electronic components and safety devices will be damaged if the battery is discharged or missing.

– Never operate the vehicle with a discharged battery or without a battery.

Note

Engine damage High revving speed with a cold engine negatively impacts the lifespan of the engine.

– Always run the engine warm at a low speed.

– Press the emergency OFF switch to the position **ON** ○.
– Switch on the ignition by turning the black ignition key to the position **ON** ○.
  ✓ After you switch on the ignition, you can hear the fuel pump working for about two seconds. The function check of the combination instrument is run at the same time.
  ✓ The ABS lamp lights up and goes back out after starting off.
– Shift the transmission to idle N.
  ✓ The green idling speed indicator lamp N lights up.

– Press the electric starter button ⓢ.

Info

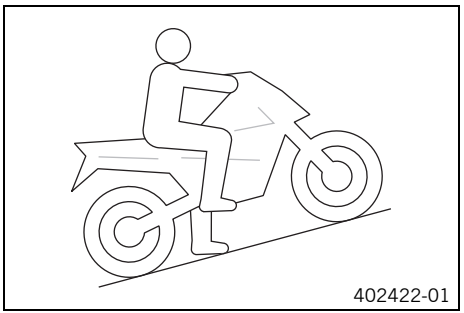
Do not press the electric starter button until the combination instrument function check is finished.
When starting, **DO NOT** open the throttle. If you open the throttle during the starting procedure, fuel is not injected by the engine management system and the engine cannot start.
Press the electric starter button ⓢ for at most 5 seconds. Wait for a least 5 seconds before trying again.
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, the engine stops.

– Remove the motorcycle from the center stand or side stand.

10.3 Starting off

– Pull the clutch lever, engage 1st gear, release the clutch lever slowly and simultaneously open the throttle carefully.

10.4 Start off with HHC (Option: Hill-start assist)



The **HHC** is an optional auxiliary function of the brake system.
The **HHC** prevents accidental rolling back of the motorcycle on hills.
The **HHC** recognizes stopping on hills and operates the rear brake.
After releasing the brake lever, the brake force is maintained for a maximum of 5 seconds as long as the motorcycle is not moving forward.
When driving off the **HHC** releases the rear brake automatically.

Info

When the **HHC** is active, the TC light flashes
When the ignition is switched on, the **HHC** can still be active, even if the engine is stopped.
To roll back with active **HHC**, wait 5 seconds, shift to neutral, or switch off the ignition.

If the **HHC** does not detect a start off after 5 seconds, the braking force is automatically reduced gently.
When a brake lever is actuated, the **HHC** is re-activated.

10.5 Shifting, riding

Warning

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

– Avoid abrupt load alterations and sudden braking actions.
– Adapt your speed to the road conditions.

Warning

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

– Do not change into a low gear at high engine speed.

Warning

Danger of accidents An incorrect ignition key position causes malfunctions.

– Do not change the ignition key position while driving.

Warning

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

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

Warning
Risk of injury The passenger may fall from the motorcycle if they conduct themselves incorrectly.

– Ensure that the passenger sits correctly on the passenger seat, places his or her feet on the passenger foot rest and holds on to the rider or the grab handles.
– Note the regulations governing the minimum age of passengers in your country.

Warning
Danger of accidents A risky 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 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 at alternating angles.
Running-in phase 200 km (124 mi)

Warning
Danger of accidents Total weight and axle loads influence the handling characteristic.
The overall weight consists of: motorcycle ready for operation and with a full tank, driver and passenger with protective clothing and helmet, and luggage.

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

Warning
Danger of accidents Pieces of luggage which have slipped impair the handling characteristic.

– Check that your luggage is fixed properly at regular intervals.

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.

Note

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

Dust and dirt will enter the engine without an air filter.

– Never start to use the vehicle without an air filter.

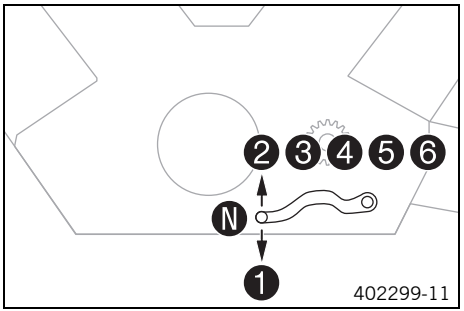
Note

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.

Info

If you hear unusual noises while riding, stop immediately, switch off the engine and contact an authorized KTM workshop.



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

Info
You can see the positions of the 6 forward gears 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 grip, turn the throttle back so it is ¾ open. This will barely reduce the speed but fuel consumption will be considerably lower.
– Accelerate only up to a speed suitable for the road surface and weather conditions. Particularly in bends, do not shift, and accelerate very carefully.
– To shift down, brake if necessary and close the throttle at the same time.
– Pull the clutch lever and shift into a lower gear, release the clutch lever slowly, and open the throttle or shift again.
– If the engine stalls (e.g. at a crossroads), just pull the clutch lever and press the electric starter button. You do not have to shift into neutral.
– Switch off the engine if you expect to be standing for a long time.
– If the oil pressure warning lamp lights up during a trip, stop immediately and switch off the engine. Contact an authorized KTM workshop.
– If the engine warning lamp lights up during a trip, please contact an authorized KTM workshop as soon as possible.

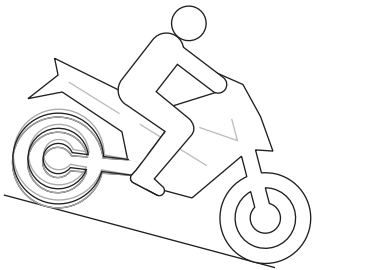
Info
From the flash rhythm you can deduce a two-digit number, the so-called blink code. The blink code tells you which component is affected by a malfunction.

– If the general warning lamp lights up during a trip, the matrix display shows a message for 10 seconds.

Info
Very important messages are stored in the **"Warning"** menu.

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

10.6 MSR (Option: Engine braking control)



The **MSR** is an optional auxiliary function of the engine control.
If the engine braking effect is too great, the **MSR** prevents the rear wheel from locking or sliding away on a sloping position.
To avoid slip of the rear wheel, the **MSR** only opens the throttle valve as far as absolutely necessary.
The **MSR** is applied on surfaces, where the friction is to low to open the anti-hopping clutch.
To further increase ride safety, the **MSR** is slope dependent.

Info
When the ABS or active Drive Mode **Offroad** (📖 p. 211) is switched off, the **MSR** is not active.

10.7 Applying the brakes

Warning
Danger of accidents Moisture and dirt impair the brake system.

– Brake carefully several times to dry out and remove dirt from the brake linings and the brake discs.

Warning

Danger of accidents A spongy pressure point on the front or rear brake reduces braking efficiency.

– Check the brake system and do not continue riding until the problem is eliminated. (Your authorized KTM workshop will be glad to help.)

Warning

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

If the foot brake lever is not released, the brake linings drag continuously.

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

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 Salt on the roads impairs the brake system.

– Brake carefully several times to remove salt from the brake linings and the brake discs.

Warning

Danger of accidents ABS may increase the stopping distance in certain situations.

– Adjust application of the brakes to the respective riding situation and riding surface conditions.

Warning

Danger of accidents Excessively forceful application of the brakes blocks 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 Driving aids can only prevent a rollover within the physical limitations.

It is not always possible to compensate for extreme 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.

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

Info

When the ABS is enabled, you can achieve maximum braking power even on low grip surfaces such as sandy, wet, or slippery terrain without locking of the wheels.

Warning

Danger of accidents The rear wheel can lock due to the engine braking effect.

– Pull in the clutch, if you perform emergency or full braking, or if you brake on a slippery ground.

Warning

Danger of accidents Banked or laterally sloping ground reduces the maximum possible delay.

– If possible finish braking before going into a bend.

– Braking should always be completed before you go into a bend. Change down to a lower gear appropriate to your road speed.
– On long downhill stretches, use the braking effect of the engine. Change down one or two gears, but do not over-rev the engine. In this way, you have to brake far less and the brakes do not overheat.

10.8 Stopping, parking

Warning

Risk of injury People who act without authorization endanger themselves and others.

- Do not leave the vehicle unattended if the engine is running.
- Protect the vehicle against access by unauthorized persons.
- Lock the steering and remove the ignition key if you leave the vehicle unattended.

Warning

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

- Do not touch any parts such as the exhaust system, radiator, engine, shock absorber, or brake system before the vehicle parts have cooled down.
- Let the vehicle parts cool down before you perform any work on the vehicle.

Note

Material damage The vehicle may be damaged by incorrect procedure when parking.

Significant damage may be caused 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.
- Ensure that nobody sits on the vehicle when the vehicle is parked on a stand.

Note

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

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

Note

Material damage Damage and destruction of components from excessive load.

– The center stand is only designed for the weight of the motorcycle and the baggage. Do no sit on the motorcycle when it is resting on the center stand. The center stand or the frame may become damaged and the motorcycle may fall over.
– Pull the motorcycle up onto the center stand at the grab handles.

– Apply the brakes on the motorcycle.
– Shift the transmission to idle N.
– Switch off the ignition by turning the black ignition key to the position **OFF** ⊠.

Info

If the engine is switched off with the emergency OFF switch and the ignition remains switched on at the ignition lock, power continues to flow to most power consumers. This discharges the battery. You should therefore always switch off the engine with the ignition lock – the emergency OFF switch is intended for emergencies only.

– Park the motorcycle on a firm surface.

Alternative 1

– Swing the side stand forward with your foot as far as it will go and lean the vehicle on it.

Alternative 2

– Raise the vehicle with the center stand. (📖 p. 108)

– Lock the steering by turning the handlebar to the left, pressing the black ignition key down in the position **OFF** ⊠ and turning it to the position **LOCK** 🔒. To make the steering lock engage more easily, move the handlebar a little to the left and right. Remove the black ignition key.

10.9 Transport

Note

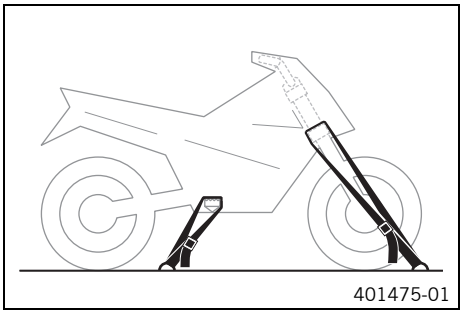
Danger of damage The parked vehicle can roll away or fall over.

– Park the vehicle on a firm and level surface.

Note

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

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



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

10.10 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 or lit cigarettes.
– 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 off immediately.
– Observe the specifications for refueling.

Warning

Danger of poisoning Fuel is poisonous and a health hazard.

- Avoid skin, eye and clothing contact with fuel.
- Immediately consult a doctor if you swallow fuel.
- Do not inhale fuel vapors.
- In case of skin contact, rinse the affected area with plenty of water.
- Rinse the eyes thoroughly with water, and consult a doctor in case of fuel contact with the eyes.
- Change your clothing in case of fuel spills on them.

Note

Material damage Inadequate fuel quality causes the fuel filter to quickly become clogged.

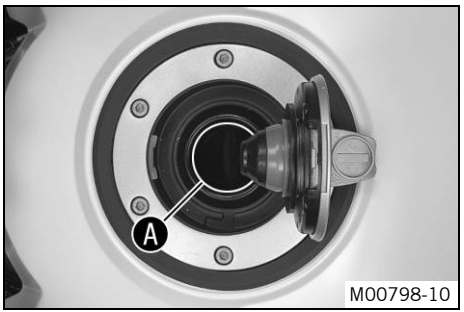
In some countries and regions, the available fuel quality and cleanliness may not be sufficient. This will result in problems with the fuel system.

- Refuel only with clean fuel that meets the specified standards. (Your authorized KTM workshop will be glad to help.)

Warning

Environmental hazard Improper handling of fuel is a danger to the environment.

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



– Switch off the engine.
– Open the filler cap. (📖 p. 38)
– Fill the fuel tank with fuel up to the lower edge Ⓐ of the filler neck.

Total fuel tank capacity, approx.	30 l (7.9 US gal)	Super unleaded (ROZ 95/RON 95/PON 91) (📖 p. 244)

– Close the filler cap. (📖 p. 40)

11 SERVICE SCHEDULE

11.1 Additional information

Any further work that results from the required work or from the recommended work must be ordered separately and invoiced separately. Different service intervals may apply in your country, depending on the local operating conditions.

11.2 Required work

	after 1,000 km (620 mi)	every 15,000 km (9,300 mi)	every 30,000 km (18,600 mi)	Every year	Every two years
Read out the fault memory using the KTM diagnostics tool. 🔧	○	●	●	●	●
Check the function of the electrical system. 🔧	○	●	●	●	●
Change the engine oil and oil filter and clean the oil screens. 🔧 (📖 p. 214)	○	●	●	●	●
Check the front brake linings. (📖 p. 155)	○	●	●	●	●
Check the rear brake linings. (📖 p. 159)	○	●	●	●	●
Check the brake discs. (📖 p. 152)	○	●	●	●	●
Check the brake lines for damage and leakage. 🔧	○	●	●	●	●
Change the front brake fluid. 🔧					●
Change the rear brake fluid. 🔧					●
Change the hydraulic clutch fluid. 🔧					●
Check the brake fluid level of the front brake. (📖 p. 153)	○	●	●	●	
Check the rear brake fluid level. (📖 p. 156)	○	●	●	●	
Check/correct the fluid level of the hydraulic clutch. (📖 p. 121)		●	●	●	
Check the shock absorber and fork for leaks. Perform service as needed and depending on how the vehicle is used. 🔧	○	●	●	●	●

	after 1,000 km (620 mi)	every 15,000 km (9,300 mi)	every 30,000 km (18,600 mi)	Every year	Every two years
Clean the dust boots of the fork legs. 🔧 (📖 p. 140)		●	●		
Check the steering head bearing play. (📖 p. 122)	○	●	●	●	●
Check the tire condition. (📖 p. 172)	○	●	●	●	●
Check the tire air pressure. (📖 p. 174)	○	●	●	●	●
Retighten the spokes. 🔧	○				
Check the spoke tension. (📖 p. 174)		●	●	●	●
Check the rim run-out. 🔧	○	●	●	●	●
Check the chain, rear sprocket and engine sprocket. (📖 p. 118)		●	●	●	●
Check the chain tension. (📖 p. 115)	○	●	●	●	●
Change the spark plugs (air filter removed). 🔧			●		
Check the valve clearance (air filter and spark plugs removed). 🔧			●		
Change the SAS membrane. 🔧			●		
Check the cables for damage and routing without sharp bends. (fuel tank removed) 🔧		●	●	●	●
Check the coolant level in the compensating tank. (📖 p. 207)	○	●	●	●	●
Change the air filter, clean the air filter box. 🔧		●	●		
Check the fuel pressure. 🔧		●	●	●	●
Check the CO adjustment using the KTM diagnostics tool. 🔧	○	●	●		
Check the setting of the lighting system. (📖 p. 197)	○	●	●		

	after 1,000 km (620 mi)	every 15,000 km (9,300 mi)	every 30,000 km (18,600 mi)	Every year	Every two years
Check that the radiator fan is functioning properly. 🔧	○	●	●	●	●
Final check: Check the vehicle for roadworthiness and take a test ride. 🔧	○	●	●	●	●
Read out the error memory after the test ride using the KTM diagnostics tool. 🔧	○	●	●	●	●
Reset the service display using the KTM diagnostic tool. 🔧	○	●	●	●	●
Make the service entry in the **KTM Dealer.net** and in the Service and Warranty Booklet. 🔧	○	●	●	●	●

○ One-time interval

● Periodic interval

11.3 Recommended work

	after 1,000 km (620 mi)	every 15,000 km (9,300 mi)	every 30,000 km (18,600 mi)	Every year	Every four years
Check the frame. 🔧			●		
Check the swingarm. 🔧			●		
Check/clean the oil nozzle for clutch lubrication. 🔧	○	●	●		
Check the swingarm bearing for play. 🔧		●	●		
Check the wheel bearing for play. 🔧		●	●		

	after 1,000 km (620 mi)	every 15,000 km (9,300 mi)	every 30,000 km (18,600 mi)	Every year	Every four years
Grease all moving parts (e.g., side stand, hand lever, chain, ...) and check for smooth operation. 🔧	○	●	●	●	●
Empty the drainage hoses. 🔧	○	●	●	●	●
Check all hoses (e.g. fuel, cooling, bleeder, drainage, etc.) and sleeves for cracking, leaks, and incorrect routing. 🔧		●	●	●	●
Check the screws and nuts for tightness. 🔧	○	●	●	●	●
Check the antifreeze. 🔧	○	●	●	●	
Change the coolant. 🔧					●

○ One-time interval

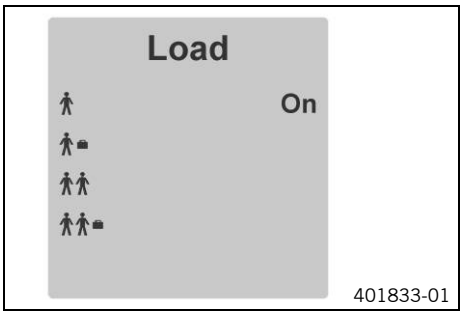
● Periodic interval

12 SUSPENSION SETTING

12.1 Fork/shock absorber

The semi-active suspension **WP Semi-active Suspension** can be used to tune the suspension individually without the use of tools.
The electronic suspension setting **WP Semi-active Suspension** constantly regulates the damping behavior of the suspension taking into account various sensor data.
As a result, the electronic damping valves are matched to the current driving situation and terrain characteristics as well as the settings made by the rider in the **"Load"** and **"Damping"** menu.
Always adapt the suspension to your riding style and the payload.
In the **"Load"** menu, the suspension can be set to the payload.
In the **"Damping"** menu, the damping behavior of the suspension can be set.

12.2 "Load"



Tunings for different vehicle loading states can be selected in the **"Load"** menu. A selection can be made between one-person operation, one-person operation with luggage, two-person operation, and two-person operation with luggage.
The load mode selected last is displayed on the right in the segment display.

Info
For the setting to be accepted by the motorcycle, the motorcycle must be stationary and the engine must be running.
The symbol of the last load status flashes until the new setting is adopted.

12.3 "Damping"

Possible states

- SPORT – Firm tuning of the spring elements with very direct feedback from the chassis
- STREET – Normal tuning of the spring elements with direct feedback from the chassis
- COMFORT – Soft tuning of the spring elements with good feedback from the chassis
- OFFROAD – Tuning of the suspension elements for use on light offroad terrain (unmade roads)

Different tunings for the damping of the spring elements can be selected in the **"Damping"** menu. You can choose from **"SPORT"**, **"STREET"**, **"COMFORT"** and **"OFFROAD"**.

13.1 Raising the vehicle with the center stand

Note

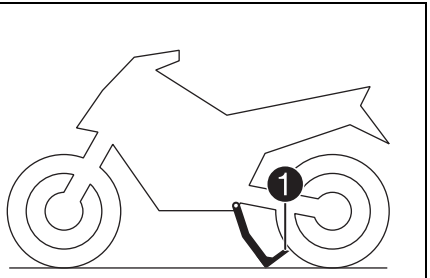
Danger of damage The parked vehicle can roll away or fall over.

– Park the vehicle on a firm and level surface.

Note

Material damage Damage and destruction of components from excessive load.

– The center stand is only designed for the weight of the motorcycle and the baggage. Do no sit on the motorcycle when it is resting on the center stand. The center stand or the frame may become damaged and the motorcycle may fall over.
– Pull the motorcycle up onto the center stand at the grab handles.



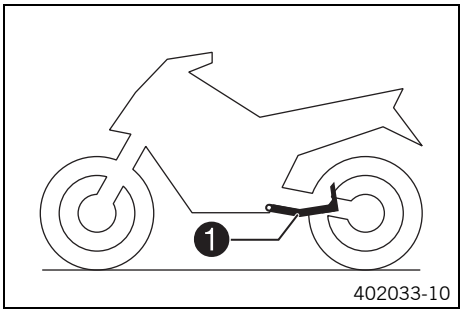
– Stand to the left of the vehicle.
– Hold the handlebar with your left hand and push the center stand onto the ground with your right foot.
– Put your entire weight on arm ❶ of the center stand while pulling the vehicle up at the left grab handle.
  ✔ The center stand is folded out to the stop.

13.2 Removing the vehicle from the center stand

Note

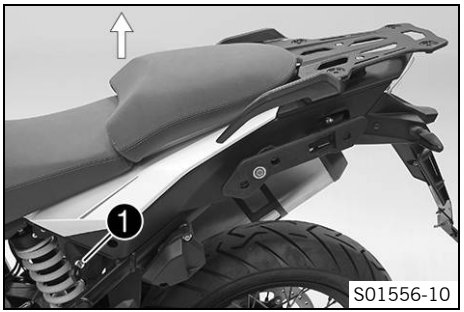
Danger of damage The parked vehicle can roll away or fall over.

– Park the vehicle on a firm and level surface.



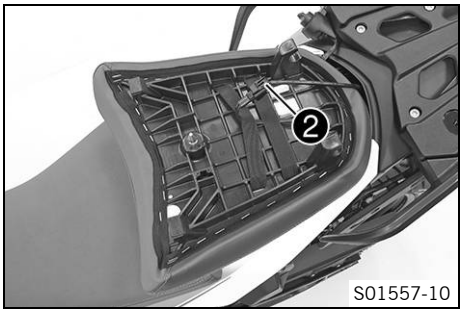
– Make sure that the steering is unlocked.
– Move the vehicle forward with both hands on the handlebar.
– While the vehicle tips off of the center stand, activate the front brake to stop the vehicle from rolling away.
– Check that the center stand ❶ is folded all the way up.

13.3 Removing the passenger seat



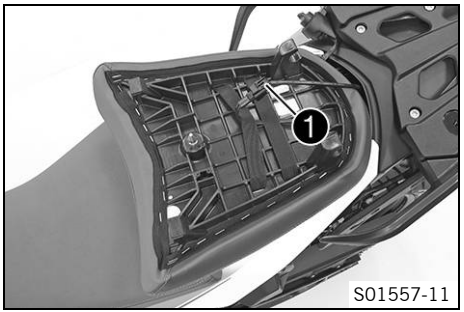
– Insert the ignition key in seat lock ❶ and turn it clockwise.
– Raise front of the passenger seat, pull toward the tank, and remove upward.

Info
Pay attention to the seat heating cable.

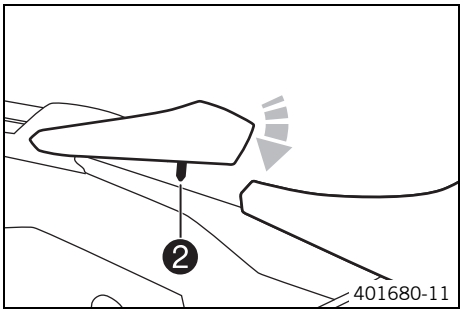


– Disconnect plug-in connector ❷.
– Remove the ignition key.

13.4 Mounting the passenger seat



– Connect plug-in connector ❶.



– Attach the hooks on the passenger seat to the hanger on the subframe.

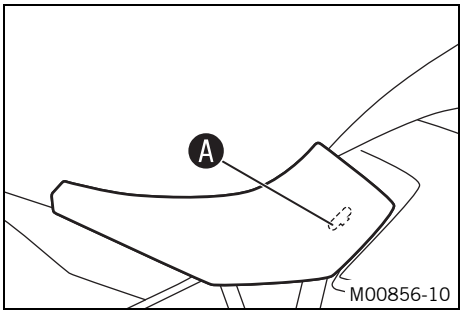
Info
Ensure that the seat heating cable is correctly routed.

– Lower passenger seat and push back at the same time.
– Position locking pin ❷ in lock housing and press passenger seat forward until the locking pin engages with an audible click.
– Check that the passenger seat is correctly mounted.

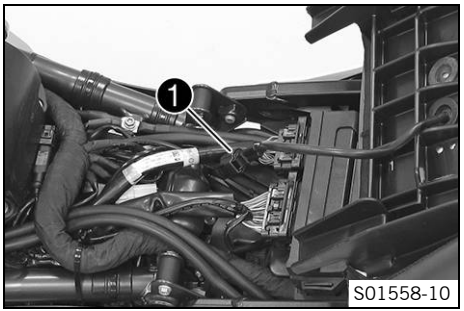
13.5 Removing the front rider's seat

Preparatory work
– Remove the passenger seat. (📖 p. 109)

Main work
– Lift the rider's seat back and unhook in the Ⓐ area.

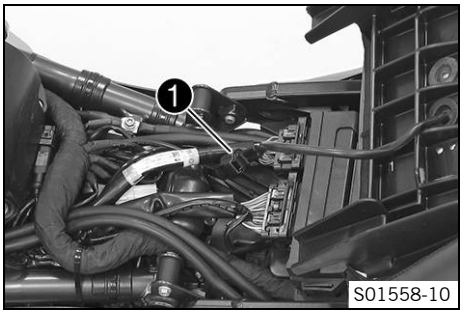


Info
Pay attention to the seat heating cable.



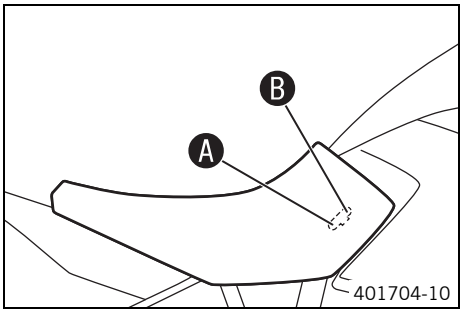
– Disconnect plug-in connector 1.

13.6 Mounting the front rider's seat



Main work

– Connect plug-in connector 1.



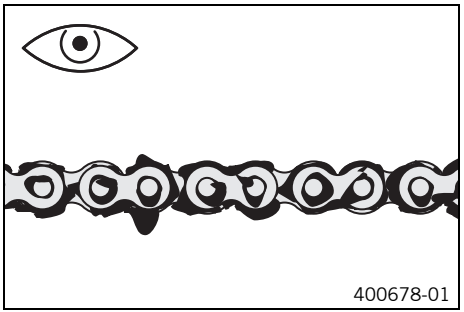
– Attach the recesses on the driver's seat to the fuel tank at the desired seat position Ⓐ or Ⓑ, and push the driver's seat forward while lowering it at the rear.

Info
Ensure that the seat heating cable is correctly routed.

– Finally, check that the driver's seat is correctly mounted.

Finishing work
– Mount the passenger seat. (📖 p. 110)

13.7 Checking for chain dirt



– Check the chain for coarse dirt accumulation.
  » If the chain is very dirty:
    – Clean the chain. (📖 p. 114)

13.8 Cleaning the chain

Warning
Danger of accidents Oil or grease on the tires reduces the road grip.

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

Warning
Danger of accidents Oil or grease on the brake discs reduces the braking effect.

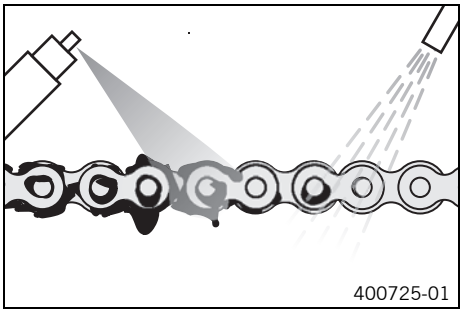
– Always keep the brake discs free of oil and grease.
– Clean the brake discs with brake cleaner when necessary.

Warning
Environmental hazard Hazardous substances cause environmental damage.

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

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

Preparatory work
– Raise the vehicle with the center stand. (📖 p. 108)



Main work
- Clean the chain regularly.
- Rinse off loose dirt with a soft jet of water.
- Remove old grease remains with chain cleaner.

  Chain cleaner (📖 p. 245)
- After drying, apply chain spray.

  Chain lube for road use (📖 p. 245)

Finishing work
- Remove the vehicle from the center stand. (📖 p. 108)

13.9 Checking the chain tension

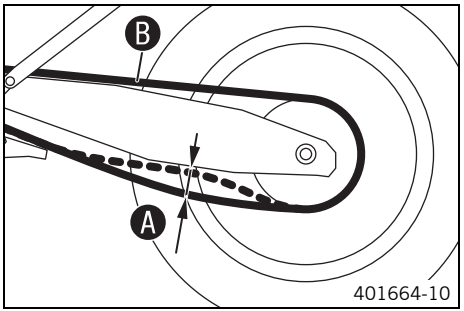
Warning

Danger of accidents Incorrect chain tension damages components and results in accidents.

If the chain is tensioned too much, the chain, engine 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 engine sprocket or the rear sprocket. As a result, the rear wheel locks or the engine will be damaged.

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

Preparatory work
- Raise the vehicle with the center stand. (📖 p. 108)



Main work

– Shift the transmission to idle N.

– In the area in front of the chain guide, push the chain up and determine chain tension A.

Info

The upper part of the chain B must be taut.
Chain wear is not always even, so you should repeat this measurement at different chain positions.

Chain tension	40... 45 mm (1.57... 1.77 in)

» If the chain tension does not meet the specification:

– Adjust the chain tension. (p. 116)

Finishing work

– Remove the vehicle from the center stand. (p. 108)

13.10 Adjusting the chain tension

Warning

Danger of accidents Incorrect chain tension damages components and results in accidents.

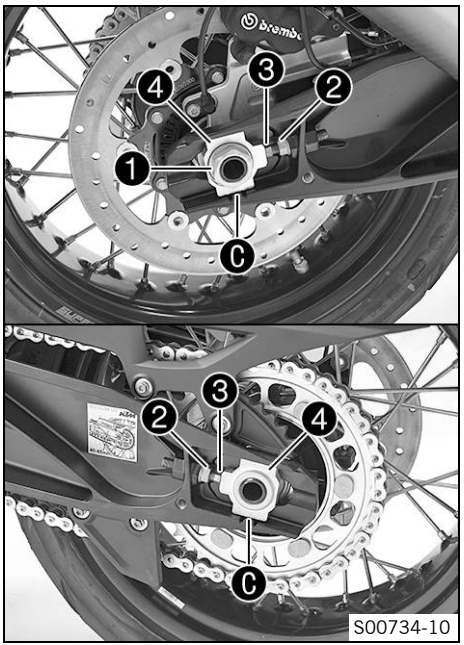
If the chain is tensioned too much, the chain, engine sprocket, rear sprocket, transmission and rear wheel bearings wear more quickly. Some components may break if overloaded.
If the chain is too loose, the chain may fall off the engine sprocket or the rear sprocket. As a result, the rear wheel locks or the engine will be damaged.

– Check the chain tension regularly.

– Set the chain tension in accordance with the specification.

Preparatory work

– Raise the vehicle with the center stand. (p. 108)



– Check the chain tension. (📖 p. 115)

Main work

– Loosen nut ❶.

– Loosen nuts ❷.

– Adjust the chain tension by turning the adjusting screws ❸ on the left and right.

Guideline

Chain tension	40... 45 mm (1.57... 1.77 in)
Turn adjusting screws ❸ on the left and right so that the markings on the left and right chain adjusters ❹ are in the same position relative to reference marks Ⓒ. The rear wheel is then correctly aligned.	

Info

The upper part of the chain must be taut.
Chain wear is not always even, so you should check the setting at different chain positions.

– Tighten nuts ❷.

– Make sure that chain adjusters ❹ are resting against adjusting screws ❸.

– Tighten nut ❶.

Guideline

Nut, rear wheel spindle	M25x1.5	90 Nm (66.4 lbf ft)	Thread greased

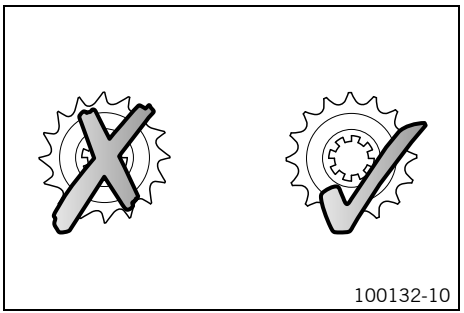
Info

Chain adjusters ❹ can be turned through 180°.

Finishing work

– Remove the vehicle from the center stand. (📖 p. 108)

13.11 Checking the chain, rear sprocket and engine sprocket


100132-10

Preparatory work

– Raise the vehicle with the center stand. (📖 p. 108)

Main work

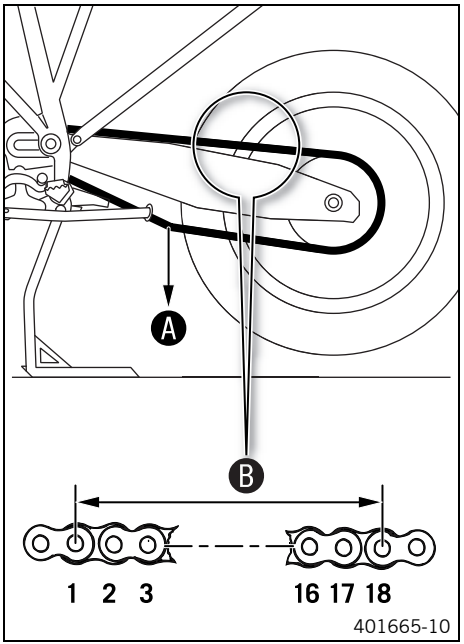
– Check the rear sprocket and engine sprocket for wear.

» If the rear sprocket or engine sprocket is worn:

– Change the drivetrain kit. 🔧

Info

The rear sprocket, engine sprocket and chain should always be changed together.



– Shift the transmission to idle N.
– Pull the lower chain section with specified weight A.

Guideline

Weight, chain wear measurement	15 kg (33 lb.)

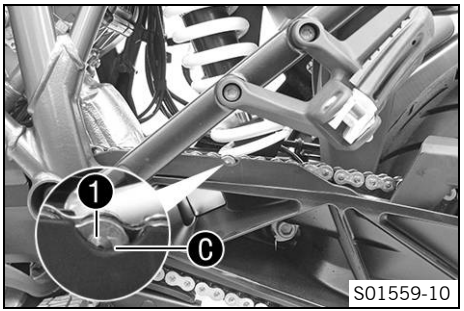
– Measure distance B of 18 chain rollers on the upper part of the chain.

Info
Chain wear is not always even, so you should repeat this measurement at different chain positions.

Maximum distance B at the longest chain section	272 mm (10.71 in)

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

Info
When the chain is replaced, the rear sprocket and engine sprocket should also be changed.
New chains wear out faster on old, worn sprockets.
For safety reasons, the chain has no chain joint.



– Check the chain sliding guard for wear at the cutout.

Info

When the chain sliding guard is new, the rivets ❶ are half visible at the bottom edge Ⓒ of the recess.

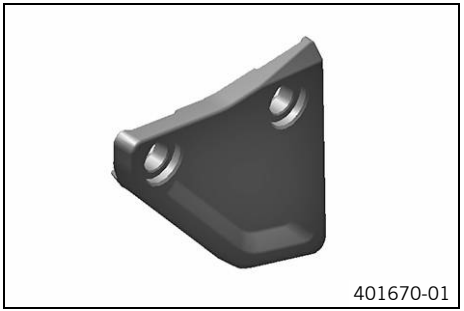
» When the rivets of the chain are no longer visible at the bottom edge of the recess of the chain sliding guard:
  – Change the chain sliding guard. 🔧

– Check the chain sliding guard for tightness.

» If the chain sliding guard is loose:
  – Tighten the screws on the chain sliding guard.

  Guideline

Screw, chain sliding guard	M5	5 Nm (3.7 lbf ft)



– Check the chain guide for wear.

» If the chain guide is worn:
  – Change the chain guide. 🔧

– Check the chain guide for tightness.

» If the chain guide is loose:
  – Tighten the screws on the chain guide.

  Guideline

Screw, chain guide	M6	5 Nm (3.7 lbf ft)

Finishing work

– Remove the vehicle from the center stand. (📖 p. 108)

13.12 Checking/correcting the fluid level of the hydraulic clutch

Warning

Skin irritation Brake fluid causes skin irritation.

- 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 swallowed.
- 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.

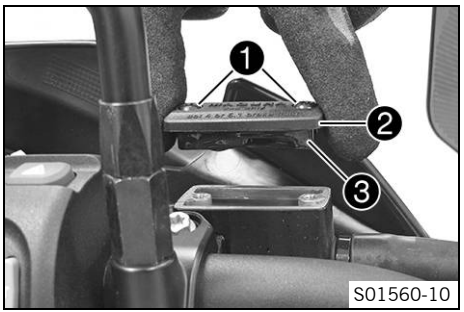
Warning

Environmental hazard Hazardous substances cause environmental damage.

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

Info

The fluid level rises with increasing wear of the clutch facing discs.
Never use DOT 5 brake fluid. It is silicone-based and purple in color. Oil seals and clutch lines are not designed for DOT 5 brake fluid.
Avoid contact between brake fluid and painted parts. Brake fluid attacks paint.
Only use clean brake fluid from a sealed container.



– Move the clutch fluid reservoir mounted on the handlebar to a horizontal position.
– Remove screws 1.
– Remove cover 2 with membrane 3.
– Check the fluid level.

Fluid level below container rim	4 mm (0.16 in)

» If the fluid level does not meet specifications:
– Correct the fluid level of the hydraulic clutch.

Brake fluid DOT 4 / DOT 5.1 (📖 p. 242)

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

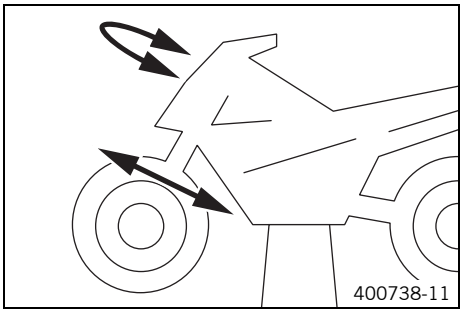
Info
Clean up overflowed or spilled brake fluid immediately with water.

13.13 Checking the steering head bearing play

Warning
Danger of accidents Incorrect steering head bearing play impairs the handling characteristic and damages components.
– Correct incorrect steering head bearing play immediately. (Your authorized KTM workshop will be glad to help.)

Info
If the vehicle is operated for a lengthy period with play in the steering head bearing, the bearings and the bearing seats in the frame can become damaged over time.

Preparatory work
– Raise the vehicle with the center stand. (📖 p. 108)



Main work

– Place a load on the rear of the vehicle.

  ✔ The front wheel is not in contact with the ground.

– Move the handlebar to the straight-ahead position. Move the fork legs back and forth in the direction of travel.

Play should not be detectable on the steering head bearing.

  » If there is no detectable play:

    – Adjust the steering head bearing play. 🔧

– Move the handlebar to and fro over the entire steering range.

It must be possible to move the handlebar easily over the entire steering range. There should be no detectable detent positions.

  » If detent positions are detected:

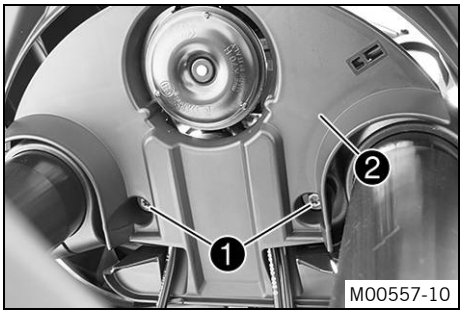
    – Adjust the steering head bearing play. 🔧

    – Check the steering head bearing and adjust if necessary.

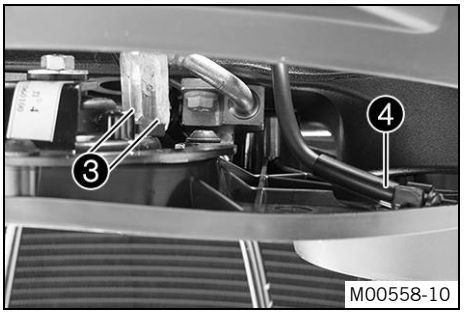
Finishing work

– Remove the vehicle from the center stand. (📖 p. 108)

13.14 Removing the bottom triple clamp cover

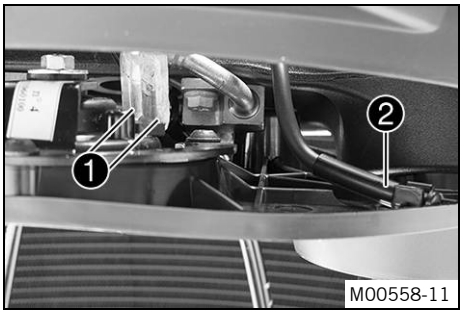


– Remove screws ❶.
– Lower triple clamp cover ❷ slightly.

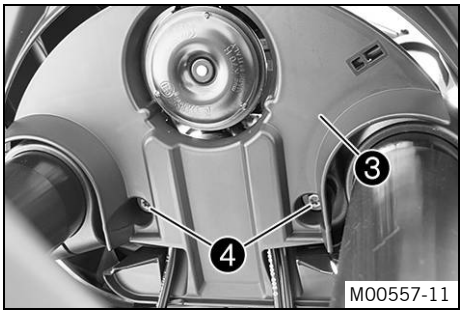


– Disconnect plugs ❸ of the horn.
– Detach temperature sensor ❹.
– Remove the triple clamp cover.

13.15 Installing the bottom triple clamp cover



– Plug in connectors ❶ of the horn.
– Attach temperature sensor ❷.



– Position the triple clamp cover ❸.
– Mount and tighten screws ❹.

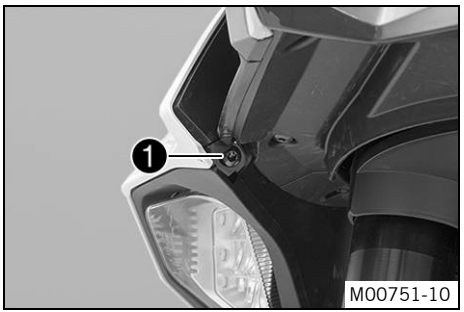
Guideline

Remaining chassis screws	M6	10 Nm (7.4 lbf ft)

13.16 Removing the front side cover

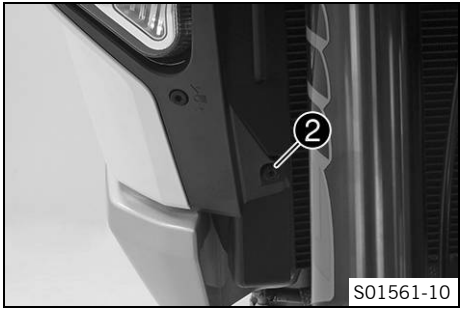
Preparatory work

– Remove the crash bar. (🕮 p. 147)

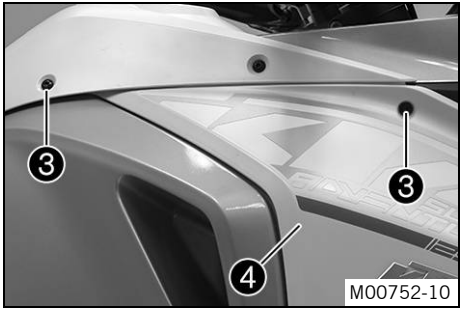


Main work

– Remove screw ❶.

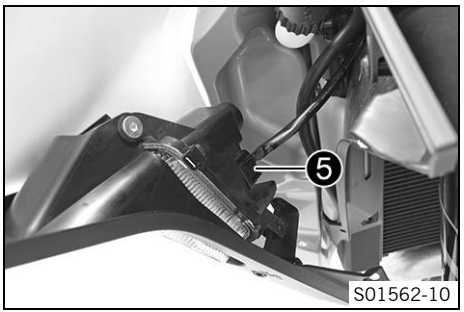


– Remove screw ❷.



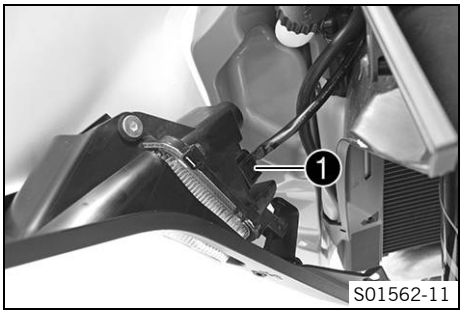
– Remove screws ❸.
– Remove side cover ❹.

Info
Pay attention to the cornering light cable.



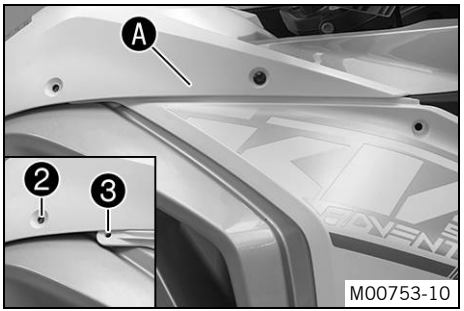
– Unplug connector ❺.
– Repeat the operation on the opposite side.

13.17 Installing the front side cover

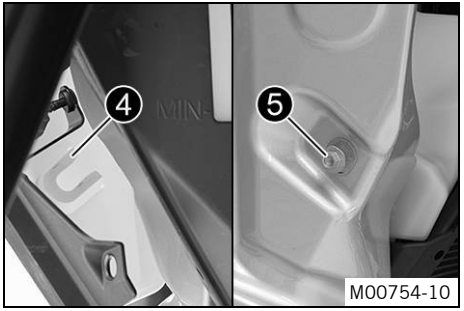


Main work

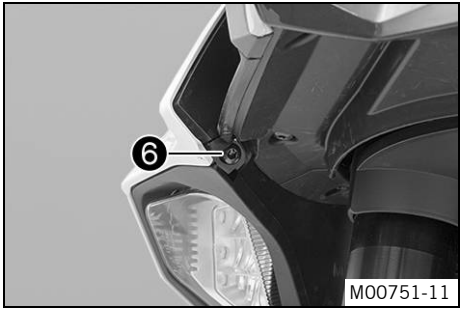
– Plug in connector ❶.



– Position the side cover in the Ⓐ area under the tank cover.
  ✓ The holes ❷ and ❸ are adjacent to each other.



– Attach catch ❹ of the side cover to bracket ❺ and position on the fuel tank.



– Mount and tighten screw ❻.

Guideline

Screw, cover part	M5	3.5 Nm (2.58 lbf ft)

– Mount and tighten screw ❼.

Guideline

Screw, cover part	M5	3.5 Nm (2.58 lbf ft)

– Mount and tighten screws ❽.

Guideline

Screw, cover part	M5	3.5 Nm (2.58 lbf ft)

– Repeat the operation on the opposite side.

Finishing work

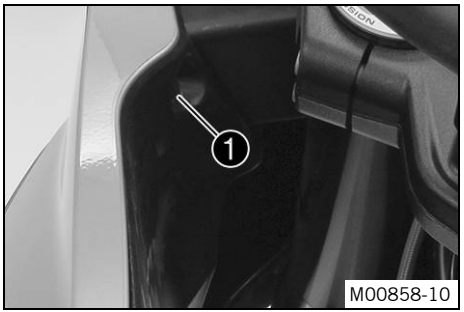
– Install the crash bar. (🔧 (📖 p. 148))

13.18 Removing the mask spoiler 🔧

Preparatory work

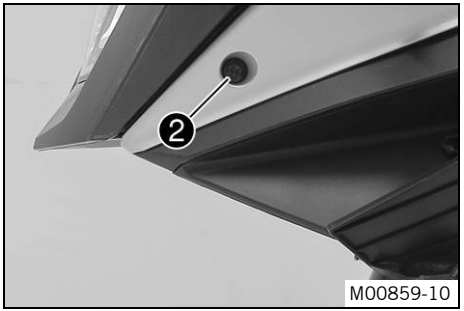
– Remove the passenger seat. (📖 p. 109)
– Remove the front rider's seat. (📖 p. 111)
– Remove the crash bar. 🔧 (📖 p. 147)
– Remove the front side cover. (📖 p. 125)

– Remove the tank cover. (📖 p. 141)

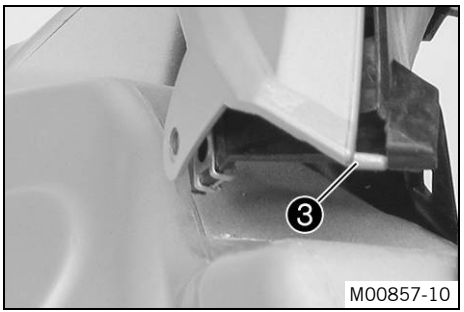


Main work

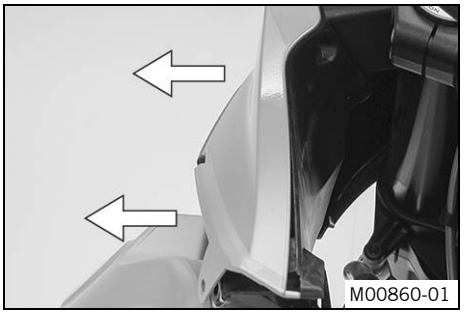
– Remove screw ❶.



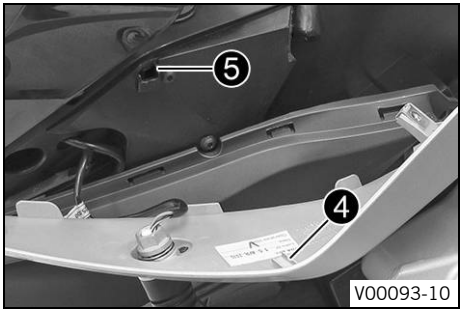
– Remove screw ❷.



– Loosen holding lug ❸ from the inside cover.

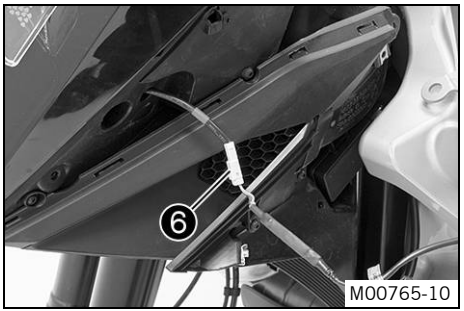


– Remove the mask spoiler laterally from the supports.



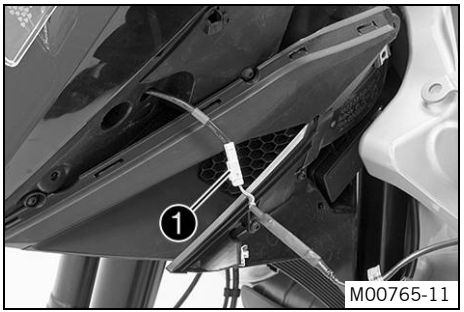
– Remove catch ❹ upward from the bracket ❺.

Info
Pay attention to the turn signal cable.



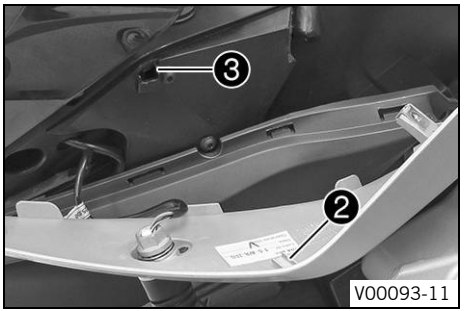
– Disconnect plug-in connector ❻.
– Remove the mask spoiler with the turn signal.
– Repeat these steps on the opposite side.

13.19 Installing the mask spoiler



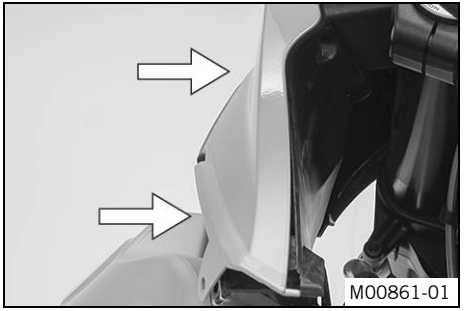
Main work

– Connect plug-in connector ❶.

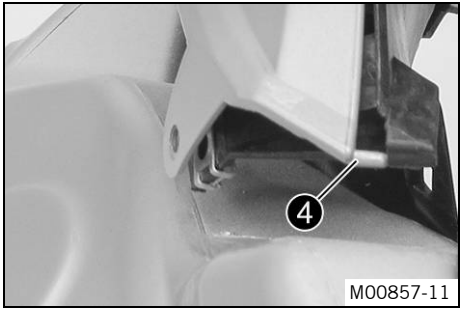


– Position the catch ❷ in the bracket ❸.

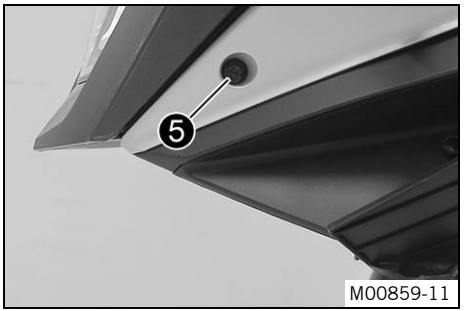
Info
Ensure that the turn signal cable is placed correctly.



– Press the mask spoiler laterally into the supports.



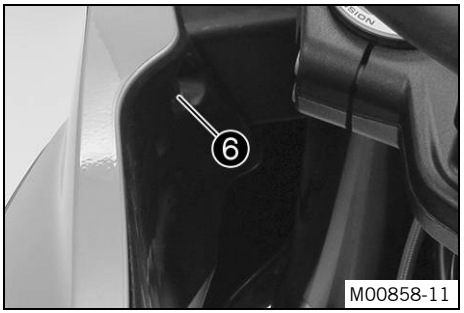
– Position holding lug ❹ in the drill hole.



– Mount and tighten screw ❺.

Guideline

Screw, mask spoiler	M5x17	3.5 Nm (2.58 lbf ft)



– Mount and tighten screw ❻.

Guideline

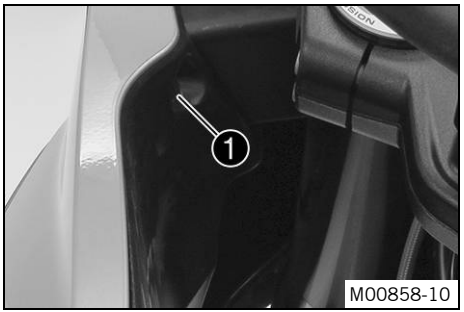
Screw, mask spoiler	M5x17	3.5 Nm (2.58 lbf ft)

– Repeat the operation on the opposite side.

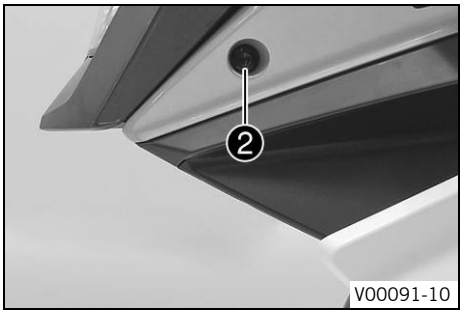
Finishing work

– Install the tank cover. (📖 p. 143)
– Install the front side cover. (📖 p. 127)
– Install the crash bar. 🔧 (📖 p. 148)
– Mount the front rider's seat. (📖 p. 112)
– Mount the passenger seat. (📖 p. 110)

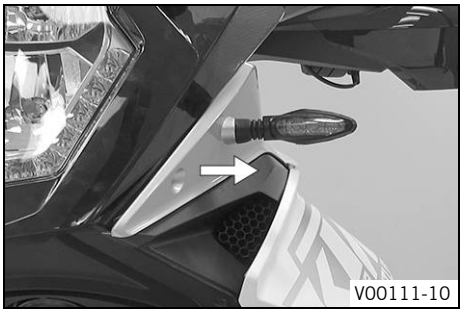
13.20 Loosening the mask spoiler



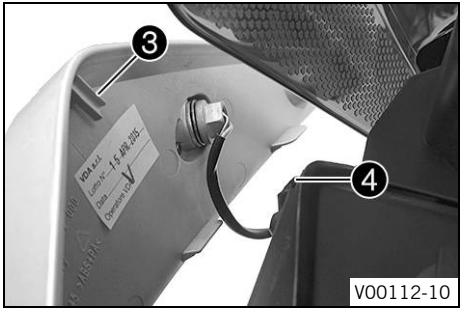
– Remove screw ❶.



– Remove screw ❷.


V00111-10

– Pull the front part of the mask spoiler laterally out of the supports.



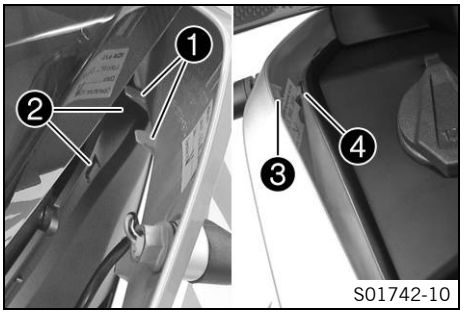
V00112-10

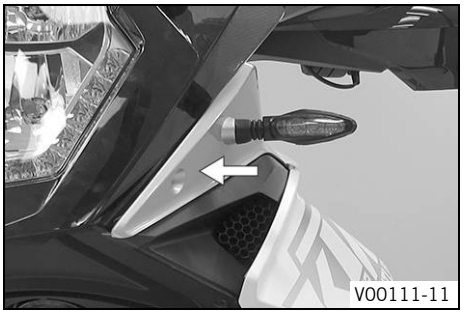
– Carefully remove catch ❸ upward from bracket ❹.

Info
Pay attention to the turn signal cable.

– Repeat these steps on the opposite side.

13.21 Positioning the mask spoiler



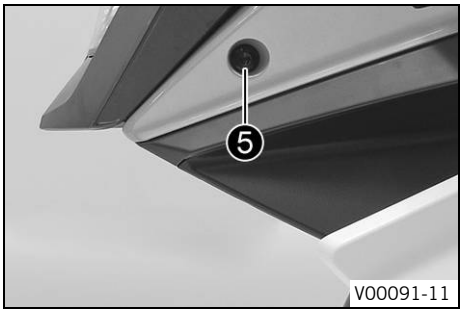


– Push the two rear catches ❶ on the mask spoiler into the supports ❷ provided.
– Push the mask spoiler up and position catch ❸ in bracket ❹.

Info

Ensure that the turn signal cable is placed correctly.
Carefully push the mask spoiler up to avoid breaking the component or bending catch ❸.
Make sure that the rear catches on the mask spoiler remain in the supports provided.

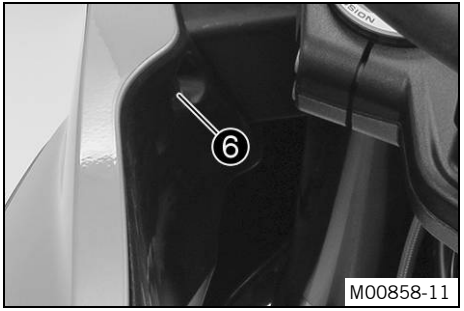
– Push the front part of the mask spoiler laterally into the supports.



– Mount and tighten screw ❺.

Guideline

Screw, mask spoiler	M5x17	3.5 Nm (2.58 lbf ft)



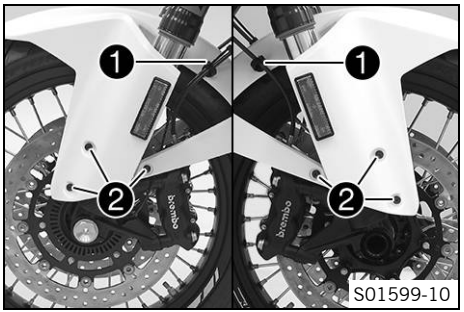
– Mount and tighten screw ❻.

Guideline

Screw, mask spoiler	M5x17	3.5 Nm (2.58 lbf ft)

– Repeat these steps on the opposite side.

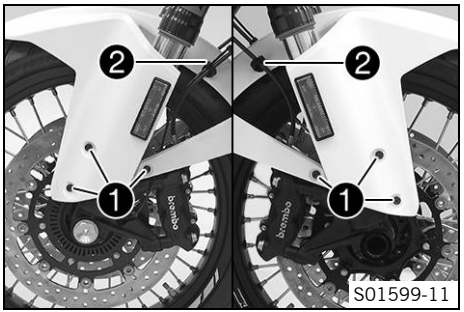
13.22 Removing the front fender



– Open holder ❶ and detach the brake lines.
– Remove screws ❷.
– Take the fender off to the front.

Info
Pay attention to the brake lines.

13.23 Installing the front fender



– Position the fender.

Info
Pay attention to where the brake lines are placed.

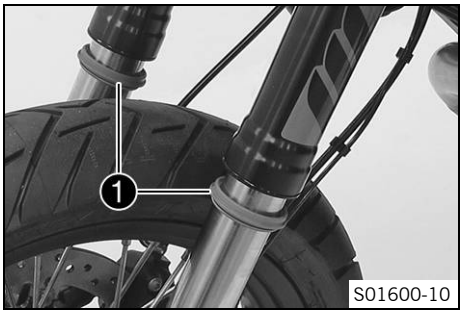
– Mount and tighten screws ❶.

Guideline

Screw, fender	M5x12	3.5 Nm (2.58 lbf ft)

– Insert the brake lines in brackets ❷ and close the holder.

13.24 Cleaning the dust boots of the fork legs



Preparatory work

– Raise the vehicle with the center stand. (📖 p. 108)
– Remove the front fender. (📖 p. 139)

Main work

– Push dust boots ❶ of both fork legs downward.

Info

The dust boots should remove dust and coarse dirt particles from the 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 or grease on the brake discs reduces the braking effect.

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

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

Universal oil spray (📖 p. 246)

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

Finishing work

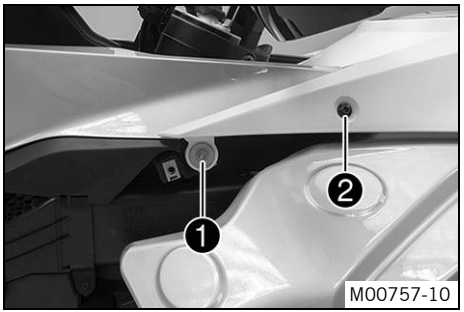
– Install the front fender. (📖 p. 139)
– Remove the vehicle from the center stand. (📖 p. 108)

13.25 Removing the tank cover

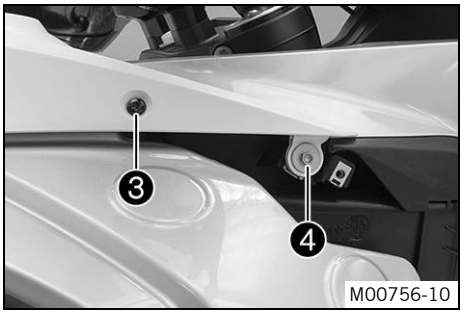
Preparatory work

– Remove the passenger seat. (📖 p. 109)
– Remove the front rider's seat. (📖 p. 111)
– Remove the crash bar. 🔧 (📖 p. 147)
– Remove the front side cover. (📖 p. 125)

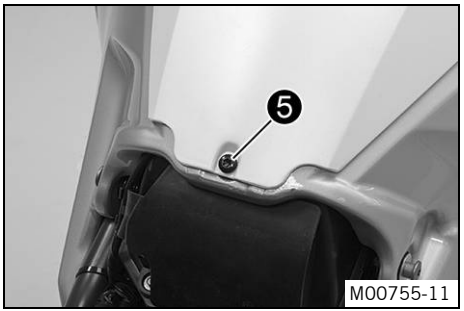
Main work



– Remove screw ❶.
– Remove screw ❷.



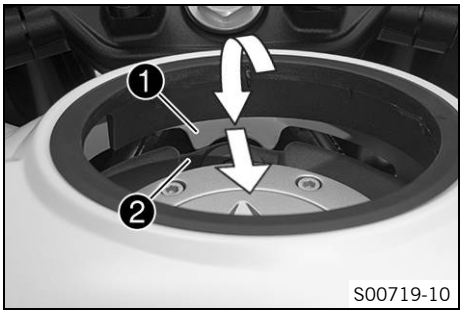
– Remove screw ❸.
– Remove screw ❹.



– Remove screw ❺.

– Raise the tank cover at the rear and remove it in a forward direction.

13.26 Installing the tank cover

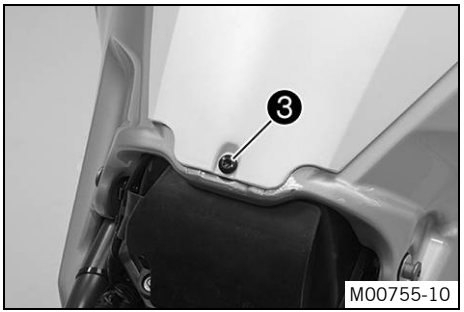


Main work

– Position the tank cover.

✓ Catch ❶ engages under the tank ❷.

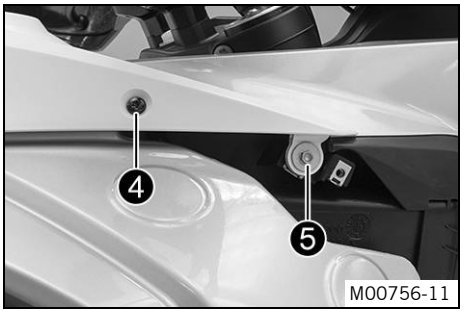
Info
Pay attention to the sealing lip and the bleeder hose.

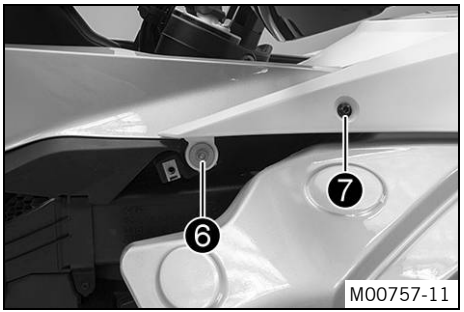


– Mount and tighten screw ❸.

Guideline

Screw, cover part	M5	3.5 Nm (2.58 lbf ft)





– Mount and tighten screw ❹.

Guideline

Screw, cover part	M5	3.5 Nm (2.58 lbf ft)

– Mount and tighten screw ❺.

Guideline

Screw, cover part	M6	6 Nm (4.4 lbf ft)

– Mount and tighten screw ❻.

Guideline

Screw, cover part	M6	6 Nm (4.4 lbf ft)

– Mount and tighten screw ❼.

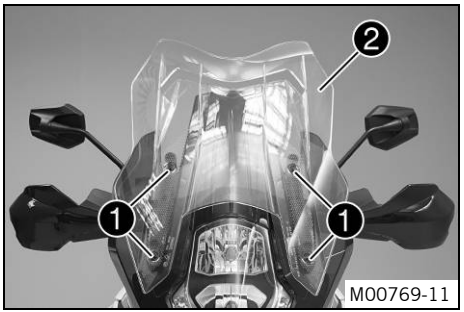
Guideline

Screw, cover part	M5	3.5 Nm (2.58 lbf ft)

Finishing work

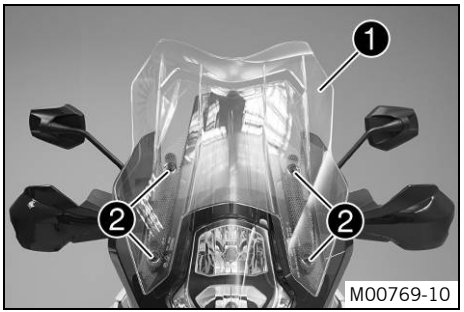
– Install the front side cover. (📖 p. 127)
– Install the crash bar. 🔧 (📖 p. 148)
– Mount the front rider's seat. (📖 p. 112)
– Mount the passenger seat. (📖 p. 110)

13.27 Removing the wind shield



– Remove screws ❶ and wind shield ❷.

13.28 Installing the wind shield

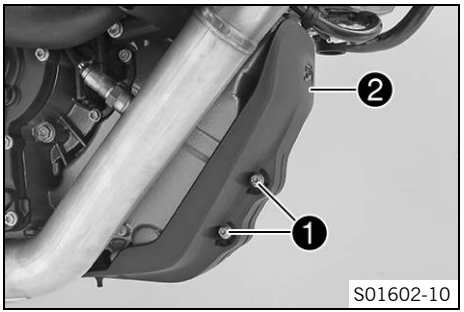


– Position wind shield ❶.
– Mount and tighten screws ❷.

Guideline

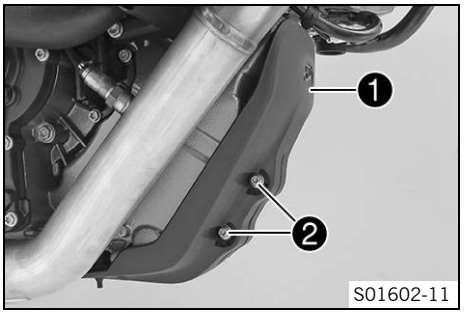
Screw, wind shield	M5	3.5 Nm (2.58 lbf ft)

13.29 Removing the engine guard



– Remove screws ❶ with bushings and engine guard ❷.

13.30 Installing the engine guard

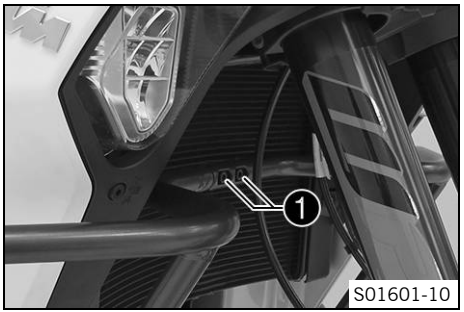


– Position engine guard ❶, mount screws ❷ with bushings and tighten.

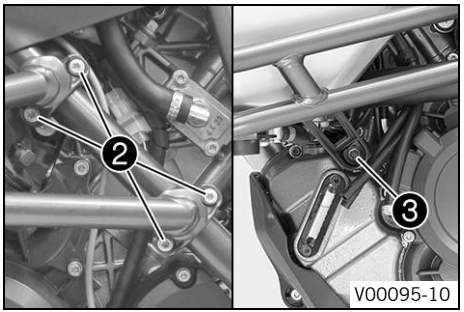
Guideline

Screw, engine guard	M6	10 Nm (7.4 lbf ft)

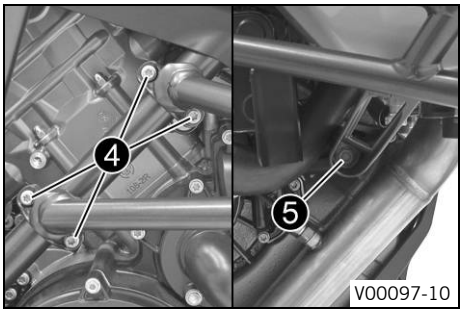
13.31 Removing the crash bar



– Remove screw connections ❶.

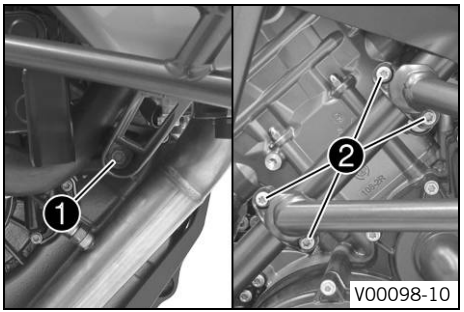


– Remove screws ❷ and take off the clamp halves.
– Remove screw ❸.
– Take off the left crash bar.



– Remove screws ❹ and take off the clamp halves.
– Remove screw ❺.
– Take off the right crash bar.

13.32 Installing the crash bar



– Position the right crash bar with the frame protector.
✔ The fuel tank support ring should be correctly positioned on the fuel tank.

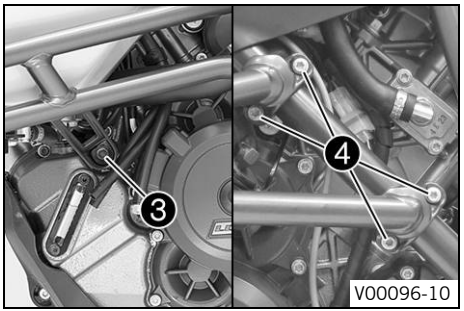
Info
Cover the components to protect them against damage.

– Mount screw ❶, but do not tighten yet.
Guideline

Remaining chassis screws	M8	25 Nm (18.4 lbf ft)

– Mount screws ❷, but do not tighten yet.
Guideline

Remaining chassis screws	M6	10 Nm (7.4 lbf ft)



– Position the left crash bar with the frame protector.

✔ The fuel tank support ring should be correctly positioned on the fuel tank.

Info
Cover the components to protect them against damage.

– Mount screw ❸, but do not tighten yet.

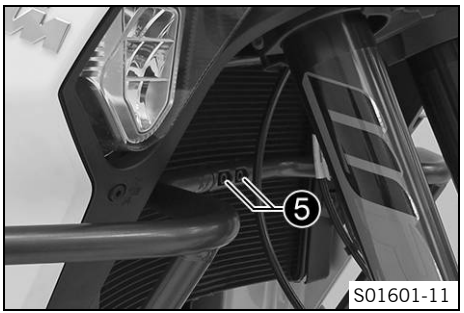
Guideline

Remaining chassis screws	M8	25 Nm (18.4 lbf ft)

– Mount screws ❹, but do not tighten yet.

Guideline

Remaining chassis screws	M6	10 Nm (7.4 lbf ft)



– Mount and tighten fittings ❺.

Guideline

Remaining chassis screws	M6	10 Nm (7.4 lbf ft)

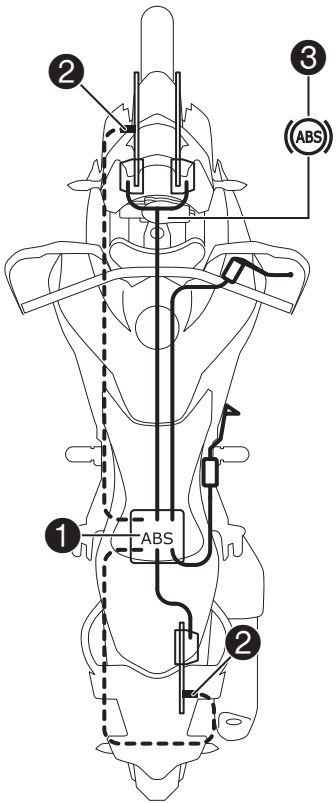
✔ The crash bars are evenly aligned with each other.

– Tighten all the screws of the crash bar.

Guideline

Remaining chassis screws	M6	10 Nm (7.4 lbf ft)
Remaining chassis screws	M8	25 Nm (18.4 lbf ft)

14.1 Antilock brake system (ABS)



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

Warning

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

- Only allow the rear wheel to spin with the front brake applied away from public road traffic if the ABS is switched off.
- Do not make any changes to the suspension travel.
- Only use spare parts on the brake system which have been approved and recommended by KTM.
- Only use tires/wheels approved by KTM with the corresponding speed index.
- Maintain the specified tire air pressure.
- Service work and repairs must be performed professionally. (Your authorized KTM workshop will be glad to help.)

ABS is a safety system that prevents locking of the wheels when driving straight ahead without the influence of lateral forces.

Warning

Danger of accidents Driving aids can only prevent a rollover within the physical limitations.

It is not always possible to compensate for extreme 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.

ABS has two operating modes: the **"Road"** and **"Offroad"** ABS modes.

In the **"Road"** ABS mode, the brakes are also applied to the rear wheel when the front brake is applied. ABS can intervene on both wheels.
In the **"Offroad"** ABS mode, the front brake slows the front wheel. The rear brake slows the rear wheel. There is no ABS intervention on the rear wheel. The ABS lamp ❸ flashes slowly to remind you that the **"Offroad"** ABS mode is enabled.

Info
In the **"Offroad"** ABS mode, the rear wheel may lock and there is a risk of falling.

The ABS operates with two independent brake circuits (front and rear brakes). When the brake electronics control unit detects a locking tendency in a wheel, ABS begins regulating the brake pressure. The regulating process causes a slight pulsing of the hand and foot brake levers.
The ABS bulb 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 lamp may also light up if the rotating speeds of the front and rear wheels differ greatly under extreme riding conditions, for example when making "wheelies" or if the rear wheel spins. This causes the ABS to switch off.
To reactivate the ABS, the vehicle must be stopped and the ignition switched off. The ABS is reactivated when the vehicle is switched on again. The ABS lamp goes out when you start off.

MSC
The **MSC** is a supplementary function for the ABS that can prevent blocking and slipping of the wheels during braking when the vehicle is inclined (riding in curves) within the physical limitations.
By means of the 5D sensor, ABS control is now dependent on the inclination and pitch angle.
ABS control that is dependent on the inclination and pitch angle improves the riding stability and braking effect in all riding situations. The **MSC** also reduces the righting moment during hard braking in curves. This prevents the motorcycle from righting itself from an inclined angle and moving along a larger curve radius. Due to the additional electronic con-

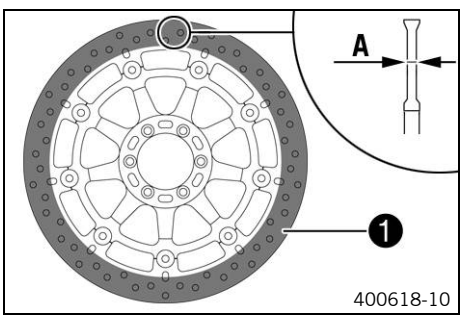
trol of the brake force distribution between the two wheels, the braking force is optimally distributed and the motorcycle is additionally stabilized.

Info
The **MSC** is only active in ABS mode **"Road"**.

14.2 Checking the brake discs

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

– Make sure that worn-out brake discs are replaced immediately. (Your authorized KTM workshop will be glad to help.)



– Check the thickness of the front and rear brake discs at multiple points on each brake disc to ensure it is at least thickness Ⓐ.

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

Brake discs - wear limit	
Front	4 mm (0.16 in)
Rear	4.5 mm (0.177 in)

» If the brake disc thickness is less than the specified value.
  – Change the front brake discs.
  – Change the rear brake discs.

– Check the front and rear brake discs for damage, cracking, and deformation.
» If the brake disc exhibits damage, cracking, or deformation:
  – Change the front brake discs.

– Change the rear brake discs. 🔧

14.3 Checking the brake fluid level of the front brake

Warning

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

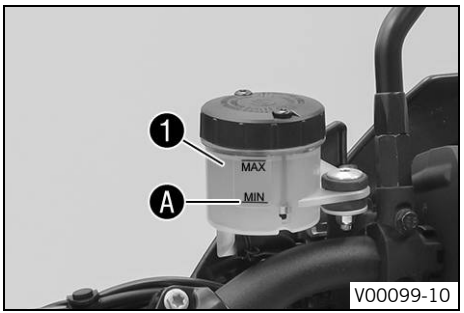
If the brake fluid level drops below the **MIN** marking, the brake system is leaking or the brake linings are worn down.

– Check the brake system and do not continue riding until the problem is eliminated. (Your authorized KTM workshop will be glad to help.)

Warning

Danger of accidents Old brake fluid reduces the braking effect.

– Make sure that brake fluid for the front and rear brake is changed in accordance with the service schedule. (Your authorized KTM workshop will be glad to help.)



– Move the brake fluid reservoir mounted on the handlebar to a horizontal position.
– Check the brake fluid level in the brake fluid reservoir 1.
  » If the brake fluid has dropped below marking **MIN** A:
    – Add front brake fluid. 🔧 (📖 p. 154)

14.4 Adding front brake fluid

Warning

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

If the brake fluid level drops below the **MIN** marking, the brake system is leaking or the brake linings are worn down.

– Check the brake system and do not continue riding until the problem is eliminated. (Your authorized KTM workshop will be glad to help.)

Warning

Skin irritation Brake fluid causes skin irritation.

– 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 swallowed.
– 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.

Warning

Danger of accidents Old brake fluid reduces the braking effect.

– Make sure that brake fluid for the front and rear brake is changed in accordance with the service schedule. (Your authorized KTM workshop will be glad to help.)

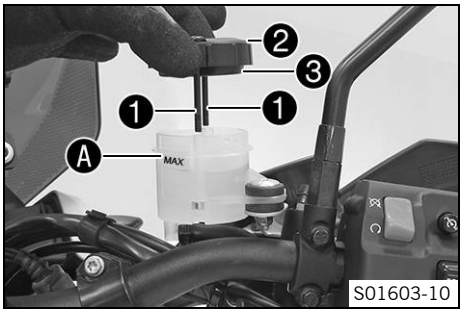
Warning

Environmental hazard Hazardous substances cause environmental damage.

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

Info

Never use DOT 5 brake fluid! It is silicone-based and purple in color. Oil seals and brake lines are not designed for DOT 5 brake fluid.
Avoid contact between brake fluid and painted parts. Brake fluid attacks paint!
Use only clean brake fluid from a sealed container.



Preparatory work

– Check the front brake linings. (p. 155)

Main work

– Move the brake fluid reservoir mounted on the handlebar to a horizontal position.
– Remove screws 1.
– Remove cover 2 with membrane 3.
– Add brake fluid to the **MAX** mark A.

Brake fluid DOT 4 / DOT 5.1 (p. 242)

– Position cover 2 with membrane 3.
– Mount and tighten screws 1.

Info

Clean up overflowed or spilt brake fluid immediately with water.

14.5 Checking the front brake linings

Warning

Danger of accidents Worn-out brake linings reduce the braking effect.

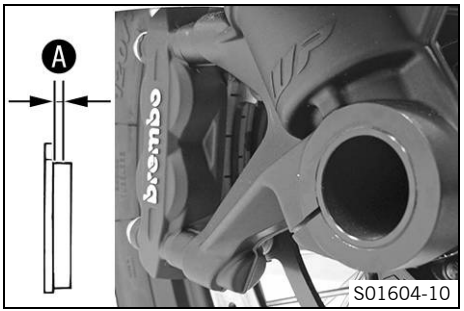
– Ensure that worn-out brake linings are replaced immediately. (Your authorized KTM workshop will be glad to help.)

Warning

Danger of accidents Damaged brake discs reduce the braking effect.

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

– Check the brake linings regularly.



– Check all brake linings on both brake calipers to ensure they have minimum thickness A.

Minimum thickness	≥ 1 mm (≥ 0.04 in)

» If the minimum thickness is less than specified:
– Change the front brake linings.

– Check all brake linings on both brake calipers for damage and cracking.

» If there is damage or cracking:
– Change the front brake linings.

14.6 Checking the rear brake fluid level

Warning

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

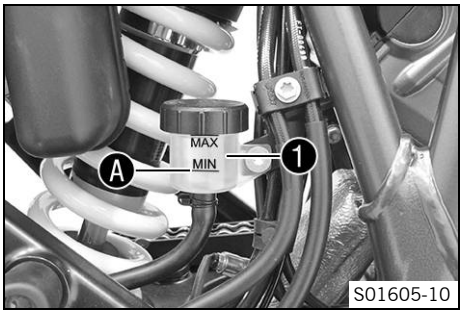
If the brake fluid level drops below the **MIN** marking, the brake system is leaking or the brake linings are worn down.

– Check the brake system and do not continue riding until the problem is eliminated. (Your authorized KTM workshop will be glad to help.)

Warning

Danger of accidents Old brake fluid reduces the braking effect.

– Make sure that brake fluid for the front and rear brake is changed in accordance with the service schedule. (Your authorized KTM workshop will be glad to help.)



Preparatory work

– Raise the vehicle with the center stand. (📖 p. 108)

Main work

– Check the brake fluid level in the brake fluid reservoir ❶.

» If the fluid level reaches the **MIN** marking Ⓐ:

– Add rear brake fluid. 🔧 (📖 p. 157)

14.7 Adding rear brake fluid 🔧

Warning

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

If the brake fluid level drops below the **MIN** marking, the brake system is leaking or the brake linings are worn down.

– Check the brake system and do not continue riding until the problem is eliminated. (Your authorized KTM workshop will be glad to help.)

Warning

Skin irritation Brake fluid causes skin irritation.

- 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 swallowed.
- 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.

Warning

Danger of accidents Old brake fluid reduces the braking effect.

- Make sure that brake fluid for the front and rear brake is changed in accordance with the service schedule. (Your authorized KTM workshop will be glad to help.)

Warning

Environmental hazard Hazardous substances cause environmental damage.

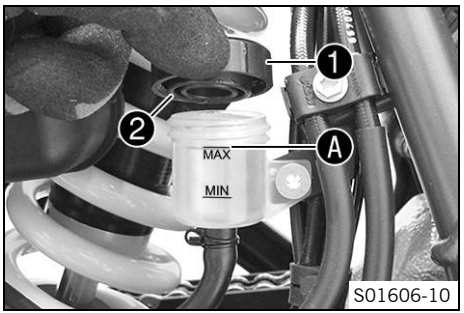
- Dispose of oils, grease, filters, fuel, cleaning agents, brake fluid, etc., correctly and in compliance with the applicable regulations.

Info

Never use DOT 5 brake fluid! It is silicone-based and purple in color. Oil seals and brake lines are not designed for DOT 5 brake fluid.
Avoid contact between brake fluid and painted parts. Brake fluid attacks paint!
Use only clean brake fluid from a sealed container.

Preparatory work

- Raise the vehicle with the center stand. (📖 p. 108)



– Check the rear brake linings. (📖 p. 159)

Main work

– Remove screw cap ❶ with membrane ❷.

– Add brake fluid to the **MAX** mark Ⓐ.

Brake fluid DOT 4 / DOT 5.1 (📖 p. 242)

– Mount and tighten screw cap ❶ with membrane ❷.

Info

Clean up overflowed or spilt brake fluid immediately with water.

14.8 Checking the rear brake linings

Warning

Danger of accidents Worn-out brake linings reduce the braking effect.

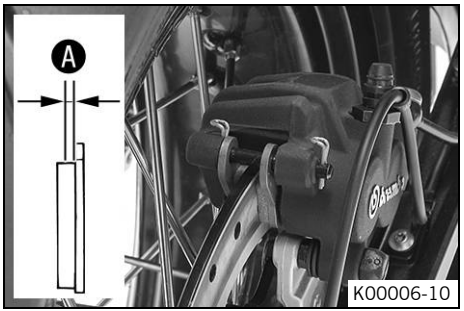
– Ensure that worn-out brake linings are replaced immediately. (Your authorized KTM workshop will be glad to help.)

Warning

Danger of accidents Damaged brake discs reduce the braking effect.

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

– Check the brake linings regularly.

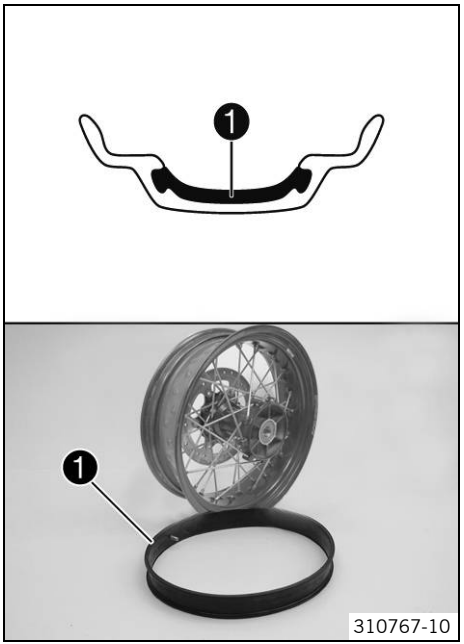


– Check the brake linings for minimum thickness Ⓐ.

Minimum thickness Ⓐ	≥ 1 mm (≥ 0.04 in)

» If the minimum thickness is less than specified:
  – Change the rear brake linings. 🔧
– Check the brake linings for damage and cracking.
» If there is wear or tearing:
  – Change the rear brake linings. 🔧

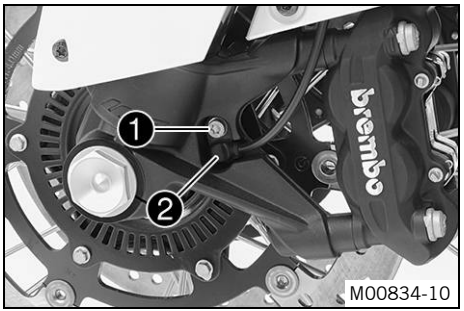
15.1 Tubeless tire system



This vehicle makes use of a tubeless tire system in which a tubeless sealing profile ❶ is used instead of the conventional tube.
The advantage of the tubeless system is that there is no risk of a defective tube. This greatly reduces the risk of a sudden loss in pressure.
The masses and moments of inertia of these wheels are smaller than in conventional spoke wheels with a tube. This results in better handling and riding comfort.
The rigid rim design results in a spoke wheel that is almost entirely maintenance-free.
KTM recommends that the tubeless sealing profile be changed after 5 years at the latest, regardless of the actual state of wear.

15.2 Removing the front wheel

Preparatory work
– Raise the vehicle with the center stand. (📖 p. 108)

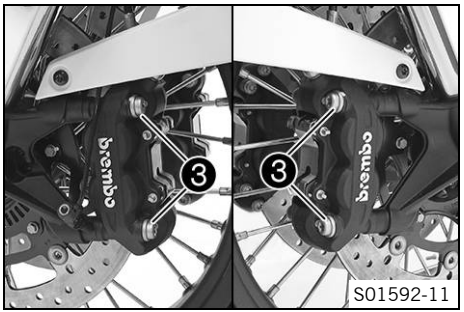


Main work

– Place a load on the rear of the vehicle.

  ✓ The front wheel is not in contact with the ground.

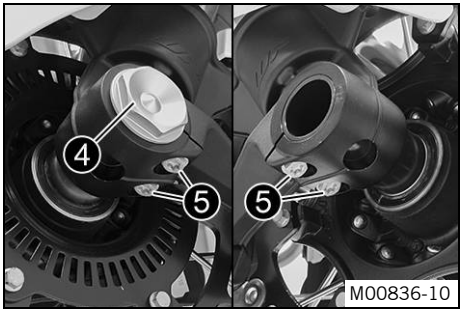
– Remove screw ❶ and pull wheel speed sensor ❷ out of the hole.



– Remove screws ❸ from both brake calipers.
– Press back the brake linings with a slight lateral tilting of the brake calipers on the brake disc.
– Pull the brake calipers carefully back from the brake discs and hang them to one side loosely.

Info

Do not actuate the hand brake lever when the brake caliper has been removed.

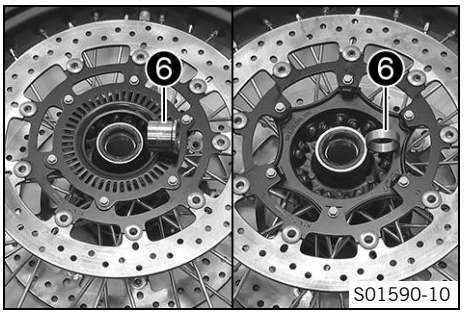


– Loosen screw ❹ by several rotations.
– Loosen screws ❺.
– Press on screw ❹ to push the wheel spindle out of the axle clamp.
– Remove screw ❹.

Warning
Danger of accidents Damaged brake discs reduce the braking effect.
– Always lay the wheel down in such a way that the brake discs are not damaged.

– Hold the front wheel and remove the wheel spindle. Take the front wheel out of the fork.

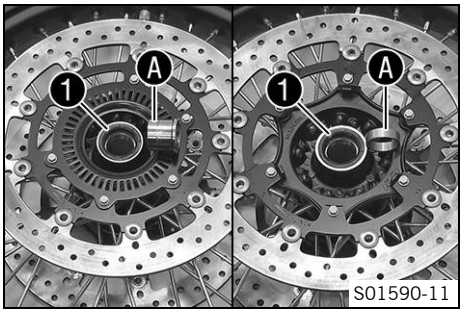
Info
Do not pull the hand brake lever when the front wheel is removed.



– Remove spacers ❻.

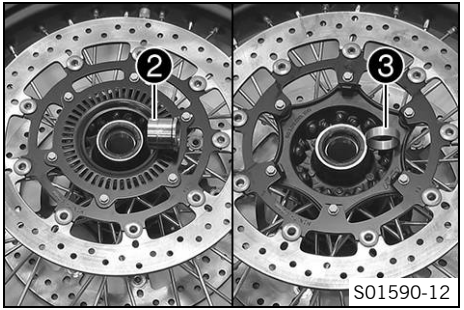
15.3 Installing the front wheel

Warning
Danger of accidents Oil or grease on the brake discs reduces the braking effect.
– Always keep the brake discs free of oil and grease.
– Clean the brake discs with brake cleaner when necessary.



– Check the wheel bearing for damage and wear.
  » If the wheel bearing is damaged or worn:
    – Change the front wheel bearing.
– Clean and grease shaft seal rings 1 and contact surface A of the spacers.

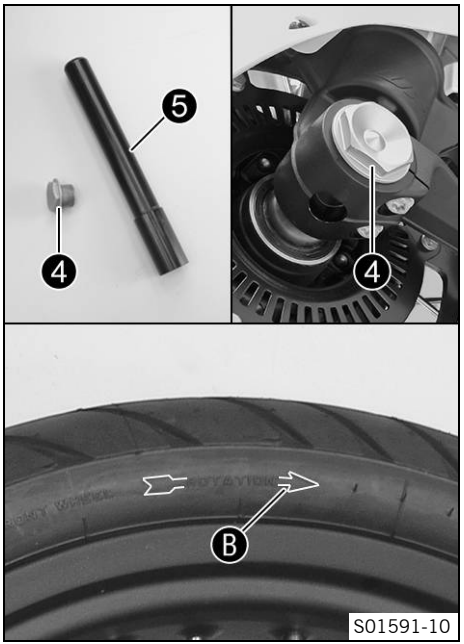
Long-life grease (p. 245)

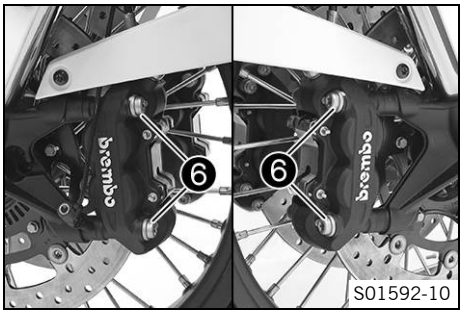


– Insert wide spacer 2 on the left in the direction of travel.

Info
The ABS sensor wheel is on the left viewed in the direction of travel.

– Insert the narrow spacer 3 on the right in the direction of travel.





Warning

Danger of accidents Oil or grease on the brake discs reduces the braking effect.

- Always keep the brake discs free of oil and grease.
- Clean the brake discs with brake cleaner when necessary.

– Clean and grease screw ❹ and wheel spindle ❺.

Long-life grease (📖 p. 245)

– Lift the front wheel into the fork, position it, and insert the wheel spindle.

Info

The ABS sensor wheel is located on the left in the direction of travel.
Arrow Ⓑ indicates the direction of travel of the front wheel.
The position of the direction of travel indicator on the tires can vary.

– Mount and tighten screw ❹.

Guideline

Screw, front wheel spindle	M25x1.5	45 Nm (33.2 lbf ft)	Thread greased

– Position the brake calipers.

✔ The brake linings are correctly positioned.

– Mount screws ❻ on both brake calipers but do not tighten yet.

– Operate the hand brake lever repeatedly until the brake linings are in contact with the brake disc and there is a pressure point. Fix the hand brake lever in the activated position.

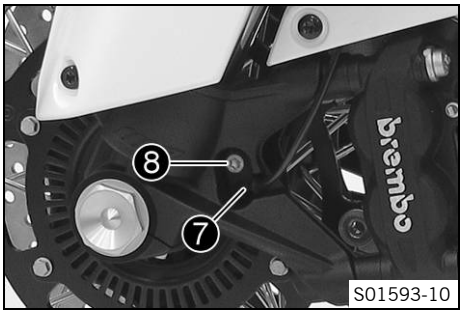
✔ The brake calipers straighten.

– Tighten screws ❻ on both brake calipers.

Guideline

Screw, front brake caliper	M10	45 Nm (33.2 lbf ft)	**Loctite® 243™**

– Remove the locking piece of the hand brake lever.

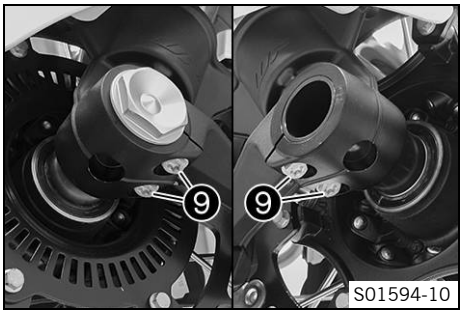


– Position wheel speed sensor ❼ in the drill hole.
– Mount and tighten screw ❽.

Guideline

Remaining chassis screws	M6	10 Nm (7.4 lbf ft)

– Remove the vehicle from the center stand. (📖 p. 108)

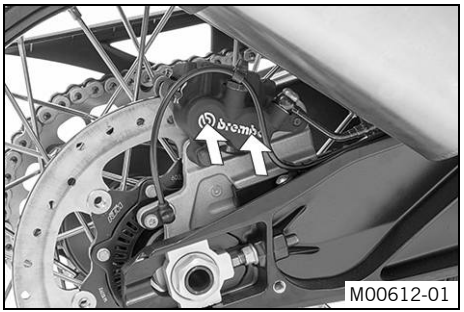


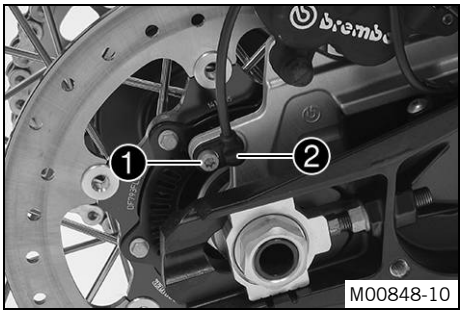
– Operate the front brake and compress the fork a few times firmly.
  ✔ The fork legs straighten.
– Tighten screws ❾.

Guideline

Screw, fork stub	M8	15 Nm (11.1 lbf ft)

15.4 Removing the rear wheel





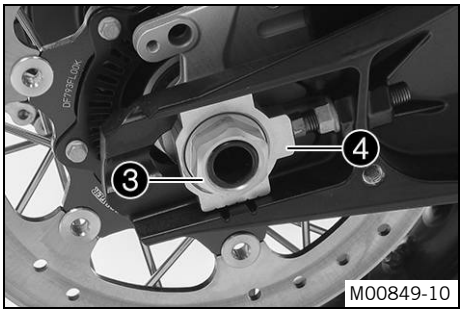
Preparatory work

– Raise the vehicle with the center stand. (📖 p. 108)

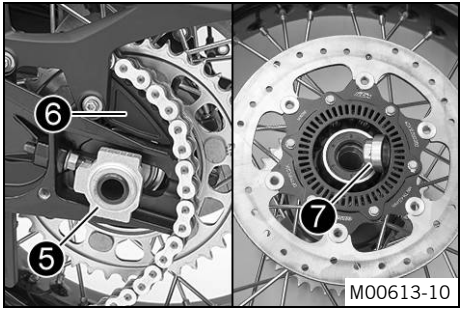
Main work

– Press the brake caliper by hand on to the brake disc in order to press back the brake pistons.

– Remove screw ❶ and pull wheel speed sensor ❷ out of the hole.



– Remove nut ❸. Remove chain adjuster ❹.



– Pull out wheel spindle ❺ only far enough to allow the rear wheel to be pushed forward.
– Push the rear wheel forward as far as possible. Take the chain off of the rear sprocket and place it on chain sprocket guard ❻.

Warning

Danger of accidents Reduced braking effect caused by damaged brake discs.

– Always lay the wheel down in such a way that the brake discs are not damaged.

– Holding the rear wheel, withdraw the wheel spindle. Take the rear wheel out of the swing arm.

Info

Do not operate the foot brake when the rear wheel is removed.

– Remove the spacer ❼.

15.5 Installing the rear wheel

Warning

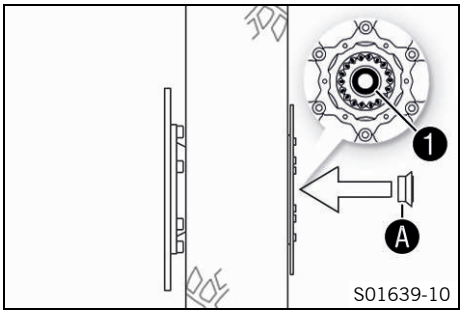
Danger of accidents Oil or grease on the brake discs reduces the braking effect.

– Always keep the brake discs free of oil and grease.
– 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.



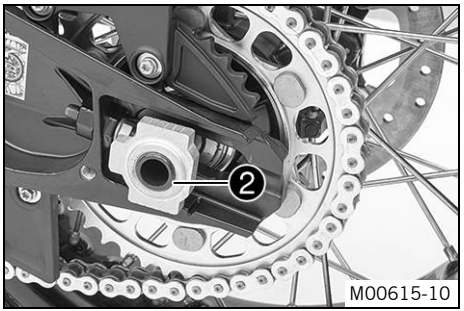
– Check the rear hub rubber dampers. (p. 171)
– Check the wheel bearing for damage and wear.
  » If the wheel bearing is damaged or worn:
    – Change the rear wheel bearing.
– Clean and grease shaft seal ring 1 and contact surface A of the spacer.

  Long-life grease (p. 245)

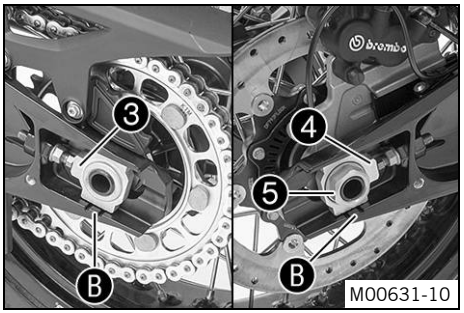
– Insert the spacer.
– Clean and grease the thread of the wheel spindle and nut.

  Long-life grease (p. 245)

– Install the rubber dampers and rear sprocket carrier on the rear wheel.
– Place the rear wheel in the swingarm and bring the brake disc into contact with the brake caliper.



– Mount wheel spindle ❷ but do not push it in all the way.
– Push the rear wheel as far forward as possible and place the chain on the rear sprocket.



– Push the wheel spindle in all the way and mount chain adjuster ❹ and nut ❺.

Info
Mount chain adjusters ❸ and ❹ in the same position.

– Make sure that the chain adjusters are fitted correctly on the adjusting screws.

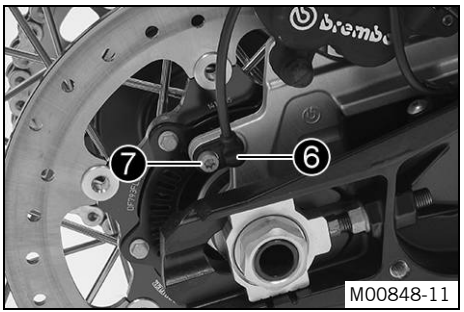
Guideline

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 the reference marks Ⓑ.

– Tighten nut ❺.

Guideline

Nut, rear wheel spindle	M25x1.5	90 Nm (66.4 lbf ft)	Thread greased



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

Guideline

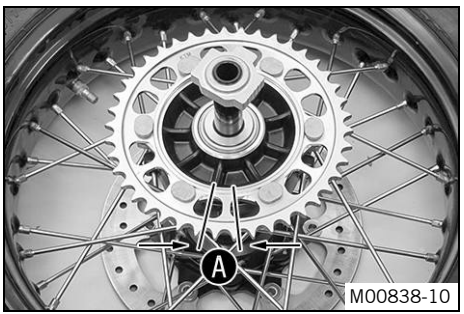
Remaining chassis screws	M6	10 Nm (7.4 lbf ft)

– Operate the foot brake lever repeatedly until the brake linings are in contact with the brake disc and there is a pressure point.

15.6 Checking the rear hub rubber dampers

Info
The engine power is transmitted from the rear sprocket to the rear wheel via 6 rubber dampers. The rubber dampers wear out during operation. If the rubber dampers are not changed in time, the rear sprocket carrier and the rear hub will be damaged.

Preparatory work
– Raise the vehicle with the center stand. (📖 p. 108)
– Remove the rear wheel. (📖 p. 167)



Main work
– Lay the rear wheel on a workbench with the rear sprocket facing upwards and insert the wheel spindle in the hub.
– Check the rear sprocket play Ⓐ.

Info
Measure the play on the outside of the rear sprocket.

Play in rubber dampers, rear wheel	≤ 5 mm (≤ 0.2 in)

» If clearance Ⓐ is larger than the specified value:
– Change all rubber dampers in the rear hub. 🔧

Finishing work
– Install the rear wheel. 🔧 (📖 p. 169)

15.7 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. (Your authorized KTM workshop will be glad to help.)

Warning
Danger of crashing Different tire tread patterns on the front and rear wheel impair the handling characteristic.
Different tire tread patterns can make the vehicle significantly more difficult to control.

– Make sure that only tires with a similar tire tread pattern are fitted to the front and rear wheel.

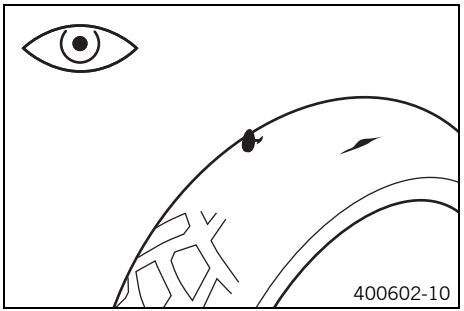
Warning
Danger of accidents Non-approved or non-recommended tires and wheels impact the handling characteristic.

– Only use tires/wheels approved by KTM with the corresponding speed index.

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 at alternating angles.
Running-in phase 200 km (124 mi)

Info
Tire type, tire condition, and tire air pressure influence the braking and handling characteristics of the vehicle.
Worn tires are particularly unfavorable on wet surfaces.

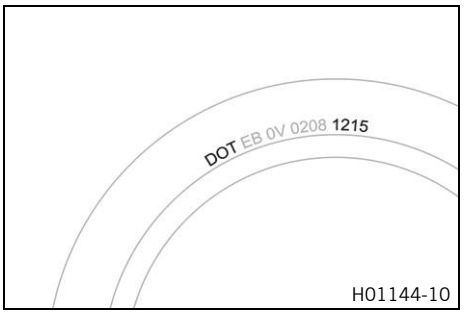

400602-10

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

Info
Adhere to the legally required minimum tread depth.

Minimum tread depth	≥ 2 mm (≥ 0.08 in)

  » If the tread depth is less than the minimum tread depth:
    – Change the tires.



H01144-10

– Check the tire age.

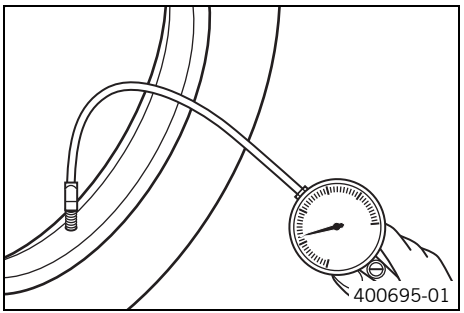
Info
The tire date of manufacture is usually contained in the tire label and is indicated by the last four digits of the **DOT** number. The first two digits indicate the week of manufacture and the last two digits the year of manufacture.
KTM recommends that the tires be changed after 5 years at the latest, regardless of the actual state of wear.

  » If the tires are more than 5 years old:
    – Change the tires.

15.8 Checking the tire air pressure

Info

Low tire air pressure leads to abnormal wear and overheating of the tire.
Correct tire air pressure ensures optimal riding comfort and maximum tire service life.



– Remove the dust cap.
– Check the tire air pressure when the tires are cold.

Tire air pressure, solo/with passenger/full payload	
Front: with cold tires	2.4 bar (35 psi)
Rear: with cold tires	2.9 bar (42 psi)

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

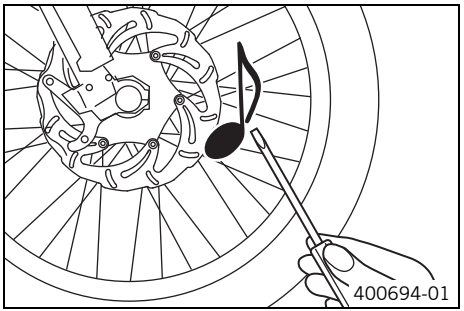
15.9 Checking spoke tension

Warning

Danger of accidents Incorrectly tensioned spokes impair the handling characteristic and result in secondary damage.

The spokes break due to being overloaded if they are too tightly tensioned. If the tension in the spokes is too low, then lateral and radial run-out will form in the wheel. Other spokes will become looser as a result.

– Check spoke tension regularly, and in particular on a new vehicle. (Your authorized KTM workshop will be glad to help.)



– Strike each spoke briefly using a screwdriver blade.

Info

The frequency of the sound depends on the spoke length and spoke diameter. If spokes of the same length and diameter vibrate with a different tone, this is an indication that the spoke tensions differ.

You should hear a high note.

» If the spoke tension differs:

– Correct the spoke tension.

16.1 Daytime running light

Warning

Danger of accidents When visibility is poor, the daytime running light is not a substitute for the low beam.

Automatic switching between the daytime running light and low beam may only be partially available when visibility is significantly impaired due to fog, snow or rain.

- Ensure that the appropriate type of lighting is always selected.
- If necessary switch off the daytime running lights using the menu before going on a ride or when stopped so that the low beam is switched on permanently.
- Note the legal regulations regarding the daytime running light.

The daytime running light/parking light is integrated in the main headlight.
The daytime running light (DRL) can be switched on when visibility conditions are good. Activate the daytime running light in the combination instrument. Control is provided by the brightness sensor in the combination instrument. When visibility conditions are good, the low beam is switched off and the daytime running light is switched on. It is four times brighter than the parking light. When the daytime running light is switched off, it serves as a parking light.

16.2 Cornering headlight

The cornering headlight is located to the left and the right in the side cover.

Info
To activate the cornering light, the low beam must be switched on and the daytime running light switched off.

The cornering headlights are activated with:

Lean angle for the lower LED	≥ 10°
Lean angle for the middle LED	≥ 20°
Lean angle for the upper LED	≥ 30°
Speed	≥ 6 km/h (≥ 3.7 mph)

16.3 Removing the battery

Warning
Risk of injury Battery acid and battery gases cause serious chemical burns.

- Keep 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 battery.
- Only charge batteries in well-ventilated rooms.
- Rinse the affected area immediately with plenty of water in the event of contact with the 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.

Caution

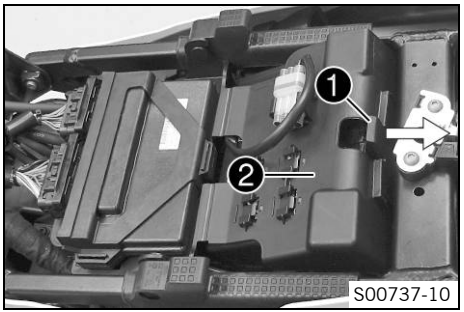
Danger of accidents Electronic components and safety devices will be damaged if the battery is discharged or missing.

– Never operate the vehicle with a discharged battery or without a battery.

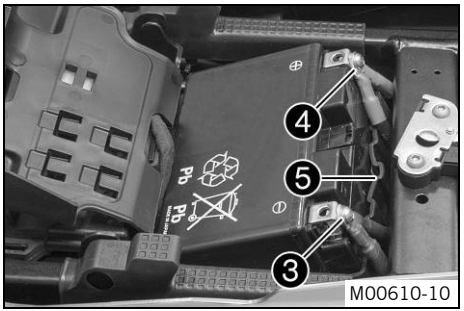
Preparatory work

– Switch off all power consumers and switch off the engine.
– Remove the passenger seat. (📖 p. 109)
– Remove the front rider's seat. (📖 p. 111)

Main work



– Pull locking mechanism ❶ in the direction of the arrow.
– Fold open cover ❷.



– Disconnect negative cable ❸ from the battery.
– Disconnect positive cable ❹ from the battery.
– Take the battery and battery case ❺ out of the battery compartment.

16.4 Installing the battery

Warning

Risk of injury Battery acid and battery gases cause serious chemical burns.

- Keep 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 battery.
- Only charge batteries in well-ventilated rooms.
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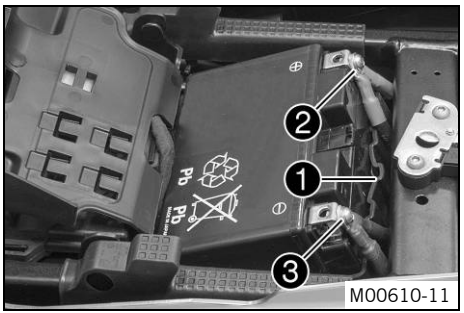


Main work

- Position the battery in battery case ❶.

  Guideline

The even side of the battery case must be opposite the poles.

- Position the battery and battery case in the battery compartment.
- Position the positive cable ❷ and mount and tighten the screw.

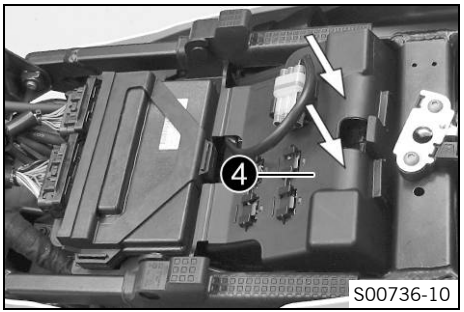
  Guideline

Screw, battery terminal	M6	4.5 Nm (3.32 lbf ft)

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

Guideline

Screw, battery terminal	M6	4.5 Nm (3.32 lbf ft)



– Close the cover ❹ and push down slightly.

✔ The cover engages with an audible click.

Finishing work

– Mount the front rider's seat. (📖 p. 112)

– Mount the passenger seat. (📖 p. 110)

– Set the time and date.

16.5 Recharging the battery

Warning

Risk of injury Battery acid and battery gases cause serious chemical burns.

- Keep 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 battery.
- Only charge batteries in well-ventilated rooms.
- Rinse the affected area immediately with plenty of water in the event of contact with the 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.

Warning

Environmental hazard Batteries contain environmentally-hazardous materials.

- Do not dispose of batteries as household waste.
- Dispose of batteries at a collection point for used batteries.

Warning

Environmental hazard Hazardous substances cause environmental damage.

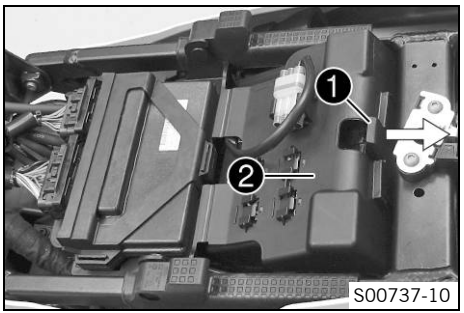
- Dispose of oils, grease, filters, fuel, cleaning agents, brake fluid, etc., correctly and in compliance with the applicable regulations.

Info

Even when there is no load on the battery, it discharges steadily.
The charge state and the type of charge are very important for the service life of the battery.
Rapid recharging with a high charging current shortens the battery's service life.
If the charging current, charging voltage, and charging time are exceeded, electrolyte escapes through the safety valves. This reduces the battery capacity.
If the battery is depleted from starting the vehicle repeatedly, the battery must be charged immediately.
If the battery is left in a discharged state for an extended period, it will become over-discharged and sulfate, destroying the battery.
The battery is maintenance-free, i.e., the acid level does not have to be checked.
If the battery is not charged using the KTM battery charger, the battery must be removed for charging. Otherwise, overvoltage may damage electronic components. Charge the battery according to the instructions on the battery housing.

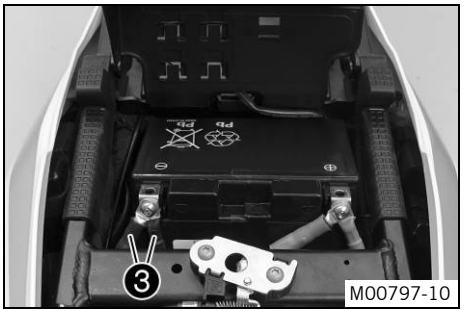
Preparatory work

– Switch off all power consumers and switch off the engine.
– Remove the passenger seat. (📖 p. 109)
– Remove the front rider's seat. (📖 p. 111)



Main work

– Pull locking mechanism ❶ in the direction of the arrow.
– Fold open cover ❷.



– Disconnect negative cable ❸ of the battery to avoid damage to the motorcycle's electronics.

– Connect the battery charger to the battery. Switch on the battery charger.

Battery charger (58429074000)

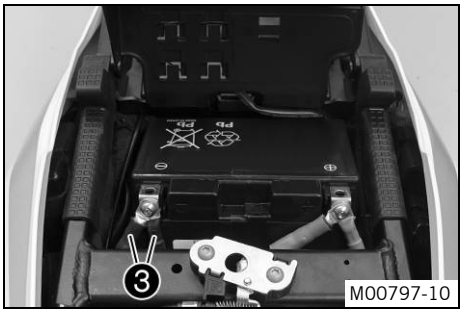
Info

You can also use the battery charger to test the open-circuit voltage and start potential of the battery, and to test the alternator. With this device, you cannot overcharge the battery.
Charge the battery with a maximum of 10% of the capacity specified on the battery housing.

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

Guideline

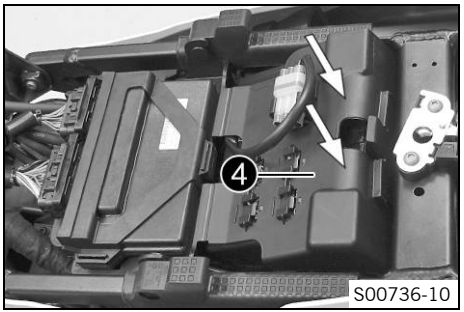
The charging current, charging voltage, and charging time must not be exceeded.	
Charge the battery regularly when the motorcycle is not in use	3 months



– Connect both negative cables ❸ with the battery.

Guideline

Screw, battery terminal	M6	4.5 Nm (3.32 lbf ft)



– Close cover ❹ and push down slightly.

✔ The cover engages with an audible click.

Finishing work

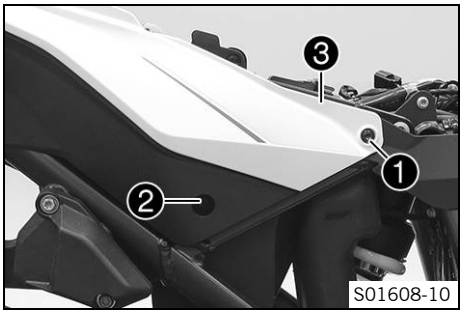
– Mount the front rider's seat. (📖 p. 112)
– Mount the passenger seat. (📖 p. 110)
– Set the time and date.

16.6 Changing the main fuse

Warning

Fire hazard Incorrect fuses overload the electrical system.

- Only use fuses with the required ampere value.
- Do not bypass or repair fuses.

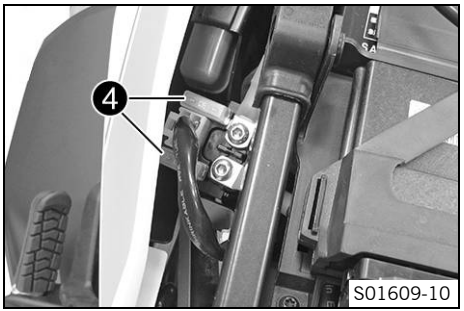


Preparatory work

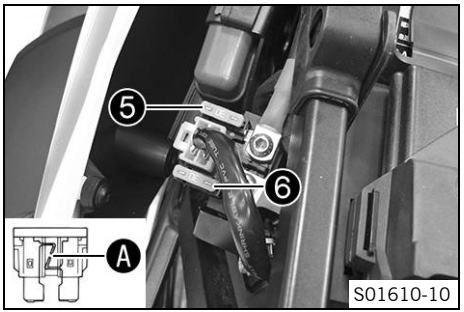
- Switch off all power consumers and switch off the engine.
- Remove the passenger seat. (📖 p. 109)
- Remove the front rider's seat. (📖 p. 111)

Main work

- Remove screws ❶ and ❷.
- Raise rear fairing ❸ slightly.



– Take off protection caps ❹.



– Remove faulty main fuse ❺.

Info

You can recognize a faulty fuse by a burned-out fuse wire Ⓐ.
A spare fuse ❻ is located in the starter relay.
The main fuse protects all power consumers of the vehicle.

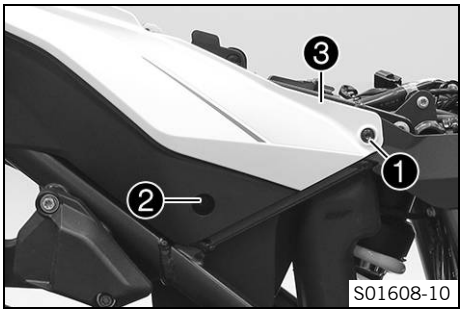
– Install a new main fuse.

Fuse (58011109130) (📖 p. 236)

– Check that the electrical equipment is functioning properly.
– Mount the protection caps.

Tip

Insert a new spare fuse into the starter relay to have it available when needed.



– Position rear fairing ❸.
  ✓ Heat protector is correctly positioned.
– Mount and tighten screw ❷.
  Guideline

Rear fairing screw	M5x12	3.5 Nm (2.58 lbf ft)

– Mount and tighten screw ❶.
  Guideline

Rear fairing screw	M5x17	3.5 Nm (2.58 lbf ft)

Finishing work
– Mount the front rider's seat. (📖 p. 112)
– Mount the passenger seat. (📖 p. 110)
– Set the time and date.

16.7 Changing the fuses in the fuse box

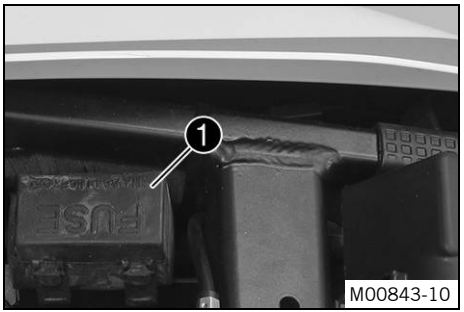
Warning
Fire hazard Incorrect fuses overload the electrical system.
– Only use fuses with the required ampere value.
– Do not bypass or repair fuses.

Info
The fuse box containing the fuses of individual power consumers is located under the seat.

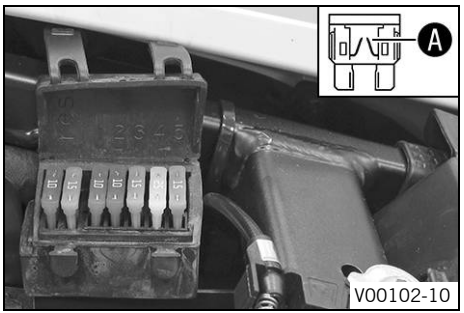
Preparatory work

– Switch off all power consumers and switch off the engine.
– Remove the passenger seat. (📖 p. 109)
– Remove the front rider's seat. (📖 p. 111)

Main work



– Open fuse box cover ❶.



– Check the fuses.

Info

You can recognize a faulty fuse by a burned-out fuse wire Ⓐ.

– Remove the defective fuse.

Guideline

Fuse **res** - 10 A - spare fuse
Fuse **res** - 15 A - spare fuse
Fuse **1** - 10 A - power supply for control units and components
Fuse **2** - 10 A - socket, license plate lamp, diagnostics connector, permanent positive for auxiliary equipment (ACC1), accessories connected with ignition for auxiliary equipment (ACC2)
Fuse **3** - 15 A - ABS hydraulic unit
Fuse **4** - 25 A - ABS return pump
Fuse **5** - 15 A - semi-active suspension

– Use spare fuses with the correct rating only.

Fuse (58011109110) (📖 p. 236)
Fuse (58011109115) (📖 p. 236)
Fuse (58011109125) (📖 p. 236)

Tip
Insert a spare fuse so that it is available if needed.

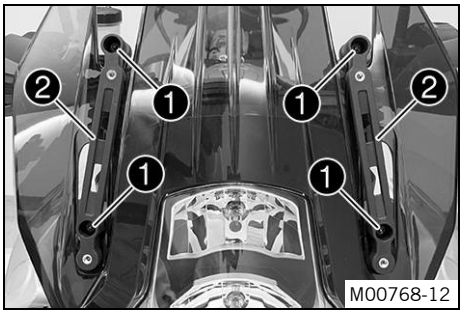
– Check that the power consumer is functioning properly.
– Close the fuse box cover.

Finishing work
– Mount the front rider's seat. (📖 p. 112)
– Mount the passenger seat. (📖 p. 110)

16.8 Removing the headlight mask with the headlight

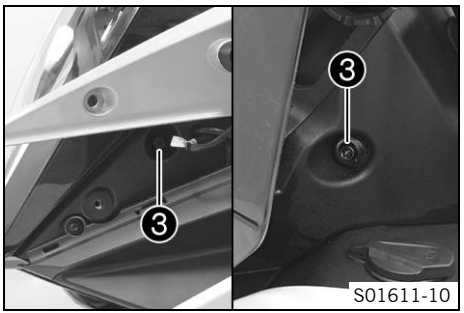
Preparatory work

– Switch off all power consumers and switch off the engine.
– Remove the wind shield. (📖 p. 145)
– Loosen the mask spoiler. (📖 p. 135)

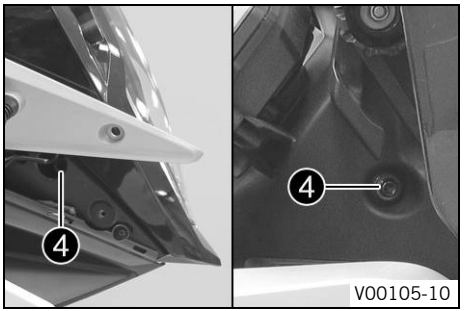


Main work

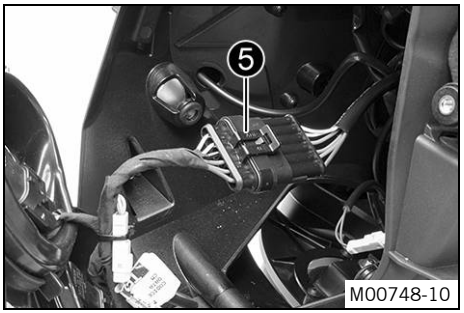
– Remove screws ❶.
– Take off windshield adapter ❷.



– Remove screws ❸.

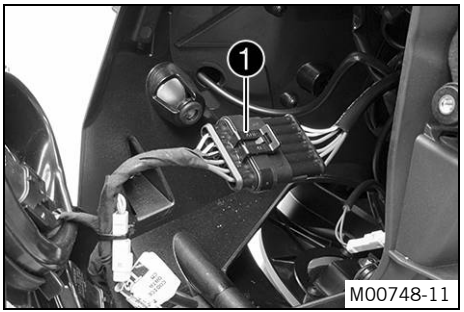


– Remove screws ❹.
– Fold the headlight mask forward.



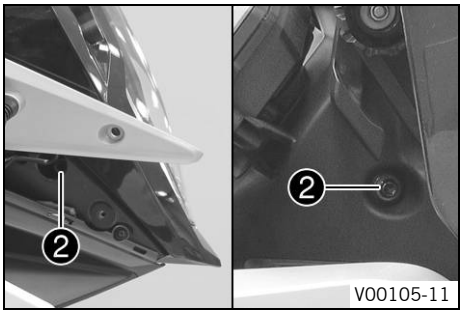
– Disconnect plug-in connector ❺.
– Put the the headlight mask on a soft cloth so that the headlight does not get damaged.

16.9 Installing the headlight mask with the headlight



Main work

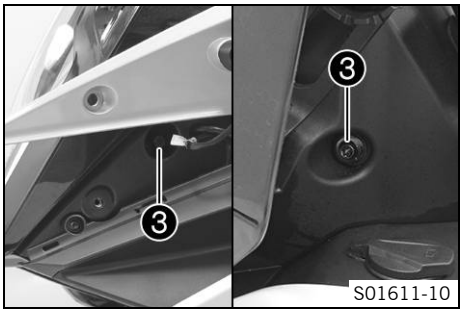
- Connect plug-in connector ❶ of the headlight.
- Check that the lighting is functioning properly.
- Position the headlight mask.



- Mount and tighten screws ❷.

  Guideline

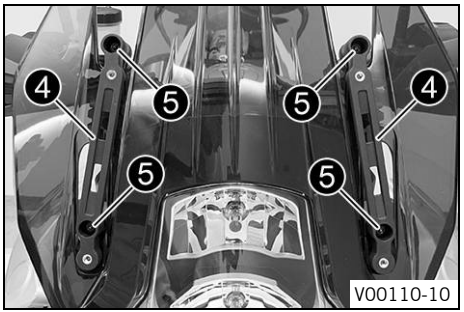
Screw, headlight	M6	5 Nm (3.7 lbf ft)



– Mount and tighten screws ❸.

Guideline

Screw, headlight	M6	5 Nm (3.7 lbf ft)



– Position windshield adapter ❹.
– Mount and tighten screws ❺.

Guideline

Screw, cover part	M5	3.5 Nm (2.58 lbf ft)

Finishing work

– Position the mask spoiler. (📖 p. 137)
– Install the wind shield. (📖 p. 145)
– Check the setting of the lighting system. (📖 p. 197)

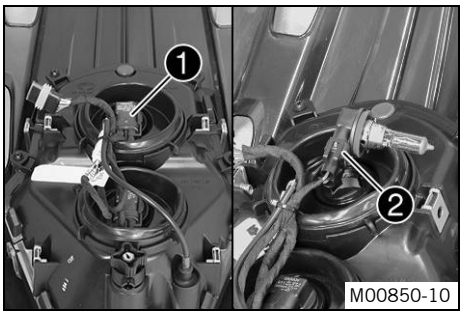
16.10 Changing the low beam bulb

Note

Damage to reflector Grease on the reflector reduces the brightness.

Grease on the bulb will evaporate due to the heat and be deposited on the reflector.

– Clean and degrease the bulbs before mounting.
– Do not touch the bulbs with your bare hands.

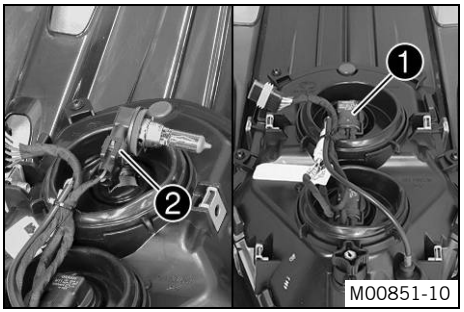


Preparatory work

– Switch off all power consumers and switch off the engine.
– Remove the wind shield. (📖 p. 145)
– Loosen the mask spoiler. (📖 p. 135)
– Remove the headlight mask with the headlight. (📖 p. 190)

Main work

– Push headlight bulb ❶ lightly into the bulb socket, turn it all the way counterclockwise, and pull it out.
– Unplug connector ❷.



– Plug connector ❷ into the new headlight bulb.

Low beam (H11/socket PGJ19-2) (📖 p. 236)

– Position headlight bulb ❶ into the bulb socket and turn it all the way clockwise.
  ✔ The headlight bulb is locked into the bulb socket.

Finishing work
– Install the headlight mask with the headlight. (📖 p. 192)
– Position the mask spoiler. (📖 p. 137)
– Install the wind shield. (📖 p. 145)
– Check the setting of the lighting system. (📖 p. 197)

16.11 Changing the high beam bulb

Note

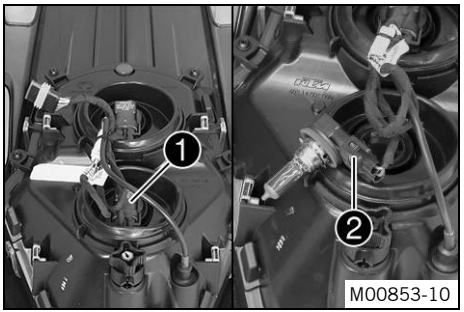
Damage to reflector Grease on the reflector reduces the brightness.

Grease on the bulb will evaporate due to the heat and be deposited on the reflector.

– Clean and degrease the bulbs before mounting.
– Do not touch the bulbs with your bare hands.

Preparatory work
– Switch off all power consumers and switch off the engine.
– Remove the wind shield. (📖 p. 145)
– Loosen the mask spoiler. (📖 p. 135)

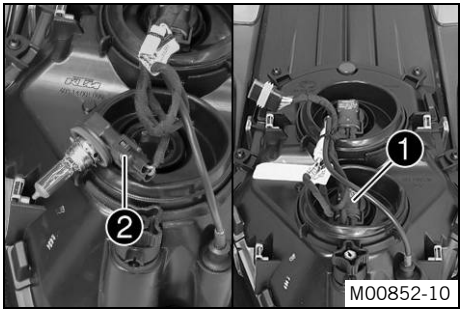
– Remove the headlight mask with the headlight. (📖 p. 190)



Main work

– Push headlight bulb ❶ lightly into the bulb socket, turn it all the way counterclockwise, and pull it out.

– Unplug connector ❷.



– Plug connector ❷ into the new headlight bulb.

High beam (H11/socket PGJ19-2) (📖 p. 236)

– Position headlight bulb ❶ into the bulb socket and turn it all the way clockwise.

✔ The headlight bulb is locked into the bulb socket.

Finishing work

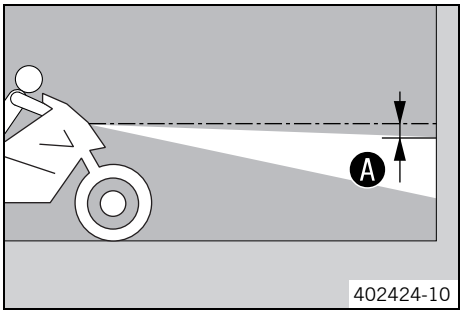
– Install the headlight mask with the headlight. (📖 p. 192)

– Position the mask spoiler. (📖 p. 137)

– Install the wind shield. (📖 p. 145)

– Check the setting of the lighting system. (📖 p. 197)

16.12 Checking the setting of the lighting system

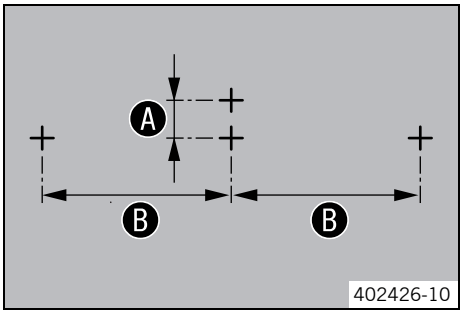


– Position the vehicle upright on a horizontal surface in front of a light wall and make a mark at the height of the center of the low beam headlight.

– Make a second mark at a distance Ⓐ under the first mark.

Guideline

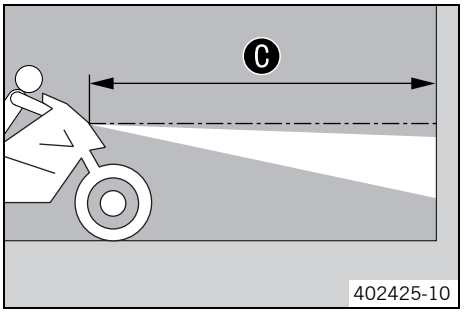
Distance Ⓐ	5 cm (2 in)



– Make two further marks spaced apart Ⓑ to the left and the right of the second marking.

Guideline

Distance Ⓑ	71.5 cm (28.15 in)



– Position the vehicle perpendicular to the wall at a distance Ⓒ from the wall and switch on the low beam.

Guideline

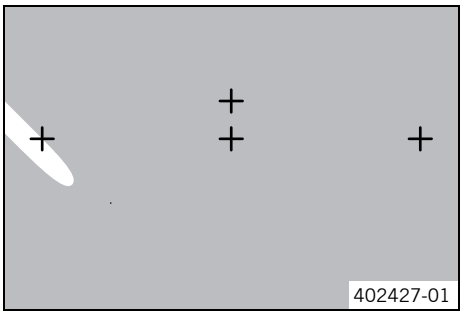
Distance Ⓒ	5 m (16 ft)

– The rider, with luggage and passenger if applicable, now mounts the motorcycle.
– Check the headlight setting.

The light-dark boundary of the low beam must lie exactly on the lower mark 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 the headlight range. (📖 p. 199)

– Press the **UP** or **DOWN** button until the **"Settings"** menu appears on the matrix display. Pressing the **SET** button opens the menu.
– Press the **UP** or **DOWN** button until **"cLightTest"** is highlighted in black on the matrix display. Pressing the **SET** button again starts the cornering light test.
– Wait for a few seconds until the upper segment of the left cornering light lights up continuously.

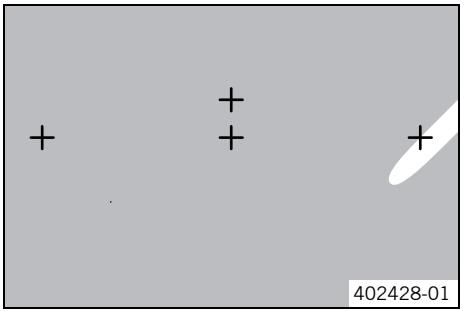


– Checking the left cornering light setting.

The light-dark boundary of the upper segment must run exactly through the left marking.

» If the boundary between light and dark does not meet specifications:
  – Adjust the cornering light range. (📖 p. 200)

– Press the **SET** button.
✔ The left cornering light is switched off.
✔ The right cornering light test is started.

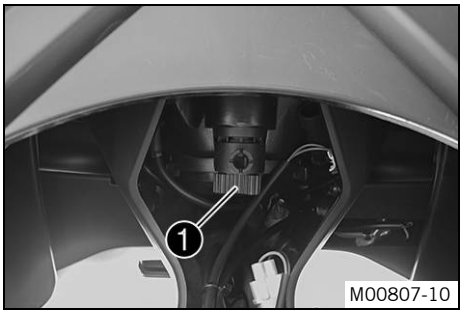


– Wait for a few seconds until the upper segment of the right cornering light lights up continuously.
– Checking the right cornering light setting.

The light-dark boundary of the upper segment must run exactly through the right marking.

» If the boundary between light and dark does not meet specifications:
  – Adjust the cornering light range. (📖 p. 200)
– Press the **SET** button.
  ✔ The cornering light is switched off.

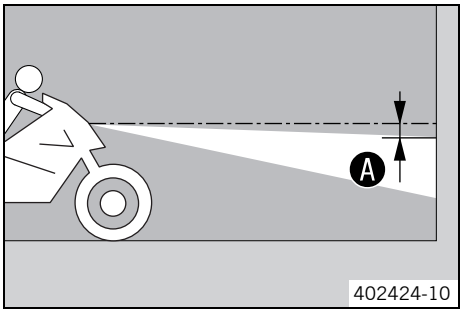
16.13 Adjusting the headlight range



Preparatory work
– Check the setting of the lighting system. (📖 p. 197)
– Remove the bottom triple clamp cover. (📖 p. 124)

Main work
– Turn adjusting screw ❶ to adjust the headlight range.

Info
Turn clockwise to increase the headlight range; turn counterclockwise to reduce the headlight range.
If you have a payload, you may have to correct the headlight range.



– Set the headlight to marking Ⓐ.

Guideline

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

Finishing work

– Install the bottom triple clamp cover. (📖 p. 125)

16.14 Adjusting the cornering light range

Preparatory work

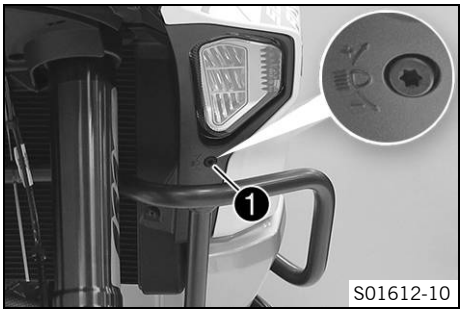
– Check the setting of the lighting system. (📖 p. 197)

Main work

– Press the **UP** or **DOWN** button until the **"Settings"** menu appears on the matrix display. Pressing the **SET** button opens the menu.

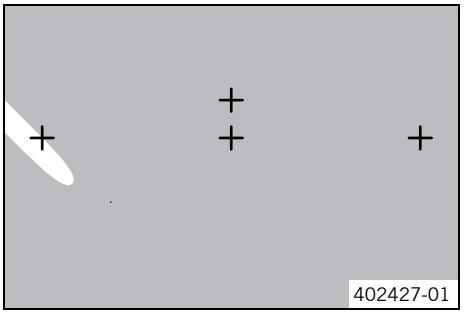
– Press the **UP** or **DOWN** button until **"cLightTest"** is highlighted in black on the matrix display. Pressing the **SET** button again starts the cornering light test.

– Wait for a few seconds until the upper segment of the left cornering light lights up continuously.



– Turn adjusting screw ❶ to adjust the left cornering light range.

Info
Turn clockwise to increase the headlight range; turn counterclockwise to reduce the headlight range.



– Set the upper segment on the left marking.

Guideline

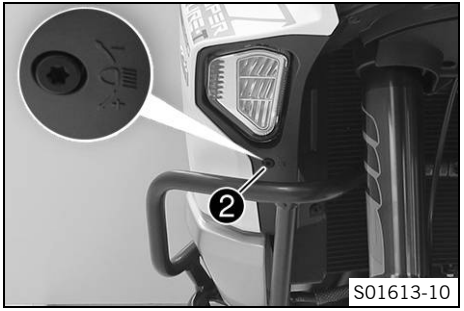
The light-dark boundary of the upper segment must run exactly through the left marking.

– Press the **SET** button.

✔ The left cornering light is switched off.

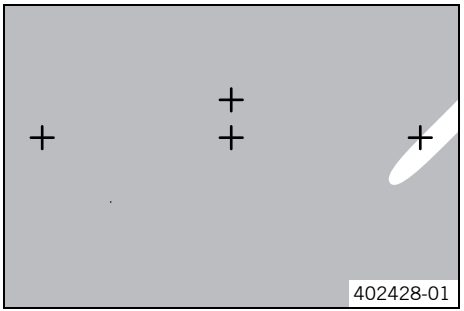
✔ The right cornering light test is started.

– Wait for a few seconds until the upper segment of the right cornering light lights up continuously.



– Turn adjusting screw ❷ to adjust the right cornering light range.

Info
Turn clockwise to increase the headlight range; turn counterclockwise to reduce the headlight range.



– Set the upper segment on the left marking.

Guideline

The light-dark boundary of the upper segment must run exactly through the right marking.

– Press the **SET** button.

✔ The cornering light is switched off.

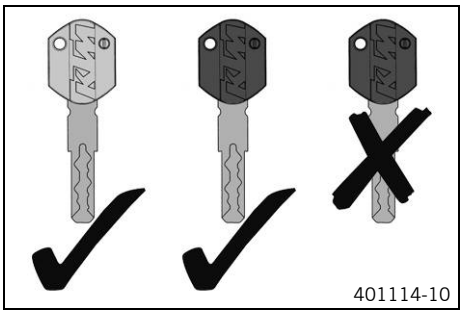
16.15 Activating/deactivating the ignition key

Info

The orange programming key must only be used for activating and deactivating!

If a black ignition key is lost or needs to be replaced, the individual black ignition keys need to be enabled or disabled using the orange programming key. This prevents the vehicle from being operated with the lost black ignition key.

You can activate or deactivate up to four black ignition keys. Only the black ignition keys programmed during an activation procedure are valid. All black ignition keys not programmed during the activation procedure are invalid, but can be reprogrammed in a further activation procedure.


401114-10

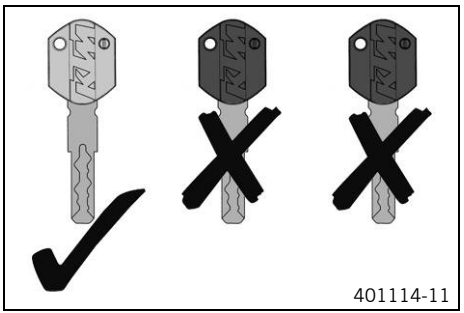
K00007-01

Loss of a black ignition key (additional black ignition keys are available):

The following procedure deactivates all activated black ignition keys that are not included in the procedure.

– Press the emergency OFF switch to the position **ON** ○.

– Insert the orange programming key in the ignition lock.
– Switch on the ignition by turning the orange programming key to the **ON** position ○.
  ✓ Immobilizer ◘ indicator lamp lights up.
– Switch off the ignition by turning the orange programming key to the **OFF** position ⊗.
– Pull out the orange programming key.
– Insert the black ignition key in the ignition lock.
– Switch on the ignition by turning the black ignition key to the position **ON** ○.
  ✓ Immobilizer ◘ indicator lamp lights up.
– Switch off the ignition by turning the black ignition key to the position **OFF** ⊗.
– Remove the black ignition key.
– Insert the orange programming key in the ignition lock.
– Switch on the ignition by turning the orange programming key to the **ON** position ○.
  ✓ The immobilizer ◘ indicator lamp flashes according to the number of functional black ignition keys including the orange programming key. In this case, it flashes twice.
– Switch off the ignition by turning the orange programming key to the **OFF** position ⊗.
– Pull out the orange programming key.
  ✓ The lost black ignition key is deactivated.


401114-11

✔ The existing black ignition key is reactivated.

Loss of all black ignition keys (no black ignition keys are available):

This procedure is important to prevent misuse of the lost black ignition key.

– Press the emergency OFF switch to the position **ON** ○.

K00007-01

– Insert the orange programming key in the ignition lock.
– Switch on the ignition by turning the orange programming key to the **ON** position ○.
  ✔ Immobilizer ◘ indicator lamp lights up.
– Switch off the ignition by turning the orange programming key to the **OFF** position ⊠.
– Switch on the ignition by turning the orange programming key to the **ON** position ○.
  ✔ The immobilizer ◘ indicator lamp flashes according to the number of functional black ignition keys including the orange programming key. In this case, it flashes once since all black ignition keys are deactivated.
– Switch off the ignition by turning the orange programming key to the **OFF** position ⊠.
– Pull out the orange programming key.
  ✔ All black ignition keys are deactivated.
– Order a new black ignition key according to the key number on the **KEYCODECARD** and activate it.

To activate up to three black ignition keys:

– Press the emergency OFF switch to the position **ON** ○.
– Insert the orange programming key in the ignition lock.

– Switch on the ignition by turning the orange programming key to the **ON** position ○.
  ✓ Immobilizer ◘ indicator lamp lights up.
– Switch off the ignition by turning the orange programming key to the **OFF** position ⊠.
– Pull out the orange programming key.
– Insert the black ignition key in the ignition lock.
– Switch on the ignition by turning the black ignition key to the position **ON** ○.
  ✓ Immobilizer ◘ indicator lamp lights up.
– Switch off the ignition by turning the black ignition key to the position **OFF** ⊠.
– Remove the black ignition key.
– If two other black ignition keys are to be activated, repeat the last steps with the respective ignition key.
– If the last black ignition key was activated, insert the orange programming key into the ignition lock.
– Switch on the ignition by turning the orange programming key to the **ON** position ○.
  ✓ The immobilizer ◘ indicator lamp flashes according to the number of functional black ignition keys including the orange programming key.
– Switch off the ignition by turning the orange programming key to the **OFF** position ⊠.
– Pull out the orange programming key.

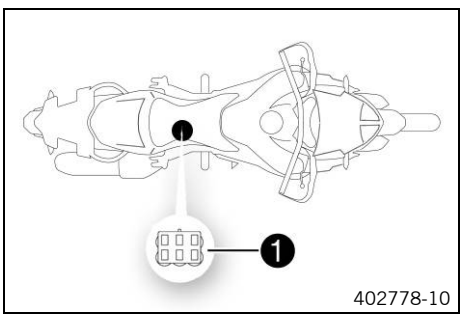
Info
Activation of the ignition key is finished.

To activate four black ignition keys:
– Press the emergency OFF switch to the position **ON** ○.
– Insert the orange programming key in the ignition lock.
– Switch on the ignition by turning the orange programming key to the **ON** position ○.
  ✓ Immobilizer ◘ indicator lamp lights up.

– Switch off the ignition by turning the orange programming key to the **OFF** position ⊠.
– Pull out the orange programming key.
– Insert the black ignition key in the ignition lock.
– Switch on the ignition by turning the black ignition key to the position **ON** ○.
  ✓ Immobilizer ◘ indicator lamp lights up.
– Switch off the ignition by turning the black ignition key to the position **OFF** ⊠.
– Remove the black ignition key.
– If three other black ignition keys are to be activated, repeat the last steps with the respective ignition key.

Info
After the fourth black ignition key has been activated, programming is finished.

16.16 Diagnostics connector



Diagnostics connector ❶ is located under the front rider's seat.

17.1 Checking the coolant level in the compensating tank

Warning

Danger of scalding During motorcycle operation, the coolant gets very hot and is under pressure.

- 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.

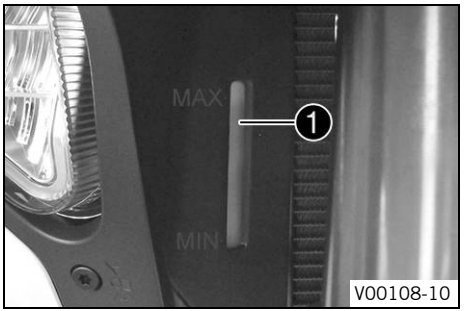
Warning

Danger of poisoning Coolant is toxic and a health hazard.

- Keep coolant out of the reach of children.
- Do not allow coolant to come into contact with the skin, the eyes and clothing.
- Consult a doctor immediately if coolant is swallowed.
- Rinse the affected area immediately with plenty of water in the event of contact with the skin.
- Rinse eyes thoroughly with water and consult a doctor immediately if coolant gets into the eyes.
- Change clothing if coolant spills onto your clothing.

Condition

The engine is cold.
The radiator is completely full.



– Park the motorcycle on a horizontal surface.
– Check the coolant level in the compensating tank ❶.

The coolant level must be between **MIN** and **MAX**.

» If there is no coolant in the compensating tank:
  – Check the cooling system for leaks. 🔧

Info
Do not start up the motorcycle!

  – Add coolant/bleed the cooling system. 🔧
» If the coolant in the compensating tank is not at the required level, but the tank is not empty:
  – Correct the coolant level in the compensating tank. (📖 p. 208)

17.2 Correcting the coolant level in the compensating tank

Warning
Danger of scalding During motorcycle operation, the coolant gets very hot and is under pressure.

– 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.

Warning

Danger of poisoning Coolant is toxic and a health hazard.

- Keep coolant out of the reach of children.
- Do not allow coolant to come into contact with the skin, the eyes and clothing.
- Consult a doctor immediately if coolant is swallowed.
- Rinse the affected area immediately with plenty of water in the event of contact with the skin.
- Rinse eyes thoroughly with water and consult a doctor immediately if coolant gets into the eyes.
- Change clothing if coolant spills onto your clothing.

Condition

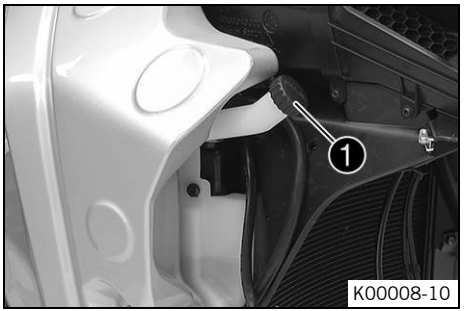
The engine is cold.
The radiator is completely full.

Preparatory work

- Check the coolant level in the compensating tank. (📖 p. 207)
- Remove the crash bar. 🔧 (📖 p. 147)
- Remove the front side cover. (📖 p. 125)

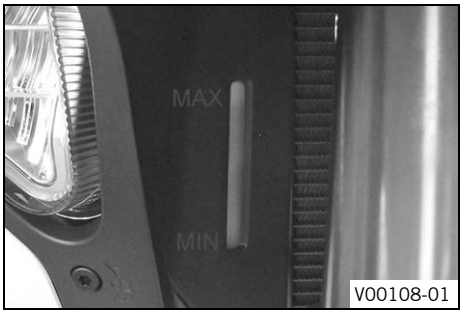
Info

Only disassemble the right-hand side.



Main work

– Remove cover ❶ of the compensating tank.



– Add coolant until the coolant reaches the specified level.

  Guideline

The coolant level must be between **MIN** and **MAX**.

Coolant (📖 p. 242)

– Mount the cover of the compensating tank.

Finishing work

– Install the front side cover. (📖 p. 127)
– Install the crash bar. 🔧 (📖 p. 148)

18.1 "Drive Mod"

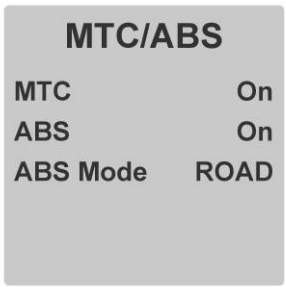
Possible states

- Sport – Homologated performance with very direct response; the motorcycle traction control allows greater slip on the rear wheel
- Street – Homologated performance with balanced response; the motorcycle traction control allows normal slip on the rear wheel
- RAIN – Reduced homologated performance for better ridability; the motorcycle traction control allows normal slip on the rear wheel
- Offroad – Reduced homologated performance for better ridability; the motorcycle traction control allows high slip on the rear wheel

Various vehicle tunings can be selected in the **"Drive Mod"** menu. You can choose from **"SPORT"**, **"STREET"**, **"RAIN"** and **"OFFROAD"**.
The drive mode selected last is displayed on the right in the segment display.

Info
The drive mode selection has no influence on the ABS.

18.2 Motorcycle traction control (MTC)



The motorcycle traction control (MTC) lowers the tightening torque in case of loss of traction in the rear wheel. Depending on the motorcycle traction control setting, a slight slip on the rear wheel may be desirable. Example: Offroad.

Info
When motorcycle traction control is switched off, the rear wheel may spin during high acceleration and on surfaces with low grip.
After the ignition is switched back on, the motorcycle traction control is enabled again.

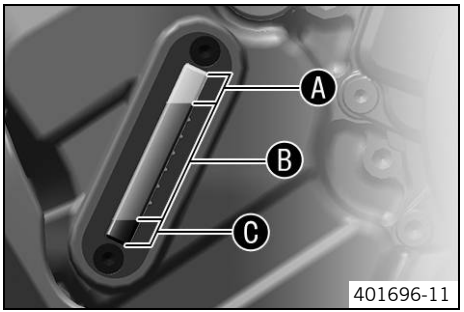
The motorcycle traction control is controlled via the **"Drive Mode"** (📖 p. 211) menu on the combination instrument. The motorcycle traction control can be switched off in the **"MTC/ABS"** menu.

Info

When motorcycle traction control is active, the TC light flashes.
When motorcycle traction control is switched off, the TC light lights up.

19.1 Checking the engine oil level

Info
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 horizontal surface.

Main work
– Check the engine oil level in the engine oil level viewer.

Info
After switching off the engine, wait one minute before checking the level.

The engine oil level should be in the upper part of the range B of the engine oil level viewer.

» When the engine oil level is in area A of the engine oil level viewer:
  – Do not add engine oil.
» When the engine oil level is in area B of the engine oil level viewer:
  – Engine oil can be added.
» When the engine oil level is in area C of the engine oil level viewer:
  – Add engine oil. (📖 p. 218)

19.2 Changing the engine oil and oil filter, cleaning the oil screens

Warning

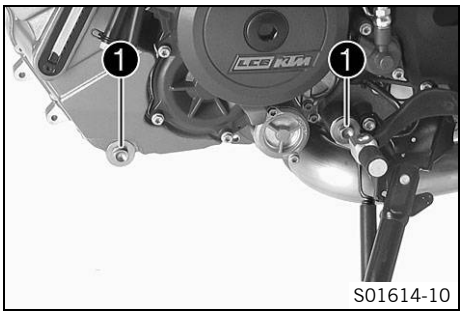
Danger of scalding Engine and gear oil get very hot when the motorcycle is ridden.

– Wear suitable protective clothing and safety gloves.
– In the event of scalding, rinse the area affected immediately with lukewarm water.

Warning

Environmental hazard Hazardous substances cause environmental damage.

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

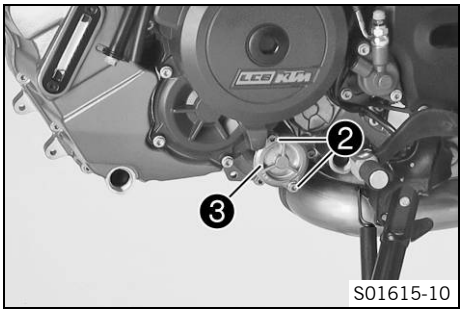


Preparatory work

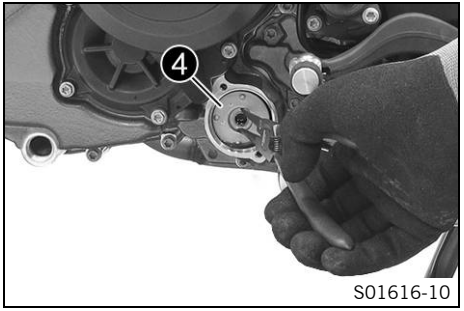
– Remove the engine guard. (p. 146)

Main work

– Stand the motorcycle on its side stand on a horizontal surface.
– Place a suitable container under the engine.
– Remove oil drain plugs 1 with the magnets, O-rings, and oil screens.



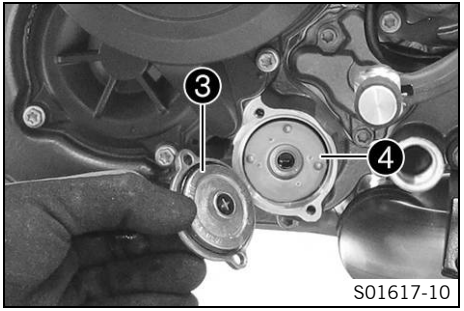
– Remove screws ❷. Remove oil filter cover ❸ with the O-ring.



– Pull oil filter ❹ out of the oil filter housing.

Circlip pliers reverse (51012011000)

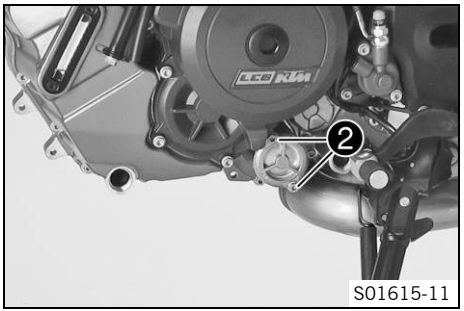
– Completely drain the engine oil.
– Thoroughly clean the parts and sealing surface.



– Insert oil filter ❹.

Info
Only insert the oil filter by hand.

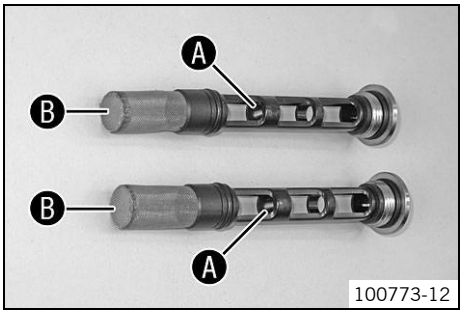
– Lubricate the O-ring of the oil filter cover. Mount oil filter cover ❸.



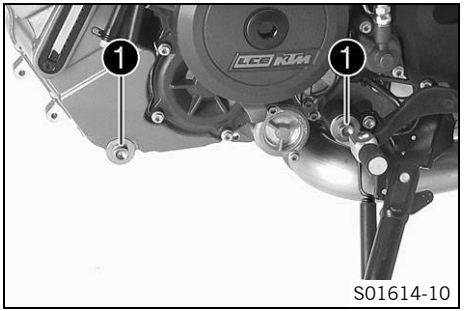
– Mount and tighten screws ❷.

Guideline

Remaining engine screws	M5	6 Nm (4.4 lbf ft)



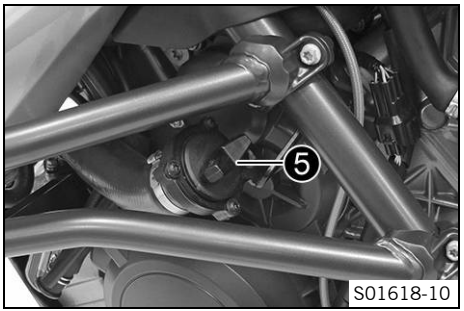
– Thoroughly clean magnets Ⓐ and oil screens Ⓑ of the oil drain plugs.



– Mount and tighten oil drain plugs ❶ with the magnets, O-rings, and oil screens.

Guideline

Oil drain plug	M20x1.5	20 Nm (14.8 lbf ft)



– The oil must be added in two steps.

Engine oil	3.60 l (3.8 qt.)	Outside temperature: ≥ 0 °C (≥ 32 °F)	Engine oil (SAE 10W/50) (📖 p. 243)
		Outside temperature: < 0 °C (< 32 °F)	Engine oil (SAE 5W/40) (📖 p. 243)

– Remove screw plug ❺ and fill in engine oil.

Engine oil (1st quantity) approx.	3.0 l (3.2 qt.)	Outside temperature: ≥ 0 °C (≥ 32 °F)	Engine oil (SAE 10W/50) (📖 p. 243)
		Outside temperature: < 0 °C (< 32 °F)	Engine oil (SAE 5W/40) (📖 p. 243)

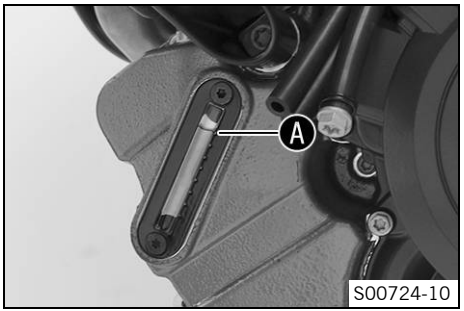
– Mount screw plug ❺.

Danger

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

– Always make sure there is sufficient ventilation when running the engine.
– Use an effective exhaust extraction system when starting or running the engine in an enclosed space.

– Start the engine and check that it is oil-tight.



– Remove the screw plug and add the remaining engine oil to upper marking Ⓐ on the engine oil level viewer.
– Mount the screw plug.

Danger

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

– Always make sure there is sufficient ventilation when running the engine.
– Use an effective exhaust extraction system when starting or running the engine in an enclosed space.

– Start the engine and check that it is oil-tight.

Finishing work

– Check the engine oil level. (📖 p. 213)
– Install the engine guard. (📖 p. 146)

19.3 Adding engine oil

Info

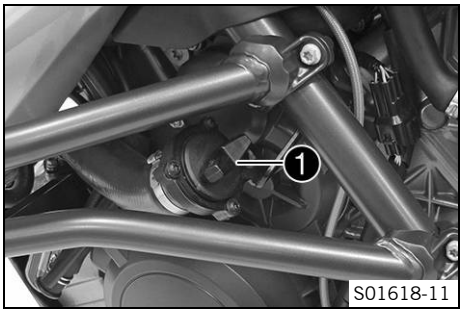
Too little engine oil or poor-quality engine oil results in premature wear to the engine.
The engine may be damaged if the engine oil level is too high.

Condition

The engine is at operating temperature.

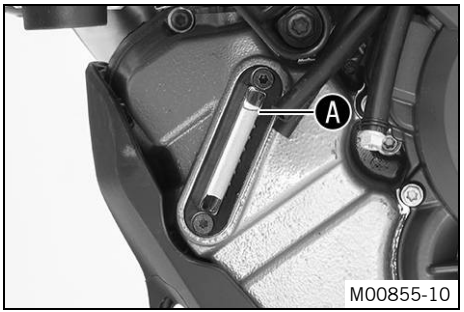
Preparatory work

– Stand the motorcycle upright on a horizontal surface.
– Check the engine oil level. (📖 p. 213)



Main work

– Remove screw plug ❶.



– Add engine oil to the upper marking Ⓐ on the engine oil level viewer.

Condition

Outside temperature: ≥ 0 °C (≥ 32 °F)

Engine oil (SAE 10W/50) (📖 p. 243)

Condition

Outside temperature: < 0 °C (< 32 °F)

Engine oil (SAE 5W/40) (📖 p. 243)

Info

In order to achieve optimal engine performance, it is not advisable to mix different engine oils.
KTM recommends changing the engine oil.

– Mount the screw plug.

Danger

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

– Always make sure there is sufficient ventilation when running the engine.
– Use an effective exhaust extraction system when starting or running the engine in an enclosed space.

– Start the engine and check that it is oil-tight.

Finishing work

– Check the engine oil level. (📖 p. 213)

20 CLEANING, CARE

20.1 Cleaning motorcycle

Note

Material damage Components become damaged or destroyed if a pressure cleaner is used incorrectly.

The high pressure forces water into the electrical components, connectors, throttle cables, and bearings, etc.
Pressure which is too high causes malfunctions and destroys components.

– Do not direct the water jet directly on to electrical components, connectors, throttle cables or bearings.
– Maintain a minimum distance between the nozzle of the pressure cleaner and the component.

Minimum clearance	60 cm (23.6 in)

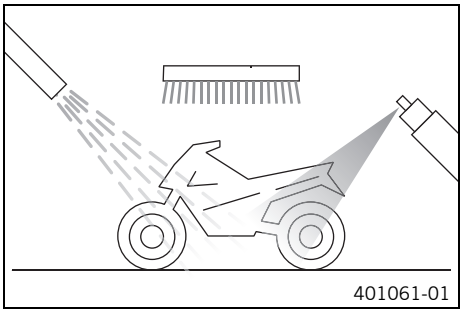
Warning

Environmental hazard Hazardous substances cause environmental damage.

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

Info

If you clean the motorcycle regularly, its value and appearance will be maintained over a long period.
Avoid direct sunshine on the motorcycle during cleaning.


401061-01

– Close off the exhaust system to keep water from entering.
– First remove coarse dirt particles with a gentle spray of water.
– Spray very dirty areas with a normal motorcycle cleaner and then clean with a brush.

Motorcycle cleaner (📖 p. 245)

Info

Use warm water containing normal motorcycle cleaner and a soft sponge.
Never apply motorcycle cleaner to a dry vehicle; always rinse the vehicle with water first.
If the vehicle was operated in road salt, clean it with cold water. Warm water would enhance the corrosive effects of salt.

– After rinsing the motorcycle with a gentle spray of water, allow it to dry thoroughly.
– Remove the closure of 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 linings and the brake discs.

– After cleaning, ride the vehicle a short distance until the engine warms up.

Info

The heat produced causes water at inaccessible locations in the engine and on the brake system to evaporate.

– Push back the protection caps of the handlebar controls to allow any water that has penetrated to evaporate.
– After the motorcycle has cooled off, lubricate all moving parts and bearings.
– Clean the chain. (📖 p. 114)

– Treat bare metal parts (except for brake discs and exhaust system) with corrosion inhibitor.

Preserving materials for paints, metal and rubber (📖 p. 246)

– Treat the painted parts with a mild paint polish.

Perfect Finish and high gloss polish for paints (📖 p. 246)

Info
Do not polish plastic parts that are matte when the vehicle is delivered as this would seriously impair the material quality.

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

Special cleaner for glossy and matte paint finishes, metal and plastic surfaces (📖 p. 246)

– Oil the ignition/steering lock, tank lock, and seat lock.

Universal oil spray (📖 p. 246)

20.2 Checks and maintenance steps for winter operation

Info
If you use the motorcycle in winter, you must expect salt on the roads. You should therefore take precautions against aggressive road salt.
If the vehicle was operated in road salt, clean it with cold water after riding. Warm water would enhance the corrosive effects of salt.


401060-01

– Clean the motorcycle. (📖 p. 221)
– Clean the brakes.

Info
After **EVERY** trip on salted roads, thoroughly wash the brake calipers and brake linings with cold water and dry carefully. This should be done after the parts are cooled down and while they are installed.
After riding on salted roads, thoroughly wash the motorcycle with cold water and dry it well.

– Treat the engine, the swingarm, and all other bare or galvanized parts (except brake discs) with a wax-based corrosion inhibitor.

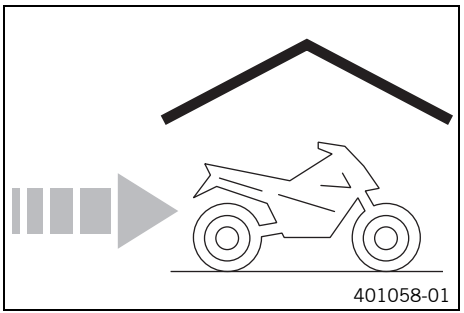
Info
Corrosion inhibitor must not come into contact with the brake discs. This would severely lower the braking effect.

– Clean the chain. (📖 p. 114)

21.1 Storage

Info

If you plan to garage the motorcycle for a longer period, perform the following steps or have them performed.
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 workshop overload). In this way, you can avoid long workshop waiting times at the start of the new season.



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

Fuel additive (📖 p. 245)

- Refuel. (📖 p. 99)
- Clean the motorcycle. (📖 p. 221)
- Change the engine oil and oil filter and clean the oil screens. 🔧 (📖 p. 214)
- Check the coolant fill level and antifreeze. 🔧
- Check the tire air pressure. (📖 p. 174)
- Remove the battery. 🔧 (📖 p. 177)

  Guideline

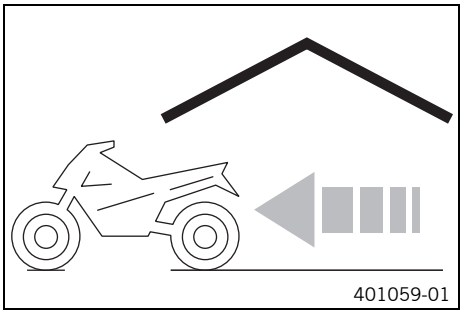
Storage temperature of battery without direct sunshine	0… 35 °C (32… 95 °F)

- Recharge the battery. 🔧 (📖 p. 181)
- Store the vehicle in a dry location that is not subject to large fluctuations in temperature.
- Raise the vehicle with the center stand. (📖 p. 108)
- Cover the vehicle with a tarp or similar cover that is permeable to air.

Info

Do not use non-porous materials since they prevent humidity from escaping, thus causing corrosion.
Avoid running the engine for a short time only. Since the engine cannot warm up properly, the water vapor produced during combustion condenses and causes valves and the exhaust system to rust.

21.2 Preparing for use after storage


401059-01

– Remove the vehicle from the center stand. (📖 p. 108)
– Install the battery. 🔧 (📖 p. 179)

Info

If the battery was removed, the time and date must be set.

– Perform checks and maintenance measures when preparing for use. (📖 p. 87)
– Take a test ride.

Faults	Possible cause	Action
Combination instrument shows nothing on the display	Fuse **1** blown	– Change the fuses in the fuse box. (📖 p. 187)
	Main fuse burned out	– Change the main fuse. (📖 p. 185)
	The battery is discharged	– Recharge the battery. 🔧 (📖 p. 181) – Check the open-circuit current. 🔧
	Ignition/steering lock is faulty	– Check the ignition/steering lock. 🔧
Engine does not crank when the electric starter button is pressed	Emergency OFF switch is off	– Press the emergency OFF switch to the position **ON** ○.
	Operating error	– Carry out the start procedure. (📖 p. 88)
	The battery is discharged	– Recharge the battery. 🔧 (📖 p. 181) – Check the open-circuit current. 🔧
	Safety start system is faulty	– Read out the fault memory using the KTM diagnostics tool. 🔧
	ICU is not enabled	– Activate the ICU. 🔧
	CAN bus communication error	– Read out the fault memory using the KTM diagnostics tool. 🔧
	Fault in EFI control unit.	– Read out the fault memory using the KTM diagnostics tool. 🔧
	Fault in MCU control unit.	– Read out the fault memory using the KTM diagnostics tool. 🔧
Engine turns only if the clutch lever is drawn	The vehicle is in gear	– Shift the transmission to idle N.
	Safety start system is faulty	– Read out the fault memory using the KTM diagnostics tool. 🔧
Engine turns although a gear is engaged	Safety start system is faulty	– Read out the fault memory using the KTM diagnostics tool. 🔧
Engine turns but does not start	The plug-in connection of the fuel hose connection is not connected	– Connect the plug-in connection of the fuel line.

Faults	Possible cause	Action
Engine turns but does not start	Fault in fuel injection system	– Read out the fault memory using the KTM diagnostics tool. 🔧
	Fuel quality is insufficient	– Add suitable fuel.
Engine dies during the trip	Lack of fuel	– Refuel. (📖 p. 99)
	Fault in fuel injection system	– Read out the fault memory using the KTM diagnostics tool. 🔧
The engine warning lamp lights up/flashes	Fault in fuel injection system	– Read out the fault memory using the KTM diagnostics tool. 🔧
The ABS warning lamp lights up	ABS fuse is blown	– Change the fuses in the fuse box. (📖 p. 187)
	Wheel speeds of front and rear wheels differ greatly	– Stop, switch off the ignition, start again.
	Malfunction in ABS	– Read out the fault memory using the KTM diagnostics tool. 🔧
High oil consumption	Engine oil level too high	– Check the engine oil level. (📖 p. 213)
	Engine oil too thin (low viscosity)	– Change the engine oil and oil filter and clean the oil screens. 🔧 (📖 p. 214)
The battery is discharged	A power consumer is connected to the socket/ACC1.	– Disconnect the power consumer from the socket/ACC1. – Recharge the battery. 🔧 (📖 p. 181)
	The hazard warning flasher is switched on	– Switch off the hazard warning flasher. – Recharge the battery. 🔧 (📖 p. 181)
	Battery is not charged by alternator	– Check the charging voltage. 🔧
	Ignition was not switched off when vehicle was parked	– Recharge the battery. 🔧 (📖 p. 181)

23 TECHNICAL DATA

23.1 Engine

Design	2-cylinder 4-stroke Otto engine, 75° V arrangement, water-cooled
Displacement	1,301 cm³ (79.39 cu in)
Stroke	71 mm (2.8 in)
Bore	108 mm (4.25 in)
Compression ratio	13.1:1
Idle speed	1,300... 1,500 rpm
Control	DOHC, 4 valves per cylinder, chain-driven
Valve - valve plate diameter	
Intake	42 mm (1.65 in)
Exhaust	34 mm (1.34 in)
Valve clearance	
Exhaust at: 20 °C (68 °F)	0.25... 0.30 mm (0.0098... 0.0118 in)
Intake at: 20 °C (68 °F)	0.10... 0.15 mm (0.0039... 0.0059 in)
Crankshaft bearing	Sleeve bearing
Conrod bearing	Sleeve bearing
Piston	Forged light alloy
Piston ring	1 upper compression (rectangular) ring, 1 lower compression ring, 1 oil scraper ring
Engine lubrication	Pressure circulation lubrication with three rotary pumps
Primary transmission	40:76
Clutch	Antihopping clutch in oil bath/hydraulically operated
Transmission	6-speed claw gears
Transmission ratio	

1st gear	12:35
2nd gear	15:32
3rd gear	18:30
4th gear	20:27
5th gear	24:27
6th gear	35:32
Mixture preparation	Electronically controlled fuel injection
Ignition system	Contactless controlled fully electronic ignition with digital ignition adjustment
Alternator	12 V, 450 W
Spark plug	
Inside spark plug	NGK LKAR9BI-10
Outside spark plug	NGK LMAR7DI-10
Electrode gap, spark plug	1.0 mm (0.039 in)
Cooling	Water cooling, permanent circulation of coolant by water pump
Cold start device	Electric starter

23.2 Engine tightening torques

Screw, damping plate	**EJOT ALtracs®** M6x14	10 Nm (7.4 lbf ft)	**Loctite® 243™**
Screw, retaining bracket, valve cover, rear	**EJOT ALtracs®** M6x10	10 Nm (7.4 lbf ft)	–
Hose clip, intake flange	M4	1.5 Nm (1.11 lbf ft)	–
Oil nozzle	M5	2 Nm (1.5 lbf ft)	**Loctite® 243™**
Remaining engine screws	M5	6 Nm (4.4 lbf ft)	–
Screw, bearing retainer	M5	6 Nm (4.4 lbf ft)	**Loctite® 243™**

Screw, bearing shells retaining bracket	M5	6 Nm (4.4 lbf ft)	**Loctite® 243™**
Screw, engine oil level viewer	M5	4 Nm (3 lbf ft)	–
Screw, gear sensor	M5	6 Nm (4.4 lbf ft)	**Loctite® 243™**
Screw, pulse generator	M5	6 Nm (4.4 lbf ft)	**Loctite® 243™**
Swing angle sensor screw	M5	5 Nm (3.7 lbf ft)	**Loctite® 243™**
Bleeder screw, water pump cover	M6	10 Nm (7.4 lbf ft)	–
Freewheel ring bolt	M6 – 10.9	15 Nm (11.1 lbf ft)	**Loctite® 648™**
Nut, cylinder head	M6	9 Nm (6.6 lbf ft)	–
Plug, vacuum connection	M6	5 Nm (3.7 lbf ft)	**Loctite® 243™**
Remaining engine screws	M6	10 Nm (7.4 lbf ft)	–
Screw, camshaft bearing support	M6 – 10.9	10 Nm (7.4 lbf ft)	–
Screw, clutch cover	M6	10 Nm (7.4 lbf ft)	–
Screw, clutch spring	M6	12 Nm (8.9 lbf ft)	–
Screw, coolant connection on cylinder head	M6	8 Nm (5.9 lbf ft)	**Loctite® 243™**
Screw, engine case	M6x60	10 Nm (7.4 lbf ft)	–
Screw, engine case	M6x80	10 Nm (7.4 lbf ft)	–
Screw, engine case	M6x90	10 Nm (7.4 lbf ft)	–
Screw, freewheel holder	M6	10 Nm (7.4 lbf ft)	**Loctite® 243™**
Screw, locking lever	M6	10 Nm (7.4 lbf ft)	**Loctite® 243™**
Screw, oil pump cover	M6	10 Nm (7.4 lbf ft)	**Loctite® 243™**
Screw, shift drum locating	M6	18 Nm (13.3 lbf ft)	**Loctite® 243™**
Screw, shift lever	M6	18 Nm (13.3 lbf ft)	**Loctite® 243™**
Screw, starter motor	M6	10 Nm (7.4 lbf ft)	–
Screw, stator	M6	10 Nm (7.4 lbf ft)	**Loctite® 243™**

Screw, valve cover	M6	10 Nm (7.4 lbf ft)	–
Screw, water pump cover	M6	10 Nm (7.4 lbf ft)	–
Screw, water pump wheel	M6	10 Nm (7.4 lbf ft)	**Loctite® 243™**
Stud, chain shaft	M6	8 Nm (5.9 lbf ft)	–
Vacuum connection	M6	5 Nm (3.7 lbf ft)	**Loctite® 243™**
Nozzle 100	M6x0.75	4 Nm (3 lbf ft)	**Loctite® 243™**
Plug, crankshaft retainer	M8	15 Nm (11.1 lbf ft)	–
Screw, camshaft bearing support	M8 – 10.9	Step 1 10 Nm (7.4 lbf ft) Step 2 18 Nm (13.3 lbf ft)	–
Screw, camshaft bearing support	M8 – 10.9	Step 1 8.5 Nm (6.27 lbf ft) Step 2 14.5 Nm (10.7 lbf ft)	Only applies when using: Hex key bit (61229025000)
Screw, engine case	M8	18 Nm (13.3 lbf ft)	–
Screw, timing chain guide rail	M8	15 Nm (11.1 lbf ft)	**Loctite® 243™**
Stud, exhaust flange	M8	10 Nm (7.4 lbf ft)	–
Timing chain tensioning rail screw	M8	15 Nm (11.1 lbf ft)	**Loctite® 243™**
Screw, engine bearer	M10	45 Nm (33.2 lbf ft)	–
Oil pressure sensor	M10x1	10 Nm (7.4 lbf ft)	–
Plug, cam lever axis	M10x1	15 Nm (11.1 lbf ft)	–
Plug, clutch lubrication	M10x1	10 Nm (7.4 lbf ft)	–
Screw plug, spreading transmission lock	M10x1	12 Nm (8.9 lbf ft)	–

Screw, conrod bearing	M10x1	Step 1 25 Nm (18.4 lbf ft) Step 2 30 Nm (22.1 lbf ft) Step 3 90°	–
Screw, timing chain tensioner release	M10x1	10 Nm (7.4 lbf ft)	–
Spark plug	M10x1	11 Nm (8.1 lbf ft)	–
Cylinder head screw	M11x1.5	Tightening sequence: Using a crisscross pattern Step 1 15 Nm (11.1 lbf ft) Step 2 30 Nm (22.1 lbf ft) Step 3 90° Step 4 90°	Lubricated with engine oil
Coolant temperature sensor	M12x1.5	12 Nm (8.9 lbf ft)	–
Rotor screw	M12x1.5	115 Nm (84.8 lbf ft)	–
Spark plug	M12x1.5	18 Nm (13.3 lbf ft)	–
Nut of engine sprocket	M20x1.5	100 Nm (73.8 lbf ft)	**Loctite® 243™**
Oil drain plug	M20x1.5	20 Nm (14.8 lbf ft)	–
Nut, inner clutch hub	M22x1.5	120 Nm (88.5 lbf ft)	**Loctite® 243™**
Plug, timing-chain tensioner	M24x1.5	25 Nm (18.4 lbf ft)	–
Screw in alternator cover	M24x1.5	8 Nm (5.9 lbf ft)	–
Nut, primary gear	M33LHx1.5	130 Nm (95.9 lbf ft)	**Loctite® 243™**

23.3 Capacities

23.3.1 Engine oil

Engine oil	3.60 l (3.8 qt.)	Outside temperature: ≥ 0 °C (≥ 32 °F)	Engine oil (SAE 10W/50) (📖 p. 243)
		Outside temperature: < 0 °C (< 32 °F)	Engine oil (SAE 5W/40) (📖 p. 243)

23.3.2 Coolant

Coolant	2.40 l (2.54 qt.)	Coolant (📖 p. 242)

23.3.3 Fuel

Fuel reserve, approx.	4 l (1.1 US gal)

Total fuel tank capacity, approx.	30 l (7.9 US gal)	Super unleaded (ROZ 95/RON 95/PON 91) (📖 p. 244)

23.4 Chassis

Frame	Lattice frame made of chrome molybdenum steel tubing, powder-coated
Fork	**WP Performance SystemsSemi-active Suspension**
Shock absorber	**WP Performance SystemsSemi-active Suspension**
Suspension travel	
Front	200 mm (7.87 in)
Rear	200 mm (7.87 in)
Brake system	

Front	Double disc brake with radially mounted four-pot brake calipers, floating brake discs
Rear	Single disc brake with dual-piston brake caliper, floating brake disc
Brake discs - diameter	
Front	320 mm (12.6 in)
Rear	267 mm (10.51 in)
Brake discs - wear limit	
Front	4 mm (0.16 in)
Rear	4.5 mm (0.177 in)
Tire air pressure, solo/with passenger/full payload	
Front: with cold tires	2.4 bar (35 psi)
Rear: with cold tires	2.9 bar (42 psi)
Secondary drive ratio	17:42
Chain	5/8 x 5/16” (525) X-ring
Steering head angle	64°
Wheelbase	1,560±15 mm (61.42±0.59 in)
Seat height, unloaded	860/875 mm (860/875 in)
Ground clearance, unloaded	220 mm (8.66 in)
Weight without fuel, approx.	229 kg (505 lb.)
Maximum permissible front axle load	175 kg (386 lb.)
Maximum permissible rear axle load	300 kg (661 lb.)
Maximum permissible total weight	462 kg (1,019 lb.)

23.5 Electrical system

Battery	YTZ14S	Battery voltage: 12 V Nominal capacity: 11.2 Ah maintenance-free
Fuse	58011109110	10 A
Fuse	58011109115	15 A
Fuse	58011109125	25 A
Fuse	58011109130	30 A
Low beam	H11/socket PGJ19-2	12 V 55 W
High beam	H11/socket PGJ19-2	12 V 55 W
Parking light	LED	
Cornering light	LED	
Instrument lights and indicator lamps	LED	
Turn signal	LED	
Tail light	LED	
Brake light	LED	
License plate lamp	LED	

23.6 Tires

Front tires	Rear tires
120/70 ZR 19 M/C 60W TL Pirelli SCORPION TRAIL II	**170/60 ZR 17 M/C 72W TL** Pirelli SCORPION TRAIL II
The tires specified represent one of the possible series production tires. Additional information is available in the Service section under: http://www.ktm.com	

23.7 Fork

Fork article number	14.18.1Q.26
Fork	**WP Performance SystemsSemi-active Suspension**
Spring length with preload spacer(s)	443 mm (17.44 in)
Spring rate	
Medium (standard)	12 N/mm (69 lb/in)
Fork length	885 mm (34.84 in)

Fork oil, fork leg, left	680 ml (22.99 fl. oz.)	Fork oil (SAE 4) (48601166S1) (📖 p. 244)
Fork oil, fork leg, right	430 ml (14.54 fl. oz.)	Fork oil (SAE 4) (48601166S1) (📖 p. 244)

23.8 Shock absorber

Shock absorber article number	01.18.1Q.26
Shock absorber	**WP Performance SystemsSemi-active Suspension**
Spring rate	
Medium (standard)	160 N/mm (914 lb/in)
Spring length	198.5 mm (7.815 in)

Static sag	25 mm (0.98 in)

23.9 Chassis tightening torques

Nut, passenger seat heating switch	PG21	2 Nm (1.5 lbf ft)	–
Nut, tire pressure sensor	ISO 10V2	12 Nm (8.9 lbf ft)	**Loctite® 2701™**
Screw, fixed grip handlebar	**EJOT Spiralform®** M4x6-K	2.7 Nm (1.99 lbf ft)	–
Screw, combination switch, left	M4	2 Nm (1.5 lbf ft)	–
Screw, side stand switch	M4	2 Nm (1.5 lbf ft)	–
Rear fairing screw	M5x12	3.5 Nm (2.58 lbf ft)	–
Rear fairing screw	M5x17	3.5 Nm (2.58 lbf ft)	–
Remaining screws for radiator	M5	3.5 Nm (2.58 lbf ft)	–
Remaining screws, chassis	M5	5 Nm (3.7 lbf ft)	–
Screw, brake line holder on frame	M5	2 Nm (1.5 lbf ft)	–
Screw, brake line holder on swingarm	M5	5 Nm (3.7 lbf ft)	–
Screw, cable channel	M5	5 Nm (3.7 lbf ft)	–
Screw, cable guide, wheel speed sensor, rear	M5	3 Nm (2.2 lbf ft)	–
Screw, chain sliding guard	M5	5 Nm (3.7 lbf ft)	–
Screw, combination switch, right	M5	3.5 Nm (2.58 lbf ft)	–
Screw, cover part	M5	3.5 Nm (2.58 lbf ft)	–
Screw, cross member for luggage support	M5	4 Nm (3 lbf ft)	–
Screw, filler cap	M5	3 Nm (2.2 lbf ft)	–
Screw, foot brake lever stub	M5	6 Nm (4.4 lbf ft)	**Loctite® 243™**
Screw, fuel level sensor	M5	3 Nm (2.2 lbf ft)	–

Screw, heat guard on main silencer	M5	4 Nm (3 lbf ft)	–
Screw, wind shield	M5	3.5 Nm (2.58 lbf ft)	–
Spoke nipple	M5	5 Nm (3.7 lbf ft)	–
Ground fitting on frame	M6	6 Nm (4.4 lbf ft)	–
Nut, ABS unit fixation	M6	8 Nm (5.9 lbf ft)	–
Remaining chassis nuts	M6	10 Nm (7.4 lbf ft)	–
Remaining chassis screws	M6	10 Nm (7.4 lbf ft)	–
Screw, acceleration sensor	M6	6 Nm (4.4 lbf ft)	–
Screw, angle sensor	M6	6 Nm (4.4 lbf ft)	**Loctite® 243™**
Screw, ball joint of push rod on foot brake cylinder	M6	10 Nm (7.4 lbf ft)	**Loctite® 243™**
Screw, battery terminal	M6	4.5 Nm (3.32 lbf ft)	–
Screw, cable channel	M6	5 Nm (3.7 lbf ft)	–
Screw, chain guide	M6	5 Nm (3.7 lbf ft)	–
Screw, clutch assembly	M6	5 Nm (3.7 lbf ft)	–
Screw, cooler retaining bracket	M6	7 Nm (5.2 lbf ft)	–
Screw, cover part	M6	6 Nm (4.4 lbf ft)	–
Screw, engine guard	M6	10 Nm (7.4 lbf ft)	–
Screw, exhaust clamp	M6	8 Nm (5.9 lbf ft)	–
Screw, foot brake cylinder	M6	10 Nm (7.4 lbf ft)	**Loctite® 243™**
Screw, front brake disc	M6	14 Nm (10.3 lbf ft)	**Loctite® 243™**
Screw, fuel pump	M6	6 Nm (4.4 lbf ft)	–
Screw, fuel tank	M6	10 Nm (7.4 lbf ft)	–
Screw, fuel tap	M6	6 Nm (4.4 lbf ft)	–
Screw, headlight	M6	5 Nm (3.7 lbf ft)	–

Screw, lower rear part	M6	6 Nm (4.4 lbf ft)	–
Screw, magnetic holder on side stand	M6	6 Nm (4.4 lbf ft)	**Loctite® 243™**
Screw, rear brake disc	M6	14 Nm (10.3 lbf ft)	**Loctite® 243™**
Screw, retaining bracket, angle sensor	M6	10 Nm (7.4 lbf ft)	–
Screw, voltage regulator	M6	6 Nm (4.4 lbf ft)	–
Screw, wheel speed sensor, front	M6	10 Nm (7.4 lbf ft)	–
Screw, wheel speed sensor, rear	M6	10 Nm (7.4 lbf ft)	–
Remaining chassis nuts	M8	25 Nm (18.4 lbf ft)	–
Remaining chassis screws	M8	25 Nm (18.4 lbf ft)	–
Screw, bottom triple clamp	M8	12 Nm (8.9 lbf ft)	–
Screw, exhaust clamp	M8	25 Nm (18.4 lbf ft)	–
Screw, foot brake lever	M8	25 Nm (18.4 lbf ft)	**Loctite® 243™**
Screw, fork stub	M8	15 Nm (11.1 lbf ft)	–
Screw, front footrest bracket	M8	25 Nm (18.4 lbf ft)	**Loctite® 243™**
Screw, handlebar clamp	M8	20 Nm (14.8 lbf ft)	–
Screw, ignition lock (tamper-proof screw)	M8	25 Nm (18.4 lbf ft)	**Loctite® 243™**
Screw, rail fitting	M8	20 Nm (14.8 lbf ft)	**Loctite® 243™**
Screw, rear footrest bracket	M8	25 Nm (18.4 lbf ft)	**Loctite® 243™**
Screw, steering damper	M8	25 Nm (18.4 lbf ft)	**Loctite® 243™**
Screw, steering damper clamp	M8	12 Nm (8.9 lbf ft)	–
Screw, steering stem	M8	20 Nm (14.8 lbf ft)	–
Screw, suitcase hook	M8	20 Nm (14.8 lbf ft)	**Loctite® 243™**
Screw, top triple clamp	M8	15 Nm (11.1 lbf ft)	–
Engine carrying screw	M10	45 Nm (33.2 lbf ft)	–

Remaining chassis nuts	M10	45 Nm (33.2 lbf ft)	–
Remaining chassis screws	M10	45 Nm (33.2 lbf ft)	–
Screw, front brake caliper	M10	45 Nm (33.2 lbf ft)	**Loctite® 243™**
Screw, handlebar support	M10	40 Nm (29.5 lbf ft)	**Loctite® 243™**
Screw, side stand	M10	35 Nm (25.8 lbf ft)	**Loctite® 243™**
Screw, side stand bracket	M10	45 Nm (33.2 lbf ft)	**Loctite® 243™**
Banjo bolt, brake line	M10x1	25 Nm (18.4 lbf ft)	–
Nut, rear sprocket screw	M10x1.25	50 Nm (36.9 lbf ft)	**Loctite® 243™**
Lambda sensor	M12x1.25	25 Nm (18.4 lbf ft)	–
Screw, bottom shock absorber	M14x1.5	80 Nm (59 lbf ft)	Thread greased
Screw, top shock absorber	M14x1.5	80 Nm (59 lbf ft)	Thread greased
Nut, socket	M18x1	4 Nm (3 lbf ft)	–
Nut, swingarm pivot	M19x1.5	130 Nm (95.9 lbf ft)	Thread greased
Screw, steering head, top	M22x1.5	18 Nm (13.3 lbf ft)	–
Nut, rear wheel spindle	M25x1.5	90 Nm (66.4 lbf ft)	Thread greased
Screw, front wheel spindle	M25x1.5	45 Nm (33.2 lbf ft)	Thread greased

Brake fluid DOT 4 / DOT 5.1

Standard/classification

– DOT

Guideline

– Use only brake fluid that complies with the specified standard (see specifications on the container) and that exhibits the corresponding properties.

Recommended supplier

Castrol

– **REACT PERFORMANCE DOT 4**

Motorex®

– **Brake Fluid DOT 5.1**

Coolant

Guideline

– Only use high-grade, silicate-free coolant with corrosion inhibitor additive for aluminum motors. Low grade and unsuitable antifreeze causes corrosion, deposits and frothing.

– Do not use pure water as only coolant is able to meet the requirements needed in terms of corrosion protection and lubrication properties.

– Only use coolant that complies with the requirements stated (see specifications on the container) and that has the relevant properties.

Antifreeze protection to at least	−25 °C (−13 °F)

The mixture ratio must be adjusted to the necessary antifreeze protection. Use distilled water if the coolant needs to be diluted.

The use of premixed coolant is recommended.

Observe the coolant manufacturer specifications for antifreeze protection, dilution and miscibility (compatibility) with other coolants.

Recommended supplier
Motorex®
– **COOLANT M3.0**

Engine oil (SAE 10W/50)

Standard/classification
– JASO T903 MA (📖 p. 247)
– SAE (📖 p. 247) (SAE 10W/50)

Guideline
– Use only engine oils that comply with the specified standards (see specifications on the container) and that possess the corresponding properties.

Fully synthetic engine oil

Recommended supplier
Motorex®
– **Power Synt 4T**

Engine oil (SAE 5W/40)

Standard/classification
– JASO T903 MA (📖 p. 247)
– SAE (📖 p. 247) (SAE 5W/40)

Guideline
– Use only engine oils that comply with the specified standards (see specifications on the container) and that possess the corresponding properties.

Synthetic engine oil

Recommended supplier
Motorex®
– **Power Synt 4T**

Fork oil (SAE 4) (48601166S1)

Standard/classification
– SAE (📖 p. 247) (SAE 4)

Guideline
– Use only oils that comply with the specified standards (see specifications on the container) and that exhibit the corresponding properties.

Super unleaded (ROZ 95/RON 95/PON 91)

Standard/classification
– DIN EN 228 (ROZ 95/RON 95/PON 91)

Guideline
– Only use unleaded super fuel that matches or is equivalent to the specified fuel grade.
– Fuel with an ethanol content of up to 10 % (E10 fuel) is safe to use.

Info
Do **not** use fuel containing methanol (e. g. M15, M85, M100) or more than 10 % ethanol (e. g. E15, E25, E85, E100).

Chain cleaner

Recommended supplier
Motorex®
– **Chain Clean**

Chain lube for road use

Guideline

Recommended supplier
Motorex®
– **Chainlube Road**

Fuel additive

Recommended supplier
Motorex®
– **Fuel Stabilizer**

Long-life grease

Recommended supplier
Motorex®
– **Bike Grease 2000**

Motorcycle cleaner

Recommended supplier
Motorex®
– **Moto Clean**

Perfect Finish and high gloss polish for paints

Recommended supplier
Motorex®
– **Moto Polish & Shine**

Preserving materials for paints, metal and rubber

Recommended supplier
Motorex®
– **Moto Protect**

Special cleaner for glossy and matte paint finishes, metal and plastic surfaces

Recommended supplier
Motorex®
– **Quick Cleaner**

Universal oil spray

Recommended supplier
Motorex®
– **Joker 440 Synthetic**

JASO T903 MA

Different technical development directions required a separate specification for 4-stroke motorcycles – the **JASO T903 MA** standard.
Earlier, engine oils from the automobile industry were used for 4-stroke motorcycles because there was no separate motorcycle specification.
Whereas long service intervals are demanded for automobile engines, the focus for motorcycle engines is on high performance at high engine speeds.
In most motorcycle engines, the transmission and the clutch are lubricated with the same oil.
The **JASO MA** standard meets these special requirements.

SAE

The SAE viscosity classes were defined by the Society of Automotive Engineers and are used for classifying oils according to their viscosity. The viscosity describes only one property of oil and says nothing about quality.

ABS	ABS	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
DRL	Daytime Running Light	Light, which enhances the visibility of the vehicle during the day but is not focused, and in contrast to low beam does not illuminate the road surface
HHC	Hill Hold Control	Assist, which prevents the vehicle from rolling backwards on an incline
MSR	Motor Slip Regulation	Auxiliary function of the motor control, which prevents rear wheel locking with excessive engine braking effect, by lightly opening the throttle valve
MSC	Motorcycle Stability Control	The is an auxiliary function for the ABS, which can prevent blocking and slipping of the wheels during braking on an inclined position, within the physical limitations
MTC	Motorcycle Traction Control	Auxiliary function of the motor control, which reduces engine torque with spinning rear wheel
TPMS	Tire Pressure Monitoring System	Safety system, which monitors tire air pressure, with the help of sensors in the tire, and displays it to the rider

28 LIST OF ABBREVIATIONS

Art. no.	Article number
ca.	circa
cf.	compare
e.g.	for example
etc.	et cetera
i.a.	inter alia
no.	number
poss.	possibly

29 LIST OF SYMBOLS

29.1 Red symbols

Red symbols indicate an error condition that requires immediate intervention.

	The immobilizer indicator lamp lights up or flashes red – Status or error message for immobilizer/alarm system.
	The oil pressure warning lamp lights up red – Engine oil pressure is too low.

29.2 Yellow and orange symbols

Yellow and orange symbols indicate an error condition that requires prompt intervention. Active driving aids are also represented by yellow or orange symbols.

	The general warning lamp lights up yellow – An operating safety (warning) message was detected. This is also shown on the matrix display.
	The engine warning lamp lights up/flashes yellow – The engine control unit has detected a fault.
	The ABS lamp lights up/flashes yellow – ABS is not active. The ABS lamp also lights up when a fault is detected.
	The TC lamp lights up/flashes yellow – The motorcycle traction control is not enabled or is currently intervening. The TC lamp also lights up when an error is detected. In addition, the TC lamp flashes if the **HHC** (optional) is active.
	The cruise control system lamp lights up yellow – The cruise control system function is switched on, but the speed control is not active.

29.3 Green and blue symbols

Green and blue symbols reflect information.

	The high beam indicator lamp lights up blue – The high beam is switched on.
	The left turn signal lamp flashes green simultaneously with the turn signal – The left turn signal is switched on.
	The idle indicator lamp lights up green – The transmission is shifted to neutral.
	The right turn signal lamp flashes green simultaneously with the turn signal – The right turn signal is switched on.
	The cruise control system lamp lights up green – The cruise control system function is switched on and the speed control is active.

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