

690 SMC R EU
690 SMC R AUS/UK

Art. no. 3211893en



KTM

The work described in these setup instructions must be performed before the vehicle is delivered to the customer.

Read the setup instructions in their entirety before beginning work.

Print out the current **PDI** form found on the **KTM DEALER.NET**.

These setup instructions were written to correspond to the latest state of this series. We reserve the right to make changes in the interest of technical advancement without at the same time updating this manual.

We shall not provide a description of general workshop methods. Likewise, safety rules that apply in a workshop are not specified here. It is assumed that the work will be performed by a fully trained mechanic.

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 delivery.

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Issued by: TÜV Management Service

REG.NO. 12 100 6061

KTM-Sportmotorcycle AG
5230 Mattighofen, Austria

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).



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



Indicates information with more details or tips.



Indicates the result of a testing step.



Denotes a voltage measurement.



Denotes a current measurement.



Denotes a resistance measurement.

1.2 Formats used

The typographical formats used in this document are explained below.

Proprietary name Identifies a proprietary name.

Name[®] Identifies a protected name.

Brand[™] Identifies a trademark.

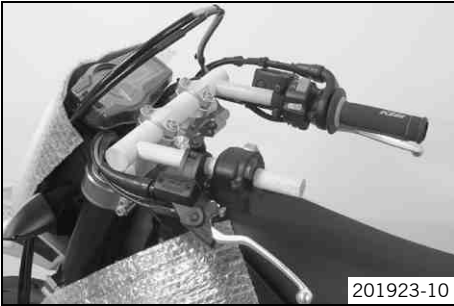
2.1 Unpacking and setting up the vehicle



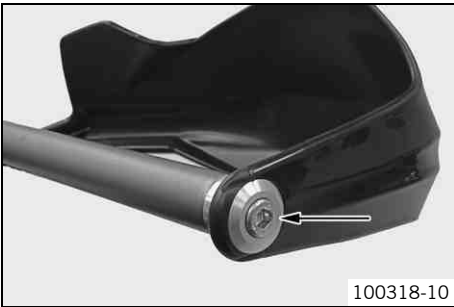
- Remove the box and the plastic packaging.

i Info

To avoid damaging the motorcycle during the setup, leave the protective film on the vehicle until you have finished.

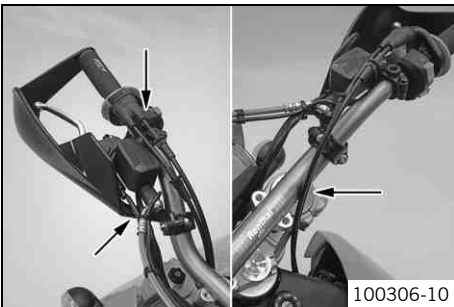


- Check the vehicle for transport damage.
- Unpack the separate enclosure and check its contents on the basis of the enclosure list.



- Remove the controls from the transport holder. Remove the screws and handlebar clamps. Remove the transport holder.

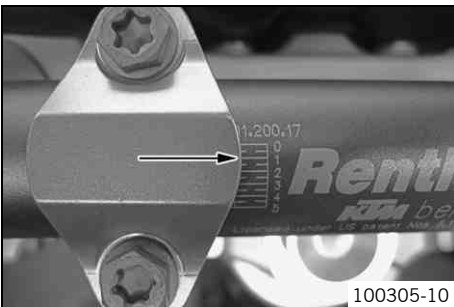
- Remove screw M8 from the right hand guard.



- Position the controls on the right half of the handlebar.

i Info

The routing of the cables can be seen in the figure.



- Position the handlebar.
 - ✓ Marking **1** on the scale on the handlebar should be situated in the middle of the handlebar clamp.

- Position the handlebar clamps. Mount the four screws and tighten evenly.

Guideline

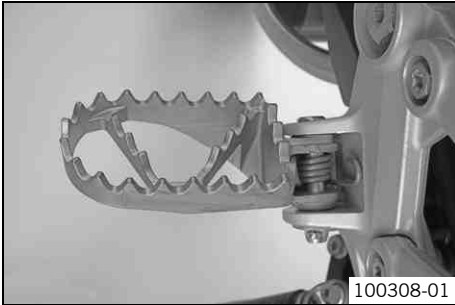
Screw, handlebar clamp	M8	20 Nm (14.8 lbf ft)
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- Position the controls on the left half of the handlebar. Mount the screws.



- Mount and tighten the rear mirror adapter and rear mirror on both sides.
- Position all controls in their exact positions on the handlebar. Tighten all screws.
- Mount and tighten screw M8 of the right hand guard.



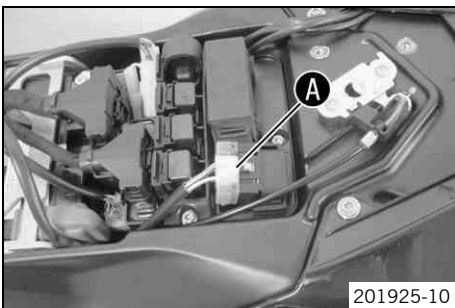
- Mount the footrests with the springs and bolts. Secure the bolts using the washers and pins.

Pliers for footrest spring (58429083000)

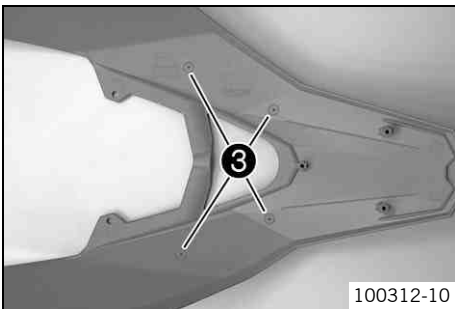
- Remove the protective plastic.
- Carefully loosen and remove the tensioning belt over the link fork.

i Info

An assistant prevents the motorcycle from falling over.



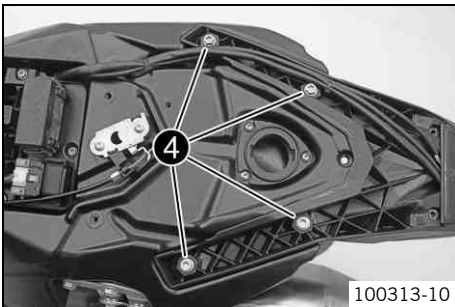
- Carefully loosen and remove the tensioning belts around the lower triple clamp.
- ✓ The vehicle is released at the front.
- Together with an assistant, take the vehicle off the pallet.
- Recharge the battery. (☛ p. 7)
- Install the battery. (☛ p. 8)
- Plug in connector A.



- Remove the rear fairing. (☛ p. 9)
- Four markings 3 are found on the underside of the rear fairing. At these location, drill holes to the specified diameter in three stages.

Guideline

Hole diameter for grab handles	14.50 mm (0.5709 in)
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- Remove screws 4.
- Fit the rear fairing. (☛ p. 9)



- Mount the reflector.
- Operation as a 2-seater**
 - Fit the rear footrest bracket. (☛ p. 9)

Operation as a 1-seater (only if requested by customer)

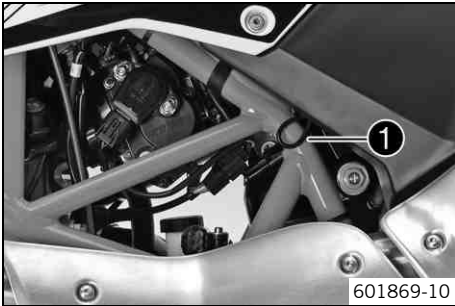


Warning

Forfeiture of homologation and insurance cover The vehicle is homologated as 2-seater. If the heel protector is fitted instead of the footrest bracket, the vehicle no longer conforms to the homologation and must not be operated in this form without alterations to the registration papers.

- Set up and operate the vehicle as a 2-seater or have changes made to the registration papers.
-
- Fit the heel protector. (☛ p. 10)
 - Refuel. (☛ p. 10)
 - Print out the current **PDI** form found on **KTM DEALER.NET** and perform the delivery inspection.
 - Set kilometers or miles. (☛ p. 11)

3.1 Removing the seat



- Pull on strap ① and raise the rear of the seat at the same time.
- Pull back the seat and lift it off.

3.2 Mounting the seat



- Hook slot ① of the seat onto screw ②, press the rear downward and at the same time push it forward.
- Push locking pin ③ into lock housing ④ and push the back of the seat down until the locking pin locks in place with an audible click.
- Finally, check that the seat is correctly mounted.

3.3 Removing the battery



Warning

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

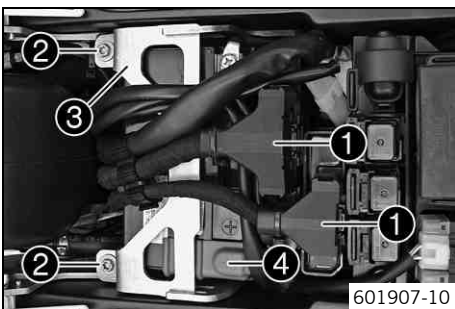
- Keep batteries out of the reach of children.
- Wear suitable protective clothing and goggles.
- Avoid contact with battery acid and battery gases.
- Keep the battery away from sparks or open flames. Charge only in well-ventilated areas.
- In the event of skin contact, rinse with large amounts of water.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

Preparatory work

- Switch off all power consumers and switch off the engine.
- Remove the seat. (➔ p. 6)

Main work

- Disconnect the negative (minus) cable of the battery.
- Pull off the plug connector ① upwards.
- Remove screws ②.
- Pull the retaining bracket ③ of the battery forward and remove it.
- Take off the positive pole cover ④.
- Disconnect the positive (plus) cable of the battery.
- Push the wiring harness to the side and pull the battery out of the battery rack.



Info

Never operate the motorcycle with a discharged battery or without a battery. In both cases, electrical components and safety devices can be damaged. The vehicle is therefore no longer roadworthy.

3.4 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 the battery away from sparks or open flames. Charge only in well-ventilated areas.
 - 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 trash. Dispose of a defective battery in an environmentally compatible manner. Give the battery to your KTM dealer or to a recycling center that accepts 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.

i Info
 Even when there is no load on the battery, it still loses power steadily. The charge state and the type of charge are very important for the service life of the battery. Rapid recharging with a high charging current shortens the battery's service life. If the charging current, charging voltage and charging time are exceeded, electrolyte escapes through the safety valves. This reduces the battery capacity. If the battery is depleted from starting the vehicle repeatedly, the battery must be charged immediately. If the battery is left in a discharged state for an extended period, it will become over-discharged and sulfate, destroying the battery. The battery is maintenance-free, which means that the acid level does not need to be checked.

Preparatory work

- Switch off all power consumers and switch off the engine.
- Remove the seat. (☛ p. 6)
- Remove the battery. (☛ p. 6)

Main work

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

Battery charger (58429074000)

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

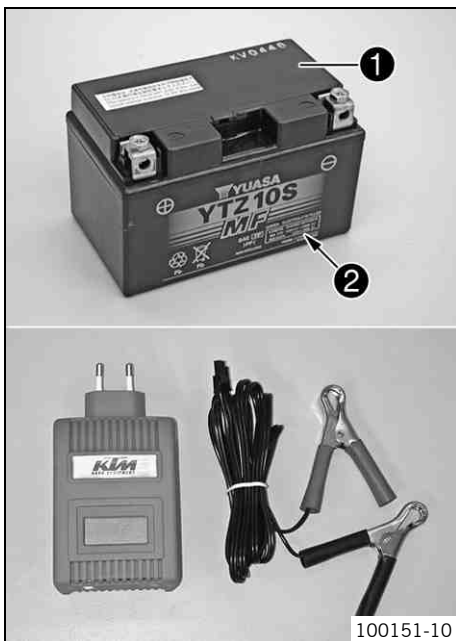
i Info
 Never remove lid ❶.
 Charge the battery with a maximum of 10% of the capacity specified on the battery housing ❷.

- Switch off and disconnect the charger after charging.

Guideline

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

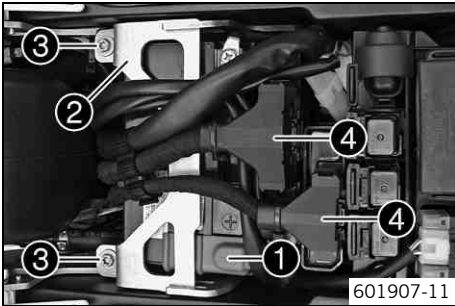
Charge the battery regularly when the motorcycle is not in use	3 months
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Finishing work

- Install the battery. (☛ p. 8)
- Mount the seat. (☛ p. 6)
- Set the clock. (☛ p. 11)

3.5 Installing the battery



Main work

- Slide the battery into the battery rack.

Info

The battery terminals must be at the rear.

- Attach the positive cable and mount positive terminal cover ❶.
- Position retaining bracket ❷.
- Mount and tighten screws ❸.

Guideline

Remaining screws, chassis	M6	10 Nm (7.4 lbf ft)
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- Plug in connector ❹.
- Attach the minus cable .

Finishing work

- Mount the seat. (☛ p. 6)
- Set the clock. (☛ p. 11)

3.6 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.
- Fuel in the fuel tank expands when warm and can escape if the tank is overfilled. See the notes on refueling.

Warning

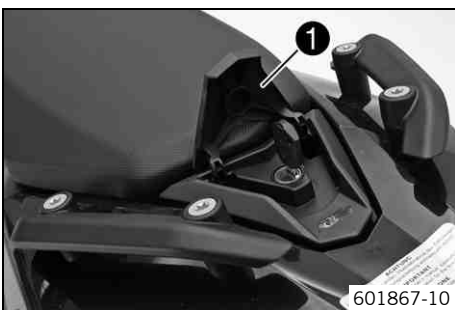
Danger of poisoning Fuel is poisonous and a health hazard.

- Avoid contact between fuel and skin, eyes and clothing. Do not inhale fuel vapors. If fuel gets into your eyes, rinse immediately with water and contact a doctor. Wash affected skin areas immediately with soap and water. If fuel is swallowed, contact a doctor immediately. Change clothing that has come into contact with fuel. Store fuel in a suitable canister according to regulations and keep it out of the reach of 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.



- Lift the cover of filler cap ❶ and insert the ignition key.
- Turn the ignition key 90° counterclockwise and remove the filler cap.

Info

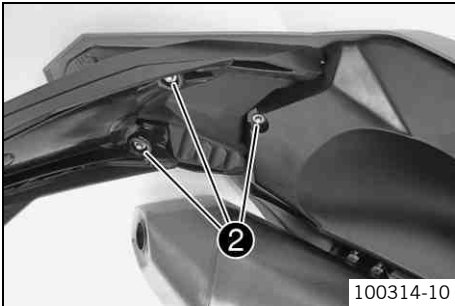
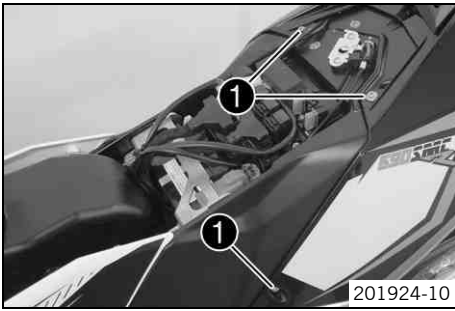
The filler cap has a tank air vent system.

3.7 Closing filler cap



- Put the filler cap back on and turn the ignition key 90° clockwise.
- Remove the ignition key and fold down the cover.

3.8 Removing rear fairing



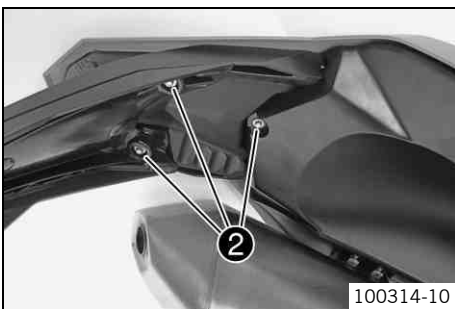
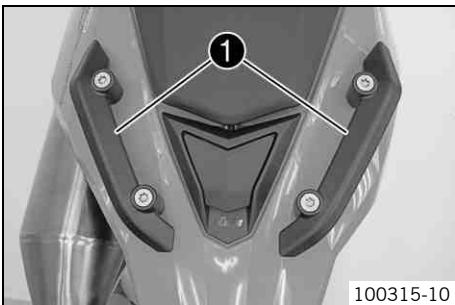
Preparatory work

- Remove the seat. (☛ p. 6)

Main work

- Remove screws ❶.
- Remove screws ❷.
- Open the filler cap. (☛ p. 8)
- Take off the rear fairing.
- Close the filler cap. (☛ p. 8)

3.9 Fitting rear fairing



- Position the license plate holder and cable harness.
- Open the filler cap. (☛ p. 8)
- Position the rear fairing and grab handles ❶ as shown in the figure. Fit and slightly tighten the screws of the grab handles.
- Close the filler cap. (☛ p. 8)
- Fit and tighten the screws on the rear fairing.

Guideline

Remaining screws, chassis	M6	10 Nm (7.4 lbf ft)
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- Mount and tighten screws ❷.
- Tighten the screws of the grab handles.

Guideline

Screw, handrail	M8	20 Nm (14.8 lbf ft)
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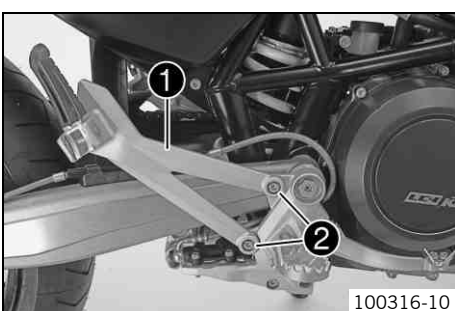
- Mount the seat. (☛ p. 6)

3.10 Fitting the rear footrest bracket



Info

The operations are the same for the left and right sides.



- Position the footrest bracket ❶. Mount and tighten screws ❷.

Guideline

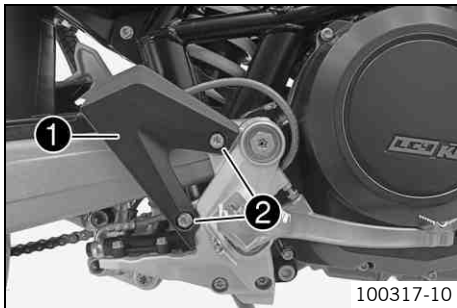
Screw, rear footrest bracket	M8x16	25 Nm (18.4 lbf ft)
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3.11 Fitting heel protector



Info

The operations are the same for the left and right sides.



Warning

Forfeiture of homologation and insurance cover The vehicle is homologated as 2-seater. If the heel protector is fitted instead of the footrest bracket, the vehicle no longer conforms to the homologation and must not be operated in this form without alterations to the registration papers.

- Set up and operate the vehicle as a 2-seater or have changes made to the registration papers.

- Position the heel protector ①. Mount and tighten screws ②.

Guideline

Screw, heel protector	M8x12	8 Nm (5.9 lbf ft)
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3.12 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.
- Fuel in the fuel tank expands when warm and can escape if the tank is overfilled. See the notes on refueling.



Warning

Danger of poisoning Fuel is poisonous and a health hazard.

- Avoid contact of the fuel with skin, eyes and clothing. Do not inhale fuel vapors. If fuel gets into your eyes, rinse immediately with water and contact a doctor. Wash affected skin areas immediately with soap and water. If fuel is swallowed, contact a doctor immediately. Change clothing that has come into contact with fuel.

Note

Material damage Premature clogging of the fuel filter.

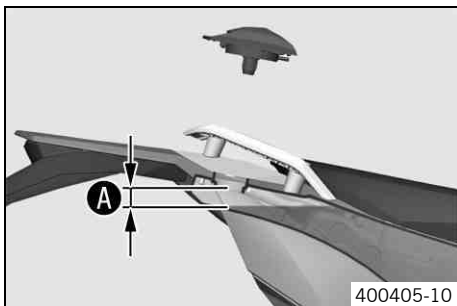
- In some countries and regions, the available fuel quality and cleanliness may not be sufficient. This will result in problems with the fuel system.
- Only refuel with clean fuel that meets the specified standards.



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. 8)
- Fill the fuel tank with fuel up to measurement A.

Guideline

Measurement A	20 mm (0.79 in)	
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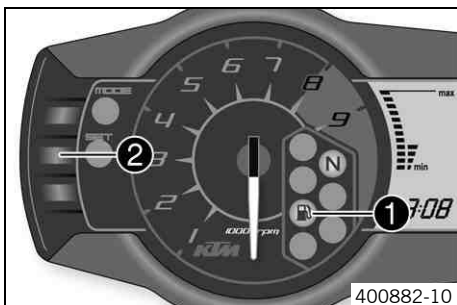
Total fuel tank capacity, approx.	12 l (3.2 US gal)	Super unleaded (ROZ 95/RON 95/PON 91) (☞ p. 14)
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- Close the filler cap. (☞ p. 8)
- Press the **SET** button ② for two seconds.
- ✓ The fuel level warning lamp ① switches off. **TRIP F** is set to **0.0** and the display returns to the previous display mode.



Info


If you do not press the **SET** button ②, the reset takes place automatically after about three minutes.



3.13 Setting the clock

**Condition**

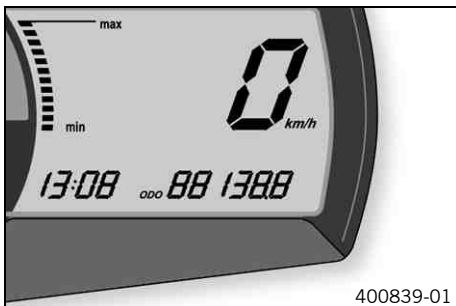
The motorcycle is stationary.

- Switch on the ignition by turning the ignition key to position **ON** .
- Press the **MODE** button repeatedly until the **ODO** mode is active.
- Keep the **MODE** button and the **SET** button pressed simultaneously.
 - ✓ The time display begins to flash.
- Press the **MODE** button to set the hour.
- Press the **SET** button to set the minute.
- Keep the **MODE** button and the **SET** button pressed simultaneously.
 - ✓ The time is set.


3.14 Setting kilometers or miles

**Info**

If you change the unit, the value **ODO** is retained and converted accordingly. Making the setting according to the country.

**Condition**

The motorcycle is stationary.

- Switch on the ignition by turning the ignition key to position **ON** .
- Press the **MODE** button repeatedly until the **ODO** mode is active.
- Keep the **MODE** button pressed until the display mode changes from **km/h** to **mph** or from **mph** to **km/h**.

4 TECHNICAL DATA - TIGHTENING TORQUES FOR CHASSIS

Screw, license plate holder, bottom	EJOT	3 Nm (2.2 lbf ft)	–
Screw, side stand switch	EJOT	2 Nm (1.5 lbf ft)	–
Screw, SLS valve	EJOT	2 Nm (1.5 lbf ft)	–
Spoke nipple, front wheel	M4.5	3... 6 Nm (2.2... 4.4 lbf ft)	–
Spoke nipple, rear wheel	M4.5	3... 6 Nm (2.2... 4.4 lbf ft)	–
Bolt, foot brake lever stub	M5	6 Nm (4.4 lbf ft)	Loctite® 243™
Remaining screws, chassis	M5	4 Nm (3 lbf ft)	–
Screw, cable on starter motor	M5	3 Nm (2.2 lbf ft)	–
Screw, electrical holder	M5	3 Nm (2.2 lbf ft)	–
Screw, exhaust heat shield	M5	8 Nm (5.9 lbf ft)	Loctite® 243™
Screw, fuel level sensor	M5	3 Nm (2.2 lbf ft)	–
Screw, fuel pump	M5	4 Nm (3 lbf ft)	–
Screw, headlight mask	M5	5 Nm (3.7 lbf ft)	–
Remaining nuts, chassis	M6	10 Nm (7.4 lbf ft)	–
Remaining screws on fuel tank	M6	5 Nm (3.7 lbf ft)	–
Remaining screws, chassis	M6	10 Nm (7.4 lbf ft)	–
Screw connection, foot brake cylinder	M6	10 Nm (7.4 lbf ft)	–
Screw, ball joint of push rod on foot brake cylinder	M6	10 Nm (7.4 lbf ft)	Loctite® 243™
Screw, brake fluid reservoir of rear brake	M6	5 Nm (3.7 lbf ft)	–
Screw, front brake disc	M6	14 Nm (10.3 lbf ft)	Loctite® 243™
Screw, ignition lock	M6	10 Nm (7.4 lbf ft)	Loctite® 243™
Screw, magnetic holder on side stand	M6	6 Nm (4.4 lbf ft)	Loctite® 243™
Screw, rear brake disc	M6	14 Nm (10.3 lbf ft)	Loctite® 243™
Screw, seat lock	M6	5 Nm (3.7 lbf ft)	–
Screw, side cover	M6	5 Nm (3.7 lbf ft)	–
Screw, upper radiator bracket	M6	10 Nm (7.4 lbf ft)	–
Screw, voltage regulator	M6	8 Nm (5.9 lbf ft)	–
Nut, manifold on cylinder head	M8	20 Nm (14.8 lbf ft)	Copper paste
Nut, rear sprocket screw	M8	35 Nm (25.8 lbf ft)	Loctite® 2701
Remaining nuts, chassis	M8	25 Nm (18.4 lbf ft)	–
Remaining screws, chassis	M8	25 Nm (18.4 lbf ft)	–
Screw, bottom triple clamp	M8	12 Nm (8.9 lbf ft)	–
Screw, connection lever on frame	M8	30 Nm (22.1 lbf ft)	Loctite® 243™
Screw, exhaust clamp on main silencer	M8	12 Nm (8.9 lbf ft)	–
Screw, foot brake lever	M8	25 Nm (18.4 lbf ft)	Loctite® 243™
Screw, fork stub	M8	15 Nm (11.1 lbf ft)	–
Screw, front footrest bracket	M8	25 Nm (18.4 lbf ft)	–
Screw, fuel tank, bottom	M8	25 Nm (18.4 lbf ft)	Loctite® 243™
Screw, fuel tank, top	M8	25 Nm (18.4 lbf ft)	Loctite® 243™
Screw, handlebar clamp	M8	20 Nm (14.8 lbf ft)	–
Screw, handrail	M8	20 Nm (14.8 lbf ft)	–
Screw, heel protector	M8x12	8 Nm (5.9 lbf ft)	–
Screw, license plate holder, top	M8	20 Nm (14.8 lbf ft)	–
Screw, main silencer holder	M8	25 Nm (18.4 lbf ft)	–
Screw, main silencer holder on fuel tank	M8	25 Nm (18.4 lbf ft)	–
Screw, rear footrest bracket	M8x16	25 Nm (18.4 lbf ft)	–
Screw, side stand bracket	M8	25 Nm (18.4 lbf ft)	Loctite® 243™
Screw, spring holder on side stand bracket	M8	25 Nm (18.4 lbf ft)	Loctite® 243™
Screw, steering stem	M8	20 Nm (14.8 lbf ft)	–

4 TECHNICAL DATA - TIGHTENING TORQUES FOR CHASSIS

Screw, top triple clamp	M8	17 Nm (12.5 lbf ft)	–
Engine carrying screw	M10	45 Nm (33.2 lbf ft)	Loctite® 243™
Remaining nuts, chassis	M10	45 Nm (33.2 lbf ft)	–
Remaining screws, chassis	M10	45 Nm (33.2 lbf ft)	–
Screw, bottom shock absorber	M10	45 Nm (33.2 lbf ft)	Loctite® 243™
Screw, engine bearer on frame	M10	45 Nm (33.2 lbf ft)	–
Screw, handlebar support	M10	40 Nm (29.5 lbf ft)	Loctite® 243™
Screw, side stand	M10	35 Nm (25.8 lbf ft)	Loctite® 243™
Screw, top shock absorber	M10	45 Nm (33.2 lbf ft)	Loctite® 243™
Screw, front brake caliper	M10x1.25	45 Nm (33.2 lbf ft)	Loctite® 243™
Screw, swingarm pivot	M12	80 Nm (59 lbf ft)	–
Lambda sensor	M12x1.25	25 Nm (18.4 lbf ft)	Copper paste
Nut, linkage lever on swingarm	M14x1.5	100 Nm (73.8 lbf ft)	–
Nut, linkage lever to rocker arm	M14x1.5	100 Nm (73.8 lbf ft)	–
Screw, bottom steering head	M20x1.5	60 Nm (44.3 lbf ft)	Loctite® 243™
Screw, top steering head	M20x1.5	12 Nm (8.9 lbf ft)	–
Screw, front wheel spindle	M24x1.5	40 Nm (29.5 lbf ft)	–
Nut, rear wheel spindle	M25x1.5	90 Nm (66.4 lbf ft)	–

Super unleaded (ROZ 95/RON 95/PON 91)

According to

- DIN EN 228 (ROZ 95/RON 95/PON 91)

Guideline

- Only use unleaded super fuel that matches or is equivalent to the specified fuel grade.
- Fuel with an ethanol content of up to 10 % (E10 fuel) is safe to use.



Info

Do **not** use fuel containing methanol (e. g. M15, M85, M100) or more than 10 % ethanol (e. g. E15, E25, E85, E100).



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