

990 Adventure EU
990 Adventure USA
990 Adventure AUS/UK
990 Adventure FR
990 Adventure R EU
990 Adventure R USA
990 Adventure R AUS/UK

Art. no. 3211895en



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

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1.1 Symbols used

The meaning of specific symbols is described below.



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



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



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

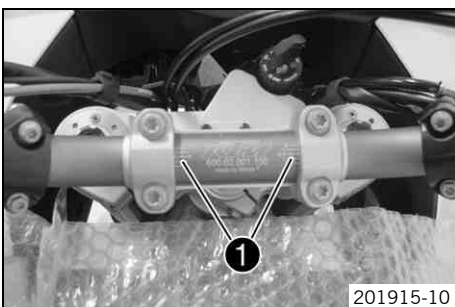
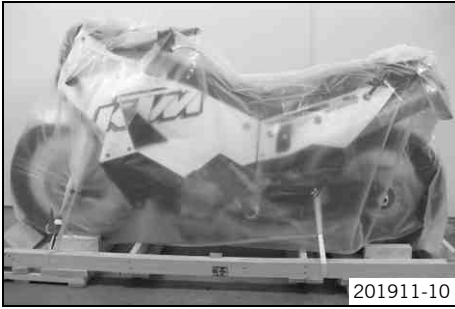
The typographical formats used in this document are explained below.

Proprietary name Identifies a proprietary name.

Name[®] Identifies a protected name.

Brand[™] Identifies a trademark.

2.1 Unpacking and setting up the vehicle



Preparatory work

- Remove the carton.

Main work

- Remove the adhesive tape in the upper area of the motorcycle.

- Roll down the film at the sides.

i Info

To avoid damaging the motorcycle during unpacking, leave the other films on the vehicle until you have finished work on the vehicle.

- Remove the separate enclosure and unpack it. Check the separate enclosure for completeness.
- Check the vehicle for transport damage.
- Remove the controls from the transport holder. Remove the screws and handlebar clamps. Remove the transport holder.

- Remove the right hand guard.
- Position the controls on the right half of the handlebar. Tighten the screws.

Guideline

Remaining screws, chassis	M5	6 Nm (4.4 lbf ft)
Remaining chassis screws	M6	10 Nm (7.4 lbf ft)

i Info

Position the holding lug of the switch unit in the drill hole of the handlebar.

- Mount the right hand guard.
- Position the handlebar.
 - ✓ Marking **1** on the scale on the handlebar is situated in the middle of the handlebar clamp.
- Position the handlebar clamps. Tighten the screws evenly.

Guideline

Screw, handlebar clamp	M8	20 Nm (14.8 lbf ft)
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- Check the throttle grip for smooth operation.



201916-10

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

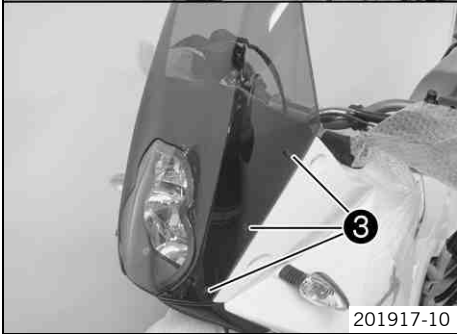
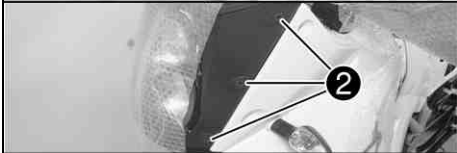
i Info

Position the holding lug of the switch unit in the drill hole of the handlebar.

- Position all controls in their exact positions on the handlebar. Tighten all screws.



- Mount speed nuts ②.
- Remove the film from the headlight. Position the screen. Mount and tighten the screws with washers ③.
- ✓ The screw heads are countersunk in the washers.



201917-10

- Mount and tighten the rear mirror on both sides.
- An assistant holds the motorcycle.
- Carefully loosen and remove the tensioning belt over the swingarm.

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.
- Mount the reflector.

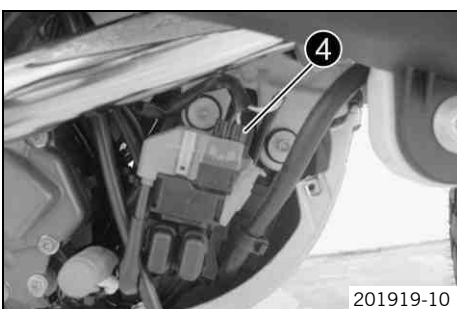


201918-10

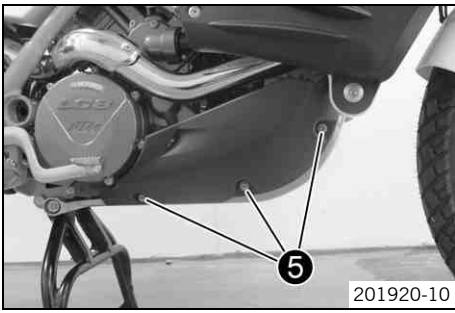


201901-10

- Recharge the battery. (☛ p. 6)
- Plug in connector ④.

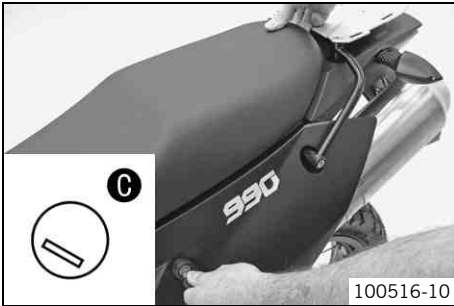


201919-10



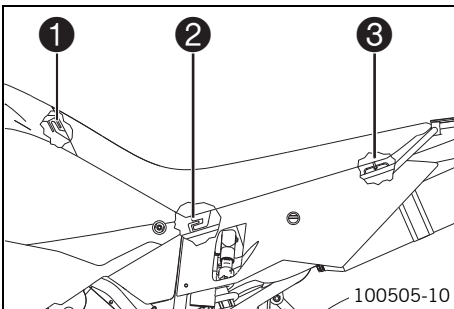
- Position the underride guard on both sides. Mount and tighten screws ⑤.
- Remove the seat. (☛ p. 6)
- Store the tool set below the seat.
- Mount the seat. (☛ p. 6)
- Remove the remaining films.
- Set kilometers or miles. (☛ p. 10)
- Set the clock. (☛ p. 10)
- Refuel. (☛ p. 7)
- Print out the current **PDI** form found on **KTM DEALER.NET** and perform the delivery inspection.

3.1 Removing the seat



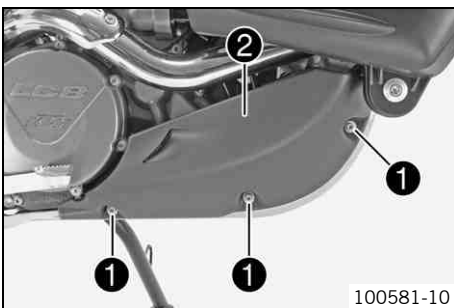
- Insert the ignition key into the seat lock.
- Turn the ignition key to position **C**.
- Lift up the seat at the rear, pull it back and remove from above.
- Remove the ignition key.

3.2 Mounting the seat



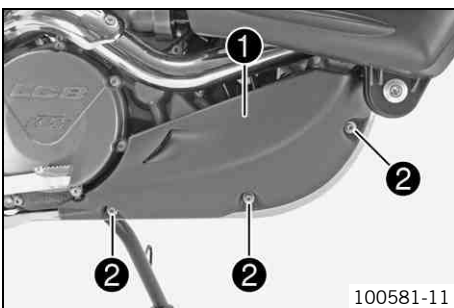
- Hook projection **1** of the seat into the storage compartment, lower the seat at the rear and push it forward at the same time. The two projections **2** must be inserted into the frame.
- Push locking pin **3** into the lock housing and push the back of the seat down until the locking pin locks in place with an audible click.
- Finally, check that the seat is correctly mounted.

3.3 Removing the right underride guard



- Remove screws **1**. Remove the right underride guard **2**.

3.4 Installing the right underride guard



- Position right underride guard **1**. Mount and tighten screws **2**.

Guideline

Remaining chassis screws	M6	10 Nm (7.4 lbf ft)
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3.5 Recharging the battery



Warning

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

- Keep batteries out of the reach of children.
- Wear suitable protective clothing and 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

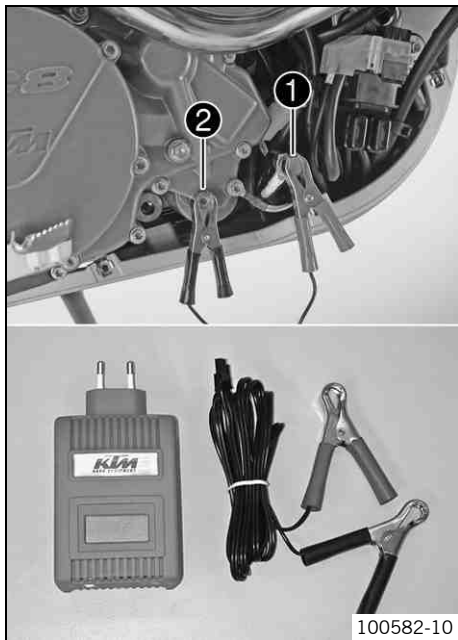
Environmental hazard Hazardous substances cause environmental damage.

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



Info

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



Preparatory work

- Switch off all power consumers and switch off the engine.
- Remove the right underride guard. (☛ p. 6)

Main work

- Pull off the red protection cap of the positive terminal extension.
- Connect the positive cable of the charger to the positive terminal extension ❶ and the negative cable to an unpainted point on the engine ❷. Switch on the battery charger.

Battery charger (58429074000)

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.

- Switch off and disconnect the battery charger after charging.

Guideline

Charge the battery regularly when the motorcycle is not in use	3 months
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- Mount the red protection cap of the positive terminal extension.

Finishing work

- Install the right underride guard. (☛ p. 6)

3.6 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

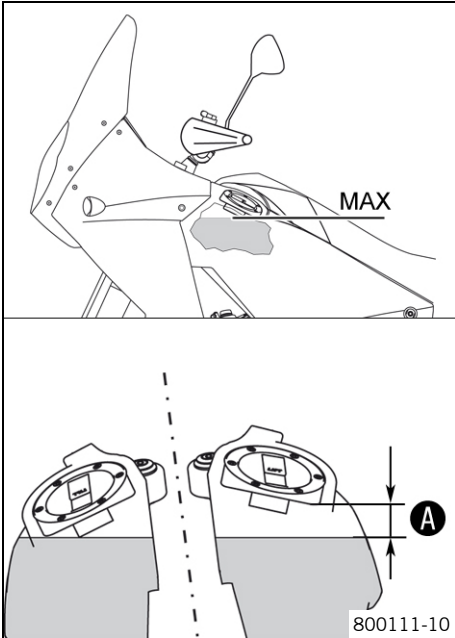
Material damage Premature clogging of the fuel filter.

- 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.
- Lean the vehicle on the side stand.
- Open the filler caps. (☛ p. 8)
- Fill the right fuel tank with fuel no higher than level **A**.

Guideline

Measurement of A	75 mm (2.95 in)
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- Fill the left fuel tank no higher than the lower edge of the filler neck.

Total fuel tank capacity, approx.	20 l (5.3 US gal)	Super unleaded (ROZ 95/RON 95/PON 91) (☛ p. 13)
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 **Info**

If the right fuel tank is filled to the filler neck, fuel may run out of the motorcycle if parked on the side stand and the fuel becomes warm.

- Close the filler caps. (☛ p. 9)

When using low octane fuel

Note

Engine failure Low-quality fuel damages the engine.

- Operate the vehicle with fuel with an octane rating below 95 (ROZ 95/RON 95/PON 91) for no more than one tank full.
- The ignition curve must be adjusted to low octane fuel.
- Adjust the ignition curve to the fuel quality. (☛ p. 9)
- 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 previous display mode appears.

 **Info**

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



3.7 Opening the filler caps

 **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.

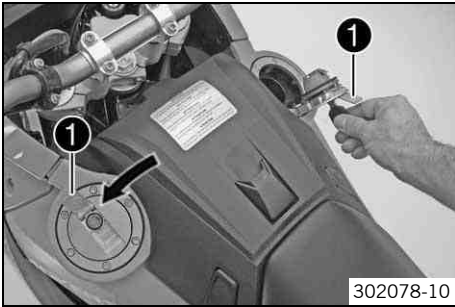
- Avoid contact between fuel and skin, eyes and clothing. Do not inhale fuel vapors. If fuel gets into your eyes, rinse immediately with water and contact a doctor. Wash affected skin areas immediately with soap and water. If fuel is swallowed, contact a doctor immediately. Change clothing that has come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

Note

Danger of damage Ignition key breakage.

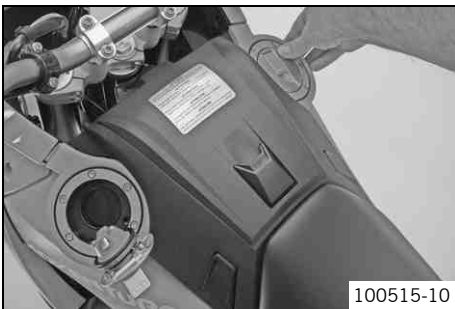
- To take pressure off of the ignition key, push down on the filler cap. Damaged ignition keys must be replaced.
- Turn the ignition key 90° clockwise.
- Raise the filler cap, withdraw the ignition key and open the second filler cap.
- Remove the ignition key.



Info

The motorcycle is equipped with two fuel tanks and two filler necks. The fuel tanks are connected to each other with a fuel line that equalizes the fuel level. The two filler caps are equipped with a ventilation system.

3.8 Closing the filler caps



Warning

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

- When closing the filler cap, ensure that it is closed correctly. Change clothing that came into contact with fuel. Immediately clean skin that came into contact with fuel using soap and water.

- Push the filler caps closed until the locks engage.
- Close the covers.

3.9 Adjusting the ignition curve to the fuel quality

Preparatory work

- Switch off the ignition by turning the black ignition key to the position **OFF** ☒.
- Remove the seat. (☛ p. 6)

To activate the ignition curve for low octane fuel:

Note

Engine failure Low-quality fuel damages the engine.

- Operate the vehicle with fuel with an octane rating below 95 (ROZ 95/RON 95/PON 91) for no more than one tank full.
- The ignition curve must be adjusted to low octane fuel.

- Disconnect plug-in connector ❶.
 - ✓ Plug-in connector disconnected – Fuel with an octane rating of 80 to 94 (RON) can be used for one tank full.

Activate the ignition curve for fuel with an octane rating of 95 or higher (ROZ 95 / RON 95 / PON 91):

- Connect plug-in connector ❶.
 - ✓ Plug-in connector connected – Fuel with an octane rating of 95 or higher can be used.

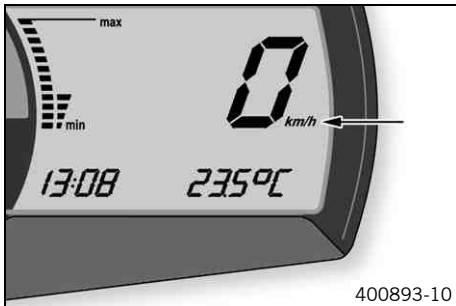
Finishing work

- Mount the seat. (☛ p. 6)


3.10 Setting kilometers or miles

i Info

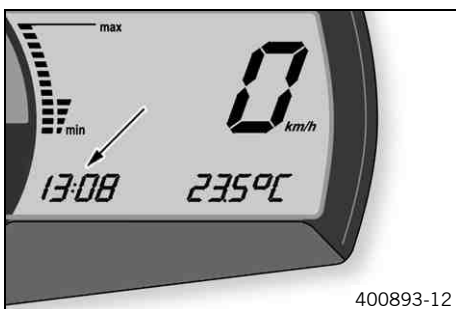
If you change the unit, the value **ODO** is retained and converted accordingly. Making the setting according to the country.

**Condition**


The motorcycle is standing.

- Switch on the ignition by turning the black ignition key to the 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**.

3.11 Setting the clock

**Condition**

The motorcycle is standing.

- Switch on the ignition by turning the black ignition key to the 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.

4 TECHNICAL DATA - TIGHTENING TORQUES FOR CHASSIS

Screw, side stand switch	M4	2 Nm (1.5 lbf ft)	–
Screw, cable guide, wheel speed sensor, rear	M5	3 Nm (2.2 lbf ft)	–
Screw, filler cap	M5	5 Nm (3.7 lbf ft)	–
Screw, foot brake lever stub	M5	6 Nm (4.4 lbf ft)	Loctite® 243™
Screw, fuel level indicator	M5	3 Nm (2.2 lbf ft)	–
Screw, wheel speed sensor bracket, front	M5	4 Nm (3 lbf ft)	Loctite® 243™
Spoke nipple	M5	5 Nm (3.7 lbf ft)	–
Nut, ABS unit fixation	M6	8 Nm (5.9 lbf ft)	–
Nut, positive terminal extension	M6	4 Nm (3 lbf ft)	–
Nut, tail light	M6	8 Nm (5.9 lbf ft)	–
Remaining chassis nuts	M6	10 Nm (7.4 lbf ft)	–
Remaining chassis screws	M6	10 Nm (7.4 lbf ft)	–
Screw connection, wheel speed sensor, front	M6	6 Nm (4.4 lbf ft)	–
Screw, brake line holder on bottom triple clamp	M6	8 Nm (5.9 lbf ft)	Loctite® 243™
Screw, cable/line guide at top triple clamp	M6	8 Nm (5.9 lbf ft)	Loctite® 243™
Screw, chain guide	M6	6 Nm (4.4 lbf ft)	Loctite® 243™
Screw, chain sliding guard	M6	6 Nm (4.4 lbf ft)	Loctite® 243™
Screw, exhaust pipe bracket	M6	12 Nm (8.9 lbf ft)	Loctite® 243™
Screw, foot brake cylinder	M6	10 Nm (7.4 lbf ft)	Loctite® 243™
Screw, front brake disc	M6	14 Nm (10.3 lbf ft)	Loctite® 243™
Screw, fuel pump	M6	6 Nm (4.4 lbf ft)	–
Screw, fuel tap	M6	6 Nm (4.4 lbf ft)	–
Screw, heat guard on manifold	M6	8 Nm (5.9 lbf ft)	–
Screw, magnetic holder on side stand	M6	6 Nm (4.4 lbf ft)	Loctite® 243™
Screw, rear brake disc	M6	14 Nm (10.3 lbf ft)	Loctite® 243™
Screw, wheel speed sensor, rear	M6	8 Nm (5.9 lbf ft)	Loctite® 243™
Nut, manifold on cylinder head	M8	Tightening sequence: Tighten the nuts evenly. Do not bend the metal.	–
Remaining chassis nuts	M8	25 Nm (18.4 lbf ft)	–
Remaining chassis screws	M8	25 Nm (18.4 lbf ft)	–
Screw, bottom triple clamp	M8	15 Nm (11.1 lbf ft)	–
Screw, crash bar	M8	15 Nm (11.1 lbf ft)	–
Screw, exhaust clamp	M8	8 Nm (5.9 lbf ft)	–
Screw, foot brake lever	M8	20 Nm (14.8 lbf ft)	–
Screw, fork stub	M8	15 Nm (11.1 lbf ft)	–
Screw, front brake caliper	M8	25 Nm (18.4 lbf ft)	Loctite® 243™
Screw, fuel tank	M8	15 Nm (11.1 lbf ft)	–
Screw, handlebar clamp	M8	20 Nm (14.8 lbf ft)	–
Screw, ignition lock (ratchet screw)	M8		Loctite® 243™
Screw, rear footrest 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)	–
Screw, top triple clamp	M8	20 Nm (14.8 lbf ft)	–
Screw, underride guard	M8	25 Nm (18.4 lbf ft)	Loctite® 243™
Engine carrying screw	M10	45 Nm (33.2 lbf ft)	–
Remaining chassis nuts	M10	45 Nm (33.2 lbf ft)	–
Remaining chassis screws	M10	45 Nm (33.2 lbf ft)	–

4 TECHNICAL DATA - TIGHTENING TORQUES FOR CHASSIS

Screw, handlebar support	M10	20 Nm (14.8 lbf ft)	–
Screw, side stand	M10	35 Nm (25.8 lbf ft)	Loctite® 243™
Screw, side stand bracket	M10	45 Nm (33.2 lbf ft)	Loctite® 243™
Screw, side stand holding plate	M10	40 Nm (29.5 lbf ft)	Loctite® 243™
Nut, rear sprocket screw	M10x1.25	50 Nm (36.9 lbf ft)	Loctite® 243™
Screw, subframe	M10x1.25	45 Nm (33.2 lbf ft)	Loctite® 243™
Oil drain plug with magnet	M12x1.5	25 Nm (18.4 lbf ft)	–
Screw, bottom shock absorber	M14x1.5	80 Nm (59 lbf ft)	Thread greased
Screw, top shock absorber	M14x1.5	80 Nm (59 lbf ft)	Thread greased
Nut, socket	M18x1	4 Nm (3 lbf ft)	–
Lambda sensor	M18x1.5	45 Nm (33.2 lbf ft)	–
Nut, swingarm pivot	M19x1.5	130 Nm (95.9 lbf ft)	Thread greased
Screw, top steering head	M20x1.5	12 Nm (8.9 lbf ft)	–
Nut, rear wheel spindle	M25x1.5	90 Nm (66.4 lbf ft)	Thread greased
Screw, front wheel spindle	M25x1.5	45 Nm (33.2 lbf ft)	–

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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08/2012

