# **SETUP INSTRUCTIONS 2016**



# **390 Duke**

Art. no. 3213459en





INTRODUCTION 1

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.

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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Issued by: TÜV Management Service

KTM Sportmotorcycle GmbH 5230 Mattighofen, Austria

This document is valid for the following models:

390 Duke EU (F4303P1, F4303P2, F4303P3, F4303P4)

390 Duke AU (F4360P1, F4360P2)

390 Duke JP (F4386P1, F4386P2)

390 Duke US (F4375P1, F4375P2)

390 Duke AR (F4342P1, F4342P2)

390 Duke ASIA (F4388P1, F4388P2)

390 Duke 2017 BR (F4340P1, F4340P2)

390 Duke 2017 CO (F4341P3, F4341P4)

390 Duke TH (F4383P1, F4383P2)



### 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<sup>®</sup> 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 SETUP 3

# 2.1 Unpacking and setting up the vehicle



Remove the straps and box.



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



Roll down the film at the sides.



# 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.



- Position the handlebar.
  - The lettering on the handlebar is situated in the middle of the handlebar clamp.
- Position the handlebar clamps. Mount and tighten the screws evenly.
   Guideline

[:	Screw, handlebar clamp	M8	21 Nm	Loctite® 243™
			(15.5 lbf ft)	



- Mount and tighten the rear mirror on both sides.
- Position all controls in their exact positions on the handlebar. Tighten all screws.



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



## nfo

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.

2 SETUP

- Take the vehicle off the pallet.



# 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.
- Fill the battery.



# Info

Read the notes in the battery package.

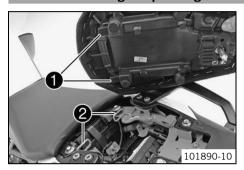
- Refuel. (🕮 p. 9)
- Prepare the vehicle according to the specifications in the KTM Dealer.net for handover to the customer.
- Set the clock. (≅ p. 9)

# 3.1 Removing the passenger seat



- Insert the ignition key in seat lock 
   and turn it clockwise.
- Raise the rear of the seat, push it towards the rear, and remove it upwards.
- Remove the ignition key from the seat lock.

# 3.2 Mounting the passenger seat



- Attach hooks **1** on the passenger seat to brackets **2** on the subframe, and lower it at the rear while pushing 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.

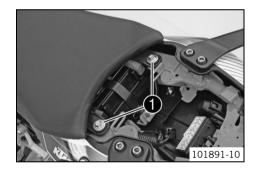
# 3.3 Removing the seat



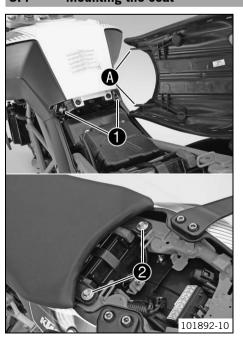
- Remove the passenger seat. (
p. 5)

# Main work

- Remove screws 1.
- Raise the rear of the seat, pull it towards the rear, and remove it upwards.



# 3.4 Mounting the seat



## Main work

- Attach seat recesses **(A)** at screws **(1)** and lower at the rear.
- Mount and tighten screws 2.
   Guideline

Screw, seat	M6	9 Nm (6.6 lbf ft)
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# **Finishing work**

- Mount the passenger seat. (🕮 p. 5)

# 3.5 Removing the battery



# Warning

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

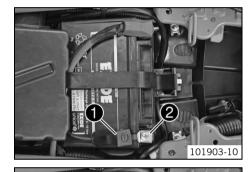
- Keep batteries out of the reach of children.
- Wear suitable protective clothing and goggles.
- Avoid contact with battery acid and battery gases.
- Keep sparks and open flames away from the battery. Only charge in well-ventilated rooms.
- In the event of skin contact, rinse with large amounts of water.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

# **Preparatory work**

- Remove the passenger seat. (
  p. 5)
- Remove the seat. ( p. 5)

## Main work

- Pull back the negative terminal cover 1.
- Disconnect negative cable 2 from the battery.





- Disconnect positive cable 4 from the battery.
- Detach rubber band 6.
- Pull the battery up and out of the battery holder.



# 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.

# 3.6 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** 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.

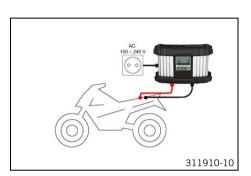
Rapid recharging with a high charging current shortens the service life of the battery.

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.



# Preparatory work

- Remove the passenger seat. ( p. 5)
- Disconnect the negative cable of the battery.

## 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)



## nfn

Follow the instructions of the charger and the manual.

Disconnect the battery charger after charging the battery.

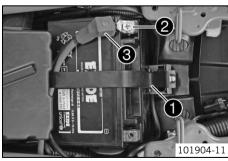
Guideline

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

# **Finishing work**

- Mount the seat. (록 p. 5)
- Set the clock. (
   p. 9)

# 3.7 Installing the battery



# 101903-11

## Main work

- Position the battery in the battery holder.

Guideline

The terminals of the battery must face upwards.

# Battery (ETZ-9-BS)

- Reconnect rubber band 1.
- Position the positive cable 2 and mount and tighten the screw.
- Position positive terminal cover 3.
- Position the negative cable **4** and mount and tighten the screw.
- Position the negative terminal cover **6**.

# Finishing work

- Mount the seat. (
   p. 5)
- Set the clock. (

  p. 9)

# 3.8 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.

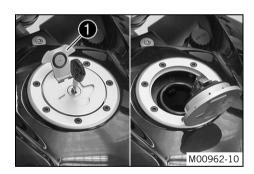
- Avoid skin, eye and clothing contact with fuel.
- Immediately consult a doctor if you swallow fuel.
- Do not inhale fuel vapors.
- In case of skin contact, rinse the affected area with plenty of water.
- Rinse the eyes thoroughly with water, and consult a doctor in case of fuel contact with the eyes.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



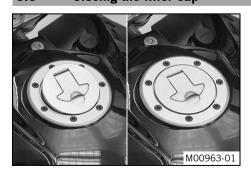
- Lift the cover **1** of the filler cap and insert the ignition key in the lock.

# 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.
- Open the filler cap.
- Remove the ignition key.

# 3.9 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.
- Close the filler cap.
- Push down the filler cap until the lock engages.

# 3.10 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. 8)
- Fill the fuel tank with fuel up to the lower edge 
   of the fuel filler.

Total fuel tank capacity, approx.	11 I (2.9 US gal)	Super unleaded (ROZ 95/RON 95/PON 91) (의 p. 14) (390 Duke EU/AU/JP/US/AR/ASIA/CO/TH)
		Super unleaded, type C (ROZ 95/RON 95/PON 91) (₽ p. 14) (390 Duke 2017 BR)

# 3.11 Setting the time



# Condition

The ignition is on.

The motorcycle is stationary.

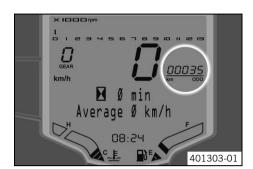
- Press the MODE button briefly and repeatedly until ODO appears on the display.
- Press the MODE and SET buttons for 5 10 seconds.
  - ✓ The time display begins to flash.
- Set the hours display using the MODE button.
- Set the minutes display using the SET button.
- Press the MODE and SET buttons for 5 10 seconds.
  - ✓ The time is set.

# 3.12 Setting kilometers or miles



# Info

Make the country-specific setting.



# Condition

The ignition is on.

The motorcycle is stationary.

- Press the MODE button briefly and repeatedly until ODO appears on the display.
- Press the **MODE** button for 5 10 seconds.
  - ✓ The display changes from **km/h** to **mph** or from **mph** to **km/h**.

# 4.1 Chassis tightening torques

Exhaust clamp	-	20 Nm (14.8 lbf ft)	_
Screw, chain guard	EJOT PT® K60x20	4 Nm (3 lbf ft)	_
Screw, headlight	EJOT PT® K50x12	4 Nm (3 lbf ft)	_
Screw, helmet holder	EJOT PT® K50x12	4 Nm (3 lbf ft)	_
Remaining screws, chassis	M4	4 Nm (3 lbf ft)	_
Screw, EFI control unit	M4	4 Nm (3 lbf ft)	_
Screw, license plate lamp	M4	2 Nm (1.5 lbf ft)	_
Screw, trim, subframe, bottom	M4	5 Nm (3.7 lbf ft)	_
Remaining nuts, chassis	M5	5 Nm (3.7 lbf ft)	_
Remaining screws, chassis	M5	5 Nm (3.7 lbf ft)	_
Screw, ABS hose clamp	M5	5 Nm (3.7 lbf ft)	_
Screw, brake line holder, rear	M5	5 Nm (3.7 lbf ft)	Loctite® 243™
Screw, chain guard	M5	4 Nm (3 lbf ft)	Loctite® 243™
Screw, fuel pump	M5	5 Nm (3.7 lbf ft)	_
Screw, fuel tank closure flange	M5	5 Nm (3.7 lbf ft)	_
Screw, fuel tank cover	M5	4 Nm (3 lbf ft)	_
Screw, fuel tank trim	M5	5 Nm (3.7 lbf ft)	_
Screw, license plate holder	M5	5 Nm (3.7 lbf ft)	_
Screw, rollover sensor	M5	5 Nm (3.7 lbf ft)	Loctite® 243™
Screw, side stand switch	M5	5 Nm (3.7 lbf ft)	Loctite® 243™
Screw, spoiler	M5	5 Nm (3.7 lbf ft)	_
Screw, subframe cover, bottom	M5	5 Nm (3.7 lbf ft)	_
Screw, tail end lower part	M5	5 Nm (3.7 lbf ft)	_
Screw, tail light	M5	5 Nm (3.7 lbf ft)	_
Screw, windshield	M5	3 Nm (2.2 lbf ft)	_
Nut, damping rubber frame	M6	7 Nm (5.2 lbf ft)	_
Nut, foot brake lever adjustment	M6	9 Nm (6.6 lbf ft)	_
Nut, radiator	M6	5 Nm (3.7 lbf ft)	_
Remaining nuts, chassis	M6	15 Nm (11.1 lbf ft)	_
Remaining screws, chassis	M6	9 Nm (6.6 lbf ft)	_
Screw, ABS module	M6	7 Nm (5.2 lbf ft)	_
Screw, air filter box	M6	6 Nm (4.4 lbf ft)	_
Screw, air filter box lid	M6	3 Nm (2.2 lbf ft)	_
Screw, brake fluid reservoir of rear	M6	8 Nm (5.9 lbf ft)	Loctite® 243™
brake			
Screw, cable holder, side stand switch	M6	9 Nm (6.6 lbf ft)	Loctite® 243™
Screw, chain sliding guard	M6	8 Nm (5.9 lbf ft)	_
Screw, compensating tank	M6	9 Nm (6.6 lbf ft)	_
Screw, damping rubber, retaining	M6	7 Nm (5.2 lbf ft)	-
bracket	I MC	O Nov. (C. C. II C. II)	Lastin-® Odorm
Screw, foot brake cylinder	M6	9 Nm (6.6 lbf ft)	Loctite® 243™
Screw, front fender	M6	9 Nm (6.6 lbf ft)	-
Screw, front lower rear panel	M6	8 Nm (5.9 lbf ft)	_
Screw, front seat fixing	M6	6 Nm (4.4 lbf ft)	_
Screw, front spoiler	M6	7 Nm (5.2 lbf ft)	_
Screw, fuel tank	M6	9 Nm (6.6 lbf ft)	_
Screw, headlight holder	M6	9 Nm (6.6 lbf ft)	Locatite® 242TM
Screw, headlight mask	M6	9 Nm (6.6 lbf ft)	Loctite® 243™
Screw, ignition coil	M6	9 Nm (6.6 lbf ft)	Locatite® 242TM
Screw, license plate holder	M6	9 Nm (6.6 lbf ft)	Loctite® 243™
Screw, lower rear panel	M6	7 Nm (5.2 lbf ft)	_

Screw, magnetic holder on side stand	M6	5 Nm (3.7 lbf ft)	Loctite® 243™
Screw, main silencer	M6	9 Nm (6.6 lbf ft)	-
Screw, radiator bracket	M6	6 Nm (4.4 lbf ft)	_
Screw, radiator holder	M6	9 Nm (6.6 lbf ft)	_
Screw, rear ABS sensor wheel	M6	8 Nm (5.9 lbf ft)	Loctite® 243™
Screw, rear splash protector	M6	9 Nm (6.6 lbf ft)	-
Screw, retaining bracket, clutch cable	M6	8 Nm (5.9 lbf ft)	Loctite® 243™
pull			
Screw, rollover sensor holder	M6	9 Nm (6.6 lbf ft)	-
Screw, seat	M6	9 Nm (6.6 lbf ft)	-
Screw, shift lever linkage	M6	9 Nm (6.6 lbf ft)	Loctite® 243™
Screw, voltage regulator	M6	9 Nm (6.6 lbf ft)	-
Screw, voltage regulator holder	M6	9 Nm (6.6 lbf ft)	_
Screw, wheel speed sensor holder	M6	8 Nm (5.9 lbf ft)	_
Nut, rear sprocket	M8	27 Nm (19.9 lbf ft)	-
Remaining nuts, chassis	M8	30 Nm (22.1 lbf ft)	_
Remaining screws, chassis	M8	25 Nm (18.4 lbf ft)	-
Screw, bottom triple clamp	M8	15 Nm (11.1 lbf ft)	_
Screw, engine bearer on engine	M8	25 Nm (18.4 lbf ft)	_
Screw, engine bearer on frame	M8	25 Nm (18.4 lbf ft)	-
Screw, foot brake lever	M8	16 Nm (11.8 lbf ft)	Loctite® 243™
Screw, fork stub	M8	15 Nm (11.1 lbf ft)	-
Screw, front brake disc	M8	25 Nm (18.4 lbf ft)	Loctite® 243™
Screw, front wheel spindle	M8	25 Nm (18.4 lbf ft)	
Screw, handlebar clamp	M8	21 Nm (15.5 lbf ft)	Loctite® 243™
Screw, handrail	M8	25 Nm (18.4 lbf ft)	_
Screw, horn	M8	21 Nm (15.5 lbf ft)	_
Screw, main silencer	M8	24 Nm (17.7 lbf ft)	_
Screw, passenger footrest bracket	M8	25 Nm (18.4 lbf ft)	Loctite® 243™
Screw, rear brake disc	M8	25 Nm (18.4 lbf ft)	Loctite® 243™
Screw, shift lever	M8	16 Nm (11.8 lbf ft)	Loctite® 243™
Screw, top triple clamp	M8	11 Nm (8.1 lbf ft)	_
Screw, front brake caliper	M8x1	25 Nm (18.4 lbf ft)	Loctite® 204™
Banjo bolt, brake line	M10	24 Nm (17.7 lbf ft)	_
Fitting side stand	M10	35 Nm (25.8 lbf ft)	Loctite® 243™
Fitting, engine mounting bracket	M10	45 Nm (33.2 lbf ft)	_
Remaining nuts, chassis	M10	50 Nm (36.9 lbf ft)	_
Remaining screws, chassis	M10	45 Nm (33.2 lbf ft)	_
Fitting, bottom shock absorber	M10x1.25	45 Nm (33.2 lbf ft)	_
Fitting, handlebar support	M10x1.25	21 Nm (15.5 lbf ft)	
Nut, mirror, left	M10x1.25	16 Nm (11.8 lbf ft)	_
Nut, mirror, right	M10LHx1.25	16 Nm (11.8 lbf ft)	_
Nut, turn signal	M10x1.25	6 Nm (4.4 lbf ft)	_
Screw, front footrest bracket	M10x1.25	45 Nm (33.2 lbf ft)	Loctite® 243™
Screw, front footrest bracket / engine	M10x1.25	45 Nm (33.2 lbf ft)	_
bearer			
Screw, side stand bracket	M10x1.25	25 Nm (18.4 lbf ft)	Loctite <sup>®</sup> 243™
Screw, top shock absorber	M10x1.25	45 Nm (33.2 lbf ft)	Loctite <sup>®</sup> 243™
Stud, rear sprocket	M10x1.25	50 Nm (36.9 lbf ft)	-
Nut, rear wheel spindle	M14x1.5	90 Nm (66.4 lbf ft)	-
Nut, swingarm pivot	M14x1.5	100 Nm (73.8 lbf ft)	_
Screw, top steering head	M16x1.5	53 Nm (39.1 lbf ft)	Loctite® 243™
Lambda sensor	M18x1.5	19 Nm (14 lbf ft)	-

Swingarm bearing adjusting ring	M22x1	Tighten and ensure that there is no play	-
Nut, steering head	M30x1	Step 1 55 Nm (40.6 lbf ft) 2nd stage (loosen, counter-clockwise) 2 turns Step 3 5 Nm (3.7 lbf ft)	_

5 SUBSTANCES 14

# 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).

# Super unleaded, type C (ROZ 95/RON 95/PON 91)

# Standard/classification

- Beschluss Nr. 57 der ANP (Agência Nacional do Petróleo) (ROZ 95/RON 95/PON 91)

## Guideline

- Only use super unleaded fuel that matches or is equivalent to the following specifications.
- Super unleaded fuel with an ethanol content of 19 to 27 % is permissible.



# Info

Do not use fuel made of methanol (e. g. M15, M85, M100).

Do not use fuel with less than 19 % ethanol (e. g. E10).

Do not use fuel with more than 27 % ethanol (e. g. E30, E85, E100).





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07/2016





