SETUP INSTRUCTIONS 2017

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690 Duke
690 Duke R

Art. no. 3213613en

INTRODUCTION

Perform the work described in these setup instructions before the vehicle is delivered to the customer.

Read the setup instructions in their entirety before beginning work.

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

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According to the international quality management standard ISO 9001, KTM uses quality assurance processes that lead to the maximum possible quality of the products.
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REG.NO. 12 100 6061

KTM Sportmotorcycle GmbH
5230 Mattighofen, Austria

This document is valid for the following models:

690 Duke EU (F9703Q3, F9703Q4)

690 Duke US (F9775Q3, F9775Q4)

690 Duke CN (F9787Q4)

690 Duke R EU (F9703Q1)

3213613en

11/2016

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).
	Indicates a page reference (more information is provided on the specified page).
	Indicates information with more details or tips.
»	Indicates the result of a testing step.
V	Denotes a voltage measurement.
A	Denotes a current measurement.
Ω	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.
Underlined terms	Refer to technical details of the vehicle or indicate technical terms, which are explained in the glossary.

2.1 Unpacking and setting up the vehicle

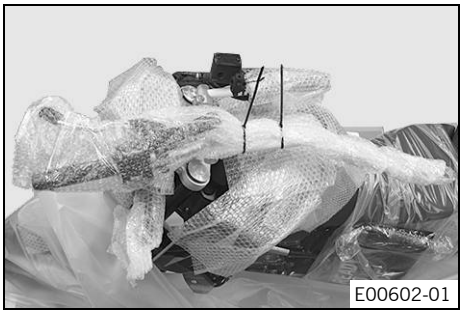

E00601-01

– Remove the box and the plastic packaging.

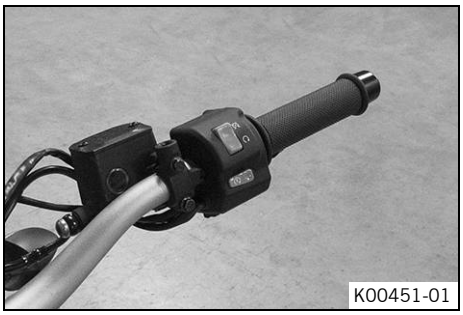
Info
To avoid damaging the motorcycle while mounting the handlebar, leave the film on the fuel tank until all of the work on the motorcycle has been finished.

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

(690 Duke US)
– Ensure that the reflector is mounted on the license plate holder.


E00602-01

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


K00451-01

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

Guideline

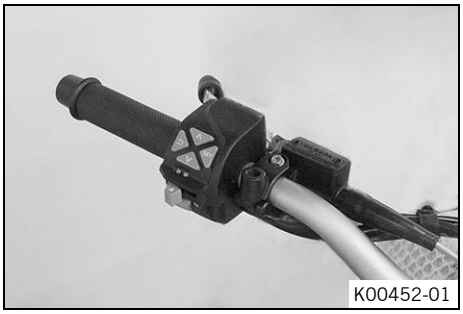
Screw, throttle grip	M5	3.5 Nm (2.58 lbf ft)


E00174-10

– Position the handlebar.
✔ Marking **0** 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)

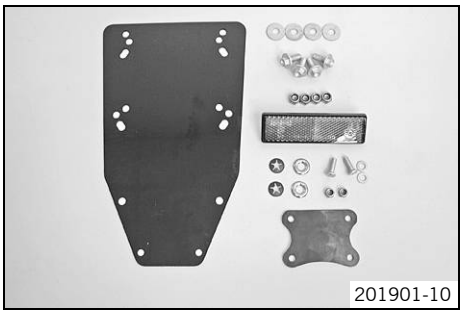

K00452-01

– Mount and tighten the right handlebar weight.
– Check the throttle grip for smooth operation.
– Position the controls on the left half of the handlebar.
– Position all controls in their exact positions on the handlebar. Tighten all screws.

– Mount and tighten the rear mirror adapter and rear mirror on both sides.

– Mount the footrests with the springs and pins. Secure the pins with the lock rings.

Pliers for footrest spring (58429083000)



– Mount the reflector.
– Remove the protective plastic.
– Carefully loosen and remove the tensioning belt over the swingarm.

Info
An assistant prevents the motorcycle from falling over.

– Carefully loosen and remove the tension belts around the lower triple clamp.
✔ The vehicle is released at the front.
– Together with an assistant, take the vehicle off the palette.

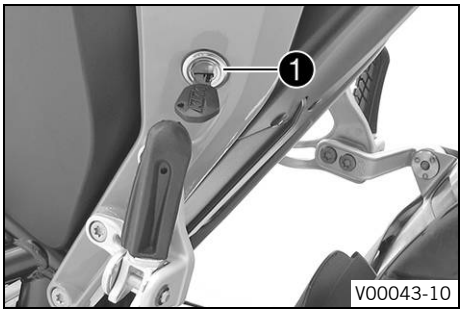
Warning
Risk of injury Battery acid and battery gases cause serious chemical burns.
– Keep batteries out of the reach of children.
– Wear suitable protective clothing and safety glasses.
– Avoid contact with battery acid and battery gases.
– Keep sparks or open flames away from the battery.
– Only charge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

– Fill the battery.

Info
Read the notes in the battery package.

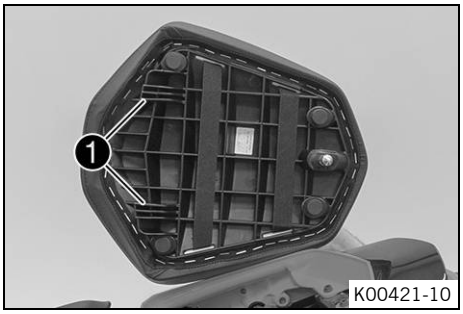
– Recharge the battery. (📖 p. 5)
– Install the battery. (📖 p. 6)
– Refuel. (📖 p. 8)
– Prepare the vehicle according to the specifications in the **KTM Dealer.net** for handover to the customer.
– Set the kilometers or miles. (📖 p. 8)

3.1 Removing the passenger seat



– Insert the ignition key in seat lock ❶ and turn it clockwise.
– Raise the rear of the passenger seat, push it towards the rear, and remove it upward.
– Remove the ignition key from the seat lock.

3.2 Mounting the passenger seat



– Hook catches ❶ of the passenger seat onto the storage compartment, lower the rear, and simultaneously push forward.
– Press down the passenger seat until it clicks into place.

Warning
Danger of accidents The passenger seat can come loose from the anchoring if it is not mounted correctly.
– After mounting the passenger seat, check that it is locked correctly by pulling up.

– Finally, check that the passenger seat is correctly mounted.

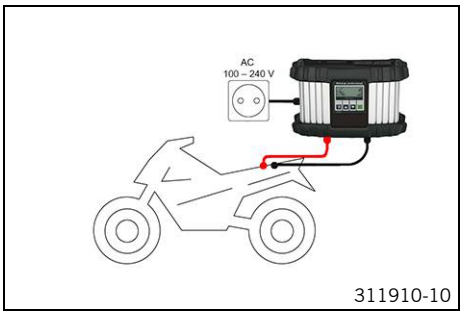
3.3 Recharging the battery

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

Warning
Environmental hazard Batteries contain environmentally-hazardous materials.
– Do not dispose of batteries as household waste.
– Dispose of batteries at a collection point for used batteries.

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

Info
Even when there is no load on the battery, it discharges steadily.
The charging level and the method of charging are very important for the service life of the battery.
Rapid recharging with a high charging current shortens the service life of the battery.
If the charging current, charging voltage, and charging time are exceeded, the battery will be destroyed.
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 sulfated, destroying the battery.
The battery is maintenance-free, i.e., the acid level does not have to be checked.



311910-10

Preparatory work
- Switch off the ignition by turning the ignition key to the position ⊠.
- Remove the passenger seat. (🕮 p. 5)
- Disconnect the negative cable of the battery. (🕮 p. 7)

Main work
- Connect the battery charger to the battery. Set the battery charger.

Alternative 1

Battery charger **XCharge-professional** EU (00029095050)

Alternative 2

Battery charger **XCharge-professional** US (00029095051)

Alternative 3

Battery charger **XCharge-professional** GB (00029095052)

Alternative 4

Battery charger **XCharge-professional** CH (00029095053)

Info
Follow the instructions of the charger and the manual.

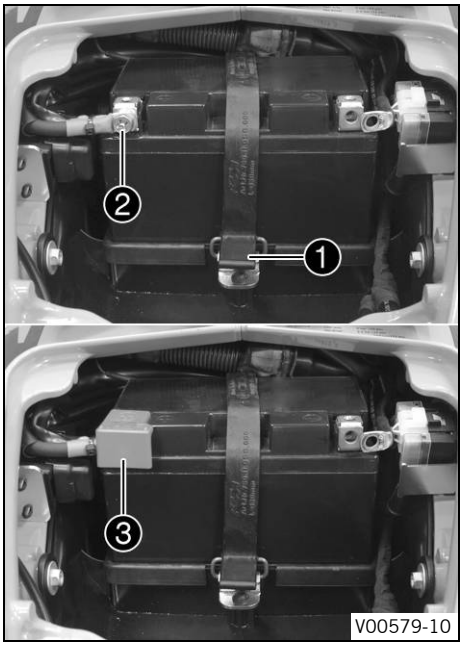
- Switch off the battery charger after charging and disconnect from the battery.

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
- Connect the negative cable of the battery. (🕮 p. 7)
- Mount the passenger seat. (🕮 p. 5)
- Set the time and date. (🕮 p. 7)

3.4 Installing the battery



V00579-10

Main work
- Position the battery in the battery holder.

Alternative 1

Battery (YTX9-BS)

Alternative 2

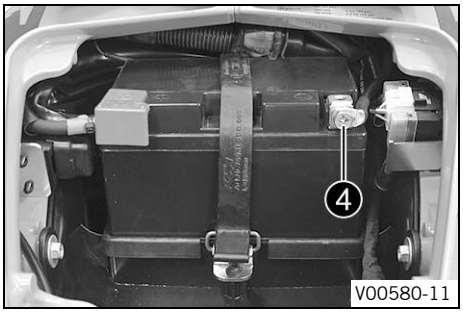
Battery (HTZ12A-BS)

✓ The battery terminals face opposite the direction of travel.
- Reconnect rubber band ❶.
- Connect both positive cables ❷ to the battery.

Guideline

Screw, battery terminal	M6	2 Nm (1.5 lbf ft)

- Mount positive terminal cover ❸.



V00580-11

- Connect negative cable ❹ to the battery.

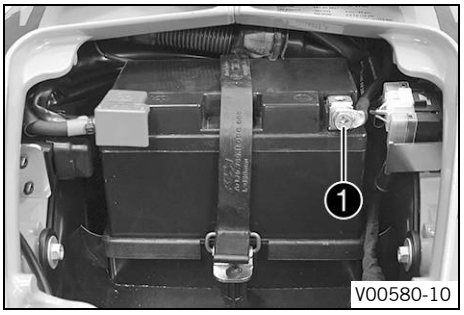
Guideline

Screw, battery terminal	M6	2 Nm (1.5 lbf ft)

Finishing work
- Mount the passenger seat. (📖 p. 5)
- Set the time and date. (📖 p. 7)

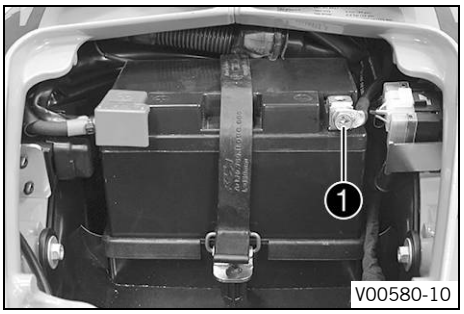
3.5 Disconnecting the negative cable of the battery

Preparatory work
- Switch off the ignition by turning the ignition key to the position ⊠.
- Remove the passenger seat. (📖 p. 5)



Main work
- Disconnect negative cable ❶ of the battery.

3.6 Connecting the negative cable of the battery



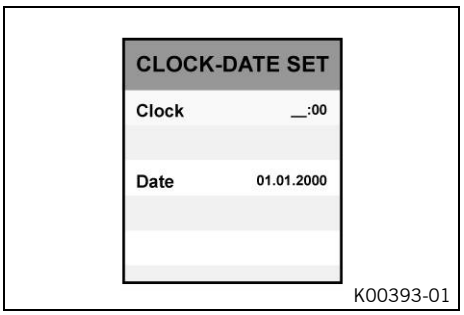
Main work
- Connect negative cable ❶. Tighten the screw.

  Guideline

Screw, battery terminal	M6	2 Nm (1.5 lbf ft)

Finishing work
- Mount the passenger seat. (📖 p. 5)
- Set the time and date. (📖 p. 7)

3.7 Set the time and date

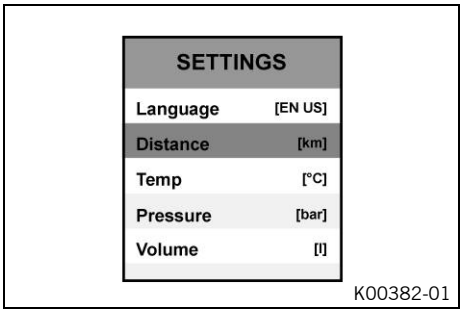


Condition
The motorcycle is stationary.
- Press the **UP** or **DOWN** button until the **"Settings"** menu appears on the display. Pressing the **SET** button opens the menu.
- Press the **UP** or **DOWN** button until the **"Clock-date set"** menu is marked on the display. Pressing the **SET** button again sets the unit of measure.
- Press the **SET** button.
  - ✓ The hour next to **"Clock"** flashes.
- Press the **UP** or **DOWN** button until the current hour is set.
- Press the **SET** button.
  - ✓ The minute next to **"Clock"** flashes.
- Press the **UP** or **DOWN** button until the current minute is set.
- Press the **SET** button.
  - ✓ The day next to **"Date"** flashes.
- Press the **UP** or **DOWN** button until the current day is set.
- Press the **SET** button.
  - ✓ The month next to **"Date"** flashes.
- Press the **UP** or **DOWN** button until the current month is set.
- Press the **SET** button.
  - ✓ The year next to **"Date"** flashes.
- Press the **UP** or **DOWN** button until the current year is set.

– Press the **BACK** button.
✓ Time and date are saved.

3.8 Setting the kilometers or miles

Info
If the unit is changed, the value is retained and converted accordingly.
Make the setting according to the country.



Condition
The motorcycle is stationary.

– Press the **UP** or **DOWN** button until the **"Settings"** menu appears on the display. Pressing the **SET** button opens the menu.
– Press the **UP** or **DOWN** button until **"Distance"** is marked on the display. Pressing the **SET** button again sets the unit of measure.
– Select kilometers **"km"** or miles **"mi"** for the distance.

3.9 Refueling

Danger
Fire hazard Fuel is highly flammable.
The fuel in the fuel tank expands when warm and can escape if overfilled.

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

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

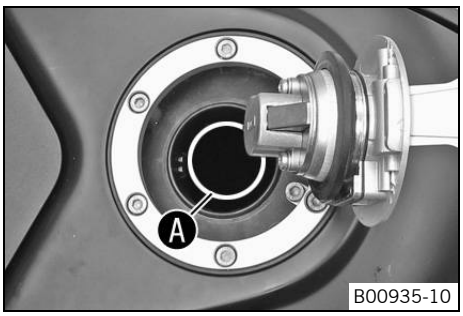
– Avoid skin, eye and clothing contact with fuel.
– Immediately consult a doctor if you swallow fuel.
– Do not inhale fuel vapors.
– In case of skin contact, rinse the affected area with plenty of water.
– Rinse the eyes thoroughly with water, and consult a doctor in case of fuel contact with the eyes.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

Note
Material damage Inadequate fuel quality causes the fuel filter to quickly become clogged.
In some countries and regions, the available fuel quality and cleanliness may not be sufficient. This will result in problems with the fuel system.

– Refuel only with clean fuel that meets the specified standards.

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

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



– Switch off the engine.
– Open the filler cap. (📖 p. 9)
– Fill the fuel tank with fuel up to the lower edge Ⓐ of the filler neck.

Total fuel tank capacity, approx.	14 l (3.7 US gal)	Super unleaded (ROZ 95/RON 95/PON 91) (📖 p. 13)

– Close the filler cap. (📖 p. 9)

3.10 Opening the filler cap

Danger
Fire hazard Fuel is highly flammable.
The fuel in the fuel tank expands when warm and can escape if overfilled.

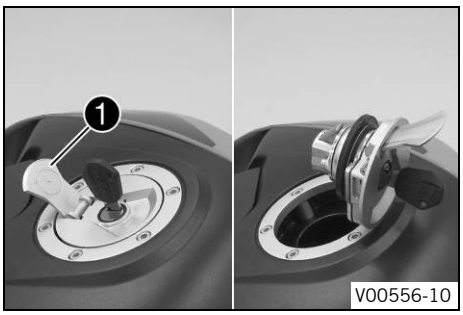
– Do not refuel the vehicle in the vicinity of open flames or lit cigarettes.
– Switch off the engine for refueling.
– Make sure that no fuel is spilled; particularly not on hot parts of the vehicle.
– If any fuel is spilled, wipe it off immediately.
– Observe the specifications for refueling.

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

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

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

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



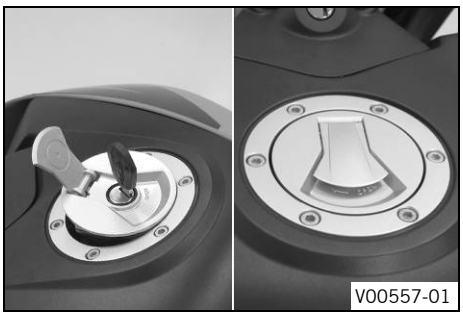
– Lift cover ❶ of the filler cap and insert the ignition key in the lock.

Note
Danger of damage The ignition key may break if overloaded.
Damaged ignition keys must be replaced.

– Push down on the filler cap to take pressure off the ignition key.

– Turn the ignition key 90° clockwise.
– Open the filler cap.

3.11 Closing the filler cap



– Fold down the filler cap.
– Turn the ignition key 90° clockwise.
– Push down the filler cap and turn the ignition key counterclockwise until the lock closes.

Warning
Fire hazard Fuel is highly flammable, toxic and a health hazard.

– Check the filler cap is locked correctly after closing.
– Change your clothing in case of fuel spills on them.
– Rinse the affected area immediately with plenty of water in the event of contact with the skin.

– Remove the ignition key and close the cover.

4.1 Chassis tightening torques

Screw, headlight	EJOT	2 Nm (1.5 lbf ft)	–
Screw, side stand switch	M4	2 Nm (1.5 lbf ft)	**Loctite® 243™**
Remaining screws, chassis	M5	5 Nm (3.7 lbf ft)	–
Retaining clamp, brake line	M5	3 Nm (2.2 lbf ft)	–
SAS valve screw on frame	M5	4 Nm (3 lbf ft)	–
Screw, air filter box	M5	3 Nm (2.2 lbf ft)	–
Screw, cable on starter motor	M5	3 Nm (2.2 lbf ft)	–
Screw, combination instrument	M5	4 Nm (3 lbf ft)	–
Screw, combination switch, left	M5	3.5 Nm (2.58 lbf ft)	–
Screw, combination switch, right	M5	3.5 Nm (2.58 lbf ft)	–
Screw, foot brake lever stub (Duke)	M5	6 Nm (4.4 lbf ft)	**Loctite® 243™**
Screw, fuel level sensor	M5	3 Nm (2.2 lbf ft)	–
Screw, headlight mask	M5	4 Nm (3 lbf ft)	–
Screw, heat guard (Duke)	M5	5 Nm (3.7 lbf ft)	**Loctite® 243™**
Screw, plastic clamp of brake line on fork leg	M5	2 Nm (1.5 lbf ft)	–
Double-sided grub screw	M6	6 Nm (4.4 lbf ft)	**Loctite® 243™**
Nut, push rod, foot brake lever	M6	6 Nm (4.4 lbf ft)	–
Remaining nuts, chassis	M6	10 Nm (7.4 lbf ft)	–
Remaining screws, chassis	M6	10 Nm (7.4 lbf ft)	–
Screw, angle sensor	M6	5 Nm (3.7 lbf ft)	–
Screw, ball joint of push rod on foot brake cylinder	M6	10 Nm (7.4 lbf ft)	**Loctite® 243™**
Screw, battery terminal	M6	2 Nm (1.5 lbf ft)	–
Screw, brake assembly	M6	5 Nm (3.7 lbf ft)	–
Screw, brake fluid reservoir of rear brake	M6	5 Nm (3.7 lbf ft)	–
Screw, chain guard	M6	4 Nm (3 lbf ft)	**Loctite® 243™**
Screw, chain sliding guard	M6	10 Nm (7.4 lbf ft)	**Loctite® 243™**
Screw, clutch assembly	M6	5 Nm (3.7 lbf ft)	–
Screw, control unit holder	M6	3 Nm (2.2 lbf ft)	–
Screw, exhaust pipe clamp	M6	8 Nm (5.9 lbf ft)	Copper paste
Screw, foot brake cylinder	M6	10 Nm (7.4 lbf ft)	**Loctite® 243™**
Screw, foot brake lever stub (Duke R)	M6	10 Nm (7.4 lbf ft)	**Loctite® 243™**
Screw, fuel pump	M6	6 Nm (4.4 lbf ft)	–
Screw, fuel spoiler	M6	3 Nm (2.2 lbf ft)	–
Screw, lower radiator bracket	M6	5 Nm (3.7 lbf ft)	–
Screw, magnetic holder on side stand	M6	5 Nm (3.7 lbf ft)	**Loctite® 243™**
Screw, seat lock	M6	10 Nm (7.4 lbf ft)	**Loctite® 222™**
Screw, shift lever (Duke R)	M6	14 Nm (10.3 lbf ft)	**Loctite® 243™**
Screw, tail light cover	M6	8 Nm (5.9 lbf ft)	–
Screw, voltage regulator	M6	8 Nm (5.9 lbf ft)	–
Screw, wheel speed sensor	M6	6 Nm (4.4 lbf ft)	–
Shift rods, nut (Duke R)	M6	6 Nm (4.4 lbf ft)	–
Shift rods, nut (Duke R)	M6LH	6 Nm (4.4 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, foot brake lever (Duke R)	M8	20 Nm (14.8 lbf ft)	–

Screw, footrest bracket, rear	M8x30	25 Nm (18.4 lbf ft)	**Loctite® 243™**
Screw, footrest bracket, rear	M8x50	25 Nm (18.4 lbf ft)	**Loctite® 243™**
Screw, fork stub	M8	15 Nm (11.1 lbf ft)	–
Screw, front brake disc	M8	30 Nm (22.1 lbf ft)	**Loctite® 2701™**
Screw, front footrest bracket	M8	25 Nm (18.4 lbf ft)	**Loctite® 243™**
Screw, handlebar clamp	M8	20 Nm (14.8 lbf ft)	–
Screw, handrail	M8x30	Countersunk screw 18 Nm (13.3 lbf ft)	**Loctite® 243™**
Screw, handrail, cover	M8x20	18 Nm (13.3 lbf ft)	**Loctite® 243™**
Screw, ignition lock (tamper-proof screw)	M8		**Loctite® 243™**
Screw, license plate holder	M8	18 Nm (13.3 lbf ft)	**Loctite® 243™**
Screw, linkage bracket, front engine fixing arm	M8	25 Nm (18.4 lbf ft)	**Loctite® 243™**
Screw, main silencer clamp (Duke R)	M8	15 Nm (11.1 lbf ft)	–
Screw, main silencer fastening (Duke)	M8	25 Nm (18.4 lbf ft)	–
Screw, rear brake disc	M8	30 Nm (22.1 lbf ft)	**Loctite® 2701™**
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, 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, foot brake lever (Duke)	M10	25 Nm (18.4 lbf ft)	–
Screw, handlebar support	M10	20 Nm (14.8 lbf ft)	–
Screw, side stand	M10	35 Nm (25.8 lbf ft)	**Loctite® 243™**
Screw, subframe	M10	45 Nm (33.2 lbf ft)	**Loctite® 243™**
Banjo bolt, brake line	M10x1	25 Nm (18.4 lbf ft)	–
Screw, bottom shock absorber	M10x1.25	50 Nm (36.9 lbf ft)	**Loctite® 243™**
Screw, front brake caliper	M10x1.25	45 Nm (33.2 lbf ft)	**Loctite® 243™**
Screw, top shock absorber	M10x1.25	50 Nm (36.9 lbf ft)	**Loctite® 243™**
Lambda sensor	M12x1.25	25 Nm (18.4 lbf ft)	–
Nut, frame to linkage lever	M14x1.5	100 Nm (73.8 lbf ft)	–
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)	–
Nut, swingarm pivot	M16x1.5	100 Nm (73.8 lbf ft)	–
Screw, steering head	M20x1.5	40 Nm (29.5 lbf ft)	–
Adjusting ring of swingarm bearing	M24x1.5	25 Nm (18.4 lbf ft)	–
Screw, front wheel spindle	M24x1.5	45 Nm (33.2 lbf ft)	–
Nut, rear wheel spindle	M25x1.5	90 Nm (66.4 lbf ft)	–
Nut, steering head	M28x1	12 Nm (8.9 lbf ft)	–

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

Standard/classification

– 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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11/2016

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