OWNER'S MANUAL 2014

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RC 250 R

Art. no. 3213113en

KTM

DEAR KTM CUSTOMER

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

We wish you a lot of enjoyment in riding this vehicle.

Please enter the serial numbers of your vehicle below.

Vehicle identification number (☛ p. 10)	Dealer's stamp
Engine number (☛ p. 10)	

The owner's manual contained the latest information for this model at the time of going to print. However, it is never possible to exclude small deviations arising from further development in design and construction.

All specifications are non-binding. KTM Sportmotorcycle AG specifically reserves the right to modify or delete technical specifications, prices, colors, forms, materials, services, designs, equipment, etc., without prior notice and without specifying reasons, to adapt these to local conditions, as well as to stop production of a particular model without prior notice. KTM accepts no liability for delivery options, deviations from illustrations and descriptions, as well as 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)
According to the international quality management standard ISO 9001, KTM uses quality assurance processes that lead to the maximum possible quality of the products.
Issued by: TÜV Management Service

KTM-Sportmotorcycle AG
5230 Mattighofen, Austria

TABLE OF CONTENTS

TABLE OF CONTENTS

1 MEANS OF REPRESENTATION

1.1 Symbols used

The meaning of specific symbols is described below.

	Indicates an expected reaction (e.g. of a work step or a function).
	Indicates an unexpected reaction (e.g. of a work step or a function).
	All work marked with this symbol requires specialist knowledge and technical understanding. In the interest of your own safety, have these jobs performed by an authorized KTM workshop. There, your motorcycle will be optimally cared for by specially trained experts using the specialist tools required.
	Indicates a page reference (more information is provided on the specified page).

1.2 Formats used

The typographical formats used in this document are explained below.

Specific name	Identifies a proprietary name.
Name®	Identifies a protected name.
Brand™	Identifies a brand available on the open market.

2 SAFETY ADVICE

2.1 Use definition - intended use

KTM sport motorcycles are designed and built to withstand the normal stresses and strains of competitive use, but not for offroad use.

Info
The motorcycle may only be used in closed off areas remote from public road traffic.

2.2 Safety advice

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

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

2.3 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.

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

2.4 Safe operation

Danger
Danger of accidents Danger arising from the rider's judgement being impaired.

– Do not operate the vehicle while under the influence of alcohol, drugs and certain medications or physically or mentally impaired.

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

– When running the engine, always make sure there is sufficient ventilation, and do not start or run the engine in an enclosed space without an effective exhaust extraction system.

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

– Do not touch hot components such as exhaust system, radiator, engine, shock absorber, and the brake system. Allow these components to cool down before starting work on them.

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

2.5 Protective clothing

Warning

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

– Wear protective clothing (helmet, boots, gloves, pants and jacket with protectors) every time you ride the vehicle. Always wear protective clothing that is in good condition and meets the legal requirements.

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

2.6 Work rules

Special tools are necessary for certain tasks. The tools are not contained in the vehicle but can be ordered under the number in parentheses. E.g.: bearing puller (15112017000)
During assembly, non-reusable parts (e.g. self-locking screws and nuts, seals and seal rings, O-rings, pins, lock washers) must be replaced by new parts.
In some instances, a thread locker (e.g. **Loctite®**) is required. The manufacturer instructions for use must be followed.
After disassembly, clean the parts that are to be reused and check them for damage and wear. Change damaged or worn parts.
After you complete the repair or service work, check the operating safety of the vehicle.

2.7 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.

2.8 Owner's Manual

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

3 IMPORTANT NOTES

3.1 Operating and auxiliary substances

Warning

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

– Do not allow fuel to get into the ground water, the ground, or the sewage system.

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

3.2 Spare parts, accessories

For your own safety, only use spare parts and accessories approved and/or recommended by KTM.
Certain spare parts and accessory products are specified in parentheses in the descriptions. Your authorized KTM dealer will be glad to advise you.

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

3.3 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. Incorrect adjustment and tuning of the engine and suspension can lead to damage and breakage of components.
Use of the vehicle under difficult conditions, such in rain or high heat, can lead to considerably more rapid wear of components such as the 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.

3.4 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.

3.5 Customer service

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

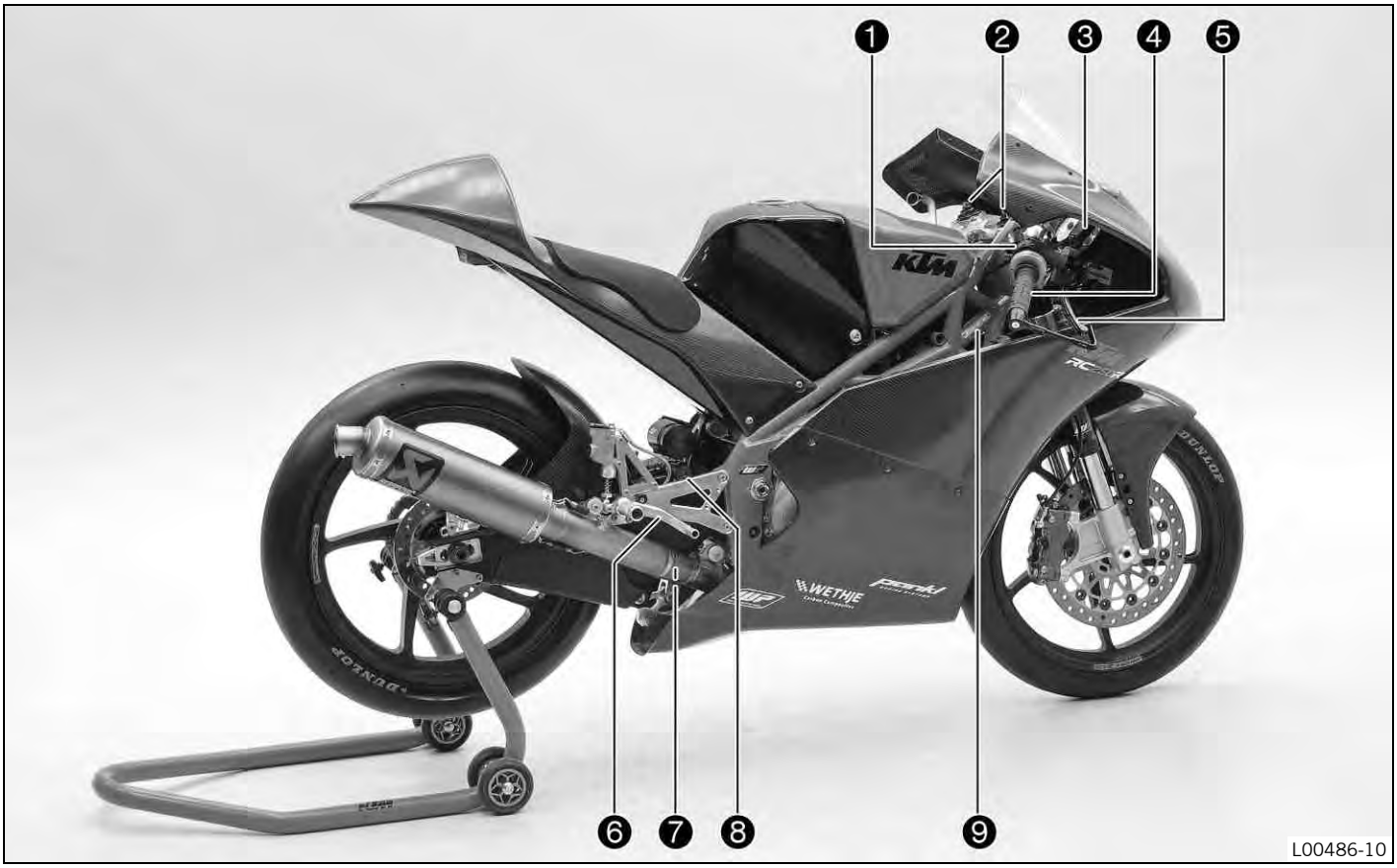
A list of authorized KTM dealers can be found on the KTM website.
International KTM Website: http://www.ktm.com

4 VIEW OF VEHICLE

4.1 View of vehicle, front left side (example)

1	**Map-Select** switch (☛ p. 12)
1	**Launch-Control** button (☛ p. 12)
1	**Pit-Limiter** button (☛ p. 12)
1	Tail light switch (☛ p. 11)
2	Clutch lever (☛ p. 11)
3	Filler cap
4	Shock absorber compression adjustment, High Speed
5	Shock absorber compression adjustment, Low Speed
6	Fork compression adjustment
7	Quick shifter (☛ p. 64)
8	Shift lever (☛ p. 18)

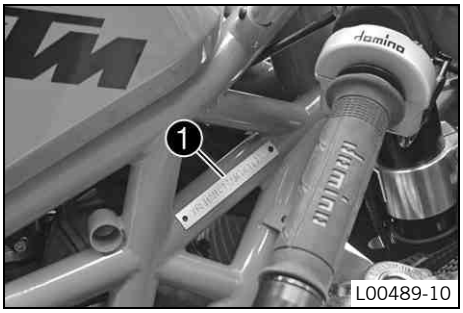
4.2 View of vehicle, rear right side (example)



1	Ignition switch (☛ p. 11)
2	Fork rebound adjustment
2	Fork, spring preload adjustment
3	Indicator lamps (☛ p. 12)
4	Throttle grip (☛ p. 11)
5	Hand brake lever (☛ p. 11)
6	Foot brake lever (☛ p. 18)
7	Shock absorber rebound adjustment
8	Shock absorber, spring preload adjustment
9	Vehicle identification number (☛ p. 10)

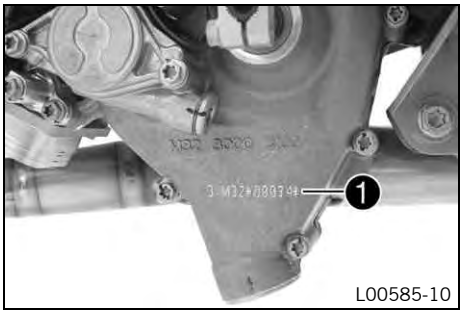
5 SERIAL NUMBERS

5.1 Vehicle identification number



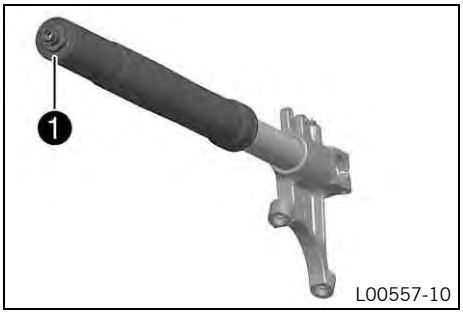
The chassis number ❶ is located on the right behind the steering head on the frame.

5.2 Engine number



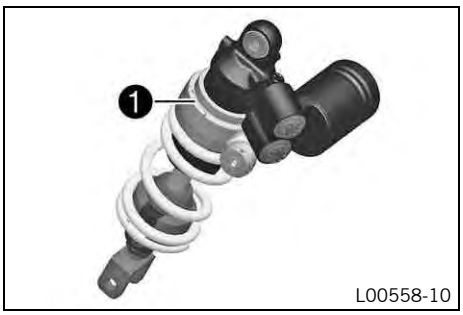
The engine number ❶ is stamped on the right side of the engine.

5.3 Fork part number



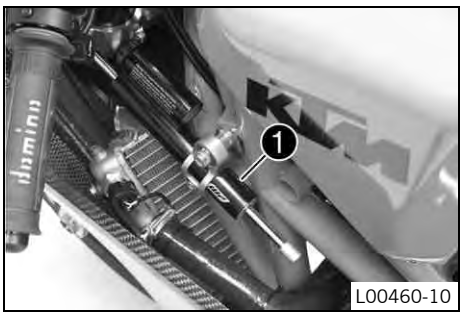
The fork part number ❶ is stamped on the upper side of the fork.

5.4 Shock absorber part number



The shock absorber part number ❶ is stamped on the fixing ring of the **Preload Adjusters**.

5.5 Steering damper part number

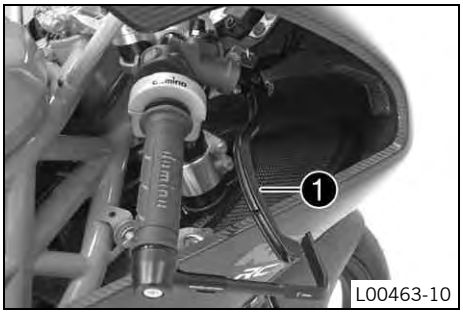


The steering damper part number ❶ is stamped on the top of the steering damper.

6.1 Clutch lever

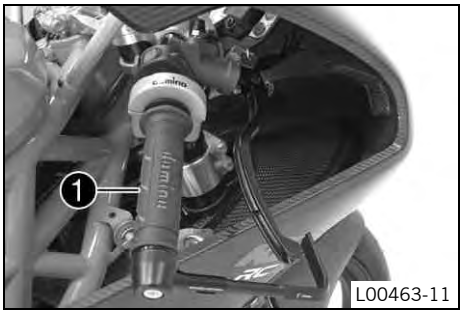
The clutch lever ❶ is fitted on the left side of the handlebar.

6.2 Hand brake lever



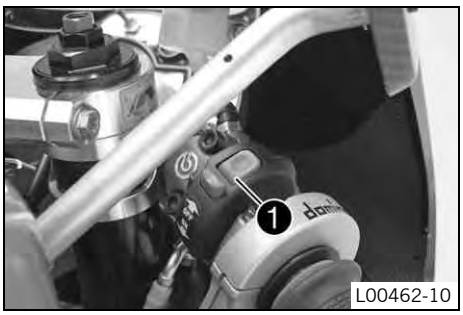
The hand brake lever ❶ is fitted on the right side of the handlebar.
The hand brake lever operates the front brake.

6.3 Throttle grip



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

6.4 Ignition switch



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

Possible states

OFF	Ignition off – In this position, the ignition circuit is interrupted, a running engine stops, and a non-running engine will not start.
ON	Ignition on – In this position, the ignition circuit is closed, and the engine can be started.

6.5 Tail light switch

The tail light switch ❶ is fitted on the left side of the handlebar.

Possible states

OFF	Tail light off – The tail light switch is not pushed in. In this position, the tail light is switched off.
	Tail light on – The tail light switch is pushed in. In this position, the tail light is switched on.

6.6 Map-Select switch

The **Map-Select** switch ❶ is fitted on the left side of the handlebar.

Possible states

MAP1	MAP 1 – In this position, Mapping 1 is activated.
MAP2	MAP 2 – In this position, Mapping 2 is activated.

Two mappings can be stored in the control unit. The **Map-Select** switch can be used to change between these two mappings and thus to alter the engine characteristics. This change can also be made while riding.

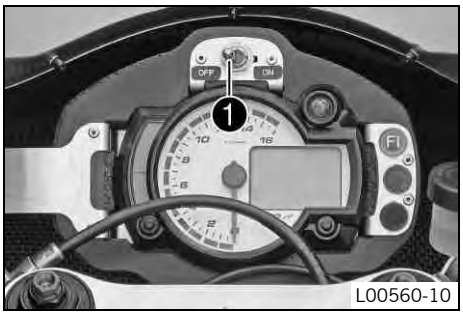
6.7 Launch-Control button

The **Launch-Control** button ❶ is located on left side of the handlebar.
The **Launch-Control** is activated by pressing the **Launch-Control** button. This limits the engine speed to an adjustable rpm until an adjustable speed is reached (see the **MAYA** Instructions on the CD-ROM in the separate enclosure).
As soon as the set speed is reached, the **Launch-Control** is deactivated automatically.

6.8 Pit-Limiter button

The **Pit-Limiter** button ❶ is fitted on the left side of the handlebar.
The **Pit-Limiter** is activated by pressing the **Pit-Limiter** button.
The **Pit-Limiter** is active until the **Pit-Limiter** button is pressed.
This limits the speed to an adjustable value (see the **MAYA** Instructions on the CD-ROM in the separate enclosure).

6.9 Quick shifter switch



The quick shifter switch ❶ is fitted above the tachometer.

Possible states

OFF	OFF – In this position, the quick shifter is deactivated.
ON	ON – In this position, the quick shifter is activated.

This switch can be used to deactivate the quick shifter while riding, such as following damage due to a fall.

6.10 Indicator lamps

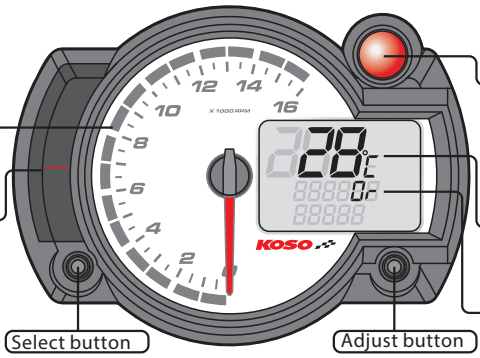
Possible states

FI	The yellow **FI** warning lamp lights up – The engine control unit has detected a fault. Read out the fault memory (see the **MAYA** Instruction on the CD-ROM in the separate enclosure).
	The green indicator lamp flashes – **Pit-Limiter** is active.
	The green indicator lamp lights up – **Launch-Control** is active.
	The red warning lamp flashes – The oil pressure is too low.

	The red warning lamp lights up – The coolant temperature has reached a critical value.
	The shift warning light flashes yellow – The set shift speed will soon be reached.
	The shift warning light flashes red – The set shift speed has been reached.

6.11 Combination instrument 1/2

3-1 Overview



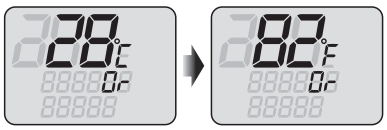
3-2 Function, setting instruction

●Needle tachometer	Display range: 0~16,000 RPM	●Thermometer	Display range: 0~150 °C (0~302 °F)
●Digital tachometer	Display range: 0~16,000 RPM		Display unit: 0.1 °C (0.1 °F)
	Display unit: 100 RPM	○Display internal	<0.5 second
○Display internal	<0.5 second	○Over heat warning light	Setting range: 60~150 °C (140~302 °F)
○Shift light	Setting range: 5,000~16,000 RPM		Setting unit: 1 °C (1°F)
	Setting unit: 100 RPM	●Battery type	9V-1604, 6LR61
○Pre-Shift light	Setting range: -500~-5,000 RPM	●Effective temperature range	-10~+60 °C
	Setting unit: 100 RPM	●Meter standard	JIS D 0203 S2
○Stroke / piston setting	2 Stroke: 1, 2, 3, 4 pistons	●Meter size	135.7 X 100.7 X 52 mm
	4 Stroke: 1, 2, 3, 4, 5, 6, 8, 10, 12 pistons	●Meter weight	Around 240 g

NOTE Design and specification are subject to change without notice!

4-1 Adjust button function instruction

●Press Adjust button one time to switch the temperature unit between °C and °F.



4-2 Cycle / Piston / Input signal setting

●In the main screen, press down the Select & Adjust button together for 3 seconds to enter the setting screen.

●EX. To change the setting to 4 stroke.
●Press the Adjust button to select the stroke.
●EX. Now the setting is 2C (2 Stroke).

NOTE You could set the stroke as 2 stroke or 4 stroke.

⚠ The digit you could set is flashing now .

⚠ CAUTION!

●Make sure the correct str okes and pistons before setting.
●Make sure the input is correct, or the RPM output will be incorrect.
●We define the engine with the ignition system ignites every 360 degree as 2-stroke and the engine with the ignition system ignites every 720 degree as 4-strok e.
●Some 4-stroke bikes with one single piston are igniting every 360 degree once, so the setting should be the same as the bike with 2-stroke and one piston engine.

●Press the Select button to enter the piston setting screen.
●EX. Now the setting is changed from 2 cycle to 4 cycle.

●EX. To change the setting to 4piston.
●Press the Adjust button to select the piston digit.
●EX. Now the setting is 1P (1 piston).

NOTE 2 Cycle: 1,2,3,4 pistons
4 Cycle: 1,2,3,4,5,6,8,10,12 pistons

⚠ The digit you could set is flashing now .

6.12 Combination instrument 2/2

●Press the Select button to enter the signal input setting screen.
●EX. Now the piston setting is changed from 1 P (Piston) to 4 P (Pistons).

●EX. To change the setting to L o. (The negative impulse)
●Press the Adjust button to choose the input signal you want to set.
●EX. Now the setting is Hi (The positive impulse)

NOTE The input signal setting range is between hight (The positive signal) & low (The negative signal)

⚠ Now the input signal setting is flashing!

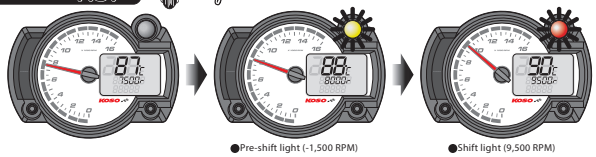
NOTE If the tachometer can't detect the signal (No RPM is displayed on the screen), you could choose another setting, and check it again.

●Press the Select button to enter the shift light setting screen.
●EX. Now the input signal is changed from hight to low.

●EX. The shift light set on 9,500 RPM.
●Press the Select button to move to the digit you want to set.
●EX. Now the RPM shift light setting is 9,000 RPM.

⚠ The digit you could set is flashing now .

P.S.



If you set the RPM shift light at 9,500 RPM, the yellow light (Pre-shift light) will light on at 8,000 RPM.
And the red light (Shift light) will light on when it reaches 9,500 RPM.

●Press the Adjust button to change the setting digit.

NOTE Setting range: 5,000~16,000 RPM ◦
Setting unit:100 RPM ◦

●Press the Select button to enter the pre-shift light setting screen.
●EX. Now the shift light setting is changed from 9,000 RPM to 9,500 RPM.

●EX. The pre-shift RPM set on 8,000 RPM. (It means that the pr e-shift light will light on 1,500 RPM before the shift light.)
●Press the Select button to move to the digit you want to set.
●EX. Now the RPM pr e-shift light setting is -1,000 RPM.

●Press the Adjust button to change the setting digit.

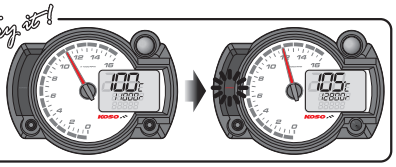
NOTE Setting range: -500~-5,000 RPM.
Setting unit: 100 RPM.

●Press the Select button to enter the over heat warning light setting screen.
●EX. Now the pre-shift light setting is changed from 1,000 RPM to 1,500 RPM.

●EX. The over heat warning set on 105 °C.
●Press the Select button to move to the digit you want to set.
●EX. Now the over heat warning setting is 100.0 °C.

P.S.

The temperature light will light on when the temperature reached your setting.



●Press the Adjust button to change the setting digit.

NOTE Setting range: 60~15 0°C (140~302 °
Setting unit: 1°C (1 °F).

⚠ The digit you could set is flashing now .

⚠ The setting unit will change together with the temperature unit setting.

●Press the Select button to back the main screen.
●EX. Now the setting is changed from 100 °C to 105 °C.

●Main screen.

6.13 Opening the filler cap

Danger

Fire hazard Fuel is highly flammable.

– Never refuel the vehicle near open flames or burning cigarettes, and always switch off the engine first. Be careful that no fuel is spilt, especially on hot vehicle components. Clean up spilt fuel immediately.
– The fuel in the fuel tank expands when warm and may emerge if overfilled. Follow the instructions on refueling.

Warning

Danger of poisoning Fuel is poisonous and a health hazard.

– Fuel must not come into contact with the skin, eyes, or clothing. Do not breathe in the fuel vapors. If contact occurs with the eyes, rinse with water immediately and contact a physician. Immediately clean contaminated areas on the skin with soap and water. If fuel is swallowed, contact a physician immediately. Change clothing that is contaminated with fuel. Store fuel properly in a suitable canister and keep away from children.

Warning

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

– Do not allow fuel to get into the ground water, the ground, or the sewage system.

– Press the filler cap lever ❶ and turn 90° counterclockwise.
– Remove the filler cap.

6.14 Closing the filler cap

Warning

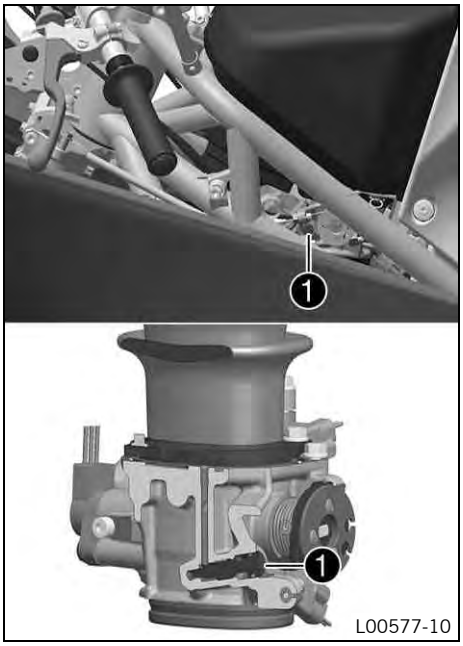
Fire hazard Fuel is highly flammable, poisonous and harmful to your health.

– After closing the filler cap, ensure that it is locked properly. Change clothing that has been contaminated with fuel. Immediately clean contaminated areas on the skin with soap and water.

– Insert the filler cap.
– Turn the filler cap lever ❶ 90° clockwise until it engages.

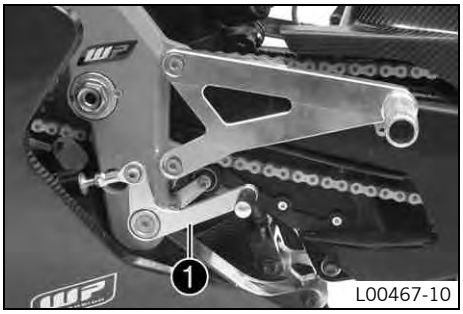
✓ The tank locking lever is positioned parallel to the direction of travel.

6.15 Idle speed adjusting screw

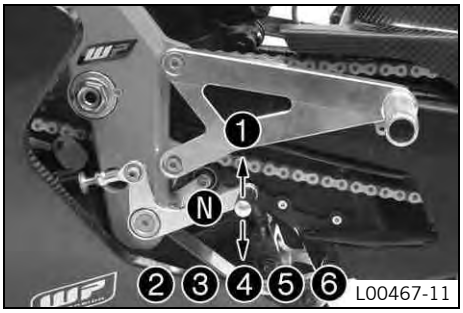


The idle speed adjusting screw ❶ is located on the throttle valve body on the left side.
Turning the screw clockwise decreases the idle speed.
Turning the screw counterclockwise increases the idle speed.

6.16 Shift lever

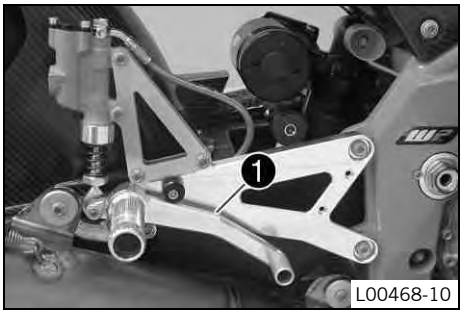


The shift lever ❶ is mounted on the left of the engine.



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

6.17 Foot brake lever



The foot brake lever ❶ is in front of the right footrest.
The foot brake lever operates the rear brake.

7 PREPARING FOR USE

7.1 Advice on first use

Danger

Danger of accidents Danger arising from the rider's judgement being impaired.

– Do not operate the vehicle while under the influence of alcohol, drugs and certain medications or physically or mentally impaired.

Warning

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

– Wear protective clothing (helmet, boots, gloves, pants and jacket with protectors) every time you ride the vehicle. Always wear protective clothing that is in good condition and meets the legal requirements.

Warning

Risk of misappropriation Usage by unauthorized persons.

– Never leave the vehicle while the engine is running. Secure the vehicle against use by unauthorized persons.

Info

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

Info

Your motorcycle is not authorized for riding on public roads.

– Before your first trip, read the entire operating instructions carefully.
– Get to know the controls.
– Adjust the basic position of the hand brake lever. (☛ p. 45)
– Hold the handlebar firmly with both hands and keep your feet on the footrests when riding.
– Run the engine in. (☛ p. 19)

7.2 Running the engine in

– During the running-in period, do not exceed the specified engine speed and avoid riding full throttle.

Guideline

Maximum engine speed	
During the first: 50 km (31 mi)	9,000 rpm
With series ECU software	13,500 rpm
With optional ECU software	14,000 rpm

8.1 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.

- Check the engine oil level. (☛ p. 66)
- Check the front brake fluid level. (☛ p. 45)
- Check the rear brake fluid level. (☛ p. 48)
- Check the front brake linings. (☛ p. 46)
- Check the rear brake linings. (☛ p. 50)
- Check the brake system.
- Check the coolant level. (☛ p. 61)
- Check the chain for dirt. (☛ p. 42)
- Check the chain tension. (☛ p. 43)
- Check the tire condition. (☛ p. 54)
- Check the tire pressure. (☛ p. 55)
- Warm the tires to the operating temperature with a tire warmer.

  Guideline

Tire temperature	78... 80 °C (172... 176 °F)

- Check the settings of all controls and ensure that the controls can be operated smoothly.
- Check that the electrical equipment is functioning properly.
- Check the fuel level.
- Check the fuel overflow reservoir. (☛ p. 41)
- Check the coolant overflow reservoir. (☛ p. 42)

8.2 Starting

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

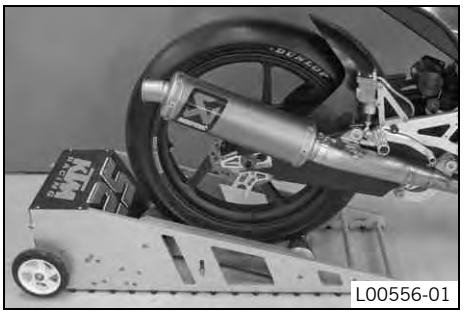
- When running the engine, always make sure there is sufficient ventilation, and do not start or run the engine in an enclosed space without an effective exhaust extraction system.

Caution
Danger of accidents If the vehicle is operated with a discharged battery or without a battery, electronic components and safety equipment may be damaged.

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

Note
Engine failure High engine speeds in cold engines have a negative effect on the service life of the engine.

- Always warm up the engine at low engine speeds.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- Place the starter on a non-slip surface.

Info
Follow the operating instructions of the starter.

- Engage neutral gear and place the motorcycle on the starter.
- Switch on the ignition.
  ✓ 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.
- Depending on the starter in use, engage either first or second gear.
- Pull the clutch and the front brake and switch on the starter.

Info

When starting, **DO NOT** open the throttle. If you apply the throttle during the starting procedure, the engine management shuts off the injectors and the engine will not start.

– Release the clutch briefly to transfer the torque on the rear wheel to the engine and then immediately pull the clutch again.

✔ The engine starts.

– Carefully release the front brake and move the motorcycle off of the starter with the clutch pulled.

8.3 Transport

Note

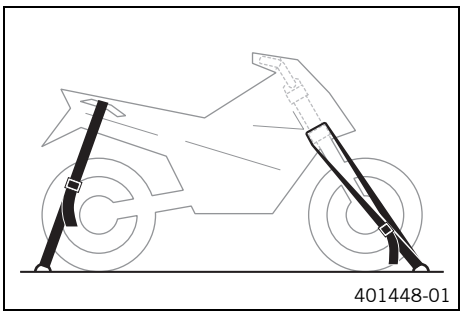
Danger of damage The parked vehicle may roll away or fall over.

– Always place the vehicle on a firm and even surface.

Note

Fire hazard Some vehicle components become very hot when the vehicle is operated.

– Do not park the vehicle near flammable or explosive substances. Do not place objects on the vehicle while it is still warm from being run. Always let the vehicle cool first.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– Switch off the engine.

Condition

Ambient temperature: ≤ 0 °C (≤ 32 °F)

– Drain the coolant. (☛ p. 61)

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

8.4 Refueling

Danger

Fire hazard Fuel is highly flammable.

– Never refuel the vehicle near open flames or burning cigarettes, and always switch off the engine first. Be careful that no fuel is spilt, especially on hot vehicle components. Clean up spilt fuel immediately.

– The fuel in the fuel tank expands when warm and may emerge if overfilled. Follow the instructions on refueling.

Warning

Danger of poisoning Fuel is poisonous and a health hazard.

– Fuel must not come into contact with the skin, eyes, or clothing. Do not breathe in the fuel vapors. If contact occurs with the eyes, rinse with water immediately and contact a physician. Immediately clean contaminated areas on the skin with soap and water. If fuel is swallowed, contact a physician immediately. Change clothing that is contaminated with fuel.

Note

Material damage Premature clogging of the fuel filter.

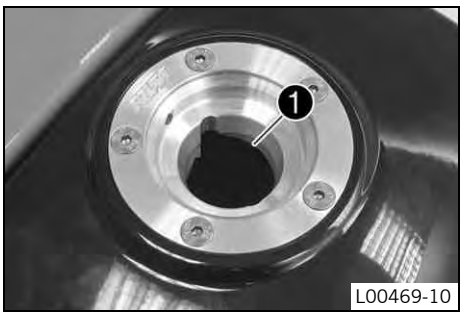
– In some countries and regions, the available fuel quality and cleanliness may not be sufficient. This will result in problems with the fuel system. (Your authorized KTM workshop will be glad to help.)

– Only refuel with clean fuel that meets the specified standards.

Warning

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

– Do not allow fuel to get into the ground water, the ground, or the sewage system.



– Switch off the engine.
– Open the filler cap. (☛ p. 17)
– Fill the fuel tank with fuel up to the lower edge ❶ of the fuel filler neck.

Total fuel tank capacity, approx.	10.5 l (2.77 US gal)	Super unleaded (ROZ 100) (☛ p. 94)

– Close the filler cap. (☛ p. 17)

9 SERVICE SCHEDULE

9.1 Service schedule 13,500 rpm

	Every 250 km (155 mi)	Every 500 km (310 mi)	Every 1,000 km (620 mi)	Every 1,500 km (930 mi)
Check the brake discs. (☛ p. 45)		•	•	•
Check the front brake linings. (☛ p. 46)	•	•	•	•
Check the rear brake linings. (☛ p. 50)		•	•	•
Check the tire condition. (☛ p. 54)	•	•	•	•
Check the tire pressure. (☛ p. 55)		•	•	•
Perform a small fork service and a small shock absorber service. 🔧		•	•	•
Perform a full fork service and full shock absorber service. 🔧				•
Check the rear sprocket and engine sprocket. (☛ p. 44)		•	•	•
Change the rear sprocket. 🔧			•	
Change the engine sprocket. 🔧				•
Replace the chain. 🔧		•	•	•
Check the chain tension. (☛ p. 43)	•	•	•	•
Check the coolant level. (☛ p. 61)		•	•	•
Check the coolant overflow reservoir. (☛ p. 42)		•	•	•
Check the fuel overflow reservoir. (☛ p. 41)		•	•	•
Clean the air filter. 🔧 (☛ p. 36)		•	•	•
Change the air filter. 🔧			•	
Check the air filter box lid gasket.			•	
Check cables for damage and kink-free routing. 🔧			•	
Change the front brake fluid. 🔧		•	•	•
Change the rear brake fluid. 🔧		•	•	•
Clean and grease the bearings and gaskets of the swingarm and the linkage. 🔧			•	
Grease all moving parts (e.g., hand lever, shift lever, ...) and check for smooth operation. 🔧			•	
Check all hoses (e.g. fuel, cooling, bleeder, drainage, etc.) and sleeves for cracking, leaks, and incorrect routing. 🔧		•	•	•
Check the screws and nuts for tightness. 🔧		•	•	•
Check the cooling system for damage and leaks. 🔧		•	•	•
Check the O-ring on the sealing plate of the cooling air shaft. 🔧			•	
Check that brake lines are undamaged and free of leaks.			•	
Grease the steering head bearing. 🔧			•	
Check that the cables are undamaged, routed without sharp bends and set correctly. 🔧		•	•	•
Check the chain link. 🔧			•	
Change the engine oil and oil filter, clean the oil screen. 🔧 (☛ p. 66)	•	•	•	•
Check the valve clearance. 🔧			•	

- Periodic interval

9.2 Maintenance work (as an additional order) 13,500 rpm

	Every 2,000 km (1,240 mi)	Every 3,000 km (1,864 mi)	Every 4,000 km (2,485 mi)
Replace the wheel bearing. 🔧			•
Change the fuel filter. 🔧		•	•
Check the fuel pressure. 🔧		•	•
Change the chain sliding guard at the top, bottom, and side. 🔧		•	•
Change the glass fiber yarn filling of the main silencer. 🔧		•	•
Check the manifold gasket. 🔧			•

	Every 2,000 km (1,240 mi)	Every 3,000 km (1,864 mi)	Every 4,000 km (2,485 mi)
Change the shift lever bearing and foot brake lever bearing.			•
Change the radiator hoses.			•
Change the rubber dampers.			•
Change the hose of the front brake fluid reservoir.			•
Change the cables.		•	•
Change the steering head bearing.		•	•
Change the chain link.		•	•
Change the brake lines.			•
Change the O-ring on the sealing plate of the cooling air shaft.		•	•
Change the bearings, gaskets, and adjustment washer of the swingarm and the linkage.			•
Change the air filter box lid gasket.			•
Change the spark plug.		•	
Change the cylinder.		•	
Change the piston.		•	
Change the conrod and conrod bearing.		•	
Change the valves, valve springs, valve spring seats, valve stem seal, and valve spring retainer.		•	
Change the cam lever.		•	
Change the tensioning rail and timing chain.		•	
Change the cylinder head gasket and cylinder base gasket.		•	
Change the crankshaft bearing.		•	
Change the double wheel bearings.		•	
Change the balancer bearing.		•	
Change the shaft seal rings of the balancer shaft.		•	
Change the bearing of the water pump.		•	
Change the shaft seal rings of the water pump.		•	
Change the bearing of the oil pump idler gear.	•		•

- Periodic interval

9.3 Service schedule 14,000 rpm

	Every 250 km (155 mi)	Every 500 km (310 mi)	Every 1,000 km (620 mi)	Every 1,500 km (930 mi)
Check the brake discs. (☛ p. 45)		•	•	•
Check the front brake linings. (☛ p. 46)	•	•	•	•
Check the rear brake linings. (☛ p. 50)		•	•	•
Check the tire condition. (☛ p. 54)	•	•	•	•
Check the tire pressure. (☛ p. 55)		•	•	•
Perform a small fork service and a small shock absorber service.		•	•	•
Perform a full fork service and full shock absorber service.				•
Check the rear sprocket and engine sprocket. (☛ p. 44)		•	•	•
Change the rear sprocket.			•	
Change the engine sprocket.				•
Replace the chain.		•	•	•
Check the chain tension. (☛ p. 43)	•	•	•	•
Check the coolant level. (☛ p. 61)		•	•	•
Check the coolant overflow reservoir. (☛ p. 42)		•	•	•
Check the fuel overflow reservoir. (☛ p. 41)		•	•	•

	Every 250 km (155 mi)	Every 500 km (310 mi)	Every 1,000 km (620 mi)	Every 1,500 km (930 mi)
Clean the air filter. 🔧 (☛ p. 36)		•	•	•
Change the air filter. 🔧			•	
Check the air filter box lid gasket.			•	
Check cables for damage and kink-free routing. 🔧			•	
Change the front brake fluid. 🔧		•	•	•
Change the rear brake fluid. 🔧		•	•	•
Clean and grease the bearings and gaskets of the swingarm and the linkage. 🔧			•	
Grease all moving parts (e.g., hand lever, shift lever, ...) and check for smooth operation. 🔧			•	
Check all hoses (e.g. fuel, cooling, bleeder, drainage, etc.) and sleeves for cracking, leaks, and incorrect routing. 🔧		•	•	•
Check the screws and nuts for tightness. 🔧		•	•	•
Check the cooling system for damage and leaks. 🔧		•	•	•
Check the O-ring on the sealing plate of the cooling air shaft. 🔧			•	
Check that brake lines are undamaged and free of leaks.			•	
Grease the steering head bearing. 🔧			•	
Check that the cables are undamaged, routed without sharp bends and set correctly. 🔧		•	•	•
Check the chain link. 🔧			•	
Change the engine oil and oil filter, clean the oil screen. 🔧 (☛ p. 66)	•	•	•	•
Check the valve clearance. 🔧		•	•	•

- Periodic interval

9.4 Maintenance work (as an additional order) 14,000 rpm

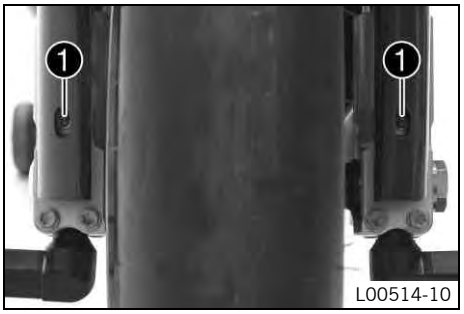
	Every 1,000 km (620 mi)	Every 1,500 km (930 mi)	Every 2,000 km (1,240 mi)	Every 4,000 km (2,485 mi)
Replace the wheel bearing. 🔧				•
Change the fuel filter. 🔧			•	•
Check the fuel pressure. 🔧			•	•
Change the chain sliding guard at the top, bottom, and side. 🔧			•	•
Change the glass fiber yarn filling of the main silencer. 🔧			•	•
Check the manifold gasket. 🔧				•
Change the shift lever bearing and foot brake lever bearing. 🔧				•
Change the radiator hoses. 🔧				•
Change the rubber dampers. 🔧				•
Change the hose of the front brake fluid reservoir. 🔧				•
Change the cables. 🔧			•	•
Change the steering head bearing. 🔧			•	•
Change the chain link. 🔧			•	•
Change the brake lines. 🔧				•
Change the O-ring on the sealing plate of the cooling air shaft. 🔧			•	•
Change the bearings, gaskets, and adjustment washer of the swingarm and the linkage. 🔧				•
Change the air filter box lid gasket. 🔧				•
Change the spark plug. 🔧		•		
Change the cylinder. 🔧		•		
Change the piston. 🔧		•		
Change the conrod and conrod bearing. 🔧		•		

	Every 1,000 km (620 mi)	Every 1,500 km (930 mi)	Every 2,000 km (1,240 mi)	Every 4,000 km (2,485 mi)
Change the valves, valve springs, valve spring seats, valve stem seal, and valve spring retainer. 🔧		•		
Change the cam lever. 🔧		•		
Change the tensioning rail and timing chain. 🔧		•		
Change the cylinder head gasket and cylinder base gasket. 🔧		•		
Change the crankshaft bearing. 🔧		•		
Change the double wheel bearings. 🔧		•		
Change the balancer bearing. 🔧		•		
Change the shaft seal rings of the balancer shaft. 🔧		•		
Change the bearing of the water pump. 🔧		•		
Change the shaft seal rings of the water pump. 🔧		•		
Change the bearing of the oil pump idler gear. 🔧	•		•	•

- Periodic interval

10.1 Adjusting the compression damping of the fork

Info
The hydraulic compression damping determines the fork suspension behavior.
An optimally adjusted compression damping ensures that the fork does not compress too far and fast when you brake hard or when the load shifts very fast. It gives the rider good feedback about the road conditions.



– Turn adjusting screws 1 clockwise to the stop.

Info
The adjusting screws are located at the bottom end of the fork legs.
Make the same adjustment on both fork legs.

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

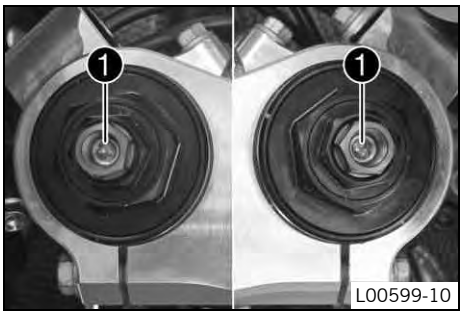
Guideline

Compression damping	
Standard	10 clicks

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

10.2 Adjusting the rebound damping of the fork

Info
The hydraulic rebound damping determines the fork suspension behavior.
An optimally adjusted rebound damping attenuates the spring energy and enables the fork to return to the zero position quickly and without oscillations.



– Turn adjusting screws 1 all the way clockwise.

Info
The adjusting screws are located at the top end of the fork legs.
Make the same adjustment on both fork legs.

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

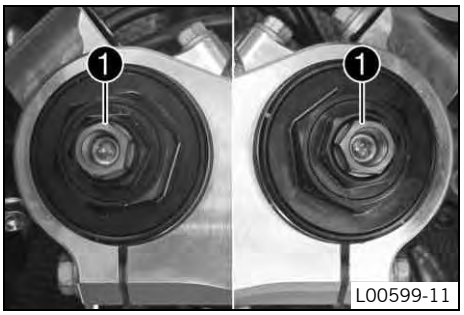
Guideline

Rebound damping	
Standard	10 clicks

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

10.3 Adjusting the spring preload of the fork

Info
The spring preload determines the initial fork position.



– Turn adjusting screws 1 counterclockwise all the way.

Info
The adjusting screws are located at the top end of the fork legs.
Make the same adjustment on both fork legs.

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

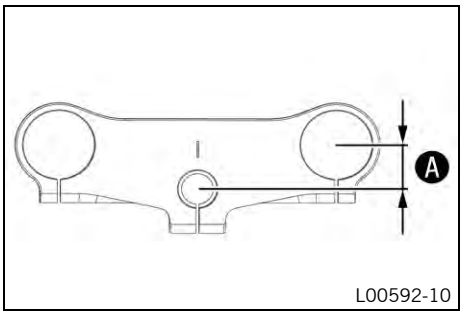
Guideline

Spring preload - **Preload Adjuster**	
Standard	0 turn

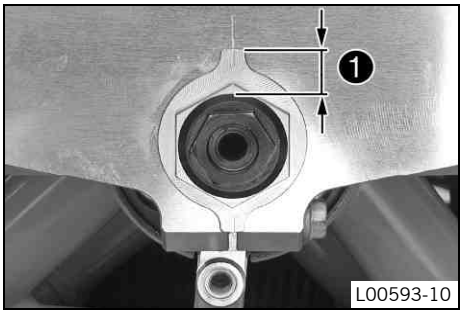
Info

Turn clockwise to increase spring preload; turn counterclockwise to reduce spring preload.
Changing the spring preload has no influence on the rebound damping although the adjusting screws turn during the adjustment work.
Basically, however, you should set the rebound damping higher when the higher spring preload is higher.

10.4 Fork offset

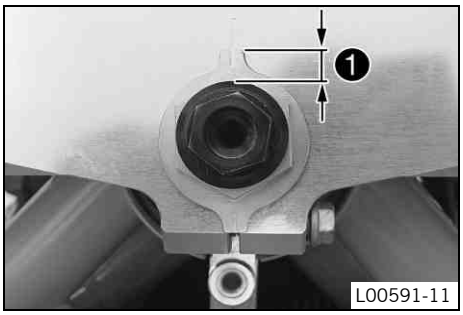


Fork offset Ⓐ has an influence on vehicle handling. It is measured from the middle of the fork leg to the middle of the steering head bearing.
The fork offset can be adjusted as necessary.



Distance ❶ shows the fork offset setting.
The standard setting provides for highly agile handling in curves.

Fork offset	
Condition at delivery	30 mm (1.18 in)
Trail	
Condition at delivery	87.4 mm (3.441 in)



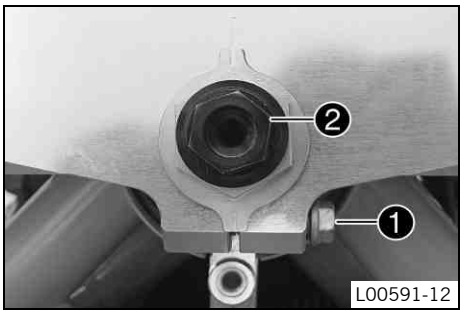
With the alternative setting, distance ❶ is smaller than the setting when delivered.
The alternative setting provides for very high riding stability.

Fork offset	
Alternative setting	28 mm (1.1 in)
Trail	
Alternative setting	89.8 mm (3.535 in)

10.5 Adjusting the fork offset

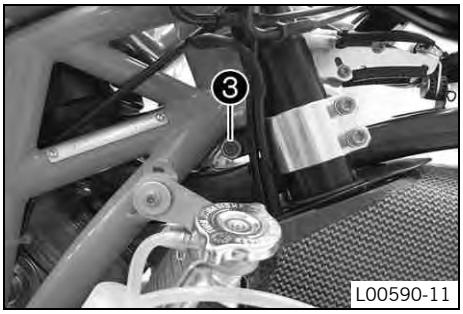
Preparatory work

– Remove the engine cowl. (☛ p. 38)
– Remove the front fairing. (☛ p. 38)

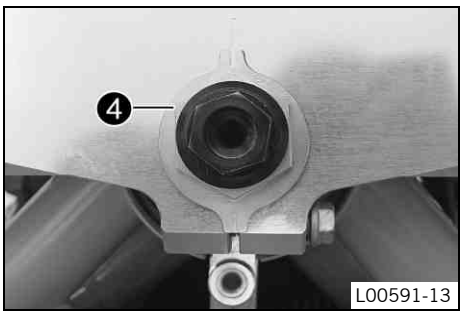


Main work

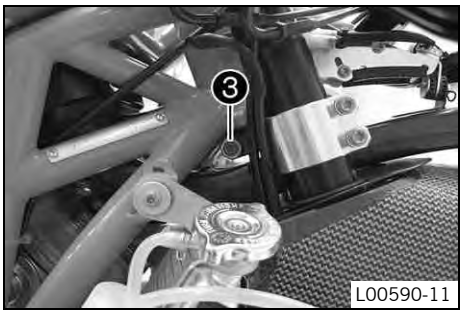
– Loosen screw ❶.
– Loosen the steering stem screw ❷.



– Loosen screw ❸.



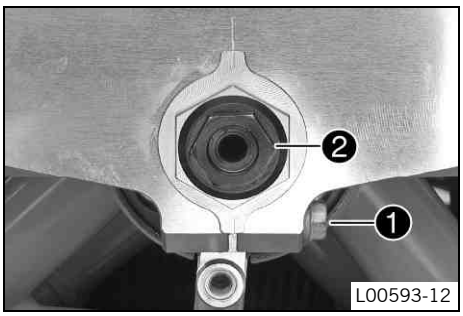
– Turn the steering stem insert ❹ by 180°.



– Tighten screw ❸.

Guideline

Screw, steering head pipe clamp	M8	15 Nm (11.1 lbf ft)	Thread greased



– Tighten the steering stem screw ❷.

Guideline

Screw, steering stem	M12x1	25 Nm (18.4 lbf ft)	Thread greased

– Tighten screw ❶.

Guideline

Screw, steering head pipe clamp	M8	15 Nm (11.1 lbf ft)	Thread greased

Finishing work

– Install the front fairing. (☛ p. 39)
– Install the engine cowl. (☛ p. 38)

10.6 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 setting, for example, has an effect when riding over road damage: the rear wheel suspension compresses quickly.
The low-speed setting, for example, has an effect when riding over long ground swells: the rear wheel suspension compresses more 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.

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

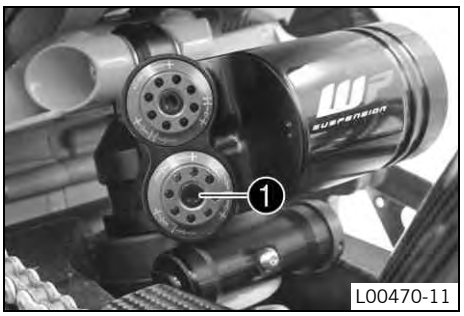
Caution

Danger of accidents Disassembly of pressurized parts can lead to injury.

– The shock absorber is filled with high density nitrogen. Adhere to the description provided. (Your authorized KTM workshop will be glad to help.)

Info

The low-speed setting can be seen during the slow to normal compression of the shock absorber.



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

Guideline

Compression damping, low-speed	
Standard	10 clicks

Info

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

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

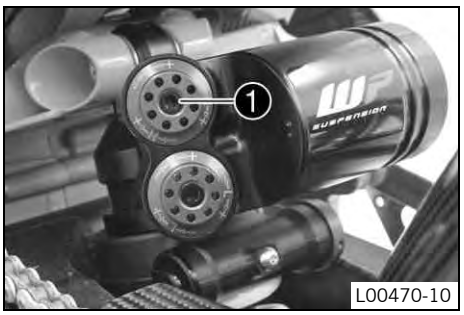
Caution

Danger of accidents Disassembly of pressurized parts can lead to injury.

– The shock absorber is filled with high density nitrogen. Adhere to the description provided. (Your authorized KTM workshop will be glad to help.)

Info

The high-speed setting can be seen during the fast compression of the shock absorber.



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

Guideline

Compression damping, high-speed	
Standard	10 clicks

Info

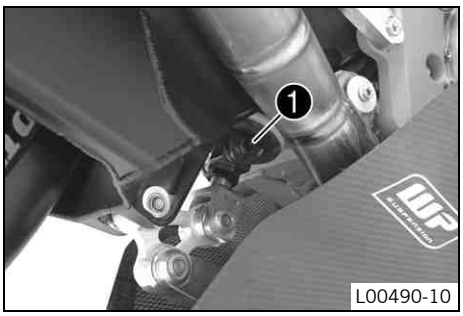
Turn clockwise to increase damping; turn counterclockwise to reduce damping.

10.9 Adjusting the rebound damping of the shock absorber

Caution

Danger of accidents Disassembly of pressurized parts can lead to injury.

– The shock absorber is filled with high density nitrogen. Adhere to the description provided. (Your authorized KTM workshop will be glad to help.)



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

Guideline

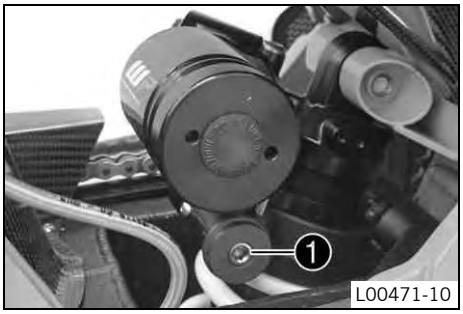
Rebound damping	
Standard	10 clicks

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

10.10 Adjusting the spring preload of the shock absorber

Warning
Danger of accidents Modifications to the suspension settings can seriously alter the vehicle's ride behavior.
– Following modifications, ride slowly at first to get the feel of the new ride behavior.

Info
The spring preload defines the initial situation of the spring process on the shock absorber.



– Take the weight off the rear wheel and swingarm.

Info
The spring preload can be adjusted correctly only if the rear wheel and the swingarm are fully relieved of weight.

– Turn adjusting screw ❶ counterclockwise all the way until the spring is fully relaxed.
– Turn the adjusting screw clockwise and tension it to the specified value.

Guideline

Spring preload	
Standard	5 mm (0.2 in)

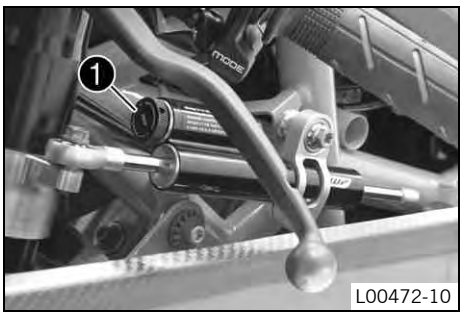
Info
Turn clockwise to increase spring preload; turn counterclockwise to reduce spring preload.
Adjusting the spring preload has no influence on the absorption setting of the rebound damping.
Basically, however, you should set the rebound damping to a higher value if the spring preload is higher.

10.11 Steering damper

The steering damper 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.

10.12 Adjusting the steering damper

Info
The hydraulic steering damper stabilizes the steering if the front wheel is raised off the ground or carries no load.
In contrast to other damping elements, the steering damper is adjusted with the damping element open.



– Turn the adjusting screw ❶ anticlockwise towards "**–**" as far as the last perceptible click.
– Adjust the steering damper according to your riding style and the road conditions by turning the adjust screw clockwise towards "**+**".

Guideline

Steering damper adjustment range	1... 32 clicks
Standard	16 clicks

Info
Do not change the adjustment of the steering damper during the journey. After adjusting the steering damper, check the steering for smooth operation, making sure that the handlebar can be moved from extreme left to extreme right without a tendency to lock.

10.13 Vehicle level

Warning
Danger of accidents Modifications to the suspension settings can seriously alter the vehicle's ride behavior.
– Following modifications, ride slowly at first to get the feel of the new ride behavior.

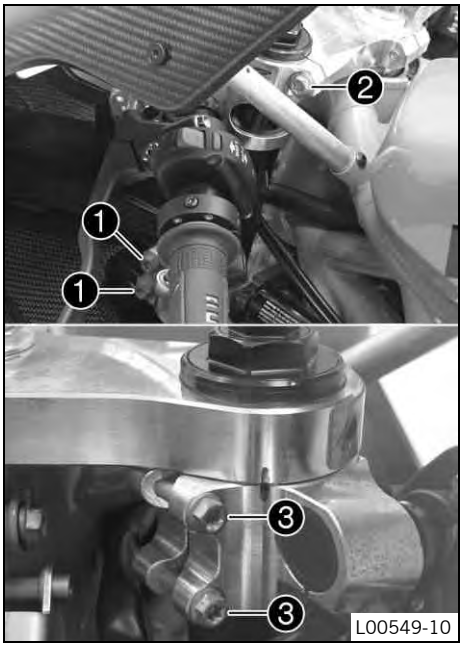
The vehicle level can be adjusted at the front by means of the fork leg clamp and at the rear by means of the thread setting of the lower shock absorber eye.

Fork, chassis height difference **HIGH** - **LOW**	10 mm (0.39 in)

Shock absorber, chassis height difference **HIGH** - **LOW**	7 mm (0.28 in)

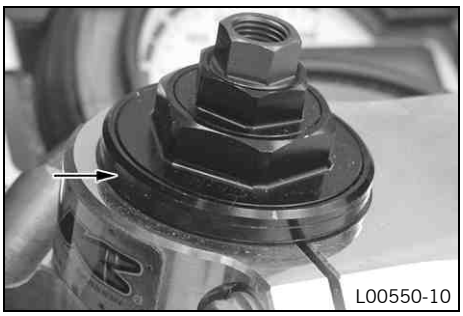
10.14 Adjusting front vehicle level

Warning
Danger of accidents Modifications to the suspension settings can seriously alter the vehicle's ride behavior.
– Following modifications, ride slowly at first to get the feel of the new ride behavior.



– Loosen screws ❶ on the lower triple clamp.
– Loosen screw ❷ on the upper triple clamp.
– Loosen screws ❸ on the handlebar stub.

Info
Loosen the screws far enough to prevent damage to the lacquer when the fork legs are moved.
Make the adjustments first on one fork leg and then on the other. When the screws of both fork legs are loosened, the vehicle sags toward the front.

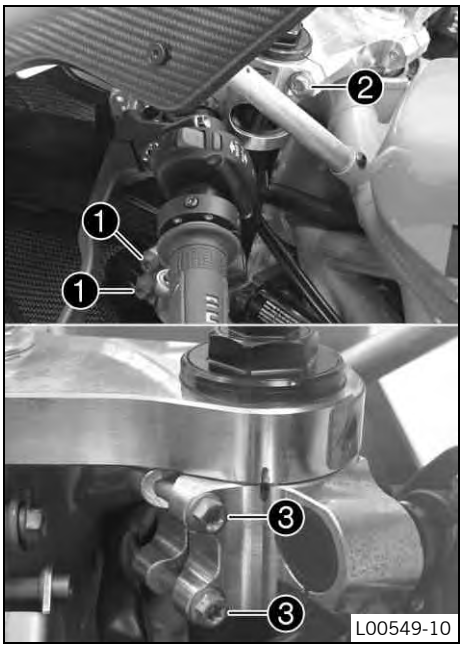


– Align the fork leg in the desired position by means of the fork rings.

Guideline

Upper triple clamp flush with upper edge of fork legs	0 mm (0 in)
Upper triple clamp flush with 1st ring of fork legs	2.5 mm (0.098 in)
Upper triple clamp flush with 2nd ring of fork legs (standard)	5 mm (0.2 in)
Upper triple clamp flush with 3rd ring of fork legs	7.5 mm (0.295 in)
Upper triple clamp flush with 4th ring of fork legs	10 mm (0.39 in)

Info
The standard setting offers a good compromise between agility and stability. When the upper triple clamp is flush with the upper edge of the fork legs, the vehicle is especially stable, but not very agile. When the upper triple clamp is flush with the 4th ring of the fork legs, the vehicle is especially agile, but not very stable.



– Tighten screw ❷.

Guideline

Screw, top triple clamp	M8	12 Nm (8.9 lbf ft)	Thread greased

– Tighten screws ❶.

Guideline

Screw, bottom triple clamp	M8	12 Nm (8.9 lbf ft)	Thread greased

– Tighten screws ❸.

Guideline

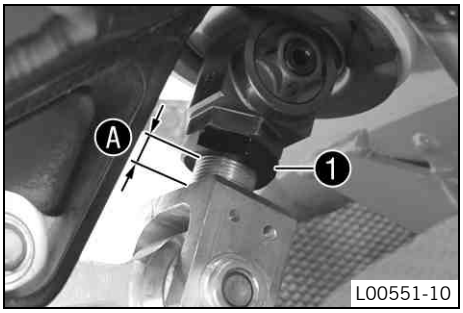
Screw, handlebar stub	M6	8 Nm (5.9 lbf ft)

– Repeat the adjustment on the other fork leg.

Info
The vehicle level setting on both fork legs must be identical.

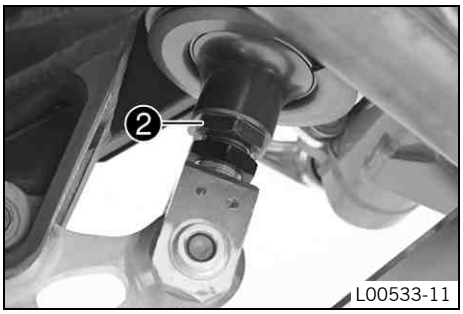
10.15 Adjusting the vehicle level at the rear

Warning
Danger of accidents Modifications to the suspension settings can seriously alter the vehicle's ride behavior.
– Following modifications, ride slowly at first to get the feel of the new ride behavior.



– Take the weight off the rear wheel and swingarm.
– Loosen nut ❶.
– Distance Ⓐ must not exceed the specified value.
Guideline

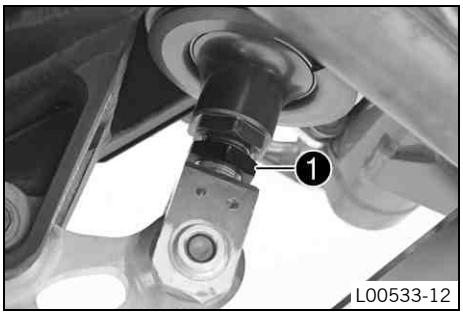
Distance Ⓐ	≤ 12 mm (≤ 0.47 in)



– Turn damper ❷ in the desired position.
Guideline

Standard shock absorber length	310 mm (12.2 in)
Shock absorber length min... max	306.5... 313.5 mm (12.067... 12.342 in)
Maximum adjustment range between **HIGH** - **LOW**	7 mm (0.28 in)

Info
The chassis height can be adjusted in both directions.



– Tighten nut ❶.
Guideline

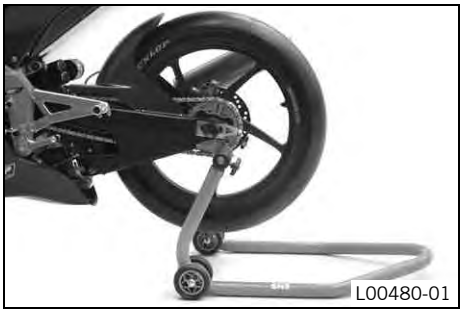
Nut, shock absorber frame height	M16x1	20 Nm (14.8 lbf ft)

11.1 Raising the rear of the motorcycle with lifting gear

Note

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

– Always place the vehicle on a firm and even surface.


L00480-01

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

Lifting gear, rear (B3329055000)

11.2 Removing the rear of motorcycle from the lifting gear

Note

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

– Always place the vehicle on a firm and even surface.

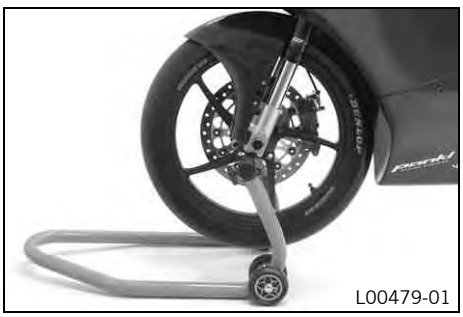
– Secure the motorcycle against falling over.
– Remove the rear lifting gear.

11.3 Raising the front of the motorcycle with lifting gear

Note

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

– Always place the vehicle on a firm and even surface.


L00479-01

Preparatory work

– Raise the rear of the motorcycle with lifting gear. (☛ p. 35)

Main work

– Move the handlebar to the straight-ahead position. Align the lifting gear at the front with the adapters to the fork legs.

Front wheel stand (61029055300)

Info
Always raise the rear of the motorcycle first.

– Raise the motorcycle at the front.

11.4 Taking the motorcycle off of the front lifting gear

Note

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

– Always place the vehicle on a firm and even surface.

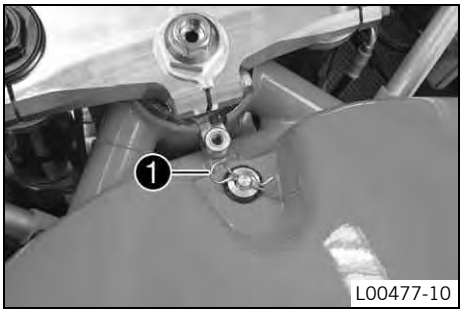
– Secure the motorcycle against falling over.
– Remove the lifting gear from the front.

11.5 Removing the air filter

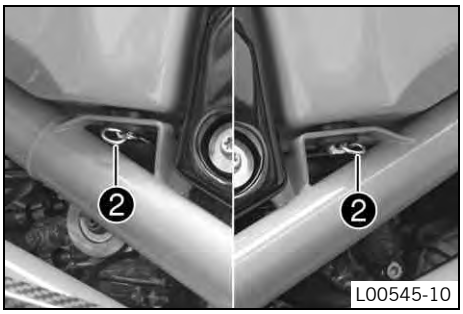
Note

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

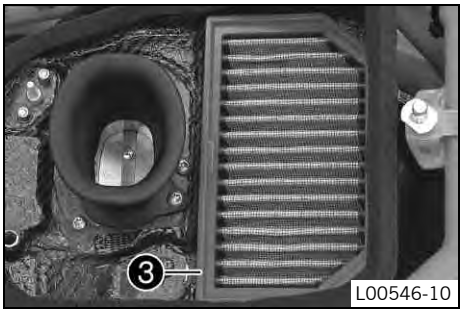
– Never operate the vehicle without an air filter as dust and dirt will enter the engine and lead to increased wear.



– Remove cotter pin ❶.



– Remove cotter pins ❷.
– Take off the air filter box lid.



– Remove air filter ❸.
– Clean the air filter box.

11.6 Cleaning the air filter

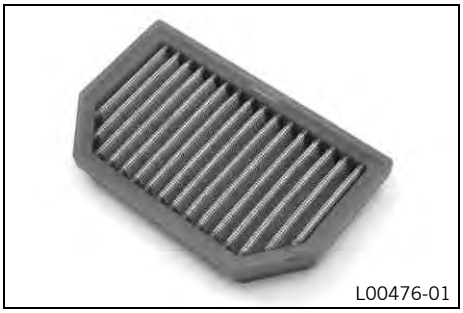
Warning

Environmental hazard Hazardous substances cause environmental damage.

– Oil, grease, filters, fuel, cleaners, brake fluid, etc., should be disposed of as stipulated in applicable regulations.

Info

Do not clean the air filter with fuel or petroleum.



Preparatory work

– Remove the air filter. (☛ p. 36)

Main work

– Tap to remove coarse dirt. Brush off the air filter with a soft brush.
– Spray on cleaner and leave it on for 10 minutes.

Air filter cleaner (☛ p. 95)

– Rinse the air filter from the inside to the outside with a gentle spray of water.
– Shake off remaining water. Let the air filter dry.

Info

Do not use compressed air to dry the filter.

– Thoroughly spray the dry air filter with filter oil.

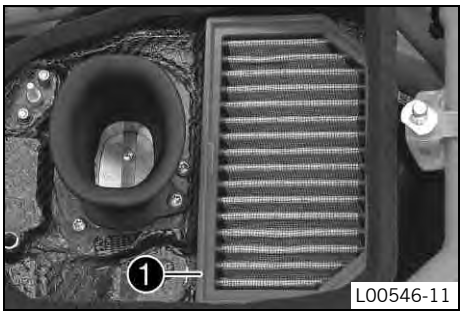
Air filter oil (☛ p. 95)

– Leave the filter oil on the filter for 20 minutes.
– Clean the air filter box.
– Check the distribution of the filter oil.
  » If unoiled areas are visible:
    – Oil the air filter again.
– Wipe off excess filter oil.

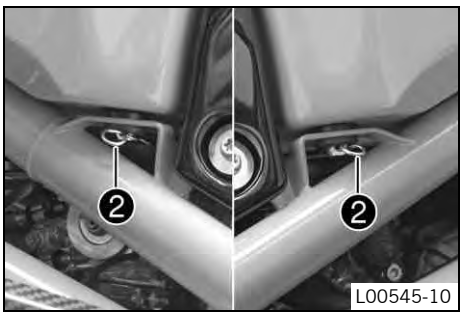
Info
Do not apply too much oil to the air filter.

Finishing work
– Install the air filter. 🔧 (☛ p. 37)

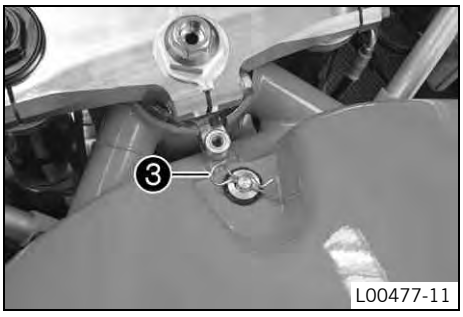
11.7 Installing the air filter 🔧



– Position air filter ❶.

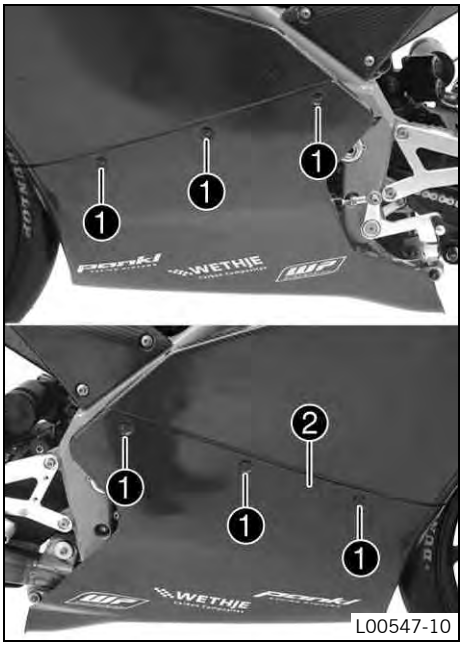


– Position the air filter box lid.
– Mount cotter pins ❷.



– Mount cotter pin ❸.

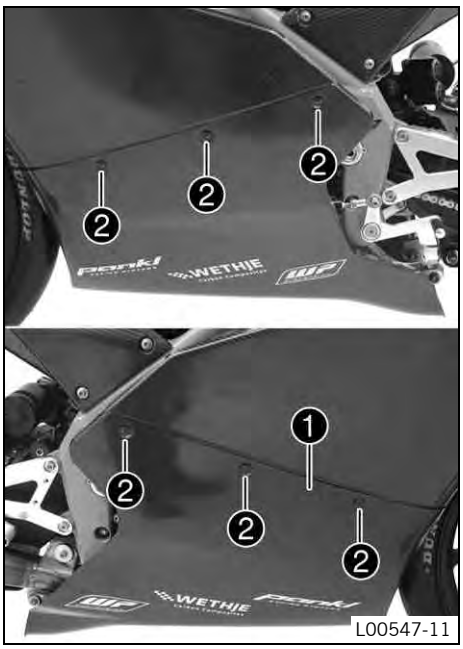
11.8 Removing the engine cowl



L00547-10

- Unlock quick releases ❶.
- Take off engine cowl ❷.

11.9 Installing the engine cowl



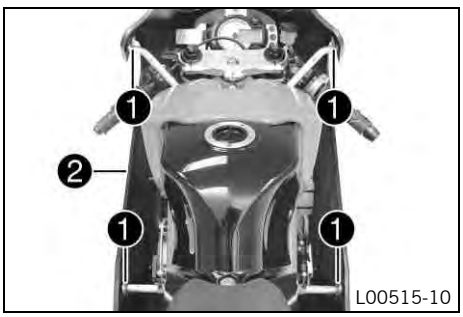
L00547-11

- Position engine cowl ❶.
- Lock quick releases ❷.

11.10 Removing the front fairing

Preparatory work

- Remove the engine cowl. (☛ p. 38)

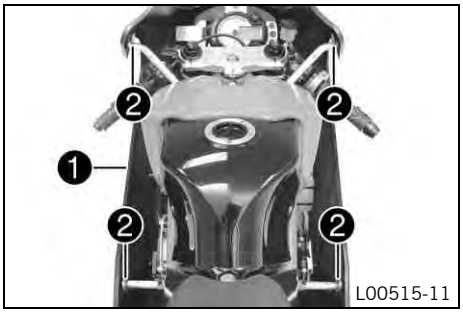


L00515-10

Main work

- Remove cotter pins ❶.
- Take off front fairing ❷.

11.11 Installing the front fairing



Main work

– Position front fairing ❶.

– Mount cotter pins ❷.

Finishing work

– Install the engine cowl. (☛ p. 38)

11.12 Removing the fuel tank

Danger

Fire hazard Fuel is highly flammable.

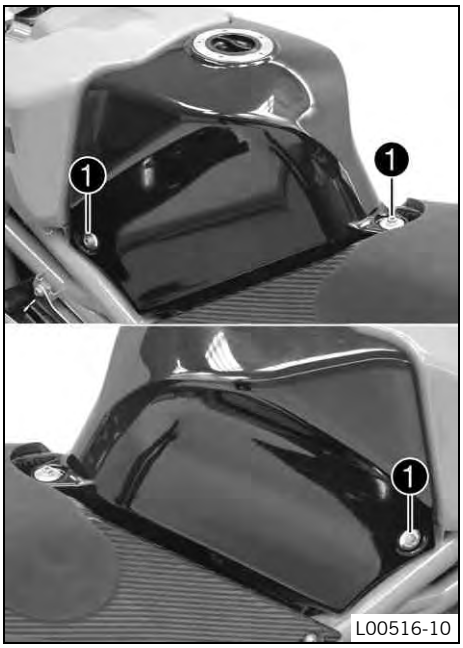
– Never refuel the vehicle near open flames or burning cigarettes, and always switch off the engine first. Be careful that no fuel is spilt, especially on hot vehicle components. Clean up spilt fuel immediately.

– The fuel in the fuel tank expands when warm and may emerge if overfilled. Follow the instructions on refueling.

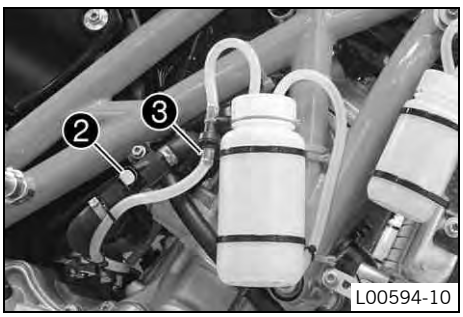
Warning

Danger of poisoning Fuel is poisonous and a health hazard.

– Fuel must not come into contact with the skin, eyes, or clothing. Do not breathe in the fuel vapors. If contact occurs with the eyes, rinse with water immediately and contact a physician. Immediately clean contaminated areas on the skin with soap and water. If fuel is swallowed, contact a physician immediately. Change clothing that is contaminated with fuel. Store fuel properly in a suitable canister and keep away from children.



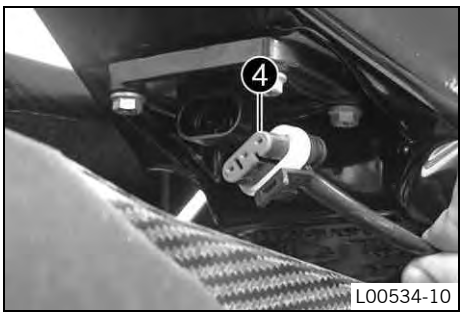
– Remove screws ❶.



– Clean and disconnect fuel hose connection ❷ and overflow hose connection ❸.

Info

Remaining fuel may flow out of the fuel hose.



– Raise the fuel tank.
– Disconnect connector ❹ of the fuel pump.
– Take off the fuel tank.

11.13 Installing the fuel tank

Danger

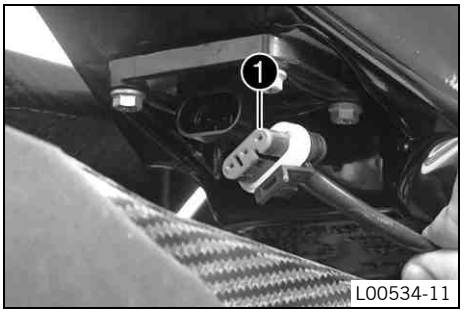
Fire hazard Fuel is highly flammable.

– Never refuel the vehicle near open flames or burning cigarettes, and always switch off the engine first. Be careful that no fuel is spilt, especially on hot vehicle components. Clean up spilt fuel immediately.
– The fuel in the fuel tank expands when warm and may emerge if overfilled. Follow the instructions on refueling.

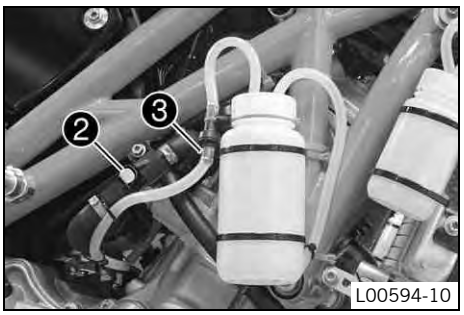
Warning

Danger of poisoning Fuel is poisonous and a health hazard.

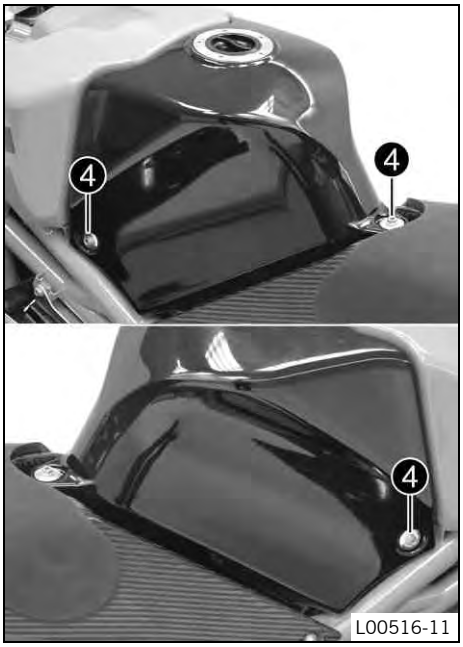
– Fuel must not come into contact with the skin, eyes, or clothing. Do not breathe in the fuel vapors. If contact occurs with the eyes, rinse with water immediately and contact a physician. Immediately clean contaminated areas on the skin with soap and water. If fuel is swallowed, contact a physician immediately. Change clothing that is contaminated with fuel. Store fuel properly in a suitable canister and keep away from children.



– Position the fuel tank.
– Attach connector ❶ of the fuel pump.



– Connect fuel hose connector ❷ with the new O-ring.
– Join overflow hose connection ❸ with the new cable tie.

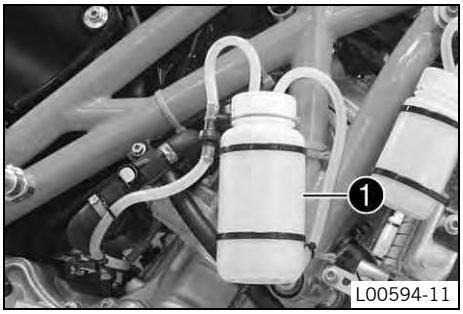


– Mount and tighten screws ❹.

Guideline

Remaining chassis screws	M6	12 Nm (8.9 lbf ft)

11.14 Checking the fuel overflow reservoir



– Check the fluid level in the fuel overflow reservoir ❶.
  » If there is fluid in the fuel overflow reservoir:
    – Empty the fuel overflow reservoir. (☛ p. 41)

11.15 Emptying the fuel overflow reservoir

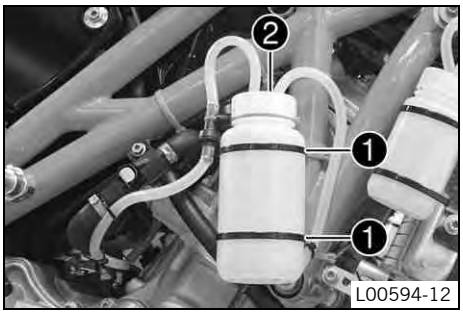
Warning
Danger of poisoning Fuel is poisonous and a health hazard.

– Fuel must not come into contact with the skin, eyes, or clothing. Do not breathe in the fuel vapors. If contact occurs with the eyes, rinse with water immediately and contact a physician. Immediately clean contaminated areas on the skin with soap and water. If fuel is swallowed, contact a physician immediately. Change clothing that is contaminated with fuel.

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

– Do not allow fuel to get into the ground water, the ground, or the sewage system.

Preparatory work
– Remove the engine cowl. (☛ p. 38)
– Remove the front fairing. (☛ p. 38)



Main work
– Remove cable ties ❶.
– Open cover ❷ and empty the fuel overflow reservoir.
– Close the cover.
– Position the fuel overflow reservoir.
– Mount the new cable ties.

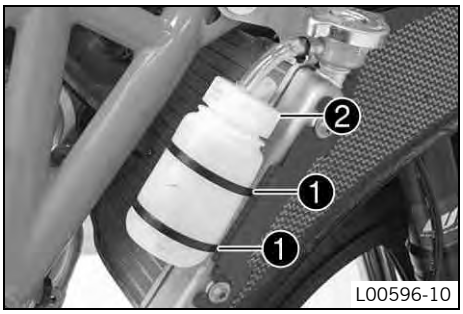
Finishing work
– Install the front fairing. (☛ p. 39)
– Install the engine cowl. (☛ p. 38)

11.16 Checking the coolant overflow reservoir

– Check the fluid level in the coolant overflow reservoir ❶.
  » If there is fluid in the coolant overflow reservoir:
    – Empty the coolant overflow reservoir. (☛ p. 42)

11.17 Emptying the coolant overflow reservoir

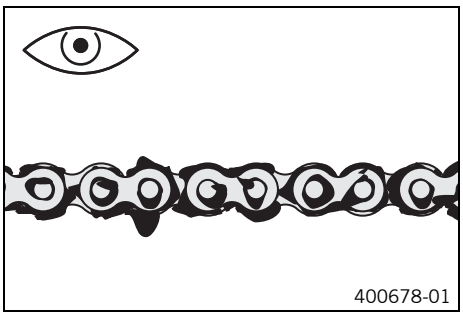
Preparatory work
– Remove the engine cowl. (☛ p. 38)
– Remove the front fairing. (☛ p. 38)



Main work
– Remove cable ties ❶.
– Open cover ❷ and empty the coolant overflow reservoir.
– Close the cover.
– Position the coolant overflow reservoir.
– Mount the new cable ties.

Finishing work
– Install the front fairing. (☛ p. 39)
– Install the engine cowl. (☛ p. 38)

11.18 Checking for chain dirt



– Check the chain for loose dirt.
  » If the chain is very dirty:
    – Clean the chain. (☛ p. 42)

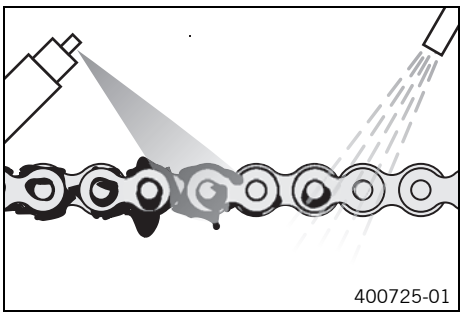
11.19 Cleaning the chain

Warning
Danger of accidents Oil or grease on the tires reduces their grip.
– Remove oil and grease with a suitable cleaning material.

Warning
Danger of accidents Reduced braking efficiency due to oil or grease on the brake discs.
– Always keep the brake discs free of oil and grease, and clean them with brake cleaner when necessary.

Warning
Environmental hazard Hazardous substances cause environmental damage.
– Oil, grease, filters, fuel, cleaners, brake fluid, etc., should be disposed of as stipulated in applicable regulations.

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



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

Chain cleaner (☛ p. 95)

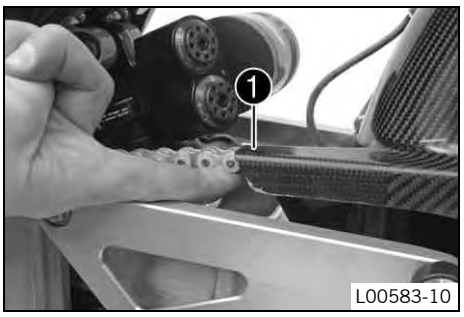
– After drying, apply chain spray.

Chain lube for road use (☛ p. 95)

11.20 Checking the chain tension

Warning
Danger of accidents Danger caused by incorrect chain tension.

– If the chain is too taut, the components of the secondary power transmission (chain, engine sprocket, rear sprocket, bearings in the transmission and in the rear wheel) will be under additional load. In addition to premature wear, this can cause the chain or the countershaft of the transmission to break in extreme cases. If the chain is too loose, however, it may fall off the engine sprocket or rear sprocket and block the rear wheel or damage the engine. Ensure that the chain tension is correct and adjust it if necessary.



Preparatory work
– Raise the rear of the motorcycle with lifting gear. (☛ p. 35)

Main work
– Shift the transmission to neutral.

Guideline

Push the chain up at the front end of the rear wheel cover ❶. The chain should touch the rear wheel cover.

Info
The lower chain section must be taut.
Chain wear is not always even, so you should repeat this measurement at different chain positions.

» If the chain tension does not meet specifications:
– Adjust the chain tension. (☛ p. 43)

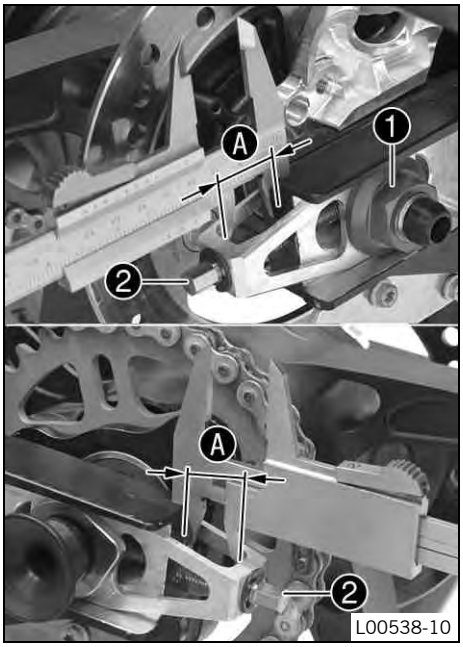
Finishing work
– Remove the rear of the motorcycle from the lifting gear. (☛ p. 35)

11.21 Adjusting the chain tension

Warning
Danger of accidents Danger caused by incorrect chain tension.

– If the chain is too taut, the components of the secondary power transmission (chain, engine sprocket, rear sprocket, bearings in the transmission and in the rear wheel) will be under additional load. In addition to premature wear, this can cause the chain or the countershaft of the transmission to break in extreme cases. If the chain is too loose, however, it may fall off the engine sprocket or rear sprocket and block the rear wheel or damage the engine. Ensure that the chain tension is correct and adjust it if necessary.

Preparatory work
– Raise the rear of the motorcycle with lifting gear. (☛ p. 35)
– Check the chain tension. (☛ p. 43)



Main work

– Loosen nut ❶.

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

Guideline

Turn adjusting screws ❷ on the left and right so that distance Ⓐ is identical on the left and right. The rear wheel is then correctly aligned.

– Tighten nut ❶.

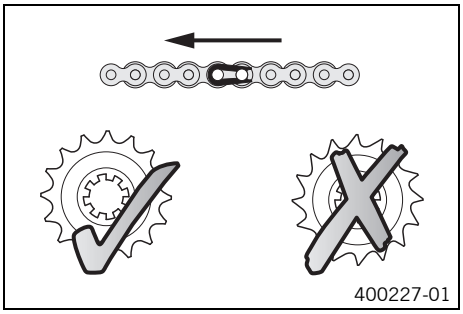
Guideline

Nut, rear wheel spindle	M18x1.5	60 Nm (44.3 lbf ft)

Finishing work

– Remove the rear of the motorcycle from the lifting gear. (☛ p. 35)

11.22 Checking the rear sprocket and engine sprocket

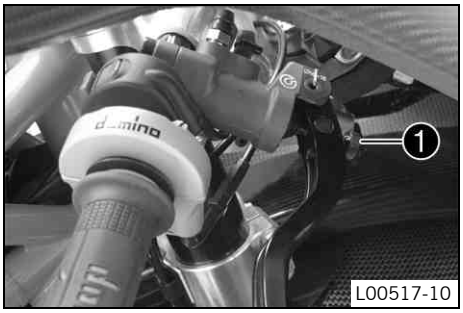


– Check the rear sprocket and engine sprocket for wear.

» If the rear sprocket and engine sprocket are worn:

– Replace the rear sprocket or engine sprocket. 🔧

12.1 Adjusting the basic position of the hand brake lever



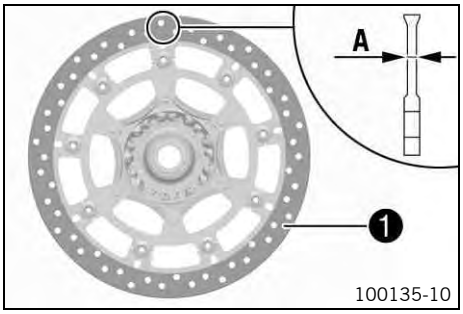
– Push the hand brake lever forward.
– Adjust the basic position of the hand brake lever to your hand position by turning the adjusting wheel 1.

Info
Do not make any adjustments while riding!

12.2 Checking brake discs

Warning
Danger of accidents Reduced braking efficiency due to worn brake disc(s).

– Change the worn brake disc(s) without delay. (Your authorized KTM workshop will be glad to help.)



– Check the thickness of the front and rear brake discs in several places to ensure that it conforms to measurement A.

Info
Wear reduces the thickness of the brake discs in area 1 of the brake linings.

Brake discs - wear limit	
Front	4.5 mm (0.177 in)
Rear	3.8 mm (0.15 in)

» If the brake disc thickness is less than the specified value:
– Change the brake discs.
– Check the front and rear brake discs for damage, cracking, and deformation.
» If damage, cracks, or deformation are visible on the brake disc:
– Change the brake discs.

12.3 Checking the front brake fluid level

Warning
Danger of accidents Failure of the brake system.

– If the brake fluid level falls below the **MIN** mark, this indicates a leakage in the brake system or worn-out brake linings. Check the brake system and do not continue riding. (Your authorized KTM workshop will be glad to help.)

Warning
Danger of accidents Reduced braking efficiency due to old brake fluid.

– Change the brake fluid of the front and rear brake according to the service schedule. (Your authorized KTM workshop will be glad to help.)

– Move the brake fluid reservoir mounted on the handlebar to a horizontal position.
– Check the brake fluid level in the brake fluid reservoir 1.
» If the brake fluid level is below the **MIN** marking:
– Add front brake fluid. (☛ p. 46)

12.4 Adding front brake fluid

Warning
Danger of accidents Failure of the brake system.

– If the brake fluid level falls below the **MIN** mark, this indicates a leakage in the brake system or worn-out brake linings. Check the brake system and do not continue riding. (Your authorized KTM workshop will be glad to help.)

Warning
Skin irritation Brake fluid can cause skin irritation on contact.

– Avoid contact with skin and eyes, and keep out of the reach of children.
– Wear suitable protective clothing and goggles.
– If brake fluid comes into contact with the eyes, flush the eyes thoroughly with water and consult a physician immediately.

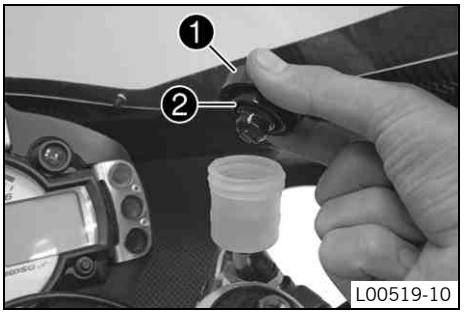
Warning
Danger of accidents Reduced braking efficiency due to old brake fluid.

– Change the brake fluid of the front and rear brake according to the service schedule. (Your authorized KTM workshop will be glad to help.)

Warning
Environmental hazard Hazardous substances cause environmental damage.

– Oil, grease, filters, fuel, cleaners, brake fluid, etc., should be disposed of as stipulated in 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 is corrosive and will damage painted surfaces.
Use only clean brake fluid from a sealed container.



Preparatory work
– Check the front brake linings. (☛ p. 46)

Main work
– Move the brake fluid reservoir mounted on the handlebar to a horizontal position.
– Remove screw cap ❶ with membrane ❷.
– Add brake fluid to the **MAX** level.

Brake fluid DOT 5.1 (☛ p. 94)

– Mount the screw cap with the membrane and tighten.

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

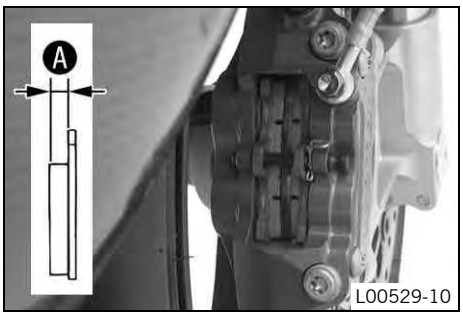
12.5 Checking the front brake linings

Warning
Danger of accidents Reduced braking efficiency caused by worn brake linings.

– Change worn brake linings immediately. (Your authorized KTM workshop will be glad to help.)

Note
Danger of accidents Reduced braking efficiency caused by damaged brake discs.

– If the brake linings are not changed in time, the steel brake lining carriers grind on the brake disc. 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 front brake linings. 🔧 (☛ p. 47)

– Check the brake linings for damage and cracking.

» If damage or wear is encountered:
– Change the front brake linings. 🔧 (☛ p. 47)

12.6 Changing the front brake linings 🔧

Warning
Skin irritation Brake fluid can cause skin irritation on contact.

– Avoid contact with skin and eyes, and keep out of the reach of children.
– Wear suitable protective clothing and goggles.
– If brake fluid comes into contact with the eyes, flush the eyes thoroughly with water and consult a physician immediately.

Warning
Danger of accidents Reduced braking efficiency due to old brake fluid.

– Change the brake fluid of the front and rear brake according to the service schedule. (Your authorized KTM workshop will be glad to help.)

Warning
Danger of accidents Reduced braking efficiency due to oil or grease on the brake discs.

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

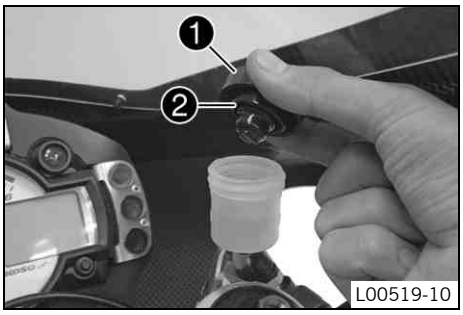
Warning
Danger of accidents Reduced braking efficiency due to use of non-approved brake linings.

– Brake linings available from accessory suppliers are often not tested and approved for use on KTM vehicles. The construction and friction factor of the brake linings and therefore the brake power can differ considerably from the original KTM brake linings. If brake linings are used that differ from the originals, there is no guarantee that they comply with the original license. The vehicle no longer corresponds to the condition at delivery, and the warranty is no longer valid.

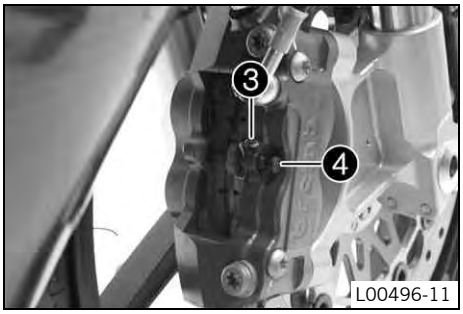
Warning
Environmental hazard Hazardous substances cause environmental damage.

– Oil, grease, filters, fuel, cleaners, brake fluid, etc., should be disposed of as stipulated in applicable regulations.

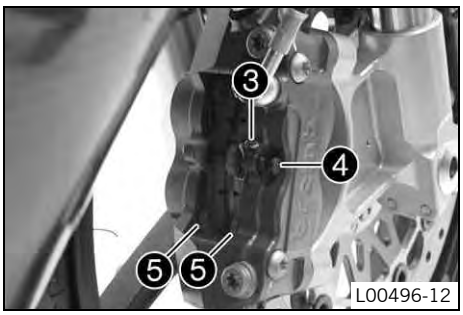
Info
Never use DOT 5 brake fluid. It is silicone-based and purple in color. Oil seals and brake lines are not designed for DOT 5 brake fluid.
Avoid contact between brake fluid and painted parts. Brake fluid is corrosive and will damage painted surfaces.
Use only clean brake fluid from a sealed container.



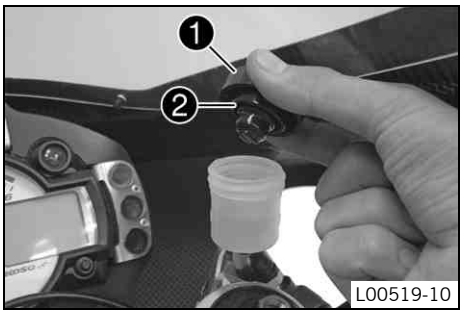
– Move the brake fluid reservoir mounted on the handlebar to a horizontal position.
– Remove screw cap ❶ with membrane ❷.



– Remove cotter pin ❸, pull out pin ❹, and remove the brake linings.
– Clean the brake caliper.



– Insert the brake linings ❺, insert pin ❹, and mount cotter pin ❸.



– Operate the hand brake lever repeatedly until the brake linings are in contact with the brake disc and there is a pressure point.
– Add brake fluid to the **MAX** level.

Brake fluid DOT 5.1 (☛ p. 94)

– Mount and tighten screw cap ❶ with membrane ❷ and the O-ring.

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

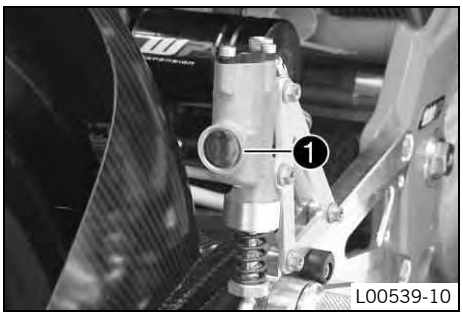
12.7 Checking rear brake fluid level

Warning
Danger of accidents Failure of the brake system.

– If the brake fluid level falls below the **MIN** mark, this indicates a leakage in the brake system or worn-out brake linings. Check the brake system and do not continue riding. (Your authorized KTM workshop will be glad to help.)

Warning
Danger of accidents Reduced braking efficiency due to old brake fluid.

– Change the brake fluid of the front and rear brake according to the service schedule. (Your authorized KTM workshop will be glad to help.)



– Stand the vehicle upright.
– Check the brake fluid level of the brake fluid reservoir.
  » If the fluid level reaches the **MIN** marking ❶:
    – Add rear brake fluid. 🔧 (☛ p. 49)

12.8 Adding rear brake fluid

Warning
Danger of accidents Failure of the brake system.

– If the brake fluid level falls below the **MIN** mark, this indicates a leakage in the brake system or worn-out brake linings. Check the brake system and do not continue riding. (Your authorized KTM workshop will be glad to help.)

Warning
Skin irritation Brake fluid can cause skin irritation on contact.

– Avoid contact with skin and eyes, and keep out of the reach of children.
– Wear suitable protective clothing and goggles.
– If brake fluid comes into contact with the eyes, flush the eyes thoroughly with water and consult a physician immediately.

Warning
Danger of accidents Reduced braking efficiency due to old brake fluid.

– Change the brake fluid of the front and rear brake according to the service schedule. (Your authorized KTM workshop will be glad to help.)

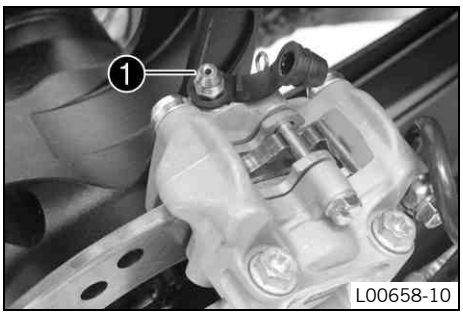
Warning
Environmental hazard Hazardous substances cause environmental damage.

– Oil, grease, filters, fuel, cleaners, brake fluid, etc., should be disposed of as stipulated in applicable regulations.

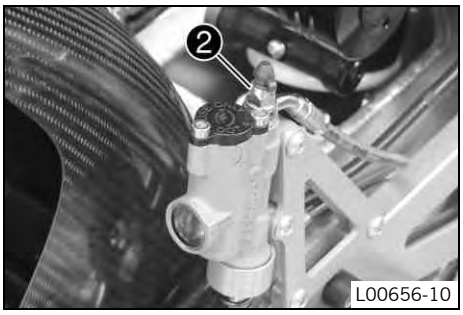
Info
Never use DOT 5 brake fluid. It is silicone-based and purple in color. Oil seals and brake lines are not designed for DOT 5 brake fluid.
Avoid contact between brake fluid and painted parts. Brake fluid is corrosive and will damage painted surfaces.
Use only clean brake fluid from a sealed container.

Preparatory work
– Check the rear brake linings. (☛ p. 50)
– Raise the rear of the motorcycle with lifting gear. (☛ p. 35)

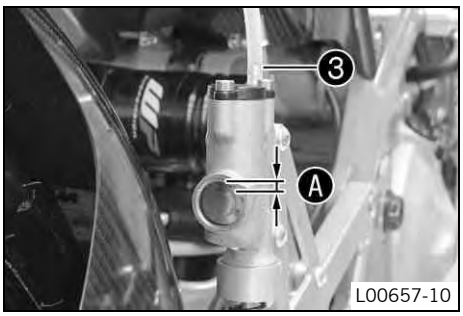
Main work



– Loosen bleeder screw ❶.



– Remove bleeder screw ❷.



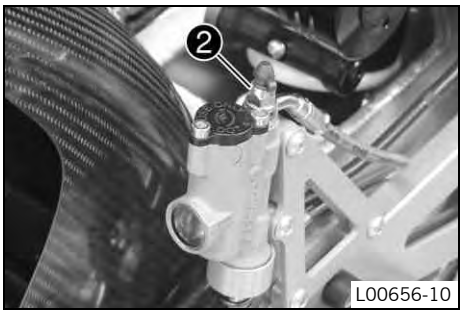
– Mount screw ❸ and the syringe hose from the separate enclosure.
– Correct the brake fluid level to level Ⓐ using the syringe.

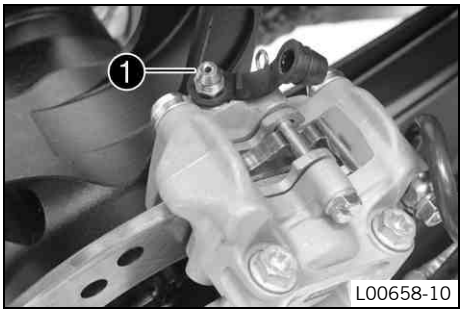
Guideline

Distance Ⓐ	2 mm (0.08 in)

Brake fluid DOT 5.1 (☛ p. 94)

– Remove screw ❸ and the syringe hose.
– Mount and tighten bleeder screw ❷.





– Tighten bleeder screw ❶.

Finishing work
– Remove the rear of the motorcycle from the lifting gear. (☛ p. 35)

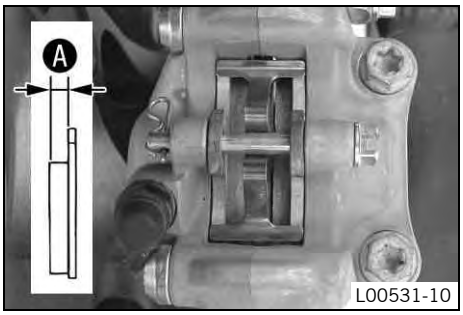
12.9 Checking the rear brake linings

Warning
Danger of accidents Reduced braking efficiency caused by worn brake linings.

– Change worn brake linings immediately. (Your authorized KTM workshop will be glad to help.)

Note
Danger of accidents Reduced braking efficiency caused by damaged brake discs.

– If the brake linings are not changed in time, the steel brake lining carriers grind on the brake disc. 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. 50)
– Check the brake linings for damage and cracking.
» If damage or wear is encountered:
– Change the rear brake linings. 🔧 (☛ p. 50)

12.10 Changing the rear brake linings 🔧

Warning
Skin irritation Brake fluid can cause skin irritation on contact.

– Avoid contact with skin and eyes, and keep out of the reach of children.
– Wear suitable protective clothing and goggles.
– If brake fluid comes into contact with the eyes, flush the eyes thoroughly with water and consult a physician immediately.

Warning
Danger of accidents Reduced braking efficiency due to old brake fluid.

– Change the brake fluid of the front and rear brake according to the service schedule. (Your authorized KTM workshop will be glad to help.)

Warning
Danger of accidents Reduced braking efficiency due to oil or grease on the brake discs.

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

Warning

Danger of accidents Reduced braking efficiency due to use of non-approved brake linings.

– Brake linings available from accessory suppliers are often not tested and approved for use on KTM vehicles. The construction and friction factor of the brake linings and therefore the brake power can differ considerably from the original KTM brake linings. If brake linings are used that differ from the originals, there is no guarantee that they comply with the original license. The vehicle no longer corresponds to the condition at delivery, and the warranty is no longer valid.

Warning

Environmental hazard Hazardous substances cause environmental damage.

– Oil, grease, filters, fuel, cleaners, brake fluid, etc., should be disposed of as stipulated in applicable regulations.

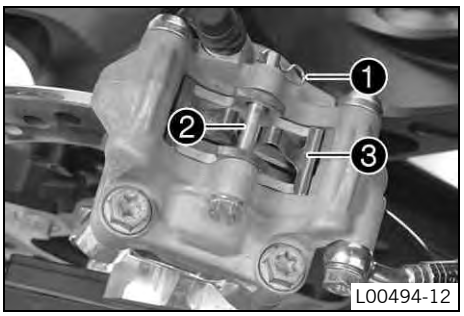
Info

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 is corrosive and will damage painted surfaces.
Use only clean brake fluid from a sealed container.

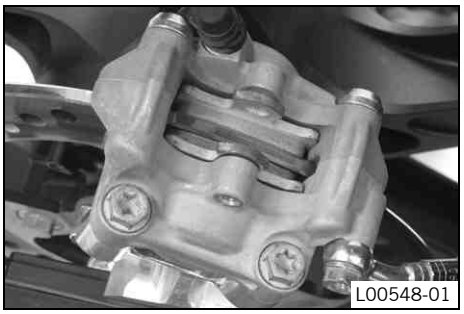
Preparatory work

– Raise the rear of the motorcycle with lifting gear. (☛ p. 35)

Main work



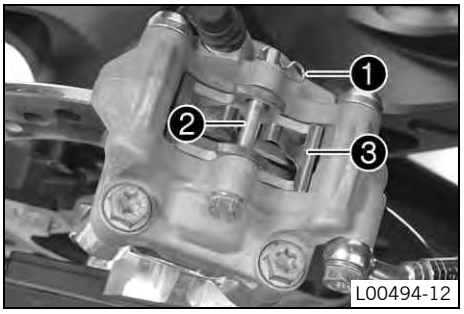
– Push the brake piston back into the basic position.
– Remove cotter pin ❶ and remove pin ❷.
– Take off retainer spring ❸ and remove the brake linings.
– Clean the brake caliper.



– Position the brake linings.

Info

Always change the full set of brake linings.



– Position retainer spring ❸.
– Mount pin ❷.

Guideline

Pin, rear brake	M6	12 Nm (8.9 lbf ft)

– Mount cotter pin ❶.

Info

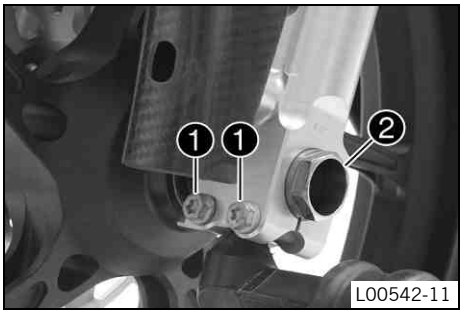
To be able to mount the pin more easily, push down the retainer spring. Ensure that the retainer spring is seated properly.

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

Finishing work

– Check the rear brake fluid level. (☛ p. 48)
– Remove the rear of the motorcycle from the lifting gear. (☛ p. 35)

13.1 Removing the front wheel



Preparatory work

– Raise the rear of the motorcycle with lifting gear. (☛ p. 35)
– Raise the front of the motorcycle with lifting gear. (☛ p. 35)

Main work

– Loosen screws ❶.
– Loosen wheel spindle ❷ and pull it out.

Warning

Danger of accidents Reduced braking efficiency due to damaged brake discs.

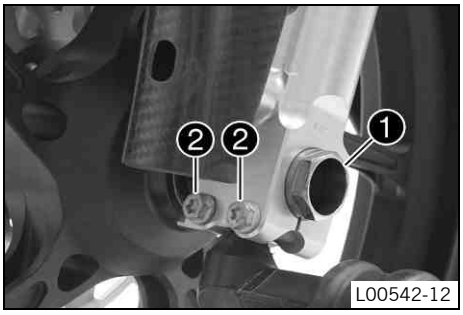
– Always lay down the wheel in such a way that the brake discs are not damaged.

– Take the front wheel out of the fork.

Info

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

13.2 Installing the front wheel



Warning

Danger of accidents Reduced braking efficiency due to oil or grease on the brake discs.

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

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

Guideline

Screw, wheel spindle, front	M16x1.5	50 Nm (36.9 lbf ft)

– Take the motorcycle off of the front lifting gear. (☛ p. 35)
– Operate the hand brake lever repeatedly until the brake linings are in contact with the brake disc and there is a pressure point.
– Pull the front brake and compress the fork powerfully a few times.

✓ The fork legs straighten.

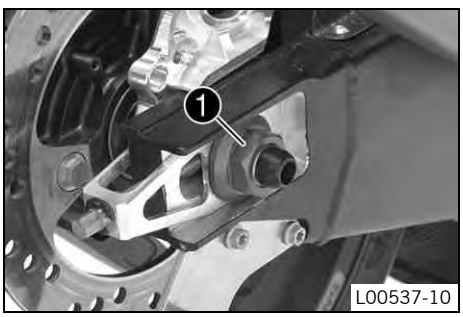
– Tighten screws ❷.

Guideline

Screw, axle clamp	M8	12 Nm (8.9 lbf ft)	Thread greased

– Remove the rear of the motorcycle from the lifting gear. (☛ p. 35)

13.3 Removing the rear wheel



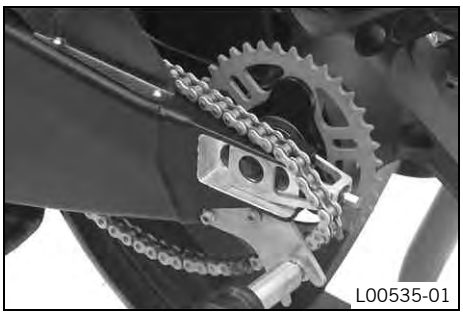
Preparatory work

– Raise the rear of the motorcycle with lifting gear. (☛ p. 35)

Main work

– Remove nut ❶.

– Remove wheel spindle ❷.



– Push the rear wheel as far forward as possible and then remove the chain from the rear sprocket.

Info
Protect the motorcycle and attachments against damage by covering them.

Warning
Danger of accidents Reduced braking efficiency due to damaged brake discs.
– Always lay down the wheel in such a way that the brake discs are not damaged.

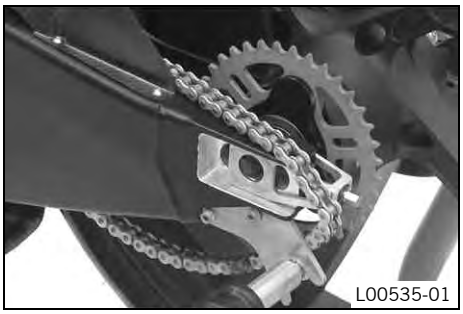
– Pull the rear wheel back and carefully take it out of the swingarm without damaging the rim or brake disc.

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

13.4 Installing the rear wheel

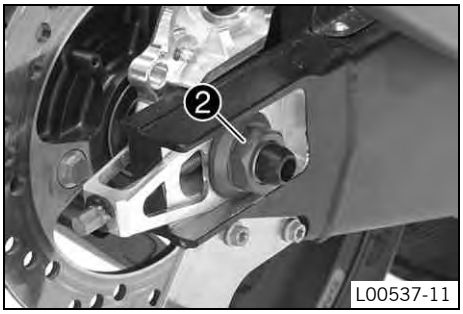
Warning
Danger of accidents Reduced braking efficiency due to oil or grease on the brake discs.
– Always keep the brake discs free of oil and grease, and clean them with brake cleaner when necessary.

Warning
Danger of accidents No braking effect when operating the rear brake.
– After installing the rear wheel, always operate the foot brake until the pressure point is reached.



Main work
– Check the rear hub rubber dampers. (☛ p. 54)
– Clean the thread of the wheel spindle and nut.
– Clean the mating surfaces of the brake caliper support and swingarm.
– Position the rear wheel.
✓ The brake caliper support and brake linings are correctly positioned.

– Push the rear wheel as far forward as possible and place the chain on the rear sprocket.
– Pull the rear wheel back and insert wheel spindle ❶.



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

Finishing work
– Check the chain tension. (☛ p. 43)
– Remove the rear of the motorcycle from the lifting gear. (☛ p. 35)

13.5 Checking the rear hub rubber dampers

Info
The engine power is transmitted by the rear sprocket to the rear wheel through 3 rubber dampers. They eventually wear out during operation. If the rubber dampers are not changed in time, the rear sprocket carrier and the rear hub become damaged.

Preparatory work
– Raise the rear of the motorcycle with lifting gear. (☛ p. 35)
– Remove the rear wheel. (☛ p. 52)

Main work
– Remove the rear sprocket carrier.
– Check the rubber dampers of the rear hub for damage and wear.
  » If the rubber dampers of the rear hub are damaged or worn:
    – Change the rubber dampers.
– Position the rear sprocket carrier.

Info
Each pin and rubber damper pair should have as little free play as possible to increase the service life of the rubber dampers.

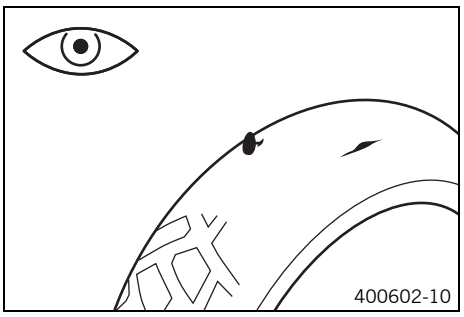
Finishing work
– Install the rear wheel. (☛ p. 53)
– Check the chain tension. (☛ p. 43)
– Remove the rear of the motorcycle from the lifting gear. (☛ p. 35)

13.6 Checking the tire condition

Warning
Danger of accidents Uncontrollable vehicle handling in the event of a flat tire.
– In the interest of safety, replace damaged or worn tires immediately. (Your authorized KTM workshop will be glad to help.)

Warning
Danger of crashing Poor vehicle handling due to different tire tread patterns on front and rear wheels.
– The front and rear wheels must be fitted with tires with similar tread patterns to prevent loss of control over the vehicle.

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



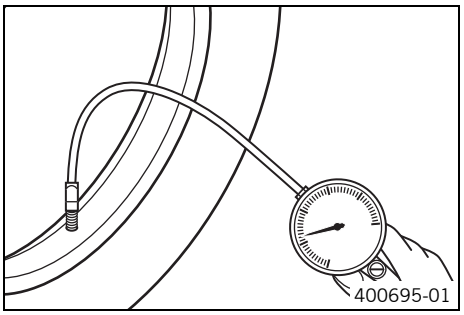
– Check the front and rear tires for cuts, run-in objects, and other damage.
  » If the tires exhibit cuts, run-in objects, or other damage:
    – Change the tires.
– Check the tread.
  » If the tread is worn:
    – Change the tires.
– Check the age of the tires.

Info
The tire's date of manufacture is usually part of the tire markings and is indicated by the last four digits of the **DOT** marking. The first two digits refer to the week of manufacture and last two digits refer to the year of manufacture.
KTM recommends that the tires are changed regardless of the actual wear, at the latest after five years.

  » If a tire is more than five years old:
    – Change the tires.

13.7 Checking the tire pressure

Info
Low tire pressure leads to abnormal wear and overheating of the tire.



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

Tire air pressure	
Front	1.8 bar (26 psi)
Rear	1.7 bar (25 psi)

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

Info
The rubber seal in the protection cap prevents air from leaking out of the tire if the valve is faulty.

14.1 Removing the battery

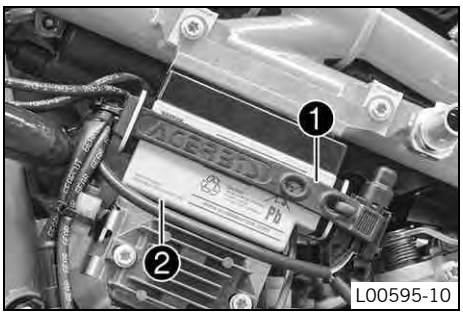
Warning
Risk of injury Battery acid and battery gases cause serious chemical burns.

- Keep batteries out of the reach of children.
- Wear suitable protective clothing and goggles.
- Avoid contact with battery acid and battery gases.
- Keep sparks and open flames away from the battery. Only charge in well-ventilated rooms.
- In the event of skin contact, rinse with large amounts of water. If battery acid gets in the eyes, rinse with water for at least 15 minutes and contact a physician.

Caution
Danger of accidents If the vehicle is operated with a discharged battery or without a battery, electronic components and safety equipment may be damaged.

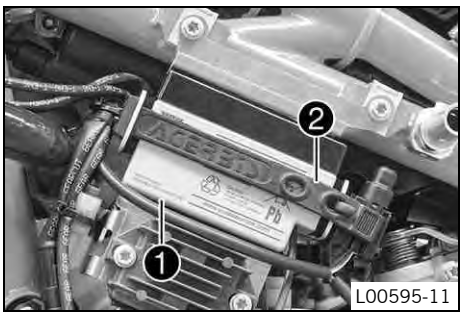
- Never operate the vehicle with a discharged battery or without a battery.

Preparatory work
- Switch off all power consumers and switch off the engine.
- Remove the engine cowl. (☛ p. 38)
- Remove the front fairing. (☛ p. 38)



Main work
- Detach rubber band ❶.
- Disconnect the battery.
- Take battery ❷ out of the battery holder.

14.2 Installing the battery



Main work
- Position battery ❶ in the battery holder.
- Connect the battery.
- Attach rubber band ❷.

Finishing work
- Install the front fairing. (☛ p. 39)
- Install the engine cowl. (☛ p. 38)

14.3 Recharging the battery

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

- Keep batteries out of the reach of children.
- Wear suitable protective clothing and goggles.
- Avoid contact with battery acid and battery gases.
- Keep sparks and open flames away from the battery. Only charge in well-ventilated rooms.
- In the event of skin contact, rinse with large amounts of water. If battery acid gets in the eyes, rinse with water for at least 15 minutes and contact a physician.

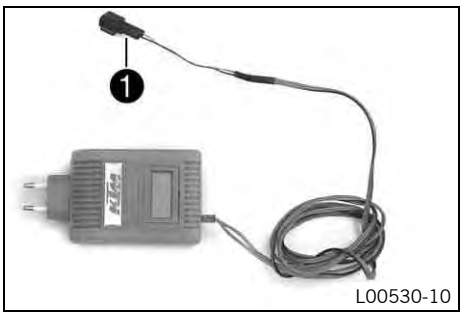
Warning
Environmental hazard The battery contains elements that are harmful to the environment.

– Do not discard batteries with the household waste. Dispose of faulty batteries in an environmentally compatible manner. Give the battery to your authorized KTM dealer or dispose of it at a collection point for used batteries.

Warning
Environmental hazard Hazardous substances cause environmental damage.

– Oil, grease, filters, fuel, cleaners, brake fluid, etc., should be disposed of as stipulated in applicable regulations.

Info
Even if there is no load on the battery, it loses power every day.
The charge state and the type of charge are very important for the service life of the battery.
Rapid recharging with a high charging current shortens the battery's service life.
If the battery is left in a discharged state for an extended period, it will become over-discharged and sulfate, destroying the battery.
The battery is maintenance-free, i.e., the acid level does not have to be checked.



L00530-10

Preparatory work
– Switch off all power consumers and switch off the engine.
– Remove the engine cowl. (☛ p. 38)
– Remove the front fairing. (☛ p. 38)
– Remove the battery. 🔧 (☛ p. 56)

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

Battery charger (58429074000)
Battery connector (000700000FC)

You can also use the battery charger to test the rest potential and start potential of the battery, and to test the alternator. With this device, you cannot overcharge the battery.

Info
Battery connector (000700000FC) ❶ must be crimped onto the charging cable. Ensure that the polarity of the connection is correct.
Charge the battery at no more than 10% of the capacity specified on the battery housing.

– Switch off the battery charger after charging. Disconnect the battery.

Guideline

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

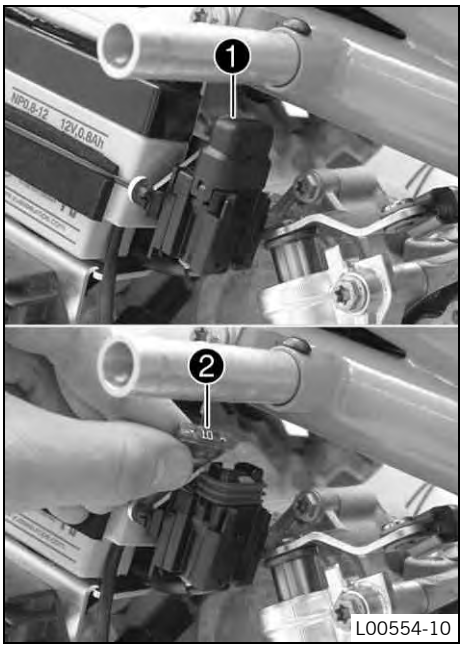
Finishing work
– Install the battery. 🔧 (☛ p. 56)
– Install the front fairing. (☛ p. 39)
– Install the engine cowl. (☛ p. 38)

14.4 Changing the main fuse

Warning
Fire hazard The electrical system can be overloaded if the wrong fuses are used.

– Use only fuses with the prescribed amperage. Never by-pass or repair fuses.

Info
The main fuse protects all power consumers of the vehicle. The main fuse is next to the battery.



Preparatory work

– Switch off all power consumers and switch off the engine.
– Remove the engine cowl. (☛ p. 38)
– Remove the front fairing. (☛ p. 38)

Main work

– Take off protection cap ❶.
– Remove the faulty main fuse ❷.
– Install a new main fuse.

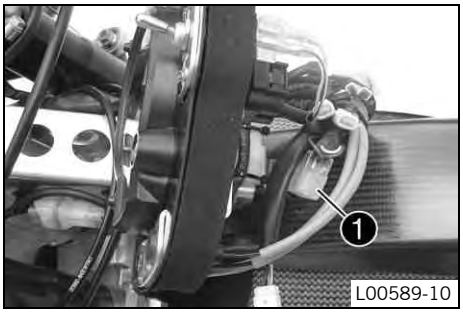
Fuse (58011109110) (☛ p. 80)

– Mount protection cap ❶.

Finishing work

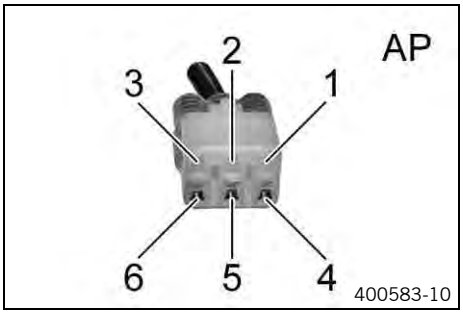
– Install the front fairing. (☛ p. 39)
– Install the engine cowl. (☛ p. 38)

15.1 Data recording



The vehicle wiring harness has a CAN bus interface via which the data recording system can be connected to the engine control unit. The data recording connector ❶ is located at the front of the vehicle and is labeled with **CAN**. The engine control unit sends all internal sensor values (rpm, throttle position, ...) via the CAN bus.
The values of the internal sensors and expansion sensors are converted to a digital CAN bus message in the engine control unit and sent. With a CAN bus logger, the messages can be recorded and read out at a later time.
KTM recommends using the KTM PowerParts CAN Bus Logger.
Alternatively, a data recording system from **2D** or **GET** can be used.

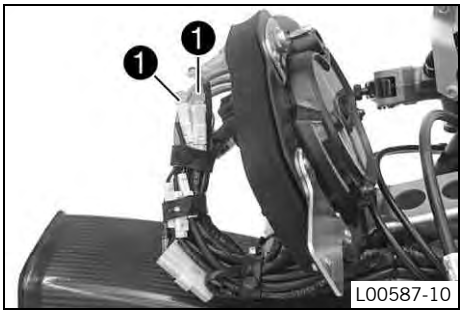
15.2 Data recording connector AP



Pin overview

1	CAN high
2	CAN low
3	Ground
4	Not assigned
5	Battery voltage (12 V)
6	Not assigned

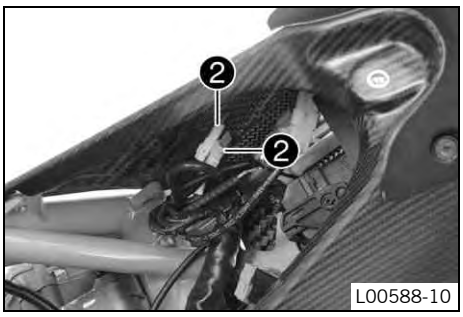
15.3 Expansion sensors



Connectors exist to connect the following expansion sensors to the engine control unit:

- **SUS_F:** suspension travel sensor, front
- **SUS_R:** suspension travel sensor, rear
- **P_FB:** brake pressure, front
- **P_RB:** brake pressure, rear

The connectors of the front expansion sensors ❶ are located in the front of the vehicle.

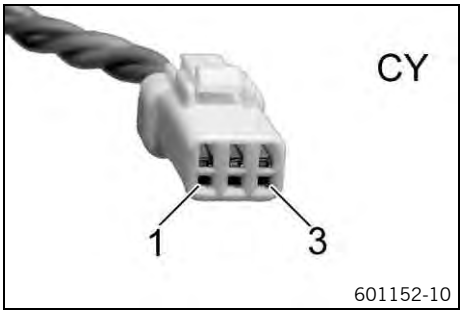


The connectors of the rear expansion sensors ❷ are located under the fuel tank in the area of the engine control unit.

Info
The cable insulation label indicates the type of connector.

The value of the expansion sensors issued by the engine control unit is equivalent to a 12-bit signal. An analog sensor voltage of 0 volts corresponds to 0 bit while an analog sensor voltage of 5 volts corresponds to 4096 bit.
For conversion to a physical value, an appropriate sensor characteristic curve must be stored in the data recording system.

15.4 Extension sensors connector CY



Pin overview

1	Ground
2	Power supply (5 V)
3	Signal wire

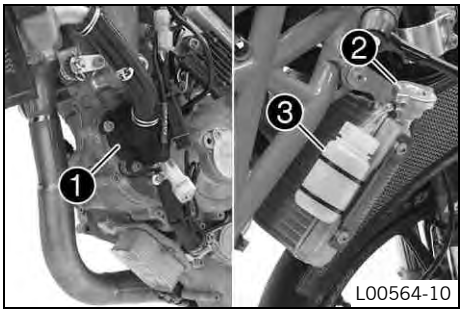
L00569-01

ID (HEX)	Message Name	TX Rate (Hz)	Message Start Byte	Message Start Bit	Start position (datalogger setup)	Message Length (bit)	Offset Value	Gain Value	Data Type S(signed) U(unsigned)	Unit	Description
100	SUS_F	200	0	0	0	16	0	1	U	bit	Analog Raw Value (Suspension_FRONT) 12bit resolution
100	SUS_R	200	2	0	16	16	0	1	U	bit	Analog Raw Value (Suspension_REAR) 12bit resolution
100	BP_F	200	4	0	32	16	0	1	U	bit	Analog Raw Value (Brake Pressure_FRONT) 12bit resolution
100	BP_R	200	6	0	48	16	0	1	U	bit	Analog Raw Value (Brake Pressure_REAR) 12bit resolution
102	REAL_SLIP	200	0	0	0	16	0	value/100	S	%	SLIP %
102	IDX_LIMIT	200	2	0	16	8	0	1	S	idx	Limit Index
102	STARD_IDX	200	5	0	40	8	0	1	U	idx	Normalized SLIP_STAR_D
200	REVCNT	100	0	0	0	16	0	1	U	rev	Engine Revolution Counter
200	RPM	100	2	0	16	16	0	1	U	rpm	RPM
200	TPS	100	4	0	32	8	0	value/2	U	%	Throttle Position %
202	INJ_TAB_TIME	100	0	0	0	16	0	value/2	U	us	BFUELT Injection Time value
204	SPARK_TAB	100	0	0	0	16	0	value/10	S	deg	BIGNT Ignition Timing value
206	DTPS+	100	4	0	32	16	0	value/2	S	%/dt	Opening Delta WTPS
208	CINJ_DTPS+	100	0	0	0	8	0	value/64	U	gain	Acceleration Injection Time Correction
20A	DEC_INJ_+	100	0	0	0	16	0	1	U	revs	Injection Acceleration Decay
218	STP_POSITION	100	0	0	0	8	0	1	U	steps	Stepper position (bypass opening)
218	STP_TARGET	100	1	0	8	8	0	1	U	steps	Stepper target position (bypass setpoint)
21A	SPEED_F	100	0	0	0	16	0	value/100	U	km/h	front wheel speed
21A	SPEED_R	100	2	0	16	16	0	value/100	U	km/h	rear wheel speed
21B	TC_STATUS	100	0	0	0	4	0	1	U	idx	TC State Machine Status (Internal Use Only)
21B	TC_INDEX	100	1	0	8	8	0	1	S	idx	TC Actuated Index
21B	GET_MATRIX_A	100	2	0	16	8	-64	value/2	U	deg	TC Ignition Correction
21B	TC_LEVEL	100	3	0	24	8	0	1	U	idx	TC Level from CanSW or EoL static setting (Driver Setting)
310	TH20	100	0	0	0	8	-40	1	U	°C	Engine Temperature
310	TAIR	100	1	0	8	8	-40	1	U	°C	Air Temperature
310	VBB1	100	3	0	24	8	0	value*0.0705	U	V	Battery Voltage
310	BARO	100	6	0	48	16	0	1	S	mbar	Barometric Pressure
312	CUT+MUTE CNT	100	0	0	0	16	0	1	U	us	GearShift Time (Cut + Mute)
312	GEAR_AD	100	2	0	16	8	0	1	U	bit	Gear Position Sensor Analog RAW Value
312	GEAR INDEX	100	3	0	24	8	0	1	U	idx	Gear Position Index (1-0-2-3-4-5-6 7=undetermined)
312	INFO_FLAG_0	100	4	0	32	1	0	1	U	idx	Launch Control Active Flag
312	INFO_FLAG_1	100	4	1	33	1	0	1	U	idx	Traction Control Active Flag
312	INFO_FLAG_2	100	4	2	34	1	0	1	U	idx	Low Pressure Oil Flag
312	INFO_FLAG_3	100	4	3	35	1	0	1	U	idx	Internal Codelock Status Flag
312	INFO_FLAG_4	100	4	4	36	1	0	1	U	idx	Training Flag (0=RACE 1=TRAINING)
312	INFO_FLAG_5	100	4	5	37	1	0	1	U	idx	PIT Limit Active Flag
312	INFO_FLAG_6	100	4	6	38	1	0	1	U	idx	Active Map Flag
312	INFO_FLAG_7	100	4	7	39	1	0	1	U	idx	Engine Malfunction Indicator Lamp Flag
312	ACTIVE_MAP	100	5	0	40	8	0	1	U	idx	Active Map

*** little endian format is used**

16 COOLING SYSTEM

16.1 Cooling system

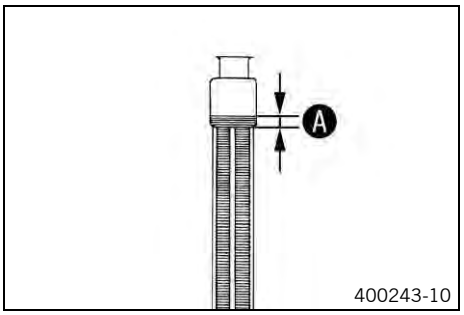


The water pump with a 3D water pump impeller ❶ in the engine ensures forced circulation of the coolant. The heat exchanger enables faster warming of the engine oil at the start of a journey and better heat dissipation for the engine oil during the journey. The pressure in the cooling system resulting from heat is regulated by a valve in the radiator cap ❷. The heat expansion causes the surplus coolant to flow into the coolant overflow reservoir ❸. When the temperature falls, this surplus coolant is sucked back into the cooling system.
The lower the speed, the less the cooling effect. Dirty cooling fins also reduce the cooling effect.

16.2 Checking the coolant level

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

– Do not remove the radiator cap, radiator hoses or other cooling system components when the engine is hot. Allow the engine and cooling system to cool down. In case of scalding, rinse immediately with lukewarm water.



Condition
The engine is cold.

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

Coolant level Ⓐ above the radiator fins.	10 mm (0.39 in)

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

Distilled water

– Fit the radiator cap.

Info
In most racing series, it is not permissible to use antifreeze, which is why the cooling system must be filled with distilled water.
If the cooling system is filled with distilled water, it may only be exposed to temperatures above freezing. If the vehicle will be exposed to temperatures below freezing during storage or transport, the coolant must be drained.
The standard filling of the vehicle is with a mixture of antifreeze and distilled water.

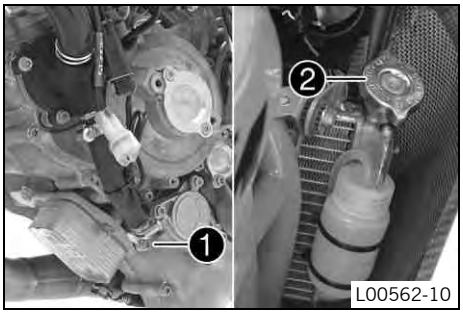
16.3 Draining the coolant

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

– Do not remove the radiator cap, radiator hoses or other cooling system components when the engine is hot. Allow the engine and cooling system to cool down. In case of scalding, rinse immediately with lukewarm water.

Condition
The engine is cold.

Preparatory work
– Remove the engine cowl. (☛ p. 38)



Main work

– Position the motorcycle upright.
– Place a suitable container under the engine.
– Remove screw ❶. Take off radiator cap ❷.
– Completely drain the coolant.
– Mount screw ❶ with a new seal ring and tighten.

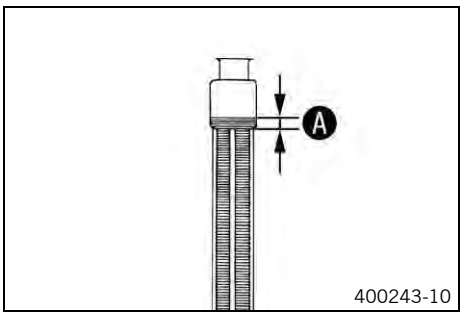
Guideline

Remaining engine screws	M5	6 Nm (4.4 lbf ft)

Finishing work

– Install the engine cowl. (☛ p. 38)

16.4 Refilling with coolant



– Position the motorcycle upright.
– Pour coolant in up to measurement Ⓐ above the radiator fins.

Guideline

Distance Ⓐ above the radiator fins	10 mm (0.39 in)

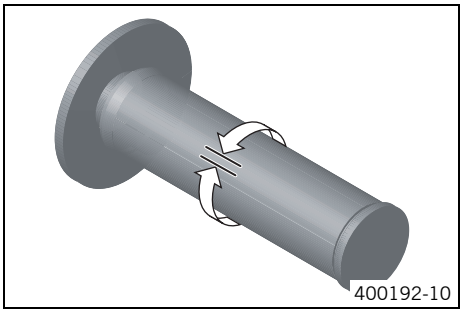
Coolant	0.7 l (0.7 qt.)	Distilled water

– Fit the radiator cap.
– Take a short test ride.
– Check the coolant level. (☛ p. 61)

Info

In most racing series, it is not permissible to use antifreeze, which is why the cooling system must be filled with distilled water.
If the cooling system is filled with distilled water, it may only be exposed to temperatures above freezing. If the vehicle will be exposed to temperatures below freezing during storage or transport, the coolant must be drained.
The standard filling of the vehicle is with a mixture of antifreeze and distilled water.

17.1 Checking the play in the throttle cable



– Check the throttle grip for smooth operation.
– Move the handlebar to the straight-ahead position. Move the throttle grip backwards and forwards to ascertain the play in the throttle cable.

Throttle cable play	3... 5 mm (0.12... 0.2 in)

» If the throttle cable play does not meet specifications:
– Adjust the play in the throttle cable. 🔧 (☛ p. 63)

Danger

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

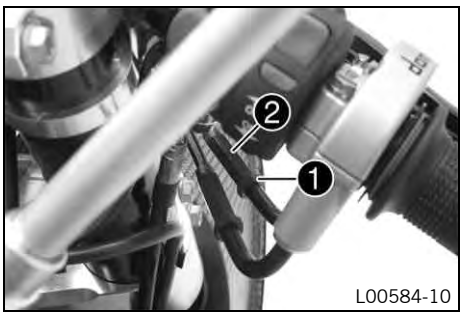
– When running the engine, always make sure there is sufficient ventilation, and do not start or run the engine in an enclosed space without an effective exhaust extraction system.

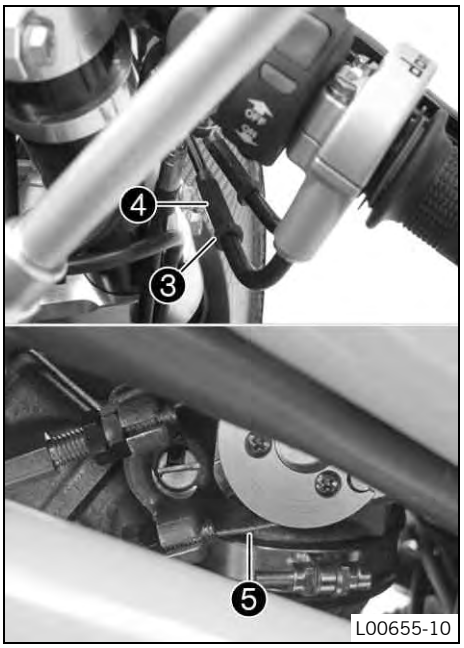
– Start the engine and let it run idle. Move the handlebar to and fro over the entire steering range.

The idle speed must not change.

» If the idle speed changes:
– Adjust the play in the throttle cable. 🔧 (☛ p. 63)

17.2 Adjusting the play in the throttle cable 🔧





Main work

– Move the handlebar to the straight-ahead position.
– Loosen lock nut ❶.
– Turn adjusting screw ❷ so that there is play in the throttle cable at the throttle grip.

Guideline

Throttle cable play	3... 5 mm (0.12... 0.2 in)

– Tighten lock nut ❶.
– Loosen lock nut ❸.
– Turn adjusting screw ❹ in such a way that there is play in the throttle cable ❺ at the throttle valve body.

Guideline

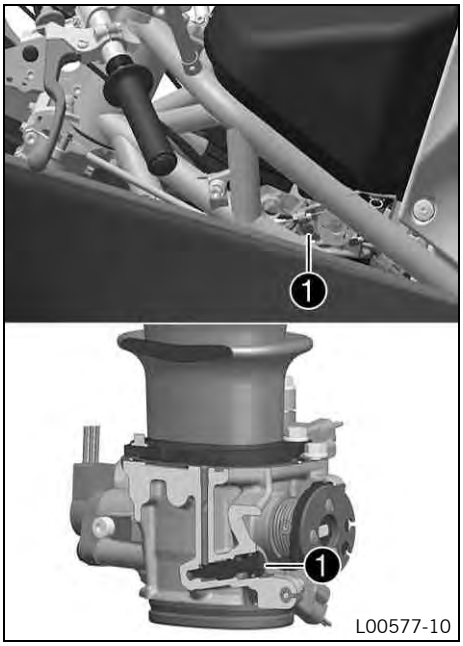
Throttle cable play	0... 1 mm (0... 0.04 in)

– Tighten lock nut ❸.

Finishing work

– Check the play in the throttle cable. (☛ p. 63)

17.3 Adjusting the idle speed



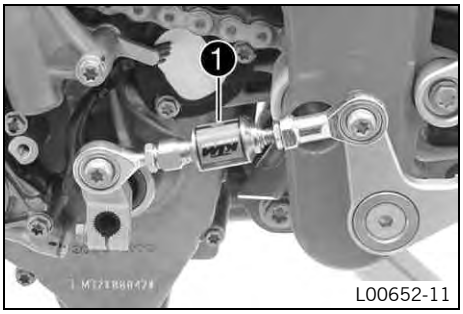
– Run the engine until it is warm.
– Set the desired idle speed by turning the idle speed adjusting screw ❶.

Guideline

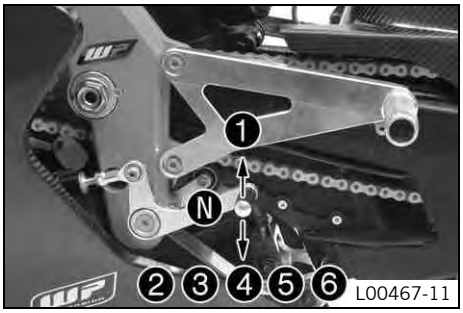
Idle speed	2,900… 3,100 rpm

Info
Turning the screw clockwise decreases the idle speed.
Turning the screw counterclockwise increases the idle speed.

17.4 Quick shifter



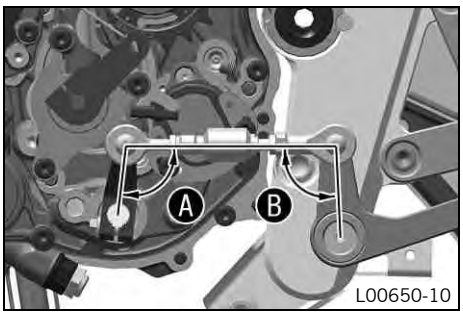
The quick shifter ❶ is mounted on the left of the engine.



With the quick shifter, it is not necessary to activate the clutch when upshifting the gears between 1st to 6th gear.
The ignition is briefly interrupted by the control unit during a shift procedure.
For the quick shifter to function properly, the engine load and the engine speed must be high.

Info
It is always possible to shift by conventional means using the clutch and throttle.

17.5 Checking the position of the quick shifter



Preparatory work
– Remove the engine cowl. (☛ p. 38)

Main work
– Check angle Ⓐ and angle Ⓑ.

Info
Angle Ⓐ and angle Ⓑ must be equal.

Angle Ⓐ	80… 100°
Angle Ⓑ	80… 100°

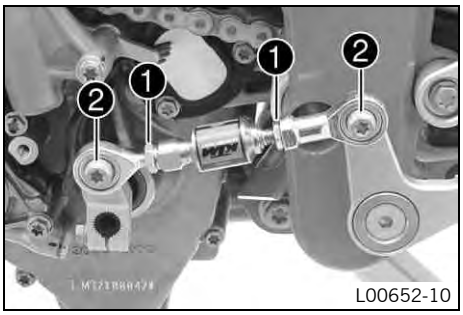
» If the specified angles are not reached:
– Position the quick shifter. (☛ p. 65)

Finishing work
– Install the engine cowl. (☛ p. 38)

17.6 Positioning the quick shifter

Preparatory work

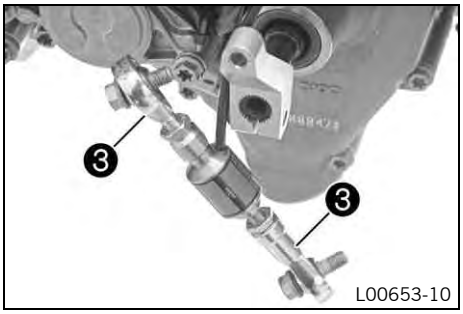
– Remove the engine cowl. (☛ p. 38)



Main work

– Loosen nuts ❶.

– Remove screws ❷.

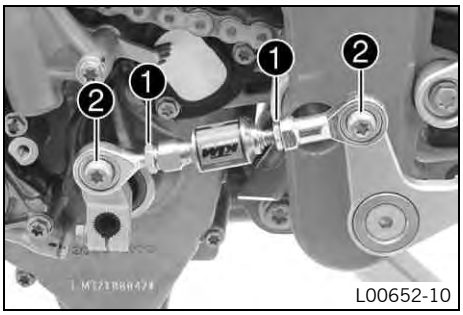


– Turn heim joints ❸ into the desired position on both sides.

Info

The screw must be screwed in by at least 6 full turns.
The two heim joints must be parallel to each other.

– Check the ball joints of the heim joints for smooth operation.



– Position the quick shifter and tighten with screws ❷.

Guideline

Screw, shift rod	M6	12 Nm (8.9 lbf ft)	**Loctite® 243™**

– Lock nuts ❶.

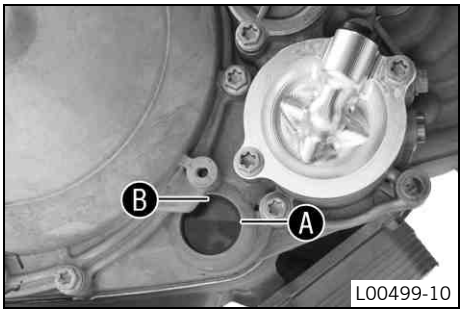
– Check the position of the quick shifter. (☛ p. 64)

Finishing work

– Install the engine cowl. (☛ p. 38)

18.1 Checking the engine oil level

Info
The engine oil level can be checked on a cold or hot engine.



Preparatory work
- Stand the motorcycle upright on a horizontal surface.
- Remove the engine cowl. (☛ p. 38)
- Remove the front fairing. (☛ p. 38)

Condition
The engine is cold.
- Check the engine oil level.

The engine oil reaches the middle of viewer Ⓐ.

» If the engine oil does not reach the middle of the viewer:
- Add engine oil. (☛ p. 68)

Condition
The engine is at operating temperature.
- Check the engine oil level.

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

The engine oil level is between the middle of viewer Ⓐ and the top edge of viewer Ⓑ.

» If the engine oil does not reach the middle of viewer Ⓐ:
- Add engine oil. (☛ p. 68)

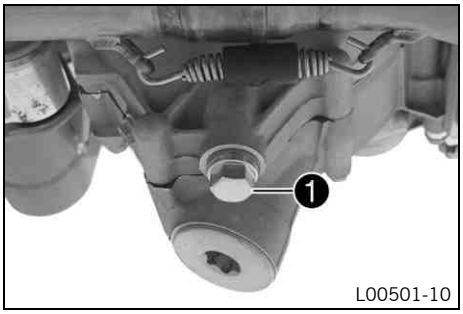
Finishing work
- Install the front fairing. (☛ p. 39)
- Install the engine cowl. (☛ p. 38)

18.2 Changing the engine oil and oil filter, cleaning the oil screen

Warning
Danger of scalding Engine oil and gear oil get very hot when the motorcycle is ridden.
- Wear appropriate protective clothing and safety gloves. In case of burns, rinse immediately with lukewarm water.

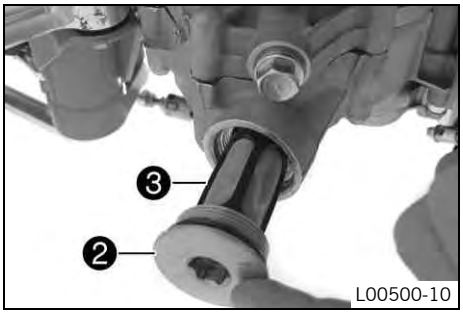
Warning
Environmental hazard Hazardous substances cause environmental damage.
- Oil, grease, filters, fuel, cleaners, brake fluid, etc., should be disposed of as stipulated in applicable regulations.

Info
Drain the engine oil only when the engine is warm.



Preparatory work
- Raise the rear of the motorcycle with lifting gear. (☛ p. 35)
- Remove the engine cowl. (☛ p. 38)
- Remove the front fairing. (☛ p. 38)

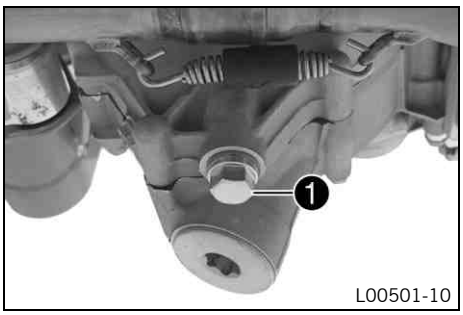
Main work
- Place a suitable container under the engine.
- Remove the oil drain plug ❶ with the magnet and seal ring.



– Remove screw plug ❷ with oil screen ❸ and the O-rings.
– Completely drain the engine oil.
– Thoroughly clean the parts and sealing surfaces.
– Mount and tighten the screw plug with the oil screen and the O-rings.

Guideline

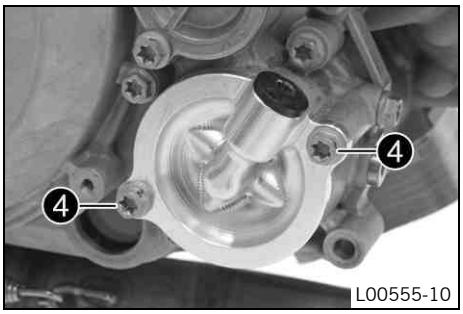
Plug, oil screen	M32	40 Nm (29.5 lbf ft)



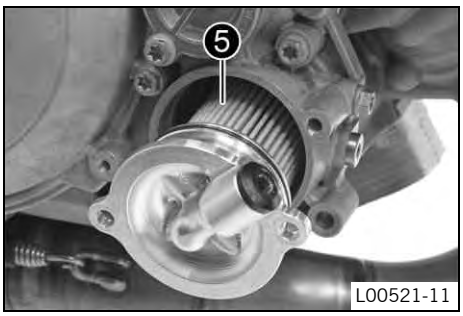
– Mount the oil drain plug ❶ with the magnet and seal ring and tighten it.

Guideline

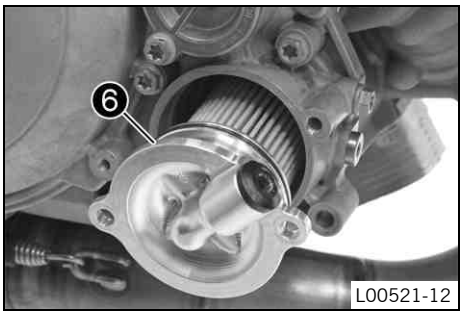
Oil drain plug	M12	30 Nm (22.1 lbf ft)



– Remove screws ❹. Take off the oil filter cover with the O-ring.



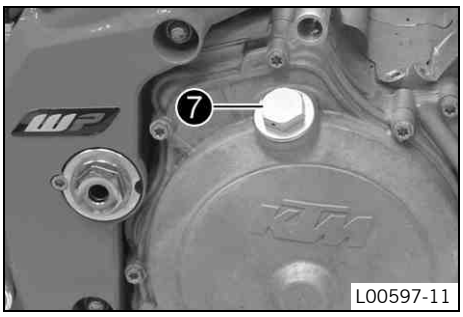
– Pull oil filter ❺ out of the oil filter housing.
– Completely drain the engine oil.
– Clean the parts and the sealing surface thoroughly.



– Insert the oil filter into the oil filter housing.
– Grease the O-ring of the oil filter cover and mount it with the oil filter cover ❻.
– Mount and tighten the screws.

Guideline

Remaining engine screws	M6	10 Nm (7.4 lbf ft)



– Remove the oil filler plug ❼ with the O-ring from the clutch cover and fill up with engine oil.

Engine oil	0.75 l (0.79 qt.)	Engine oil (SAE 0W/40) (☛ p. 94)

Info
Too little engine oil or poor-quality engine oil results in premature wear to the engine.

– Install and tighten the oil filler plug with the O-ring.

Danger

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

– When running the engine, always make sure there is sufficient ventilation, and do not start or run the engine in an enclosed space without an effective exhaust extraction system.

– Start the engine and check for oil tightness.

Finishing work

– Remove the rear of the motorcycle from the lifting gear. (☛ p. 35)
– Check the engine oil level. (☛ p. 66)
– Install the front fairing. (☛ p. 39)
– Install the engine cowl. (☛ p. 38)

18.3 Adding engine oil

Info

Too little engine oil or poor-quality engine oil results in premature wear to the engine.

Preparatory work

– Remove the engine cowl. (☛ p. 38)
– Remove the front fairing. (☛ p. 38)

Main work

– Remove filler plug ❶ with the O-ring on the clutch cover.
– Fill up with engine oil.

Engine oil (SAE 0W/40) (☛ p. 94)

Info

For optimal performance of the engine oil, do not mix different types of engine oil.
If appropriate, change the engine oil.

– Install and tighten the oil filler plug with the O-ring.
– Check the engine oil level. (☛ p. 66)

Danger

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

– When running the engine, always make sure there is sufficient ventilation, and do not start or run the engine in an enclosed space without an effective exhaust extraction system.

– Start the engine and check for oil tightness.

Finishing work

– Install the front fairing. (☛ p. 39)
– Install the engine cowl. (☛ p. 38)

18.4 Removing the engine 🔧

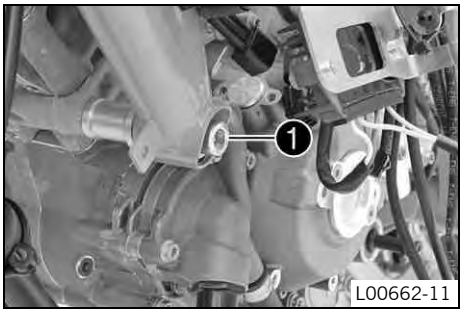
Preparatory work

– Raise the rear of the motorcycle with lifting gear. (☛ p. 35)
– Remove the engine cowl. (☛ p. 38)
– Remove the front fairing. (☛ p. 38)
– Remove the fuel tank. 🔧 (☛ p. 39)
– Take off the air filter box lid.
– Disconnect the battery.
– Remove the battery holder.
– Completely drain the coolant.

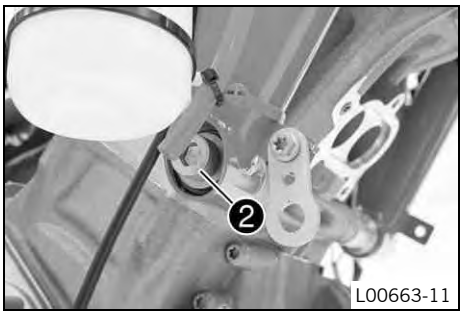
– Remove the cooling air guide, radiator hoses, and radiator.
– Remove the main silencer, connecting pipe, and exhaust pipe.
– Remove the sprocket.
– Remove the shift linkage.
– Disconnect the ground wire and all plug-in connections.
– Remove the front air intake.
– Pull off the engine breather hose.
– Loosen the hose clip of the throttle valve body and pull off the throttle valve body. The throttle valve body can remain on the vehicle.
– Remove the thrust bearing of the clutch cable and detach the clutch cable from the eyelet of the clutch release lever.

Main work

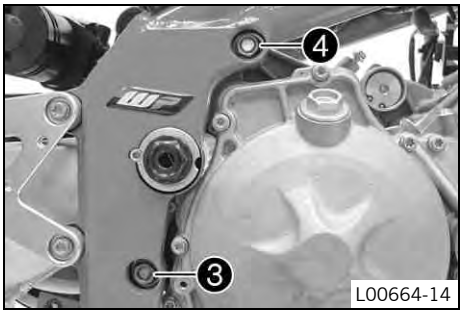
– Support the engine with the scissors stand.



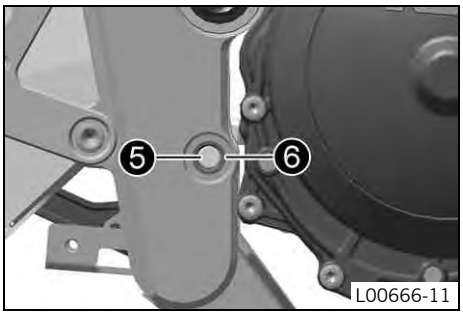
– Remove the front engine bracket screw ❶ with the washer.



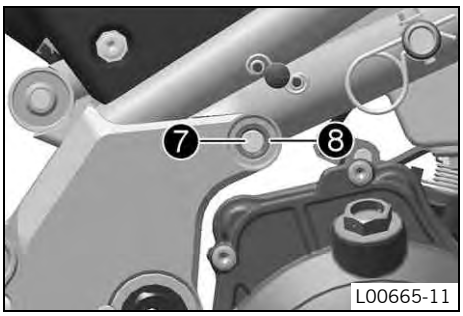
– Remove the front engine bracket screw ❷ with the washer.



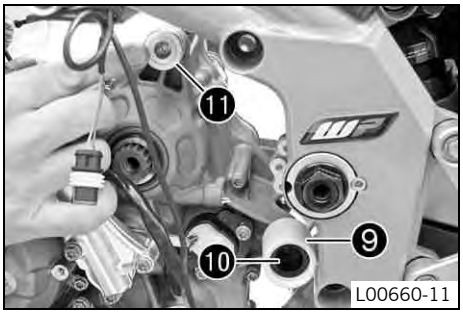
– Remove nut ❸ and nut ❹ with the washers.



– Remove the lower engine bracket screw ❺ and loosen the lower adjustable engine spacer ❻ by approx. ten rotations.

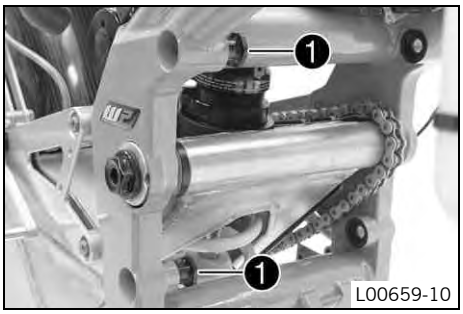


– Remove the upper engine bracket screw ❼ and loosen the upper adjustable engine spacer ❽ by approx. ten rotations.



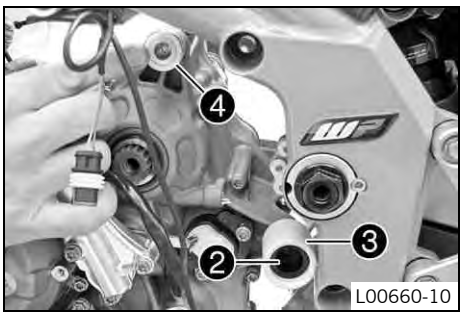
– Take off chain link ❾ and the lower left engine spacer ❿.
– Take off the upper left engine spacer ⓫.
– Lower the engine with the scissors stand.

18.5 Installing the engine

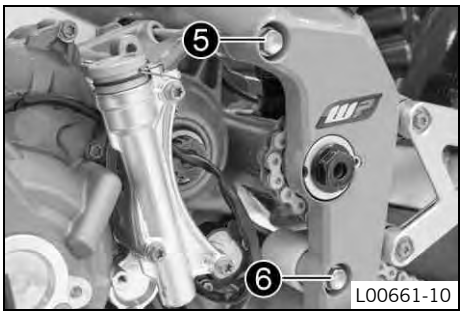


Main work

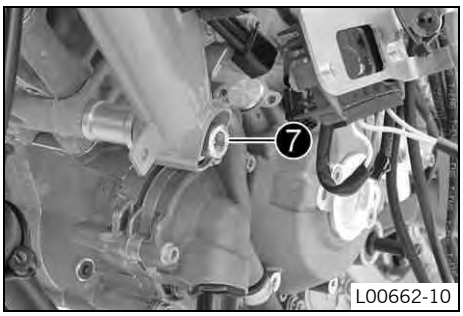
– Position the adjustable engine spacers ❶ to create sufficient space for the engine.



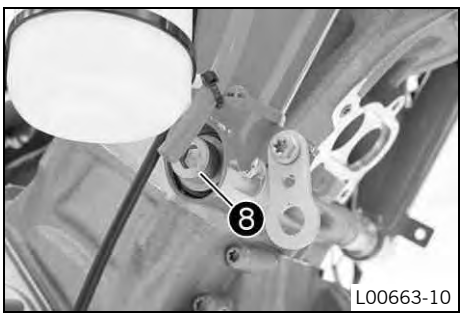
– Raise the engine with the scissors stand.
– Position the lower left engine spacer ❷ and chain link ❸.
– Position the upper left engine spacer ❹.



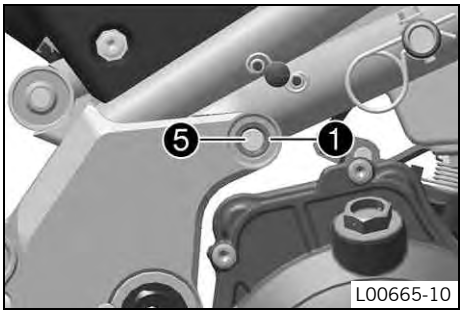
– Mount the upper engine bracket screw ❺ and lower engine bracket screw ❻.



– Mount the front engine bracket screw ❼ with the washer but do not tighten yet.



– Mount the front engine bracket screw ❽ with the washer but do not tighten yet.

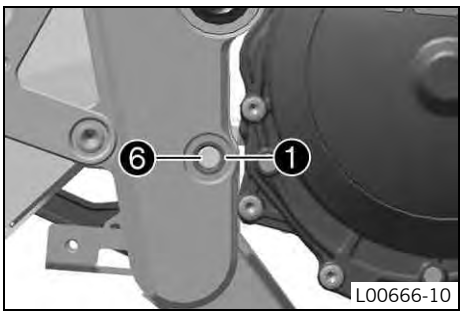


– Pull out the upper engine bracket screw ❺ slightly and tighten the upper adjustable engine spacer ❶.

Guideline

Screw, engine spacer	M16x1	10 Nm (7.4 lbf ft)	Thread greased

– Mount the upper engine bracket screw ❺.

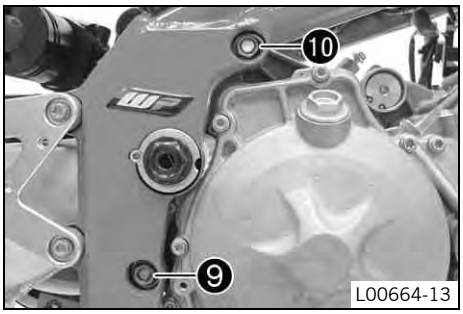


– Pull out the lower engine bracket screw ❻ slightly and tighten the lower adjustable engine spacer ❶.

Guideline

Screw, engine spacer	M16x1	10 Nm (7.4 lbf ft)	Thread greased

– Mount the lower engine bracket screw ❻.



– Mount and tighten nut ❾ with the washer.

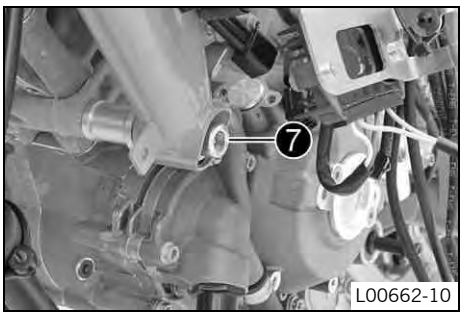
Guideline

Screw, rear engine bearer	M10	35 Nm (25.8 lbf ft)	Thread greased

– Mount and tighten nut ❿ with the washer.

Guideline

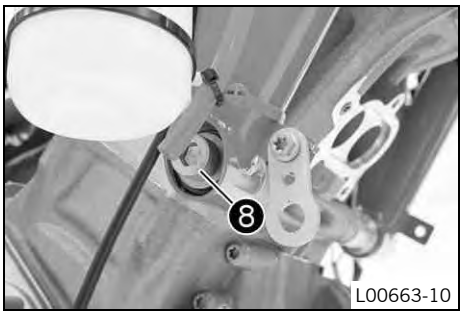
Screw, rear engine bearer	M10	35 Nm (25.8 lbf ft)	Thread greased



– Tighten the front engine bracket screw ❼.

Guideline

Screw, front engine bearer	M10	35 Nm (25.8 lbf ft)	Thread greased



– Tighten the front engine bracket screw ❽.

Guideline

Screw, front engine bearer	M10	35 Nm (25.8 lbf ft)	Thread greased

Finishing work

– Attach the clutch cable to the eyelet of the clutch release lever and mount the thrust bearing of the clutch cable.
– Position the throttle valve body and mount the hose clip of the throttle valve body.
– Mount the engine breather hose.
– Mount the front air intake.
– Connect the ground wire and all plug-in connections.
– Mount the shift linkage.
– Mount the sprocket.

- Mount the exhaust pipe, connecting pipe, and main silencer.
- Mount the radiator, radiator hoses, and cooling air guide.
- Refill with coolant. 🔧 (☛ p. 62)
- Mount the battery holder.
- Connect the battery.
- Mount the air filter box lid.
- Install the fuel tank. 🔧 (☛ p. 40)
- Install the front fairing. (☛ p. 39)
- Install the engine cowl. (☛ p. 38)
- Remove the rear of the motorcycle from the lifting gear. (☛ p. 35)

19.1 Engine control unit


L00578-01

The engine control unit can be accessed using the included connection cable and the software on the CD-ROM. Various parameters can be adjusted using the software.

Info
KTM would like to emphasize that incorrect parameter settings can cause damage to the vehicle and engine.

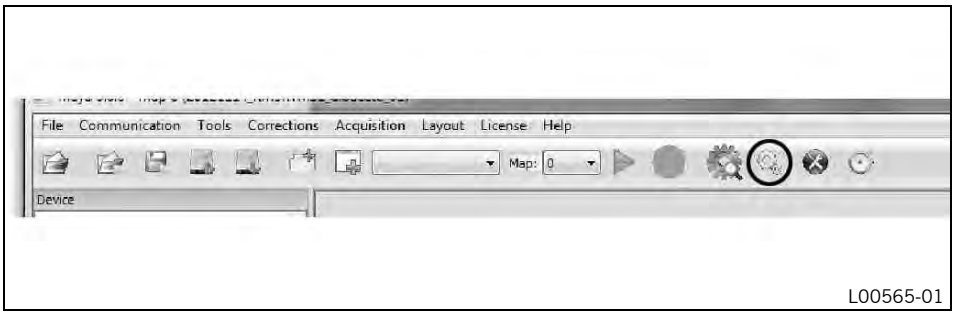
Explicit instructions on how to install and use the software are also contained on the CD-ROM.
For optimal engine running, KTM recommends setting the correction of the injection rate to a valve that keeps the fuel-air mixture (λ) at 0.88 over the entire characteristic map.

19.2 Adjusting the throttle position sensor

Info
The position of the throttle position sensor is preset at the factory. This screw may only be opened to replace a faulty sensor. The setting of the 0% and 100% position is made in the **MAYA** software.

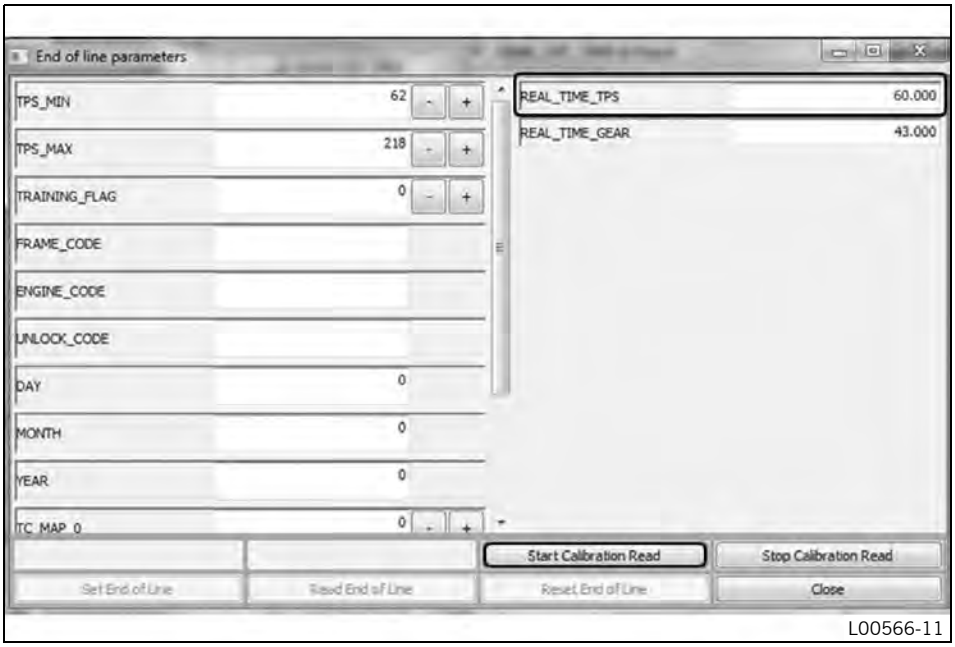
Preparatory work
– Check the play in the throttle cable. (☛ p. 63)

Main work
– Ensure that the throttle valve is fully closed.
– Connect the engine control unit with the computer (see the **MAYA** Instructions on the CD-ROM in the separate enclosure).



L00565-01

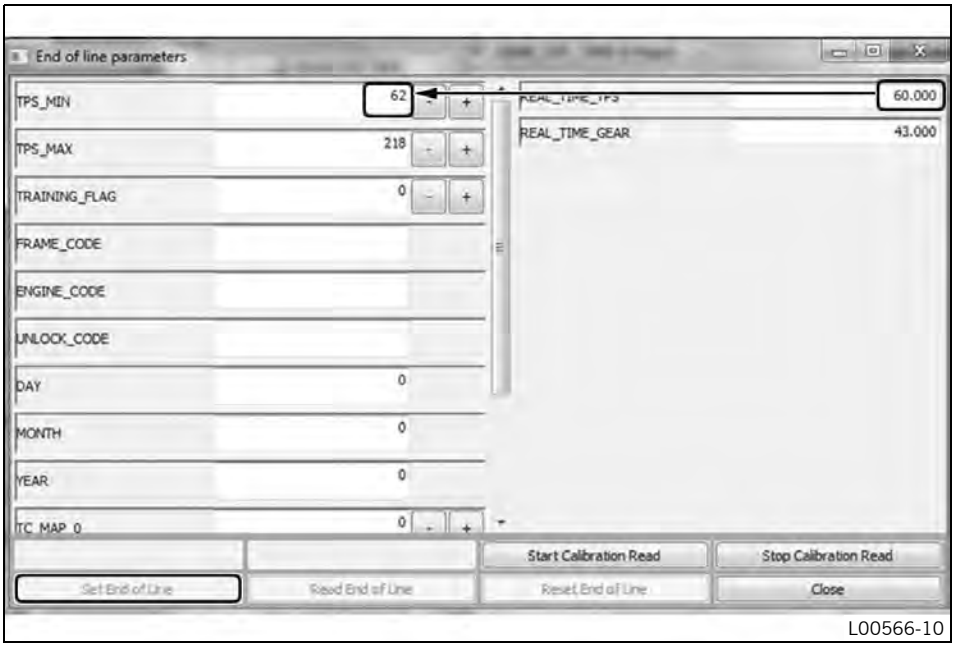
– In the **MAYA** software, select **open EOL setting window**.



L00566-11

– Select **Start Calibration Read**. The current sensor value is displayed in [bit] in the **REAL_TIME_TPS** field.
– Check the sensor value by opening and closing the throttle grip multiple times.
Guideline

REAL_TIME_TPS	58... 62



L00566-10

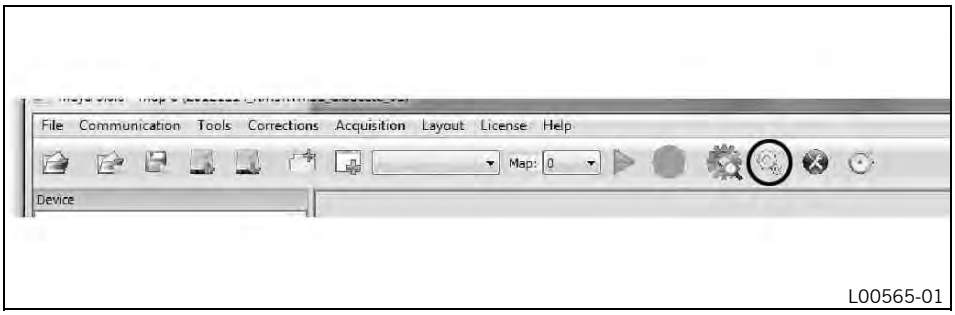
– Transfer the sensor value reading plus 2 bits into the **TPS_MIN** field.
– Fully open the throttle valve. Read out the sensor value in the **REAL_TIME_TPS** field and transfer the maximum value reading minus 2 bits into the **TPS_MAX** field.
– **Set End of Line** transfers the calibrated values to the engine control unit.

Info
When the throttle position sensor is replaced due to fault, the new throttle position sensor must be positioned over the slotted hole of the fixing screw such that a sensor value of 60 bits (±1 bit) results when the throttle valve is fully closed. After that, make the settings as described.

19.3 Adjusting the gear position sensor

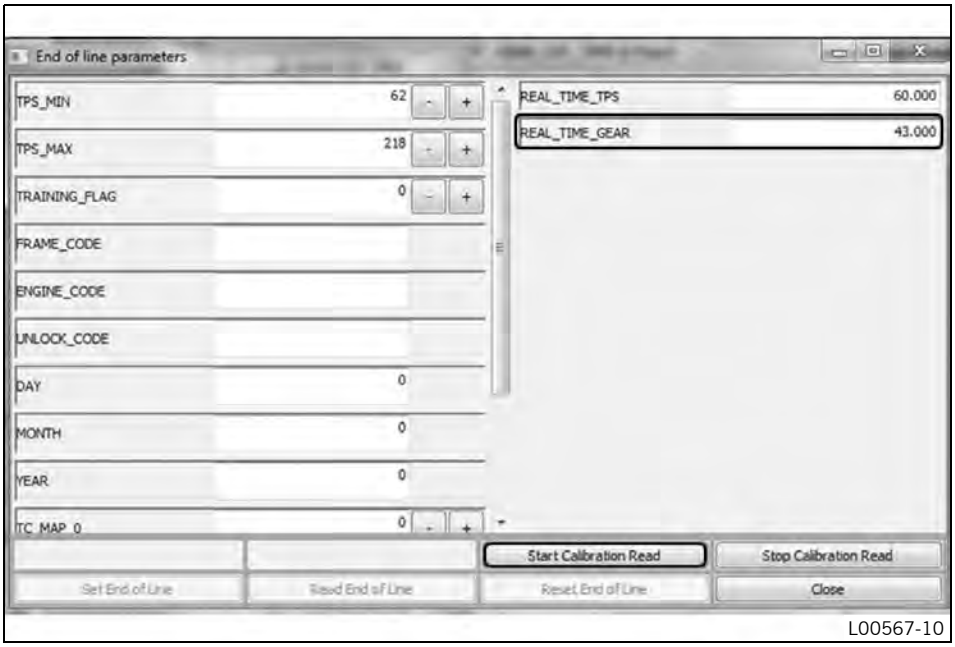
Info
The gear position sensor has two slotted holes by means of which the position can be adjusted. If the gear position sensor is removed, the position must be readjusted.

– **Engage neutral gear**.
– Connect the engine control unit with the computer (see the **MAYA** Instructions on the CD-ROM in the separate enclosure).

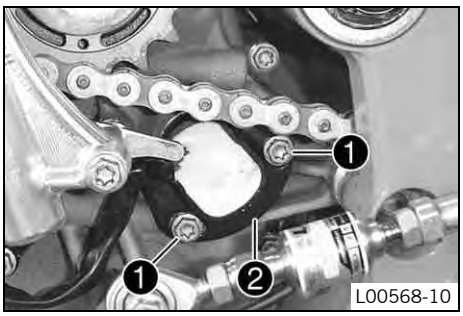


L00565-01

– In the **MAYA** software, select **open EOL setting window**.



– Select **Start Calibration Read**. The current sensor value is displayed in [bit] in the **REAL_TIME_GEAR** field.



– Release screws ❶ and change the position of the gear position sensor ❷ until the specified value is reached.

Guideline

REAL_TIME_GEAR	51 bit

– Tighten the screws.

Guideline

Screw, gear position sensor	M5	6 Nm (4.4 lbf ft)	**Loctite® 243™**

20.1 Cleaning the motorcycle

Note

Material damage Damage and destruction of components by high-pressure cleaning equipment.

– When cleaning the vehicle with a pressure cleaner, do not point the water jet directly onto electrical components, connectors, cables, bearings, etc. Maintain a minimum distance of 60 cm between the nozzle of the pressure cleaner and the component. Excessive pressure can cause malfunctions or destroy these parts.

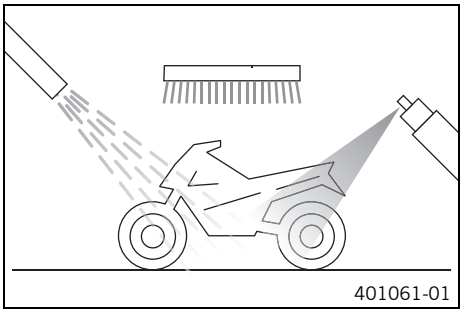
Warning

Environmental hazard Hazardous substances cause environmental damage.

– Oil, grease, filters, fuel, cleaners, brake fluid, etc., should be disposed of as stipulated in applicable regulations.

Info

To maintain the value and appearance of the motorcycle over a long period, clean it regularly.
Avoid direct sunshine when cleaning the motorcycle.


401061-01

– Close off the exhaust system to keep water from entering.
– Remove loose dirt first with a soft jet of water.
– Spray very dirty parts with a normal commercial engine cleaner and then brush off with a soft brush.

Motorcycle cleaner (☛ p. 95)

Info

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

– 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 Reduced braking efficiency due to a wet or dirty brake system.

– Clean or dry a dirty or wet brake system by riding and braking gently.

– 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.

– After the motorcycle has cooled off, lubricate all moving parts and bearings.
– Clean the chain. (☛ p. 42)
– Treat bare metal (except for brake discs and the exhaust system) with a corrosion inhibitor.

Preserving materials for paints, metal and rubber (☛ p. 95)

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

Perfect Finish and high gloss polish for paints (☛ p. 95)

Info

Do not polish plastic parts that are matte when the vehicle is delivered as this would seriously impair the material quality.

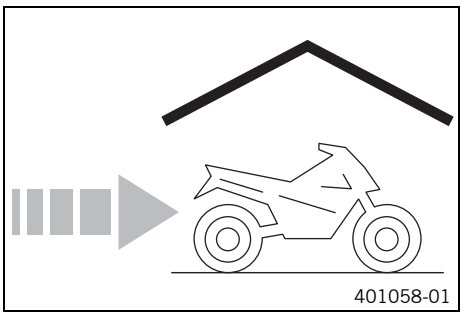
– Treat all plastic parts and powder-coated parts with a mild cleaning and care product.

Special cleaner for glossy and matte paint finishes, metal and plastic surfaces (☛ p. 95)

21 STORAGE

21.1 Storage

Info
If you want to garage the motorcycle for a longer period, take the following actions.
Before storing the motorcycle, check all parts for function and wear.


401058-01

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

Fuel additive (☛ p. 95)

– Fill up with fuel. (☛ p. 21)

Info
The fuel tank should be filled to around 95%.

– Clean the motorcycle. (☛ p. 76)
– Change the engine oil and oil filter, clean the oil screen. 🔧 (☛ p. 66)
– Check the coolant level. (☛ p. 61)
– Check the tire pressure. (☛ p. 55)
– Remove the battery. 🔧 (☛ p. 56)
– Recharge the battery. 🔧 (☛ p. 56)

Guideline

Storage temperature of battery without direct sunshine	0... 35 °C (32... 95 °F)

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

Guideline

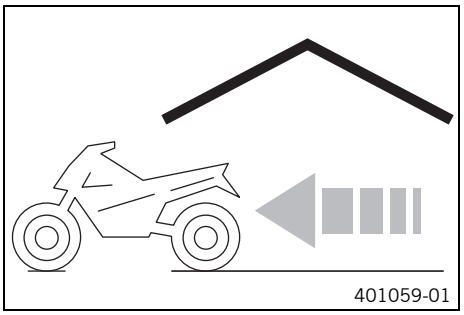
Storage temperature of vehicle	0... 35 °C (32... 95 °F)

Info
KTM recommends raising the motorcycle.

– Raise the rear of the motorcycle with lifting gear. (☛ p. 35)
– Raise the front of the motorcycle with lifting gear. (☛ p. 35)
– Cover the motorcycle with a porous sheet or blanket.

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 exhaust system to rust.

21.2 Preparing for use after storage


401059-01

– Take the motorcycle off of the front lifting gear. (☛ p. 35)
– Remove the rear of the motorcycle from the lifting gear. (☛ p. 35)
– Recharge the battery. 🔧 (☛ p. 56)
– Install the battery. 🔧 (☛ p. 56)
– Fill up with fuel. (☛ p. 21)
– Perform checks and maintenance measures when preparing for use. (☛ p. 20)
– Take a test ride.

22 TECHNICAL DATA

22.1 Engine

Design	1-cylinder 4-stroke engine with balancer shaft, water-cooled
Displacement	249.5 cm³ (15.225 cu in)
Stroke	48.5 mm (1.909 in)
Hole	81 mm (3.19 in)
Compression ratio	14.5:1
Control	DOHC, 4 valves per cylinder, chain-driven
Valve - valve stem diameter	
Intake	34.5 mm (1.358 in)
Exhaust	27 mm (1.06 in)
Valve clearance	
Exhaust at: 20 °C (68 °F)	0.20... 0.23 mm (0.0079... 0.0091 in)
Intake at: 20 °C (68 °F)	0.10... 0.13 mm (0.0039... 0.0051 in)
Crankshaft bearing	Slide bearing
conrod bearing	Slide bearing
Piston pin bearing	No bearing bushes - DLC-coated piston pins
Piston	Forged light alloy
Piston ring	1 compression ring, 1 oil scraper ring
Engine lubrication	Semi-dry sump lubrication system with 1 force pump and 2 suction pumps
Primary transmission	22:64 (22:63/22:65)
Clutch	Multi-disc clutch in oil bath/mechanically operated
Transmission	6-gear cassette gearbox, claw-shifted, multiple optional gear ratios are available
Transmission ratio	
1st gear	14:30 (16:36/15:31)
2nd gear	20:36 (16:30/19:33)
3rd gear	18:28 (18:29/18:27)
4th gear	21:29 (21:30/18:24)
5th gear	21:26 (22:28/19:24/19:23/20:24)
6th gear	22:25 (23:27/19:22/26:29/20:22)
Mixture preparation	Electronically controlled fuel injection
Ignition system	Contactless controlled fully electronic ignition with digital ignition adjustment
Alternator	12 V, 70 W
Spark plug	NGK LMAR9AI-8
Electrode gap, spark plug	0.7... 0.8 mm (0.028... 0.031 in)
Cooling	Water cooling, permanent circulation of coolant by water pump
Idle speed	2,900... 3,100 rpm

22.2 Engine tightening torques

Oil nozzle 125	M4	2 Nm (1.5 lbf ft)	**Loctite® 243™**
Oil nozzle 50	M4	2 Nm (1.5 lbf ft)	**Loctite® 243™**
Oil nozzle 60	M4	2 Nm (1.5 lbf ft)	**Loctite® 243™**
Nut, cylinder head	M5	6 Nm (4.4 lbf ft)	–
Oil nozzle, timing chain tensioner	M5	6 Nm (4.4 lbf ft)	**Loctite® 243™**
Remaining engine screws	M5	6 Nm (4.4 lbf ft)	–
Screw cap, clutch pressure cap	M5	5 Nm (3.7 lbf ft)	–
Screw plug, alternator cover	M5	6 Nm (4.4 lbf ft)	**Loctite® 243™**
Screw, bearing pin of oil pump idler gear	M5	6 Nm (4.4 lbf ft)	**Loctite® 243™**
Screw, bearing retainer of main shaft	M5	6 Nm (4.4 lbf ft)	**Loctite® 243™**

Screw, bearing shell retaining bracket	M5	6 Nm (4.4 lbf ft)	**Loctite® 243™**
Screw, gear position sensor	M5	6 Nm (4.4 lbf ft)	**Loctite® 243™**
Screw, intake flange	M5	6 Nm (4.4 lbf ft)	**Loctite® 243™**
Screw, oil pump cover	M5	6 Nm (4.4 lbf ft)	**Loctite® 243™**
Screw, retaining bracket for balancer shaft bearing	M5	6 Nm (4.4 lbf ft)	**Loctite® 243™**
Stud, cylinder head	M5	6 Nm (4.4 lbf ft)	**Loctite® 243™**
Remaining engine screws	M6	10 Nm (7.4 lbf ft)	–
Screw plug, oil temperature sensor	M6	10 Nm (7.4 lbf ft)	**Loctite® 243™**
Screw, alternator cover	M6	12 Nm (8.9 lbf ft)	–
Screw, alu valve cover	M6	6 Nm (4.4 lbf ft)	–
Screw, clutch cover	M6	12 Nm (8.9 lbf ft)	–
Screw, heat exchanger	M6	10 Nm (7.4 lbf ft)	**Loctite® 243™**
Screw, locking lever	M6	10 Nm (7.4 lbf ft)	**Loctite® 243™**
Screw, shift drum locating	M6	10 Nm (7.4 lbf ft)	**Loctite® 243™**
Screw, valve cover	M6	8 Nm (5.9 lbf ft)	–
Nut, camshaft bearing bridge	M7	15 Nm (11.1 lbf ft)	–
Screw, bearing shield	M7	15 Nm (11.1 lbf ft)	–
Screw, camshaft bearing support	M7	15 Nm (11.1 lbf ft)	–
Stud, camshaft bearing bridge	M7	15 Nm (11.1 lbf ft)	–
Screw, conrod bearing	M8	Step 1 20 Nm (14.8 lbf ft) Step 2 90°	Lubricant (☛ p. 95)
Nut of engine sprocket	M10	40 Nm (29.5 lbf ft)	–
Plug, timing-chain tensioner	M10	10 Nm (7.4 lbf ft)	–
Screw, balancer shaft gear	M10	70 Nm (51.6 lbf ft)	**Loctite® 243™**
Screw, engine sprocket	M10	60 Nm (44.3 lbf ft)	**Loctite® 243™**
Stud, cylinder head	M10	20 Nm (14.8 lbf ft)	**Loctite® 243™**
Rotor screw	M10x1	70 Nm (51.6 lbf ft)	**Loctite® 243™**
Screw, shift shaft bearing retainer	M10x1	20 Nm (14.8 lbf ft)	**Loctite® 243™**
Nut, cylinder head	M10x1.25	Step 1 10 Nm (7.4 lbf ft) Step 2 30 Nm (22.1 lbf ft) Step 3 50°	–
Spark plug	M10x1.25	18 Nm (13.3 lbf ft)	–
Bleeder flange, engine case	M12	15 Nm (11.1 lbf ft)	**Loctite® 243™**
Camshaft drive sprocket bolt	M12	70 Nm (51.6 lbf ft)	**Loctite® 243™**/cone degreased
Oil drain plug	M12	30 Nm (22.1 lbf ft)	–
Axis, timing chain guide rail	M14	15 Nm (11.1 lbf ft)	–
Nut, inner clutch hub	M18	70 Nm (51.6 lbf ft)	Secure the nut with a punch mark
Screw-in fitting, cooling system	M20	15 Nm (11.1 lbf ft)	**Loctite® 243™**
Nut, primary gear	M22	100 Nm (73.8 lbf ft)	**Loctite® 243™**
Filler plug	M24	18 Nm (13.3 lbf ft)	–
Plug, timing-chain tensioner	M24	25 Nm (18.4 lbf ft)	–
Plug, oil screen	M32	40 Nm (29.5 lbf ft)	–

22.3 Capacities

22.3.1 Engine oil

Engine oil	0.75 l (0.79 qt.)	Engine oil (SAE 0W/40) (☛ p. 94)

22.3.2 Coolant

Coolant	0.7 l (0.7 qt.)	Distilled water

22.3.3 Fuel

Total fuel tank capacity, approx.	10.5 l (2.77 US gal)	Super unleaded (ROZ 100) (☛ p. 94)

22.4 Chassis

Frame	Lattice frame made of chromium molybdenum steel tubing, powder-coated
Fork	**WP Suspension** Up Side Down 3548
Shock absorber	**WP Suspension** 4618 with linkage system
Suspension travel	
Front	100 mm (3.94 in)
Rear	69 mm (2.72 in)
Brake system	
Front	Single disc brake with radially mounted four-pot brake caliper, floating brake disc
Rear	Single disc brake with radially connected dual-piston brake caliper, non-floating brake disc
Brake discs - diameter	
Front	290 mm (11.42 in)
Rear	190 mm (7.48 in)
Brake discs - wear limit	
Front	4.5 mm (0.177 in)
Rear	3.8 mm (0.15 in)
Tire air pressure	
Front	1.8 bar (26 psi)
Rear	1.7 bar (25 psi)
Secondary ratio	17:36
Chain	1/2 x 3/16”
Steering head angle	66.6±1°
Wheelbase	$1{,}210^{+35}_{0}$ mm ($47.64^{+1.38}_{0}$ in)
Seat height, unloaded	760 mm (29.92 in)
Weight without fuel approx.	82 kg (181 lb.)
Fuel pressure	3.5 bar (51 psi)

22.5 Electrical system

Battery	NP0.8-12	Battery voltage: 12 V Nominal capacity: 0.8 Ah maintenance-free
Fuse	58011109110	10 A
Indicator lamps	W2.3W/socket W2x4.6d	12 V 2.3 W
Tail light	LED	

22.6 Tires

Front tires	Rear tires
95/75 R 17 M/C TL Dunlop Moto3 M Slick	**115/75 R 17 M/C TL** Dunlop Moto3 M Slick
Additional information is available in the Service section under: http://www.ktm.com	

22.7 Fork

Fork part number	07.18.2M.01
Fork	**WP Suspension** Up Side Down 3548
Compression damping	
Standard	10 clicks
Rebound damping	
Standard	10 clicks
Spring preload - **Preload Adjuster**	
Standard	0 turn
Spring length with preload spacer(s)	225 mm (8.86 in)
Spring rate	
Medium (standard)	6.5 N/mm (37.1 lb/in)
Air chamber length	90^{+20}_{-10} mm ($3.54^{+0.79}_{-0.39}$ in)
Fork length	660 mm (25.98 in)
Fork oil (☛ p. 94)	SAE 4

22.8 Shock absorber

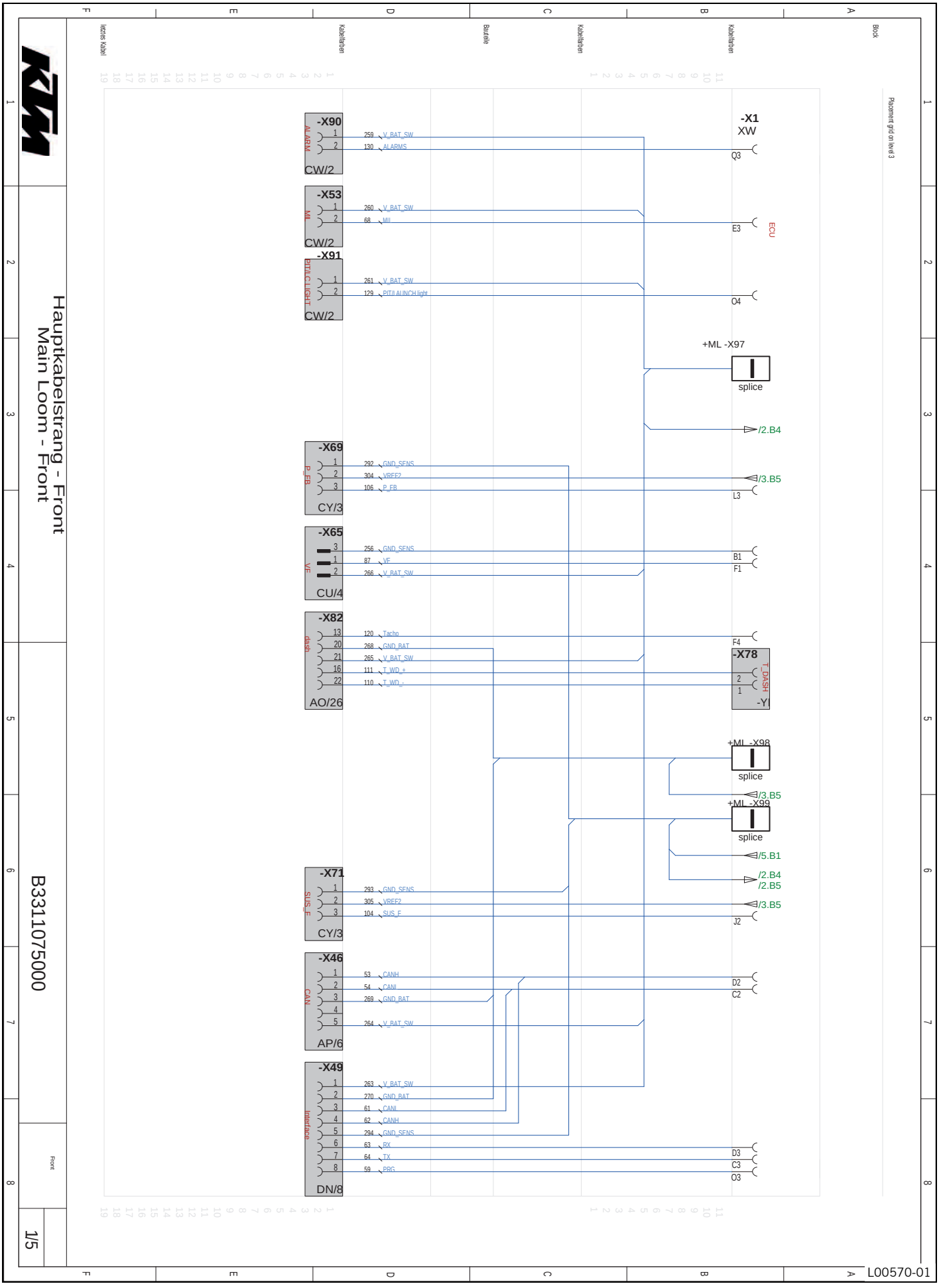
Shock absorber part number	15.18.7M.50
Shock absorber	**WP Suspension** 4618 with linkage system
Compression damping, high-speed	
Standard	10 clicks
Compression damping, low-speed	
Standard	10 clicks
Rebound damping	
Standard	10 clicks
Spring preload	
Standard	5 mm (0.2 in)
Spring rate	
Medium (standard)	82 N/mm (468 lb/in)
Spring length	130 mm (5.12 in)
Gas pressure	10 bar (145 psi)
Inbuilt length	310 mm (12.2 in)
Shock absorber oil (☛ p. 94)	SAE 2.5

22.9 Chassis tightening torques

Remaining chassis nuts	M5	7 Nm (5.2 lbf ft)	–
Remaining chassis screws	M5	7 Nm (5.2 lbf ft)	–
Remaining chassis nuts	M6	12 Nm (8.9 lbf ft)	–
Remaining chassis screws	M6	12 Nm (8.9 lbf ft)	–
Screw, shift rod	M6	12 Nm (8.9 lbf ft)	**Loctite® 243™**
Screw, steering stop	M6	8 Nm (5.9 lbf ft)	**Loctite® 243™**
Remaining chassis nuts	M8	29 Nm (21.4 lbf ft)	–
Remaining chassis screws	M8	29 Nm (21.4 lbf ft)	–
Screw of rear brake caliper	M8	20 Nm (14.8 lbf ft)	–

Screw, axle clamp	M8	12 Nm (8.9 lbf ft)	Thread greased
Screw, bottom triple clamp	M8	12 Nm (8.9 lbf ft)	Thread greased
Screw, footrest	M8	20 Nm (14.8 lbf ft)	**Loctite® 243™**
Screw, footrest bracket	M8	20 Nm (14.8 lbf ft)	**Loctite® 243™**
Screw, shift lever	M8	20 Nm (14.8 lbf ft)	**Loctite® 243™**
Screw, steering head pipe clamp	M8	15 Nm (11.1 lbf ft)	Thread greased
Screw, top triple clamp	M8	12 Nm (8.9 lbf ft)	Thread greased
Remaining chassis nuts	M10	58 Nm (42.8 lbf ft)	–
Remaining chassis screws	M10	58 Nm (42.8 lbf ft)	–
Screw, angle lever on swingarm	M10	35 Nm (25.8 lbf ft)	–
Screw, front engine bearer	M10	35 Nm (25.8 lbf ft)	Thread greased
Screw, linkage lever on angle lever	M10	35 Nm (25.8 lbf ft)	–
Screw, linkage lever on frame	M10	35 Nm (25.8 lbf ft)	–
Screw, rear engine bearer	M10	35 Nm (25.8 lbf ft)	Thread greased
Screw, shock absorber	M10	35 Nm (25.8 lbf ft)	Thread greased
Screw, front brake caliper	M10x1.25	35 Nm (25.8 lbf ft)	**Loctite® 243™**
Screw, steering stem	M12x1	25 Nm (18.4 lbf ft)	Thread greased
Nut, shock absorber frame height	M16x1	20 Nm (14.8 lbf ft)	–
Nut, swingarm pivot	M16x1	60 Nm (44.3 lbf ft)	–
Screw, engine spacer	M16x1	10 Nm (7.4 lbf ft)	Thread greased
Screw, wheel spindle, front	M16x1.5	50 Nm (36.9 lbf ft)	–
Nut, rear wheel spindle	M18x1.5	60 Nm (44.3 lbf ft)	–
Nut, steering stem	M26x1	6 Nm (4.4 lbf ft)	–

23.1 Page 1 of 5

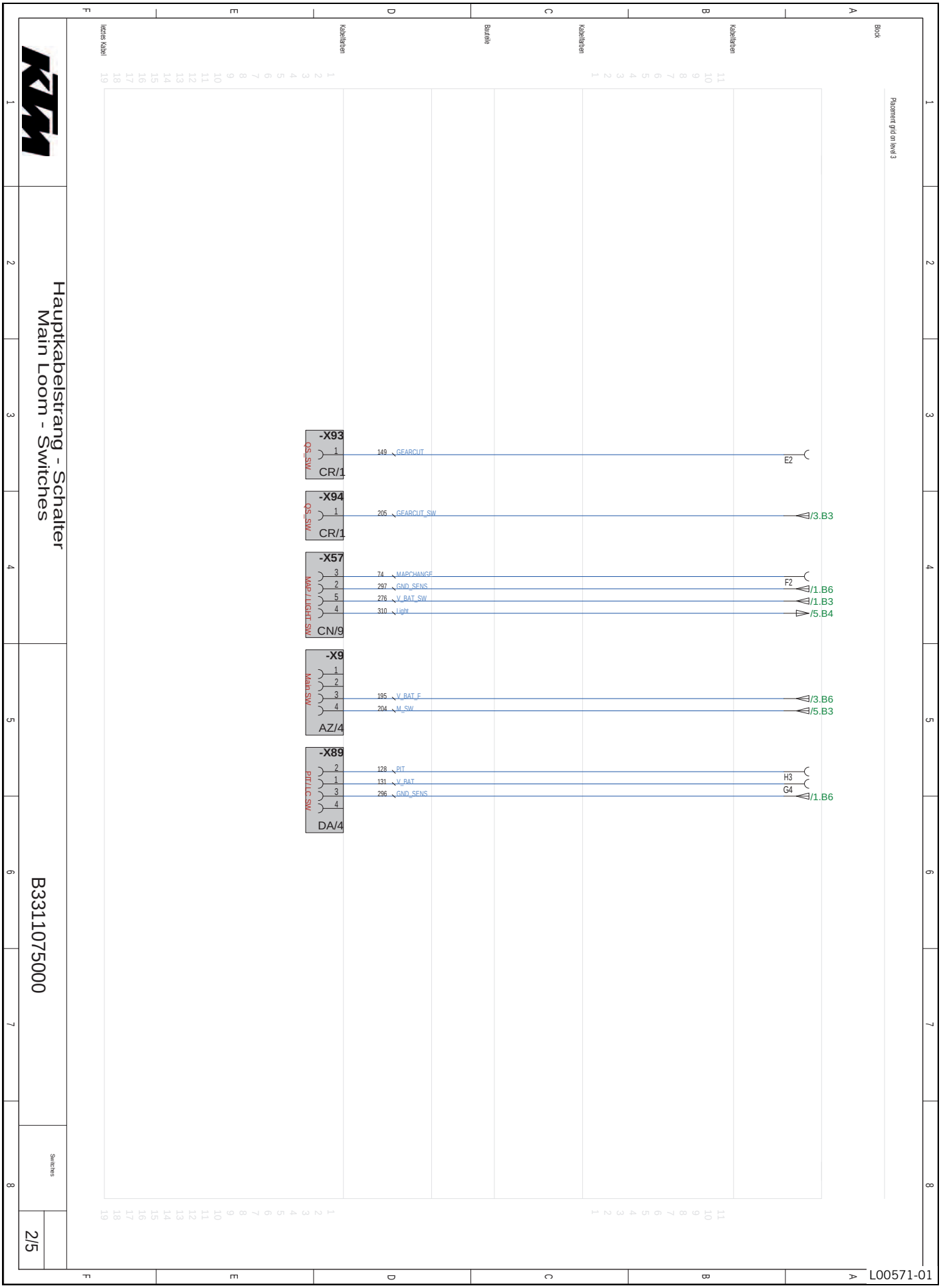


23 WIRING DIAGRAM

Components:

	ECU
	Engine control unit
	T_DASH
	Temperature sensor for dashboard
	ALARM
	Red indicator lamp
	MIL
	Yellow indicator lamp
	PIT/LC LIGHT
	Green indicator lamp
	P_FB
	Pressure front brake
	VF
	Wheel speed front
	dash
	Dashboard connector
	SUS_F
	Suspension sensor front
	CAN
	CAN-bus interface connector
	Interface
	Interface connection for ECU communication

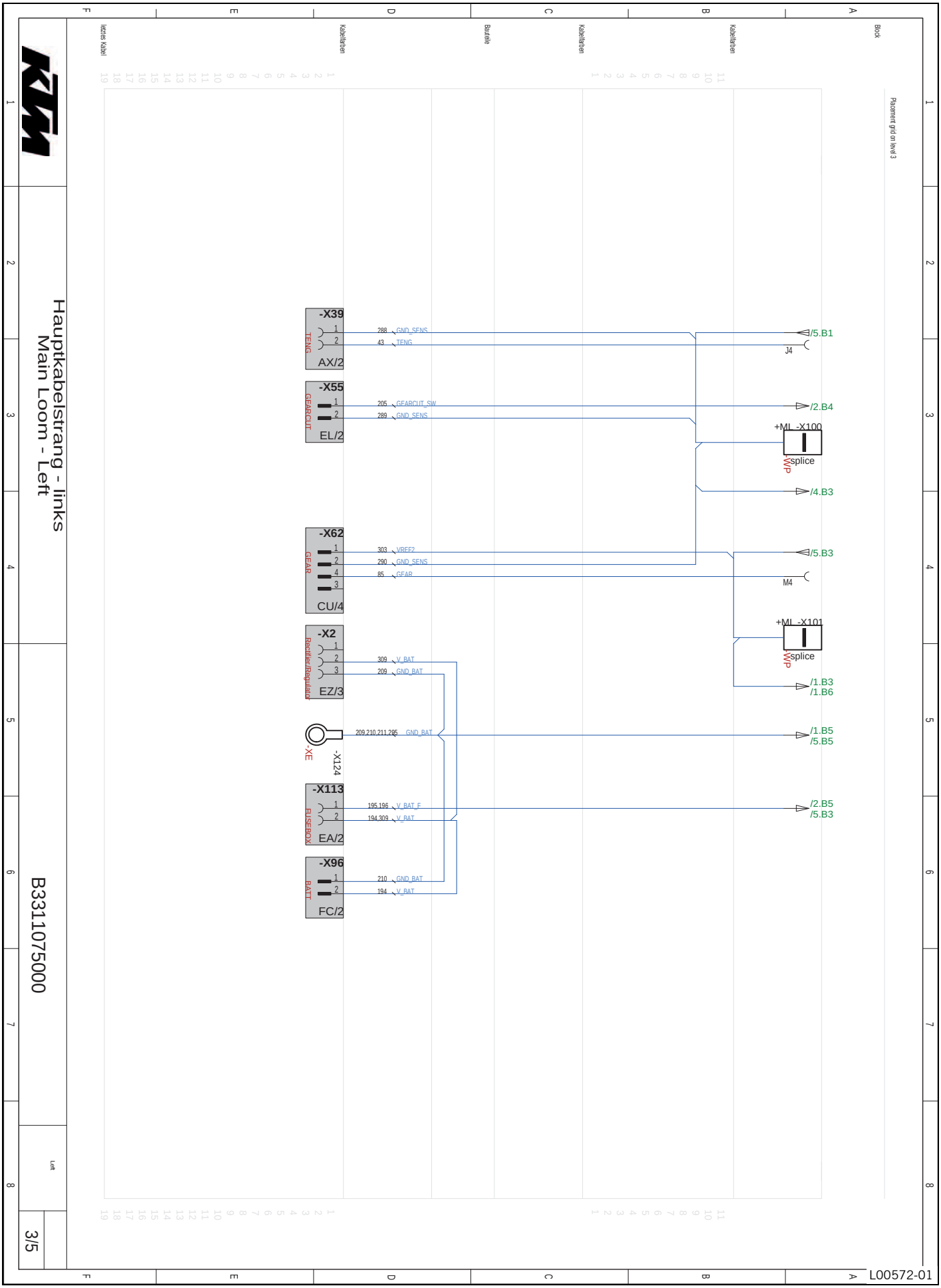
23.2 Page 2 of 5



Components:

	QS_SW
	Quick shifter switch
	MAP/LIGHT_SW
	Map-select and rear light switch (left handlebar)
	MAIN_SW
	Main switch (right handlebar)
	PIT_LC_SW
	Pit-limiter / launch-control switch (left handlebar)

23.3 Page 3 of 5

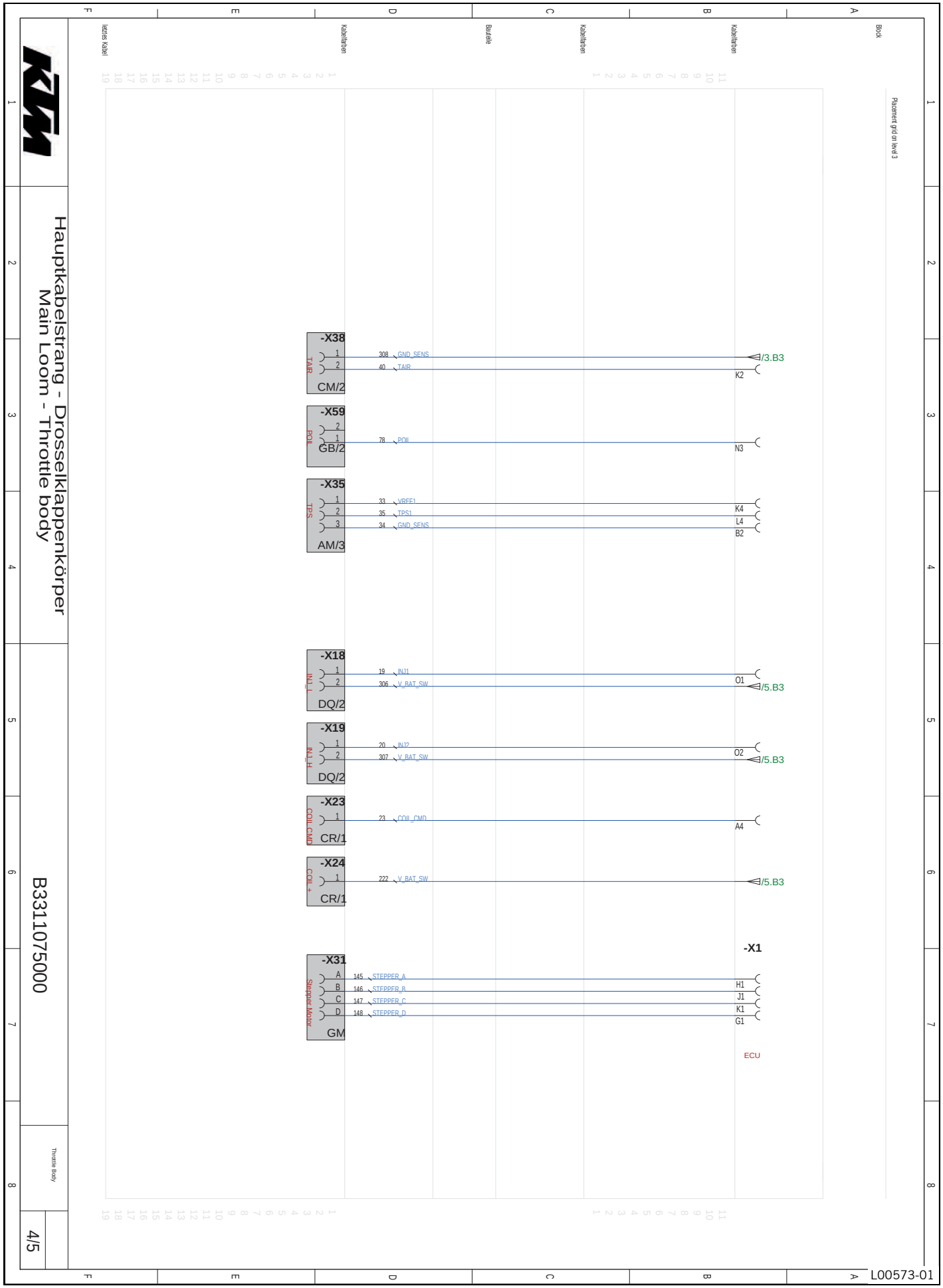


23 WIRING DIAGRAM

Components:

	TENG
	Engine temperature sensor
	GEARCUT
	Quick shifter sensor
	GEAR
	Gear position sensor
	Rectifier/Regulator
	Voltage regulator
	-XE
	Ground
	FUSEBOX
	Fusebox
	BATT
	Battery

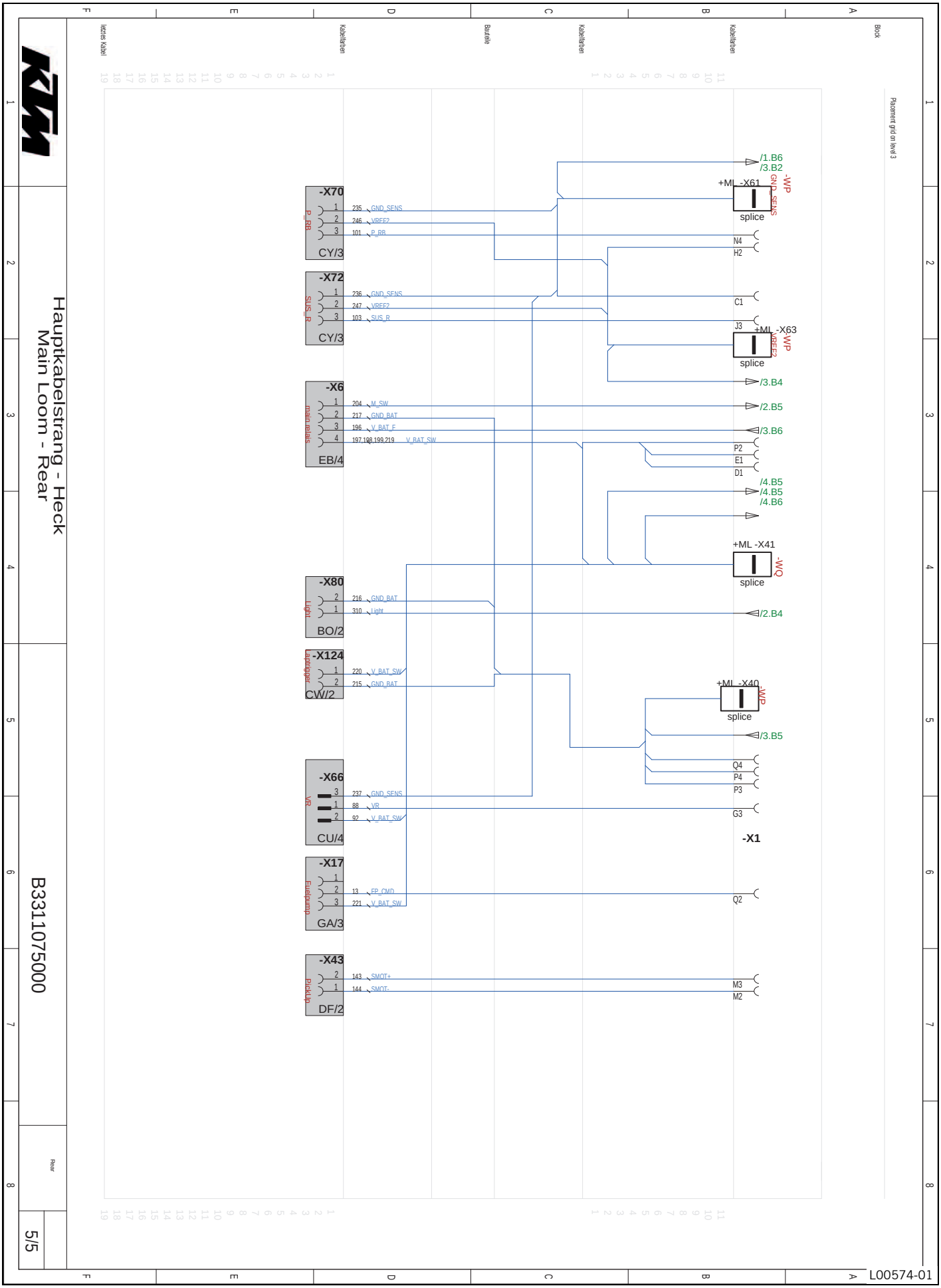
23.4 Page 4 of 5



Components:

	T_AIR
	Air temperature sensor
	POIL
	Oil pressure sensor
	TPS
	Throttle position sensor
	INJ_L
	Injector low
	INJ_H
	Injector high
	COIL_CMD
	Ignition coil command
	COIL_+
	Ignition coil voltage supply
	Stepper Motor
	Stepper motor bypass at the throttle valve

23.5 Page 5 of 5



Components:

	P_RB
	Pressure rear brake sensor
	SUS_R
	Suspension rear sensor
	main_relais
	Power relay
	light
	Rear light
	Laptrigger
	12V power supply for laptimer
	VR
	Wheel speed rear
	Fuelpump
	Fuel pump
	PickUp
	Pick-up sensor

Brake fluid DOT 5.1

Standard/classification
– DOT

Guideline
– Use only brake fluid that complies with the specified standards and that possesses the necessary properties.

Recommended supplier
Motorex®
– **Brake Fluid DOT 5.1**

Engine oil (SAE 0W/40)

Standard/classification
– JASO T903 MA (☛ p. 96)
– SAE (☛ p. 96) (SAE 0W/40)

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®
– **Racing Pro 4T**

Fork oil (SAE 4) (48601166S1)

Standard/classification
– SAE (☛ p. 96) (SAE 4)

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

Shock absorber oil (SAE 2.5) (50180342S1)

Standard/classification
– SAE (☛ p. 96) (SAE 2.5)

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

Super unleaded (ROZ 100)

Standard/classification
– DIN EN 228 (ROZ 100)

25 AUXILIARY SUBSTANCES

Air filter cleaner

Recommended supplier
Motorex®
– **Twin Air Dirt Bio Remover**

Air filter oil

Recommended supplier
Motorex®
– **Air Filter Oil Spray 655**

Chain cleaner

Recommended supplier
Motorex®
– **Chain Clean**

Chain lube for road use

Guideline

Recommended supplier
Motorex®
– **Chainlube Road**

Fuel additive

Recommended supplier
Motorex®
– **Fuel Stabilizer**

Lubricant

Recommended supplier
Pankl®
– **PLB07**

Motorcycle cleaner

Recommended supplier
Motorex®
– **Moto Clean**

Perfect Finish and high gloss polish for paints

Recommended supplier
Motorex®
– **Moto Polish & Shine**

Preserving materials for paints, metal and rubber

Recommended supplier
Motorex®
– **Moto Protect**

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

Recommended supplier
Motorex®
– **Quick Cleaner**

JASO T903 MA

Different technical development directions required a new specification for 4-stroke motorcycles – the JASO T903 MA Standard. Earlier, engine oils from the automobile industry were used for 4-stroke motorcycles because there was no separate motorcycle specification. Whereas long service intervals are demanded for automobile engines, high performance at high engine speeds are in the foreground for motorcycle engines. In most motorcycles, the gearbox and the clutch are lubricated with the same oil as the engine. The JASO MA Standard meets these special requirements.

SAE

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

INDEX

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