

390 ADVENTURE X

ITEM NO.: 3240184EN





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

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

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

Vehicle identification number (p. 16)	Dealer stamp
Engine number [3] (p. 16)	

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

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ISO 9001

KTM applies quality assurance processes that lead to the highest possible product quality as defined in the ISO 9001 international quality management standard.





Issuing institution:

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This document is valid for:

390 ADVENTURE X EU (F5303YM, F5303YN)

390 ADVENTURE X B.D. RW (F5302YJ, F5302YK, F5302YJL, F5302YKL)

390 ADVENTURE X B.D. EU (F5303YJ, F5303YK)

390 ADVENTURE X B.D. UK (F5322YJ, F5322YK)

390 ADVENTURE X B.D. JP (F5386YJ, F5386YK)

390 ADVENTURE X AR (F5342YJ, F5342YK)

390 ADVENTURE X BR (F5340YJ, F5340YK)

390 ADVENTURE X TW (F5381YJ, F5381YK)

390 ADVENTURE X PH (F5382YK)

390 ADVENTURE X CO (F5341YJ, F5341YK)



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1.1 Conventions

1.1.1 Icons

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

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



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



Indicates a page reference.



Indicates information with more details.



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

- >> Indicates the result from a test step.
- Indicates the end of an activity, including any rework.

1.1.2 Formatting

Proprietary name Indicates a proprietary name.

Name ® Indicates a protected name.

Brand ™ Indicates a brand available on the open market.

<u>Underlined terms</u>

Refer to technical details of the vehicle or indicate technical terms that are

explained in the glossary.

1.1.3 Abbreviations

2-pc. two-part
Part no. Part number
or respectively
approx. circa
etc. et cetera

poss. possibly/possible if necessary if necessary cmpl. complete min. at least no. number no fig. no figure s. see

among others among others/not limited to

and the like and the like etc. et cetera cf. compare e.g. for example

2.1 Safety instructions

Function of the safety instruction

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

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

Safety instruction layout

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



DANGER

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



WARNING

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



CAUTION

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



NOTE

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



NOTE

Indicates a situation that can lead to environmental damage.

2.2 Ban on tampering

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

Tampering that is prohibited

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

Examples of prohibited tampering

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

2.3 Safe use



DANGER

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

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



DANGER

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

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



WARNING

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

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

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

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

Have malfunctions that impair safety promptly eliminated by an authorized KTM workshop.

Adhere to the information and warning labels on the vehicle.

2.4 Protective clothing



WARNING

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

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

2.5 Work rules

Unless specified otherwise, the ignition must be switched off during all work (models with ignition lock, models with transponder key) or the engine must be at a standstill (models without ignition lock or transponder key). Special tools are required for some work. The tools are not part of the vehicle, but can be ordered using the number in parentheses. Example: bearing puller (15112017000)

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

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

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

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

If thread lock (e.g. **Precote®**) has already been applied to a new part, do not apply any additional thread lock. After disassembly, clean the parts that are to be reused and check them for damage and wear. Replace damaged or worn parts.

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

2.6 Environment

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

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

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

2.7 Owner's manual

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



Tip

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

An authorized KTM dealer will be happy to assist you if you are unsure.

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

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

The owner's manual is also available for download from your authorized KTM dealer and on the KTM website. A physical copy can also be ordered from your authorized KTM dealer.

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

2.8 Usage definition

The vehicle is designed and constructed to withstand the usual demands of regular traffic and use on gentle terrain (unpaved roads). This vehicle is not suitable for use on race tracks.



Note

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

2.9 Improper use

The vehicle may only be used as intended.

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

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

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

3.1 Manufacturer's warranty, implied warranty

The work prescribed in the service schedule must be carried out in an authorized KTM workshop only and confirmed in the electronic proof of service, since otherwise no warranty claims will be recognized. Damage or secondary damage caused by tampering with and/or conversions on the vehicle are not covered by the manufacturer's warranty.

3.2 Auxiliary material, operating material

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

3.3 Spare parts, accessories

For safety reasons, only spare parts and accessories approved by KTM may be used. Installation must be carried out in 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. Authorized KTM dealers will be happy to help.

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

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

3.4 Service

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

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

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

The relevant mileage or time interval is whichever occurs first.

3.5 Figures

Some of the figures in this document contain optional extras.

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

3.6 Customer service

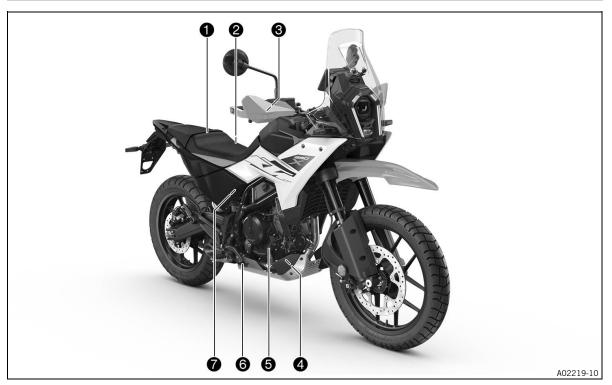
Authorized KTM dealers will be happy to answer questions about the vehicle and KTM.

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

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

4 View of the vehicle

4.1 View of vehicle, front left (example)



- 1 Passenger strap (p. 25)
- 2 Seat lock (p. 24)
- 3 Handbrake lever (p. 18)
- 4 Side stand (p. 26)

- **6** Level viewer, engine oil
- 6 Brake pedal (p. 26)
- 7 Shock absorber, spring preload setting

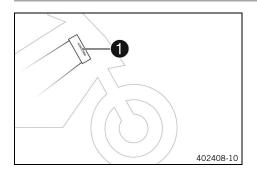
4.2 View of vehicle, rear right (example)



- 1 Fuel tank cap
- 2 Clutch lever (p. 18)
- 3 Light switch (p. 19)
- 3 Menu buttons (p. 20)
- 3 Turn signal switch (p. 20)

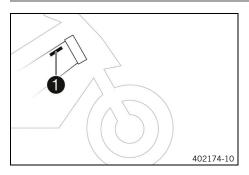
- 3 Hazard warning flasher switch (p. 19)
- **3** Horn button (p. 20)
- 4 Ignition and steering lock (p. 21)
- **6** Kill switch (p. 21)
- 6 Throttle grip (p. 18)

5.1 Vehicle identification number



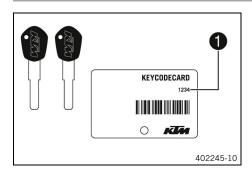
The vehicle identification number **1** is stamped on the right-hand side of the steering head.

5.2 Type approval label



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

5.3 Key number



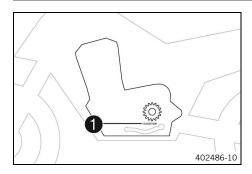
Key number **1** for the ignition and steering lock is indicated on the key card.



Note

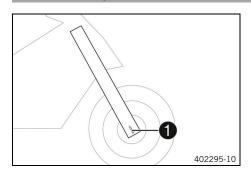
The key number is required to order a spare key and should therefore be kept in a safe place.

5.4 Engine number



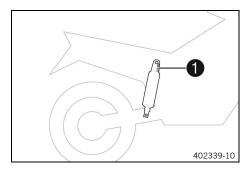
The engine number 1 is located on the left side of the engine under the engine sprocket.

5.5 Fork part number



Fork part number 1 is stamped on the inside of the fork shoe.

5.6 Shock absorber part number



The shock absorber part number **1** is stamped on the top of the shock absorber.

6.1 Clutch lever



Clutch lever 1 is fitted on the left side of the handlebar.

6.2 Handbrake lever



The front brake is engaged using the hand brake lever.

Hand brake lever 1 is fitted on the right side of the handlebar.

6.3 Throttle grip



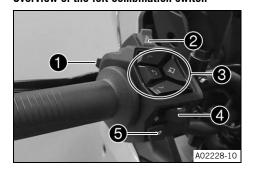
The throttle twist grip

is fitted on the right side of the handlebar

6.4 Switches on the left side of the handlebar

6.4.1 Combination switch

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

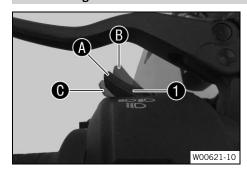


Light switch (p. 19)

8

- 2 Hazard warning flasher switch (p. 19)
 - Menu buttons 🗐 (p. 20)
- 4 Turn signal switch 🗐 (p. 20)
- **5** Horn button (p. 20)

6.4.2 Light switch



Light switch **1** is fitted on the left side of the handlebar.

Condition		Meaning
≣ D	Light switch in position A .	In this position, the low beam and the tail light are switched on.
■ D	Light switch in position B .	In this position, the high beam and the tail light are switched on.
≣ O	Light switch in position 6 .	The headlight flasher is operated in this position. The light switch returns automatically to the position A after use.

6.4.3 Hazard warning flasher switch



The hazard warning flasher switch **1** is fitted on the top of the combination switch.

The hazard warning flasher is used to indicate emergency situations.



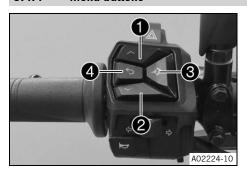
Note

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

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

Condition	Meaning
Hazard warning flasher switch 🛕 in the basic position	No function
Hazard warning flasher switch 🛕 is pressed	All four turn signals and the indicator lamp for the hazard warning flasher in the combination instrument flash.

6.4.4 Menu buttons



The menu buttons are fitted in the middle of the left combination switch.

The menu buttons are used to control the display on the combination instrument.

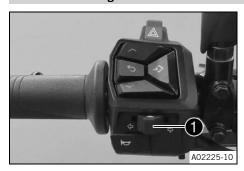
Button **1** is the **UP** button.

Button 2 is the **DOWN** button.

Button 3 is the SET button.

Button 4 is the BACK button.

6.4.5 Turn signal switch



Turn signal switch 1 is fitted on the left side of the handlebar.

Condition		Meaning
4	Turn sig- nal switch pressed to the left	Left turn signal on.
\Rightarrow	Turn sig- nal switch pressed to the right	Right turn signal on.



Note

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

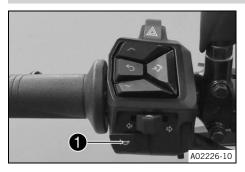
The ATIR function uses a time and distance counter.

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

If the vehicle is stationary, both counters are stopped.

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

6.4.6 Horn button



Horn button 1 is fitted on the left side of the handlebar.

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

6.5 Electric starter



Electric starter 1 is fitted on the right side of the handlebar.

Condition		Meaning
(3)	Electric starter (3) in the basic position	No function
(3)	Electric starter (3) pressed	In this position, the starter motor is actuated.

6.6 Kill switch



The emergency OFF switch 1 is fitted on the right side of the handlebar.

Condition		Meaning
\boxtimes	Emergency OFF switch off	In this position, the ignition circuit is interrupted, a running engine stops, and cannot be started. A message appears on the display.
\bigcirc	Emergency OFF switch on	This position is required for operation; the ignition circuit is closed.

6.7 Ignition and steering lock



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

Condition		Meaning
\boxtimes	Ignition off 0FF	In this position, the ignition circuit is interrupted, a running engine stops, and an engine at a standstill will not start. The ignition key can be removed.
\bigcirc	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 ignition key can be removed.

6.8 Locking the steering



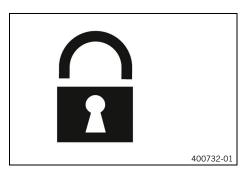
NOTE

Material damage The vehicle may be damaged if parked incorrectly.

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

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

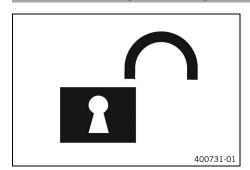
- Park the vehicle on a firm and level surface.
- Make sure that nobody sits on the vehicle when it is parked on a stand.



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

4

6.9 Unlocking the steering



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

6.10 USB socket



A USB socket **1** is located in the storage compartment for supplying power to external devices.

The USB socket is activated when the ignition is switched on.

USB socket	
Voltage	5 V
Maximum current consumption	2.1 A

6.11 Opening the fuel tank cap



DANGER

Fire hazard Fuel is highly flammable.

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

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



WARNING

Danger of poisoning Fuel is harmful to health.

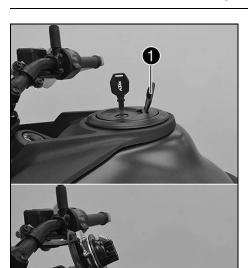
- Do not allow fuel to come into contact with skin, eyes, or clothing.
- Consult a doctor immediately if fuel has been ingested.
- Do not inhale fuel vapors.
- Rinse the affected area immediately with plenty of water in the event of contact with skin.
- Rinse eyes thoroughly with water and consult a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



NOTE

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

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



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



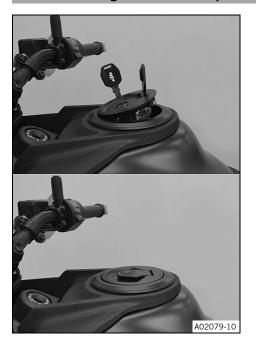
NOTE

Danger of damage The ignition key may break if overloaded.

- Push down on the fuel tank filler cap to take pressure off the ignition key.
- Turn the ignition key 90° clockwise.
- Lift the fuel tank filler cap.



6.12 Closing the fuel tank cap





WARNING

Fire hazard Fuel is highly flammable and a health hazard.

- Check that the fuel tank filler cap is locked correctly after closing.
- If fuel spills on to your clothing, change the clothing.
- Rinse the affected area immediately with plenty of water in the event of contact with skin.
- Fold down the fuel tank filler cap.
- Turn the ignition key 90° clockwise.
- Push down the fuel tank filler cap and turn the ignition key counterclockwise until the fuel tank filler cap lock engages.
- Remove the ignition key and close the cover.

4

6.13 Seat lock



The seat lock 1 is located to the left of the seat.

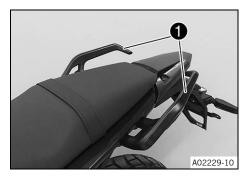
The seat lock can be unlocked using the ignition key.

6.14 On-board tool kit



Tool set 1 is located under seat.

6.15 Grab handles



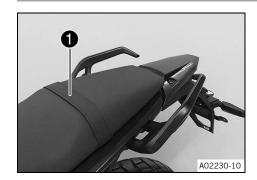
The grab handles **1** are used for moving the motorcycle around.



Note

The passenger can hold onto the grab handles **1** during the trip.

6.16 Passenger strap



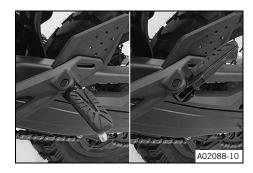
Passenger strap 1 is mounted on the seat.



Note

The passenger can hold onto the supporting strap $\ensuremath{ \bullet }$ during the trip.

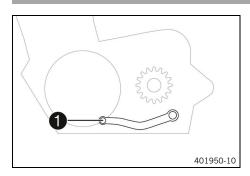
6.17 Passenger footpegs



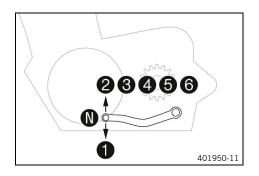
The passenger foot pegs can be folded up and down.

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

6.18 Gear shift lever



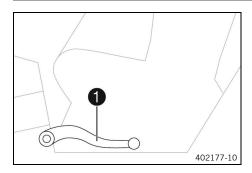
Gear shift lever 1 is mounted on the left of the engine.



The gear positions can be seen in the figure.

The neutral or idle position is between the first and second gears.

6.19 Brake pedal

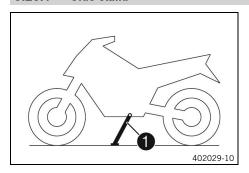


The rear brake is operated with the brake pedal.

Brake pedal 1 is located in front of the right footpeg.

6.20 Side stand

6.20.1 Side stand



The side stand **1** is located on the left of the vehicle. The side stand is used for parking the motorcycle.



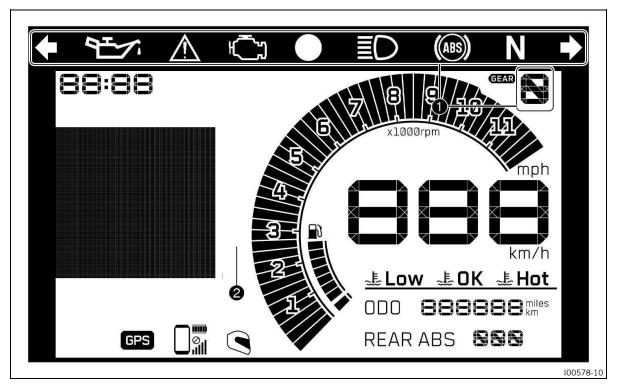
Note

The side stand must be folded up during use. $\,$

The side stand is coupled with the safety starting system; follow the riding instructions.

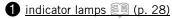
Condition	Meaning
Side stand folded out	The vehicle can be supported on the side stand. The safety starting system is active.
Side stand folded in	This position is mandatory when riding the motorcycle. The safety starting system is inactive.

7.1 Dashboard



The combination instrument is attached in front of the handlebar.

The combination instrument is divided into two function areas.



Display 2



CAUTION

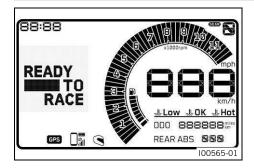
Danger of burns Parts of the combination instrument become hot in certain situations.

The display in particular can heat up considerably at ambient temperatures above 55 °C (131 °F) during long periods of inactivity, e.g. at traffic lights, or in direct sunlight.

- Do not touch the combination instrument with bare hands in the situations referred to.
- Where appropriate protective clothing.
- In the event of burns, rinse the area affected immediately with lukewarm water.

7.2 activation and testing

7.2.1 Activation



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



Note

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

7.2.2 Test

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



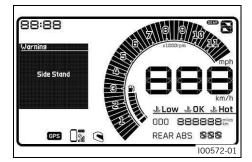
Note

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

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

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

7.3 warnings



Warnings appear on the left-hand side of the display.

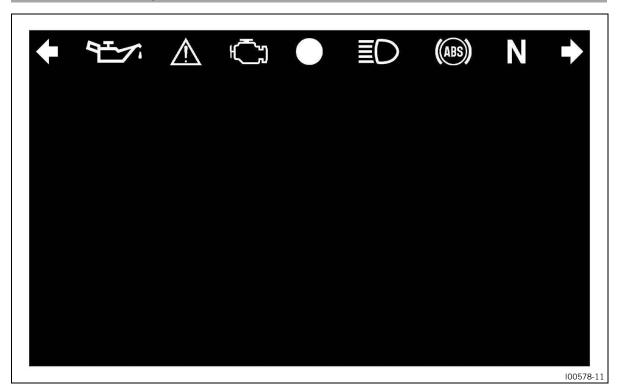


Note

Warnings can be hidden by pressing any button.

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

7.4 indicator lamps



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



Note

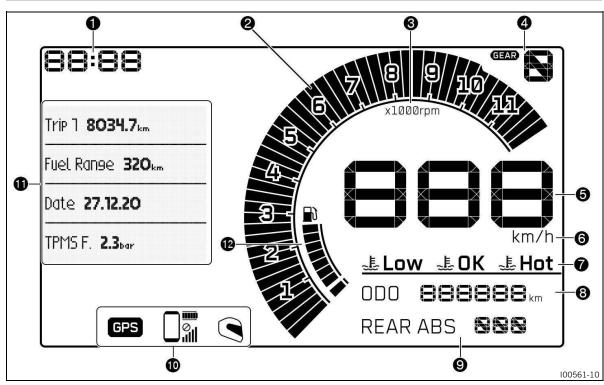
The malfunction indicator lamp always lights up as long as the engine is not running. If the engine is running and the malfunction indicator lamp lights up, stop (taking care not to endanger yourself or other road users in the process) and contact an authorized KTM workshop.

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

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

Condition		Meaning
* *	The turn signal indicator light flashes green with a steady blinking interval	The turn signal is switched on.
4	The malfunction indicator light lights up yellow	The OBD has detected a malfunction in the vehicle electronics. Come safely to a halt, and contact an authorized KTM workshop.
(ABS)	ABS warning light lights up yellow	Status or error messages relating to ABS .
N	The idle indicator lamp lights up green	The transmission is in the neutral position.
45	The oil pressure warning light lights up red	The oil pressure is too low. Stop immediately, taking care not to endanger yourself or other road users in the process, and switch off the engine.
	Shift Light lights up/flashes red	Signals that a gear change is necessary.
	The high beam indicator lamp lights up blue	The high beam is switched on.
\triangle	General warning light lights up yellow	A note/warning note on operating safety has been detected. This is also shown in the display.

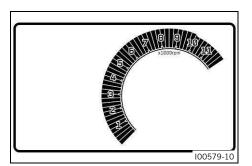
7.5 display



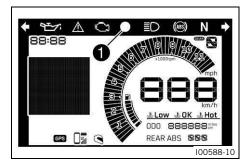
- 1 time (p. 31)
- 2 speed (p. 30)
- 3 Unit for the engine speed display
- 4 Gear display
- 5 speed display (p. 31)
- 6 Unit of speed

- coolant temperature indicator (p. 32)
- 8 Odometer
- **9 ABS** display (p. 32)
- Connected devices
- Favorites display (p. 33)
- fuel level display (p. 33)

7.6 speed



The engine speed is displayed in revolutions per minute.



LED **1** is used as a shift warning light.

i

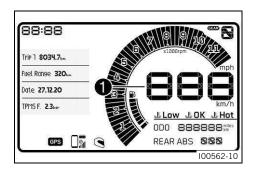
Note

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

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

Coolant temperature	> 35 °C (> 95.0 °F)
	(> 95.0 °F)
ODO .	> 1,000 km (> 621.4 mi)
	(> 621.4 mi)
RPM1 shift warning light	flashes
RPM2 shift warning light	Lights up continuously

7.8 speed display

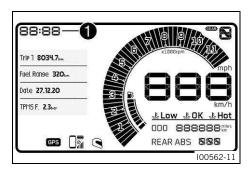


The speed is shown in area 1 of the display.

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

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

7.9 time



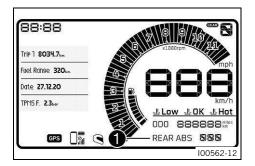
The time is shown in area **1** of the display.



Note

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

7.10 ABS display



The ABS mode setting is shown in the **1** area of the display. ABS can be configured separately in the **ABS** submenu.

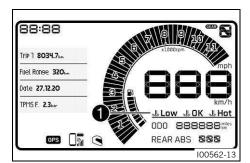


Note

When the ABS mode \boldsymbol{Road} is active, ABS controls both wheels.

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

7.11 coolant temperature indicator



The coolant temperature is displayed by a symbol ①. The symbol changes between **LOW**, **OK** and **HOT** depending on the temperature.



NOTE

Engine failure Overheating damages the engine.

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



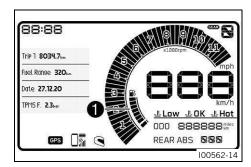
Note

If the coolant temperature gage is showing **① HOT**, the indicator also starts to flash.

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

Condition	Meaning
The engine is cold	The coolant temperature indicator shows LOW.
Engine warm	The coolant temperature indicator shows 0K .
Engine hot	The coolant temperature indicator shows HOT .

7.12 fuel level display



Fuel level display **1** consists of a bar. The higher the bar is filled, the more fuel there is in the fuel tank.



Note

If the fuel level is getting low, the last segment flashes and the ${f LOW}$ ${f FUEL}$ warning also appears.

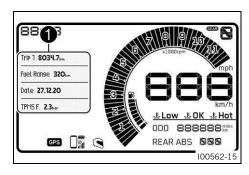
The fuel level is displayed with a slight delay to prevent the indicator from constantly moving while riding.

Fuel level display **1** is not updated while the side stand is folded out or the emergency OFF switch is switched off.

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

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

7.13 Favorites display



Up to four items of information are displayed in the **Favorites** display ①.

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

7.14 Quick Selector 1 display

When the menu is closed, the **Quick Selector 1** display is opened by pressing the **UP** button. Press the **BACK** button to close the **Quick Selector 1** display.



Note

The **Quick Selector 1** display can be configured in the **Settings** menu under **Quick Selector 1**. Any information can be selected.

7.15 Quick Selector 2 display

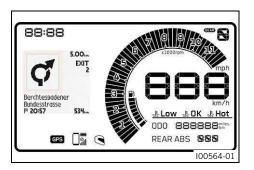
When the menu is closed, the **Quick Selector 2** display is opened by pressing the **DOWN** button. Press the **BACK** button to close the **Quick Selector 2** display.



Note

The **Quick Selector 2** display can be configured in the **Settings** menu under **Quick Selector 2**. Any information can be selected.

7.16 Navigation display (optional)



The **Navigation** indicator (optional) appears when the navigation function is activated.

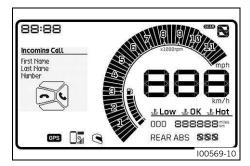
In the **Navigation** display (optional), the direction arrow, the distance from the destination, the estimated arrival time of the cell phone, the distance to the next waypoint, and the street name are displayed.

The **Navigation** display (optional) can be switched on or off in menu **Navigation** (optional).

Conditions for use:

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

7.17 Call display





WARNING

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

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

The **Call** indicator appears for incoming or active calls.

Press the **SET** button to accept an incoming call.

Press the **BACK** button to reject an incoming call.

Press the **UP** button to increase the audio volume.

Press the **DOWN** button to reduce the audio volume.



Note

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

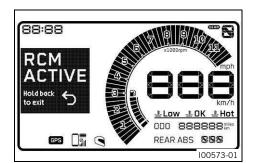
The call duration and contact are displayed. Depending on the cell phone settings, the contact is shown by name.

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

Condition for use:

• The dashboard is connected to a suitable cell phone.

7.18 Remote Control Mode (optional)



The **Remote Control Mode** indicator (optional) appears when **Remote Control Mode** is activated.

Pressing the **BACK** button for approx. 3 seconds activates the **Remote Control Mode** (optional).

Pressing the **BACK** button for approx. 3 seconds exits the **Remote Control Mode** (optional).

If **Remote Control Mode** (optional) is activated, you can navigate using the combination switch in the app on a cell phone.



Note

In $\mbox{\bf Remote Control Mode}$ (optional), you can only navigate within the app.

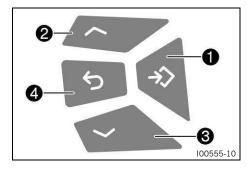
If **Remote Control Mode** (optional) is active, you cannot navigate in the combination instrument.

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

Conditions for use:

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

7.19 Menu





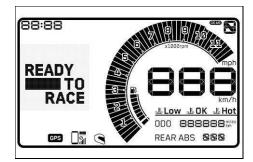
Note

Press the **SET** button **1** on the start screen to open the menu.

Navigate through the menu using the **UP** button **2** or the **DOWN** button **3**.

By pressing the **BACK** button **4**, the menu structure jumps one step back, or the menu is closed.

7.19.1 ABS



- Press the SET button when the menu is closed.
- Press the **UP** or **DOWN** button until **ABS** is highlighted. Press the **SET** button to open the menu.
- Activate the menu item using the UP or DOWN button.



WARNING

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

The ABS modes are each only suitable for certain conditions.

- Always select an ABS mode that suits the ground and the riding situation.
- Press the **SET** button to select the desired ABS mode.

Do not open the throttle during the selection.

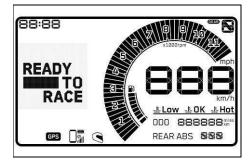


Note

The ABS mode can be switched during the journey. When the ABS mode **Road** is active, ABS controls both wheels

When the **Offroad** ABS mode is active, ABS only controls the front wheel. The rear wheel is no longer controlled by ABS and may lock during braking maneuvers.

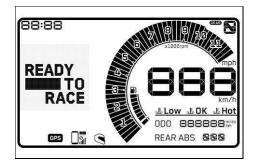
7.19.2 Bike info



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

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

7.19.3 Bike info



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

Engine Temperature displays the coolant temperature.

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

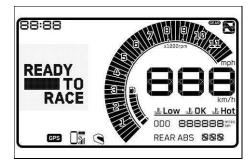
Battery displays the battery voltage.

Odometer displays the total mileage.

Service displays when the next service is due.

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

7.19.4 Warning



Condition: Message or warning is present

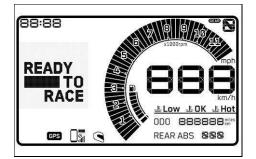
- Press the **SET** button when the menu is closed.
- Press the UP or DOWN button until Bike Info is highlighted.
 Pressing the SET button opens the menu.
- Press the **UP** or **DOWN** button until **Warning** is highlighted.
 Press the **SET** button to open the submenu.
- Use the UP or DOWN button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



Note

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

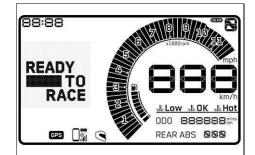
7.19.5 Trip info



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

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

7.19.6 Trip 1



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

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



Note

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

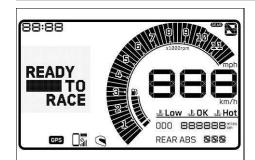
Trip Time shows the riding time on the basis of **Trip** and runs as soon as a speed signal is received.

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

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

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

7.19.7 Trip 2



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

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



Note

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

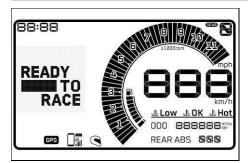
Trip Time shows the riding time on the basis of **Trip** and runs as soon as a speed signal is received.

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

 $\ensuremath{\mbox{\sc gSpeed}}$ indicates the average speed based on $\ensuremath{\mbox{Trip}}$ and $\ensuremath{\mbox{Trip}}$ Time.

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

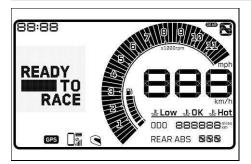
7.19.8 Navigation (optional)



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

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

7.19.9 Volume (optional)



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

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

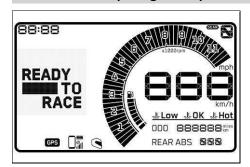


WARNING

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

- Always select headphone volume which is low enough for you to still clearly hear acoustic signals.
- Press UP or DOWN button until Volume is highlighted. Press the SET button to open the submenu.
- Press the **UP** button to increase the volume of the activated voice navigation.
- Press the **DOWN** button to reduce the volume of the activated voice navigation.

7.19.10 start/stop navigation (optional)



Condition: Function **Bluetooth®** activated, The **KTMconnect** app (optional) is installed and opened on a suitable cell phone (Android devices from version 7.0, iOS devices from version 14), The dashboard is connected to a suitable cell phone

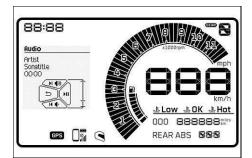
- Press the SET button when the menu is closed.
- Press the UP or DOWN button until Navigation is marked. Pressing the SET button opens the menu.
- Press the UP or DOWN button until Start/Stop Navigation is marked. Press the SET button to confirm the selection.
- Press the SET button to switch the visual navigation on or off.

Note

Voice navigation remains switched on if it has been activated.

The volume of the activated voice navigation is identical to the volume of the audio player on the cell phone. If the volume on the cell phone is changed, the volume of the activated voice navigation also changes.

7.19.11 Audio



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

Press the SET button when the menu is closed.



WARNING

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

- Always select headphone volume which is low enough for you to still clearly hear acoustic signals.
- Press the UP or DOWN button until Audio is highlighted.
 Press SET button to open the menu.
- Press and hold **UP** button to increase the audio volume.
- Press and hold **DOWN** button to reduce the audio volume.
- Press **UP** button briefly to change to the next audio track.
- Briefly pressing the **DOWN** button once or twice replays the current audio track from the start or changes to the previous audio track, depending on the cell phone.
- Press **SET** button to play or pause the audio track.

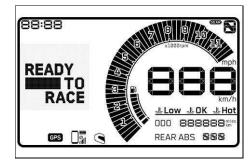


Note

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

The audio function can be added to **Quick Selector 1** or **Quick Selector 2** for easier operation.

7.19.12 Settings

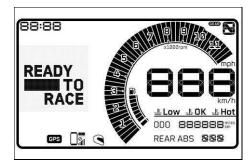


Condition: Motorcycle is stationary

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

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

7.19.13 favorites

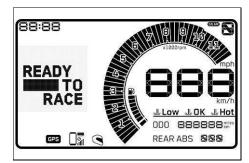


Condition: Motorcycle is stationary

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

Up to four sets of information can be selected in the ${\bf Favorites}$ menu.

7.19.14 Quick Selector 1



Condition: Motorcycle is stationary

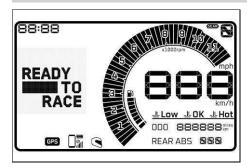
- Press the **SET** button when the menu is closed.
- Press the UP or DOWN button until Settings is highlighted.
- Press the SET button to open the menu.
- Press the UP or DOWN button until Quick Selector 1 is highlighted. Press the SET button to open the submenu.
- Activate the menu item using the UP or DOWN button.
- Press the SET button to set a direct selection submenu for Quick Selector 1.



Note

When the menu is closed, the submenu defined in **UP** is opened by pressing the **Quick Selector 1** button.

7.19.15 Quick selector 2



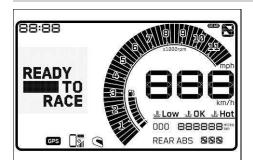
Condition: Motorcycle is stationary

- Press the SET button when the menu is closed.
- Press the UP or DOWN button until Settings is highlighted.
- Press the SET button to open the menu.
- Press the UP or DOWN button until Quick Selector 2 is high-lighted. Press the SET button to open the submenu.
- Activate the menu item using the UP or DOWN button.
- Press the SET button to set a direct selection submenu for Quick Selector 2.



Note

When the menu is closed, the submenu defined in **DOWN** is opened by pressing the **Quick Selector 2** button.



Condition: Motorcycle is stationary, Function Bluetooth® activated

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

In menu **Connectivity**, an appropriate cell phone or communication system can be paired with the dashboard via **Bluetooth®** and the audio function and navigation function can be configured.

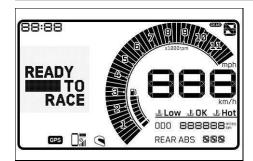


Note

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

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

7.19.17 Bluetooth



Condition: Motorcycle is stationary

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

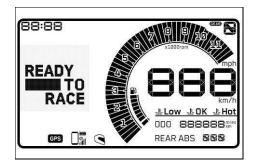


Note

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

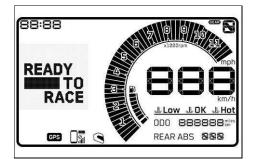
Not every cell phone and communication system is suitable for pairing with the dashboard.

7.19.18 pairing a phone



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

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





Note

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

- Press the UP or DOWN button until New Pairing is marked.
 Press the SET button to open the submenu.
- The vehicle starts the search for a suitable cell phone. If the search is successful, the name of the cell phone is displayed again in the pairing menu. Press the SET button to start the pairing.



Note

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

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

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



Note

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

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

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

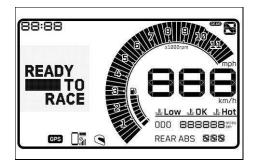


Note

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

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

7.19.19 headset pairing



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

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



Note

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

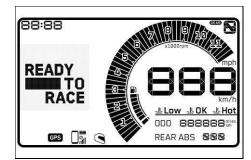
Press the **UP** or **DOWN** button until **Delete Pairing** is highlighted. The paired device can be deleted by pressing the **SET** button.

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

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

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

7.19.20 Type of audio device



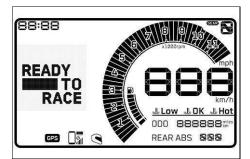
Condition: Motorcycle is stationary

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

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

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

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

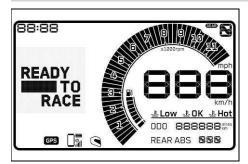




Note

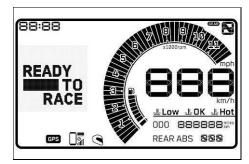
The **Riders Headset** menu item is only available in **Headset Type Bluetooth**.

7.19.21 QUICKSHIFTER+ (optional)



- Press the SET button when the menu is closed.
- Press the UP or DOWN button until Settings is highlighted.
 Pressing the SET button opens the menu.
- Press the **UP** or **DOWN** button until **QUICKSHIFTER+** (optional) is highlighted. Press the **SET** button to open the submenu.
- Press the UP or DOWN button to activate or deactivate QUICK-SHIFTER+ (optional).

7.19.22 Shift Light

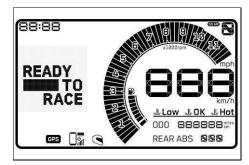


Condition: Motorcycle is stationary, **QDO** > 1,000 km (621 miles)

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

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

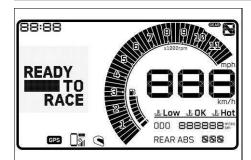
7.19.23 Shift light state



Condition: Motorcycle is stationary, **0D0** > 1,000 km (621 miles)

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

7.19.24 RPM1



Condition: Motorcycle is stationary, **0D0** > 1,000 km (621 miles)

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

RPM1 must not be larger than RPM2.

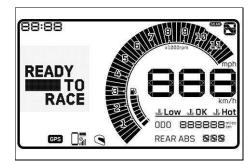


Note

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

If the engine speed reaches the set value RPM1, the shift warning light flashes.

7.19.25 RPM2



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

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

RPM2 must not be smaller than RPM1.



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

If the engine speed reaches the set value RPM2, the shift warning light flashes and the color changes.

7.19.26 Setting the time and date

Condition: Motorcycle is stationary

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

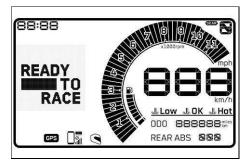
Setting the clock

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

Setting the date

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

7.19.27 Date format



Condition: Motorcycle is stationary

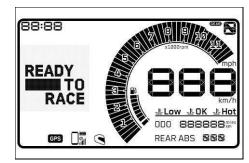
- Press the SET button when the menu is closed.
- Press the **UP** or **DOWN** button until **Settings** is highlighted.
 Press the **SET** button to open the menu.
- Press the UP or DOWN button until Clock & Date is highlighted.
 Press the SET button to open the submenu.
- Press the UP or DOWN button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



Note

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

7.19.28 Units

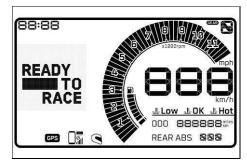


Condition: Motorcycle is stationary

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

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

7.19.29 Distance



Condition: Motorcycle is stationary

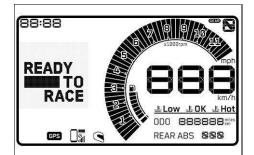
- Press the SET button when the menu is closed.
- Press the UP or DOWN button until Settings is highlighted.
 Press SET button to open the menu.
- Press the **UP** or **DOWN** button until **Units** is highlighted. Press the **SET** button to open the submenu.
- Press the **UP** or **DOWN** button until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



Note

Kilometers and miles can be set.

7.19.30 Temperature



Condition: Motorcycle is stationary

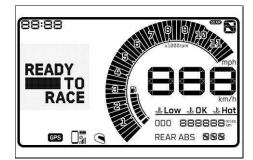
- Press the **SET** button when the menu is closed.
- Press the UP or DOWN button until Settings is highlighted.
 Press SET button to open the menu.
- Press the **UP** or **DOWN** button until **Units** is highlighted. Press the **SET** button to open the submenu.
- Press the **UP** or **DOWN** button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



Note

Celsius and Fahrenheit can be set.

7.19.31 Consumption



Condition: Motorcycle is stationary

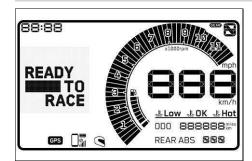
- Press the SET button when the menu is closed.
- Press the UP or DOWN button until Settings is highlighted.
 Press SET button to open the menu.
- Press the **UP** or **DOWN** button until **Units** is highlighted. Press the **SET** button to open the submenu.
- Press the UP or DOWN button until Consumption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



Note

The following can be set: I/100 km, km/l, USG/100 mi, mi/USG, malfunction indicator light, UKG/100 mi and mi/UKG.

7.19.32 Extra Functions



Condition: Motorcycle is stationary, Motorcycle with optional supplementary function

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

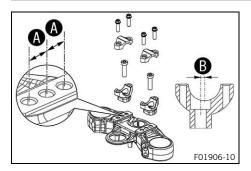


Note

The optional extra functions are listed.

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

8.1 Handlebar position



On the upper triple clamp, there are three holes at a distance of $\bf A$ to each other.

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

Hole distance (A)	15 mm (0.59 in)
Hole distance B	3.5 mm
	(0.138 in)

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

8.2 Adjusting the handlebar position

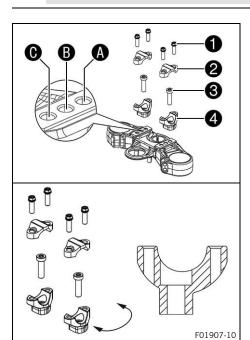


WARNING

Danger of accidents A repaired handlebar poses a safety risk.

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

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



- Remove **1** screws. Take off the handlebar clamps **2**. Position the handlebar so that screws **3** are accessible.

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

- Remove 3 screws. Take off handlebar supports 4.
- Move the handlebar supports into the desired position (B), (A) or (C). Mount and tighten screws (3).

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

Screw, handlebar mount	
M10	45 Nm
	(33.2 ft·lb _f)

Position the handlebar.

Make sure the cables and wiring are positioned correctly.

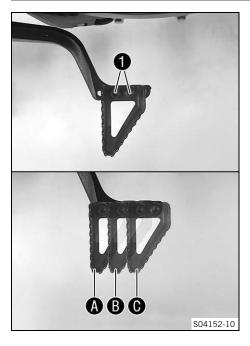
Position the handlebar clamp. Mount screws and tighten evenly.

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

 Position the handlebar clamp. Mount screws 1 and tighten evenly.

Handlebar clamp screw	
M8	20 Nm
	$(14.8 \text{ ft} \cdot \text{lb}_{\text{f}})$

8.3 Adjusting foot brake lever stub



- Remove screws 1 with the foot brake lever stub.
- Move the foot brake lever stub into desired position (A), (B) or (O). Mount and tighten screws (1).

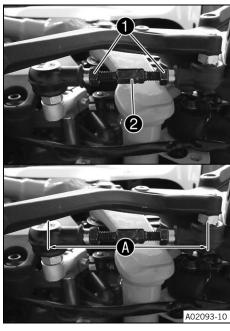
Remaining screws on chassis	
M5	5 Nm
	(3.7 ft⋅lb _f)

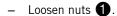
8.4 Adjusting the shift lever



Note

The adjustment range of the shift lever is limited.





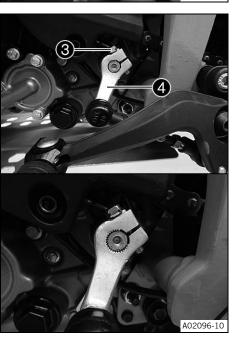
Adjust the shift lever by turning shift rod 2.

Shift rod adjustment range A	83 mm 85 mm
	(3.27 in 3.35 in)
Make equal adjustments on both sides.	

- Tighten nuts **1**.

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

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



- Loosen screw 3.
- Mount bell crank shift lever 4 on the shift shaft in the required position and engage the gearing.



Note

The basic position of the marking on the shift shaft and the shift bell crank is offset by two teeth.

- Tighten screw 3.

Screw, bell crank shift lever	
M6	16 Nm
	(11.8 ft·lb _f)

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

9.1 Notes on preparing for first use



DANGER

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

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



WARNING

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

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



WARNING

Danger of accidents New tires have reduced road grip.

The contact surface on new tires is not yet roughened.

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

Run-in distance	200 km
	(124.3 mi)



WARNING

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

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



WARNING

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

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



Note

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

- Ensure that the pre-sales inspection work has been carried out by an authorized KTM workshop.
 - ✓ The delivery certificate is transferred upon vehicle handover.
- Read the entire owner's manual before riding for the first time.
- Get to know the controls.
- Get used to the handling characteristics of the motorcycle on suitable terrain before undertaking a more challenging ride. Also, ride as slowly as possible to get a better feeling for the motorcycle.
- Hold the handlebar firmly with both hands and keep your feet on the footpegs when riding.
- Run in the engine. (p. 52)

9.2 Running in the engine

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

Maximum engine speed		
During the first: 1,000 km (621.4 mi)	7,500 rpm	
	(125.00 Hz)	
Avoid fully opening the throttle	·	

i

Note

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

9.3 Loading the vehicle



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 Items of luggage that have slipped or are incorrectly fastened can obscure the lighting system.

- Check that your luggage is fixed properly at regular intervals.
- Make sure that the lighting system is not covered by luggage.



WARNING

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

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

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



WARNING

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

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

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



WARNING

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

- Read the manufacturer information on maximum payload when mounting cases.
- If luggage is carried, ensure it is fixed firmly as close as possible to the center of the vehicle and ensure even weight distribution between the front and rear wheels.

The maximum permissible total weight and the maximum permissible axle loads must not be exceeded	
Maximum permissible total weight	375 kg (826.7 lb)
Maximum permissible front axle load	119.9 kg (264.33 lb)
Maximum permissible rear axle load	255.1 kg (562.40 lb)

•

9.4 Preparing the vehicle for difficult operating conditions



Note

Use of the vehicle under difficult conditions, such as on sand, dust or on wet and muddy roads/terrain, can result in significantly increased wear of components, such as the powertrain, brake system, or suspension components. For this reason, it may be necessary to inspect or replace parts before the next scheduled service interval.



Note

In dusty conditions, it may be necessary to check and replace the air filter more frequently, possibly even daily.

- Check the connector for humidity and corrosion and to ensure it is firmly seated.
 - » If moisture, corrosion, or damage is found:
 - Clean and dry the socket connector, or change it if necessary.

Difficult operating conditions are:

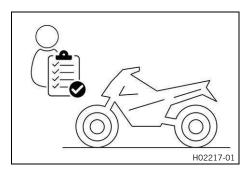
- Sand
- Dust
- Wet or muddy roads
- Temperatures above +40 °C
- Temperatures below -10 °C

10.1 Checks and maintenance measures when preparing for use



Note

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



- Check the engine oil level. (p. 118)
- Check the brake fluid level for the front brake.
 (p. 85)
- Check the brake fluid level for the rear brake. (p. 87)
- Check that the brake pads of the front brake are secured.
 (p. 86)
- Check that the brake pads of the rear brake are secured.
 (p. 89)
- Check that the brake system is functioning properly.
- Check the coolant level. (p. 112)
- Check the chain for dirt. (p. 70)
- Check the chain tension. (p. 71)
- Check the tire condition. (p. 96)
- Check the tire pressure. (p. 97)
- Check the settings of all controls and ensure that they can be operated smoothly.
- Check that the electrical equipment is functioning properly.
- Check that luggage is properly secured.
- Sit on the motorcycle and check the rear mirror setting.
- Check the fuel level.
- In dusty operating conditions: Check the air filter box and air filter.

10.2 Starting



DANGER

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

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



WARNING

Danger of accidents Electronic components and safety devices will be damaged if the 12-V battery is discharged or missing.

If the 12-V battery is discharged or defective, malfunctions in the vehicle electronics can occur, especially when starting.

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



NOTE

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

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

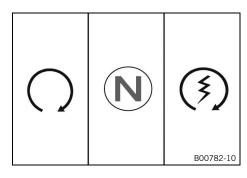
Only operate the vehicle if an air filter is correctly fitted.



NOTE

Engine failure Running a cold engine at high engine speeds negatively impacts the service life of the engine.

- Always warm up the engine at low engine speeds.



- Unlock steering. (p. 22)
- Sit on the vehicle, take the weight off of the side stand, and move it all the way up with your foot.
- Press the kill switch into position ().
- Switch on the ignition by turning the ignition key to position ().

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

- ✓ After you switch on the ignition, you can hear the fuel pump working for about two seconds. The function check of the combination instrument is run at the same time.
- Shift the transmission into the neutral position.
 - ✓ The green idle indicator lamp N lights up.
 - ✓ The ABS warning light lights up and goes out again after starting off.
- Briefly press start button (§).

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

Do not open the throttle to start.

If the starting attempt is unsuccessful, wait for 15 seconds before making another attempt at starting.

After 6 unsuccessful starting attempts, do not try again, and check the vehicle for other malfunctions instead.



Note

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

10.3 Starting off

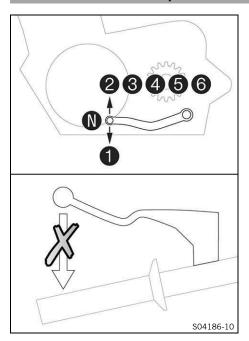
 Pull the clutch lever, shift into first gear, release the clutch lever slowly and at the same time carefully open the throttle.



Tip

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

10.4 Quickshifter+ (optional)



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

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

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

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

10.5 Shifting, riding



WARNING

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

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



WARNING

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

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



WARNING

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

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

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



WARNING

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

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



WARNING

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

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



WARNING

Danger of accidents Cold tires have reduced road grip.

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



WARNING

Danger of accidents New tires have reduced road grip.

The contact surface on new tires is not yet roughened.

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

Run-in distance	200 km
	(124.3 mi)



WARNING

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

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



WARNING

Danger of accidents An incorrect ignition key position causes malfunctions.

- Do not change the ignition key position while riding.



WARNING

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

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



NOTE

Engine failure Overheating damages the engine.

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



NOTE

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

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

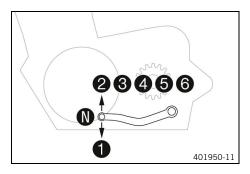
The QUICKSHIFTER+ is not active if you pull the clutch lever.

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



Note

If unusual noises occur while riding, stop immediately (taking care not to endanger yourself or other road users in the process), switch off the engine and contact an authorized KTM workshop.



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



Note

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

 After reaching maximum speed by fully opening the throttle twist grip, turn the throttle back so that it is ¾ open. This will

10 Riding instructions

- reduce the speed slightly, but the fuel consumption will be considerably lower.
- Accelerate only up to a speed suitable for the road surface and weather conditions. In particular, you should not change gear on bends and should only accelerate very cautiously.
- Brake if necessary and close the throttle at the same time in order to shift down.
- Pull clutch lever and shift into a lower gear, release the clutch lever slowly, and open the throttle or shift again.
- Switch off the engine if you are likely to be running at idle speed or stationary for a long time.
- If the engine stalls (e.g. at an intersection), just pull the clutch lever and press the start button. The transmission must not be shifted into neutral.
- If the oil pressure warning lamp lights up during a trip, stop as soon as it is safe to do so and switch off the engine. Contact an authorized KTM workshop.
- If theoil pressure warning light comes on while riding, contact an authorized KTM workshop as soon as possible.
- If the general warning lamp lights up during a trip, an operating safety (warning) message was detected.



Note

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

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

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



Note

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

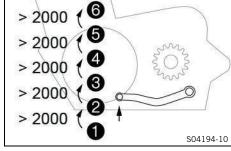
 If the QUICKSHIFTER+ (optional) is activated in the dashboard, you can shift down in the rev range indicated without pulling the clutch lever.

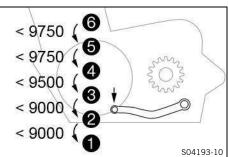
Press the shift lever to the stop quickly without changing the throttle twist grip position.



Note

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





10.6 Braking



WARNING

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

Do not drive the vehicle if the brake system has a spongy pressure point.



WARNING

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

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

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



WARNING

Danger of accidents Moisture and dirt impair the brake system.

- Brake carefully several times to dry out and remove dirt from the brake pads and the brake discs.



WARNING

Danger of accidents Salt on the roads impairs the brake system.

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



WARNING

Danger of accidents Higher total weight increases the stopping distance.

Take the longer stopping distance into account when carrying a passenger or luggage with you.



WARNING

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

- Adapt your braking to the riding situation and the road conditions.
- When braking, release the throttle and apply the front and rear brakes at the same time.



Note

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



WARNING

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

- Pull the clutch when performing emergency braking or braking on slippery surfaces.



WARNING

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

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

10.7 Stop, park



WARNING

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

- Never leave the vehicle unattended while the engine is running.
- Lock the steering and remove the ignition key if you leave the vehicle unattended.



WARNING

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

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



NOTE

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

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



NOTE

Material damage The vehicle may be damaged if parked incorrectly.

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

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

- Park the vehicle on a firm and level surface.
- Make sure that nobody sits on the vehicle when it is parked on a stand.
- Brake the motorcycle.
- Shift the transmission into the neutral position.
- Switch off the ignition by turning the ignition key to position
 \infty.



Note

If the engine is switched off with the emergency OFF switch and the ignition remains switched on in the ignition lock, the power supply to most electrical power consumers remains uninterrupted and this discharges the 12-V battery. You should therefore always switch off the engine with the ignition lock – the kill switch is intended for emergencies only.

- Park the motorcycle on a firm surface.
- Swing side stand forward with your foot as far as it will go and lean the vehicle on it.
- Lock the steering. (p. 22)

10.8 Transport



NOTE

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

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



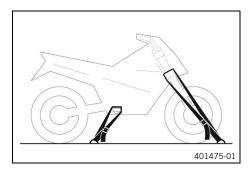
NOTE

Material damage The vehicle may be damaged if parked incorrectly.

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

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

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



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

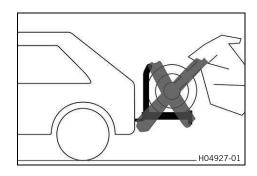
10.9 Towing in the event of a breakdown



NOTE

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

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



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

10.10 Refueling



DANGER

Fire hazard Fuel is highly flammable.

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

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



WARNING

Danger of poisoning Fuel is harmful to health.

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

10 Riding instructions



NOTE

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

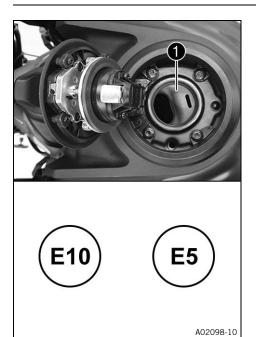
Refuel only with clean fuel that meets the specified standards.



NOTE

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

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



- Switch off the engine.
- Open the fuel tank cap. (p. 23)
- Fill the fuel tank with fuel up to the lower edge of the filler neck.

Total fuel tank capacity, appro	X.
Super unleaded (ROZ 95)	14
(p. 146)	(3.7 liq. gal _{US})

Close the fuel tank cap. (p. 24)

11.1 Service work

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

* In dusty operating conditions: Check the air filter regularly and replace if necessary.

	Every 48 months						
	Every 24 months						
	Every 12 months						
Every 20,000 km (12,4	27.4	mi)				
Every 10,000 km (6,2		mi)					
After 1,000 km (621.4	mi)						
Read out the fault memory using the diagnostics tool.	0	•	•	•	•	•	
Program the shift shaft sensor.	0	•	•				
Check that the electrical equipment is functioning properly.	0	•	•	•	•	•	
Check that the brake pads of the front brake are secured. (p. 86)	0	•	•	•	•	•	
Check that the brake pads of the rear brake are secured. (p. 89)	0	•	•	•	•	•	
Check the brake discs. (p. 84)	0	•	•	•	•	•	
Check the brake lines for damage and tightness.	0	•	•	•	•	•	
Check the brake fluid level for the front brake. (p. 85)	0	•	•	•			
Change the brake fluid for the front brake.					•	•	
Check the brake fluid level for the rear brake. (p. 87)	0	•	•	•			
Change the brake fluid for the rear brake.					•	•	
Change the engine oil and the oil filter, clean the oil screens. 🔌 📖 (p. 118)	0	•	•	•	•	•	
Check all hoses (e.g. fuel, cooling, bleeder, drainage, etc.) and boots for cracking, leaks, and correct routing.	0	٠	•	•	•	•	
Empty the drainage hoses.	0	•	•	•	•	•	
Check the cables for damage and that there are no kinks in the routing.	0	•	•	•	•	•	
Check the frame.			•				
Check the swingarm.			•				
Check the swingarm bearing for play.		•	•				
Check the steering head bearing play.	0	•	•				
Check the wheel bearing for play.		•	•				
Check the shock absorber and fork for leaks.	0	•	•	•	•	•	
Check the tire condition. (p. 96)	0	•	•	•	•	•	
Check the tire pressure. (p. 97)	0	•	•	•	•	•	
Check the chain, rear sprocket, and engine sprocket. (p. 73)		•	•	•	•	•	
Check the chain tension. [2] (p. 71)	0	•	•	•	•	•	
Grease all moving parts (e.g. side stand, hand lever, chain, etc.) and check for smooth operation.	0	•	•	•	•	•	

11 Service schedule

	Every 48 months									
	Every 24 months									
	Every 12 months									
Every 20,000 km ((12,427.4 mi)									
Every 10,000 km (6,2	213.7 mi)									
After 1,000 km (621.4	(621.4 mi)									
Check that the clutch cables are undamaged, routed without kinks, and set correctly.	0	•	•	•	•	•				
Check the valve clearance.			•							
Change the air filter, clean the air filter box. *		•	•							
Check the headlight setting. (p. 107)	0	•	•							
Check the tightness of the safety-relevant screws and nuts which are easily accessible.	0	•	•	•	•	•				
Clean the dust boots of the fork legs. (p. 69)		•	•							
Check that the radiator fan is functioning properly.	0	•	•	•	•	•				
Check the coolant level. [2] (p. 112)	0	•	•	•	•					
Checking the antifreeze.		•	•		•					
Change the coolant. 4 (p. 115)						•				
Final check: Check the vehicle is roadworthy and take a test ride.	0	•	•	•	•	•				
Read out the fault memory after the test ride using the diagnostics tool.	0	•	•	•	•	•				
Set the service interval display.	0	•	•	•	•	•				
Enter electronic proof of service.	0	•	•	•	•	•				

- o One-time interval
- Periodic interval

12.1 Fork/shock absorber



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



Note

The recommendations for the suspension setting are shown in table 1. The table is located on the battery cover and is covered by the seat when the motorcycle is ready to ride.

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

12.2 Adjusting the spring preload of the shock absorber 🔌



WARNING

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

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



Note

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

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

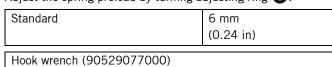
Preparatory work

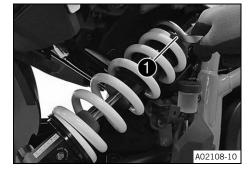
Remove the right side fairing. (p. 75)



Adjust the spring preload by turning adjusting ring 1.

Extension for hook wrench (90129099025)





Reworking

Install the right side cover. (p. 75)

13.1 Raising the vehicle with the center stand



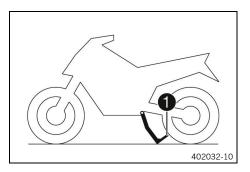
NOTE

Material damage The vehicle may be damaged if parked incorrectly.

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

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

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



- 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 body weight on arm **1** 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



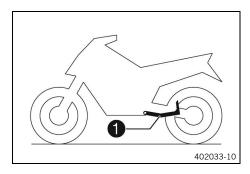
NOTE

Material damage The vehicle may be damaged if parked incorrectly.

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

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

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



- Make sure that the steering is unlocked.
- Move the vehicle forward with both hands on the handlebar.
- While the vehicle tips off the center stand, actuate the front brake to stop the vehicle from rolling away.
- Check that the center stand 1 is folded all the way up.

13.3 Raising the motorcycle with rear lifting gear



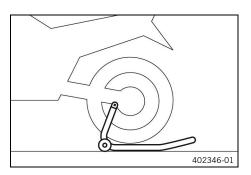
NOTE

Material damage The vehicle may be damaged if parked incorrectly.

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

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

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



- Mount the supports of the lifting gear.
- Insert the adapter in the rear lifting gear.

Retaining adapter (61029955244)

Rear wheel work stand (69329955000)

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

13.4 Removing the rear of the motorcycle from the lifting gear



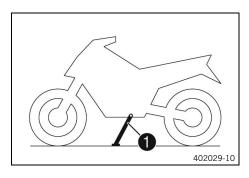
NOTE

Material damage The vehicle may be damaged if parked incorrectly.

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

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

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



- Secure the motorcycle against falling over.
- Remove the rear lifting gear and lean the vehicle on side stand 1.
- Remove bushings kit.

13.5 Lifting the motorcycle with the front lifting gear



NOTE

Material damage The vehicle may be damaged if parked incorrectly.

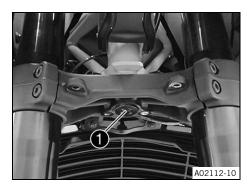
Damage can occur if the vehicle rolls away or falls over.

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

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

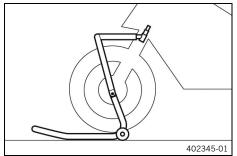
Preparatory work

- Raise the motorcycle with the rear lifting gear. (p. 66)
- Remove the front top fender. (p. 80)



Main work

Remove protection cap 1.



- Move the handlebar to the straight-ahead position.
- Use suitable lifting gear when attaching the steering stem.

Mounting pin (69329965030)

Front wheel work stand, large (69329965100)

- Align the front lifting gear with the fork legs.
 - Always raise the motorcycle at the rear first.
- Lift the motorcycle at the front.

13.6 Taking the motorcycle off the front lifting gear



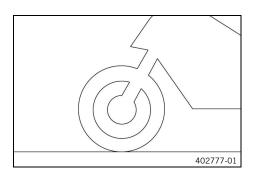
NOTE

Material damage The vehicle may be damaged if parked incorrectly.

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

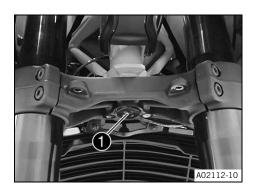
The components for parking the vehicle are designed only for the weight of the vehicle.

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



Main work

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



- Mount protection cap 1.

Reworking

- Install the front top fender. (p. 81)
- Remove the rear of the motorcycle from the lifting gear.
 (p. 67)

13.7 Cleaning the dust boots of the fork legs

Preparatory work

- Raise the motorcycle with the rear lifting gear. (p. 66)
- Remove the front top fender. (p. 80)
- Lift the motorcycle with the front lifting gear. (p. 67)
- Remove the fork protector. (p. 81)

Main work

- Push protection caps 1 of both fork legs downward.
- Push dust boot 2 downward on both fork legs.



Note

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



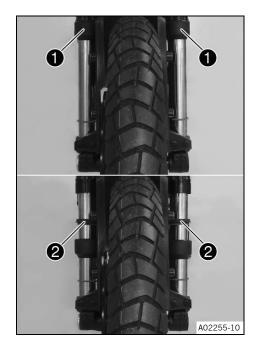
WARNING

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

- Always keep the brake discs free of oil, fat and wax.
- Clean the brake discs with brake cleaner when necessary.
- Clean and oil the dust boots and the inner fork tube of both fork legs.

Universal oil spray 🗐 (p. 147)

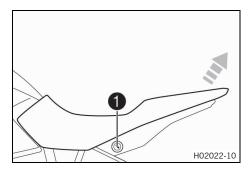
- Press the dust boots back into their installation position.
- Remove excess oil.



Reworking

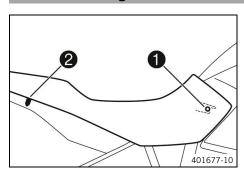
- Install the fork protector. (p. 82)
- Take the motorcycle off the front lifting gear. (p. 68)
- Install the front top fender. (p. 81)
- Remove the rear of the motorcycle from the lifting gear.
 (p. 67)

13.8 Removing the seat



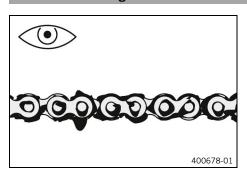
- Insert the ignition key in seat lock lacktriangle and turn it clockwise.
- Raise the rear of the seat, pull the seat back and lift it off.
- Remove the ignition key.

13.9 Mounting the seat



- Hook holding lug 1 of the seat onto the fuel tank, lower the rear and push it forward.
- Insert locking pin 2 into the lock housing and push down the rear of the seat until the locking pin engages with a click.
- Check that the seat is correctly mounted.

13.10 Checking the chain for dirt



- Check the chain for coarse dirt accumulation.
 - » If the chain is very dirty:
 - Clean the chain. (p. 71)

13.11 Cleaning the chain



WARNING

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

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



WARNING

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

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



NOTE

Environmental hazard Hazardous substances cause environmental damage.

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

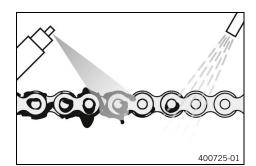


Note

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

Preparatory work

Raise the motorcycle with the rear lifting gear. (p. 66)



Main work

- Clean the chain regularly.
- Rinse off the loose dirt with a gentle jet of water.
- Remove grease residue with chain cleaner.

Chain cleaner (p. 152)

After drying, apply chain spray.

Street chain spray 🗐 (p. 147)

Reworking

Remove the rear of the motorcycle from the lifting gear.
 (p. 67)

13.12 Checking the chain tension



WARNING

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

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

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

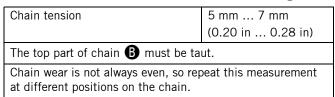
- Check the chain tension regularly.
- Set the chain tension in accordance with the specification.



- Raise the motorcycle with the rear lifting gear. (p. 66)

Main work

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



- » If the chain tension does not meet the specification:
 - Adjust the chain tension. (p. 72)

Reworking

Remove the rear of the motorcycle from the lifting gear.
 (p. 67)

13.13 Adjusting the chain tension



WARNING

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

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

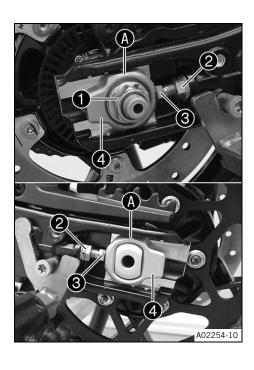
If the chain is too loose, the chain may fall off the front sprocket or the rear sprocket. This can damage the rear wheel or the engine.

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

M00714-10

Preparatory work

- Raise the motorcycle with the rear lifting gear. (p. 66)
- Check the chain tension. (p. 71)



Main work

- Loosen nut 1.
- Loosen nuts **2**.
- Adjust the chain tension by turning adjusting screws 3 on the left and right.

_	
Chain tension	5 mm 7 mm
	(0.20 in 0.28 in)

In order for the rear wheel to be correctly aligned, the markings on the left and right chain adjusters must be in the same position relative to reference markings **A**.

The upper part of the chain must be taut.

Chain wear is not always even, so repeat this measurement at different positions on the chain.

- Tighten nuts 2.
- Make sure that chain tension adjusters 4 are fitted correctly on adjusting screws 3.
- Tighten nut 1.

Nut, wheel spindle, rear	
M16	100 Nm
	(73.8 ft·lb _f)

Grease the thread and contact surface of the wheel spindle.

Reworking

Remove the rear of the motorcycle from the lifting gear.
 (p. 67)

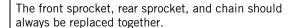
13.14 Checking the chain, rear sprocket, and engine sprocket

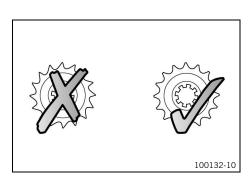
Preparatory work

Raise the motorcycle with the rear lifting gear. (p. 66)

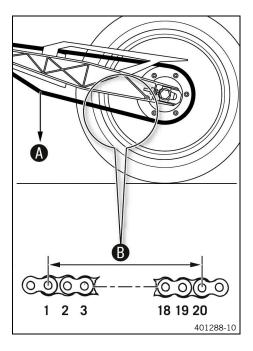
Main work

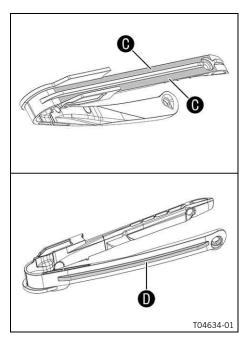
- Check the rear sprocket and the engine sprocket for wear.
 - » If the rear sprocket and engine sprocket are worn:
 - Change the drivetrain kit.





13 Service work on the chassis





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

Weight, chain wear measurement	15 kg
	(33.1 lb)

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

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

When you replace the chain, you should also replace the rear sprocket and front sprocket.



Note

New chains wear out faster on old, worn sprockets.

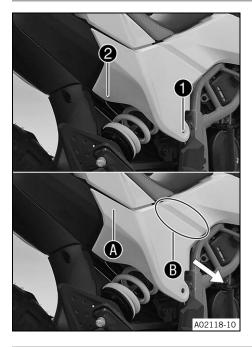
- Check the chain slider at the top for wear.
 - » If continuous signs of wear to the chain are visible on the chain sliding guard in the area ① marked:
 - Change the chain slider.
 - » If the chain sliding guard is highly worn on the underside in the marked area \mathbf{D} :
 - Change the chain slider.
- Check that the chain slider is firmly seated.
 - » If the chain slider is loose:
 - Tighten the screw of the chain sliding guard.

Screw, chain guard	
M6	5 Nm
	(3.7 ft·lb _f)

Reworking

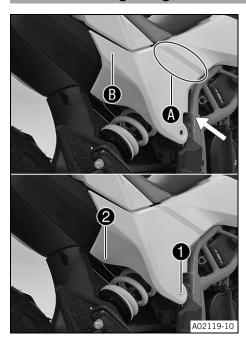
Remove the rear of the motorcycle from the lifting gear.
 (p. 67)

13.15 Removing the right side fairing



- Remove screw 1.
- Remove push/pull captive panel screw 2.
- Remove the right side fairing from rubber bushing **(A)** and detach it from area **(B)**.
- Carefully take off the right side fairing to the side.

13.16 Installing the right side cover



- Hook the right side fairing into area f A and press it into rubber bushing f B.
- Mount and tighten screw 1.

Screw, side fairing bracket on frame	
M6	6 Nm
	(4.4 ft·lb _f)

Mount push/pull captive panel screw 2.



Removing right fuel tank cover 13.17



DANGER

Fire hazard Fuel is highly flammable.

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

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



WARNING

Danger of poisoning Fuel is harmful to health.

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



NOTE

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

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

Preparatory work

Remove the seat. (p. 70)

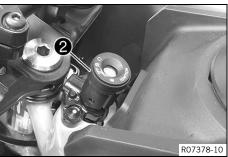


Remove ignition lock cover 1.



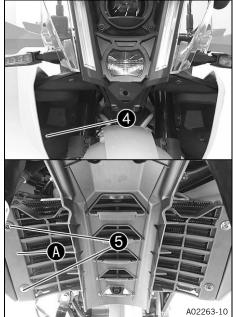


Remove plastic retainer 2.

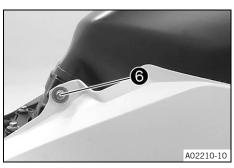




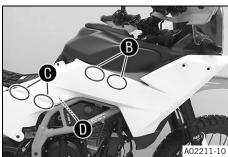
Remove 3 screws.



- Remove screw 4.
- Remove 6 screws.
- Remove fairings from the screw connection points.

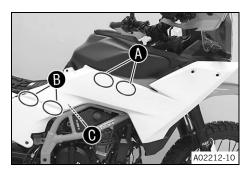


- Remove screw 6.



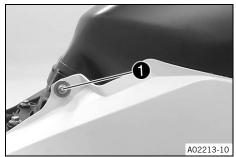
- Remove the fairing from areas $oldsymbol{\mathbb{B}}$ and $oldsymbol{\mathbb{G}}$.
- Unhook the fairing from guide pins **①** and remove it.

13.18 Installing the right fuel tank cover 🔌



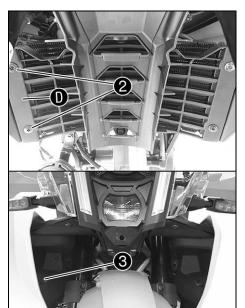
Main work

Attach the fairings in areas (A) and (B), press guide pin (D) into the guide.



Mount and tighten screw ①.

Remaining screws on chassis	
M6	9 Nm
	(6.6 ft⋅lb _f)



- Attach fairings at the screw connection points.
- Position the fairings behind the radiator protection grille.
- Mount and tighten screws 2.

Screw, radiator shield	
M6	8 Nm
	(5.9 ft⋅lb _f)

Mount and tighten screw 3.

Remaining screws on chassis	
M6	9 Nm
	(6.6 ft⋅lb _f)



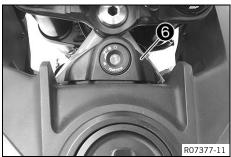
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Mount and tighten screws 4.

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



Position plastic retainer **5**.

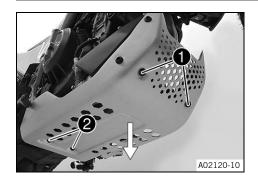


Mount ignition lock cover **6**.

Reworking

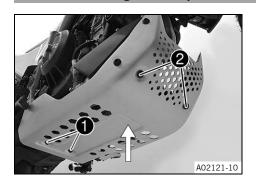
Mount the seat. (p. 70)

13.19 Removing the skid plate



- Remove screws 1 and 2.
- Remove skid plate downward.

13.20 Installing the skid plate



Position the skid plate, mount and tighten screws 1 and 2. Screw, engine guard M6 9 Nm (6.6 ft·lb_f) Loctite® 243

79

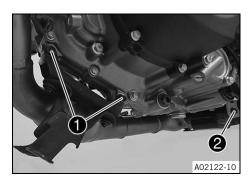
13.21 Removing the engine guard retaining bracket

Preparatory work

- Remove the skid plate. (p. 79)

Main work

- Remove screws 1 and 2 with nuts.
- Remove the skid plate retaining bracket.

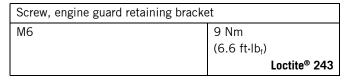


13.22 Installing the engine guard retaining bracket

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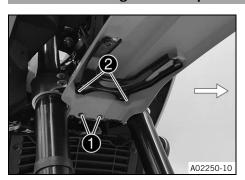
- Position the skid plate retaining bracket, mount and tighten screws 1 and 2 with nuts.



Reworking

Install the skid plate. (p. 79)

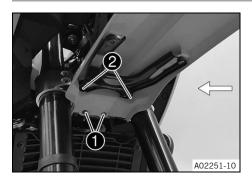
13.23 Removing the front top fender



Remove screws 1 and 2. Take the fender off to the front.

80

13.24 Installing the front top fender



Position the front fender. Mount and tighten screws 1.

Screw, rear fender	
M6	6 Nm
	(4.4 ft⋅lb _f)

- Mount and tighten screws 2.

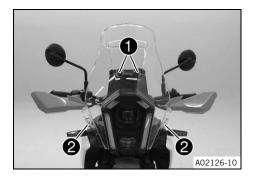
Remaining screws on chassis	
M6	9 Nm
	(6.6 ft·lb _f)

13.25 Removing the windshield



- Remove 1 screws.
- Remove 2 screws.
- Remove the windshield to the front.

13.26 Installing the windshield



- Position the windshield.
- Mount and tighten screws 1.

Screw, windshield on mask support	
M6	6 Nm
	(4.4 ft⋅lb _f)

Mount and tighten screws 2.

Screw, windshield on mask support	
M6	6 Nm
	(4.4 ft⋅lb _f)

13.27 Removing the fork protector



- Remove screw 1 and reflector.
- Remove **2** screws.
- Take off the fork protector at the front.
- Repeat these steps on the opposite side.

13.28 Installing the fork protector



 Position the fork protector. Mount screw with the reflector, but do not tighten yet.

Ī	Screw, reflector	
ſ	M6	6 Nm
		(4.4 ft·lb _f)

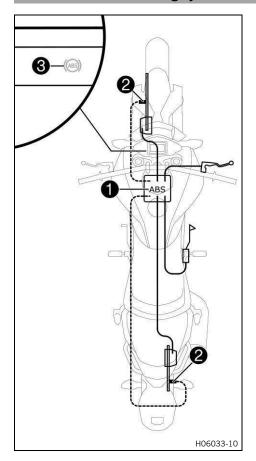
Mount screws 2, but do not tighten yet.

Remaining screws on chassis	
M6	9 Nm
	(6.6 ft⋅lb _f)

- ✓ The fork protector is evenly aligned to the front.
- Tighten all screws of the fork protector.
- Repeat these steps on the opposite side.

4

14.1 Anti-lock braking system





WARNING

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

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

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



WARNING

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

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

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



WARNING

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

The ABS modes are each only suitable for certain conditions.

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

The **ABS** module ①, which consists of a hydraulic unit, ABS control unit, and return pump, is installed under the fuel tank. One wheel speed sensor ② is located in each case on the front and the rear wheel.

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

In ABS mode Road, ABS controls both wheels.

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



Note

The curve dependent control is only active in ABS mode ${f Road}.$

The ABS operates with two independent brake circuits (front and rear brakes). When the ABS control unit detects a locking tendency in a wheel, ABS begins regulating the brake pressure. The

control function causes a slight pulsing of the hand and foot brake

The ABS warning light **3** must light up after the ignition is switched on and go out after starting off. If it does not go out after starting off or if it is lit while riding, this indicates a fault in the ABS. In this case, the ABS is no longer enabled and the wheels may lock during braking. The brake system itself stays functional; only ABS control is not available.

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

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

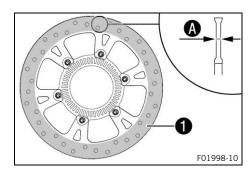
14.2 Checking the brake discs



WARNING

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

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



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

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



Note

Wear will reduce the thickness of the brake disc at contact surface **1** of the brake linings.

- If the brake disc thickness is less than the specified value.
 - Change the brake discs of the front brake.
 - Change the brake discs on the rear brake.
- Check the front and rear brake discs for damage, cracks, and deformation.
 - If the brake disc shows signs of damage, cracks, or defor-
 - Change the brake discs of the front brake.
 - Change the brake discs on the rear brake.



14.3 Checking the brake fluid level for the front brake



WARNING

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

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



WARNING

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

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

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



- Move the brake reservoir mounted on the handlebar to a horizontal position.
- Check the brake fluid level in sight glass 1.
 - If the brake fluid level is below the **MIN** marking:
 - Add brake fluid for the front brake. (p. 85)



14.4 Adding brake fluid for the front brake 🔌



WARNING

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

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



WARNING

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

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

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



WARNING

Health hazard Brake fluid is a harmful substance.

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



NOTE

Environmental hazard Hazardous substances cause environmental damage.

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

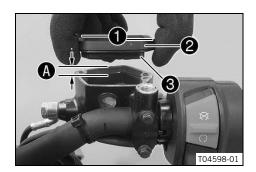


Note

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

Preparatory work

Check that the brake pads of the front brake are secured. (p. 86)



Main work

- Move the brake reservoir mounted on the handlebar to a horizontal position.
- Remove **1** screws.
- Take off cover **2** with diaphragm **3**.
- Add brake fluid up to level **A**.

Level A	5 mm
	(0.20 in)

Brake fluid DOT 4 / DOT 5.1 (p. 148)

Position the cover with diaphragm. Mount and tighten the

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

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



WARNING

Danger of accidents Worn brake pads reduce the brake action.

- Make sure that worn brake pads are replaced immediately.

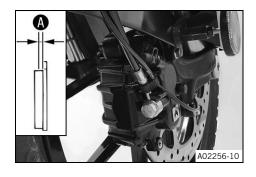


WARNING

Danger of accidents Damaged brake discs reduce the braking action.

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

Check the brake linings regularly.



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

≥ 1 mm Minimum pad thickness (A) $(\ge 0.04 in)$

- If it is less than the minimum thickness:
 - Change the front brake pads.
- Check the brake linings for damage and cracking.
 - If there is damage or cracking:
 - Change the front brake pads.



86

- Check that the brake pads are secured.
 - » If the brake pads are not secured correctly:
 - Secure brake pads, replace with new parts if necessary.

14.6 Checking the free travel of the brake pedal

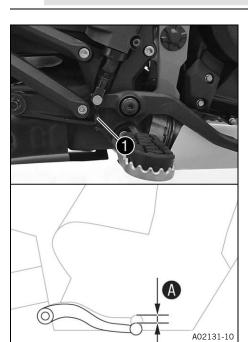


WARNING

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

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

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



- Detach spring 1.
- Move the brake pedal back and forth between the end stop and the brake pedal cylinder piston actuation and check free travel (A).

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

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





Note

Have this carried out in an authorized KTM workshop.

Attach spring 1.

14.7 Checking the brake fluid level for the rear brake



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

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

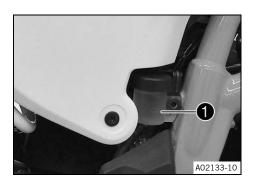


WARNING

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

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

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



- Stand the vehicle upright.
- Check the brake fluid level in the brake fluid reservoir.
 - When the fluid level has reached the MIN marking 1.
 - Add brake fluid for the rear brake. 4 (p. 88)

14.8 Adding brake fluid for the rear brake 🔌



WARNING

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

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



WARNING

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

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

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



WARNING

Health hazard Brake fluid is a harmful substance.

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



NOTE

Environmental hazard Hazardous substances cause environmental damage.

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



Note

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

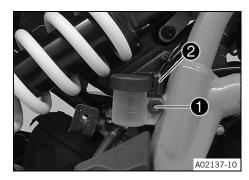
Preparatory work

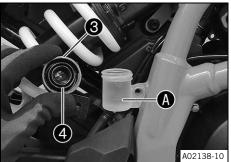
- Check that the brake pads of the rear brake are secured.
 (p. 89)
- Remove the right side fairing. (p. 75)

Main work

Condition: Screw cap is locked

Remove screw 1 and take off screw cap lock 2.





- Stand the vehicle upright.
- Remove screw cap 3 with membrane 4.
- Add brake fluid to mark $oldsymbol{A}$.

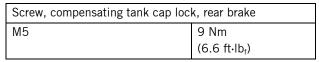
Brake fluid DOT 4 / DOT 5.1 (p. 148)

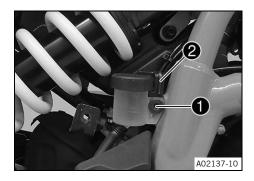
Mount the screw cover with the membrane.

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

Condition: The screw cap is locked.

 Position screw cap lock 2 and mount and tighten screw 1.





Reworking

Install the right side cover. (p. 75)

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



WARNING

Danger of accidents Worn brake pads reduce the brake action.

- Make sure that worn brake pads are replaced immediately.

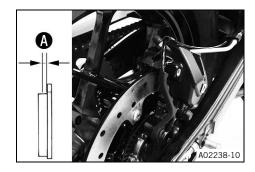


WARNING

Danger of accidents Damaged brake discs reduce the braking action.

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

Check the brake linings regularly.



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

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

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

4

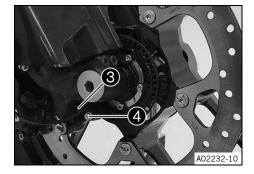
15.1 Removing the front wheel

Preparatory work

- Raise the motorcycle with the rear lifting gear. (p. 66)
- Remove the front top fender. (p. 80)
- Lift the motorcycle with the front lifting gear. (p. 67)

Main work

Remove screw 1 and pull wheel speed sensor 2 out of the



- Loosen screw 3 by four turns.
- Loosen screws 4.
- Press on screw 3 to push the wheel spindle out of the fork
- Remove screw 3.



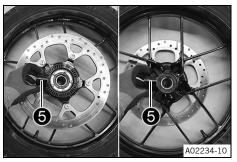
WARNING

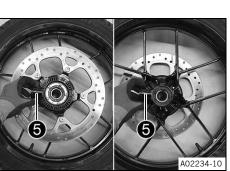
Danger of accidents Damaged brake discs reduce the braking action.

- Always lay the wheel down in such a way that the brake disc is not damaged.
- Hold front wheel and remove wheel spindle. Take the front wheel out of the fork.

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

Remove spacers **5**.





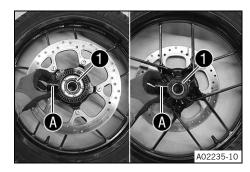
15.2 Installing the front wheel



WARNING

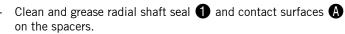
Danger of accidents Oil, grease or wax on the brake discs reduces the brake action.

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



Main work

- Check the wheel bearing for damage and wear.
 - If the wheel bearing is damaged or worn:
 - Change the front wheel bearing.



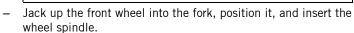
Long-life grease (p. 147)

Insert spacers.



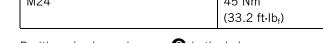
- Clean screw 2 and the wheel spindle.
- Grease wheel spindle lightly.

Long-life grease (p. 147)

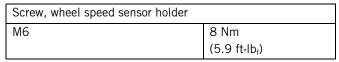


- ✓ The brake pads are positioned correctly.
- Mount and tighten screw 2.

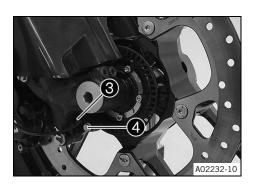
Screw, wheel spindle, front	
M24	45 Nm
	(33.2 ft·lb _f)

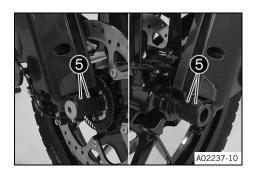


- Position wheel speed sensor 3 in the hole.
- Mount and tighten screw 4.



- Operate the hand brake lever repeatedly until the brake pads are in contact with the brake disc and a pressure point is
- Take the motorcycle off the front lifting gear. (p. 68)
- Remove the rear of the motorcycle from the lifting gear. (p. 67)
- Operate the front brake and compress the fork a few times firmly.
 - ✓ The fork legs straighten.





- Tighten screws **5**.

Screw, fork shoe	
M8	15 Nm
	(11.1 ft⋅lb _f)

Reworking

- Install the front top fender. (p. 81)

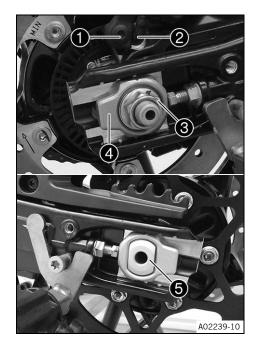
15.3 Removing the rear wheel

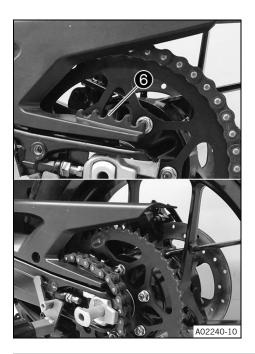
Preparatory work

- Raise the motorcycle with the rear lifting gear. (p. 66)

Main work

- Manually press the brake caliper toward the brake disc to push back the brake pistons.
- Remove screw 1 and pull wheel speed sensor 2 out of the hole.
- Remove nut 3 with washer.
- Remove chain tension adjuster 4.
- Hold the rear wheel and remove wheel spindle 5 with the washer and chain adjuster 4.





Push the rear wheel forward as far as possible.

Protect the components against damage by covering them.

Take the chain off the rear sprocket and place it on chain sprocket guard 6.



WARNING

Danger of accidents Damaged brake discs reduce the braking action.

- Always lay the wheel down in such a way that the brake disc is not damaged.
- Pull the rear wheel back until the brake caliper bracket is suspended freely between the brake disc and rim.

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

15.4 Installing the rear wheel



WARNING

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

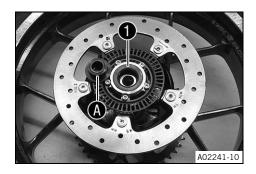
- Always keep the brake discs free of oil, fat and wax.
- Clean the brake discs with brake cleaner when necessary.



WARNING

Danger of accidents There is no braking effect to start with at the rear brake after installing the rear wheel.

- Actuate the foot brake several times before going on a ride until you can feel a firm pressure point.



Main work

- Check the wheel bearing for damage and wear.
 - If the wheel bearing is damaged or worn:
 - Change the rear wheel bearing.



- Remove the spacers.
- Clean and grease radial shaft seal 1 and contact surfaces A on the spacers.

Long-life grease (p. 147)

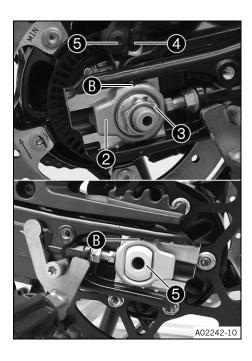
- Insert spacers.
- Clean and grease the thread of the wheel spindle and axle nut.

Long-life grease (p. 147)

Clean and lightly grease the wheel spindle.

Long-life grease 🗐 (p. 147)

Clean the contact areas on the brake caliper bracket and link fork.



- Jack up the rear wheel into the link fork, position it, and insert the wheel spindle.
 - ✓ The brake pads are positioned correctly.
- Place the chain on the rear sprocket.
 - Position chain tension adjuster 2.
- Mount the washer and nut 3, but do not tighten yet.

Mount left and right chain adjusters **2** in the same position.

- Make sure that chain adjusters 2 are fitted correctly on the adjusting screws.
- Tighten nut 🔞.

In order for the rear wheel to be correctly aligned, the markings on the left and right chain adjusters must be in the same position relative to reference markings **B**.

Nut, wheel spindle, rear	
M16	100 Nm
	(73.8 ft⋅lb _f)

- Position wheel speed sensor 4 in the hole.
- Mount and tighten screw **5**.

Screw, wheel speed sensor holder	
M6	8 Nm
	(5.9 ft⋅lb _f)

 Actuate the brake pedal repeatedly until the brake pads are in contact with the brake disc and a pressure point is achieved.

Reworking

- Check the chain tension. (p. 71)
- Remove the rear of the motorcycle from the lifting gear.
 (p. 67)

15.5 Checking the rear hub damping rubber pieces 🔌



Note

The engine power is transmitted from the rear sprocket to the rear wheel via the six damping rubber pieces. They eventually wear out during operation.

If the damping rubber pieces are not changed in time, the rear sprocket carrier and the rear hub will be damaged.

Preparatory work

- Raise the motorcycle with the rear lifting gear. (p. 66)
- Remove the rear wheel. 🔌 🗐 (p. 93)



Main work

- Check bearing 1.
 - » If the bearing is damaged or worn:
 - Change the bearings.
- Check damping rubber pieces 2 of the rear hub for damage and wear.
 - » If the damping rubber pieces of the rear hub are damaged or worn:
 - Change all the damping rubber pieces of the rear hub.
- Lay the rear wheel on a workbench with the rear sprocket facing upward and insert the wheel spindle in the hub.
- To check play (A), hold the rear wheel tight and try to rotate the rear sprocket.

Play of damping rubber pieces on	≤ 5 mm
rear wheel	(≤ 0.20 in)



Note

Measure the play on the outside of the rear sprocket.

- » If clearance **A** is larger than the specified value:
 - Change all the damping rubber pieces of the rear hub.

Reworking

- Install the rear wheel.
- Check the chain tension. (p. 71)
- Remove the rear of the motorcycle from the lifting gear.
 (p. 67)

15.6 Checking the tire condition



WARNING

Danger of accidents If a tire bursts while riding, the vehicle becomes uncontrollable.

- Ensure that damaged or worn tires are replaced immediately.



WARNING

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

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



WARNING

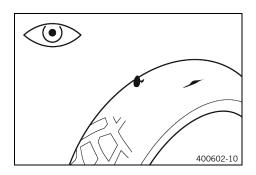
Danger of accidents Different tire profiles on the front and rear wheels can make it more difficult to control the vehicle.

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



Note

The type, condition, and pressure of the tires all have a major impact on the handling of the motorcycle. Worn tires have a negative effect on handling characteristics, especially on wet surfaces.



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

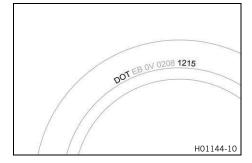
Minimum tread depth	≥ 2 mm (≥ 0.08 in)



Note

Observe the minimum tread depth required by national law

- » If the tread depth is less than the minimum tread depth:
 - · Change the tires. 🔌
- Check the tire age.

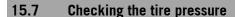




The tire date of manufacture is usually contained in the tire label and is indicated by the last four digits of the **DOT** number. The first two digits indicate the week of manufacture and the last two digits the year of manufacture.

KTM recommends that the tires be changed after 5 years at the latest, regardless of the actual state of wear.

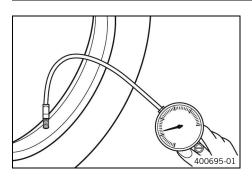
- » If the tires are older than five years:
 - Change the tires.





Note

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



- Remove the protection cap.
- Check the tire pressure when the tires are cold.

Tire pressure when solo	
front	2.0 bar
	(29.0 psi)
rear	2.0 bar
	(29.0 psi)

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

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

4

1 1 A02176-10



WARNING

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

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

- Ensure that the appropriate type of lighting is always selected.
- If necessary switch off the daytime running lights using the menu before going on a ride or when stopped so that the low beam is switched on permanently.
- Make sure that the daytime running light is deactivated with the diagnostic tool when the menu item is not available, but the low beam is required.
- Note the legal regulations regarding the daytime running light.

The daytime running light (**DRL**) is integrated in the main head-light.

The daytime running light (**DRL**) must only be switched on when visibility conditions are good.

The daytime running light (**DRL**) is activated in the combination instrument.

This is controlled by the ambient light sensor in the combination instrument. When visibility conditions are good, the low beam is switched off and the daytime running light is switched on.



Note

The position light 1 lights up with all types of lighting.

16.2 Removing the 12 V battery 🔌



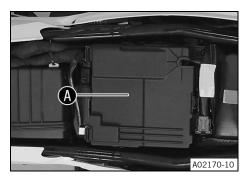
WARNING

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

- Keep 12–V batteries out of the reach of children.
- Wear suitable protective clothing and safety glasses.
- Avoid contact with battery acid and battery gases.
- Keep sparks or open flames away from the 12 V battery.
- Only charge 12 V batteries in well-ventilated rooms.
- Rinse the affected area immediately with plenty of water in the event of contact with skin.
- Rinse eyes with water for at least 15 minutes and consult a doctor immediately if battery acid and battery gases get into the eyes.

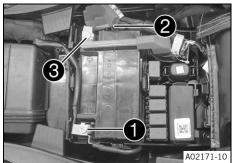
Preparatory work

- Remove the seat. (p. 70)



Main work

- Remove battery cover f A .



- Disconnect negative cable 1 from the 12 V battery.
- Pull back positive terminal cover 2.
- Disconnect positive cable 3 from the 12-V battery.
- Pull the 12-V battery upwards and out of the battery compartment.

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

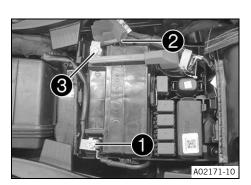


Note

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

The vehicle will therefore no longer be roadworthy.

16.3 Installing the 12 V battery

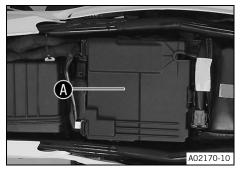


Main work

Position the 12-V battery in the battery compartment.

12 V battery (ETZ-9-BS) (p. 149)

- Position positive cable 2 and mount and tighten the screw.
- Position positive terminal cover 3.
- Position negative cable and mount and tighten the screw.



Mount battery cover $oldsymbol{A}$.



Reworking

- Mount the seat. (p. 70)
- Set time and date. (p. 45)

16.4 Charging the 12 V battery



WARNING

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

- Keep 12–V batteries out of the reach of children.
- Wear suitable protective clothing and safety glasses.
- Avoid contact with battery acid and battery gases.
- Keep sparks or open flames away from the 12 V battery.
- Only charge 12 V batteries in well-ventilated rooms.
- Rinse the affected area immediately with plenty of water in the event of contact with skin.
- Rinse eyes with water for at least 15 minutes and consult a doctor immediately if battery acid and battery gases get into the eyes.



NOTE

Environmental hazard 12–V batteries contain environmentally-hazardous materials.

- Do not dispose of 12–V batteries as household waste.
- Dispose of 12–V batteries at a collection point for used batteries.



NOTE

Environmental hazard Hazardous substances cause environmental damage.

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



Note

Even when there is no load on the 12-V battery, it discharges steadily each day.

The state of charge and the method of charging are very important for the service life of the 12 V battery. Rapid recharging with a high charging current shortens the service life of the battery.

If the charging current, charging voltage, or charging time is exceeded, electrolyte escapes through the safety valves. This reduces the capacity of the 12-V battery.

If the 12-V battery is left in a discharged state for an extended period, it will become deeply discharged and sulfating occurs, destroying the battery.

The 12 V battery is maintenance-free. The acid level does not have to be checked.

Preparatory work

- Remove the seat. (p. 70)
- Disconnect the negative cable of the 12-V battery to avoid damage to the onboard electronics.



Main work

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

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

Battery charger (58429074000)

USA/CA battery charger **TecMATE Optimate PRO** (A61029974144)

Battery charger **TecMATE Optimate PRO** UK (A61029974244)



Note

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



Note

This battery charger is not suitable for lithium-ion batteries

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

The charging current, charging voltage, and charging time must not be exceeded.

Recharge the 12 V battery regularly when the motorcycle is not being used

3 months

If the 12 V battery is depleted from starting the vehicle repeatedly, the battery must be charged immediately.

- Position the negative cable and mount and tighten the screw.
- Position the negative terminal cover.

Reworking

- Mount the seat. (p. 70)
- Set time and date. (p. 45)

16.5 Changing the main fuse



WARNING

Fire hazard Incorrect fuses overload the electrical system.

- Use only fuses with the prescribed amperage.
- Do not bypass or repair fuses.



Note

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

Preparatory work

Remove the seat. (p. 70)

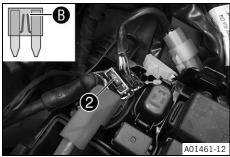




- Remove battery cover **A**.



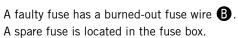
Remove protection cap 1.



Remove faulty main fuse 2.



Note



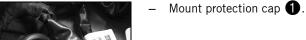
Insert the main fuse.

Fuse (75011088030) (p. 150)

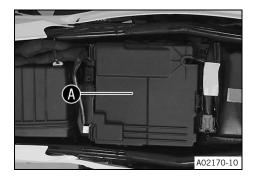


Пp

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







Mount battery cover **A**.

Reworking

- Mount the seat. (p. 70)
- Set time and date. (p. 45)

16.6 **Changing the ABS fuses**



WARNING

Fire hazard Incorrect fuses overload the electrical system.

- Use only fuses with the prescribed amperage.
- Do not bypass or repair fuses.



Note

Two fuses for the ABS are located under the seat.

These fuses protect the return pump and the hydraulic unit of the ABS.

The third fuse, which protects the ABS control unit, is located in the fuse box.

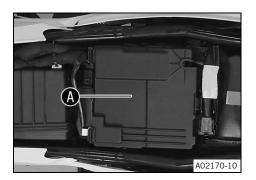
Preparatory work

- Remove the seat. (p. 70)

Main work

Remove battery cover (A).





Changing the fuse of the ABS hydraulic unit

Take off the protection cap and remove fuse $\mathbf{0}$.



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





WARNING

Fire hazard Incorrect fuses overload the electrical system.

- Use only fuses with the prescribed amperage.
- Do not bypass or repair fuses.
- Insert the spare fuse with the correct rating.

Fuse (58011109110) (p. 149)



Tip

Insert spare fuse **2** in the fuse box so that it is available

Mount the protection cap.

Changing the fuse of the ABS return pump

- Remove battery cover **A**.
- Take off the protection cap and remove fuse 3.



Note

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





WARNING

Fire hazard Incorrect fuses overload the electrical system.

- Use only fuses with the prescribed amperage.
- Do not bypass or repair fuses.
- Insert the spare fuse with the correct rating.

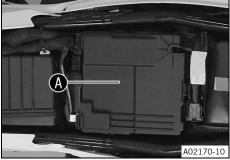
Fuse (58011109125) (p. 150)



Tip

Insert spare fuse 4 in the fuse box so that it is available if needed.

- Mount the protection cap.
- Mount battery cover **A**.





Reworking

Mount the seat. (p. 70)

16.7 Changing the fuses of individual electrical power consumers



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

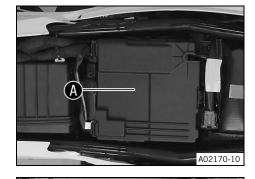
Preparatory work

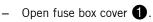
Remove the seat. (p. 70)

Main work

Remove battery cover **A**.







Remove the faulty fuse.

Fuse 1- 10 A - combination instrument, brake light, high beam, tail light

Fuse 2 - 10 A - combination instrument

Fuse 3 - 15 A - main relay

Fuse 4 - 10 A - start auxiliary relay, horn

Fuse 5 - 20 A - radiator fan

Fuse 6 - 10 A - headlight unit, parking light, license plate

Fuse 7 - 10 A - engine control unit, ABS control unit, Connectivity Unit

Fuse 8 - not assigned

Fuse 9 - 10 A - permanent positive for accessories (ACC1)

Fuse 10 - 10 A - ignition positive for accessories (ACC2),

Fuse SPARE - 10 A/15 A/20 A/30 A - spare fuses



A02173-10

Note

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





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WARNING

Fire hazard Incorrect fuses overload the electrical system.

- Use only fuses with the prescribed amperage.
- Do not bypass or repair fuses.
- Insert the spare fuse with the correct rating.

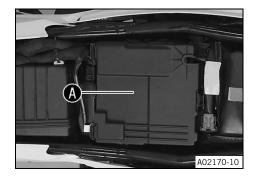
Fuse (75011088010) (p. 150)
Fuse (75011088015) (p. 150)
Fuse (75011088020) 🗐 (p. 150)
Fuse (75011088030) (p. 150)



Tip

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

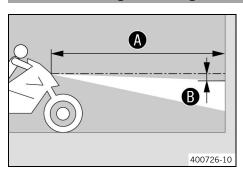
- Check the function of the electrical power consumer.
- Close the fuse box cover 1.
- Install battery cover A.



Reworking

Mount the seat. (p. 70)

16.8 Checking the headlight setting



- Park the vehicle on a horizontal surface in front of a lightcolored wall and make a mark at the height of the center of the low beam headlight.
- Make another mark at a distance
 B under the first marking.

Dist	ance B	5 cm
	_	(2.0 in)

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

Distance A	5 m
_	(16 ft – 5 in)

- Get on the motorcycle, together with any luggage or passenger.
- Check the headlight adjustment.

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

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

16.9 Adjusting the headlight range

Preparatory work

- Check the headlight setting. (p. 107)

Main work

Turn adjusting screw 1 to adjust the headlight range.

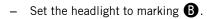
Screw 1 also secures the headlight. Ensure the screw is always screwed in far enough.



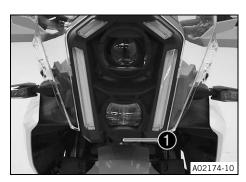
Note

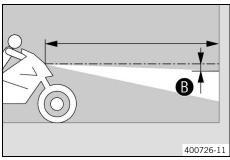
Turn clockwise to increase the headlight range; turn counterclockwise to reduce the headlight range.

If you have a payload, you may have to correct the headlight range.

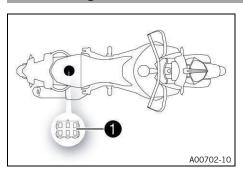


The light-dark boundary must lie exactly on lower marking **3** when the motorcycle is ready to operate with the rider mounted along with any luggage and a passenger if applicable.





16.10 Diagnostic connector



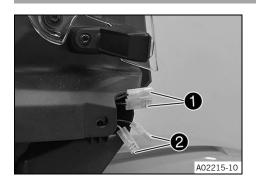
Diagnostics connector 1 is located under the seat.

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



Note

Unplug the diagnostics adapter to use the diagnostic tool. Following completion of the diagnosis, plug the diagnostics adapter back in.



Installation location

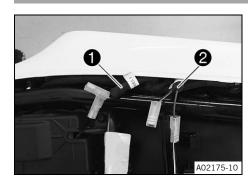
• The ACC1 1 and ACC2 2 front power supplies are located behind the right headlight cover.



Note

The fuel tank fairing on the right must be removed. The ACC1 and ACC2 front power supplies can be accessed under the right headlight cover.

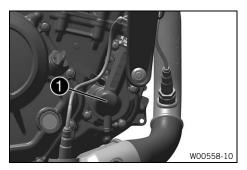
16.12 Rear ACC1 and ACC2



Installation location

Power supplies ACC1 and ACC2 rear are located under the right rear fairing.

17.1 Cooling system

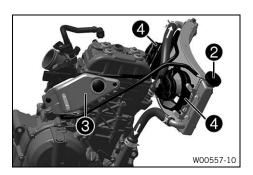


Water pump 1 in the engine circulates the coolant.

The pressure resulting from the warming of the cooling system is regulated by a valve in radiator cap 2. Heat expansion causes excess coolant to flow into compensating tank 3. When the tem-

excess coolant to flow into compensating tank **3**. When the temperature falls, this surplus coolant is sucked back into the cooling system. This ensures that operating the vehicle at the specified coolant temperature will not result in a risk of malfunctions.

110 °C (230.0 °F)



The coolant is cooled by the air stream and two radiator fans **4**, which are activated at high temperature.

The lower the vehicle speed, the lower the cooling effect. Dirty cooling fins also reduce the cooling effect.



Note

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

17.2 Checking the frost protection and coolant level



WARNING

Health hazard Coolant is harmful to health.

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



WARNING

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

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

Condition: The engine is cold

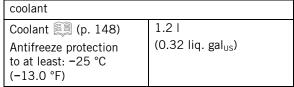


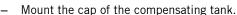
- Stand the motorcycle upright on a level surface.
- Remove cap 1 of the compensating tank.
- Check the frost protection in the coolant.

- » If the frost protection in the coolant does not match the specified value:
 - Correct the frost protection in the coolant.
- Check the coolant level in the compensating tank.

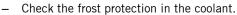
The coolant level must be between the two markings.

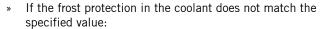
- » If the coolant level does not meet the specifications:
 - Correct the coolant level.









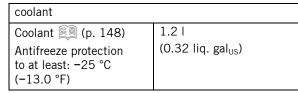


Correct the frost protection in the coolant.

- Check the coolant level in the radiator.

The radiator must be filled completely.

- » If the coolant level does not meet the specifications:
 - Check the coolant level and the reason for the loss.



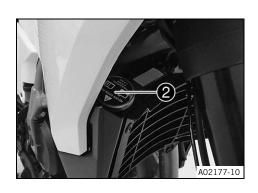
» If you had to add more coolant than the specified amount:

> 0.20 1

(> 0.053 liq. gal_{US})

- Fill/bleed the cooling system. (p. 113)

Mount the radiator cap.



17.3 Checking the coolant level



WARNING

Health hazard Coolant is harmful to health.

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



WARNING

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

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

Condition: The engine is cold



- Stand the motorcycle upright on a level surface.
- Check the coolant level in compensating tank 1.

The coolant level must be between the two markings.

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

coolant	
Coolant (p. 148) Antifreeze protection to at least: -25 °C (-13.0 °F)	1.2 l (0.32 liq. gal _{US})

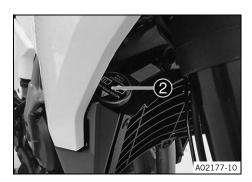
 Remove radiator cap 2 and check the coolant level in the radiator.

The radiator must be filled completely.

- » If the coolant level does not meet the specifications:
 - Check the coolant level and the reason for the loss.
- » If you had to add more coolant than the specified amount: > 0.20 I

(> 0.053 liq. gal_{US})

- Fill/bleed the cooling system.
 (p. 113)
- Mount the radiator cap.



17.4 Draining the coolant



WARNING

Health hazard Coolant is harmful to health.

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



WARNING

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

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

Condition: The engine is cold

Preparatory work

Remove the skid plate. (p. 79)



Main work

- Stand the motorcycle upright.
- Position an appropriate container under the engine.
- Remove screw 1 with the seal ring.
- Remove the radiator cap.
- Completely drain the coolant.
- Mount screw 1 with the new sealing ring and tighten.

Screw plug, water pump drain hole	
M6	11 Nm
	(8.1 ft⋅lb _f)
	Loctite® 243

17.5 Filling/bleeding the cooling system 🔌



WARNING

Health hazard Coolant is harmful to health.

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





Main work

Remove radiator cap 1.

Loosen bleeder screw 2.



3 turns (1,080°)

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

coolant	
Coolant (p. 148) Antifreeze protection to at least: -25 °C (-13.0 °F)	1.2 l (0.32 liq. gal _{US})

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



DANGER

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

- Always ensure that there is sufficient ventilation when running the engine.
- Use suitable exhaust extraction when starting or running the engine in an enclosed space.
- Start the engine and allow it to warm up.
- Stop the engine and allow it to cool down.
- When the engine is cool, check the coolant level in the radiator and, if necessary, add coolant.
- Remove cap **3** of the compensating tank and top up the coolant level to the upper marking.
- Mount the cap of the compensating tank.



Reworking

Install the skid plate. (p. 79)

17.6 Changing the coolant 🔌



WARNING

Health hazard Coolant is harmful to health.

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



WARNING

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

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

Condition: The engine is cold

Preparatory work

Remove the skid plate. (p. 79)



Main work

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



- Remove radiator cap 2.
- Completely drain the coolant.
- Mount screw with the new sealing ring and tighten.

Screw plug, water pump drain hole	
M6	11 Nm
	(8.1 ft⋅lb _f)
	Loctite® 243



Loosen bleeder screw 3.

3 turns (1,080°)

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

coolant	
Coolant (p. 148) Antifreeze protection to at least: -25 °C (-13.0 °F)	1.2 l (0.32 liq. gal _{US})

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



DANGER

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

- Always ensure that there is sufficient ventilation when running the engine.
- Use suitable exhaust extraction when starting or running the engine in an enclosed space.
- Start the engine and allow it to warm up.
- Stop the engine and allow it to cool down.
- When the engine is cool, check the coolant level in the radiator and, if necessary, add coolant.
- Remove cap 4 of the compensating tank and top up the coolant level up to the MAX marking.
- Mount the cap of the compensating tank.



Reworking

Install the skid plate. (p. 79)

18.1 Checking the play in the clutch lever



NOTE

Clutch damage If there is no free travel by the clutch lever, the clutch will slip.

- Check the free travel of the clutch lever each time before using the vehicle.
- Adjust the free travel of the clutch lever when necessary in accordance with the specification.



- Check the clutch lever for smooth operation.
- Move the handlebar to the straight-ahead position.
- Pull the clutch lever until resistance is perceptible, and determine the play in the clutch lever (A).

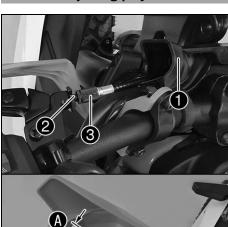
Clutch lever play A	1 mm 3 mm
	(0.04 in 0.12 in)

- If the play in the clutch lever does not meet the specified value.
 - Adjust play in the clutch lever.
- Move the handlebar back and forth over the entire steering range.

The clutch lever play must not change.

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

18.2 Adjusting play in the clutch lever 🔌





- Move the handlebar to the straight-ahead position.
- Push back boot 1.
- Loosen lock nut 2.
- Adjust the play in the clutch level by turning adjusting screw turning adjusting

Clutch lever play (A)	1 mm 3 mm
	(0.04 in 0.12 in)

- Tighten lock nut 2.
- Position bellows 1.

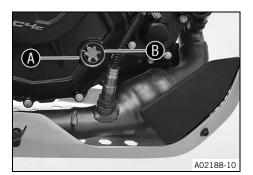
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19.1 Checking the engine oil level

Condition: The engine is at operating temperature

Preparatory work

- Stand the motorcycle upright on a level surface.



Main work

Check the engine oil level.

The engine oil must be between the **A** and **B** markings. After switching off the engine, wait one minute before checking the level.

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

19.2 Changing the engine oil and oil filter, cleaning the oil screens



WARNING

Danger of scalding Engine and gear oil heat up when the motorcycle is operated.

- Wear suitable protective clothing and safety gloves.
- In the event of scalding, rinse the area affected immediately with lukewarm water.



NOTE

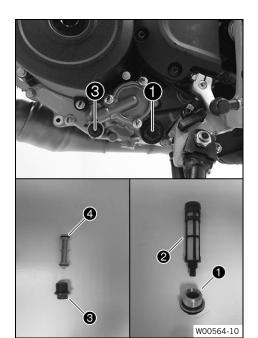
Environmental hazard Hazardous substances cause environmental damage.

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

Condition: The engine is at operating temperature

Preparatory work

- Remove the skid plate. (p. 79)
- Stand the motorcycle on a level surface using the side stand.



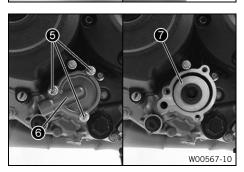


- Place an appropriate container under the engine.
- Remove screw plug 1 with O-ring.
- Remove oil screen 2 with the O-ring.
- Remove screw plug **3** with oil screen **4**.
- Allow the engine oil to drain completely.
- Thoroughly clean the screw plug and oil screen.
- Position oil screen 2 and mount and tighten screw plug 1 with the O-ring.

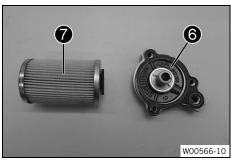
Oil screen screw plug, large	
M24×1.5	11 Nm
	$(8.1 \text{ ft} \cdot \text{lb}_{\text{f}})$

- Mount and tighten screw plug **3** with oil screen **4** and the O-ring.

Oil screen screw plug, small	
M17×1.5	11 Nm
	(8.1 ft⋅lb _f)



- Remove **5** screws.
- Take off oil filter cover 6 with the O-ring.
- Pull oil filter out of the oil filter housing.
- Allow the engine oil to drain completely.
- Thoroughly clean the parts and the sealing surface.



- Insert new oil filter 7.
- Oil the O-ring of the oil filter cover.
- Mount oil filter cover 6.
- Mount and tighten the screws.

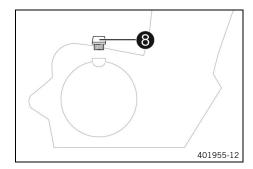
Screw, oil filter cover	
M6	11 Nm
	(8.1 ft⋅lb _f)



Note

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

19 Service work on the engine



Remove filler plug 8 with the O-ring, and fill up with engine oil.

engine oil	
Engine oil (SAE 15W/50) (p. 147) Partially synthetic	1.7 l (0.45 liq. gal _{us})

Mount and tighten the oil plug together with the O-ring.



DANGER

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

- Always ensure that there is sufficient ventilation when running the engine.
- Use suitable exhaust extraction when starting or running the engine in an enclosed space.
- Start the engine and check it for leaks.

Reworking

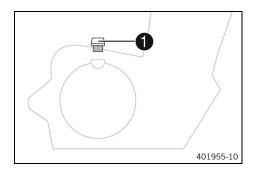
- Check the engine oil level. (p. 118)
- Install the skid plate. 🗐 (p. 79)

19.3 Adding engine oil



Note

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



Main work

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

Engine oil (SAE 15W/50) (p. 147) Partially synthetic



Note

In order to achieve optimal engine oil performance, it is not advisable to mix different engine oils.

KTM recommends changing the engine oil if necessary.

Mount and tighten the oil plug together with the O-ring.



DANGER

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

- Always ensure that there is sufficient ventilation when running the engine.
- Use suitable exhaust extraction when starting or running the engine in an enclosed space.
- Start the engine and check it for leaks.

Reworking

- Check the engine oil level. (p. 118)

4

20.1 Cleaning the motorcycle



NOTE

Material damage Components can be damaged or destroyed if a high-pressure cleaner is used incorrectly. The high pressure forces water into the electrical components, socket connectors, clutch cables, and bearings, etc.

Too high a pressure can cause malfunctions and destroy components.

- Do not direct the water jet directly on to electrical components, socket connectors, clutch cables, or bearings.
- Maintain a minimum distance between the nozzle of the high-pressure cleaner and the component.

Minimum distance	60 cm
	(23.6 in)



NOTE

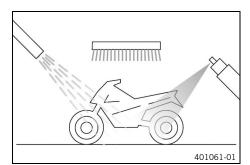
Environmental hazard Hazardous substances cause environmental damage.

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



Note

Clean the motorcycle regularly to maintain its value and appearance over a long period. Avoid direct sunshine when cleaning the motorcycle.



- Seal the exhaust system to prevent water from entering into it.
- Remove loose dirt first with a soft jet of water.
- Spray the heavily soiled parts with a standard commercial motorcycle cleaner and clean using a brush.

Environmentally neutral universal cleaning agent (p. 152)



Note

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

Never apply motorcycle cleaner to a dry motorcycle; always rinse the vehicle with water first.

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

- After rinsing the motorcycle with a gentle spray of water, allow it to dry thoroughly.
- Remove the cover from the exhaust system.



WARNING

Danger of accidents Moisture and dirt impair the brake system.

- Brake carefully several times to dry out and remove dirt from the brake pads and the brake discs.
- After cleaning, ride the vehicle a short distance until the engine warms up.

Note

The heat produced causes water to evaporate at inaccessible locations in the engine and on the brake system.

- Push back the sleeves of the handlebar controls to allow any water that has penetrated to evaporate.
- After the motorcycle has cooled off, lubricate all moving parts and pivot points.
- Clean the chain. (p. 71)
- Treat bare metal (except for brake discs and the exhaust system) with an anticorrosive.

Preserving materials (p. 152)

- Treat all painted parts with a mild paint care product.

Shine spray with beading effect (p. 152)



Note

Do not polish parts that were matte when delivered as this would strongly impair the material quality.

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

Cleaning agents for plastics, glass, lacquers, metals, windshields and visors (p. 152)

- Lubricate the ignition and steering lock.

Universal oil spray (p. 147)

4

20.2 Checks and maintenance steps for winter operation



WARNING

Danger of accidents Salt on the roads impairs the brake system.

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



WARNING

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

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



Note

If you use the motorcycle in winter, you must expect salt on the roads. You should therefore take precautions against aggressive road salt.

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

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

i

Note

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

 Treat the engine, link fork, and all other bare or zinc-plated parts (except the brake discs) with a wax-based corrosion inhibitor.

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

Clean the chain. (p. 71)

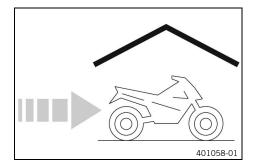
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21.1 Storage



Note

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 (workshops less busy). 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. 146)

– Refuel. 🗐 (p. 61)



Tip

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

- Clean the motorcycle. (p. 122)
- Change the engine oil and the oil filter, clean the oil screens.
 - (p. 118)
- Check the frost protection and coolant level. (p. 110)
- Check the tire pressure. (p. 97)
- Remove the 12 V battery. 4 (p. 99)
- Charge the 12 V battery. → (p. 101)

 Store the vehicle in a dry location that is not subject to large fluctuations in temperature.



Note

KTM recommends jacking up the motorcycle.

- Raise the motorcycle with the rear lifting gear. (p. 66)
- Lift the motorcycle with the front lifting gear. (p. 67)

Cover the motorcycle with a tarp or cover that is permeable to air.

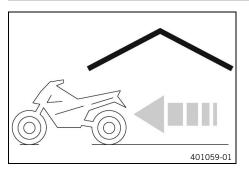
Do not use any non-porous materials, as moisture cannot escape and corrosion can occur.



Note

Avoid running the engine of a motorcycle in storage for a short time only. Since the engine cannot warm up properly, the water vapor produced during combustion condenses and causes valves and the exhaust system to rust.

21.2 Preparing for use after storage



- Take the motorcycle off the front lifting gear. 🗐 (p. 68)
- Remove the rear of the motorcycle from the lifting gear.
 (p. 67)
- Install the 12 V battery. 🔌 🗐 (p. 100)
- Set time and date. (p. 45)
- Perform checks and maintenance measures when preparing for use. (p. 54)
- Take a test ride.

•

22.1 troubleshooting

Cause	Finding	Remedy
The engine does not turn over when the start button is actuated	Operating error 12 V battery discharged Main fuse or fuse 3 , 4 or 7 blown	 Carry out the starting procedure. (p. 54) Charge the 12 V battery. (p. 101)
	No ground connection present on the starter motor	Change the fuses of individual electrical power consumers. (p. 106)
		Change the main fuse. (p. 102)Check the ground connection.
The engine only turns over if the clutch lever is pulled	The vehicle is in gear The vehicle is in gear and the side stand is folded out	 Shift the transmission into the neutral position. Shift the transmission into the neutral position.
The engine turns but does not start	Operating error Quick-lock coupling not joined Malfunction in the electronic fuel injection	 Carry out the starting procedure. (p. 54) Join quick-lock couplings. Read out the fault memory using the
Engine has too little power	Air filter is very dirty Fuel filter is very dirty Malfunction in the electronic fuel injection	diagnostics tool. - Change the air filter. - Check the fuel pressure. - Read out the fault memory using the diagnostics tool.
Engine overheats	Too little coolant in cooling system Radiator fins very dirty Foam formation in the cooling system Thermostat defective Fuse 5 blown Defect in radiator fan system	 Check the transmission and cooling system for leaks. Check the coolant level. (p. 112) Clean the radiator fins. Drain the coolant. (p. 113) Fill/bleed the cooling system. (p. 113) Check the thermostat. (p. 113) Change the fuses of individual electrical power consumers. (p. 106) Check the radiator fan system. (106)
The malfunction indicator light lights up yellow	Malfunction in the electronic fuel injection	 Read out the fault memory using the diagnostics tool.
The engine dies during the trip	Lack of fuel Main fuse or fuse 3, 4 or 7 blown	 Refuel. (p. 61) Change the fuses of individual electrical power consumers. (p. 106) Change the main fuse. (p. 102)
The ABS warning light lights up	ABS fuse blown Large difference in wheel speeds of the front and rear wheels Malfunction in ABS	 Change the ABS fuses. (p. 104) Stop the vehicle, switch off the ignition, and start it again. Read out the ABS fault memory using the diagnostic tool.
High oil consumption	Engine vent hose bent The engine oil level is too high	Route the vent hose without bends or change it if necessary.

22 Troubleshooting

Cause	Finding	Remedy
	The engine oil is too thin (low viscosity)	- Check the engine oil level.
		- Change the engine oil and the oil filter, clean the oil screens.
Headlight and position light are not functioning	Fuse 6 blown	Change the fuses of individual electrical power consumers. [3] (p. 106)
Turn signal, brake light, and horn are not functional	Fuse 4 or 6 blown	Change the fuses of individual electrical power consumers. (p. 106)
Time is not displayed or not correctly displayed	Fuse 2 blown	Change the fuses of individual electrical power consumers. [3] (p. 106)
12 V battery discharged	Ignition was not switched off when vehicle was parked	Charge the 12 V battery. <a>▲(p. 101)
	The 12-V battery is not being charged by the alternator	 Check the charging voltage.
		 Check the open-circuit current.
The dashboard shows nothing on the display	Fuse 2 blown	Change the fuses of individual electrical power consumers. (p. 106)
Speedometer in combination instrument is not functioning	Speedometer wiring harness is damaged or plug-in connector is oxidized	Check the wiring harness and plug-in connector.

23

23.1 Engine

23.1.1 Technical data - engine

Design	1-cylinder 4-stroke engine, water-cooled
Displacement	398 cm ³
	(24.29 in ³)
Stroke	64 mm
	(2.52 in)
Bore	89 mm
	(3.50 in)
Compression ratio	12.59:1
Control	DOHC, four valves controlled via cam lever, chain drive
Valve diameter, intake	36 mm
	(1.42 in)
Valve diameter, exhaust	29 mm
	(1.14 in)
Valve clearance, intake, cold	0.10 mm 0.15 mm
	(0.0039 in 0.0059 in)
Valve clearance, exhaust, cold	0.15 mm 0.20 mm
	(0.0059 in 0.0079 in)
Crankshaft bearing	Slide bearing
Big (bottom) end bearing	Slide bearing
Piston	Forged aluminum
Piston rings	1 compression ring, 1 tapered compression piston ring, 1 oil scraper ring
Engine lubrication	Pressure circulation lubrication
Primary transmission	33:86
Clutch	Multi-disc clutch in oil bath
Transmission	Sixth-gear manual transmission
Gear ratios	
1st gear	12:32
2nd gear	14:26
3rd gear	19:27
4th Gear	21:24
5th Gear	23:22
6th gear	25:21
Mixture formation	Electronic fuel injection
Ignition system	Fully electric ignition
Alternator	• 12 V
	• 230 W (0.308 hp)
Spark plug	BOSCH VR6NEU
Plug gap of spark plug	1 mm
· · · · · · · · · · · · · · · · · ·	(0.04 in)
Cooling	Liquid cooling, permanent circulation of coolant by water pump

23 Technical specifications

Idle speed	1,550 rpm 1,650 rpm (25.83 Hz 27.50 Hz)
Starting aid	Starter motor

23.1.2 Capacities - engine

engine oil		
Engine oil (SAE 15W/50) (p. 147)	1.7	
Partially synthetic	(0.45 liq. gal _{us})	
coolant		
Coolant (p. 148)	1.2	
Antifreeze protection to at least: -25 °C (-13.0 °F)	(0.32 liq. gal _{US})	

23.2 Chassis

23.2.1 Technical data - chassis

Frame	Lattice frame of steel tubes, powder-coated	
Fork	WP APEX 3343	
Shock absorber	WP APEX 3446	
Brake system		
front	Disc brake with four-pot brake caliper	
rear	Disc brake with single-pot brake caliper, floating	
Suspension travel:		
front	200 mm (7.87 in)	
rear	205 mm (8.07 in)	
Brake discs - diameter		
front	320 mm (12.60 in)	
rear	240 mm (9.45 in)	
Brake disc wear limit		
front	4.5 mm (0.177 in)	
rear	4.5 mm (0.177 in)	
Tire pressure when solo	•	
front	2.0 bar (29.0 psi)	
rear	2.0 bar (29.0 psi)	
Tire pressure with passenger / full payload	•	
front	2.0 bar (29.0 psi)	

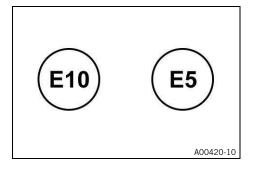
rear	2.2 bar
	(31.9 psi)
Final drive	14:46
Chain	5/8 x 1/4" (520) X-ring
Steering head angle	62.9°
	(1.098 rad)
Wheelbase	1,464 mm
	(57.64 in)
Seat Height unloaded	825 mm
	(32.48 in)
Ground clearance unloaded	232 mm
	(9.13 in)
Weight without fuel approx.	165.8 kg
	(365.53 lb)
Maximum permissible front axle load	119.9 kg
	(264.33 lb)
Maximum permissible rear axle load	255.1 kg
	(562.40 lb)
Maximum permissible total weight	375 kg
	(826.7 lb)

23.2.2 Technical data - tires

Tire front	Rear tire
100/90 - 19 M/C 57T M+S TL	130/80 - 17 M/C 65H M+S TL
MRF Apollo Treamplr XR	MRF Apollo Treamplr XR

The tires specified represent one of the possible series production tires. For alternative manufacturers, if any, contact an authorized dealer or qualified tire dealership. If local road approval regulations apply, these and the respective technical specifications must be observed.

23.2.3 Fuel



Please observe the labels on EU fuel pumps.

23.2.4 Capacities - vehicle

Total fuel tank capacity, approx.	
Super unleaded (ROZ 95) (p. 146)	14
* '	(3.7 liq. gal _{US})

23 Technical specifications

Fuel reserve, approx.	
Super unleaded (ROZ 95) (p. 146)	2
	(0.5 liq. gal _{US})

23.3 Electrics

23.3.1 Battery

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

23.3.2 Fuses

Fuse	75011088010	10 A
Fuse	75011088015	15 A
Fuse	75011088025	25 A
Fuse	75011088030	30 A

23.3.3 Lamps

Headlight	LED
Daytime running light/position light	LED
Dashboard illumination and indicator lights	LED
Turn signal	LED
Brake/tail light	LED
License plate lighting	LED

23.4 Fork

23.4.1 Technical data - fork

Fork part number	A601C139Y209102	
Fork	WP APEX 3343	
Fork length	852 mm (33.54 in)	
Spring length with preload spacer(s)	440 mm (17.32 in)	

23.4.2 Fork oil capacity

Fork oil per fork leg	
Fork oil (SAE 5) (p. 147)	500 ±5 ml
	(16.91 ±0.17 fl. oz _{US})

23.5 Shock absorber

23.5.1 Technical data - shock absorber

Shock absorber part number	A601C439Y310102	
Shock absorber	WP APEX 3446	
Preload	•	
Standard	6 mm (0.24 in)	
Static sag	12 mm (0.47 in)	
Riding sag	34 mm (1.34 in)	
Spring length	200.5 mm (7.894 in)	
Installation position	338.5 mm (13.327 in)	
Gas assisted	16 bar (232 psi)	

23.5.2 Capacity of shock absorber oil

Shock absorber oil	
Shock absorber oil (50180751S1) (SAE 2.5) (p. 148)	Fill to half-full.

23.6 Tightening torque

23.6.1 Engine tightening torques

Screw, shift shaft sensor		6 Nm	
,	M5×0.8	(4.4 ft⋅lb _f)	
Oil nozzle		6 Nm	
	M5×0.8	(4.4 ft⋅lb _f)	
			Loctite® 243
Oil spray jet, camshaft bridge		9 Nm	
	M5×0.8	(6.6 ft⋅lb _f)	
			Loctite® 243
Screw, crankshaft position sensor		5.5 Nm	
	M5×0.8	(4.06 ft⋅lb _f)	
			Loctite® 243
Stator screw		7.5 Nm	
	M5×0.8	(5.53 ft⋅lb _f)	
			Loctite® 243
Screw, retaining bracket, stator cable		5.5 Nm	
	M5×0.8	(4.06 ft⋅lb _f)	
			Loctite® 243

23 Technical specifications

Sorow goor position concor		5.5 Nm	
Screw, gear position sensor	M5		
	IVIO	(4.06 ft⋅lb _f)	Loctite® 243
			Lucille 243
Piston oil spray jet		5.5 Nm	
M	5×0.8	(4.06 ft⋅lb _f)	
			Loctite® 243
Oil spray jet		6 Nm	
M	5×0.8	(4.4 ft⋅lb _f)	
			Loctite® 243
Screw, oil filter cover		11 Nm	
	M6	(8.1 ft⋅lb _f)	
Screw plug, water pump drain hole		11 Nm	
	M6	(8.1 ft⋅lb _f)	
			Loctite® 243
Nut, water pump impeller		8 Nm	
Trut, water pamp impener	M6	(5.9 ft⋅lb _f)	
	IVIO	(3.5 1015)	Loctite® 243
Covery alisted across		11 Nm	LUCINE 243
Screw, clutch cover	MC		
	M6	(8.1 ft⋅lb _f)	
Screw, autodecompression mechanism		9 Nm	
	М6	(6.6 ft⋅lb _f)	_
			Loctite® 243
Screw, camshaft bearing bridge		9 Nm	
	М6	(6.6 ft⋅lb _f)	
Screw, camshaft bearing bridge		9 Nm	
	/16×35	(6.6 ft⋅lb _f)	
Screw, camshaft bearing bridge		9 Nm	
	л6×40	(6.6 ft⋅lb _f)	
Screw, camshaft bearing bridge		9 Nm	
	/16×45	(6.6 ft⋅lb _f)	
	710743		
Screw, valve cover	MC	11 Nm	
	M6	(8.1 ft⋅lb _f)	
Screw, engine case		11 Nm	
N	16×35	$(8.1 \text{ ft} \cdot \text{lb}_f)$	
			Loctite® 243
Screw, engine case		11 Nm	
N	/16×70	(8.1 ft⋅lb _f)	
			Loctite® 243
Screw, freewheel gear retaining bracket		11 Nm	
	M6	(8.1 ft⋅lb _f)	
			Loctite® 243
Screw, ignition cover		11 Nm	
	M6	(8.1 ft⋅lb _f)	
Shift star screw		11 Nm	
Office Star Sofow	M6	(8.1 ft⋅lb _f)	
	IVIO	(O.1 1010f)	Loctite® 243
Covery and in a yeart what		1.1 Ne-	LUCINE Z43
Screw, engine vent plate	NAC	11 Nm	
	M6	(8.1 ft⋅lb _f)	

Detent arm screw		11 Nm	
	M6	(8.1 ft⋅lb _f)	
			Loctite® 243
Screw, water pump cover		11 Nm	
	M6	(8.1 ft⋅lb _f)	
Screw, release for timing chain tensioner		8 Nm	
	M6	(5.9 ft⋅lb _f)	
Screw, timing chain tensioner		11 Nm	
	M6	(8.1 ft⋅lb _f)	
Screw, starter motor		11 Nm	
	M6	(8.1 ft⋅lb _f)	
Screw, special nozzle retaining bracket		7 Nm	
	M6×1	(5.2 ft⋅lb _f)	
			Loctite® 243
Screw, timing chain tensioning rail		11 Nm	
	M6×1	(8.1 ft⋅lb _f)	
			Loctite® 243
Screw, oil pump cover		11 Nm	
	M6×1	(8.1 ft⋅lb _f)	
Screw, thermostat		11 Nm	
	M6	(8.1 ft⋅lb _f)	
Chain shaft screw, cylinder head		11 Nm	
	M6	(8.1 ft⋅lb _f)	
Bracket for ignition coil cable		11 Nm	
	M6	(8.1 ft⋅lb _f)	
Screw, inlet sleeve		9 Nm	
	M6	(6.6 ft⋅lb _f)	
			Loctite® 243
Stud, exhaust flange		21 Nm	
	M8	(15.5 ft⋅lb _f)	
Exhaust flange nut		21 Nm	
	M8	(15.5 ft⋅lb _f)	
Screw, spring thrust bearing of the shift shaft		21 Nm	
	M8×1.25	(15.5 ft⋅lb _f)	
			Loctite® 243
TDC locking screw, crankshaft	140 4 05	15.5 Nm	
	M8×1.25	(11.43 ft·lb _f)	1
TD01 11 6		15.5.11	Loctite® 243
TDC locking screw, balancer shaft	MO. 1 OF	15.5 Nm	
	M8×1.25	(11.43 ft⋅lb _f)	Lastita® 040
		01.11	Loctite® 243
Screw, intermediate gear	Mov1 of	21 Nm	
	M8×1.25	(15.5 ft⋅lb _f)	Lootito® 242
Carous conved hooving	1	17 7 N	Loctite® 243
Screw, conrod bearing M9×1	1.	17.7 Nm	
M9×1 Thread oiled		(13.05 ft·lb _f)	
Tillead Offed	2.	60°	
		(1.05 rad)	

Coolant temperature sensor	13 Nm
M10×1.5	(9.6 ft·lb _f)
Screw plug, cam lever shaft	9 Nm
M10×1	(6.6 ft·lb _f)
	Loctite® 243
Screw, cylinder head	62 Nm
M10×1.25	(45.7 ft⋅lb _f)
	Thread oiled
Oil pressure sensor	9 Nm
M10×1	(6.6 ft·lb _f)
Screw, camshaft gear wheel	42 Nm
M10×1	(31.0 ft⋅lb _f)
	Loctite® 243
Screw, rotor	125 Nm
M12×1.5	(92.2 ft⋅lb _f)
Spark plug	16 Nm
M12×1.25	(11.8 ft⋅lb _f)
Nut, primary gear wheel/timing chain sprocket	150 Nm
M16×1.5	(110.6 ft⋅lb _f)
	Loctite® 243
Nut, inner clutch hub	122.5 Nm
M16LH×1.5	(90.35 ft⋅lb _f)
	Loctite® 243
Oil pressure regulator valve	39 Nm
M16×1.5	(28.8 ft·lb _f)
Oil screen screw plug, small	11 Nm
M17×1.5	$(8.1 \text{ ft} \cdot \text{lb}_f)$
Screw plug, alternator cover TDC	9 Nm
M18×1.5	(6.6 ft·lb _f)
Nut, countershaft gear	95 Nm
M18×1.5	(70.1 ft⋅lb _f)
	Loctite® 243
Screw plug, alternator cover	11 Nm
M24×1.5	(8.1 ft⋅lb _f)
Oil screen screw plug, large	11 Nm
M24×1.5	(8.1 ft⋅lb _f)

23.6.2 Chassis tightening torques

Exhaust clamp	20 Nm
	(14.8 ft·lb _f)
Hose clamp, throttle valve housing	4 Nm
	(3.0 ft⋅lb _f)
Remaining screws on chassis	4 Nm
M4	(3.0 ft⋅lb _f)
Screw, fuel tank lid	5 Nm
M5	(3.7 ft·lb _f)

Demaining course on abossis	E Nee
Remaining screws on chassis M5	5 Nm (3.7 ft·lb _f)
Screw, tail light	5 Nm
M5	
Screw, rear wheel speed sensor	7 Nm
	(5.2 ft·lb _f)
Screw, outer clutch cable guide	5 Nm
M5	
IVIO	Loctite® 243
Screw, compensating tank cap lock, rear brake	9 Nm
M5	
	7 Nm
Screw, rear wheel speed sensor	
M5	'
Screw, turn signal on turn signal bracket	5 Nm
	(3.7 ft·lb _f)
Screw, ABS sensor wheel front	7 Nm
M5	'
Screw, rear wheel speed sensor	7 Nm
M5	(5.2 ft⋅lb _f)
Screw, side stand sensor	5 Nm
M6	(3.7 ft·lb _f)
Screw, fuel pump	9 Nm
	(6.6 ft⋅lb _f)
Side stand magnet holder screw	5 Nm
M6	
	Loctite® 243
Screw, ABS hose clamp	7 Nm
M6	
Screw, side stand sensor cable holder	9 Nm
M6	
IVIO	Loctite® 243
Screw, wheel speed sensor holder	8 Nm
	(5.9 ft·lb _f)
	<u> </u>
Screw, bell crank shift lever	16 Nm
M6	·
Nut, foot brake lever adjustment	9 Nm
M6	'
Screw, foot brake cylinder	10 Nm
M6	(7.4 ft·lb _f)
Screw, rear splash protector	9 Nm
M6	(6.6 ft·lb _f)
Screw, chain slider guard	7 Nm
M6	(5.2 ft·lb _f)
Screw, rear brake reservoir	7 Nm
M6	
Screw, radiator holder	10 Nm
M6	
L INIO	(7.7 ICIDf)

23 Technical specifications

Communication will		O N
Screw, ignition coil	MC	8 Nm
	M6	(5.9 ft⋅lb _f)
Screw, tilt sensor		9 Nm
	M6	(6.6 ft⋅lb _f)
Screw, front fender		6 Nm
	M6	(4.4 ft·lb _f)
Screw, tank on frame front		11 Nm
	M6	(8.1 ft·lb _f)
Screw, front seat fixing		6 Nm
	М6	(4.4 ft⋅lb _f)
Screw, compensating tank		5 Nm
	М6	(3.7 ft⋅lb _f)
License plate holder support screw		7 Nm
	M6	(5.2 ft⋅lb _f)
Remaining screws on chassis		9 Nm
-	М6	(6.6 ft⋅lb _f)
Remaining nuts on chassis		15 Nm
0	М6	(11.1 ft⋅lb _f)
Screw, main silencer		11 Nm
	М6	(8.1 ft·lb _f)
Screw, chain guard		5 Nm
onem, enam gaard	M6	
Screw, ABS module	1110	7 Nm
ociew, Abo illoduic	M6	(5.2 ft·lb _f)
Screw, main silencer retaining bracket	1410	9 Nm
Sciew, main shericer recanning bracket	M6	(6.6 ft·lb _f)
Carrant air filtar hav	IVIO	6 Nm
Screw, air filter box	MG	
	M6	(4.4 ft·lb _f)
Screw, damper block	MC	8 Nm
	M6	. 1.
Screw, ABS module retaining bracket on frame		7 Nm
	M6	(5.2 ft⋅lb _f)
Screw, ignition lock (tamper-proof screw)		10 Nm
	M6	(7.4 ft·lb _f)
Screw, radiator shield		8 Nm
	M6	(5.9 ft⋅lb _f)
Screw, brake hose clamp		7 Nm
	М6	(5.2 ft⋅lb _f)
Screw, combination instrument		7 Nm
	М6	(5.2 ft⋅lb _f)
Screw, front sprocket cover		11 Nm
	M6	$(8.1 \text{ ft} \cdot \text{lb}_{\text{f}})$
Screw, headlight		8 Nm
	M6	(5.9 ft·lb _f)
Screw, protective plate		8 Nm
, _F	M6	(5.9 ft·lb _f)
	1410	(5.5 10 10)

Nut vadiates	6 Nm
Nut, radiator	
M	, "
Nut, shift rod	6 Nm
M	6 (4.4 ft·lb _f)
Screw, engine guard	9 Nm
M	6 (6.6 ft·lb _f)
	Loctite® 243
Nut, foot brake lever adjustment	10 Nm
M	
Screw, engine guard retaining bracket	9 Nm
M	
IVI	· ·
	Loctite® 243
Screw, main wiring harness bracket on frame	7 Nm
M	6 (5.2 ft·lb _f)
Screw, main wiring harness clamp on frame	5 Nm
M	6 (3.7 ft·lb _f)
Screw, side fairing bracket on frame	6 Nm
M	
Screw, air filter bracket on frame	7 Nm
M	· ''
Screw, frame cover on frame	6 Nm
M	6 (4.4 ft·lb _f)
Screw, intake snorkel on frame	7 Nm
M	6 (5.2 ft·lb _f)
Screw, radiator tank on front frame	8 Nm
M	6 (5.9 ft·lb _f)
Screw, radiator tank on rear frame	6 Nm
M	
Screw, tank on frame rear	11 Nm
M	<u>'</u>
Screw, ABS modulator bracket on silent block	7 Nm
M	6 (5.2 ft·lb _f)
Screw, reflector	6 Nm
M	6 (4.4 ft·lb _f)
Screw, temperature and manifold air pressure sensor	5 Nm
M	6 (3.7 ft·lb _f)
Nut, reflector	6 Nm
M	
	· ·
Screw, air filter on air filter housing	7 Nm
M	·
Screw, voltage regulator	7 Nm
M	6 (5.2 ft·lb _f)
Screw, seat lock	7 Nm
M	
Screw, tail section on license plate holder support	7 Nm
M	
Screw, mask support left to right	6 Nm
M	6 (4.4 ft·lb _f)

Screw, mask support on headlight	6 Nm	
M6	(4.4 ft⋅lb _f)	
Screw, inner cover on mask support	6 Nm	
M6	(4.4 ft⋅lb _f)	
Screw, windshield on mask support	6 Nm	
M6	(4.4 ft⋅lb _f)	
Screw, radiator shroud on radiator and fuel tank spoiler	6 Nm	
M6		
Screw, rear fender	6 Nm	
M6	·	
Screw, brake line guide	7 Nm	
M6	·	
Screw, brake line bracket on swingarm	7 Nm	
M6	(5.2 ft⋅lb _f)	
Screw, handguard	10 Nm	
M6×25	(7.4 ft⋅lb _f)	
20	(71112)	Loctite® 243
Screw, hand guard clamp	10 Nm	2001110 2 10
M6×20	(7.4 ft⋅lb _f)	
Screw, rear seat fixing	18 Nm	
M8	(13.3 ft·lb _f)	
Screw, engine brace	22 Nm	
M8	(16.2 ft⋅lb _f)	
Screw, foot brake lever	16 Nm	
M8	(11.8 ft⋅lb _f)	
		Loctite® 243
Screw, bottom triple clamp	12 Nm	
M8	(8.9 ft⋅lb _f)	
Screw, top triple clamp	17 Nm	
M8	· ·	
Screw, fork shoe	15 Nm	
M8	(11.1 ft⋅lb _f)	
Screw, front brake disc	30 Nm	
M8	(22.1 ft⋅lb _f)	
Screw, rear brake disc	30 Nm	
M8	(22.1 ft·lb _f)	
	20 Nm	
Handlebar clamp screw		
M8	(14.8 ft·lb _f)	
Screw, front brake caliper	30 Nm	
M8	(22.1 ft⋅lb _f)	
		Loctite® 243
Nut, rear sprocket	34 Nm	
M8	(25.1 ft⋅lb _f)	
Screw, footpeg bracket top	25 Nm	
M8×20	(18.4 ft⋅lb _f)	
5 25		Loctite® 243
Screw, horn	16 Nm	
	(11.8 ft⋅lb _f)	
M8		

Passenger footrest support screw	25 Nm
rassenger rootrest support screw M8	
Screw, grab handle	25 Nm
M8	
Screw, lower rear panel	10 Nm
M8	
	25 Nm
Remaining screws on chassis M8	
	30 Nm
Remaining nuts on chassis M8	
	10 Nm
Screw, lower rear panel M8	
	21 Nm
Screw, main silencer	
M8	· ·
Screw, front seat fixing	25 Nm
M8	· ·
Screw, shift lever	16 Nm
M8	· ·
	Loctite® 243
Screw, mask support	21 Nm
M8	
Screw, chain guide on link fork	10 Nm
M8	, "
	Loctite® 2701
Stud, rear sprocket	50 Nm
M10×1.25	
Screw, handlebar mount	45 Nm
M10	'
Fitting, side stand	32 Nm
M10	· ·
	Loctite® 243
Nut, side stand bracket	36 Nm
M10×1.25	<u>'</u>
Top shock absorber screw	50 Nm
M10	· ·
No. 1 G	Loctite® 2701
Nut, left rear mirror	23 Nm
M10	
Remaining screws on chassis	46 Nm
M10	'
Remaining nuts on chassis	50 Nm
M10	'
Fitting, bottom shock absorber	50 Nm
M10	•
	Loctite® 2701
Banjo bolt, brake line	24 Nm
M10	(17.7 ft⋅lb _f)

Nut, right rear mirror		23 Nm	
,	M10LH		
Screw, engine brace		44 Nm	
	M10	(32.5 ft⋅lb _f)	
			Loctite® 243
Screw, front footrest bracket		45 Nm	
	M10×1.25	(33.2 ft·lb _f)	
		45.11	Loctite® 243
Screw, subframe, top	M10	45 Nm	
	M10	(33.2 ft·lb _f)	Loctite® 2701
Screw, combination instrument bracket		21 Nm	Locate 2701
Screw, combination instrument blacket	M10×1.25	(15.5 ft·lb _f)	
Fitting, engine mounting bracket		49 Nm	
Titting, engine mounting bracket	M10		
Threaded bolt, side stand bracket		27 Nm	
	M10×1.25	(19.9 ft·lb _f)	
		·	Loctite® 243
Screw, subframe, bottom		45 Nm	
	M10	(33.2 ft⋅lb _f)	
			Loctite® 2701
Nut, engine bearer		45 Nm	
	M10	(33.2 ft⋅lb _f)	
Threaded bolt, footpeg bracket		40 Nm	
	M10×1.25	·	
Thread adapter, mirror		27 Nm	
N	M10	(19.9 ft·lb _f)	
Nut, swingarm pivot		100 Nm	
M14×1.5		(73.8 ft·lb _f)	
Nut, wheel spindle, rear M16		(73.8 ft·lb _f)	
Screw, top steering head		53 Nm	
Seriew, top steering nead	M16×1.5		
Oxygen sensor		19 Nm	
//80.1	M18×1.5	(14.0 ft·lb _f)	
Adjusting ring, fork bearing		10 Nm	
, , , ,	M22	(7.4 ft⋅lb _f)	
Screw, steering head		50 Nm	
M22×1.5		(36.9 ft⋅lb _f)	
Screw, wheel spindle, front		45 Nm	
	M24	(33.2 ft·lb _f)	
Nut, steering head	1.	45 Nm	
M30		(33.2 ft⋅lb _f)	
	2.	2 turns	
		(720°)	
	3.	15 Nm	
		(11.1 ft·lb _f)	

Screw, chain guard		3 Nm
	EJOT PT® – MK60×30	(2.2 ft⋅lb _f)

24.1 Declarations of conformity



Note

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

JNS Instruments Ltd. hereby declares that the 320T1100 wireless system conforms with the relevant guidelines. The full text of the Declaration of Conformity is available at the following Internet address.

Certification website: https://www.ktm.com/320T1100

Technical terms ABS Anti-lock braking system Safety system that prevents locking of the wheels when riding straight ahead without the influence of lateral forces. ATIR Software, which automatically switches the indicator Automatic Turn Indicator Reset off according to a time or travel distance counter DRL Daytime Running Light Light that increases the visibility of the vehicle during the day, but unlike the low beam is not focused and does not illuminate the road ahead. System for remote communication with suitable cell **KTMconnect** phones and communication systems for telephony and OBD On-board diagnosis Vehicle system, which monitors the specified parameters of the vehicle electronics QUICKSHIFTER+ Engine electronics function for shifting up and down without clutch actuation

B Fuels Super unleaded Standards • ROZ 95 → DIN EN 228 Fuel additive

Recommended supplier

MOTOREX®

• FUEL STABILIZER

C **Operating supplies** Street chain spray Recommended supplier **MOTOREX®** • CHAINLUBE ROAD STRONG Fork oil **Recommended supplier** MOTOREX® RACING FORK OIL Standards SAE 5 $\rightarrow SAE$ Thread oiled Universal oil spray **Recommended supplier MOTOREX®** • JOKER 440 SYNTHETIC Long-life grease **Recommended supplier MOTOREX®** Bike Grease 2000 **Engine oil** Recommended supplier MOTOREX® • FORMULA 4T Standards → JASO T903 MA2 • SAE 15W/50 → SAE **Properties** Partially synthetic

Shock absorber oil

Order details

• 50180751S1

Standards

• SAE 2.5

→ SAE

Brake fluid DOT 4 / DOT 5.1

Recommended supplier

Castrol

• REACT PERFORMANCE DOT 4

MOTOREX®

BRAKE FLUID DOT 5.1

Standards

→ DOT

Coolant

Recommended supplier

MOTOREX®

• COOLANT M3.0

Properties

Antifreeze protection to at least -25 °C (-13.0 °F)

D Electrics

12 V battery (ETZ-9-BS)

Product code

• ETZ-9-BS

Properties

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

Turn signal (LED)

Product code

• LED

Brake/tail light (LED)

Product code

• LED

License plate lighting (LED)

Product code

• LED

Dashboard illumination and indicator lights (LED)

Product code

• LED

Headlight (LED)

Product code

• LED

Fuse (58011109110)

Product code

• 58011109110

Properties

• 10 A

Fuse (75011088010) **Product code** • 75011088010 **Properties** • 10 A Fuse (75011088015) **Product code** • 75011088015 **Properties** • 15 A Fuse (75011088020) **Product code** • 75011088020 **Properties** • 20 A Fuse (58011109125) **Product code** • 58011109125 Properties • 25 A Fuse (75011088025) **Product code** • 75011088025 Properties • 25 A Fuse (75011088030) **Product code** • 75011088030

Properties

- 30 A

Daytime running light/position light (LED)

Product code

• LED

E Cleaning agents

Shine spray with beading effect

Recommended supplier

MOTOREX®

MOTO SHINE MS1

Chain cleaner

Recommended supplier

MOTOREX®

• CHAIN CLEAN

Preserving materials

Recommended supplier

MOTOREX®

MOTO PROTECT

Cleaning agents for plastics, glass, lacquers, metals, windshields and visors

Recommended supplier

MOTOREX®

QUICK CLEANER

Environmentally neutral universal cleaning agent

Recommended supplier

MOTOREX®

MOTO CLEAN UNIVERSAL

F Icons

F.1 Symbol colors

F.1.1 Red symbols

Red symbols indicate a fault status that requires immediate intervention.



The oil pressure warning light lights up red

F.1.2 Yellow and orange symbols

Yellow and orange symbols indicate a malfunction status that requires prompt intervention. Active driving aids are also represented by yellow or orange symbols.

(ABS)	ABS warning light lights up yellow
£	The malfunction indicator light lights up yellow
<u> </u>	General warning light lights up yellow

F.1.3 Green and blue symbols

Green and blue symbols convey information.

+ +	The turn signal indicator light flashes green with a steady blinking interval
	The high beam indicator lamp lights up blue
N	The idle indicator lamp lights up green

1	draining
12 V battery	Coolant level
charging	checking
installation	Cooling system
removing	filling/bleeding
A	Customer service
ABS	D
ABS fuses	
changing	Dashboard
Accessories	ABS
Anti-lock braking system	ABS display
Auxiliary substances	Audio
	Bike info
В	Bluetooth 41
Brake discs	Call display
checking	connectivity 41
Brake fluid	coolant temperature indicator 32
adding front brake 85	Date format
adding to rear brake	display
Brake fluid level	Distance
checking on front brake 85	Extra Functions
checking on rear brake 87	favorites 40 Favorites display 33
Brake lining retainers	fuel level display
checking on front brake	Fuel Cons
checking on rear brake 89	headset pairing
Brake pad	indicator lamps
checking on front brake 86	navigation
Brake pads	Navigation display (optional)
checking on rear brake	overview 27
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checking the free travel 87	Quick Selector 1
Brakes	Quick Selector 1 display
Braking	Quick selector 2
Breakdown	Quick Selector 2 display
towing	Remote Control Mode (optional)
C	Settings
	shift light
Chain	speed
checking	speed display
cleaning	start/stop navigation (optional)
dirt, checking for	Temperature
Chain tension	time
adjusting	trip
checking	Trip 1
Clathing 11	Trip 2
Clothing	Type of audio device
Coolant	volume
changing	Warning
	

warnings	G
Date	Gear shift lever
adjusting	adjusting
Difficult operating conditions 13, 53	Н
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installation	I Implied warranty
Engine oil	Improper use
adding 120 changing 118	Indicator lamps
Engine oil level	K
checking	Key number
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F	Loading the vehicle
Figures	Luggage
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adjusting	Main fuse
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Fork protector	Motorcycle
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removing	adjusting
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changing	after storage

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