OWNER'S MANUAL 2022

READY TO RACE

RC 8C

ART. NO. 3214552EN

KTM

DEAR KTM CUSTOMER

Congratulations on your decision to purchase a KTM motorcycle. You are now the owner of a state-of-the-art, sporty motorcycle that you will continue to enjoy for a long time if you maintain it properly. We wish you good and safe riding at all times!

Enter the serial numbers of your vehicle below.

Vehicle identification number (📖 p. 12)	Dealer's stamp
Engine number (📖 p. 12)	

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.

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

ISO 9001(12 100 6061)
KTM applies quality assurance processes that lead to the highest possible product quality as defined in the ISO 9001 international quality management standard.
Issued by: TÜV Management Service

REG.NO. 12 100 6061

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This document is valid for the following models:
RC 8C (F9799V9)

3214552en

08/2021

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1.1 Symbols used

The meaning of specific symbols is described below.

	Indicates an expected reaction (e.g. of a work step or a function).
	Indicates an unexpected reaction (e.g. of a work step or a function).
	All work marked with this symbol requires specialist knowledge and technical understanding. In the interest of your own safety, have these jobs performed by an authorized KTM workshop! Your motorcycle will be optimally cared for there by specially trained experts using the auxiliary tools required.
	Indicates a page reference (more information is provided on the specified page).
	Indicates information with more details or tips.
»	Indicates the result of a testing step.
V	Indicates a voltage measurement.
A	Indicates a current measurement.
	Indicates the end of an activity, including potential rework.

1.2 Formats used

The typographical formats used in this document are explained below.

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

2 SAFETY ADVICE

2.1 Use definition – intended use

This vehicle has been designed and built to withstand the normal stresses and strains of racing.

Info
Only operate this vehicle in closed-off areas remote from public road traffic.

2.2 Misuse

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

2.3 Safety advice

A number of safety instructions need to be followed to operate the product described safely. Therefore read this instruction and all further instructions included carefully. The safety instructions are highlighted in the text and are referred to at the relevant passages.

Info
Various information and warning labels are attached in prominent locations on the product described. Do not remove any information or warning labels. If they are missing, you or others may not recognize dangers and may therefore be injured.

2.4 Degrees of risk and symbols

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

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

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

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

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

2.5 Tampering warning

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

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

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

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

1 Removal or puncturing of the main silencers, baffles, header pipes or any other components which conduct exhaust gases.

2 Removal or puncturing of parts of the intake system.

3 Lack of proper maintenance.

4 Replacing moving parts of the vehicle, or parts of the exhaust system or intake system, with parts other than those specified by the manufacturer.

2.6 Safe operation

Danger

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

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

Danger

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

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

Warning

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

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

Only operate the vehicle when it is in perfect technical condition, in accordance with its intended use, and in a safe and environmentally compatible manner.
Have malfunctions that impair safety promptly eliminated by an authorized KTM workshop.
Adhere to the information and warning labels on the vehicle.

2.7 Protective clothing

Warning

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

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

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

2.8 Work rules

Unless specified otherwise, the ignition must be turned off during all work (models with ignition lock, models with remote key) or the engine must be at a standstill (models without ignition lock or remote key).
Special tools are necessary for certain tasks. The tools are not a component of the vehicle, but can be ordered using the number in parentheses. Example: bearing puller (15112017000)
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).
In the case of certain screws, a screw adhesive (e.g. **Loctite®**) is required. Observe the manufacturer's instructions.
If thread locker (e.g., **Precote®**) has already been applied to a new part, do not apply any additional thread locker.
After disassembly, clean the parts that are to be reused and check them for damage and wear. Change damaged or worn parts.
After completing a repair or service work, check the operating safety of the vehicle.

2.9 Environment

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

2.10 Owner's Manual

Read this owner's manual carefully and completely before making your first trip. The Owner's Manual contains useful information and many tips on how to operate, handle, and service your motorcycle. This is the only way to find out how best to customize the vehicle for your own use and how you can protect yourself from injury.

Tip
Store the Owner's Manual on your terminal device, for example, so that you can read it whenever you need to.

If you would like to know more about the vehicle or have questions on the material you read, please contact an authorized KTM dealer.
The Owner's Manual is an important component of the vehicle. If the vehicle is sold, the Owner's Manual must be downloaded again by the new owner.
The Owner's Manual can be downloaded several 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 printed copy can also be ordered from your authorized KTM dealer.
International KTM Website: KTM.COM

3.1 Manufacturer and implied warranty

The work prescribed in the service schedule must only be carried out in an authorized KTM workshop and confirmed in the **KTM Dealer.net**, as otherwise all warranty claims will be void. Damage or secondary damage caused by tampering with and/or conversions on the vehicle are not covered by the manufacturer warranty.

3.2 Fuel, auxiliary substances

Note

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

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

Use fuels and auxiliary substances in accordance with the Owner's Manual and specification.

3.3 Spare parts, technical accessories

For your own safety, only use spare parts and accessory products that are approved and/or recommended by KTM and have them installed by an authorized KTM workshop. KTM accepts no liability for other products and any resulting damage or loss.
Certain spare parts and accessory products are specified in parentheses in the descriptions. Your authorized KTM dealer will be glad to advise you.

The latest news **KTM PowerParts** on your vehicle can be found on the KTM website.
International KTM Website: KTM.COM

3.4 Service

A prerequisite for perfect operation and prevention of premature wear is that the service, care, and tuning work on the engine and chassis 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 considerably more rapid wear of components such as the air filter, drive train, brake system, or suspension components. For this reason, it may be necessary to inspect or replace parts before the next scheduled service.
It is imperative that you adhere to the stipulated run-in times and service intervals. If you observe these exactly, you will ensure a much longer service life for your motorcycle.
The relevant mileage or time interval is whichever occurs first.

3.5 Figures

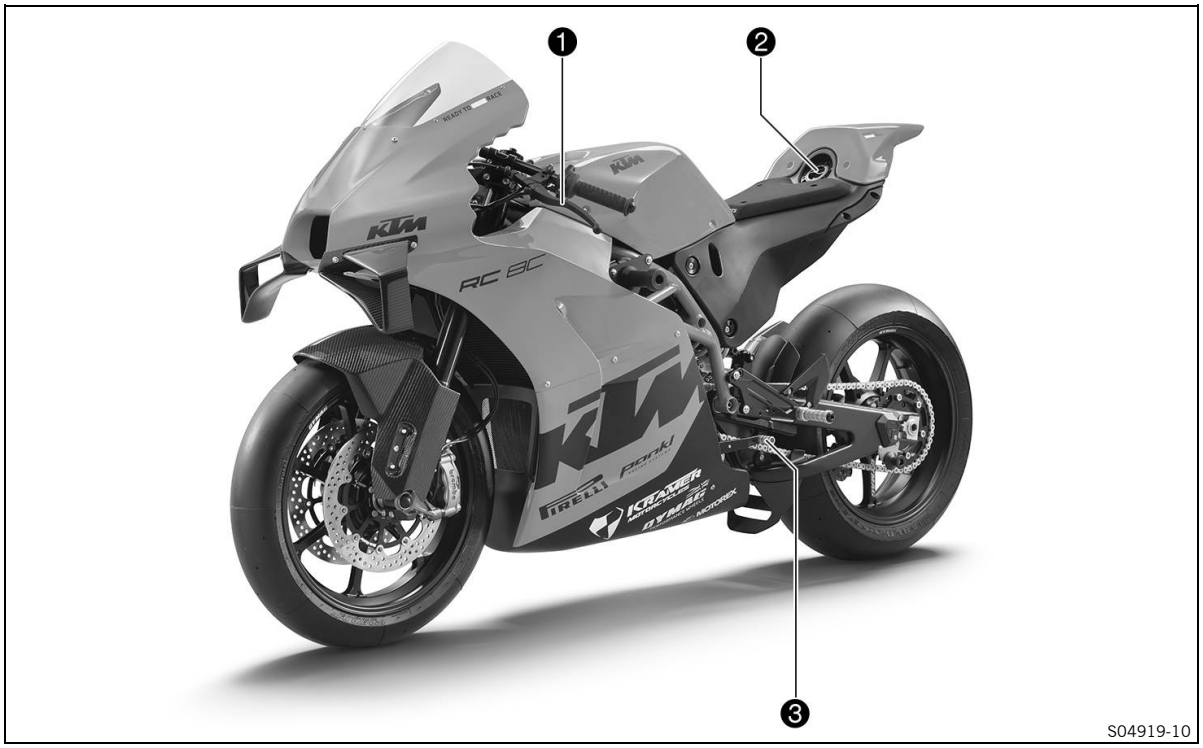
The figures contained in the manual may depict special equipment.
In the interest of clarity, some components may be shown disassembled or may not be shown at all. It is not always necessary to disassemble the component to perform the activity in question. Please follow the instructions in the text.

3.6 Customer service

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

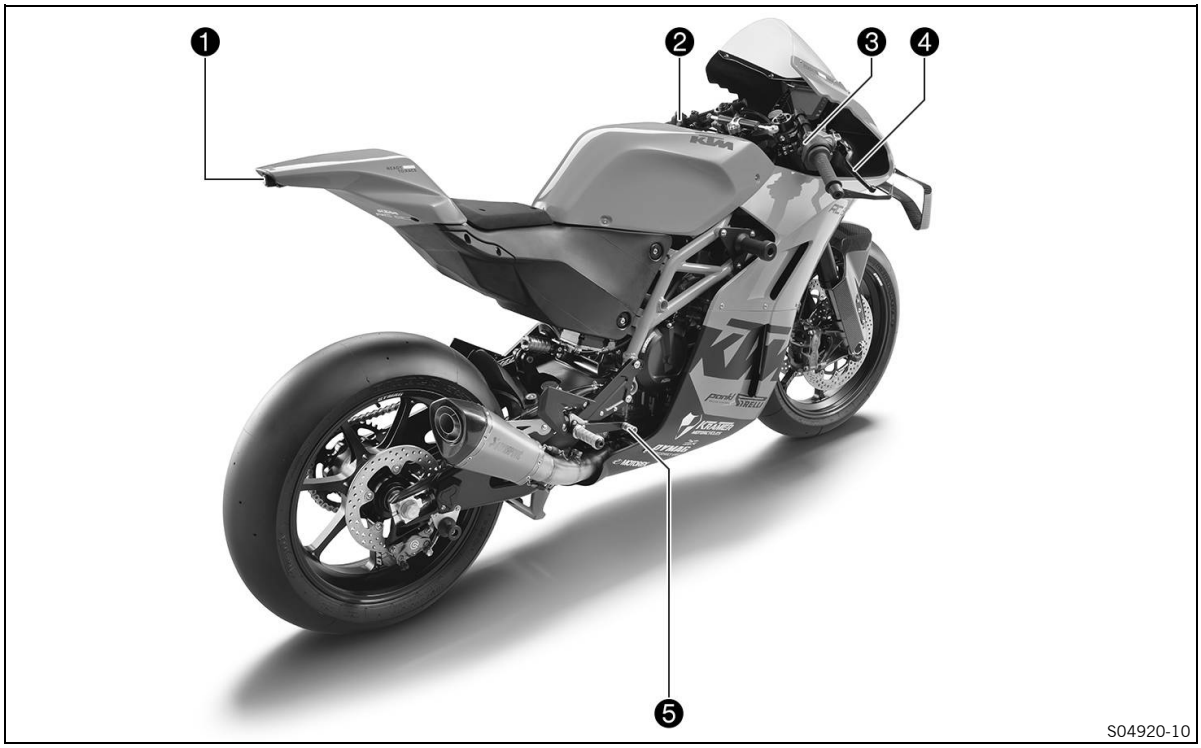
A list of authorized KTM dealers can be found on the KTM website.
International KTM Website: KTM.COM

4.1 View of vehicle, front left (example)



1 Clutch lever (📖 p. 13)
2 Fuel tank filler cap
3 Shift lever (📖 p. 17)

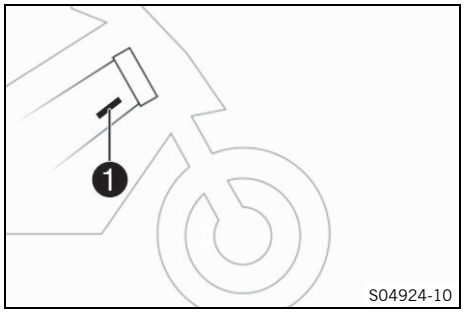
4.2 View of vehicle, rear right (example)



1. Tail light (p. 14)
2. Throttle response (p. 14)
2. Engine braking effect (p. 15)
2. Pit limiter (p. 15)
3. Start button (p. 14)
3. Emergency OFF switch (p. 14)
4. Hand brake lever (p. 13)
5. Foot brake lever (p. 18)

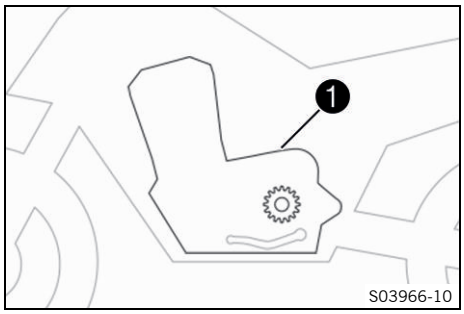
5 SERIAL NUMBERS

5.1 Vehicle identification number



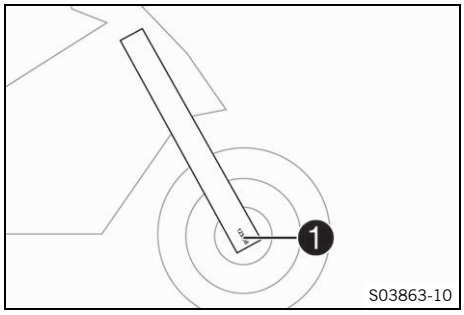
The vehicle identification number ❶ is stamped on the right side of the frame.

5.2 Engine number



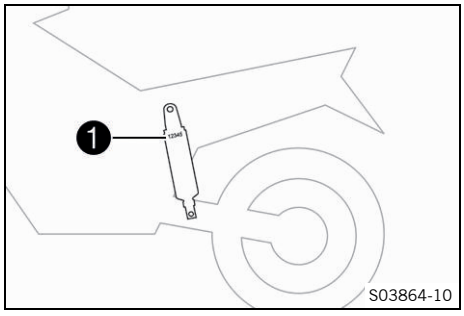
Engine number ❶ is embossed on the left side of the engine above the engine sprocket.

5.3 Fork article number



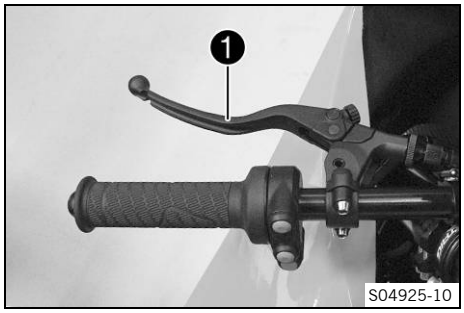
The fork article number ❶ is stamped on the inside of the axle clamp.

5.4 Shock absorber article number



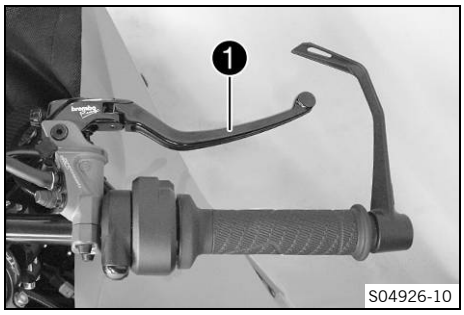
Shock absorber article number ❶ is stamped on the top of the shock absorber above the adjusting ring towards the motor side.

6.1 Clutch lever



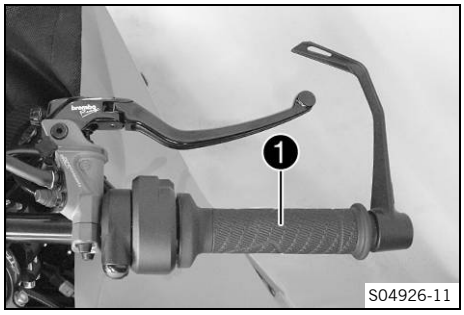
Clutch lever ❶ is fitted on the handlebar on the left.

6.2 Hand brake lever



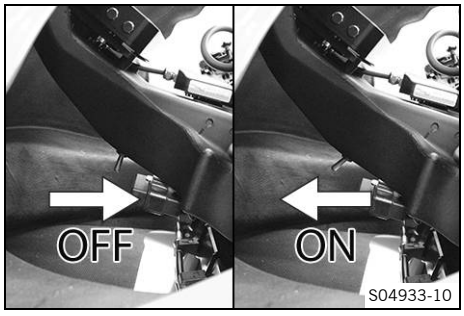
The front brake is engaged using the hand brake lever.
The hand brake lever ❶ is located on the right side of the handlebar.

6.3 Throttle grip



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

6.4 Main switch for power supply



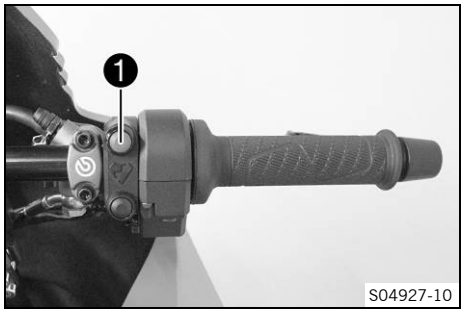
Tilt switch ❶ is located below the combination instrument.

Info
To maintain the GPS reception of the combination instrument, it is recommended that you switch the ignition on and off using the emergency OFF switch (📖 p. 14).
The main switch (📖 p. 13) of the power supply remains switched on.

Possible states

OFF	Power supply from **OFF** – In this position, the electric circuit is interrupted, a running engine stops, and cannot be started.
ON	Power supply on **ON** – In this position, the electric circuit is closed and the engine can be started.

6.5 Emergency OFF switch



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

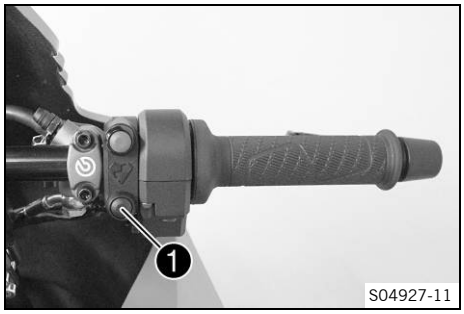
Info

To maintain the GPS reception of the combination instrument, it is recommended that you switch the ignition on and off using the emergency OFF switch (📖 p. 14).
The main switch (📖 p. 13) of the power supply remains switched on.

Possible states

OFF	Emergency OFF switch **not** pushed in – In this position, the ignition circuit is interrupted, a running engine stops, and cannot be started.
ON	Emergency OFF switch **pushed in** – This position is required for operation; the ignition circuit is closed.

6.6 Start button

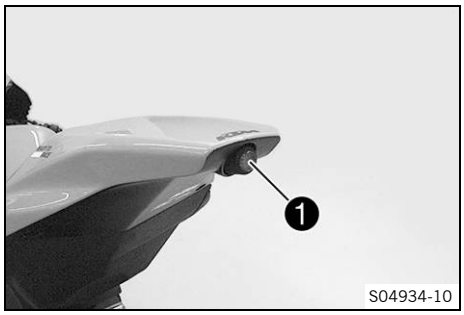


Start button ❶ is fitted on the right side of the handlebar.

Possible states

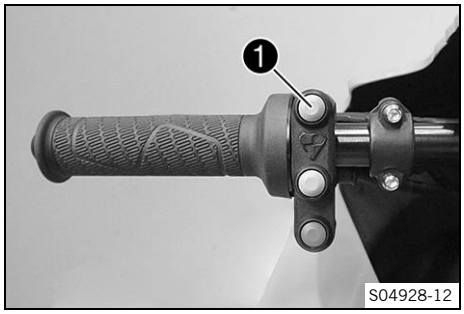
- Start button in the basic position
- Start button pressed – In this position, the starter motor is actuated.

6.7 Tail light



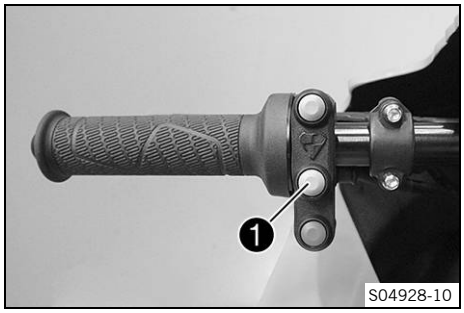
Tail light ❶ is installed in the rear.

6.8 Throttle response



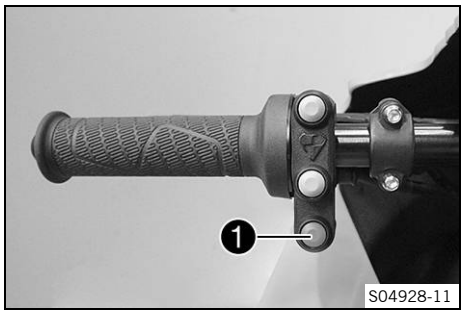
The button for throttle response ❶ is fitted on the left of the handlebar.

6.9 Engine braking effect



The button for engine braking effect ❶ is fitted on the left of the handlebar.

6.10 Pit limiter



The button for pit limiter ❶ is fitted on the left of the handlebar.

6.11 Indicator lamps overview

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.

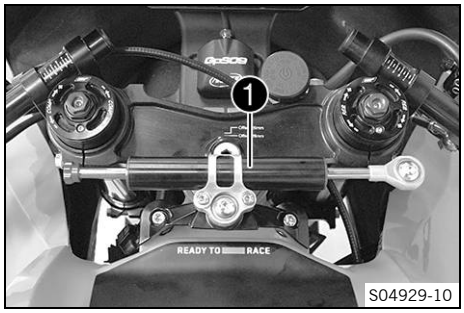
Info

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.
A detailed description of the combination instrument can be found at **www.aim-sportline.com**.

Possible states

	Malfunction indicator lamp lights up yellow – The OBD has detected a malfunction in the vehicle electronics.
	The oil pressure warning lamp lights up red – The oil pressure is too low. Stop immediately, taking care not to endanger yourself or other road users in the process, and switch off the engine.
	The coolant temperature warning lamp lights up red – The coolant temperature is too high.
	The battery warning lamp lights up red – The 12 V battery is not charging.

6.12 Steering damper



Steering damper ❶ suppresses shocks to the steering arising from acceleration on uneven ground at high speed or when the load is temporarily taken from the front wheel.
The steering damper is adjusted to suit the riding style and the road conditions. For high speeds, a setting with high damping can be chosen to make the best possible use of the steering damper function. In slow, tight bends, intensive damping can negatively affect handling and steering precision, so the damping should be set to low.

6.13 Opening the fuel tank filler cap

Danger

Fire hazard Fuel is highly flammable.

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

- Do not fuel the vehicle in the vicinity of open flames or lit cigarettes.
- Switch off the engine for refueling.
- Make sure that no fuel is spilled; particularly not on hot parts of the vehicle.
- If any fuel is spilled, wipe it off immediately.
- Observe the specifications for refueling.

Warning

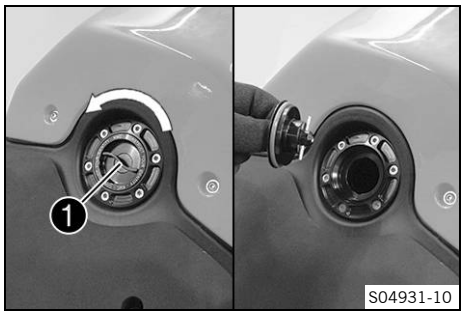
Danger of poisoning Fuel is poisonous and a health hazard.

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

Note

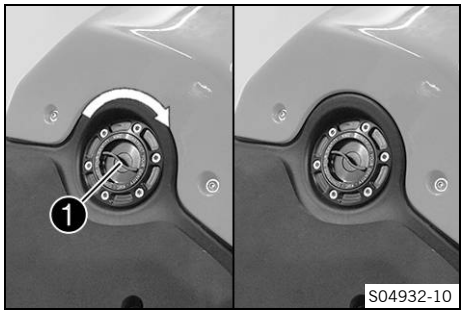
Environmental hazard Improper handling of fuel is a danger to the environment.

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



- Press in fuel tank quick release ❶ and turn counterclockwise.
- Take off the fuel tank cover.

6.14 Closing the fuel tank filler cap



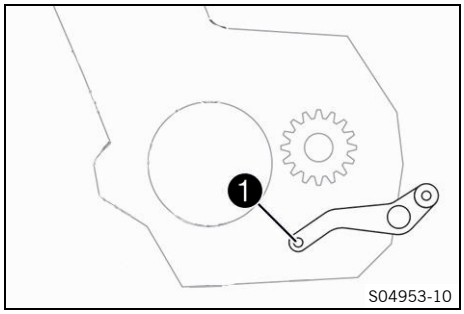
- Position the fuel tank cover.

  Guideline

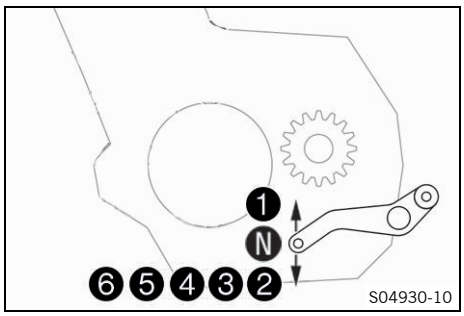
The fuel tank cover must not protrude.

- Turn fuel tank quick release ❶ clockwise.

6.15 Shift lever

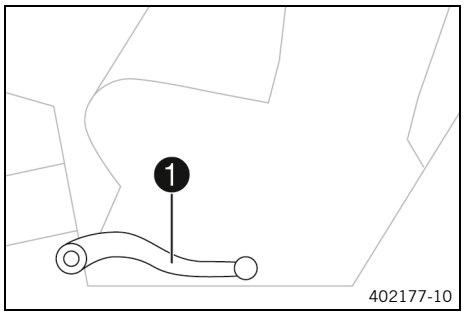


Shift lever ❶ is located in front of the left footrest.



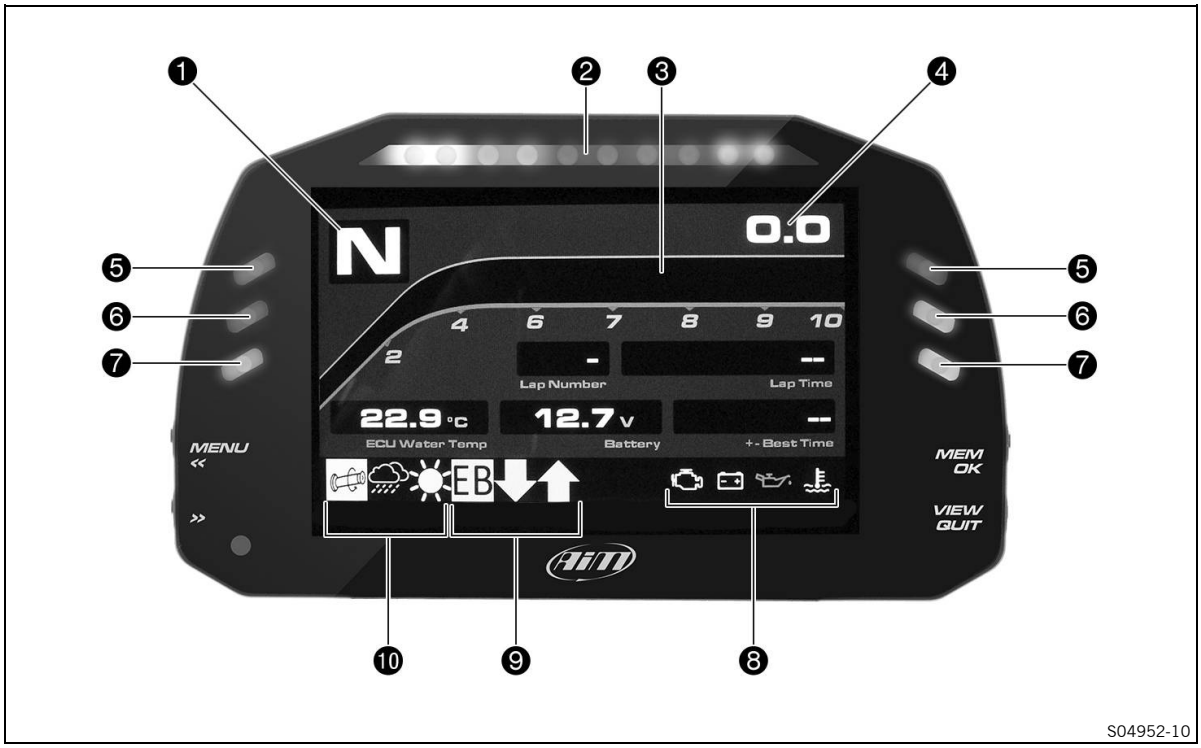
The gear positions can be seen in the figure.
The neutral or idle position is between the first and second gears.

6.16 Foot brake lever



Foot brake lever ❶ is located in front of the right footrest.
The foot brake lever is used to activate the rear brake.

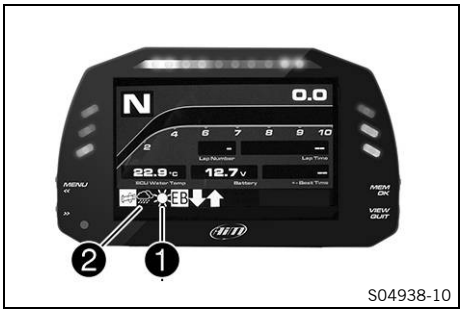
7.1 Display



Info
The figure shows the start screen of the combination instrument.
A detailed description of the combination instrument can be found at **www.aim-sportline.com**.

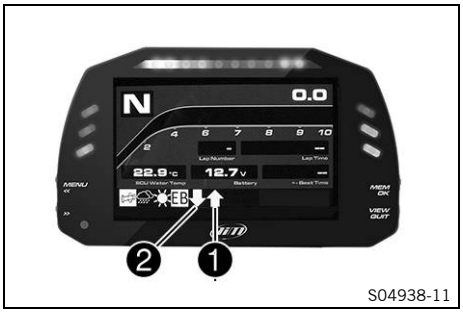
1. Gear display
2. Shift warning light
3. Tachometer
4. Lap time
5. Coolant temperature warning lamp
   Lights up blue < 65 °C, lights up red > 105 °C, flashes red > 110 °C.
6. Oil pressure warning lamp
   Lights up red if the oil pressure warning lamp is active.
7. Malfunction indicator lamp
   Lights up yellow if the engine indicator lamp is active.
9. Indicator lamps
10. Engine braking effect setting
11. Throttle response setting

7.2 Throttle response



The throttle response setting is shown in section ❶ of the display.
In section ❷ the pre-selection for the throttle response is displayed.

7.3 Engine braking effect

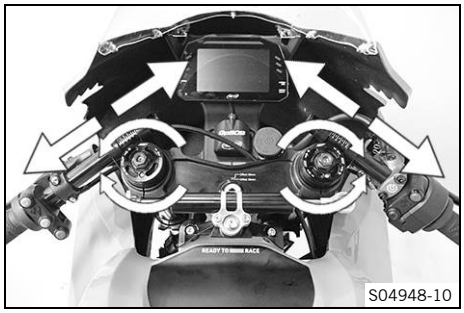


The engine braking effect setting is shown in section ❶.
In section ❷, the pre-selection for the engine braking effect is displayed.

7.4 Service hour counter

– Press button **MENU** briefly.
  ✔ The main menu opens.
– Press one of the arrow buttons on the left side repeatedly until menu item **Counters** is selected.
– Press button **OK**.
  ✔ The service hour counter and trip odometer are displayed.
– Press button **QUIT** repeatedly until the main menu is closed.
  ✔ The combination instrument shows the start screen again.

8.1 Handlebar position

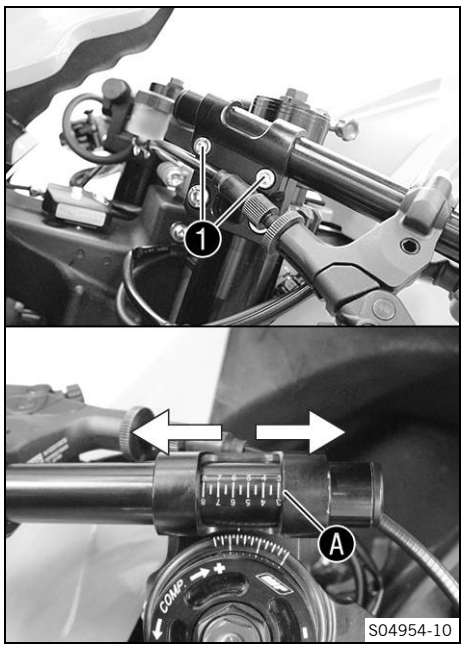


The width and angle of the handlebar stubs can be adjusted variably.

Info
The handlebar stub position must be identical on the left and right of the vehicle.

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.



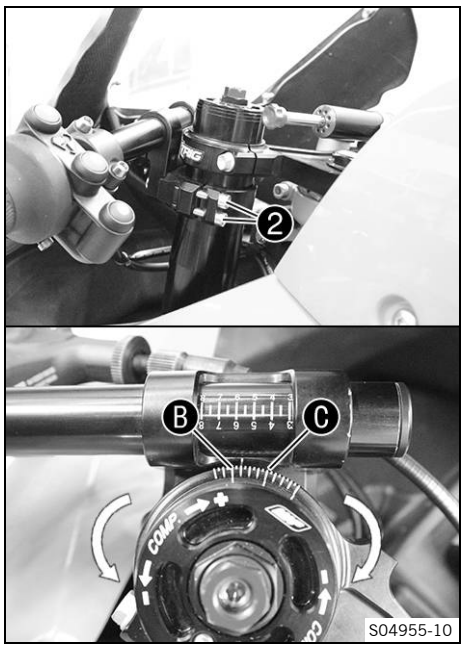
– Adjust **the handlebar width**.
– Loosen screws ❶. Set the width of the handlebar.
Guideline

0 ... 10
Mount the left and right handlebar in the same position.

Info
Read the setting at the inner edge Ⓐ.
Do not kink the cables and lines.
After adjusting the handlebar width, check the steering for freedom of movement.

– Tighten screws ❶.
Guideline

Screw, handlebar stub clamp	M6	10 Nm (7.4 lbf ft)



– Adjust **the handlebar angle**.
– Loosen screws ❷. Adjust the angle and height of the handlebar.

Guideline

Standard distance between upper triple clamp and handlebar clamp	10 mm
Mount the left and right handlebar in the same position.	

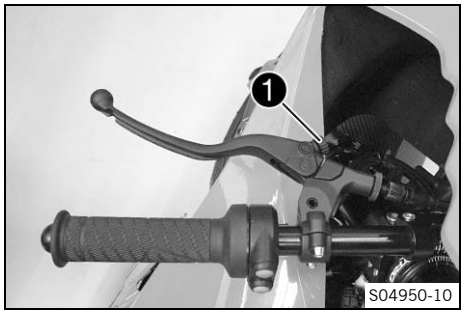
– Tighten screws ❷.

Guideline

Screw, handlebar stub clamp on fork tube	M6	15 Nm (11.1 lbf ft)

Info
The angle setting is only possible in the area between Ⓑ and Ⓒ.
Do not kink the cables and lines.
After adjusting the handlebar angle, check the steering for freedom of movement.

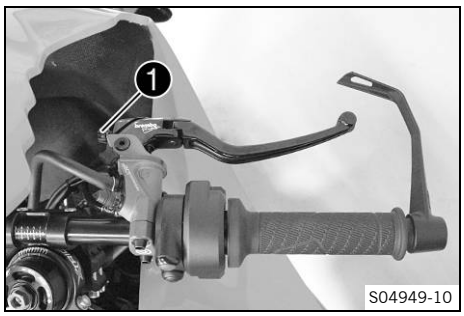
8.3 Adjusting the basic position of the clutch lever



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

Info
Do not make any adjustments while riding.

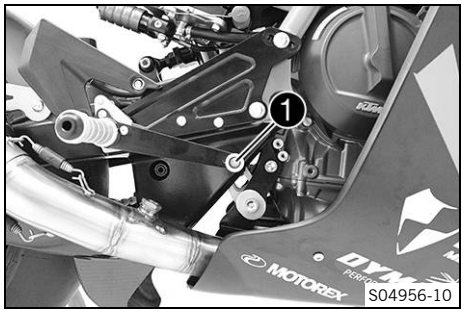
8.4 Adjusting the basic position of the hand brake lever



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

Info
Do not make any adjustments while riding.

8.5 Setting the step plate of the foot brake lever



– Remove screw ❶.
– Screw in foot brake lever stub at the desired position.

Guideline

Standard	Stub in front position

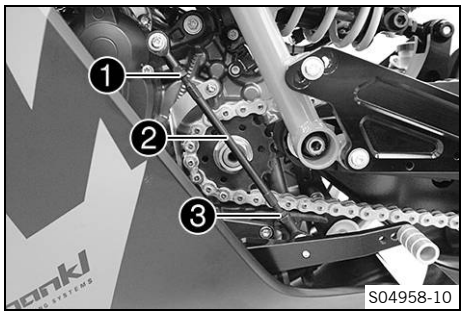
Info
The foot brake lever stub can be set to two different positions.

– Mount and tighten screw ❶.

Guideline

Screw, rear brake lever stub	M6	10 Nm (7.4 lbf ft) **Loctite®243™**

8.6 Adjusting the basic position of the shift lever



– Loosen nut ❶ while holding stud ❷.

Info
Nut ❶ has an LH thread.

– Loosen nut ❸ while holding stud ❷.
– Turn stud ❷ to adjust the shift lever.

Info
The range of adjustment is limited.
If the adjustment range is not sufficient, use the extension included.
The shift lever must not come into contact with any other vehicle components during the shift procedure.
The shift linkage must be correctly adjusted in all footrest positions to ensure correct functioning of the shift mechanism.

– Tighten nut ❸ while holding stud ❷.

Guideline

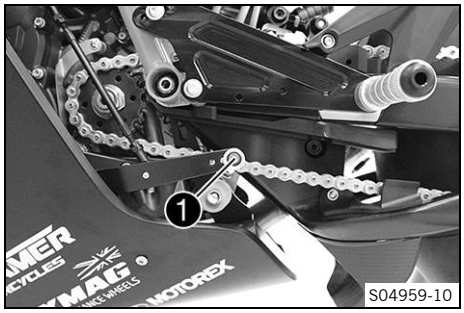
Nut, shift rod	M6	10 Nm (7.4 lbf ft)

– Tighten nut ❶ while holding stud ❷.

Guideline

Nut, shift rod	M6LH	10 Nm (7.4 lbf ft)

8.7 Setting the shift lever stub



– Remove screw ❶.
– Screw in the shift lever stub at the desired position.

Guideline

Standard	Stub in rear position

Info
The shift lever stub can be set to three different positions.
The shift lever stud is set at the factory and does not need to be changed.

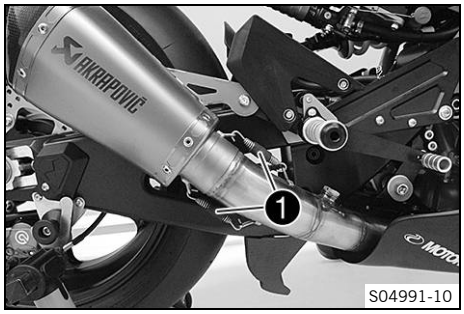
– Mount and tighten screw ❶.

Guideline

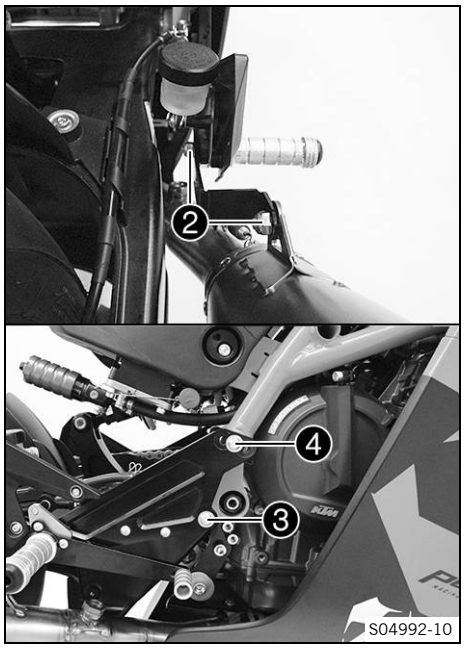
Screw, shift lever stub	M6	10 Nm (7.4 lbf ft) **Loctite®243™**

8.8 Adjusting the footrests

Preparatory work
– Raise the motorcycle with the rear lifting gear. (📖 p. 41)



Main work
– Remove retainer springs ❶ of the main silencer.



– Release fitting ❷.
– Unscrew screw ❸ and remove screw ❹.
– Position footrest with brake cylinder at one of the three possible positions.

Info
The adjustable footrest allows up to three footrest positions. Adjust the footrest position equally on both sides.

– Mount and tighten screw ❹.

Guideline

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

– Tighten screw ❸.

Guideline

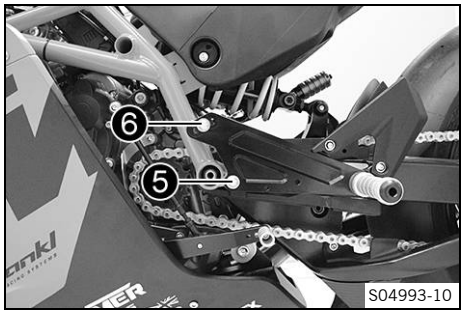
Screw, footrest bracket	M8	25 Nm (18.4 lbf ft) **Loctite®243™**

– Tighten fitting ❷.

Guideline

Screw, main silencer	M8	18 Nm (13.3 lbf ft)

– Attach retainer springs ❶ of the main silencer.



– Unscrew screws ❺ and remove screw ❻.
– Position the footrest at one of the three possible positions.

Info
The adjustable footrest allows up to three footrest positions. Adjust the footrest position equally on both sides.

– Mount and tighten screw ❻.

Guideline

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

– Tighten screw ❺.

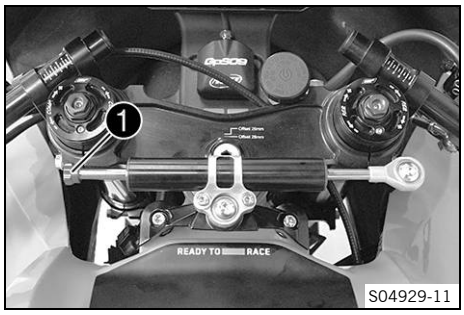
Guideline

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

Finishing work
– Check basic position of the shift lever. (📖 p. 101)
– Adjust the basic position of the shift lever. 🔧 (📖 p. 23)
– Remove the rear of the motorcycle from the lifting gear. (📖 p. 41)

8.9 Adjusting the steering damper

Info
In contrast to other absorbing elements, the steering damper is adjusted with the absorbing element open.



– Turn adjusting screw ❶ counterclockwise to the last detectable click.
– Adjust the steering damper according to your riding style and the road conditions by turning adjusting screw ❶ clockwise.

Guideline

Steering damper adjustment range	1 … 30 clicks
Standard	16 clicks
Do not change the adjustment of the steering damper during the journey.	

– After adjusting the steering damper, check the steering for freedom of movement.
  ✓ The handlebar can be moved from one stop to the other without a locking tendency.

9.1 Advice on preparing for first use

Danger

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

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

Warning

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

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

Warning

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

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

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

Warning

Danger of accidents An unadapted riding style impairs the handling characteristic.

– Adapt your riding speed to the road conditions and your riding ability.

Warning

Danger of accidents The vehicle is not designed to carry passengers.

– Do not ride with a passenger.

Warning

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

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

– Take your foot off the foot brake lever if you do not want to brake.

Warning

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

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

Warning

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

– Do not leave the vehicle unattended if the engine is running.
– Protect the vehicle against access by unauthorized persons.

Info

When using the motorcycle, remember that others may be 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.
– Check the coolant level. (📖 p. 96)
– Get to know the controls.
– Adjust basic position of the clutch lever. (📖 p. 22)

– Adjust basic position of the hand brake lever. (📖 p. 22)
– Check the free travel of the foot brake lever. (📖 p. 80)
– Adjust the basic position of the shift lever. 🔧 (📖 p. 23)
– Get used to the handling characteristic of the motorcycle on suitable terrain before undertaking a more challenging ride.

Info
This vehicle is not approved for use on public roads.

– Hold the handlebar firmly with both hands and keep your feet on the footrests when riding.
– Do not carry the luggage.
– Do not exceed the maximum permissible weight and maximum permissible axle loads.
Guideline

Maximum permissible overall weight	430 kg (948 lb.)
Maximum permissible front axle load	160 kg (353 lb.)
Maximum permissible rear axle load	270 kg (595 lb.)

– Run the engine in. (📖 p. 27)

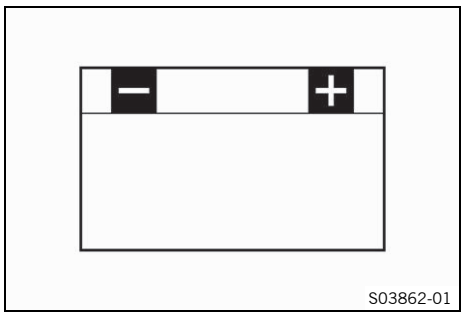
9.2 Running in the engine

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

Maximum engine speed	
During the first operating hour	7,000 rpm

– Avoid fully opening the throttle.

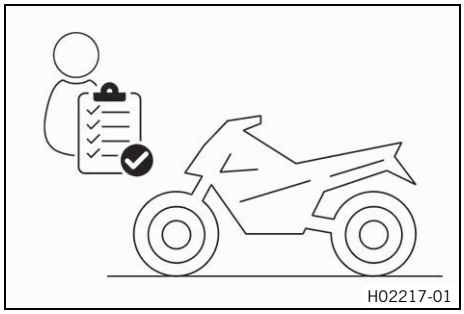
9.3 Starting power of lithium-ion batteries at low temperatures



Lithium-ion batteries are far lighter than lead batteries, have a low self-discharge rate, and have more starting power at temperatures over 15 °C (60 °F). At low temperatures, however, the starting power of lithium-ion batteries drops to below that of lead batteries.
Multiple starting attempts may be needed. Press the start button for 5 seconds, and wait 30 seconds between attempts. The pauses are necessary so that the heat created can distribute through the lithium-ion battery and the lithium-ion battery is not damaged.
If the charged lithium-ion battery is unable to actuate the starter motor or does so only weakly when temperatures are below 15 °C (60 °F), the battery is not faulty but needs to be warmed up internally to increase its starting power (current output).
The starting power increases as the battery warms up.

10.1 Checks and maintenance measures when preparing for use

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


H02217-01

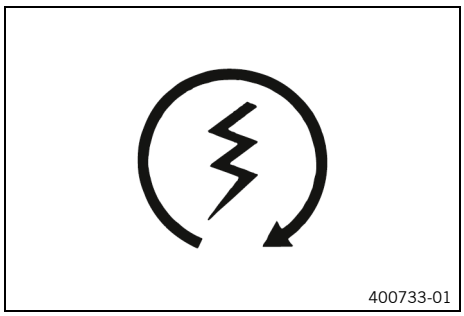
- Check the engine oil level. (p. 103)
- Check the front brake fluid level. (p. 70)
- Check the rear brake fluid level. (p. 75)
- Check the front brake linings. (p. 72)
- Check the rear brake linings. (p. 77)
- Check that the brake system is functioning properly.
- Check the chassis for leakage.
- Check that the chassis is functioning properly.
- Check the coolant level. (p. 96)
- Check for chain dirt accumulation. (p. 61)
- Check the chain, rear sprocket, and engine sprocket. (p. 64)
- Check the chain tension. (p. 62)
- Check the tire condition. (p. 85)
- Check the tire pressure. (p. 86)
- Check the settings of all controls and ensure that they can be operated smoothly.
- Check all screws, nuts, and hose clips regularly for tightness.
- Check the fuel level.

10.2 Starting the vehicle

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

Note
Engine damage High revving speed with a cold engine negatively impacts the lifespan of the engine.
- Always run the engine warm at a low speed.

Preliminary work
- Remove the rear of the motorcycle from the lifting gear. (p. 41)



Main work

– Put the emergency OFF switch to the pushed-in position.
– Switch on power supply by setting the tilt switch into the position **ON**.
  ✓ After you switch on the ignition, you can hear the fuel pump working for about two seconds. The function check of the combination instrument is run at the same time.
– Shift the transmission into neutral.
  ✓ The idle indicator lamp **N** lights up.
– Press the start button.

Info

Press the start button when the combination instrument function check has finished.
Do not open the throttle to start.
Press the start button for a maximum of 5 seconds.
Wait for at least 5 seconds before trying again.
This motorcycle is equipped with a safety starting system. You can only start the engine if the transmission is in neutral or if the clutch lever is pulled when a gear is engaged.

10.3 Starting off

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

Tip

If the engine dies while starting off, only pull the clutch lever and press the electric starter button. You do not need to shift into neutral.

10.4 Shifting, riding

Warning

Danger of accidents Abrupt load alterations can cause the vehicle to get out of control.
– Avoid abrupt load alterations and sudden braking actions.
– Adapt your speed to the road conditions.

Warning

Danger of accidents If you change down at high engine speed, the rear wheel blocks and the engine races.
– Do not change into a low gear at high engine speed.

Warning

Danger of accidents Adjustments to the vehicle distract attention from traffic activity.
– Make all adjustments when the vehicle is at a standstill.

Warning

Danger of accidents A risky riding style constitutes a major risk.

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

Warning

Danger of accidents Cold tires have reduced road grip.

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

Warning

Danger of accidents New tires have reduced road grip.

The contact surface on new tires is not yet roughened.

– Run in new tires with moderate riding at alternating angles.

Running-in phase	200 km (124 mi)

Warning

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

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

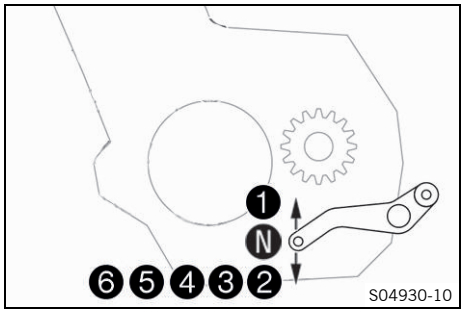
Note

Engine failure Overheating damages the engine.

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

Info

If 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.



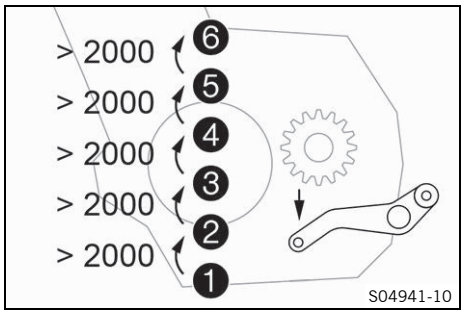
– Shift into a higher gear when conditions allow (incline, road situation, etc.).
– Release the throttle while simultaneously pulling the clutch lever, shift into the next gear, release the clutch lever, and open the throttle.

Info

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

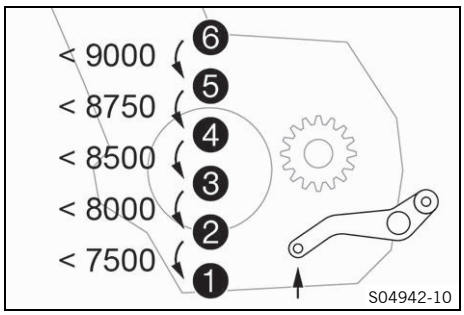
– Only open the throttle as much as the engine can handle – abrupt throttle grip opening increases fuel consumption. Accelerate only up to a speed suitable for the road surface and weather conditions. Particularly in bends, do not shift, and accelerate very carefully.
– Brake if necessary and close the 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.
– Avoid frequent or lengthy slipping of the clutch. This causes the engine oil, engine and cooling system to heat up.
– Ride at a low engine speed instead of at a high engine speed with a slipping clutch.
– If the malfunction indicator lamp lights up during a trip, 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.



– The Quickshifter allows you to shift up in the rev range shown without pulling the clutch lever.

Info
The minimum engine speed before shifting up in revolutions per minute is shown in the figure.
Press the shift lever to the stop quickly without changing the throttle twist grip position.



– The Quickshifter allows you to shift down in the rev range shown without pulling the clutch lever.

Info
The maximum engine speed before shifting down in revolutions per minute is shown in the figure.
Pull the shift lever to the stop quickly without changing the throttle twist grip position.

10.5 Applying the brakes

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

Warning
Danger of accidents A spongy pressure point on the front or rear brake reduces braking efficiency.
– Check the brake system and do not continue riding until the problem is eliminated. (Your authorized KTM workshop will be glad to help.)

Warning
Danger of accidents The brake system fails in the event of overheating.
If the foot brake lever is not released, the brake linings drag continuously.
– Take your foot off the foot brake lever if you do not want to brake.

Warning
Danger of accidents The rear wheel can lock due to the engine braking effect.
– Pull in the clutch, if you perform emergency or full braking, or if you brake on a slippery ground.

Warning

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

– If possible finish braking before going into a bend.

– Always finish braking before you go into a bend. Shift down to a lower gear appropriate to your speed.
– Use the braking effect of the engine on long downhill stretches. Shift back one or two gears, but do not over-rev the engine when doing so. This means that significantly less braking is required and the brake system does not overheat.

10.6 Stopping, parking

Warning

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

– Do not leave the vehicle unattended if the engine is running.
– Protect the vehicle against access by unauthorized persons.

Warning

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

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

Note

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

Significant damage may be caused if the vehicle rolls away or falls over.
The components for parking the vehicle are designed only for the weight of the vehicle.

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

Note

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

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

– Apply the brakes on the motorcycle.
– Shift the transmission into neutral.
– Switch off power supply by setting the tilt switch into the position OFF.
– Park the motorcycle on firm ground.

Info

Park the motorcycle in the shade when possible.

10.7 Transporting

Note

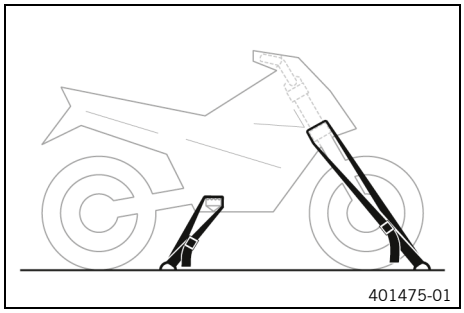
Danger of damage The parked vehicle can roll away or fall over.

– Park the vehicle on a firm and level surface.

Note

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

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



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

10.8 Refueling

Danger

Fire hazard Fuel is highly flammable.

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

– Do not fuel the vehicle in the vicinity of open flames or lit cigarettes.
– Switch off the engine for refueling.
– Make sure that no fuel is spilled; particularly not on hot parts of the vehicle.
– If any fuel is spilled, wipe it off immediately.
– Observe the specifications for refueling.

Warning

Danger of poisoning Fuel is poisonous and a health hazard.

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

Note

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

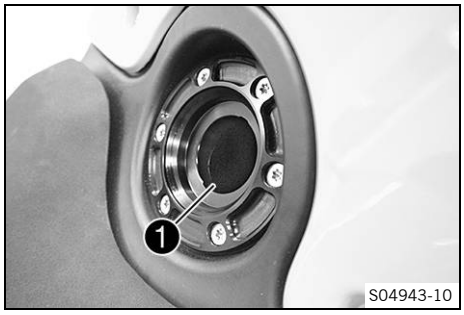
In some countries and regions, the available fuel quality and cleanliness may not be sufficient. This will result in problems with the fuel system.

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

Note

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

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



– Switch off the engine.
– Open the fuel tank filler cap. (p. 16)
– Fill the fuel tank with fuel up to the lower edge ❶ of the fuel filler.

Total fuel tank capacity, approx.	16 l (4.2 US gal)	Super unleaded (ROZ 98 / RON 98 / PON 94) (p. 137)

– Close the fuel tank filler cap. (p. 17)

11.1 Additional information

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 can always be found on KTM Dealer.net. Your authorized KTM dealer will be happy to advise you.

11.2 Service work

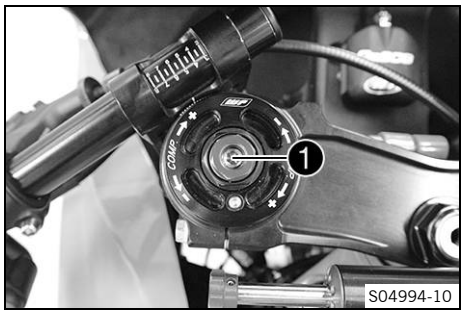
	Every 5 operating hours	Every 10 operating hours	Every 15 operating hours	Every 30 operating hours	Every 50 operating hours	Every 100 operating hours	after every race or track day	every 12 months
Read out the fault memory using the KTM diagnostics tool. 🔧	●	●	●	●	●	●	●	●
Program the shift shaft sensor. 🔧		●		●	●	●		●
Change the engine oil and the oil filter, clean the oil screens. 🔧 (📖 p. 103)	●	●	●	●	●	●	●	●
Check the brake discs. (📖 p. 70)	●	●	●	●	●	●	●	●
Check the front brake linings. (📖 p. 72)	●	●	●	●	●	●	●	●
Check the rear brake linings. (📖 p. 77)	●	●	●	●	●	●	●	●
Check the fork bearing for play. 🔧		●		●	●	●		
Check the heim joint for play. 🔧		●		●	●	●	●	
Check the shock absorber linkage. 🔧		●		●	●	●	●	
Check the tire condition. (📖 p. 85)	●	●	●	●	●	●	●	●
Check the tire pressure. (📖 p. 86)	●	●	●	●	●	●	●	●
Check the brake lines for damage and tightness.	●	●	●	●	●	●	●	●
Check the front brake fluid level. (📖 p. 70)	●		●					
Check the rear brake fluid level. (📖 p. 75)	●		●					
Check the brake pressure on the front and back on the lever.	●	●	●	●	●	●	●	●
Check the free travel of the clutch lever.	●	●	●	●	●	●		●
Clean the dust boots of the fork legs. 🔧			●	●				
Check the chain, rear sprocket, and engine sprocket. (📖 p. 64)	●	●	●	●	●	●	●	●
Check the chain tension. (📖 p. 62)	●	●	●	●	●	●	●	●
Check the coolant level. (📖 p. 96)	●	●	●	●	●	●	●	
Clean the air filter box. 🔧	●	●	●	●	●	●	●	
Clean the air filter and change as necessary. 🔧			●	●				
Check that the throttle cables are undamaged, routed without kinks, and set correctly. 🔧		●		●	●	●	●	●
Check the cables for damage and for routing without kinks. 🔧		●		●	●	●	●	●
Check the valve clearance. 🔧			●	●				
Check the clutch. 🔧		●		●	●	●		
Change the cover seal and radial shaft seal rings of the water pump. 🔧				●				
Change the glass fiber yarn filling of the main silencer. 🔧			●	●				

	Every 5 operating hours	Every 10 operating hours	Every 15 operating hours	Every 30 operating hours	Every 50 operating hours	Every 100 operating hours	after every race or track day	every 12 months
Service the fork. 🔧				•				•
Perform the shock absorber service. 🔧				•				•
Check the fuel pressure. 🔧				•				•
Change the front brake fluid. 🔧		•		•	•	•	•	•
Change the rear brake fluid. 🔧		•		•	•	•	•	•
Check the steering head bearing for play. (📖 p. 49)	•	•	•	•	•	•	•	•
Check the fuel collecting container.	•	•	•	•	•	•	•	
Check the coolant overflow reservoir.	•	•	•	•	•	•	•	
Check the frame. 🔧 (📖 p. 68)	•	•	•	•	•	•	•	
Check the link fork. 🔧 (📖 p. 69)	•	•	•	•	•	•	•	
Check the wheel bearing for play. 🔧	•	•	•	•	•	•	•	
Check the easily accessible, safety-relevant screws and nuts (e.g. front wheel spindle, rear wheel spindle, swingarm pivot) for tightness. 🔧	•	•	•	•	•	•	•	•
Grease all moving parts (e.g., hand lever, chain, ...) and check for smooth operation. 🔧	•	•	•	•	•	•		•
Check all hoses (e.g. fuel, cooling, bleeder, drainage hoses, etc.) and sleeves for cracking, tightness, and correct routing. 🔧	•	•	•	•	•	•	•	•
Change the fuel filter. 🔧				•				
Perform minor engine service including removing and installing the engine. (Change the spark plugs. Check/measure the piston, check/measure the cylinder and check the cylinder head. Change the cylinder head gasket. Check the camshaft and cam lever. Check the timing assembly. Change the clutch facings.) 🔧					•	•		
Perform major engine service including removing and installing the engine. (Change the valves, valve springs, valve spring seats, valve spring retainer and cam lever. Change the connecting rod, conrod bearing and balancer shaft bearing. Change the piston. Check the transmission and the shift mechanism. Change the cylinder head gasket. Check the oil pressure control valve. Change the oil pumps and check the lubrication system. Change the timing chain, tensioning rail and guide rail.) 🔧						•		
Final check: Check the vehicle for operating safety and take for a test ride. 🔧	•	•	•	•	•	•	•	•
Read out the fault memory after the test ride using the KTM diagnostics tool. 🔧	•	•	•	•	•	•	•	•
Make a service entry in **KTM Dealer.net**. 🔧	•	•	•	•	•	•	•	•

• Periodic interval

12.1 Adjusting the compression damping of the fork

Info
The hydraulic compression damping determines the fork suspension behavior.



– Turn adjusting screws ❶ clockwise all the way.

Info
The adjusting screw ❶ is located at the upper end of the left fork leg.

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

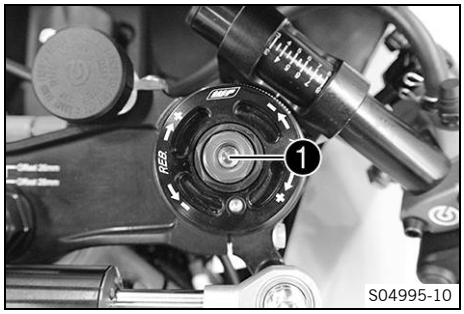
Guideline

Compression damping	
Comfort	20 clicks
Standard	16 clicks
Sport	12 clicks

Info
Turn clockwise to increase damping; turn counterclockwise to reduce damping during compression.

12.2 Adjusting the rebound damping of the fork

Info
The hydraulic rebound damping determines the fork suspension behavior.



– Turn adjusting screw ❶ clockwise all the way.

Info
Adjusting screw ❶ is located at the upper end of the right fork leg.

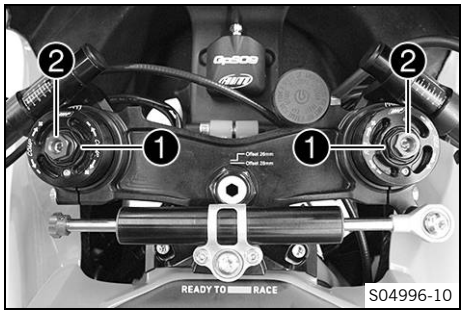
– Turn counterclockwise by the number of clicks corresponding to the fork type.

Guideline

Rebound damping	
Comfort	18 clicks
Standard	16 clicks
Sport	12 clicks

Info
Turn clockwise to increase the damping; turn counterclockwise to reduce damping when the shock absorber rebounds.

12.3 Adjusting the spring preload of the fork



Preparatory work

– Raise the motorcycle with the rear lifting gear. (📖 p. 41)

Main work

– Turn adjusting screws ❶ counterclockwise all the way.

Guideline

Do not place a load on the fork.

Info

Adjusting screws ❶ are located at the top end of the fork legs.
Make the same adjustment on both fork legs.
Do not loosen screw caps ❷.

– Turn clockwise by the number of turns corresponding to the fork type.

Guideline

Spring preload – preload adjuster	
Comfort	16 clicks
Standard	18 clicks
Sport	22 clicks

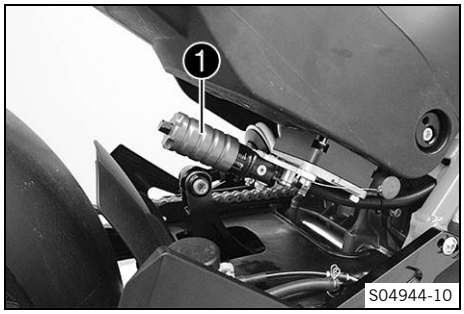
Info

Turning clockwise increases the preload; turning counterclockwise reduces the spring preload.
Changing the spring preload has no influence on the rebound damping although the adjusting screws turn during the adjustment work. However, you should also adjust the rebound damping when you alter the spring preload.

Finishing work

– Remove the rear of the motorcycle from the lifting gear. (📖 p. 41)

12.4 Adjusting the spring preload of the shock absorber



– To increase the spring preload, turn handwheel ❶ on the right side of the vehicle clockwise.

– To reduce the spring preload, turn handwheel ❶ on the right side of the vehicle counterclockwise.

Guideline

Spring preload	
Standard	12 mm (0.47 in)

12.5 Compression damping of the shock absorber

The compression damping of the shock absorber is divided into two ranges: high-speed and low-speed.
High-speed and low-speed refer to the compression speed of the rear wheel suspension and not to the vehicle speed.
The high-speed compression adjuster, for example, has an effect when riding over an asphalt edge: the rear wheel suspension compresses quickly.
The low-speed compression adjuster has an effect, for example, when riding over long ground swells: the rear wheel suspension compresses slowly.
These two ranges can be adjusted separately, although the transition between high-speed and low-speed is gradual. Thus, changes in the high-speed range affect the compression damping in the low-speed range and vice versa.

12.6 Adjusting the high-speed compression damping of the shock absorber

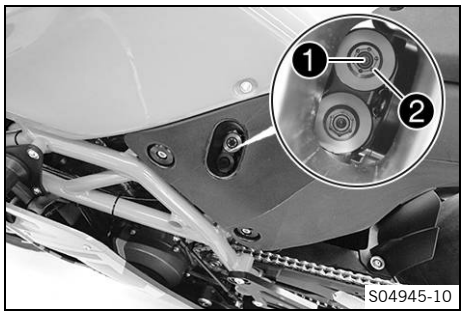
Caution

Risk of injury Parts of the shock absorber will move around if the shock absorber is detached incorrectly.
The shock absorber is filled with highly compressed nitrogen.

– Please follow the description provided. (Your authorized KTM workshop will be glad to help.)

Info

The effect of the high speed compression adjuster can be seen in the fast compression of the shock absorber.



– Turn adjusting screw ❶ all the way counterclockwise with a socket wrench.

Info

Do not loosen fitting ❷!

– Turn clockwise by the number of turns corresponding to the shock absorber type.

Guideline

High-speed compression damping	
Standard	22 turns

Info

Turn clockwise to increase damping; turn counterclockwise to reduce damping.

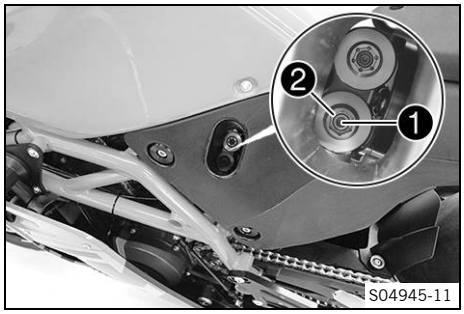
12.7 Adjusting the low-speed compression damping of the shock absorber

Caution

Risk of injury Parts of the shock absorber will move around if the shock absorber is detached incorrectly.
The shock absorber is filled with highly compressed nitrogen.

– Please follow the description provided. (Your authorized KTM workshop will be glad to help.)

Info
The effect of the low-speed compression adjuster can be seen in slow to normal compression of the shock absorber.



– Turn adjusting screw ❶ clockwise up to the last perceptible click.

Info
Do not loosen fitting ❷!

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

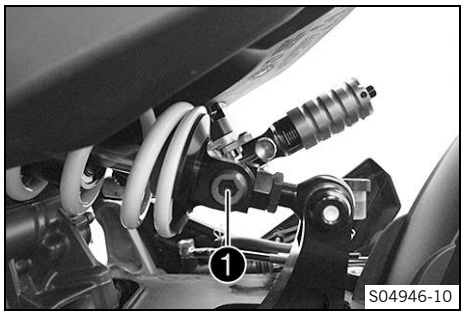
Guideline

Low-speed compression damping	
Standard	18 clicks

Info
Turn clockwise to increase damping; turn counterclockwise to reduce damping.

12.8 Adjusting the rebound damping of the shock absorber

Caution
Risk of injury Parts of the shock absorber will move around if the shock absorber is detached incorrectly. The shock absorber is filled with highly compressed nitrogen.
– Please follow the description provided. (Your authorized KTM workshop will be glad to help.)



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

Guideline

Rebound damping	
Standard	14 clicks

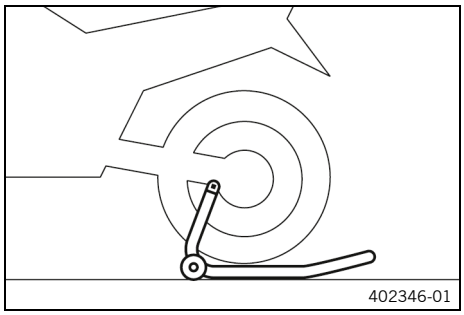
Info
Turn clockwise to increase the damping; turn counterclockwise to reduce damping when the shock absorber rebounds.

13.1 Raising the motorcycle with rear lifting gear

Note

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

– Park the vehicle on a firm and level surface.



– Insert the adapter in the rear lifting gear.

Retaining adapter (61029955144)
Rear wheel work stand (69329955000)

Info
The supports, the adapter and the lifting gear are included in the scope of supply.

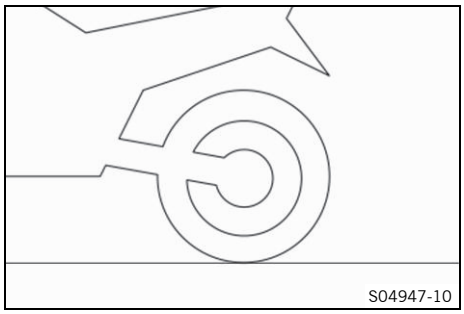
– Stand the motorcycle upright, align the lifting gear with the link fork and the adapters, and raise the motorcycle.

13.2 Removing the rear of the motorcycle from the lifting gear

Note

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

– Park the vehicle on a firm and level surface.



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

13.3 Lifting the motorcycle with the front lifting gear

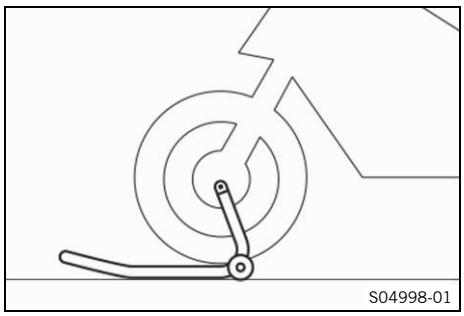
Note

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

– Park the vehicle on a firm and level surface.

Preparatory work

– Raise the motorcycle with the rear lifting gear. (p. 41)



Main work

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

Front wheel work stand, small (61129965000)

Info
Always raise the motorcycle at the rear first.

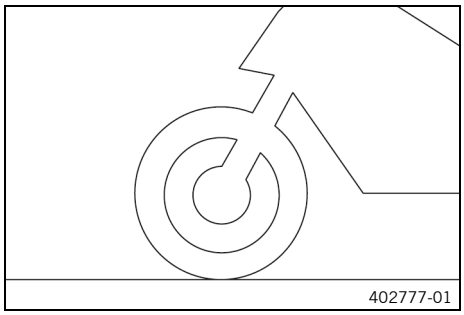
– Lift the motorcycle at the front.

13.4 Taking the motorcycle off the front lifting gear

Note

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

– Park the vehicle on a firm and level surface.



Main work

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

Finishing work

– Remove the rear of the motorcycle from the lifting gear. (p. 41)

13.5 Lifting the motorcycle with the large front lifting gear

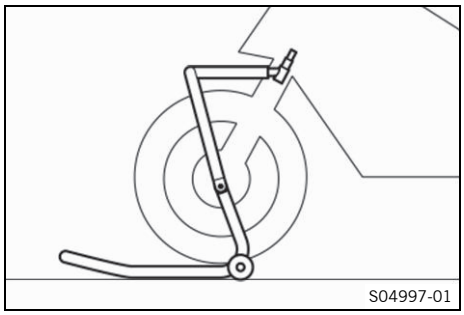
Note

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

– Park the vehicle on a firm and level surface.

Preparatory work

– Raise the motorcycle with the rear lifting gear. (p. 41)
– Remove the front spoiler. (p. 54)
– Remove the trim along with the front. (p. 56)



Main work

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

Front wheel work stand, large (69329965100)
Mounting pin (69329965020)

Info
Always raise the motorcycle at the rear first.

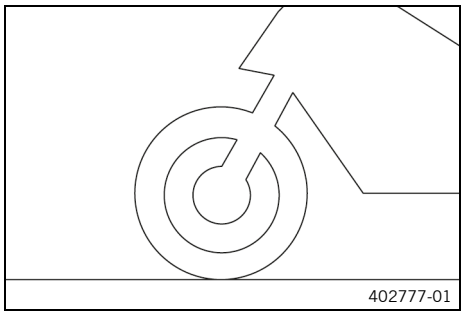
– Lift the motorcycle at the front.

13.6 Taking the motorcycle off the large front lifting gear

Note

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

– Park the vehicle on a firm and level surface.



Main work

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

Finishing work

– Install the trim along with the front. (📖 p. 56)
– Fit the front spoiler. (📖 p. 54)
– Remove the rear of the motorcycle from the lifting gear. (📖 p. 41)

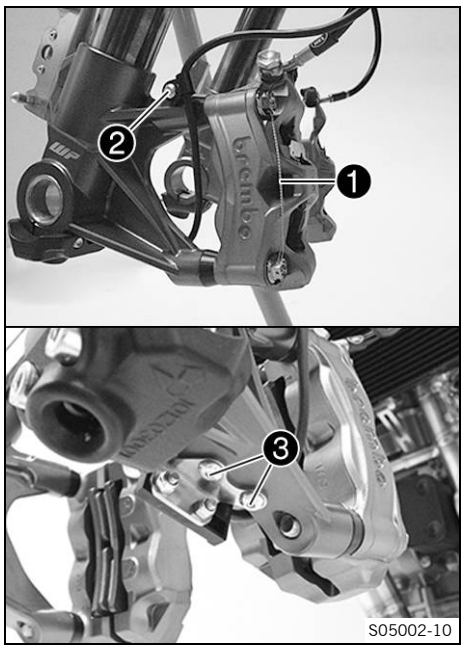
13.7 Removing the fork legs

Preparatory work

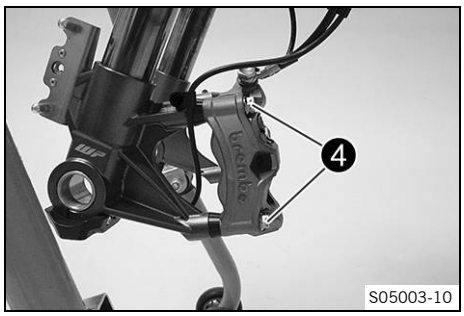
– Raise the motorcycle with the rear lifting gear. (📖 p. 41)
– Remove the front spoiler. (📖 p. 54)
– Remove the trim along with the front. (📖 p. 56)
– Lift the motorcycle with the large front lifting gear. (📖 p. 42)

Main work

– Remove the front wheel. (📖 p. 82)

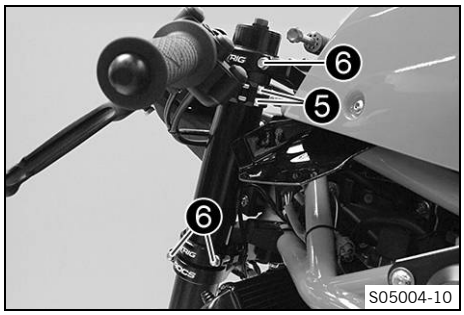


– Remove the locking wire ❶ on both sides.
– Remove screws ❷ and ❸ of the wheel speed sensor.



– Remove screws ❹ from both sides and take off the brake calipers.
– Hang the brake calipers to the side.

Info
Do not actuate the hand brake lever when the front wheel is removed.
Cover the components to protect them against damage.
Do not kink the cables and lines.



– Loosen screws ❺ of the handlebar stub on both sides.
– Loosen screws ❻. Remove the left fork leg.
– Repeat the operation on the right side.

13.8 Installing the fork legs

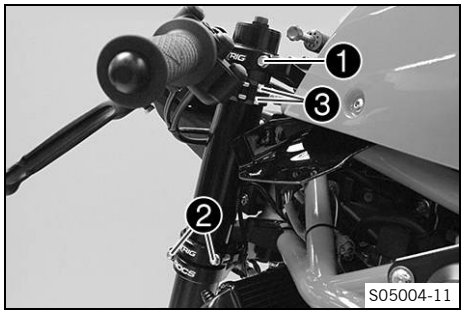
Main work

– Position the fork legs.

Guideline

Make sure the cables and wiring are positioned correctly.	
Insert the fork legs through the upper triple clamp.	22 mm (0.87 in)
The handlebar stubs must be positioned underneath the upper triple clamp.	

Info
Fork leg **COMP** is located on the left.
Fork leg **REB** is located on the right.



– Tighten screw ❶.

Guideline

Screw, top triple clamp	M8	20 Nm (14.8 lbf ft)

– Tighten screws ❷.

Guideline

Screw, bottom triple clamp	M8	16 Nm (11.8 lbf ft)

– Position the handlebar stub under the upper triple clamp.

Guideline

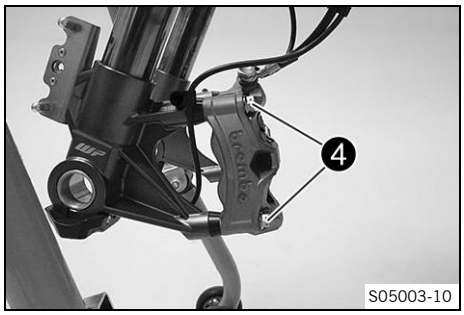
Distance	10 mm (0.39 in)

– Tighten screws ❸.

Guideline

Screw, handlebar stub clamp on fork tube	M6	15 Nm (11.1 lbf ft)

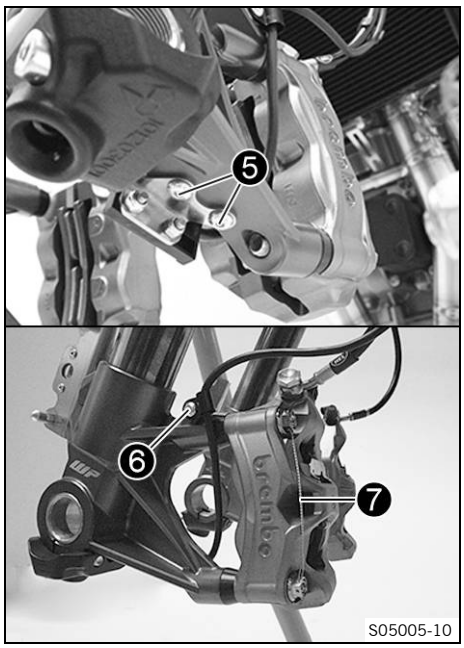
– Repeat the operation on the right side.



– Position the brake caliper with the spacers. Mount and tighten screws ❹ on both sides.

Guideline

Screw, front brake caliper	M10x1.25	45 Nm (33.2 lbf ft) Long-life grease (📖 p. 138)



– Position the wheel speed sensor.
– Mount and tighten screws ❺.

Guideline

Screw, wheel speed sensor holder	M5	10 Nm (7.4 lbf ft) **Loctite®243™**

– Mount and tighten screw ❻.

Guideline

Remaining screws, chassis	M5	5 Nm (3.7 lbf ft)

– Mount the locking wire ❼ on both sides.

Wire twister forceps (00029015100)
Securing wire (54812016000)

Finishing work

– Remove the work stand.
– Install the front wheel. 🔧 (📖 p. 82)
– Install the front fender. (📖 p. 54)
– Remove the rear of the motorcycle from the lifting gear. (📖 p. 41)
– Install the trim along with the front. 🔧 (📖 p. 56)
– Fit the front spoiler. 🔧 (📖 p. 54)

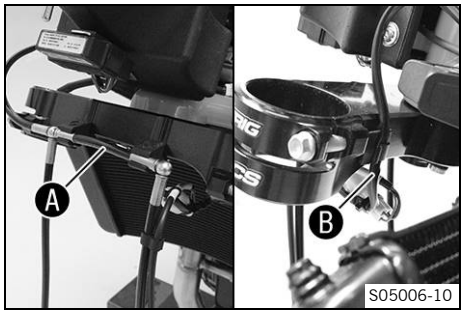
13.9 Removing the lower triple clamp

Condition

Front wheel removed.
The fork legs have been removed.

Preparatory work

– Use a suitable work stand.

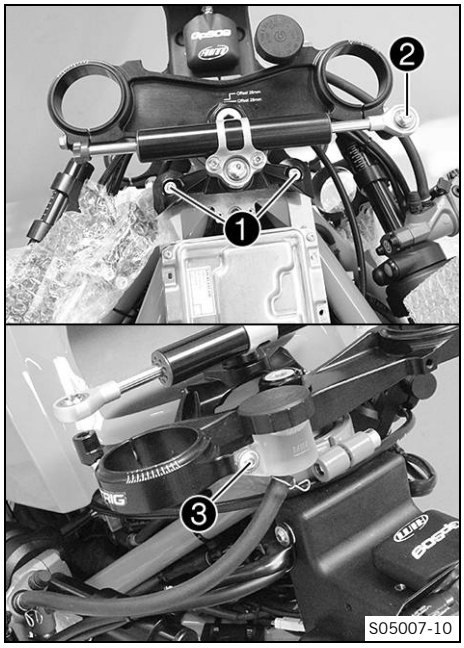


Main work

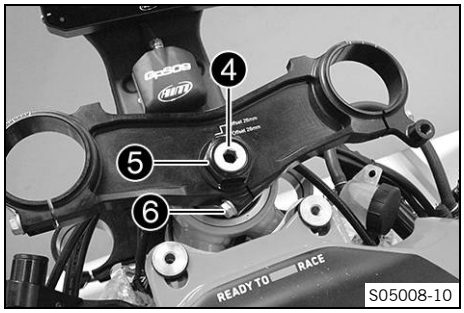
– Take brake line Ⓐ out of the holders and hang to the side of the brake calipers.

> **Info**
> Cover the components to protect them against damage. Do not kink the cables and lines.

– Take cable Ⓑ of the wheel speed sensor out of the bracket.

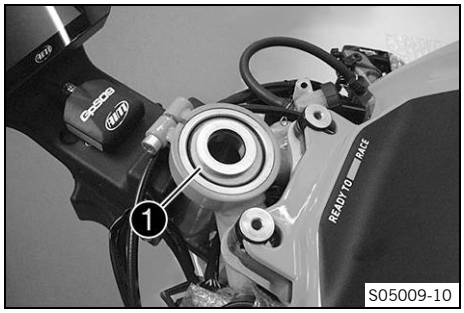


– Remove screws ❶ and ❷ and take off steering damper.
– Remove screw ❸ and hang the compensating tank to the side.



– Loosen contact screw ❹ and remove nut ❺.
– Remove screw ❻.
– Take off the upper triple clamp.
– Remove the lower triple clamp with the steering stem.

13.10 Installing the lower triple clamp



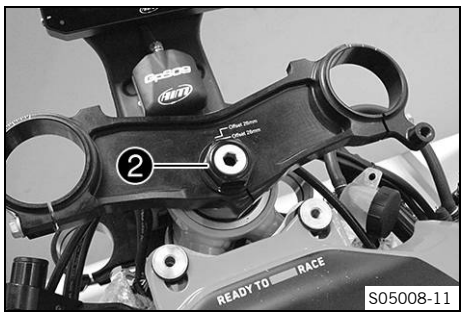
Main work

– Clean the bearing and sealing elements, check for damage, and grease.

High viscosity grease (p. 138)

– Position protective ring ❶ with the spacer ring.

– Insert the lower triple clamp with the steering stem.



– Position the upper triple clamp.

– Mount nut ❷, but do not tighten yet.

– Push the fork legs into the triple clamp and handlebar stub and position.

Guideline

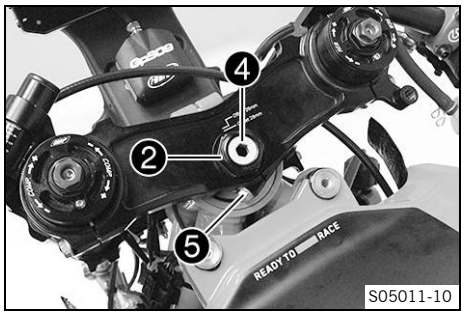
Insert the fork legs through the upper triple clamp.	22 mm (0.87 in)

Info
Make sure the cables and wiring are positioned correctly.

– Tighten screws ❸ on both sides.

Guideline

Screw, bottom triple clamp	M8	16 Nm (11.8 lbf ft)



– Tighten nut ❷ and lock with contact screw ❹.

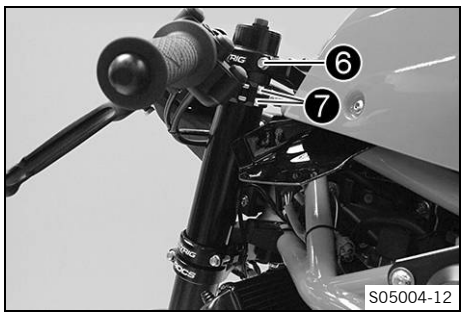
Guideline

Nut, steering head, top	M25x1.5	18 Nm (13.3 lbf ft)

– Mount and tighten screw ❺.

Guideline

Screw, top steering stem	M8	20 Nm (14.8 lbf ft)



– Using a plastic hammer, tap lightly on the upper triple clamp to avoid stresses.
– Tighten screws ❻ on both sides.

Guideline

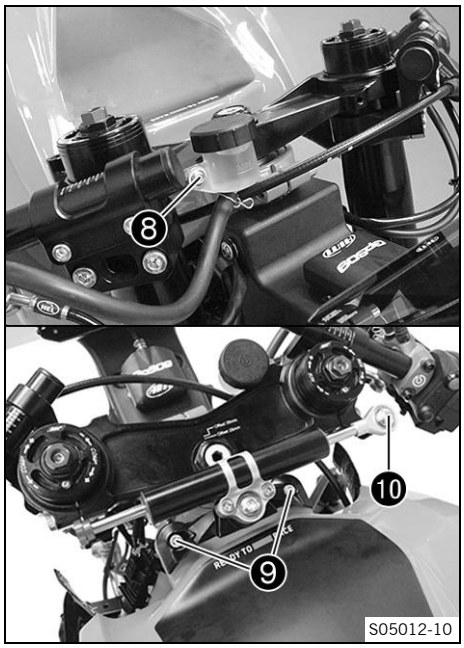
Screw, top triple clamp	M8	20 Nm (14.8 lbf ft)

– Position the handlebar stub and tighten screws ❼ on both sides.

Guideline

Distance	10 mm (0.39 in)

Screw, handlebar stub clamp on fork tube	M6	15 Nm (11.1 lbf ft)



– Position the brake fluid reservoir.
– Mount and tighten screw ❽.

Guideline

Screw, compensating tank	M5	5 Nm (3.7 lbf ft) **Loctite®243™**

– Position steering damper and mount and tighten screws ❾.

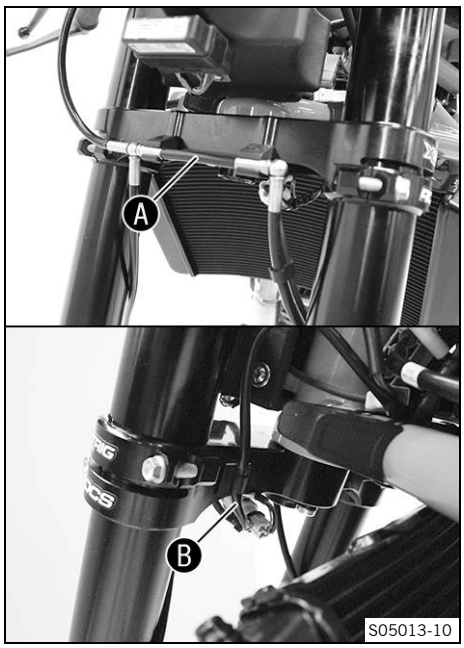
Guideline

Screw, steering damper bracket	M6	15 Nm (11.1 lbf ft) **Loctite®243™**

– Mount and tighten screw ❿.

Guideline

Screw, steering damper on triple clamp	M8	20 Nm (14.8 lbf ft) **Loctite®243™**



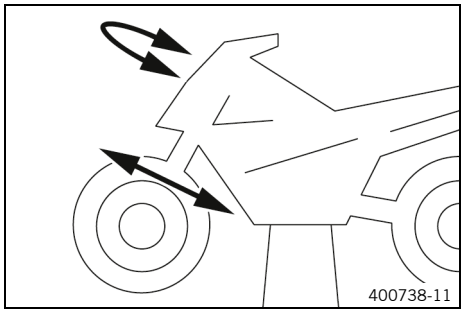
– Hook brake line Ⓐ in the holders.
– Hook cable Ⓑ of the wheel speed sensor into the holder.
– Install the front wheel. 🔧 (📖 p. 82)
– Check that the wiring harness, cables, brake line have the necessary freedom of movement and are correctly routed.

Finishing work
– Install the trim along with the front. 🔧 (📖 p. 56)
– Check the steering head bearing for play. (📖 p. 49)
– Remove the work stand.
– Fit the front spoiler. 🔧 (📖 p. 54)

13.11 Checking the steering head bearing play

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

Preparatory work
– Remove the front spoiler. 🔧 (📖 p. 54)
– Use a suitable work stand.



Main work
– Move the handlebar to the straight-ahead position. Move the fork legs to and fro in the direction of travel.

Play should not be detectable on the steering head bearing.

» If there is detectable play:
– Adjust the steering head bearing play. 🔧 (📖 p. 50)
– Move the handlebar to and fro over the entire steering range.

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

» If detent positions are detected:
– Adjust the steering head bearing play. 🔧 (📖 p. 50)

– Check the steering head bearing and adjust if necessary.

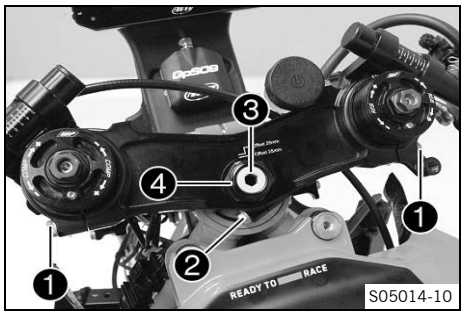
Finishing work

– Remove the work stand.
– Fit the front spoiler. (p. 54)

13.12 Adjusting the steering head bearing play

Preparatory work

– Remove the front spoiler. (p. 54)
– Use a suitable work stand.



Main work

– Loosen screws 1.
– Remove screw 2.
– Loosen and retighten contact screw 3 and nut 4.

Guideline

Nut, steering head, top	M25x1.5	18 Nm (13.3 lbf ft)

– Using a plastic hammer, tap lightly on the upper triple clamp to avoid stresses.
– Mount and tighten screw 2.

Guideline

Screw, top steering stem	M8	20 Nm (14.8 lbf ft)

– Tighten screws 1.

Guideline

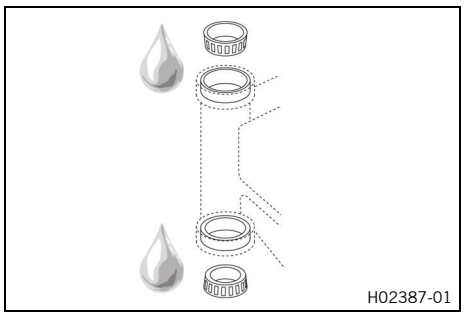
Screw, top triple clamp	M8	20 Nm (14.8 lbf ft)

– Check the steering head bearing for play. (p. 49)

Finishing work

– Remove the work stand.
– Fit the front spoiler. (p. 54)

13.13 Lubricating the steering head bearing



– Remove the lower triple clamp. (p. 46)
– Install the lower triple clamp. (p. 47)

Info

The steering head bearing is cleaned and lubricated in the course of removal and installation of the lower triple clamp.

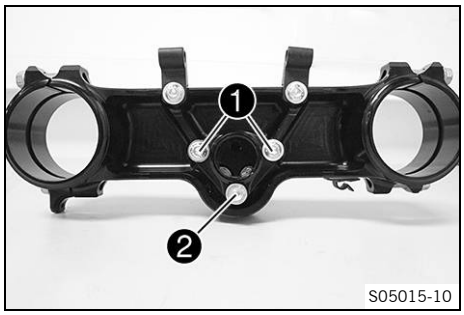
13.14 Adjusting the fork offset

Preparatory work

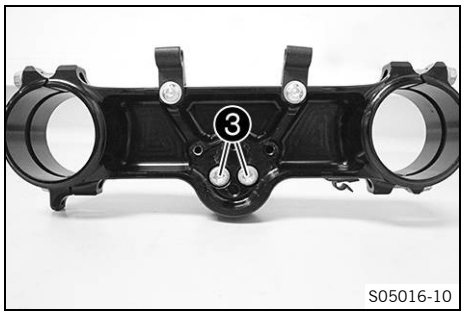
– Use a suitable work stand.

– Remove the lower triple clamp. (📖 p. 46)

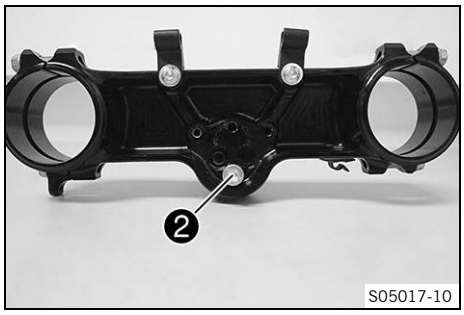
Main work



– Remove screws ❶ and screw ❷.



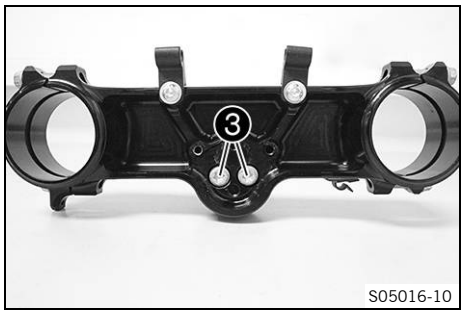
– Remove screws ❸.



– Screw screw ❷ into the lower thread until the steering stem is loosened.

– Remove screw ❷.

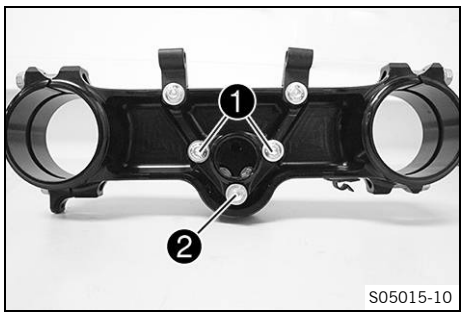
– Rotate the steering stem 180° and insert into the triple clamp.



– Mount and tighten screws ❸.

Guideline

Screw, steering stem, bottom	M8	20 Nm (14.8 lbf ft)



– Position the work stand support.
– Mount and tighten screws ❶.

Guideline

Screws, work stand adapter, front	M8	15 Nm (11.1 lbf ft) **Loctite®243™**

– Mount and tighten screws ❷.

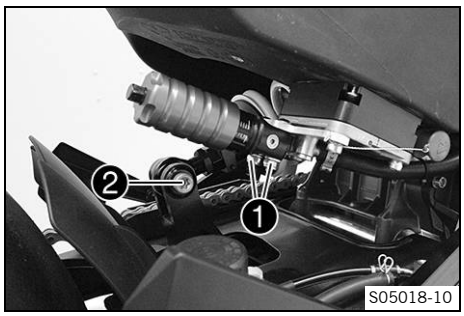
Guideline

Screws, work stand adapter, front	M6	15 Nm (11.1 lbf ft) **Loctite®243™**

Finishing work
– Install the lower triple clamp. (📖 p. 47)
– Install the trim along with the front. (📖 p. 56)
– Check the steering head bearing for play. (📖 p. 49)
– Remove the work stand.
– Fit the front spoiler. (📖 p. 54)

13.15 Removing the shock absorber

Preparatory work
– Use a suitable work stand.

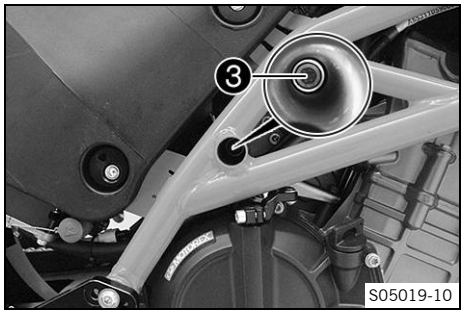


Main work
– Remove screws ❶ and hang the adjuster to the side.

Info
Protect the components against damage by covering them.

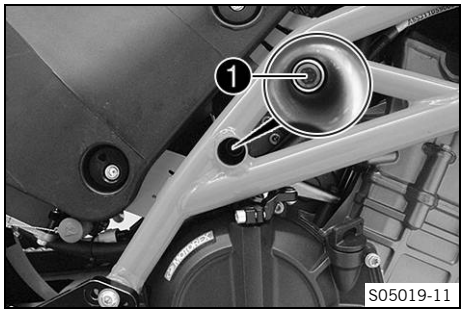
– Remove fitting ❷.

Info
Raise wheel slightly to make it easier to remove screw.



– Hold the shock absorber and remove screw ❸.
– Remove the shock absorber carefully at the bottom.

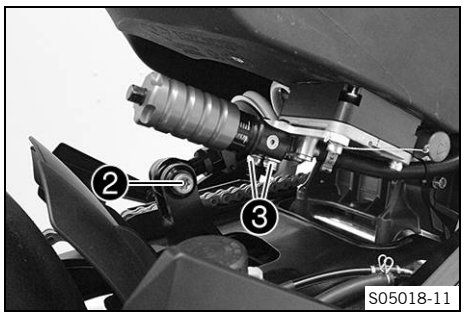
13.16 Installing the shock absorber



– Carefully position the shock absorber into the vehicle from the bottom.
– Mount and tighten screw ❶.

Guideline

Screw, top shock absorber	M10x1.25	45 Nm (33.2 lbf ft) **Loctite®243™**



– Position the shock absorber.

Info
Raise the wheel slightly to be able to mount the screw more easily.

– Mount and tighten screw ❷.

Guideline

Screw, bottom shock absorber	M10x1.25	45 Nm (33.2 lbf ft) **Loctite®243™**

– Position the adjusting lever.

Info
Make sure the cables and wiring are routed correctly.

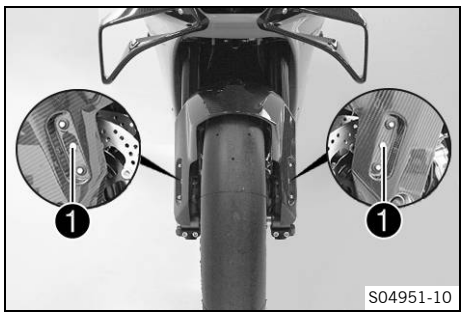
– Mount and tighten fitting ❸.

Guideline

Remaining nuts, chassis	M6	10 Nm (7.4 lbf ft)

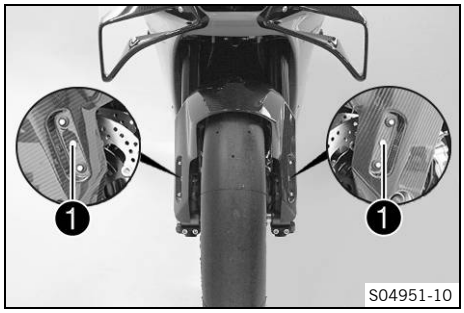
– Remove the motorcycle from the work stand.

13.17 Removing the front fender



– Remove quick releases ❶. Pull off the fender sideways and take it off toward the front.

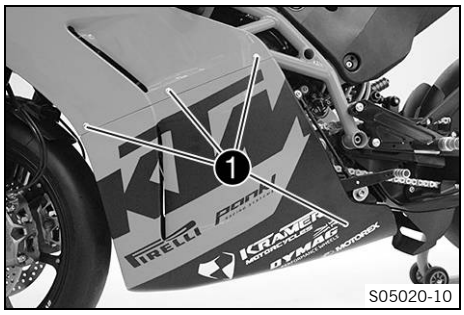
13.18 Installing the front fender



– Position the front fender. Mount and tighten quick releases 1.

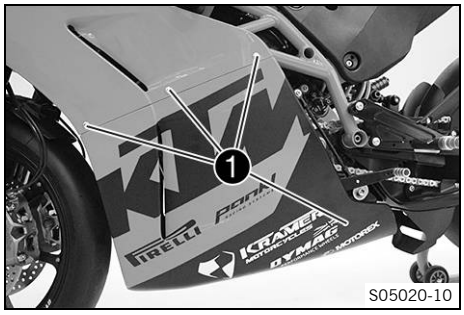
✔ The fender engages in the holding lugs.

13.19 Removing the front spoiler



– Unlock quick releases 1 on both sides.
– Take off the front spoiler.

13.20 Fitting front spoiler



– Position the front spoiler.
– Lock quick releases 1 on both sides.

13.21 Removing the tail section

– Remove screws 1.
– Pull the tail section toward the rear to remove.

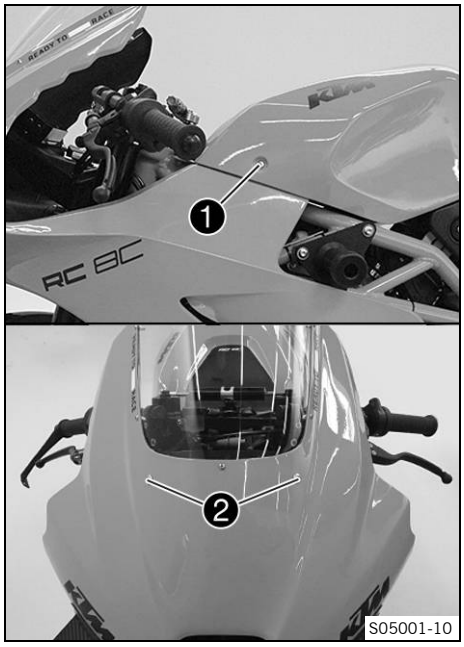
13.22 Installing the tail section

– Position the tail section.
– Mount and tighten screws 1.

Guideline

Remaining screws, chassis	M5	5 Nm (3.7 lbf ft)

13.23 Removing the trim along with the front



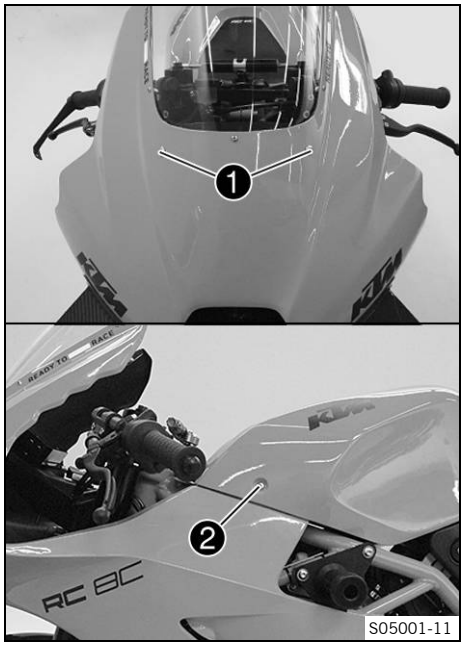
Preparatory work

– Remove the front spoiler. (p. 54)

Main work

– Unlock quick releases ❶ on both sides.
– Unlock quick releases ❷.
– Remove the trim toward the front.

13.24 Installing the trim along with the front



Main work

– Position the trim from the front.
– Lock quick releases ❶.
– Lock quick releases ❷ on both sides.
– Check that the trim is firmly seated.

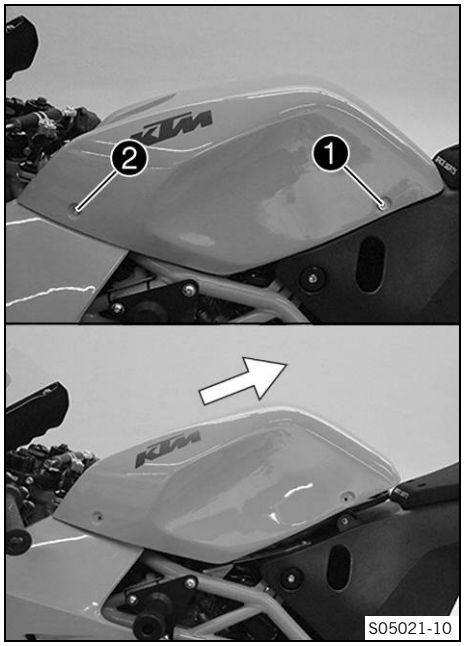
Finishing work

– Fit the front spoiler. (p. 54)

13.25 Taking off the air filter box

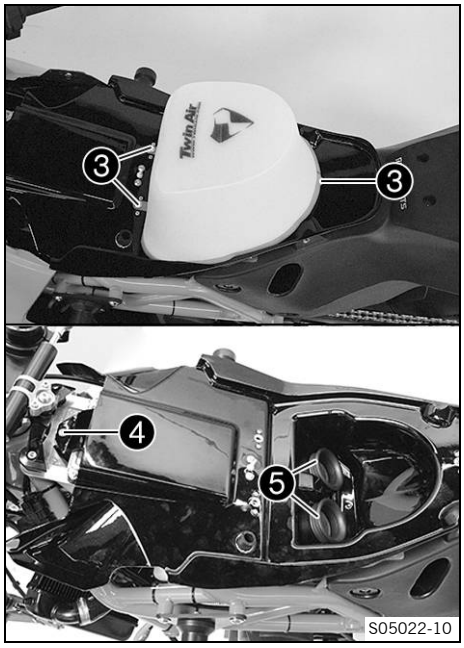
Preparatory work

– Raise the motorcycle with the rear lifting gear. (📖 p. 41)

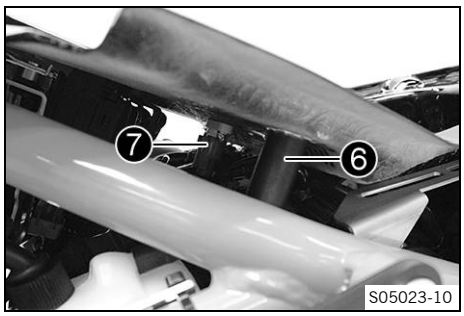


Main work

– Remove screw ❶ and quick release ❷ on both sides.
– Lift the air filter box cover and pull it off toward the rear.

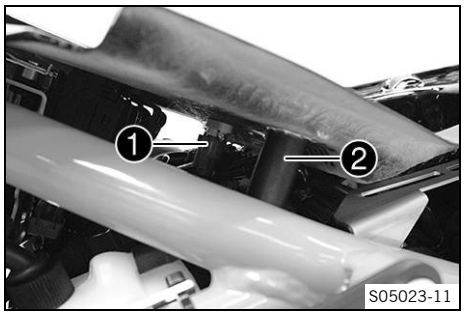


– Open quick releases ❸ and remove the air filter.
– Remove quick release ❹.
– Remove intake flange ❺.



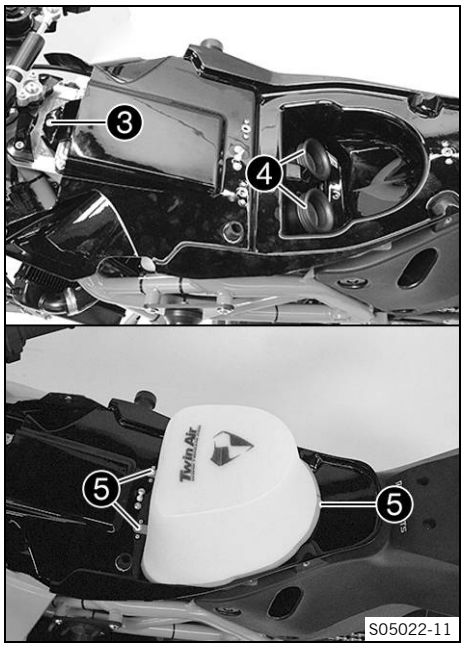
– Disconnect housing vent hose ❻ and intake air temperature sensor ❼.
– Take off the air filter box base.

13.26 Mounting the air filter box

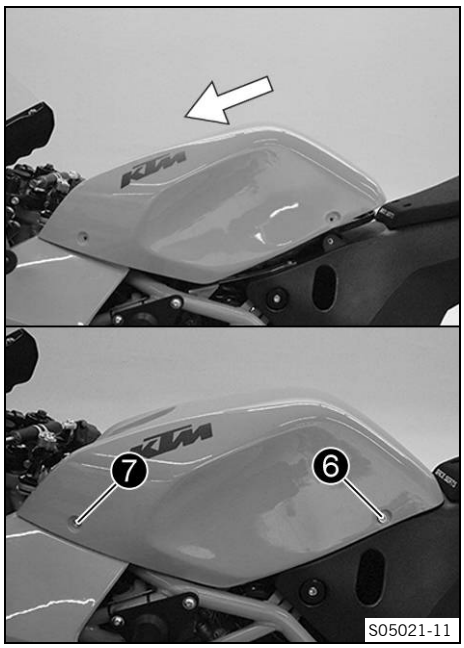


Main work

– Connect intake air temperature sensor ❶.
– Attach housing breather hose ❷.
– Position the air filter box base.



– Mount quick release ❸.
– Mount intake flange ❹.
– Position air filter and close quick releases ❺.



– Hook air filter box cover at the front under the steering damper and lower it at the rear.
– Mount and tighten screw ❻ and quick release ❼ on both sides.

Guideline

Remaining screws, chassis	M6	10 Nm (7.4 lbf ft)

Finishing work

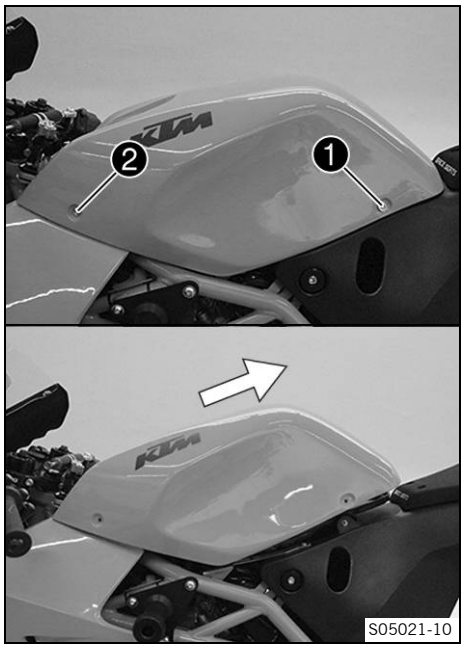
– Remove the rear of the motorcycle from the lifting gear. (📖 p. 41)

13.27 Removing the air filter

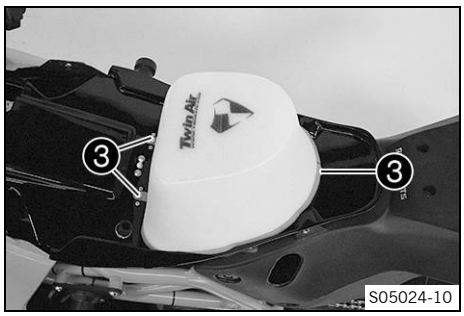
Note

Engine damage Unfiltered intake air has a negative effect on the service life of the engine.
Dust and dirt will enter the engine without an air filter.

– Only operate the vehicle if it is equipped with an air filter.



– Remove screw ❶ and quick release ❷ on both sides.
– Lift the air filter box cover and pull it off toward the rear.



– Unlock quick releases ❸.
– Remove air filter with air filter support.
– Remove air filter from air filter support.

13.28 Cleaning the air filter and air filter box

Note

Environmental hazard Hazardous substances cause environmental damage.

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

Info

Do not clean the air filter with fuel or petroleum since these substances attack the foam.

Preparatory work

– Remove the air filter. (p. 59)

Main work

– Wash the air filter thoroughly in special cleaning liquid and allow it to dry properly.

Air filter cleaner (p. 138)

Info

Only press the air filter to dry it, never wring it out.

– Oil the dry air filter with a high-grade air filter oil.

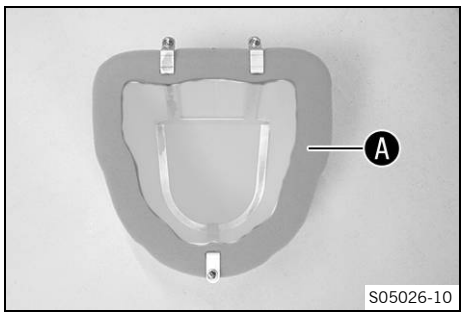
Oil for foam air filter (p. 138)

– Clean the air filter box.
– Clean the intake flange and check it for damage and tightness.

Finishing work

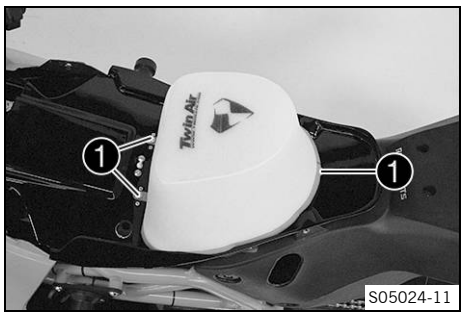
– Install the air filter. (p. 60)

13.29 Installing the air filter



– Mount the clean air filter on the air filter support.
– Grease the air filter in area Ⓐ.

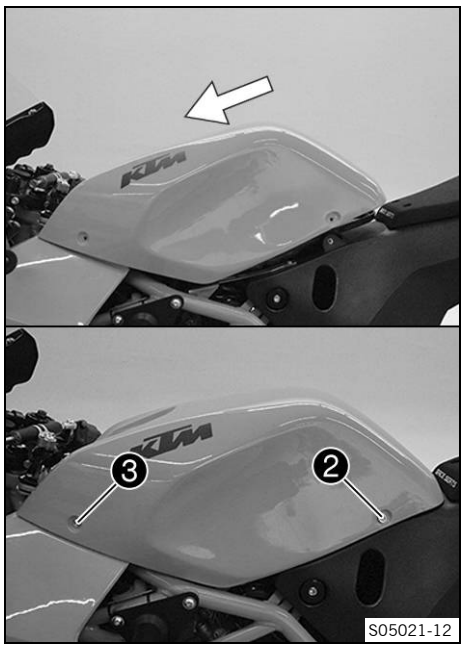
Long-life grease (p. 138)



– Position air filter and lock quick releases ❶.

✔ The air filter is correctly positioned.

Info
If the air filter is not mounted correctly, dust and dirt may enter the engine and result in damage.

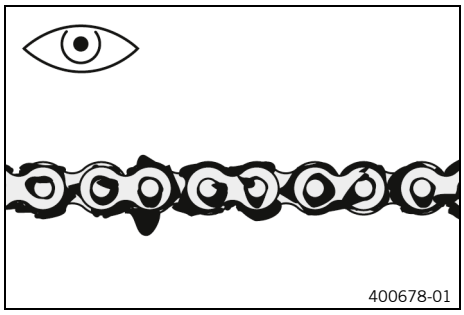


– Hook air filter box cover at the front under the steering damper and lower it at the rear.
– Mount and tighten screw ❷ and quick release ❸ on both sides.

Guideline

Remaining screws, chassis	M6	10 Nm (7.4 lbf ft)

13.30 Checking for chain dirt accumulation



– Check the chain for coarse dirt accumulation.
  » If the chain is very dirty:
    – Clean the chain. (📖 p. 61)

13.31 Cleaning the chain

Warning
Danger of accidents Lubricants on the tires reduces the road grip.
– Remove lubricants from the tires using a suitable cleaning agent.

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

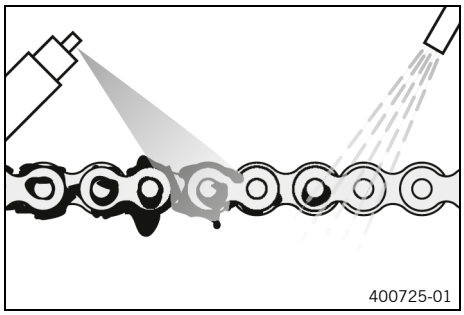
Note

Environmental hazard Hazardous substances cause environmental damage.

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

Info

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



Preparatory work

– Raise the motorcycle with the rear lifting gear. (📖 p. 41)

Main work

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

Chain cleaner (📖 p. 138)

– After drying, apply chain spray.

Street chain spray (📖 p. 139)

Finishing work

– Remove the rear of the motorcycle from the lifting gear. (📖 p. 41)

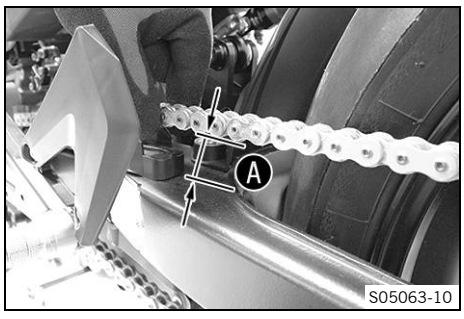
13.32 Checking the chain tension

Warning

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

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

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



Preparatory work

– Raise the motorcycle with the rear lifting gear. (📖 p. 41)

Main work

– Shift the transmission into neutral.
– In the area behind the chain sliding piece, push the chain up and determine chain tension Ⓐ.

Info

Chains do not always wear evenly. Repeat this measurement at different chain positions.

Chain tension	30 … 35 mm (1.18 … 1.38 in)

» If the chain tension does not meet the specification:
– Adjust the chain tension. (📖 p. 63)

– Remove the rear of the motorcycle from the lifting gear. (p. 41)

13.33 Adjusting the chain tension

Warning

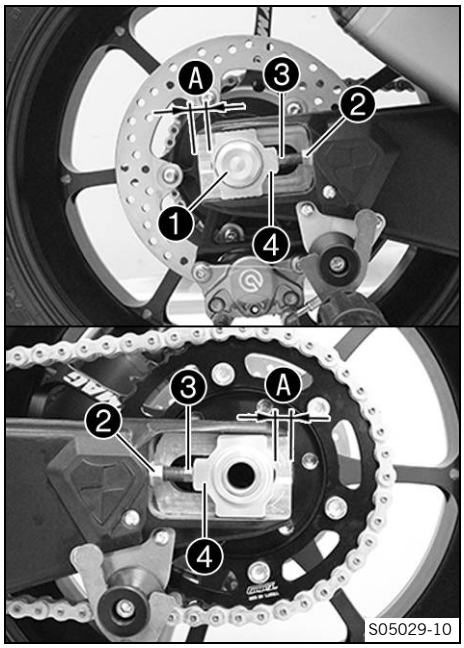
Danger of accidents Incorrect chain tension damages components and results in accidents.

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

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

Preparatory work

– Raise the motorcycle with the rear lifting gear. (p. 41)
– Check the chain tension. (p. 62)



Main work

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

Guideline

Chain tension	30 … 35 mm (1.18 … 1.38 in)
Turn adjusting screws ❸ on the left and right so that chain adjusters ❹ on the left and right have the same distance Ⓐ. The rear wheel is then correctly aligned.	

Info

The top part of the chain must be taut.
Chains do not always wear evenly, so you should check the setting at different chain positions.

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

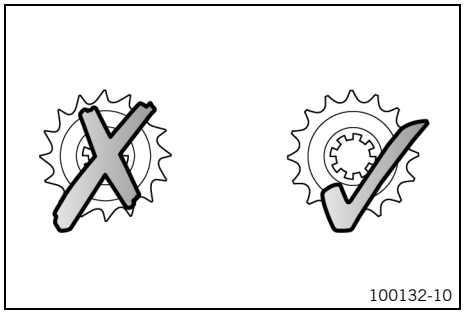
Guideline

Nut, rear wheel spindle	M25x1.5	100 Nm (73.8 lbf ft) Long-life grease (p. 138)

Finishing work

– Remove the rear of the motorcycle from the lifting gear. (p. 41)

13.34 Checking the chain, rear sprocket, and engine sprocket


100132-10

Preparatory work

– Raise the motorcycle with the rear lifting gear. (📖 p. 41)

Main work

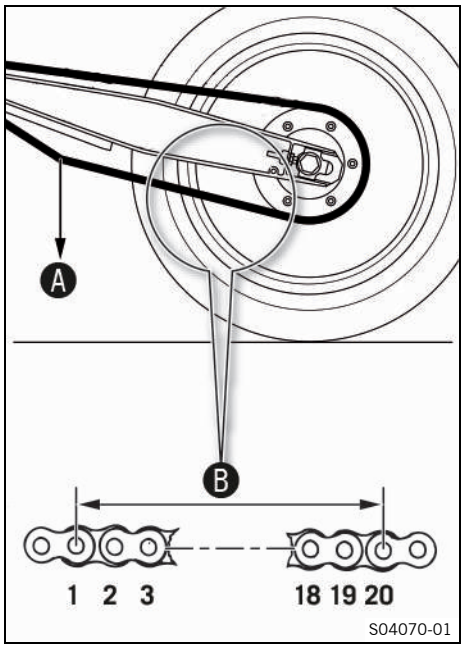
– Shift the transmission into neutral.

– Check the rear sprocket and the engine sprocket for wear.

» If the rear sprocket and engine sprocket are worn:

– Change the drivetrain kit. 🔧

Info
The engine sprocket, the rear sprocket, and the chain should always be replaced together.



S04070-01

– Pull on the lower chain section with specified weight Ⓐ.

Guideline

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

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

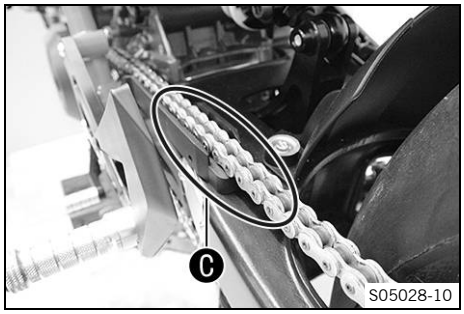
Info
Chains do not always wear evenly. Repeat this measurement at different chain positions.

Maximum distance Ⓑ from 20 chain rollers at the longest chain section	304 mm (11.97 in)

» If distance Ⓑ is greater than the specified measurement:

– Change the drivetrain kit. 🔧

Info
When a new chain is mounted, the rear sprocket and the engine sprocket should also be changed.
New chains wear out faster on old, worn sprockets.



S05028-10

– Push the chain up in the area behind the chain guide.

– Check the chain sliding guard for wear.

» If the chain sliding guard in area Ⓒ has lost a large amount of material due to wear.

– Change the chain sliding guard. 🔧

– Check that the chain sliding guard is firmly seated.

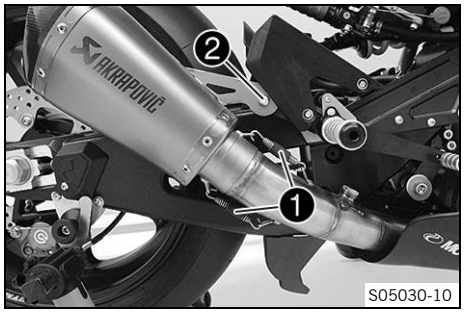
» If the chain sliding guard is loose:

– Tighten screws on the chain sliding guard.

Finishing work

– Remove the rear of the motorcycle from the lifting gear. (📖 p. 41)

13.35 Removing the main silencer

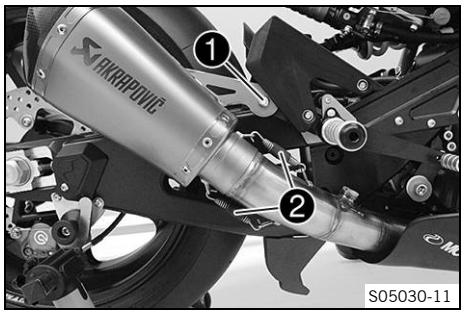


– Remove springs ❶.

Spring hook (50305017000C1)

– Remove fitting ❷.
– Take off the main silencer.

13.36 Installing the main silencer



– Position the main silencer.
– Mount and tighten fitting ❶.

Guideline

Screw, main silencer	M8	18 Nm (13.3 lbf ft)

– Mount springs ❷.

Spring hook (50305017000C1)

13.37 Removing the fuel tank

Danger

Fire hazard Fuel is highly flammable.

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

– Do not fuel the vehicle in the vicinity of open flames or lit cigarettes.
– Switch off the engine for refueling.
– Make sure that no fuel is spilled; particularly not on hot parts of the vehicle.
– If any fuel is spilled, wipe it off immediately.
– Observe the specifications for refueling.

Warning

Danger of poisoning Fuel is poisonous and a health hazard.

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

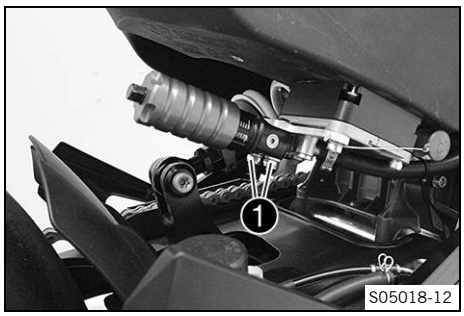
Note

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

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

Preparatory work

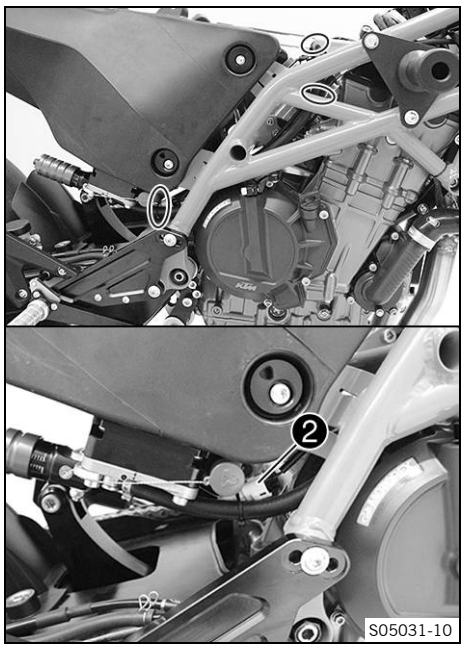
– Raise the motorcycle with the rear lifting gear. (📖 p. 41)
– Take off the air filter box. (📖 p. 57)



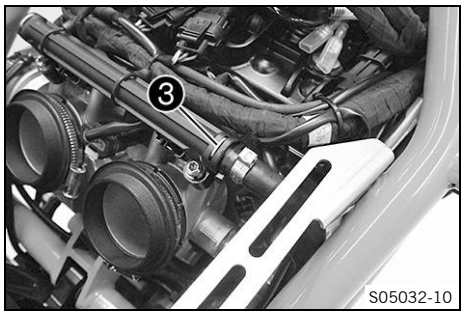
Main work

– Remove fittings ❶ and hang the adjuster to the side.

Info
Protect the components against damage by covering them.

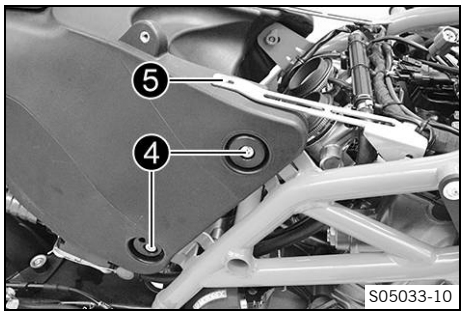


– Remove the cable ties along the fuel line.
– Unplug connector ❷ of the fuel pump.



– Remove holding pin ❸ and pull the fuel line off the injection rail.

Info
Under no circumstances should dirt enter into the fuel line. Dirt in the fuel line clogs the injection valve!



– Remove screws ❹ and ❺ on both sides.
– Remove the fuel tank towards the rear.

Info
Pay attention to the fuel line and the cables.

13.38 Installing the fuel tank

Danger

Fire hazard Fuel is highly flammable.

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

- Do not fuel the vehicle in the vicinity of open flames or lit cigarettes.
- Switch off the engine for refueling.
- Make sure that no fuel is spilled; particularly not on hot parts of the vehicle.
- If any fuel is spilled, wipe it off immediately.
- Observe the specifications for refueling.

Warning

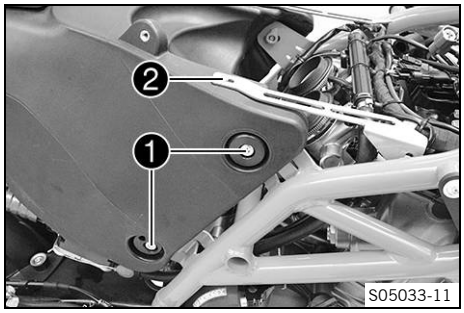
Danger of poisoning Fuel is poisonous and a health hazard.

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

Note

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

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



Main work

- Position the fuel tank.

Info

Make sure the cables and wiring are positioned correctly.

- Mount and tighten screws ❶ on both sides.

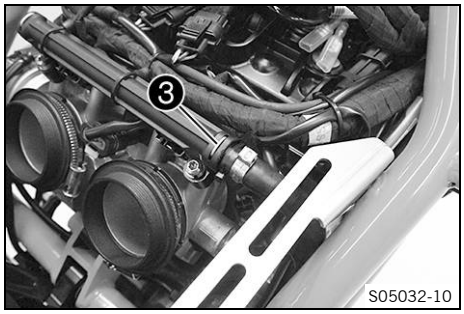
Guideline

Screw, fuel tank fastening	M8	25 Nm (18.4 lbf ft) **Loctite®243™**

- Mount and tighten screws ❷ on both sides.

Guideline

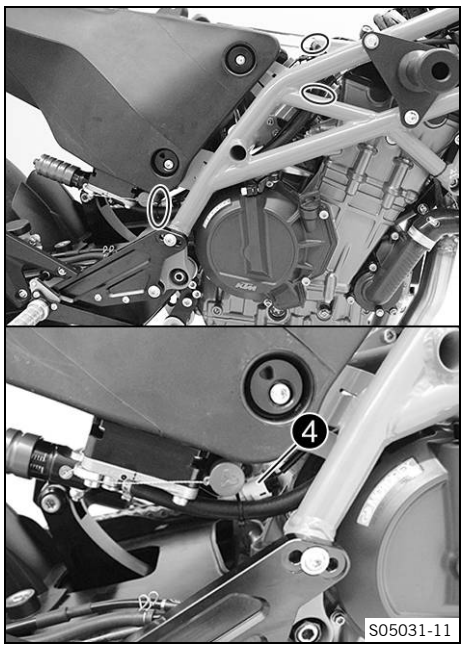
Remaining screws, chassis	M6	10 Nm (7.4 lbf ft)



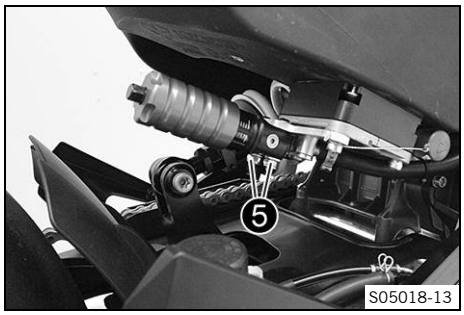
- Insert the fuel line into the injection rail and secure with holding pin ❸.

Info

Under no circumstances should dirt enter into the fuel line. Dirt in the fuel line clogs the injection valve!



– Mount the cable ties along the fuel line at the marked positions.
– Plug in connector ❹ of the fuel pump.



– Position the adjusting lever.
– Mount and tighten fitting ❺.

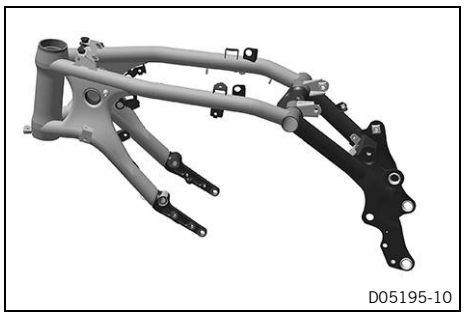
Guideline

Remaining screws, chassis	M6	10 Nm (7.4 lbf ft)

Finishing work

– Mount the air filter box. (📖 p. 58)
– Remove the rear of the motorcycle from the lifting gear. (📖 p. 41)

13.39 Checking the frame

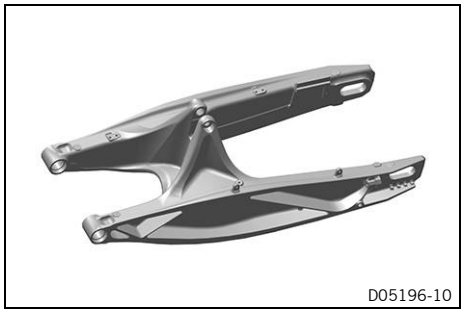


– Check the frame for damage, cracking, and deformation.
  » If the frame shows signs of damage, cracking, or deformation:
    – Change the frame.

    Guideline

    Repairs on the frame are not permitted.

13.40 Checking the link fork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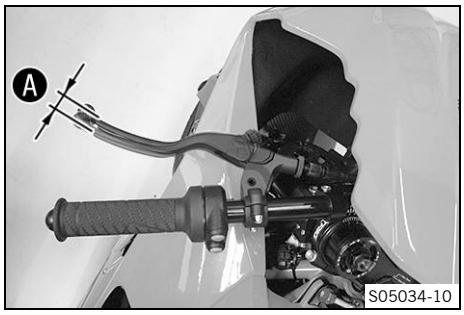
– Check the link fork for damage, cracking, and deformation.
  » If the link fork shows signs of damage, cracking, or deformation:
    – Change the link fork.

Info
Always replace a damaged link fork. Repairing the link fork is not authorized by KTM.

13.41 Checking the clutch lever play

Note
Clutch damage If there is no free travel by the clutch lever, the clutch will begin to slip.
– Check the free travel of the clutch lever each time before using the motorcycle.
– Adjust the free travel of the clutch lever when necessary in accordance with the specification.



S05034-10

– 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.

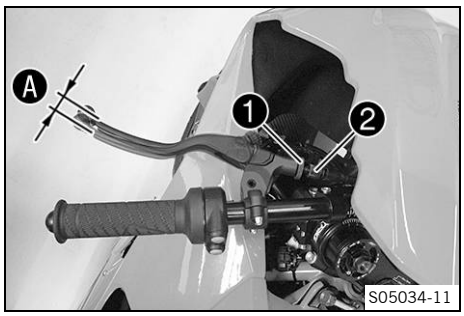
Clutch lever play A	1 … 3 mm (0.04 … 0.12 in)

  » If the clutch lever play does not meet the specified value:
    – Adjust play in the clutch lever. (📖 p. 69)
– Move the handlebar to and fro 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.

13.42 Adjusting play in the clutch lever



S05034-11

– Move the handlebar to the straight-ahead position.
– Loosen lock nut 1.
– Adjust the play in the clutch level A by turning adjusting screw 2.
  Guideline

Clutch lever play A	1 … 3 mm (0.04 … 0.12 in)

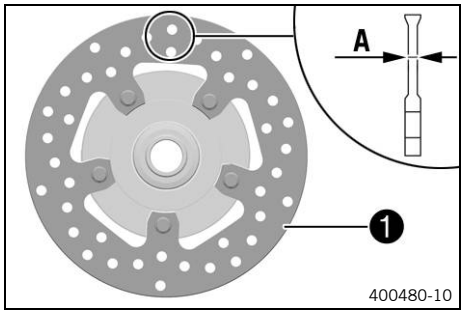
– Tighten lock nut 1.

14.1 Checking the brake discs

Warning

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

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



– Check the front and rear brake disc thickness at multiple points for the dimension A.

Info

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

Brake discs - wear limit	
front	4.5 mm (0.177 in)
rear	4.0 mm (0.157 in)

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

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

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

14.2 Checking the front brake fluid level

Warning

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

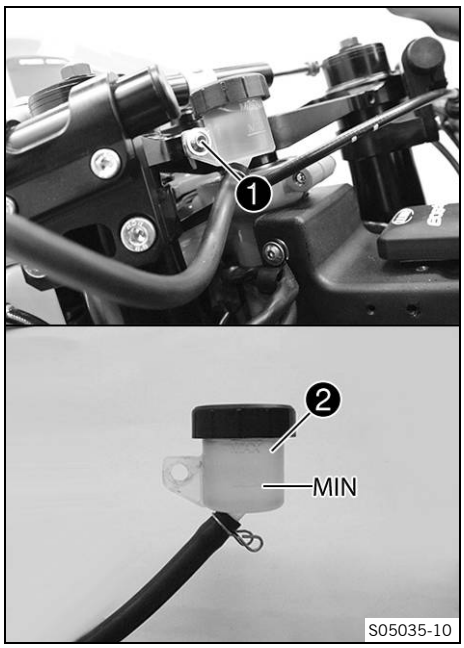
If the brake fluid level drops below the **MIN** marking, the brake system is leaking or the brake linings are worn down.

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

Warning

Danger of accidents Old brake fluid reduces the braking effect.

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



– Remove screw ❶ and move the compensating tank to a horizontal position.
– Check the brake fluid level in brake fluid reservoir ❷.
  » If the brake fluid level is below the **MIN** marking:
    – Add front brake fluid. 🔧 (📖 p. 71)
– Position the compensating tank, and mount and tighten screw ❶.

Guideline

Screw, compensating tank	M5	5 Nm (3.7 lbf ft) **Loctite®243™**

14.3 Adding front brake fluid 🔧

Warning

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

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

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

Warning

Skin irritation Brake fluid causes skin irritation.

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

Warning

Danger of accidents Old brake fluid reduces the braking effect.

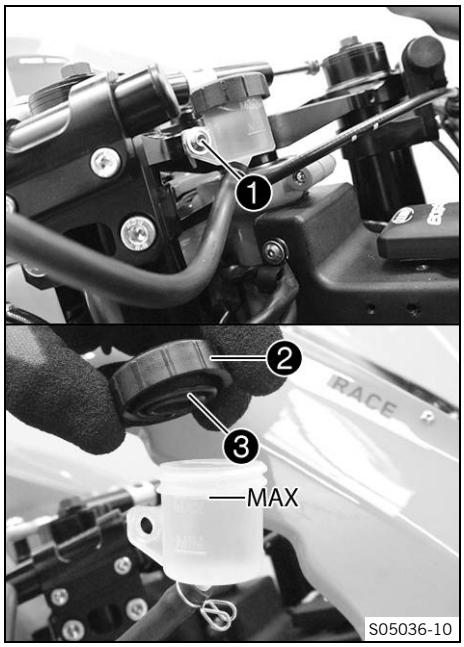
– Make sure that brake fluid for the front and rear brake is changed in accordance with the service schedule. (Your authorized KTM workshop will be glad to help.)

Note

Environmental hazard Hazardous substances cause environmental damage.

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

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



Preparatory work
– Check the front brake linings. (📖 p. 72)

Main work
– Remove screw ❶ and move the compensating tank to a horizontal position.
– Take off screw cap ❷ with membrane ❸ and the shim.
– Add brake fluid to the **MAX-** marking.

Brake fluid DOT 4 / DOT 5.1 (📖 p. 136)

– Mount screw cap ❷ with membrane ❸ and the shim.

Info
Use water to immediately clean up any brake fluid that has overflowed or spilled.

– Position the compensating tank, and mount and tighten screw ❶.

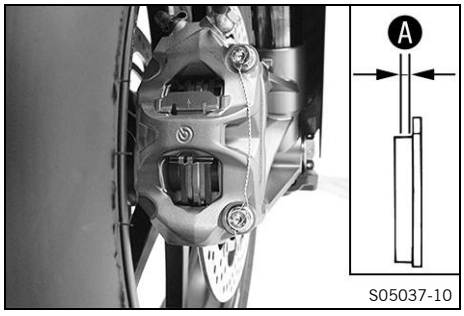
Guideline

Screw, compensating tank	M5	5 Nm (3.7 lbf ft) **Loctite®243™**

14.4 Checking the front brake linings

Warning
Danger of accidents Worn-out brake linings reduce the braking effect.
– Ensure that worn-out brake linings are replaced immediately. (Your authorized KTM workshop will be glad to help.)

Warning
Danger of accidents Damaged brake discs reduce the braking effect.
If the brake linings are not changed in time, the brake lining carriers grind against the brake disc. As a consequence, the braking effect is greatly reduced and the brake discs are destroyed.
– Check the brake linings regularly.



– Check the brake linings on both sides for minimum thickness Ⓐ.

Minimum thickness Ⓐ	≥ 1 mm (≥ 0.04 in)

» If the minimum thickness is less than specified:
– Change the brake linings of the front brake. 🔧 (📖 p. 73)
– Check the brake linings for damage and cracking.
» If there is damage or cracking:

– Change the brake linings of the front brake. 🔧 (📖 p. 73)

14.5 Changing the brake linings of the front brake 🔧

Warning

Skin irritation Brake fluid causes skin irritation.

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

Warning

Danger of accidents Old brake fluid reduces the braking effect.

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

Warning

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

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

Warning

Danger of accidents Brake linings which have not been approved alter the braking efficiency.

Not all brake linings are tested and approved for KTM motorcycles. The structure and friction coefficient of the brake linings, and thus their brake power, may vary greatly from that of original brake linings.
If brake linings are used that differ from the original equipment, compliance with the original homologation is not guaranteed. In this case, the vehicle no longer corresponds to its condition at delivery and the manufacturer warranty shall be void.

– Only use brake linings approved and recommended by KTM.

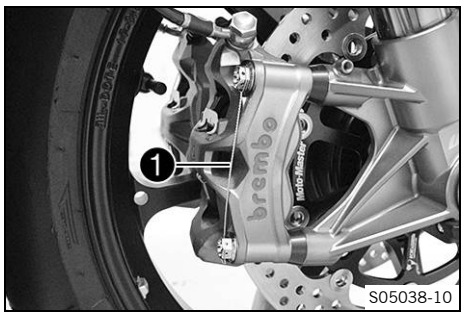
Note

Environmental hazard Hazardous substances cause environmental damage.

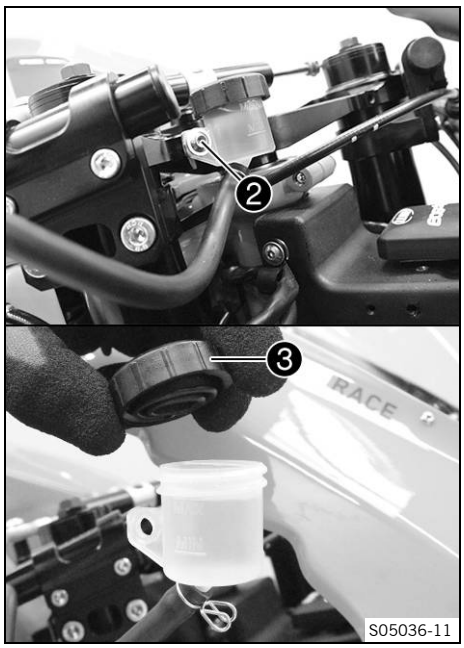
– Dispose of oils, grease, filters, fuel, cleaning agents, brake fluid, etc., correctly and in compliance with the applicable regulations.

Info

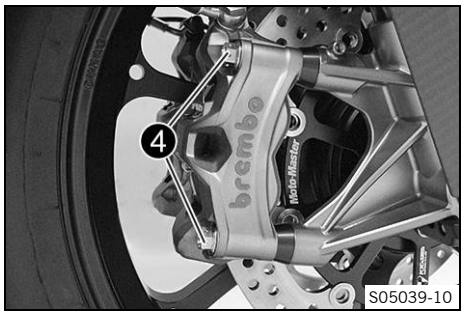
Never use DOT 5 brake fluid. It is silicone-based and purple in color. Oil seals and brake lines are not designed for DOT 5 brake fluid.
Avoid contact between brake fluid and painted parts. Brake fluid corrodes paint.
Only use clean brake fluid from a sealed container.



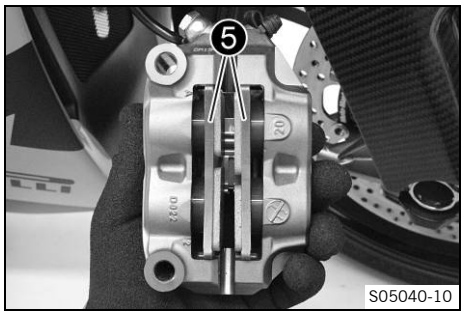
– Remove locking wire ❶.



– Remove screw ❷ and move the brake fluid reservoir to a horizontal position.
– Take off screw cap ❸ with the membrane and the shim.

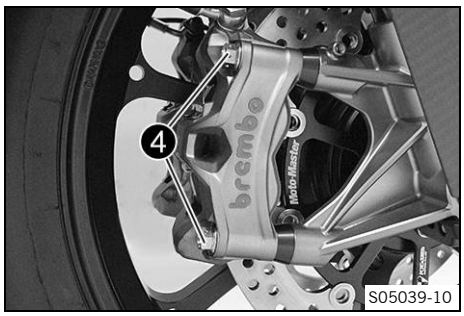


– Remove screws ❹ and take off the brake caliper.
– Press the brake piston with the help of the worn brake linings back into the basic position and ensure that brake fluid does not flow out of the brake fluid reservoir, extracting some if necessary.



– Remove brake linings ❺.
– Clean the brake caliper.
– Position new brake linings ❺.

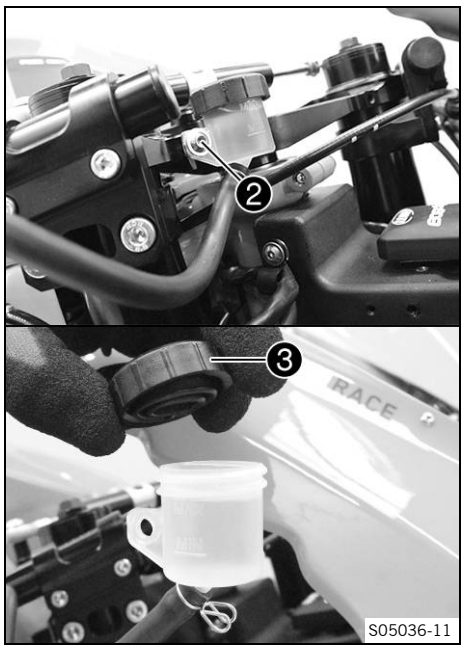
Info
Ensure that the spring is correctly seated.
Always change the brake linings in pairs.



– Position the brake caliper with the spacers.
– Mount screws ❹ but do not tighten yet.
– Operate the hand brake lever repeatedly until the brake linings are in contact with the brake disc and there is a pressure point. Secure the hand brake lever in the activated position.
✔ The brake caliper straightens.
– Tighten screws ❹.

Guideline

Screw, front brake caliper	M10x1.25	45 Nm (33.2 lbf ft) Long-life grease (📖 p. 138)



– Add brake fluid up to the **MAX** marking.

Brake fluid DOT 4 / DOT 5.1 (📖 p. 136)

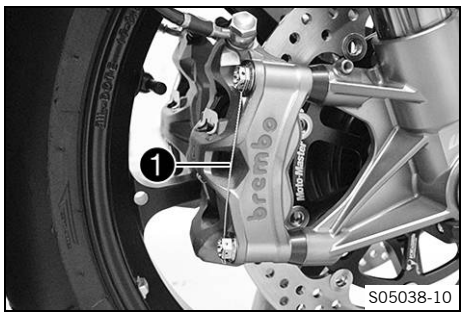
– Mount screw cap ❸ with the membrane and the shim.

Info
Use water to immediately clean up any brake fluid that has overflowed or spilled.

– Position the brake fluid reservoir.
– Mount and tighten screw ❷.

Guideline

Screw, compensating tank	M5	5 Nm (3.7 lbf ft) **Loctite®243™**



– Mount locking wire ❶.

Wire twister forceps (00029015100)
Securing wire (54812016000)

– Repeat these steps on the opposite side.

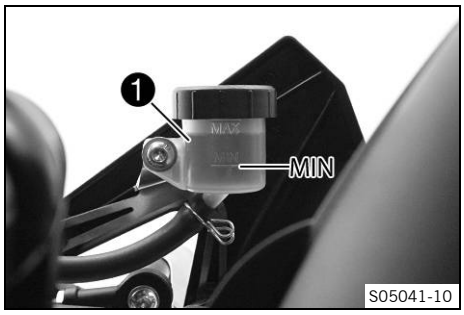
14.6 Checking the rear brake fluid level

Warning
Danger of accidents An insufficient brake fluid level will cause the brake system to fail.
If the brake fluid level drops below the **MIN** marking, the brake system is leaking or the brake linings are worn down.
– Check the brake system and do not continue riding until the problem is eliminated. (Your authorized KTM workshop will be glad to help.)

Warning

Danger of accidents Old brake fluid reduces the braking effect.

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



– Position the vehicle vertically.
– Check the brake fluid level in brake fluid reservoir 1.
  » If the brake fluid level has dropped below the **MIN** marking:
    – Add rear brake fluid. (p. 76)

14.7 Adding rear brake fluid

Warning

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

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

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

Warning

Skin irritation Brake fluid causes skin irritation.

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

Warning

Danger of accidents Old brake fluid reduces the braking effect.

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

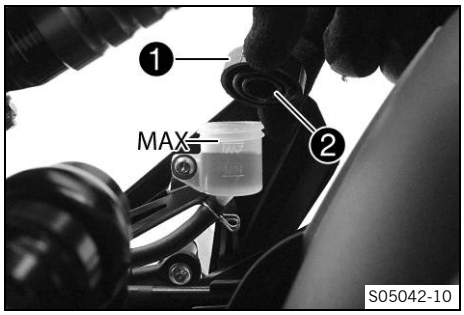
Note

Environmental hazard Hazardous substances cause environmental damage.

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

Info

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



Preparatory work

– Check the rear brake linings. (p. 77)

Main work

– Position the vehicle vertically.
– Remove screw cap ❶ with membrane ❷ and the shim.
– Add brake fluid up to the **MAX** marking.

Brake fluid DOT 4 / DOT 5.1 (p. 136)

– Mount screw cap ❶ with membrane ❷ and the shim.

Info

Use water to immediately clean up any brake fluid that has overflowed or spilled.

14.8 Checking the rear brake linings

Warning

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

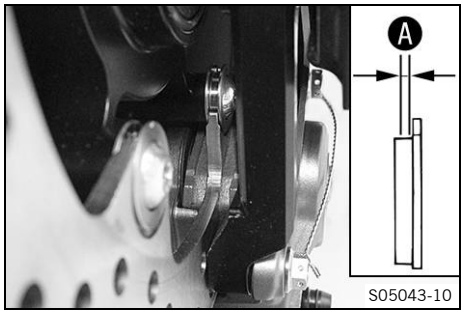
– Ensure that worn-out brake linings are replaced immediately. (Your authorized KTM workshop will be glad to help.)

Warning

Danger of accidents Damaged brake discs reduce the braking effect.

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

– Check the brake linings regularly.



– Check the brake linings for minimum thickness Ⓐ.

Minimum thickness Ⓐ	≥ 1 mm (≥ 0.04 in)

» If the minimum thickness is less than specified:
  – Change the rear brake linings. (p. 78)

– Check the brake linings for damage and cracking.

» If there is wear or tearing:
  – Change the rear brake linings. (p. 78)

14.9 Changing the rear brake linings

Warning

Skin irritation Brake fluid causes skin irritation.

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

Warning

Danger of accidents Old brake fluid reduces the braking effect.

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

Warning

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

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

Warning

Danger of accidents Brake linings which have not been approved alter the braking efficiency.

Not all brake linings are tested and approved for KTM motorcycles. The structure and friction coefficient of the brake linings, and thus their brake power, may vary greatly from that of original brake linings.
If brake linings are used that differ from the original equipment, compliance with the original homologation is not guaranteed. In this case, the vehicle no longer corresponds to its condition at delivery and the manufacturer warranty shall be void.

– Only use brake linings approved and recommended by KTM.

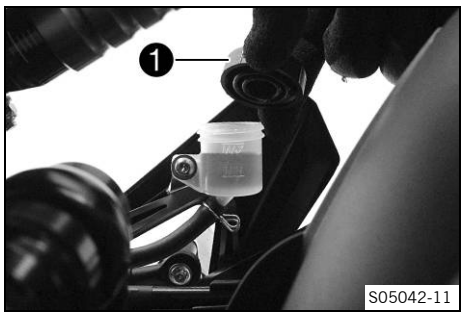
Note

Environmental hazard Hazardous substances cause environmental damage.

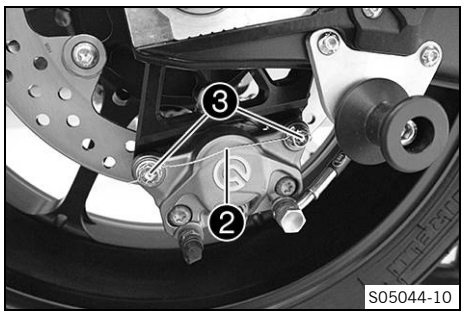
– Dispose of oils, grease, filters, fuel, cleaning agents, brake fluid, etc., correctly and in compliance with the applicable regulations.

Info

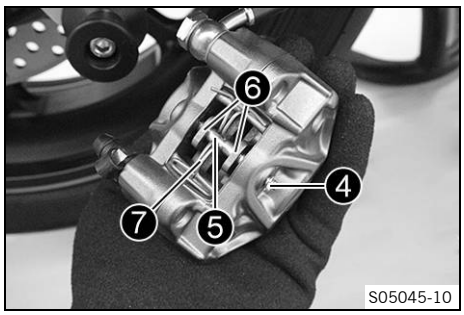
Never use DOT 5 brake fluid. It is silicone-based and purple in color. Oil seals and brake lines are not designed for DOT 5 brake fluid.
Avoid contact between brake fluid and painted parts. Brake fluid corrodes paint.
Only use clean brake fluid from a sealed container.



- Position the vehicle vertically.
- Take off screw cap ❶ with the washer and membrane.



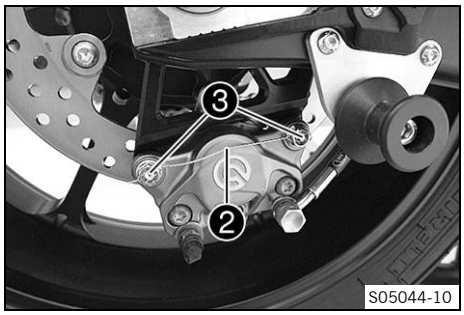
- Remove locking wire ❷.
- Remove screws ❸.
- Manually press the brake caliper toward the brake disc to push back the brake pistons. Ensure that brake fluid does not flow out of the brake fluid reservoir, extract some if necessary.



- Remove latch ❹.
- Remove pin ❺.
- Remove brake linings ❻ with spring ❼.
- Clean the brake caliper.
- Position new brake linings ❻ with spring ❼.

Info
Always change the brake linings in pairs.
Check that the brake linings are seated correctly.

- Mount pin ❺.
- Mount latch ❹.



- Position the brake caliper.
- Mount and tighten screws ❸.

Guideline

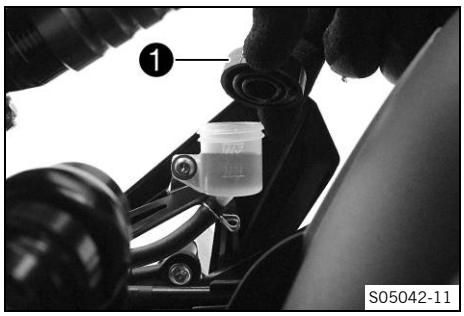
Screw, rear brake caliper	M8	20 Nm (14.8 lbf ft) Long-life grease (📖 p. 138)

- Mount locking wire ❷.

Wire twister forceps (00029015100)
Securing wire (54812016000)

- Operate the foot brake lever repeatedly until the brake linings are in contact with the brake disc and there is a pressure point.
- Adjust the brake fluid level to the **MAX** marking.

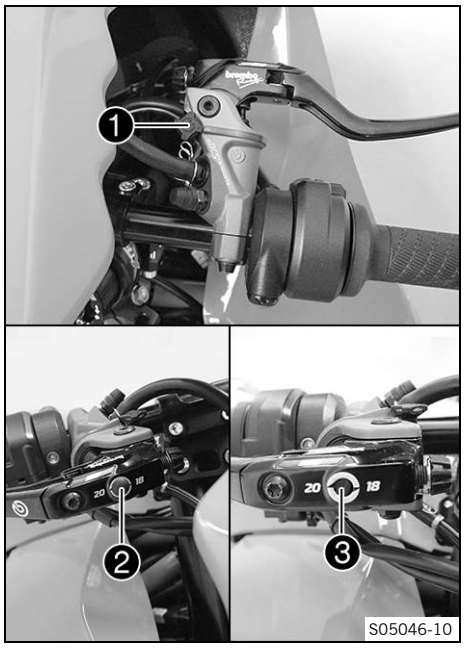
Brake fluid DOT 4 / DOT 5.1 (📖 p. 136)



– Mount and tighten screw cover ❶ with the shim and the membrane.

Info
Use water to immediately clean up any brake fluid that has overflowed or spilled.

14.10 Adjusting the response of the front brake pump



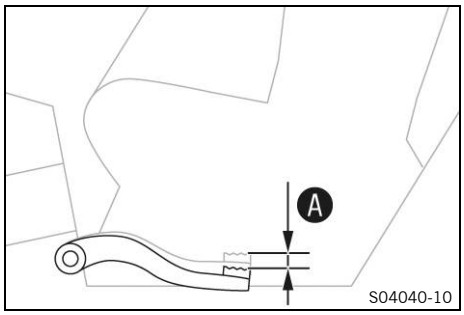
– Use adjuster ❶ to set the desired response of the front brake pump.
  ✔ N - soft, linear braking behavior
  ✔ S - sporty braking behavior
  ✔ R - hard, direct braking behavior
– Remove protection cap ❷.
– Adjust the characteristics of the hand brake lever with adjusting screw ❸.
  ✔ 18 - Setting with large hand brake lever transmission ratio (soft response, more lever travel, less lever force).
  ✔ 20 - Setting with small hand brake lever transmission ratio (hard response, less lever travel, more lever force).

Info
The transmission ratio and, therefore, the response of the hand brake lever can be changed.
Do not make any adjustments while riding.

– Mount protection cap ❷.

14.11 Checking the free travel of the foot brake lever

Warning
Danger of accidents The brake system fails in the event of overheating.
If there is no free travel on the foot brake lever, pressure builds up in the brake system on the rear brake.
– Set the free travel on the foot brake lever in accordance with the specification.



– Move the foot brake lever back and forth between the end stop and the contact to the foot brake cylinder piston and check free travel Ⓐ.

Guideline

Free travel at foot brake lever	3 … 5 mm (0.12 … 0.2 in)

» If the free travel does not match the specification:
  – Adjust the free travel of the foot brake lever. (📖 p. 81)

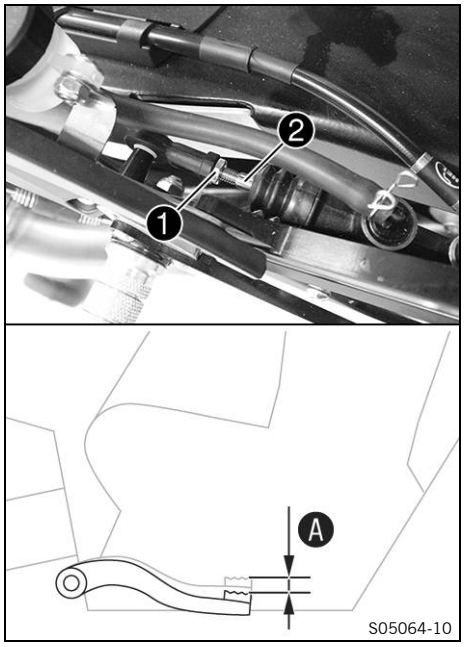
14.12 Adjusting the free travel of the foot brake lever

Warning

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

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

– Set the free travel on the foot brake lever in accordance with the specification.



– Loosen nut ❶ and use push rod ❷ to adjust the specified free travel Ⓐ.

Guideline

Free travel at foot brake lever	3 … 5 mm (0.12 … 0.2 in)

Info

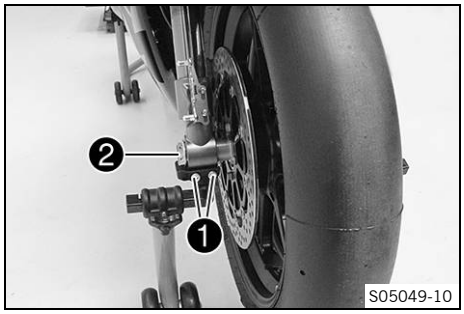
The range of adjustment is limited.

– Tighten nut ❶.

Guideline

Remaining nuts, chassis	M6	10 Nm (7.4 lbf ft)

15.1 Removing the front wheel



Preparatory work

- Raise the motorcycle with the rear lifting gear. (p. 41)
- Lift the motorcycle with the front lifting gear. (p. 41)
- Remove the front fender. (p. 53)

Main work

- Loosen screws 1.
- Loosen wheel spindle 2.

Warning

Danger of accidents Damaged brake discs reduce the braking effect.

- 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 and swing the brake calipers outward.

Info

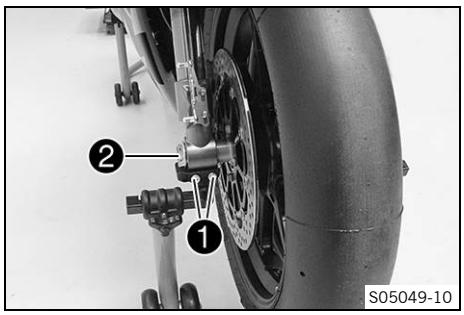
Do not actuate the hand brake lever when the front wheel is removed.

15.2 Installing the front wheel

Warning

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

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



Main work

- Check the wheel bearing for damage and wear.
  - » If the wheel bearing is damaged or worn:
    - Change front wheel bearing.
- Lift the front wheel into the fork, position it, and fold in the brake calipers.

✓ The brake linings are correctly positioned.

Info

The spacer is mounted on the left of the wheel in the direction of travel.

- Mount and tighten wheel spindle 2.

Guideline

Screw, front wheel spindle	M29x1.5	60 Nm (44.3 lbf ft) Long-life grease (p. 138)

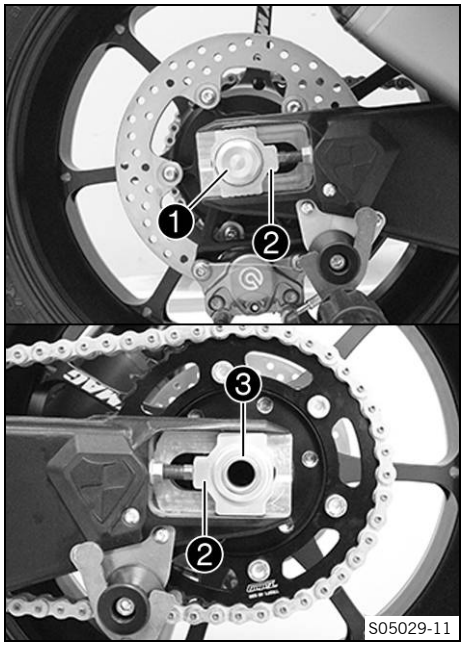
– Operate the hand brake lever repeatedly until the brake linings are in contact with the brake disc and there is a pressure point.
– Take the motorcycle off the front lifting gear. (📖 p. 42)
– Operate the front brake and compress the fork a few times firmly.
  ✔ The fork legs straighten.
– Tighten screws ❶.
  Guideline

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

Finishing work
– Install the front fender. (📖 p. 54)
– Remove the rear of the motorcycle from the lifting gear. (📖 p. 41)

15.3 Removing the rear wheel

Preparatory work
– Raise the motorcycle with the rear lifting gear. (📖 p. 41)



Main work
– Remove nut ❶ with the washer. Take off chain adjuster ❷.
– Hold the rear wheel and pull out wheel spindle ❸ with the washer and chain adjuster ❷.
– Push the rear wheel forward as far as possible and take the chain off the rear sprocket.

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

– Pull the rear wheel back and take it out of the link fork.

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

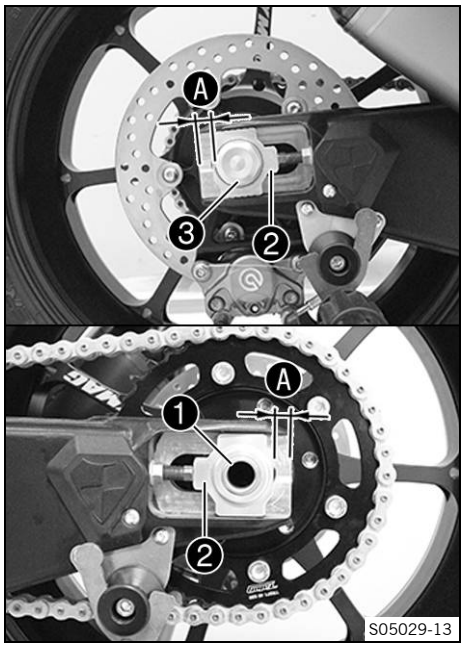
15.4 Installing the rear wheel

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

Warning

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

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



Main work

– Check the rear hub damping rubber pieces.
– Check the wheel bearing for damage and wear.
  » If the wheel bearing is damaged or worn:
    – Change the rear wheel bearing.
– Clean the thread of the wheel spindle and nut.
– Clean and grease wheel spindle.

Long-life grease (p. 138)

– Clean the contact areas on the brake caliper bracket and link fork.
– Position the rear wheel.
  ✔ The brake linings are correctly positioned.
– Push the rear wheel forward as far as possible and lay the chain on the rear sprocket.
– Pull the rear wheel back and mount wheel spindle ❶ with the washers and chain adjusters ❷.

Info

Mount left and right chain adjusters ❷ in the same position.

– Mount nut ❸, but do not tighten yet.
– Ensure that the chain adjusters lie flat on the adjusting screws and tighten the nut ❸.

Guideline

In order for the rear wheel to be correctly aligned, the chain adjusters on the left and right must have the same distance Ⓐ.

Nut, rear wheel spindle	M25x1.5	100 Nm (73.8 lbf ft) Long-life grease (p. 138)

Finishing work

– Check the chain tension. (p. 62)
– Remove the rear of the motorcycle from the lifting gear. (p. 41)

15.5 Checking the tire condition

Warning

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

– Ensure that damaged or worn tires are replaced immediately. (Your authorized KTM workshop will be glad to help.)

Warning

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

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

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

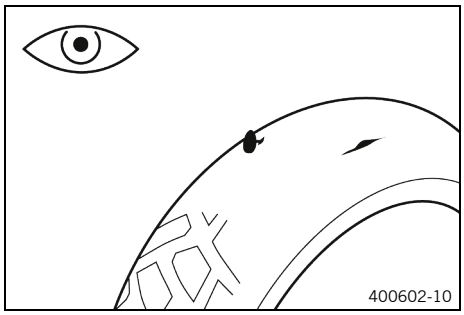
Warning

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

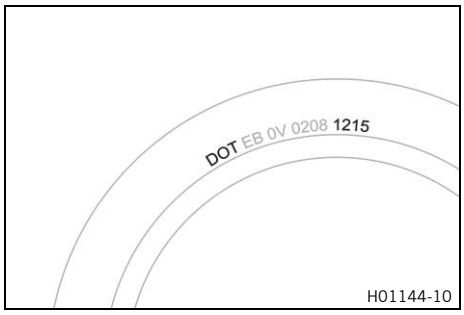
– Only use tires/wheels approved by KTM with the corresponding speed index.

Info

The type, condition, and pressure of the tires all have a major impact on the handling characteristic 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 tire wear.
  » If the tire is worn:
    – Change the tires.



– Check the tire age.

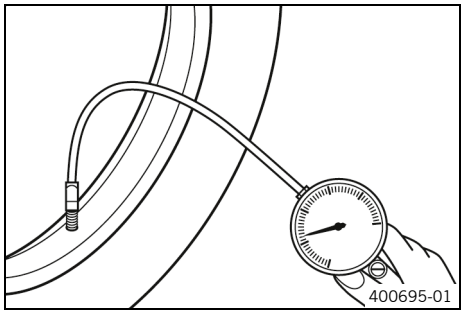
Info

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

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

15.6 Checking tire pressure

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

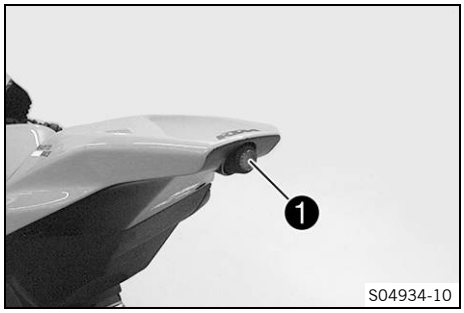


– Remove the protection cap.
– Check tire pressure when the tires are warm.

Tire pressure (warm)	
front: 75 ... 85 °C (167 ... 185 °F)	2.1 bar (30 psi)
rear: 75 ... 85 °C (167 ... 185 °F)	1.8 bar (26 psi)

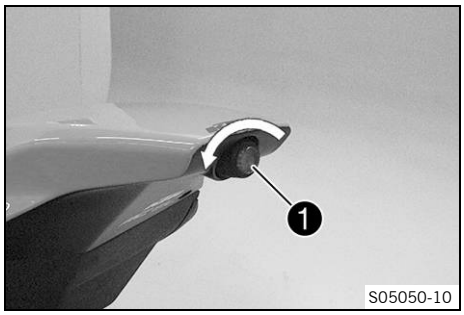
» If the tire pressure does not meet specifications:
  – Correct tire pressure.
– Mount the protection cap.

16.1 Switching the tail light on and off

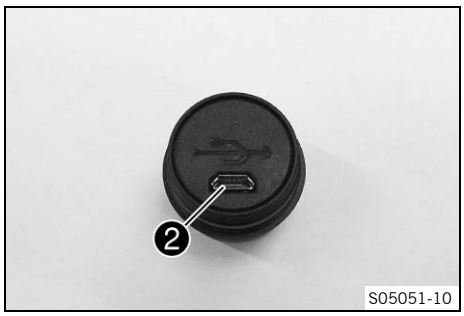


– Press and hold the tail light ❶ to switch on the tail light.
  ✓ The tail light lights up or flashes.
  ✗ The tail light does not light up.
    – Charge the tail light. (📖 p. 87)
– Press the tail light briefly to select a light mode.
  ✓ One of four light modes is set.
– Press the tail light for a long time.
  ✓ The tail light is switched off.

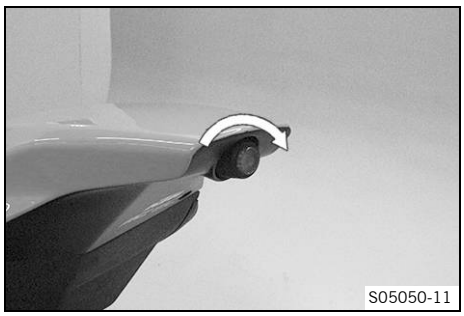
16.2 Charging the tail light



– Turn tail light ❶ counterclockwise and remove it.



– Charge the tail light via USB socket ❷.



– Position the tail light and turn it clockwise.

16.3 Removing the 12 V battery

Caution

Danger of burns The voltage regulator gets very hot when the vehicle is driven.

– Allow the voltage regulator to cool down before performing any work.

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.

Preparatory work

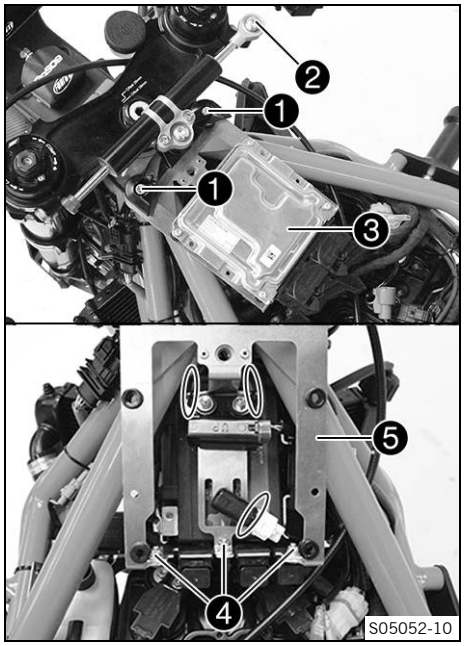
– Switch off power supply by setting the tilt switch into the position OFF.

– Remove the front spoiler. (p. 54)

– Remove the trim along with the front. (p. 56)

– Raise the motorcycle with the rear lifting gear. (p. 41)

– Take off the air filter box. (p. 57)



Main work

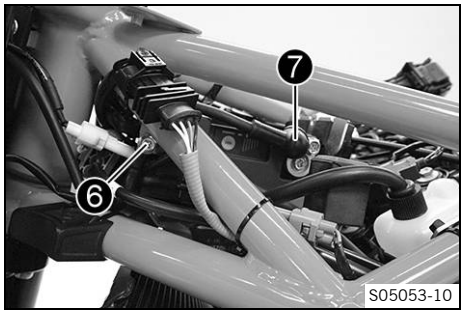
– Remove screws ❶ and ❷ and take off steering damper.

– Pull off the engine control unit ❸ upward and hang it to the side.

– Remove cable tie with distance piece.

– Remove fittings ❹.

– Remove holding bracket ❺ upward.

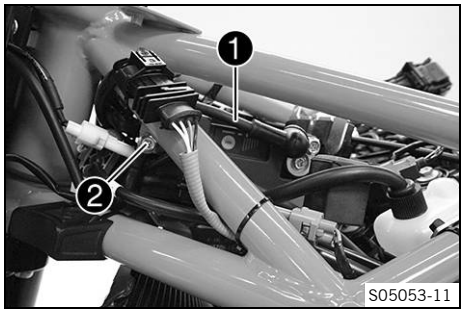


– Disconnect negative cable ❻ from the 12-V battery.

– Pull back positive terminal cover ❼ and disconnect the positive cable from the 12-V battery.

– Lift out the 12-V battery.

16.4 Installing the 12-V battery



Main work

– Place the 12 V battery into the battery compartment with the terminals facing to the left.

12 V battery (LTM14-B) (📖 p. 117)

– Connect positive cable ❶ to the 12-V battery.

Guideline

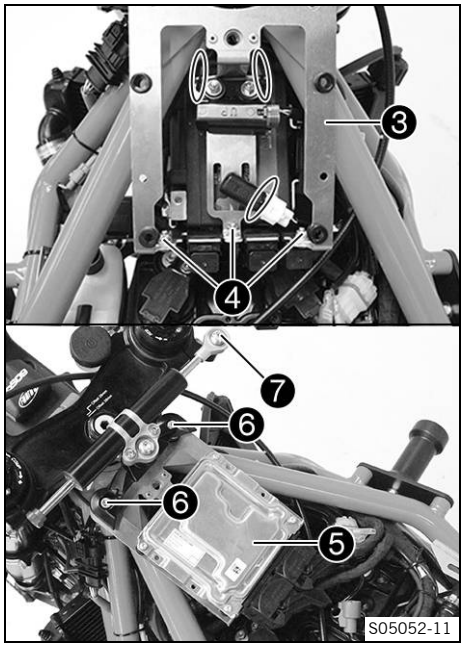
Screw, battery terminal	M5	2.5 Nm (1.84 lbf ft)

– Connect negative cable ❷ to the 12 V battery.

Guideline

Screw, battery terminal	M5	2.5 Nm (1.84 lbf ft)

– Slide the positive terminal cover over the positive terminal.



– Position holding bracket ❸, mount and tighten screws ❹.

Guideline

Remaining screws, chassis	M5	5 Nm (3.7 lbf ft)

– Mount cable tie with distance piece.
– Mount engine control unit ❺ on the holding bracket.
– Position the steering damper.
– Mount and tighten screws ❻.

Guideline

Screw, steering damper bracket	M6	15 Nm (11.1 lbf ft) **Loctite®243™**

– Mount and tighten screw ❼.

Guideline

Screw, steering damper on triple clamp	M8	20 Nm (14.8 lbf ft) **Loctite®243™**

Finishing work

– Install the trim along with the front. (📖 p. 56)
– Fit the front spoiler. (📖 p. 54)
– Mount the air filter box. (📖 p. 58)
– Remove the rear of the motorcycle from the lifting gear. (📖 p. 41)

16.5 Charging the 12-V battery

Warning

Risk of injury 12 V batteries contain harmful substances.

- Keep 12 V batteries out of the reach of children.
- Keep sparks and open flames away from 12 V batteries.
- Only charge 12 V batteries in well-ventilated rooms.
- Maintain a minimum clearance from inflammable materials when charging 12 V batteries.
  Minimum clearance 1 m (3 ft)
- Do not charge deeply discharged 12 V batteries if the charge is already below the minimum voltage.
  Minimum voltage before the start of the charge 9 V
- Dispose of 12 V batteries with less than the minimum voltage correctly.

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.

Info

Even when there is no load on the 12-V battery, it discharges steadily each day.
The charging level 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, the 12 V battery will be destroyed.
If the 12-V battery is depleted by repeated starting, the 12-V battery must be charged immediately.
If the 12-V battery is left in a discharged state for an extended period, it will become deeply discharged and suffer a loss of capacity, destroying the battery.
The 12-V battery is maintenance-free.


S04784-01

Preparatory work

- Switch off power supply by setting the tilt switch into the position OFF.
- Remove the front spoiler. (p. 54)
- Remove the trim along with the front. (p. 56)
- Raise the motorcycle with the rear lifting gear. (p. 41)
- Take off the air filter box. (p. 57)
- Remove the 12 V battery. (p. 88)

Main work

- Check the battery voltage.
  - » Battery voltage: < 9 V
    - Do not charge the 12-V battery.
    - Replace the 12-V battery and dispose of the old 12-V battery properly.
  - » If the specifications have been met:
    Battery voltage: ≥ 9 V
    - Connect a battery charger to the 12-V battery. Switch on the battery charger.

Guideline

The charging current, charging voltage, and charging time must not be exceeded.	
Maximum charging voltage	14.4 V
Maximum charging current	3.0 A
Maximum charging time	24 h
Recharge the 12-V battery regularly when the motorcycle is not being used	6 months

(EU) battery charger (79629974000)

Alternative 1

(US) battery charger (79629974500)

These battery chargers test whether the 12-V battery retains its voltage. It is also impossible to overcharge the 12-V battery with these battery chargers. The charging time may be longer at low temperatures.

These battery chargers are only suitable for lithium iron phosphate batteries. Read the accompanying **KTM PowerParts** instructions.

Info

Never remove cover ❶.

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

Finishing work

– Install the 12-V battery. (🔧 (📖 p. 89)
– Install the trim along with the front. (🔧 (📖 p. 56)
– Fit the front spoiler. (🔧 (📖 p. 54)
– Mount the air filter box. (📖 p. 58)
– Remove the rear of the motorcycle from the lifting gear. (📖 p. 41)

16.6 Changing main fuse

Warning

Fire hazard Incorrect fuses overload the electrical system.

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

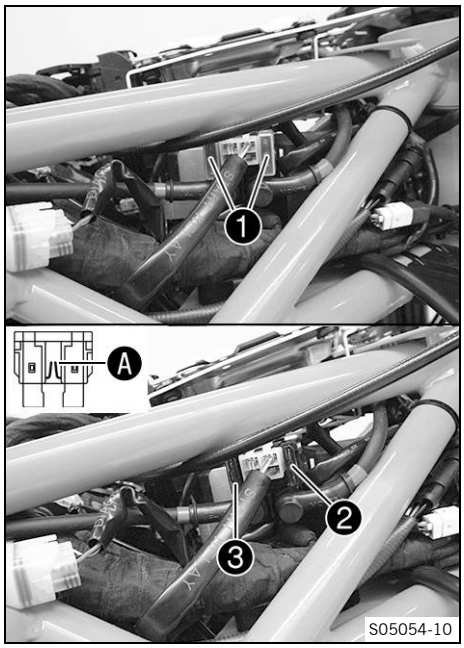
Caution

Danger of burns The voltage regulator gets very hot when the vehicle is driven.

– Allow the voltage regulator to cool down before performing any work.

Info
The main fuse protects all power consumers of the vehicle. It is located in the starter relay housing under the seat.

Preparatory work
- Switch off power supply by setting the tilt switch into the position OFF.
- Raise the motorcycle with the rear lifting gear. (📖 p. 41)
- Take off the air filter box. (📖 p. 57)
- Remove the front spoiler. 🔧 (📖 p. 54)
- Remove the trim along with the front. 🔧 (📖 p. 56)



Main work
- Take off protection caps ❶.
- Remove faulty main fuse ❷.

Info
A faulty fuse has a burned-out fuse wire Ⓐ.
A spare fuse ❸ is located in the starter relay.

- Insert a new main fuse.

Fuse (75011088030) (📖 p. 117)

- Check that the electrical system is functioning properly.

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

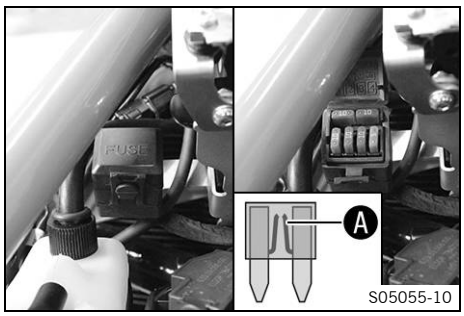
- Mount the protection caps.

Finishing work
- Install the trim along with the front. 🔧 (📖 p. 56)
- Fit the front spoiler. 🔧 (📖 p. 54)
- Mount the air filter box. (📖 p. 58)
- Remove the rear of the motorcycle from the lifting gear. (📖 p. 41)

16.7 Changing the fuse of individual power consumers

Info
The fuses for each power consumer are located on the right above the main silencer.

Preparatory work
- Switch off power supply by setting the tilt switch into the position OFF.
- Raise the motorcycle with the rear lifting gear. (📖 p. 41)
- Take off the air filter box. (📖 p. 57)
- Remove the front spoiler. 🔧 (📖 p. 54)
- Remove the trim along with the front. 🔧 (📖 p. 56)



Main work

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

Guideline

Fuse **1** - 10 A - ignition switch
Fuse **2** - 10 A - power relay
Fuse **3** - 10 A - fuel pump
Fuse **4** - 5 A - ACC2

Info

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

Warning

Fire hazard Incorrect fuses overload the electrical system.

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

– Insert the spare fuse with the correct rating.

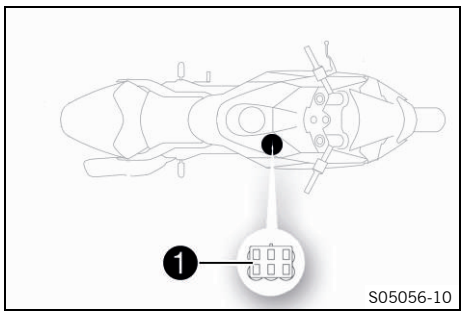
Fuse (75011088005) (p. 117)
Fuse (75011088010) (p. 117)

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

Finishing work

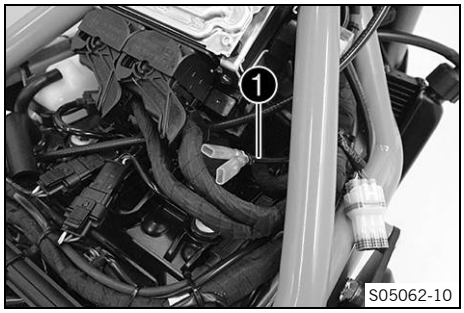
– Install the trim along with the front. (p. 56)
– Fit the front spoiler. (p. 54)
– Mount the air filter box. (p. 58)
– Remove the rear of the motorcycle from the lifting gear. (p. 41)

16.8 Diagnostics connector



Diagnostics connector ❶ is located on the right-hand side below the air filter box.

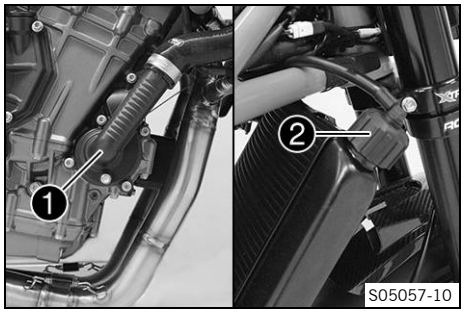
16.9 ACC2 front



Installation location

– Power supplies ACC2 ❶ front are located on the right-hand side under the air filter box.

17.1 Cooling system



Water pump ❶ in the engine ensures forced circulation of the coolant.
The pressure resulting from the warming of the cooling system is regulated by a valve in radiator cap ❷. This ensures that operating the vehicle at the specified coolant temperature will not result in a risk of malfunctions.

120 °C (248 °F)

Cooling is effected by the air stream.
The lower the speed, the less the cooling effect. Dirty cooling fins also reduce the cooling effect.

17.2 Checking the antifreeze and coolant level

Warning

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

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

Warning

Danger of poisoning Coolant is toxic and a health hazard.

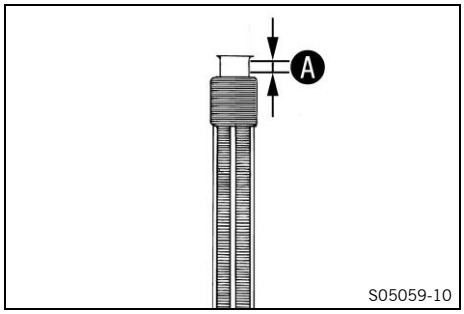
- Keep coolant out of the reach of children.
- Do not allow coolant to come into contact with the skin, the eyes and clothing.
- Consult a doctor immediately if coolant is swallowed.
- Rinse the affected area immediately with plenty of water in the event of contact with the skin.
- Rinse eyes thoroughly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

Condition

The motorcycle is mounted and the engine is cold.

Preparatory work

- Remove the front spoiler. 🔧 (📖 p. 54)
- Remove the trim along with the front. 🔧 (📖 p. 56)



Main work

- Stand the motorcycle upright on a horizontal surface.
- Take off the radiator cap.
- Check the antifreeze in the coolant.

−25 ... −45 °C (−13 ... −49 °F)

  » If the antifreeze in the coolant does not match the specified value:
  - Correct the antifreeze in the coolant.

Coolant (📖 p. 136)

- Check the coolant level in the radiator.

Coolant level Ⓐ below the upper edge of filler neck	35 mm (1.38 in)

» If the coolant level does not match the specified value:
– Correct the coolant level.

– Mount the radiator cap.

Finishing work

– Install the trim along with the front. (📖 p. 56)
– Fit the front spoiler. (📖 p. 54)

17.3 Checking the coolant level

Warning

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

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

Warning

Danger of poisoning Coolant is toxic and a health hazard.

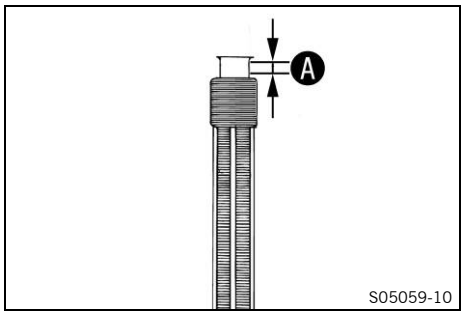
– Keep coolant out of the reach of children.
– Do not allow coolant to come into contact with the skin, the eyes and clothing.
– Consult a doctor immediately if coolant is swallowed.
– Rinse the affected area immediately with plenty of water in the event of contact with the skin.
– Rinse eyes thoroughly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

Condition

The engine is cold.

Preparatory work

– Remove the front spoiler. (📖 p. 54)
– Remove the trim along with the front. (📖 p. 56)



Main work

– Stand the motorcycle upright on a horizontal surface.
– Take off the radiator cap.
– Check the coolant level in the radiator.

Coolant level Ⓐ below the upper edge of filler neck	35 mm (1.38 in)

» If the coolant level does not match the specified value:
– Correct the coolant level.

Info

Ensure that distilled water with additive (for race track use) or coolant with antifreeze (for storage) is in the radiator.

– Mount the radiator cap.

Finishing work
- Install the trim along with the front. (p. 56)
- Fit the front spoiler. (p. 54)

17.4 Draining the coolant

Warning

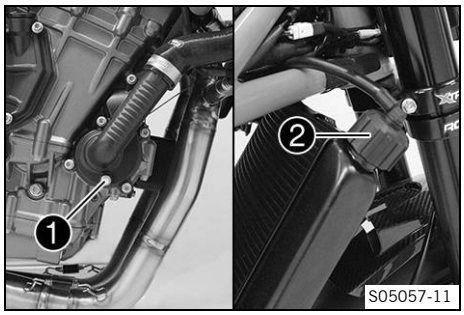
Danger of scalding During motorcycle operation, the coolant gets very hot and is under pressure.
- Do not open the radiator, the radiator hoses or other cooling system components if the engine or the cooling system are at operating temperature.
- Allow the cooling system and the engine to cool down before you open the radiator, the radiator hoses or other components of the cooling system.
- In the event of scalding, rinse the area affected immediately with lukewarm water.

Warning

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

Condition
The engine is cold.

Preparatory work
- Remove the front spoiler. (p. 54)
- Remove the trim along with the front. (p. 56)



Main work
- Position the motorcycle upright.
- Place an appropriate container under the water pump cover.
- Remove screw ❶ with the seal ring. Take off radiator cap ❷.
- Completely drain the coolant.
- Mount and tighten screw ❶ with a new seal ring.

  Guideline

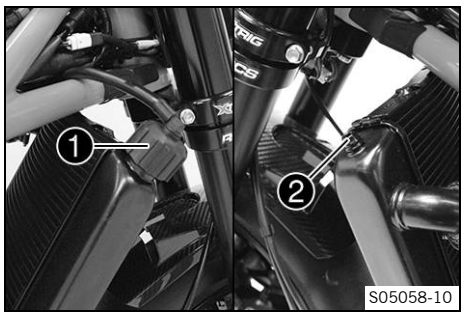
Screw, water pump cover	M6	10 Nm (7.4 lbf ft) **Loctite®243™**

17.5 Filling/bleeding the cooling system

Warning

Danger of poisoning Coolant is toxic and a health hazard.

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



Main work

- Remove radiator cap ❶.
- Remove bleeder screw ❷.
- Pour in coolant until it emerges without bubbles at the vent hole, and then mount and tighten bleeder screw ❷ immediately.

Condition

Storage

Coolant	1.6 l (1.7 qt.)	Coolant (📖 p. 136)

Condition

Race track use

Coolant	1.6 l (1.7 qt.)	Distilled water with approved additive for race tracks

- Completely fill the radiator with coolant. Mount radiator cap ❶.
- Check the coolant level. (📖 p. 96)

Danger

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

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

- Start the engine and run it until it reaches operating temperature.
- Stop the engine and allow it to cool down.
- When the engine is cool, check the coolant level in the radiator and, if necessary, add coolant.
- Check the coolant level. (📖 p. 96)

Finishing work

- Install the trim along with the front. (📖 p. 56)
- Fit the front spoiler. (📖 p. 54)

17.6 Changing the coolant

Warning

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

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

Warning

Danger of poisoning Coolant is toxic and a health hazard.

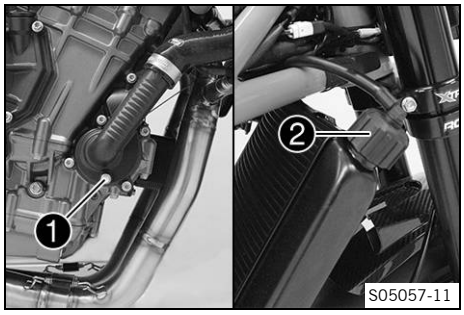
- Keep coolant out of the reach of children.
- Do not allow coolant to come into contact with the skin, the eyes and clothing.
- Consult a doctor immediately if coolant is swallowed.
- Rinse the affected area immediately with plenty of water in the event of contact with the skin.
- Rinse eyes thoroughly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

Condition

The engine is cold.

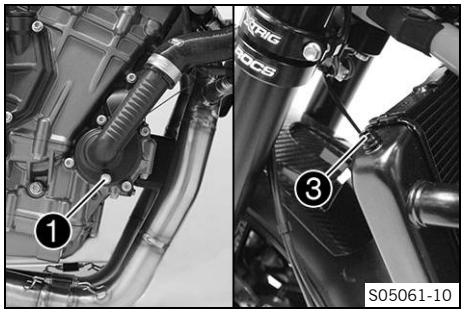
Preparatory work

- Remove the front spoiler. (p. 54)
- Remove the trim along with the front. (p. 56)



Main work

- Position the motorcycle upright.
- Place an appropriate container under the water pump cover.
- Remove screw ❶. Take off radiator cap ❷.
- Completely drain the coolant.



- Mount and tighten screw ❶ with a new seal ring.

  Guideline

Screw, water pump cover	M6	10 Nm (7.4 lbf ft) **Loctite®243™**

- Remove bleeder screw ❸.
- Pour in coolant until it emerges without bubbles at the vent hole, and then mount and tighten the bleeder screw immediately.

  Condition

  Race track use

Coolant	1.6 l (1.7 qt.)	Distilled water with approved additive for race tracks

Condition

Storage

Coolant	1.6 l (1.7 qt.)	Coolant (📖 p. 136)

– Completely fill the radiator with coolant and close it with radiator cap ❷.

Danger

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

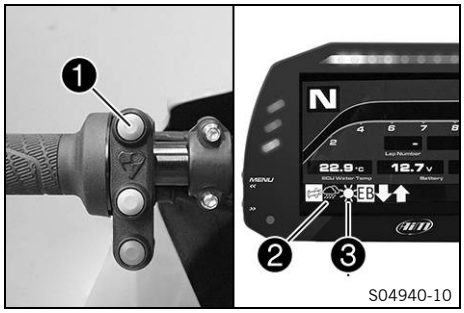
– Always make sure there is sufficient ventilation when running the engine.
– Use effective exhaust extraction when starting or running the engine in an enclosed space.

– Start the engine and run it until it reaches operating temperature.
– Stop the engine and allow it to cool down.
– When the engine is cool, check the coolant level in the radiator and, if necessary, add coolant.
– Check the coolant level. (📖 p. 96)

Finishing work

– Install the trim along with the front. 🔧 (📖 p. 56)
– Fit the front spoiler. 🔧 (📖 p. 54)

18.1 Throttle response

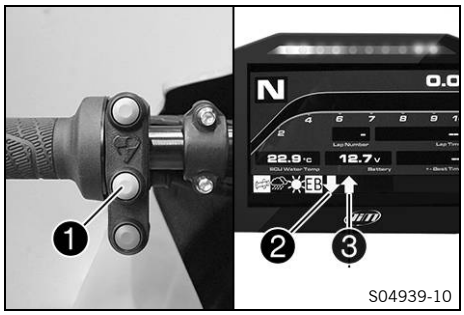


Possible states
- Sun symbol – Extremely direct response
- Rain symbol – Gentle response.

The throttle response can be adjusted with button ❶.
The throttle response can also be set while riding when the throttle grip is closed.

Info
A pre-setting ❷ can be set while driving. The pre-setting will then be active when the throttle grip is closed.
The active condition is shown in section ❸.

18.2 Engine braking effect



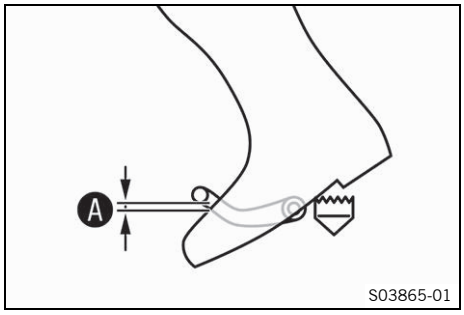
Possible states
- Arrow up – High engine braking effect
- Arrow down – Low engine braking effect

The engine braking effect can be adjusted with button ❶.
The engine braking effect can also be set when the throttle grip is closed.

Info
A pre-setting ❷ can be set while driving. The pre-setting will then be active when the throttle grip is closed.
The active condition is shown in section ❸.

18.3 Checking the basic position of the shift lever

Info
When driving, the shift lever must not touch the rider's boot when in the basic position.
If the shift lever is permanently touching the boot, the transmission will be subject to excessive load; this can cause a malfunction of the quickshifter.

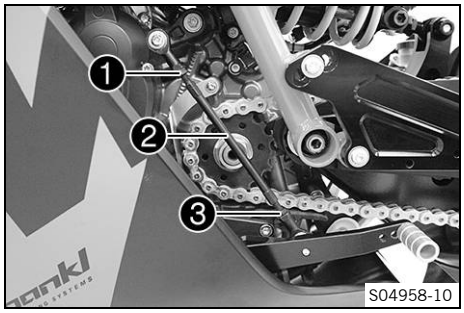


– Sit on the vehicle in the riding position and determine distance Ⓐ between the upper edge of your boot and the shift lever.

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

» If the distance does not meet specifications:
– Adjust the basic position of the shift lever. (📖 p. 102)

18.4 Adjusting the basic position of the shift lever



– Loosen nut ❶ while holding stud ❷.

Info
Nut ❶ has an LH thread.

– Loosen nut ❸ while holding stud ❷.
– Turn stud ❷ to adjust the shift lever.

Info
The range of adjustment is limited.
If the adjustment range is not sufficient, use the extension included.
The shift lever must not come into contact with any other vehicle components during the shift procedure.
The shift linkage must be correctly adjusted in all footrest positions to ensure correct functioning of the shift mechanism.

– Tighten nut ❸ while holding stud ❷.

Guideline

Nut, shift rod	M6	10 Nm (7.4 lbf ft)

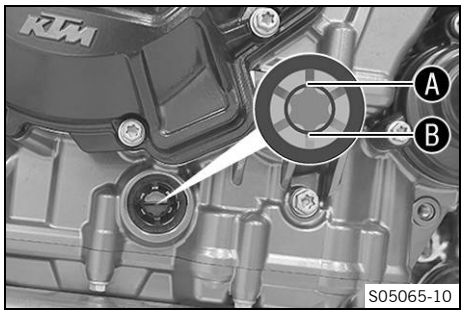
– Tighten nut ❶ while holding stud ❷.

Guideline

Nut, shift rod	M6LH	10 Nm (7.4 lbf ft)

19.1 Checking the engine oil level

Info
The engine oil level must be checked at normal engine operating temperature.



– Stand the motorcycle upright on a horizontal surface.
– Check the engine oil level.

Info
After switching off the engine, wait one minute before checking the level.

The engine oil must be between marking Ⓐ and marking Ⓑ of the oil level viewer.

» If the engine oil level is below the marking Ⓑ:
  – Add engine oil. (📖 p. 105)
» If the engine oil level is above the marking Ⓐ:
  – Correct engine oil level.

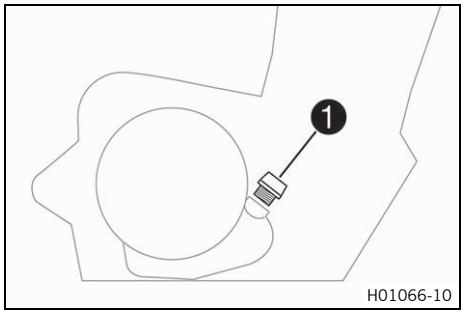
19.2 Changing the engine oil and oil filter, cleaning the oil screens 🔧

Warning
Danger of scalding Engine and gear oil get very hot when the motorcycle is ridden.
– Wear suitable protective clothing and safety gloves.
– In the event of scalding, rinse the area affected immediately with lukewarm water.

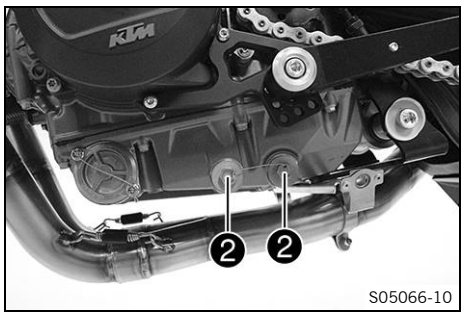
Note
Environmental hazard Hazardous substances cause environmental damage.
– Dispose of oils, grease, filters, fuel, cleaning agents, brake fluid, etc., correctly and in compliance with the applicable regulations.

Info
Drain the engine oil while the engine is at operating temperature.

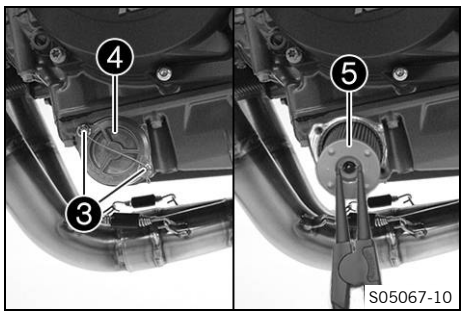
Preparatory work
– Raise the motorcycle with the rear lifting gear. (📖 p. 41)
– Remove the front spoiler. 🔧 (📖 p. 54)
– Remove the trim along with the front. 🔧 (📖 p. 56)



Main work
– Park the motorcycle on a level surface.
– Position an appropriate container under the engine.
– Remove oil filler plug ❶ with the O-ring from the clutch cover.



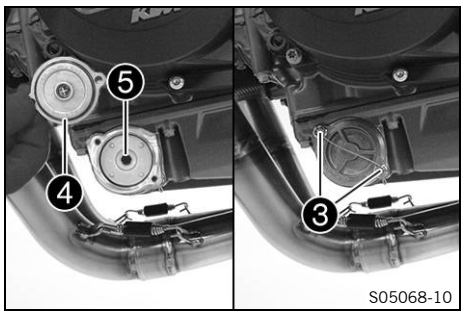
– Remove locking wire.
– Remove oil drain plugs ❷ along with the O-rings, and the oil screens.



– Remove screws ❸. Take off oil filter cover ❹ with the O-ring.
– Pull oil filter ❺ out of the oil filter housing.

Lock ring plier (51012011000)

– Allow the engine oil to drain completely.
– Thoroughly clean the parts and the sealing surfaces.



– Insert new oil filter ❺.

Info
Only insert the oil filter by hand.

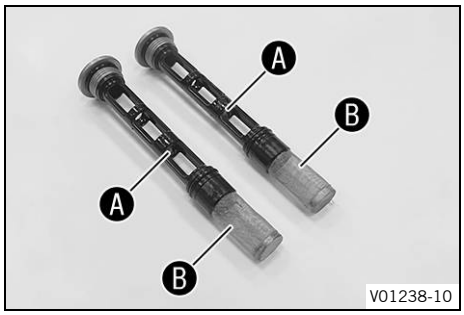
– Oil the O-ring of the oil filter cover. Position oil filter cover ❹.
– Mount and tighten screws ❸.

Guideline

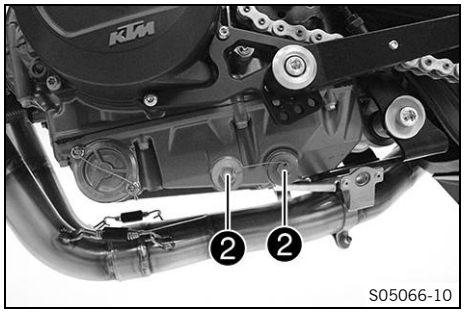
Screw, oil filter cover	M5	6 Nm (4.4 lbf ft)

– Mount locking wire.

Wire twister forceps (00029015100)
Securing wire (54812016000)



– Thoroughly clean magnets Ⓐ and oil screens Ⓑ of the oil drain plugs.



– Mount the oil drain plugs ❷ with magnets and new seal rings, and tighten.

Guideline

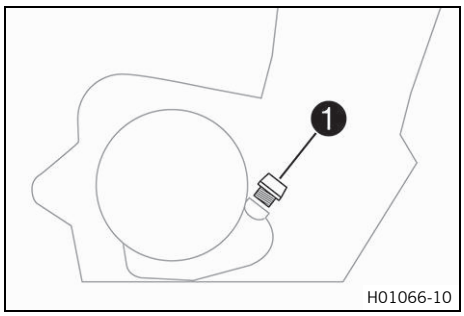
Plug, oil screen	M20x1.5	20 Nm (14.8 lbf ft)

– Mount locking wire.

Wire twister forceps (00029015100)
Securing wire (54812016000)

– Fill up with engine oil at the clutch cover.

Engine oil	2.8 l (3 qt.)	Engine oil (SAE 10W/50) (📖 p. 136)



– Mount and tighten filler plug ❶ with the O-ring.

Danger

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

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

– Start the engine and check it for leaks.

Finishing work

– Check the engine oil level. (📖 p. 103)
– Install the trim along with the front. 🔧 (📖 p. 56)
– Fit the front spoiler. 🔧 (📖 p. 54)
– Remove the rear of the motorcycle from the lifting gear. (📖 p. 41)

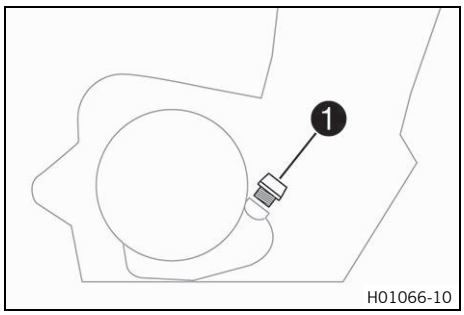
19.3 Adding engine oil

Info

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

Preparatory work

– Remove the front spoiler. 🔧 (📖 p. 54)
– Remove the trim along with the front. 🔧 (📖 p. 56)



Main work

– Remove filler plug ❶ with the O-ring, and fill up with engine oil.
– Fill engine oil to the middle of the level viewer.

Engine oil (SAE 10W/50) (📖 p. 137)

Info

In order to achieve optimal engine oil performance, it is not advisable to mix different engine oils.
KTM recommends changing the engine oil where necessary.

– Mount and tighten filler plug ❶ with the O-ring.

Danger

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

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

– Start the engine and check it for leaks.

Finishing work

– Check the engine oil level. (📖 p. 103)
– Install the trim along with the front. 🔧 (📖 p. 56)
– Fit the front spoiler. 🔧 (📖 p. 54)

20.1 Cleaning the motorcycle

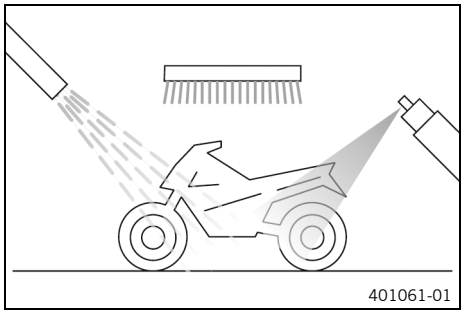
Note

Environmental hazard Hazardous substances cause environmental damage.

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

Info

Clean the motorcycle regularly to maintain its value and appearance over a long period.
Avoid direct sunshine when cleaning the motorcycle.



– Close off exhaust system to keep water from entering.
– Remove loose dirt first with a soft jet of water.
– Spray the heavily soiled parts with a normal commercial motorcycle cleaner and clean using a brush.

Motorcycle cleaner (📖 p. 138)

Info

Use warm water containing normal motorcycle cleaner and a soft sponge.
Never apply motorcycle cleaner to a dry motorcycle; always rinse the vehicle with water first.

– After rinsing the motorcycle with a gentle spray of water, allow it to dry thoroughly.
– Remove the closure of the exhaust system.

Warning

Danger of accidents Moisture and dirt impair the brake system.

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

– After cleaning, ride the vehicle a short distance until the engine warms up.

Info

The heat produced causes water at inaccessible locations in the engine and on the brake system to evaporate.

– Push back the sleeves of the handlebar controls to allow any water that has penetrated to evaporate.
– After the motorcycle has cooled down, lubricate all moving parts and pivot points.
– Clean the chain. (📖 p. 61)
– Treat bare metal (except for brake discs and the exhaust system) with a corrosion inhibitor.

Preserving materials for paints, metal and rubber (📖 p. 138)

– Treat all painted parts with a mild paint care product.

Perfect finish and high gloss polish for paints (📖 p. 138)

Info

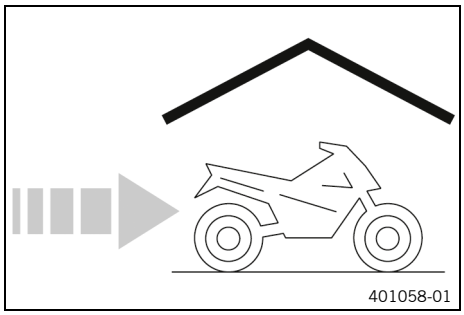
Do not polish parts that were matte when delivered as this would strongly impair the material quality.

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

Special cleaner for glossy and matte paint finishes, metal and plastic surfaces (📖 p. 139)

21.1 Storage

Info
If you plan to garage the motorcycle for a longer period, perform the following steps or have them performed.
Before storing the motorcycle, check all parts for function and wear. If service, repairs, or replacements are necessary, you should do this during the storage period (less workshop overload). In this way, you can avoid long workshop waiting times at the start of the new season.



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

Fuel additive (📖 p. 138)

– Refuel. (📖 p. 33)
– Clean the motorcycle. (📖 p. 107)
– Change the engine oil and the oil filter, clean the oil screens. 🔧 (📖 p. 103)
– Change the coolant. (📖 p. 99)
– Check the antifreeze and coolant level. (📖 p. 95)
– Check the tire pressure. (📖 p. 86)
– Remove the 12 V battery. 🔧 (📖 p. 88)
– Charge the 12-V battery. 🔧 (📖 p. 90)
Guideline

Storage temperature of the 12-V battery without direct sunlight	0 … 35 °C (32 … 95 °F)

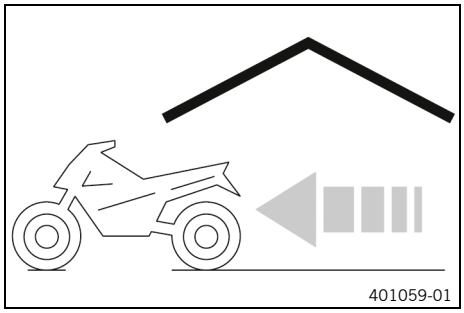
– Store the vehicle in a dry location that is not subject to large fluctuations in temperature.

Info
KTM recommends jacking up the motorcycle.

– Raise the motorcycle with the rear lifting gear. (📖 p. 41)
– Lift the motorcycle with the front lifting gear. (📖 p. 41)
– Cover the motorcycle with a tarp or cover that is permeable to air.

Info
Do not use non-porous materials since they prevent humidity from escaping, thus causing corrosion.
Avoid running the engine for a short time only. Since the engine cannot warm up properly, the water vapor produced during combustion condenses and causes valves and the exhaust system to rust.

21.2 Preparing for use after storage



- Take the motorcycle off the front lifting gear. (📖 p. 42)
- Install the 12-V battery. 🔧 (📖 p. 89)
- Change the coolant. (📖 p. 99)
- Check the coolant level. (📖 p. 96)
- Remove the rear of the motorcycle from the lifting gear. (📖 p. 41)
- Perform checks and maintenance measures when preparing for use. (📖 p. 28)
- Take a test ride.

Faults	Possible cause	Action
The engine does not turn over when the start button is actuated	Operating error	– Carry out start procedure. (📖 p. 28)
	12-V battery discharged	– Charge the 12-V battery. 🔧 (📖 p. 90) – Check the open-circuit current. 🔧
	Fuse **1** or **2** blown	– Change the fuse of individual power consumers. (📖 p. 92)
	Main fuse blown	– Change the main fuse. (📖 p. 91)
	No ground connection present	– Check the ground connection.
The engine only turns over if the clutch lever is pulled	The vehicle is in gear	– Shift the transmission into neutral.
The engine turns but does not start	Operating error	– Carry out start procedure. (📖 p. 28)
	Fuse **3** blown	– Change the fuse of individual power consumers. (📖 p. 92)
	Quick release coupling not joined	– Join the quick release coupling.
	Malfunction in the electronic fuel injection	– Read out the fault memory using the KTM diagnostics tool. 🔧
	Throttle opened while starting	– When starting, **DO NOT** open the throttle. – Carry out start procedure. (📖 p. 28)
Engine has too little power	Air filter is very dirty	– Remove the air filter. 🔧 (📖 p. 59) – Install the air filter. 🔧 (📖 p. 60)
	Fuel filter is very dirty	– Check the fuel pressure. 🔧
	Malfunction in the electronic fuel injection	– Read out the fault memory using the KTM diagnostics tool. 🔧
Engine overheats	Too little coolant in cooling system	– Check the cooling system for leakage. – Check the coolant level. (📖 p. 96)
	Radiator fins very dirty	– Clean the radiator fins.
	Foam formation in the cooling system	– Drain the coolant. 🔧 (📖 p. 97) – Fill/bleed the cooling system. 🔧 (📖 p. 98)
	Buckled or damaged radiator hose	– Change the radiator hose. 🔧
Malfunction indicator lamp lights up or flashes	Malfunction in the electronic fuel injection	– Read out the fault memory using the KTM diagnostics tool. 🔧
N The idling speed indicator lamp does not light up when the transmission is in neutral	Gear position sensor not programmed	– Read out the fault memory using the KTM diagnostics tool. 🔧
The engine dies during the trip	Lack of fuel	– Refuel. (📖 p. 33)
	Fuse **1**, **2** or **3** blown	– Change the fuse of individual power consumers. (📖 p. 92)
High oil consumption	Engine vent hose bent	– Route the vent hose without bends or change it if necessary.
	Engine oil level too high	– Check the engine oil level. (📖 p. 103)
	Engine oil too thin (low viscosity)	– Change the engine oil and the oil filter, clean the oil screens. 🔧 (📖 p. 103)
12-V battery discharged	Ignition was not switched off when vehicle was parked	– Charge the 12-V battery. 🔧 (📖 p. 90)

Faults	Possible cause	Action
12-V battery discharged	The 12-V battery is not being charged by the alternator	– Check the charging voltage. 🔧 – Check the open-circuit current. 🔧
The combination instrument shows nothing on the display	Fuse **1** or **2** blown	– Change the fuse of individual power consumers. (📖 p. 92)

23.1 Engine

Design	2-cylinder 4-stroke in-line engine, water-cooled
Displacement	890 cm³ (54.31 cu in)
Stroke	68.8 mm (2.709 in)
Bore	90.7 mm (3.571 in)
Compression ratio	13.5:1
Idle speed	2,300 ± 50 rpm
Control	DOHC, 4 valves per cylinder controlled via cam lever, chain drive
Valve diameter, intake	37 mm (1.46 in)
Valve diameter, exhaust	30 mm (1.18 in)
Valve play, cold	
Intake at: 20 °C (68 °F)	0.10 ... 0.15 mm (0.0039 ... 0.0059 in)
Exhaust at: 20 °C (68 °F)	0.15 ... 0.20 mm (0.0059 ... 0.0079 in)
Crankshaft bearing	Slide bearing
Conrod bearing	Slide bearing
Piston pin bearing	Piston pin with bronze coating
Pistons	Forged light alloy
Piston rings	1 compression ring, 1 lower compression ring, 1 oil ring with spring expander
Engine lubrication	Semi-dry sump lubrication system with two trochoid pumps
Primary transmission	39:75
Clutch	Slipper clutch in oil bath/mechanically operated
Transmission	6-gear transmission, claw shifted
Transmission ratio	
First gear	13:37
Second gear	17:34
Third gear	20:31
Fourth gear	22:28
Fifth gear	24:26
Sixth gear	23:22
Alternator	12 V, 400 W
Ignition	Contactless controlled fully electronic ignition with digital ignition adjustment
Spark plug	NGK LMAR9AI-10
Spark plug electrode gap	1.0 mm (0.039 in)
Cooling	Water cooling, permanent circulation of coolant by water pump
Starting aid	Starter motor

23.2 Engine tightening torques

Screw plug, water pump drain hole	**EJOTALtracs®Plus** 60x14	8 Nm (5.9 lbf ft) **Loctite®243™**
Screw, bleeder flange	**EJOTALtracs®** M6x12	8 Nm (5.9 lbf ft) **Loctite®243™**
Hose clamp, intake flange	M4	2.5 Nm (1.84 lbf ft)
Nozzle, engine vent	M5	2 Nm (1.5 lbf ft)
Oil nozzle for piston cooling	M5	2 Nm (1.5 lbf ft)
Oil nozzle in cylinder head	M5	2 Nm (1.5 lbf ft)
Remaining screws, engine	M5	6 Nm (4.4 lbf ft)
Screw, cam lever axial lock	M5	6 Nm (4.4 lbf ft) **Loctite®243™**
Screw, crankshaft speed sensor	M5	6 Nm (4.4 lbf ft) **Loctite®243™**
Screw, gear position sensor	M5	6 Nm (4.4 lbf ft) **Loctite®243™**
Screw, oil filter cover	M5	6 Nm (4.4 lbf ft)
Screw, pressure plate	M5	3 Nm (2.2 lbf ft) **Loctite®243™**
Screw, shift drum retaining bracket	M5	6 Nm (4.4 lbf ft) **Loctite®243™**
Screw, shift shaft sensor	M5	6 Nm (4.4 lbf ft) **Loctite®243™**
Screw, thermostat case	M5	6 Nm (4.4 lbf ft) **Loctite®243™**
Securing screw, balancer shaft	M5	5 Nm (3.7 lbf ft) **Loctite®243™**
Swing angle sensor screw	M5	6 Nm (4.4 lbf ft) **Loctite®243™**
Nut, starter motor cable	M6	5 Nm (3.7 lbf ft)
Remaining screws, engine	M6	10 Nm (7.4 lbf ft)
Screw, alternator cover	M6x30	10 Nm (7.4 lbf ft)
Screw, alternator cover	M6x35	10 Nm (7.4 lbf ft)
Screw, camshaft bearing bridge	M6	10 Nm (7.4 lbf ft)
Screw, clutch cable retaining bracket	M6	10 Nm (7.4 lbf ft) **Loctite®243™**
Screw, clutch cover	M6	10 Nm (7.4 lbf ft)
Screw, clutch release lever	M6	10 Nm (7.4 lbf ft) **Loctite®243™**
Screw, clutch spring	M6	10 Nm (7.4 lbf ft)
Screw, cylinder head	M6	10 Nm (7.4 lbf ft)
Screw, engine case	M6x30	12 Nm (8.9 lbf ft)
Screw, engine case	M6x60	12 Nm (8.9 lbf ft)
Screw, freewheel ring	M6	14 Nm (10.3 lbf ft) **Loctite®243™**
Screw, ignition coil	M6	8 Nm (5.9 lbf ft)
Screw, locking lever	M6	10 Nm (7.4 lbf ft) **Loctite®243™**

Screw, main shaft bearing support	M6	10 Nm (7.4 lbf ft) **Loctite®243™**
Screw, oil pan	M6x30	10 Nm (7.4 lbf ft)
Screw, oil pan	M6x35	10 Nm (7.4 lbf ft)
Screw, oil pump cover	M6	10 Nm (7.4 lbf ft) **Loctite®243™**
Screw, oil pump unit	M6	10 Nm (7.4 lbf ft)
Screw, oil/water heat exchanger	M6	10 Nm (7.4 lbf ft) **Loctite®243™**
Screw, shift drum locating	M6	10 Nm (7.4 lbf ft) **Loctite®243™**
Screw, shift lever	M6	14 Nm (10.3 lbf ft) **Loctite®243™**
Screw, shift shaft retaining bracket	M6	10 Nm (7.4 lbf ft) **Loctite®243™**
Screw, starter motor	M6	10 Nm (7.4 lbf ft)
Screw, stator	M6	10 Nm (7.4 lbf ft) **Loctite®243™**
Screw, timing chain shaft	M6	10 Nm (7.4 lbf ft)
Screw, upper guide rail	M6	8 Nm (5.9 lbf ft) **Loctite®243™**
Screw, valve cover	M6	10 Nm (7.4 lbf ft)
Screw, water pump cover	M6	10 Nm (7.4 lbf ft) **Loctite®243™**
Screw, water pump wheel	M6	10 Nm (7.4 lbf ft) **Loctite®243™**
Nut, exhaust flange	M8	15 Nm (11.1 lbf ft) Copper paste
Oil nozzle for clutch lubrication	M8	5 Nm (3.7 lbf ft) **Loctite®243™**
Remaining screws for engine	M8	20 Nm (14.8 lbf ft)
Screw plug, locking screw	M8	15 Nm (11.1 lbf ft)
Screw, engine case	M8x45	25 Nm (18.4 lbf ft) Screw support greased
Screw, engine case	M8x55	25 Nm (18.4 lbf ft) Screw support greased
Screw, engine case	M8x65	25 Nm (18.4 lbf ft) Screw support greased
Screw, engine case	M8x90	25 Nm (18.4 lbf ft) Screw support greased
Screw, knock sensor	M8	20 Nm (14.8 lbf ft)
Screw, oil pump idler gear	M8	15 Nm (11.1 lbf ft) **Loctite®243™**
Screw, tensioning rail	M8	15 Nm (11.1 lbf ft) **Loctite®243™**
Stud, exhaust flange	M8	15 Nm (11.1 lbf ft) **Loctite®243™**

Screw, conrod bearing	M8x0.75	1st stage 5 Nm (3.7 lbf ft) 2nd stage 20 Nm (14.8 lbf ft) 3rd stage 90° Screw support and thread oiled
Spark plug	M10	11 Nm (8.1 lbf ft)
Oil pressure sensor	M10x1	10 Nm (7.4 lbf ft)
Screw plug, bearing support	M10x1	12 Nm (8.9 lbf ft) **Loctite®243™**
Screw plug, cam lever axis	M10x1	8 Nm (5.9 lbf ft)
Screw, unlocking of timing chain tensioner	M10x1	8 Nm (5.9 lbf ft)
Coolant temperature sensor	M10x1.25	10 Nm (7.4 lbf ft)
Screw, cylinder head	M10x1.25	Tightening sequence: Observe tightening sequence. 1st stage 5 Nm (3.7 lbf ft) 2nd stage 15 Nm (11.1 lbf ft) 3rd stage 90° 4th stage 90° Screw support greased/thread oiled
Screw plug, cylinder head oil drain	M12x1.5	15 Nm (11.1 lbf ft)
Screw, rotor	M12x1.5	90 Nm (66.4 lbf ft) Thread greased
Screw plug, water jacket	M16x1.5	20 Nm (14.8 lbf ft) **Loctite®243™**
Nut, engine sprocket	M20x1.5	120 Nm (88.5 lbf ft) **Loctite®243™**
Nut, inner clutch hub	M20x1.5	135 Nm (99.6 lbf ft)
Plug, oil screen	M20x1.5	20 Nm (14.8 lbf ft)
Plug, timing chain tensioner	M24x1.5	25 Nm (18.4 lbf ft)
Screw plug, alternator cover	M24x1.5	8 Nm (5.9 lbf ft)

23.3 Capacities

23.3.1 Engine oil

Engine oil	2.8 l (3 qt.)	Engine oil (SAE 10W/50) (📖 p. 136)

23.3.2 Coolant

Coolant	1.6 l (1.7 qt.)	Coolant (📖 p. 136)

23.3.3 Fuel

Total fuel tank capacity, approx.	16 l (4.2 US gal)	Super unleaded (ROZ 98 / RON 98 / PON 94) (📖 p. 137)

23.4 Chassis

Frame	Lattice frame of steel tubes, powder-coated
Fork	**WP Suspension APEX PRO 7543**
Shock absorber	**WP SuspensionAPEX PRO 7746**
Brake system	
front	Disc brake with 4-piston brake caliper
rear	Disc brake with single-pot brake caliper, floating
Suspension travel	
front	120 mm (4.72 in)
rear	120 mm (4.72 in)
Brake discs - diameter	
front	290 mm (11.42 in)
rear	230 mm (9.06 in)
Brake discs - wear limit	
front	4.5 mm (0.177 in)
rear	4.0 mm (0.157 in)
Tire pressure (warm)	
front: 75 ... 85 °C (167 ... 185 °F)	2.1 bar (30 psi)
rear: 75 ... 85 °C (167 ... 185 °F)	1.8 bar (26 psi)
Secondary ratio	16:41
Chain	5/8 x 1/4" (520)
Steering head angle	66.7°
Wheelbase	1,400 ± 15 mm (55.12 ± 0.59 in)
Seat height, unloaded	820 mm (32.28 in)
Ground clearance, unloaded	150 mm (5.91 in)
Weight without fuel, approx.	140 kg (309 lb.)
Maximum permissible front axle load	160 kg (353 lb.)
Maximum permissible rear axle load	270 kg (595 lb.)
Maximum permissible overall weight	430 kg (948 lb.)

23.5 Electrical system

12 V battery	LTM14-B	Lithium-ion battery Battery voltage: 12 V Nominal capacity: 4.0 Ah Maintenance-free
Fuse	75011088005	5 A
Fuse	75011088010	10 A
Fuse	75011088030	30 A
Tail light	LED	

23.6 Tires

Front tire	Rear tire
120/70 R 17 R TL Pirelli **Diablo Superbike**	**180/60 R 17 R TL** Pirelli **Diablo Superbike**
The tires specified represent one of the possible series production tires. Additional information is available in the Service section under: KTM.COM	

23.7 Fork

Fork article number	05.99.2P.01
Fork	**WP Suspension APEX PRO 7543**
Compression damping	
Comfort	20 clicks
Standard	16 clicks
Sport	12 clicks
Rebound damping	
Comfort	18 clicks
Standard	16 clicks
Sport	12 clicks
Spring preload – preload adjuster	
Comfort	16 clicks
Standard	18 clicks
Sport	22 clicks
Spring length with preload spacer(s)	260 mm (10.24 in)
Spring rate	
Weight of rider: 65 ... 75 kg (143 ... 165 lb.)	8.5 N/mm (48.5 lb/in)
Weight of rider: 75 ... 85 kg (165 ... 187 lb.)	9 N/mm (51 lb/in)
Weight of rider: 85 ... 95 kg (187 ... 209 lb.)	9.5 N/mm (54.2 lb/in)
Fork length	735 mm (28.94 in)

23.8 Shock absorber

Shock absorber article number	A653C400U313200
Shock absorber	**WP SuspensionAPEX PRO 7746**
Low-speed compression damping	
Standard	18 clicks
High-speed compression damping	
Standard	22 turns
Rebound damping	
Standard	14 clicks
Spring preload	
Standard	12 mm (0.47 in)
Spring rate	
Weight of rider: 55 ... 65 kg (121 ... 143 lb.)	80 N/mm (457 lb/in)
Weight of rider: 65 ... 75 kg (143 ... 165 lb.)	82 N/mm (468 lb/in)

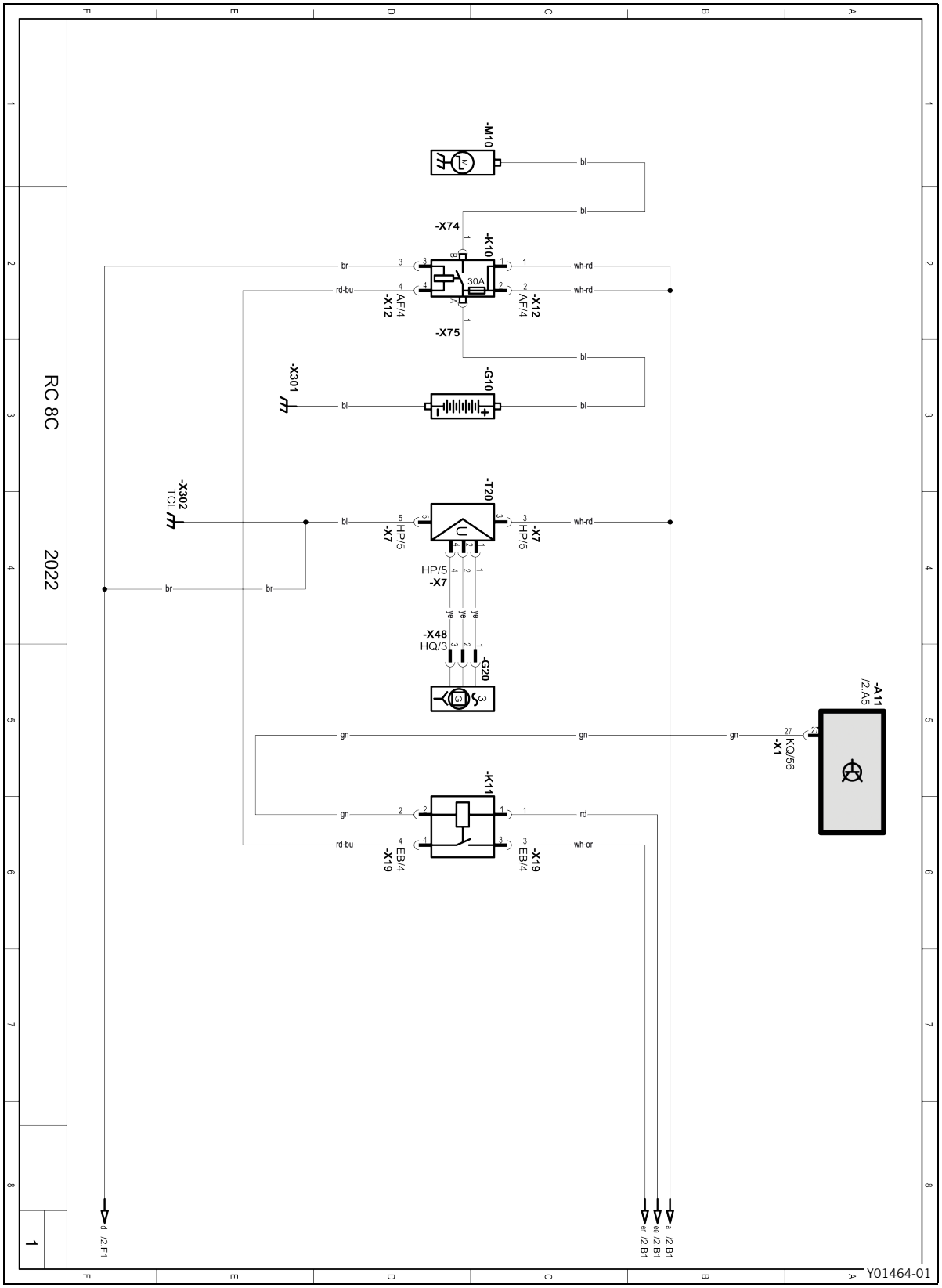
Weight of rider: 75 ... 85 kg (165 ... 187 lb.)	84 N/mm (480 lb/in)
Weight of rider: 85 ... 95 kg (187 ... 209 lb.)	86 N/mm (491 lb/in)
Weight of rider: 95 ... 105 kg (209 ... 231 lb.)	88 N/mm (502 lb/in)
Spring length	130 mm (5.12 in)
Gas pressure	10 bar (145 psi)
Fitted length	299 mm (11.77 in)

23.9 Chassis tightening torques

Remaining nuts, chassis	M5	5 Nm (3.7 lbf ft)
Remaining screws, chassis	M5	5 Nm (3.7 lbf ft)
Screw, brake fluid reservoir for rear brake	M5	5 Nm (3.7 lbf ft) **Loctite®243™**
Remaining nuts, chassis	M6	10 Nm (7.4 lbf ft)
Remaining screws, chassis	M6	10 Nm (7.4 lbf ft)
Screw, foot brake cylinder	M6	10 Nm (7.4 lbf ft) **Loctite®243™**
Screw, foot brake lever	M6	15 Nm (11.1 lbf ft) **Loctite®243™**
Screw, fuel pump	M6	6 Nm (4.4 lbf ft)
Screw, handlebar stub clamp	M6	10 Nm (7.4 lbf ft)
Screw, handlebar stub clamp on fork tube	M6	15 Nm (11.1 lbf ft)
Screw, rear brake lever stub	M6	10 Nm (7.4 lbf ft) **Loctite®243™**
Screw, shift lever stub	M6	10 Nm (7.4 lbf ft) **Loctite®243™**
Screw, shift rod	M6	12 Nm (8.9 lbf ft) **Loctite®243™**
Screw, shift rod linkage	M6	7 Nm (5.2 lbf ft) **Loctite®243™**
Screw, steering damper bracket	M6	15 Nm (11.1 lbf ft) **Loctite®243™**
Remaining nuts, chassis	M8	25 Nm (18.4 lbf ft)
Remaining screws, chassis	M8	25 Nm (18.4 lbf ft)
Screw for lifting gear support, rear	M8	25 Nm (18.4 lbf ft) **Loctite®243™**
Screw, bottom triple clamp	M8	16 Nm (11.8 lbf ft)
Screw, footrest bracket	M8	25 Nm (18.4 lbf ft) **Loctite®243™**
Screw, fork stub	M8	15 Nm (11.1 lbf ft)
Screw, front brake disc	M8	25 Nm (18.4 lbf ft) **Loctite®243™**
Screw, fuel tank fastening	M8	25 Nm (18.4 lbf ft) **Loctite®243™**
Screw, handlebar stub, clamping piece on handlebar tube	M8	20 Nm (14.8 lbf ft)
Screw, main silencer clamp	M8	18 Nm (13.3 lbf ft)

Screw, rear brake caliper	M8	20 Nm (14.8 lbf ft) Long-life grease (📖 p. 138)
Screw, rear brake disc	M8	25 Nm (18.4 lbf ft) **Loctite®243™**
Screw, shift rod	M8	20 Nm (14.8 lbf ft) **Loctite®243™**
Screw, shift shaft support on engine	M8	20 Nm (14.8 lbf ft) **Loctite®243™**
Screw, steering damper bracket on console	M8	20 Nm (14.8 lbf ft) **Loctite®243™**
Screw, steering damper on triple clamp	M8	20 Nm (14.8 lbf ft) **Loctite®243™**
Screw, top steering stem	M8	20 Nm (14.8 lbf ft)
Screw, top triple clamp	M8	20 Nm (14.8 lbf ft)
Banjo bolt, brake line	M10	25 Nm (18.4 lbf ft)
Rear sprocket bolt	M10	50 Nm (36.9 lbf ft) **Loctite®243™**
Remaining nuts, chassis	M10	45 Nm (33.2 lbf ft)
Remaining screws, chassis	M10	45 Nm (33.2 lbf ft)
Screw, deflection console on engine	M10	25 Nm (18.4 lbf ft)
Screw, engine brace on engine	M10	30 Nm (22.1 lbf ft) **Loctite®243™**
Screw, engine brace on frame	M10	30 Nm (22.1 lbf ft) **Loctite®243™**
Screw, linkage lever on angle lever	M10	45 Nm (33.2 lbf ft) **Loctite®243™**
Screw, bottom shock absorber	M10x1.25	45 Nm (33.2 lbf ft) **Loctite®243™**
Screw, front brake caliper	M10x1.25	45 Nm (33.2 lbf ft) Long-life grease (📖 p. 138)
Screw, top shock absorber	M10x1.25	45 Nm (33.2 lbf ft) **Loctite®243™**
Screw, tension strut bearing	M12	45 Nm (33.2 lbf ft) **Loctite®243™**
Nut, angle lever to link fork	M14	100 Nm (73.8 lbf ft)
Nut, tension strut on angle lever	M14x1.5	100 Nm (73.8 lbf ft)
Nut, swingarm pivot	M16x1	100 Nm (73.8 lbf ft) Long-life grease (📖 p. 138)
Nut, rear wheel spindle	M25x1.5	100 Nm (73.8 lbf ft) Long-life grease (📖 p. 138)
Nut, steering head, top	M25x1.5	18 Nm (13.3 lbf ft)
Screw, front wheel spindle	M29x1.5	60 Nm (44.3 lbf ft) Long-life grease (📖 p. 138)

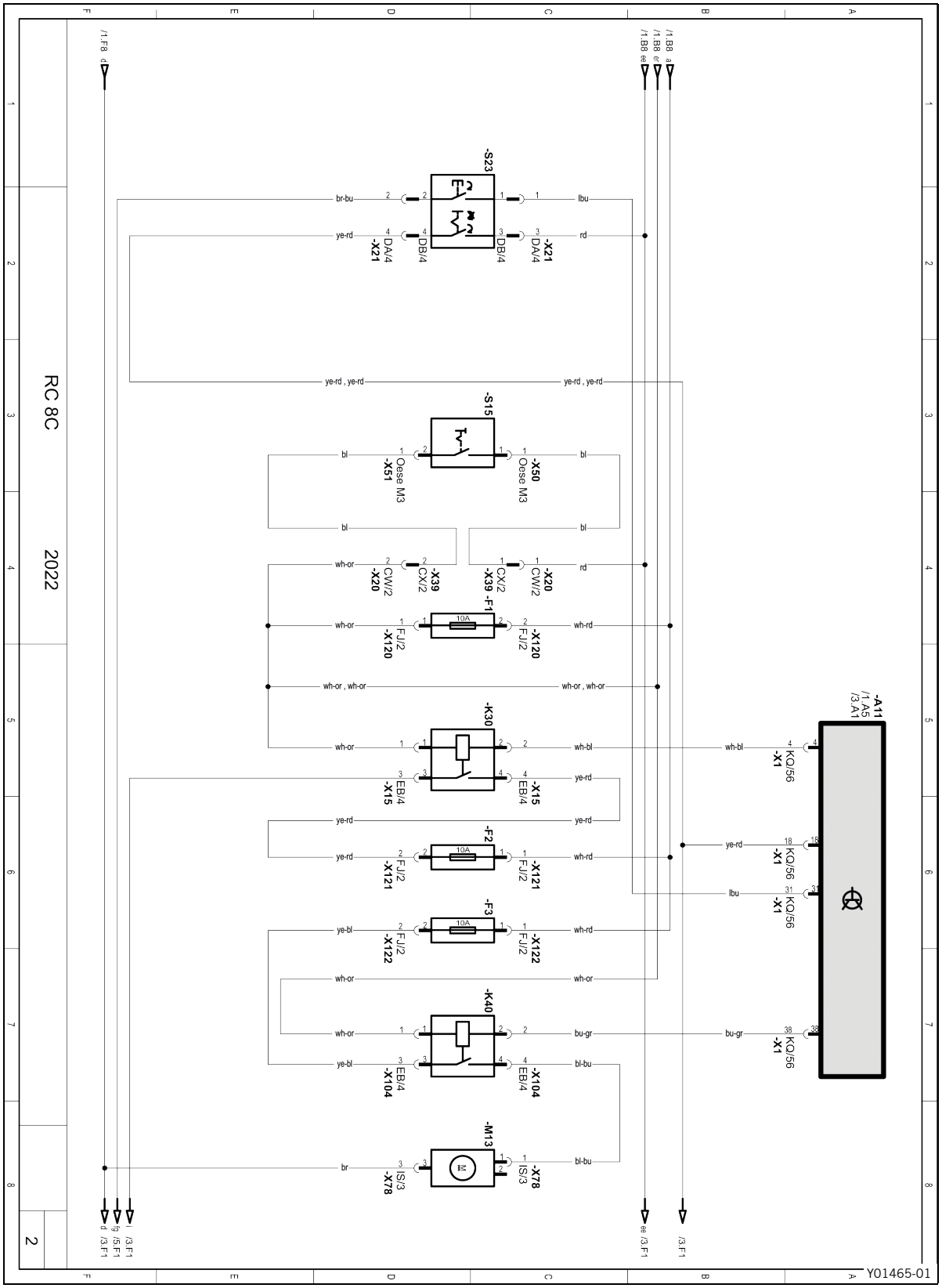
24.1 Page 1 of 7



Components:

A11	Engine control unit
G10	12 V battery
G20	Alternator
K10	Starter relay with main fuse
K11	Start auxiliary relay
M10	Electric starter system
T20	Voltage regulator

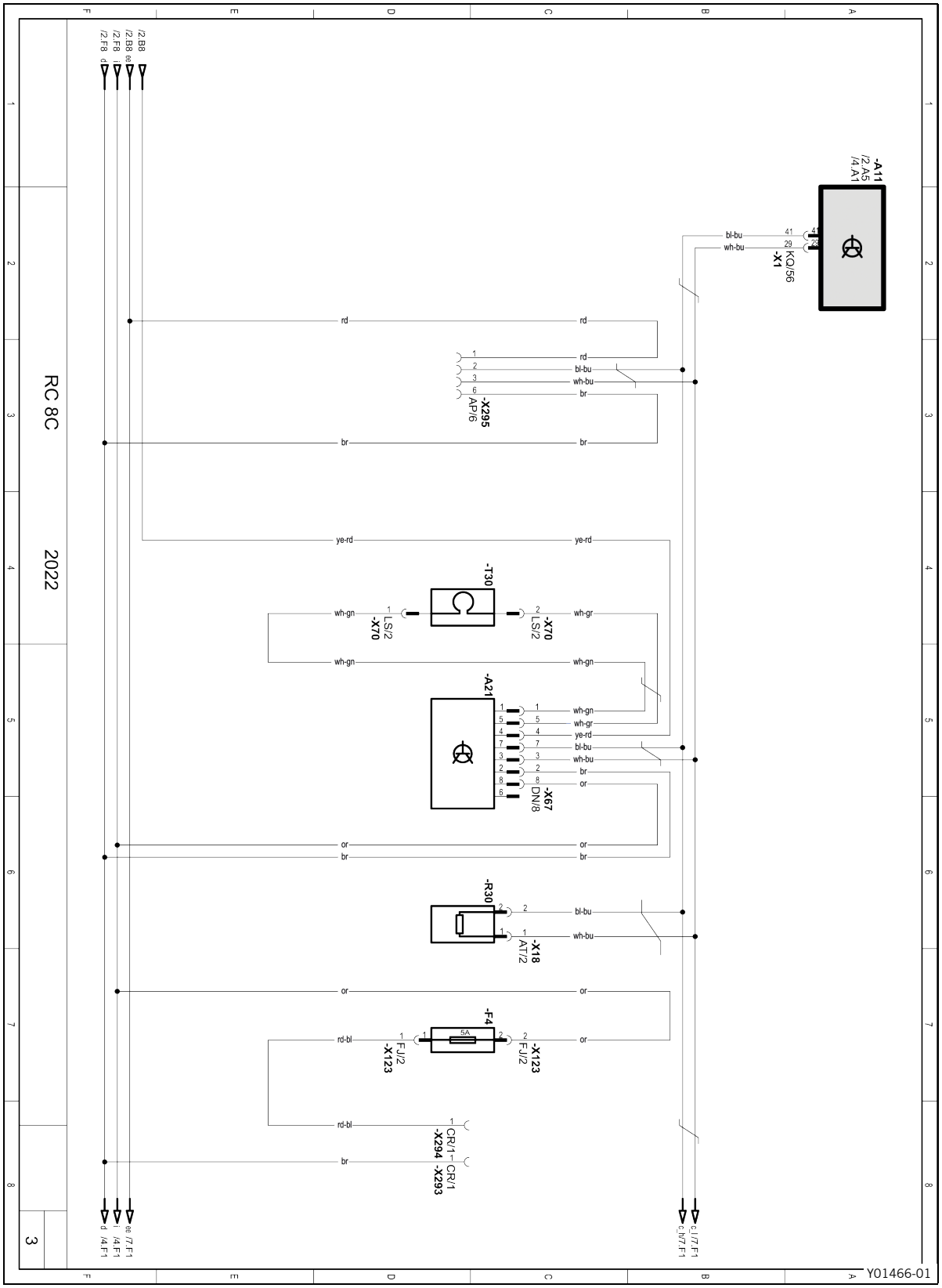
24.2 Page 2 of 7



Components:

A11	Engine control unit
F1	Fuse
F2	Fuse
F3	Fuse
K30	Power relay
K40	Fuel pump relay
M13	Fuel pump
S15	Main switch
S23	Emergency OFF switch, start button

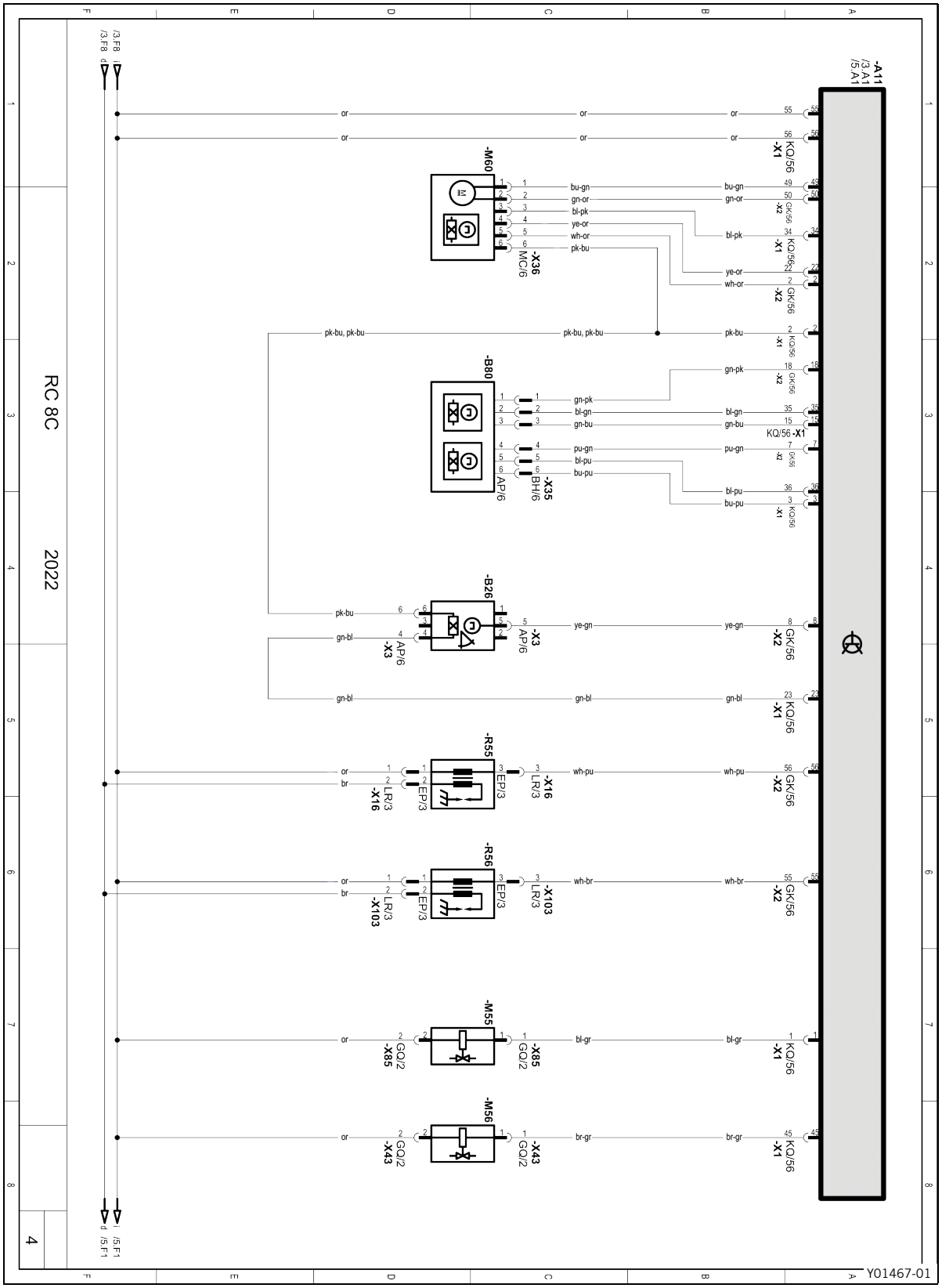
24.3 Page 3 of 7



Components:

A11	Engine control unit
A21	Immobilizer control unit
F4	Fuse
R30	CAN bus terminating resistor
T30	Antenna of the immobilizer control unit
X293	Accessories circuit -
X294	Accessories circuit +
X295	Diagnostics connector

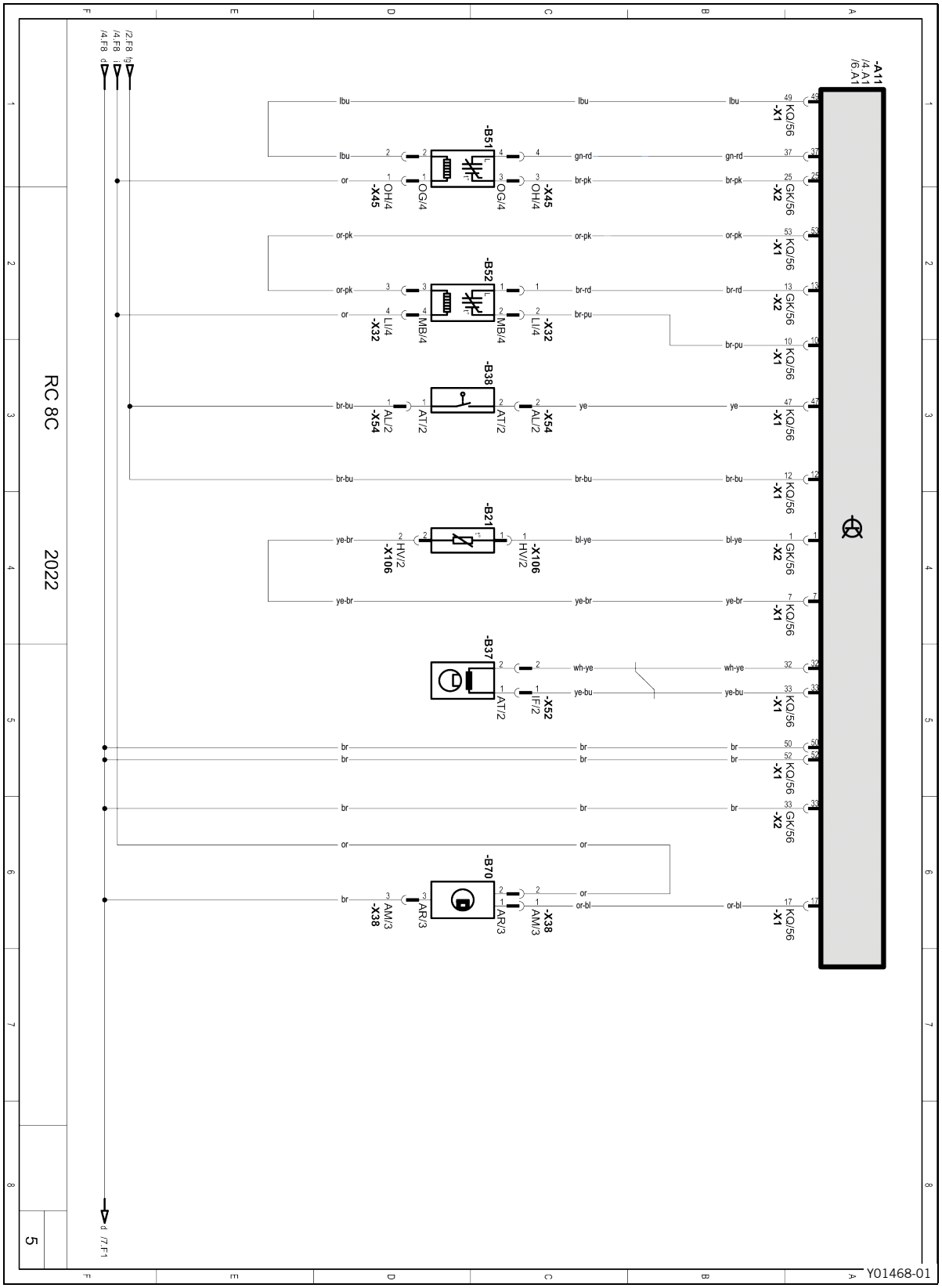
24.4 Page 4 of 7



Components:

A11	Engine control unit
B26	Tilt sensor
B80	Throttle grip
M55	Left injection valve
M56	Right injection valve
M60	Throttle valve actuator
R55	Left ignition coil
R56	Right ignition coil

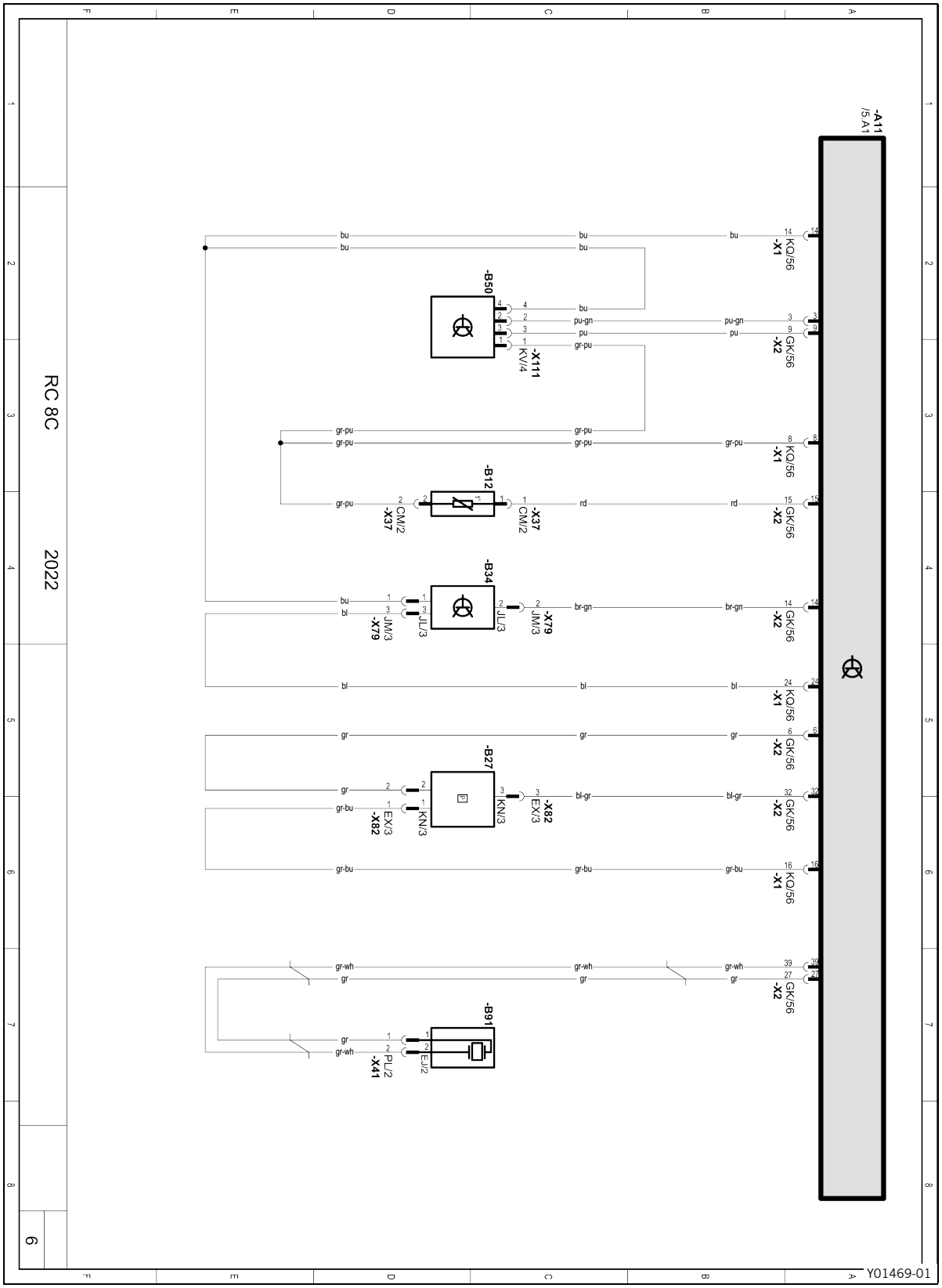
24.5 Page 5 of 7



Components:

A11	Engine control unit
B21	Coolant temperature sensor
B37	Crankshaft speed sensor
B38	Clutch switch
B51	Lambda sensor cylinder 1, sensor 1
B52	Lambda sensor cylinder 2, sensor 1
B70	Wheel speed sensor

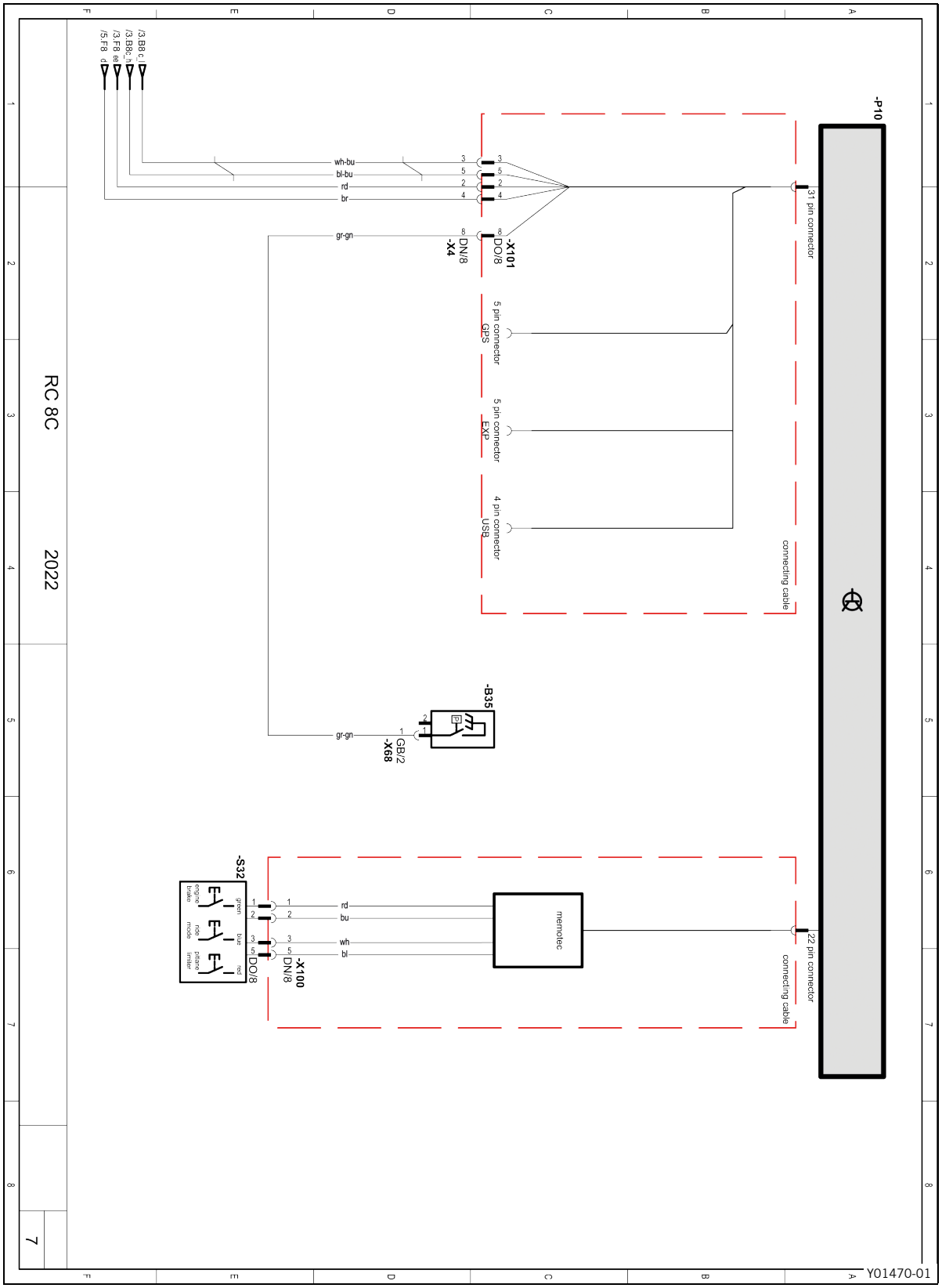
24.6 Page 6 of 7



Components:

A11	Engine control unit
B12	Intake air temperature sensor
B27	Shift shaft sensor
B34	Gear position sensor
B50	Induction manifold pressure sensor, cylinder 1 and cylinder 2
B91	Knock sensor

24.7 Page 7 of 7



Components:

B35	Oil pressure sensor
P10	Combination instrument
S32	Right combination switch

Cable colors:

bl	Black
br	Brown
bu	Blue
gn	Green
gr	Gray
lbu	Light blue
or	Orange
pk	Pink
pu	Violet
rd	Red
wh	White
ye	Yellow

Brake fluid DOT 4 / DOT 5.1

Standard/classification
– DOT

Guideline
– Use only brake fluid that complies with the specified standard (see specifications on the container) and that exhibits the corresponding properties.

Recommended supplier
Castrol
– **REACT PERFORMANCE DOT 4**

MOTOREX®
– **Brake Fluid DOT 5.1**

Coolant

Guideline
– Only use high-grade, silicate-free coolant with corrosion inhibitor additive for aluminum motors. Low grade and unsuitable antifreeze causes corrosion, deposits and frothing.
– Do not use pure water as only coolant is able to meet the requirements needed in terms of corrosion protection and lubrication properties.
– Only use coolant that complies with the requirements stated (see specifications on the container) and that has the relevant properties.

Antifreeze protection to at least	−25 °C (−13 °F)

The mixture ratio must be adjusted to the necessary antifreeze protection. Use distilled water if the coolant needs to be diluted.

The use of premixed coolant is recommended.

Observe the coolant manufacturer specifications for antifreeze protection, dilution and miscibility (compatibility) with other coolants.

Recommended supplier
MOTOREX®
– **COOLANT M3.0**

Engine oil (SAE 10W/50)

Standard/classification
– JASO T903 MA2 (📖 p. 140)
– SAE (📖 p. 140) (SAE 10W/50)

Guideline
– Use only engine oils that comply with the specified standards (see specifications on the container) and that possess the corresponding properties.

Fully synthetic engine oil

Recommended supplier
MOTOREX®
– **Cross Power 4T**

Engine oil (SAE 10W/50)

Standard/classification

– JASO T903 MA2 (📖 p. 140)

– SAE (📖 p. 140) (SAE 10W/50)

Guideline

– Use only engine oils that comply with the specified standards (see specifications on the container) and that possess the corresponding properties.

Fully synthetic engine oil

Recommended supplier
MOTOREX®

– **Power Synt 4T**

Super unleaded (ROZ 98 / RON 98 / PON 94)

Standard/classification

– DIN EN 228 (ROZ 98 / RON 98 / PON 94)

Air filter cleaner

Recommended supplier
MOTOREX®
– **Racing Bio Dirt Remover**

Chain cleaner

Recommended supplier
MOTOREX®
– **Chain Clean**

Fuel additive

Recommended supplier
MOTOREX®
– **Fuel Stabilizer**

High viscosity grease

Recommended supplier
SKF®
– **LGHB 2**

Long-life grease

Recommended supplier
MOTOREX®
– **Bike Grease 2000**

Motorcycle cleaner

Recommended supplier
MOTOREX®
– **Moto Clean**

Oil for foam air filter

Recommended supplier
MOTOREX®
– **Racing Bio Liquid Power**

Perfect finish and high gloss polish for paints

Recommended supplier
MOTOREX®
– **Moto Shine**

Preserving materials for paints, metal and rubber

Recommended supplier
MOTOREX®
– **Moto Protect**

Special cleaner for glossy and matte paint finishes, metal and plastic surfaces

Recommended supplier
MOTOREX®
– **Quick Cleaner**

Street chain spray

Guideline

Recommended supplier
MOTOREX®
– **Chainlube Road Strong**

JASO T903 MA2

Different technical development directions required a separate specification for motorcycles – the **JASO T903 MA2** standard.
Earlier, engine oils from the automobile industry were used for motorcycles because there was no separate motorcycle specification.
Whereas long service intervals are demanded for automobile engines, the focus for motorcycle engines is on high performance at high engine speeds.
In most motorcycle engines, the transmission and clutch are lubricated with the same oil.
The **JASO T903 MA2** standard meets these special requirements.

SAE

The SAE viscosity classes were defined by the Society of Automotive Engineers and are used for classifying oils according to their viscosity. The viscosity describes only one property of oil and says nothing about quality.

OBD	On-board diagnosis	Vehicle system, which monitors the specified parameters of the vehicle electronics

29 LIST OF ABBREVIATIONS

Art. no.	Article number
ca.	circa
cf.	compare
e.g.	for example
etc.	et cetera
i.a.	inter alia
no.	number
poss.	possibly

30.1 Red symbols

Red symbols indicate an error condition that requires immediate intervention.

	The oil pressure warning lamp lights up red – The oil pressure is too low. Stop immediately, taking care not to endanger yourself or other road users in the process, and switch off the engine.
	The coolant temperature warning lamp lights up red – The coolant temperature is too high.
	The battery warning lamp lights up red – The 12 V battery is not charging.

30.2 Yellow and orange symbols

Yellow and orange symbols indicate an error condition that requires prompt intervention. Active driving aids are also represented by yellow or orange symbols.

	Malfunction indicator lamp lights up yellow – The OBD has detected a malfunction in the vehicle electronics.

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08/2021

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KTM.COM

Photo: Mitterbauer/KISKA/KTM