

# 250 EXC-F 250 EXC-F Six Days

Art. no. 3213717en





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 figures and descriptions, misprints, and other errors. The models portraved partly contain special equipment that does not belong to the regular scope of supply.

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## ISO 9001(12 100 6061)

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REG.NO. 12 100 6061

KTM Sportmotorcycle GmbH Stallhofnerstraße 3 5230 Mattighofen, Austria

This document is valid for the following models:

250 EXC-F EU (F8103R9)

250 EXC-F AU (F8160R9)

250 EXC-F US (F8175R9)

250 EXC-F BR (F8140R9)

250 EXC-F Six Days EU (F8103R2)



# 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.



Indicates a voltage measurement.



Indicates a current measurement.



Indicates a resistance measurement.



Indicates the end of an activity including potential rework.

# 1.2 Formats used

The typographical formats used in this document are explained below.

**Proprietary name** Indicates a proprietary name.

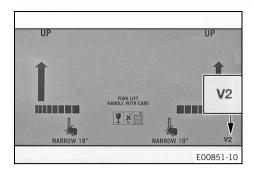
Name® Indicates a protected name.

**Brand™** Indicates a brand available on the open market.

<u>Underlined terms</u> 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



#### Condition

#### Packaging V2

- Remove the box and the plastic packaging.



#### Info

An assistant prevents the motorcycle from falling over

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

- Remove the separate enclosure and unpack it. Check that the scope of supply is complete using the enclosed packing list.
- Have a lift stand available.

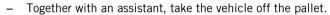
#### Lift stand (78129955100)

 Carefully loosen and remove the tension belt of the footrest mount.

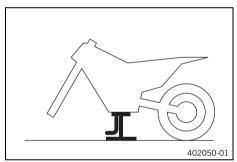


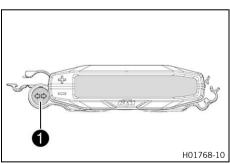
#### Info

An assistant prevents the motorcycle from falling over

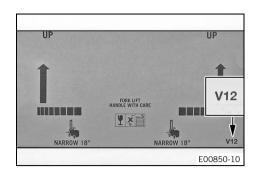


- Position the vehicle on a lift stand.
- Check the vehicle for transport damage.
- Remove the headlight mask with the headlight. (Fig. 19)





 Position the turn signal indicator lamp 1 in the speedometer bracket.



#### Condition

## Packaging V12

- Remove the box and the plastic packaging.



#### Info

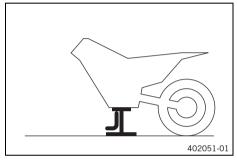
An assistant prevents the motorcycle from falling over

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

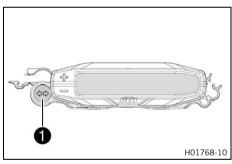
- Remove and unpack the separate enclosure and attachments. Check that the scope of supply is complete using the enclosed packing list.
- Remove the two cable ties on the triple clamp.
- Have a lift stand available.

## Lift stand (78129955100)

- Together with an assistant, take the vehicle off the pallet.
- Position the vehicle on a lift stand.
- Check the vehicle and attachments for transport damage.



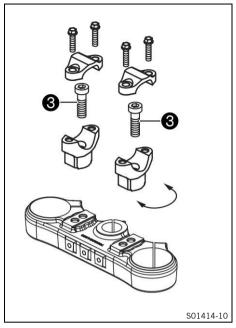
Position the turn signal indicator lamp 
 in the speedometer bracket.



- 402736-10
- Position the connector retainer and speedometer on the upper triple clamp.
- Mount and tighten screws 2.
   Guideline

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

- Route the clutch line with the clutch master cylinder toward the front between the upper and lower triple clamps.
- Install the fork legs. (🕮 p. 23)





#### (EXC-F EU/AU/BR/US)

- Take off screws 3 and handlebar supports.
- Move the handlebar supports to the desired position and mount and tighten screws 3.

## Guideline

Screw, handle-	M10	40 Nm (29.5 lbf ft)
bar holder		Loctite®243™



#### Info

Position the left and right handlebar supports evenly.



# Warning

**Danger of accidents** A repaired handlebar poses a safety risk.

If the handlebar is bent or straightened, the material becomes fatigued. The handlebar may break as a result.

- Change the handlebar if the handlebar is damaged or bent.
- Position the handlebar.



#### Info

Make sure the cables and wiring are positioned correctly.

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

## Guideline

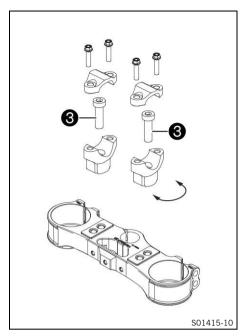
Screw, handlebar	M8	20 Nm
clamp		(14.8 lbf ft)



#### Info

The markings on the handlebar should be at the center of the handlebar clamps.

Keep the gap widths equal when tightening.





## (EXC-F Six Days)

- Remove screws 3 and handlebar supports.
- Move the handlebar supports to the desired position and mount and tighten screws 3.

## Guideline

Screw, handle-	M10	40 Nm (29.5 lbf ft)
bar holder		Loctite®243™



#### Info

Position the left and right handlebar supports evenly.



# Warning

**Danger of accidents** A repaired handlebar poses a safety risk.

If the handlebar is bent or straightened, the material becomes fatigued. The handlebar may break as a result.

- Change the handlebar if the handlebar is damaged or bent.
- Position the handlebar.



#### Info

Make sure the cables and wiring are positioned correctly.

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

## Guideline

Screw, handlebar	M8	20 Nm
clamp		(14.8 lbf ft)



#### Info

The markings on the handlebar should be at the center of the handlebar clamps.

Keep the gap widths equal when tightening.



Position the controls on the right half of the handlebar.



## (EXC-F EU/AU/BR, EXC-F Six Days)

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



#### (EXC-F Six Days)



# Warning

Voiding of the government approval for road use and the insurance coverage — If the combination switch is installed, the vehicle's approval for road use is invalidated.

- Only operate the vehicle in closed-off areas remote from public road traffic if the combination switch is installed.
- (Optional) Mount combination switch on the left side.



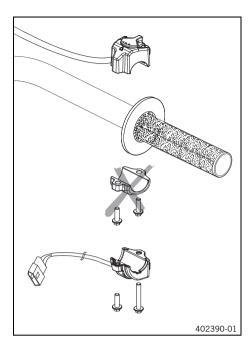
# Info

The figure shows a possible installation position of the left side combination switch.



## (EXC-F US)

Position the controls on the left half of the handlebar.



# (EXC-F EU/AU/BR, EXC-F Six Days)

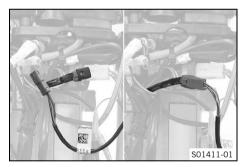
Mount the turn signal switch.



# Condition

# Packaging V12

- Join all plug-in connectors to the plug-in holder.
- Route the cable without tension and secure with cable tie.



# (EXC-F Six Days)



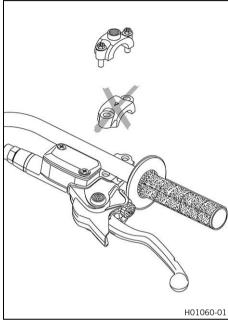
# Warning

Voiding of the government approval for road use and the insurance coverage If the combination switch is installed, the vehicle's approval for road use is invalidated.

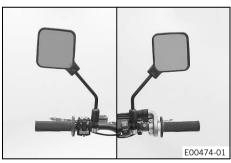
- Only operate the vehicle in closed-off areas remote from public road traffic if the combination switch is installed.
- (Optional) Remove the protection cap and join the plug-in connector of the left combination switch.



 Route the cable without tension and secure with cable ties and cable holder.



Mount the mirror clamps on both sides.



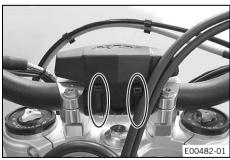
Mount both rear mirrors with the adapter.



- Preassemble the hand guards on the left and right.



- Mount the left hand guard.
- Mount the right hand guard.



- Secure the handlebar cushion with two cable ties.
- Install front fender. (🕮 p. 25)

# (EXC-F EU/AU/US, EXC-F Six Days)

- Remove the battery. ( p. 26)
- Recharge the battery. (🕮 p. 29)

#### (EXC-F BR)



# 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 batterv.
- 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. 30)

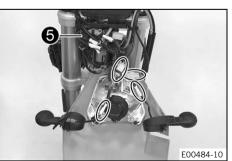
#### (EXC-F US)

- Install the headlight mask with the headlight. (🕮 p. 20)

# (EXC-F EU/AU/BR, EXC-F Six Days)

- Position turn signal cable harness.
- Insert the indicator lamp with the black and violet cable colors into socket 4.





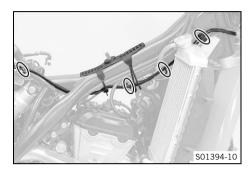
- Position turn signal on the headlight mask on both sides, mount nuts with washers and tighten.
- Connect the plug-in connector of the right turn signal using the black and brown cables of the turn signal cable harness.
- Connect the plug-in connector of the left turn signal using the violet and brown cable colors of the turn signal cable harness.



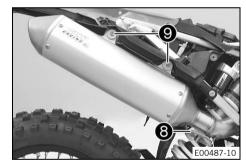
#### Info

Pay attention to where the brake line is routed when doing so.

- Connect plug-in connector of the headlight.
- Connect plug-in connector of the turn signal switch.
- Secure turn signal relay **5** with a cable tie and plug in the connector.
- Install the headlight mask with the headlight. (🕮 p. 20)
- Route the turn signal cable harness from the front to the back as far as the battery compartment.
- Position and secure turn signal cable harness using cable ties to the main wiring harness under the rubber bands of fuel tank support.



- Remove screw **6**.
- Remove screw 7.
- Pull off the side cover in area (A) and area (B) and remove it toward the rear.

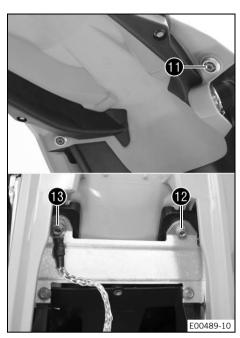


Detach spring 8.

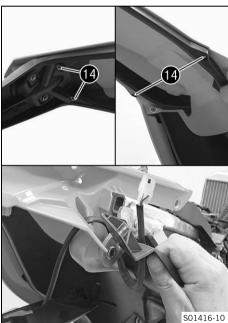
Spring hook (50305017000)



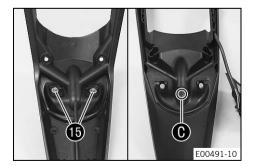
- Pull off engine electronics control unit from the holder and hang it to the side.
- Disconnect plug-in connector 10 on main wiring harness and take off.
- Connect turn signal cable harness plug-in connector to the main wiring harness plug-in connector.



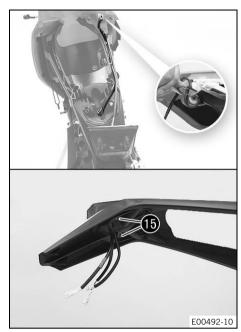
- Remove screw with the collar bushing.
- Remove screw 12.
- Remove screw (3) with negative cable and contact disk.

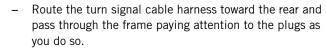


- Remove screws 14.
- Carefully pull the tail light cable out of the frame, paying attention to the plug as you do so.
- Take off license plate holder with tail light toward the rear.

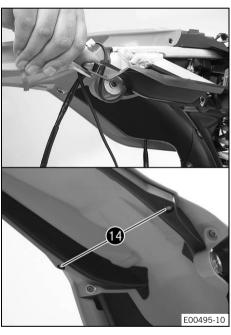


- Remove screws **15** and hang the tail light to the side.
- Drill a hole at the marking **()** to the size of the marking.

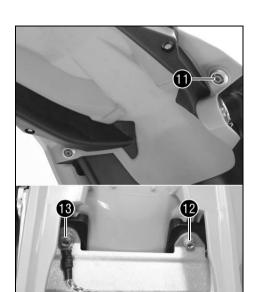


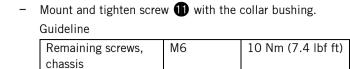


- Route turn signal cable harness on the license plate holder and pass turn signal cable harness through the drill hole.
- Position tail light on license plate holder, and mount and tighten screws 15.



- Carefully pass the tail light cable through the frame, paying attention to the plug as you do so.
- Position license plate holder on the rear.
- Mount and tighten screws 14.





Mount and tighten screw 12.

Guideline

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

Mount and tighten screw 13 with negative cable and contact disk.

Guideline

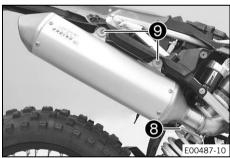
Remaining screws,	M6	10 Nm (7.4 lbf ft)
chassis		



- Connect the tail light plug-in connector to the main wiring harness plug-in connector.
- Mount engine electronics control unit on the holder.



The wiring harness runs under the engine electronics control unit.



- Position the main silencer. Mount screws **9** with the washers, but do not tighten yet.
- Attach spring 8.

Spring hook (50305017000)

Tighten screws **9**.

Guideline

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

- Attach the side cover in area (A) and engage it in area (B).
- Mount and tighten screw 7.

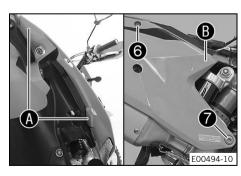
Guideline

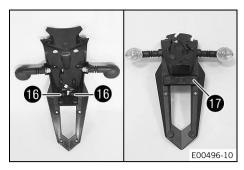
Screw, sub-	M8	35 Nm (25.8 lbf ft)
frame		Loctite®2701™

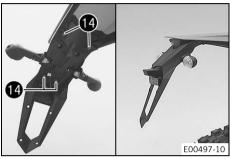
Mount and tighten screw **6**. Guideline

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

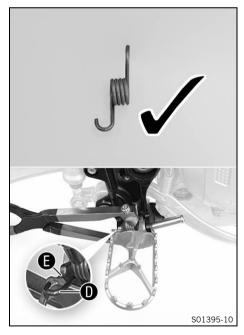
- Install the battery. (
  p. 28)
- Install the fuel tank. (
  p. 34)











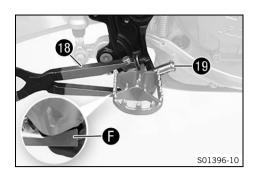
- Position turn signal on both sides, mount nuts with washers and tighten.
- Position license plate lamp on the license plate holder, and mount and tighten screws 6.
- Pass cable through the license plate holder.
- Position license plate holder on the license plate holder.
- Join the plug-in connector of the license plate lamp.
- Connect the plug-in connector of the left turn signal which is marked red.
- Connect the plug-in connector of the right turn signal which is marked green.
- Mount and tighten screws 14.
- Position the right footrest and pin.



### Info

Only insert the pin to the extent that the spring can still be mounted.

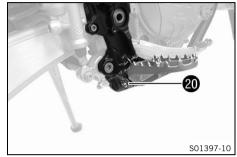
- Position spring as shown.
  - ✓ Spring **①** engages in area **②**.



- Press the spring with special tool 18.

Pliers for footrest spring (79029083000)

- ✓ The special tool is applied to area 
   on the footrest.
- Mount pin 📵.



- Mount the washer and split pin  ${f 20}$ .

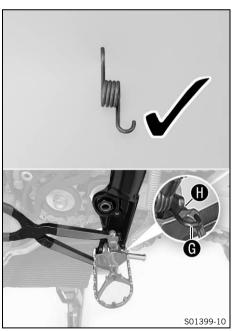


- Position the left footrest and pin.

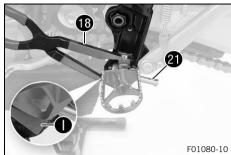


#### Info

Only insert the pin to the extent that the spring can still be mounted.



- Position spring as shown.
  - ✓ Spring **G** engages in area **(**1).



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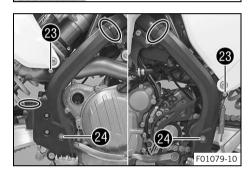
F01081-10

- Press the spring with special tool  $oxed{18}$ .

Pliers for footrest spring (79029083000)

- ✓ The special tool is applied to area 
   on the footrest.
- Mount pin 🗿.





- Position the frame protectors on both sides.
- Mount and tighten screws 23.
   Guideline

Screw, frame protector M5 3 Nm (2.2 lbf ft)

Mount and tighten screws with the washers.
 Guideline

Screw, frame protector M5 3 Nm (2.2 lbf ft)

Mount the cable tie(s).

#### (EXC-F AU, EXC-F Six Days)

- Install the engine guard. (≅ p. 37)
- Unpack and mount the KTM PowerParts included in the delivery (optional).



#### Info

Read the accompanying **KTM PowerParts** fitting instructions.

- Apply the sticker included in the delivery (optional).

- Set the clock. (
   p. 40)
- Position all controls in their exact positions on the handlebar.
   Tighten all screws.
- Prepare the vehicle according to the specifications in the KTM Dealer.net for handover to the customer.

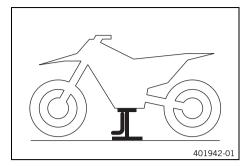


#### Info

Transport mode must be deactivated to be able to start the motorcycle.

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# 3.1 Raising the motorcycle with the lift stand



#### Note

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

- Park the vehicle on a firm and level surface.
- Raise the motorcycle at the frame underneath the engine.

Lift stand (78129955100)

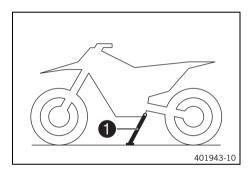
- ✓ Neither wheel is in contact with the ground.
- Secure the motorcycle against falling over.

# 3.2 Removing the motorcycle from the lift stand

## Note

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

Park the vehicle on a firm and level surface.



- Remove the motorcycle from the lift stand.
- Remove the lift stand.
- To park the motorcycle, press side stand 1 to the ground with your foot and lean the motorcycle on it.



#### Info

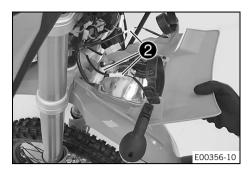
While riding, the side stand must be folded up and secured with the rubber band.

# 3.3 Removing the headlight mask with the headlight

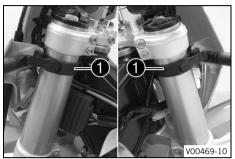


# (EXC-F EU/AU/BR, EXC-F Six Days)

- Detach the brake line and wiring harness from the headlight mask.
- Release rubber bands 1. Slide the headlight mask up and swing it forward.

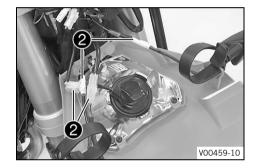


 Detach plug-in connectors 2 and take off the headlight mask with the headlight.



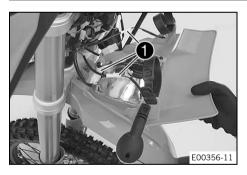
#### (EXC-F US)

- Detach the brake line and wiring harness from the headlight mask.
- Release rubber bands 1. Slide the headlight mask up and swing it forward.



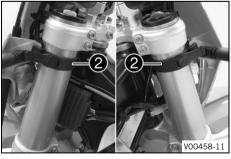
 Detach plug-in connectors 2 and take off the headlight mask with the headlight.

# 3.4 Installing the headlight mask with the headlight

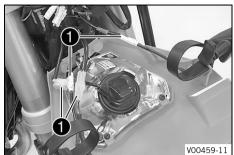


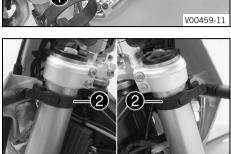
# Main work (EXC-F EU/AU/BR, EXC-F Six Days)

Connect plug-in connectors 1.



- Position the headlight mask and fix it with rubber bands 2.
  - ✓ The holding lugs engage in the fender.
- Position the brake line and wiring harness in the brake line guide.





#### (EXC-F US)

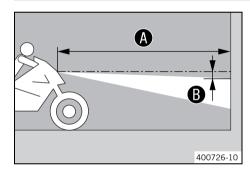
Connect plug-in connectors 1.

- Position the headlight mask and fix it with rubber bands 2.
  - ✓ The holding lugs engage in the fender.
- Position the brake line and wiring harness in the brake line guide.

#### **Finishing work**

- Check the headlight setting. (@ p. 21)

# 3.5 Checking the headlight setting



- Position the vehicle upright on a horizontal surface in front of a light wall and make a mark at the height of the center of the low beam headlight.
- Make another mark at a distance 
   B under the first mark.
   Guideline

Distance **B** 5 cm (2 in)

Position the vehicle vertically at a distance **(A)** away from the wall.

Guideline

Distance A 5 m (16 ft)

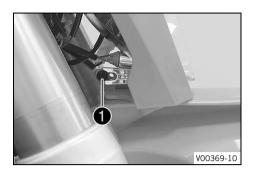
- The rider now sits down on the motorcycle.
- Switch on the low beam.
- Check the headlight setting.

The boundary between light and dark must be exactly on the lower mark for a motorcycle with rider.

- » If the light-dark border does not meet specifications:

4

# 3.6 Adjusting the headlight range



#### Preparatory work

Check the headlight setting. (
 p. 21)

#### Main work

- Loosen screw 1.
- Adjust the headlight range by pivoting the headlight.
   Guideline

The boundary between light and dark must be exactly on the lower mark for a motorcycle with driver. The boundary between light and dark must be exactly on the lower marking for a motorcycle with rider (attached during checking the headlight setting).

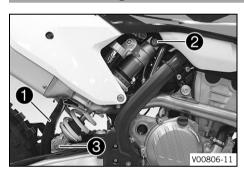


#### Info

A change in weight on the vehicle may require a correction of the headlight range.

Tighten screw 1.

# 3.7 Installing the shock absorber



#### Main work

Push splash protector 1 to the side and position the shock absorber. Mount and tighten screw 2.
 Guideline

Screw, top	M12	80 Nm (59 lbf ft)
shock absorber		Loctite®2701™

- Mount and tighten screw **3**.

Guideline

Screw, bottom	M12	80 Nm (59 lbf ft)
shock absorber		Loctite®2701™



#### Info

The heim joint for the shock absorber at the swing arm is Teflon coated. It must not be greased with grease or with other lubricants. Lubricants dissolve the Teflon coating, thereby drastically reducing the service life.

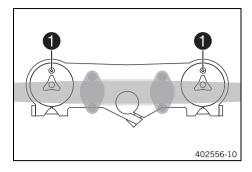
#### **Finishing work**

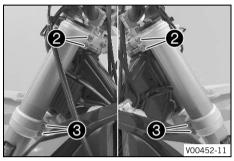
- Remove the motorcycle from the lift stand. (

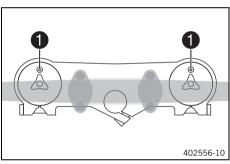
p. 19)

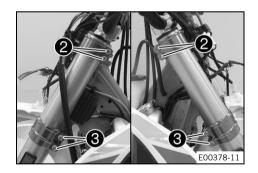
•

# 3.8 Installing the fork legs









## Main work (EXC-F EU/AU/BR/US)

- Position the fork legs.

✓ Bleeder screws are positioned toward the front.



## Info

Grooves are milled into the side of the upper end of the fork legs. The second milled groove (from the top) must be flush with the top edge of the upper triple clamp.

- Tighten screws 2.

# Guideline

Screw, top triple	M8	20 Nm
clamp		(14.8 lbf ft)

- Tighten screws **3**.

## Guideline

Screw, bottom triple	M8	15 Nm
clamp		(11.1 lbf ft)

#### (EXC-F Six Days)

- Position the fork legs.

✓ Bleeder screws are positioned toward the front.



#### Info

The rebound damping is located in right fork leg **REB** (red adjusting screw). The compression damping is located in left fork leg **COM** (white adjusting screw).

Grooves are milled into the side of the upper end of the fork legs. The second milled groove (from the top) must be flush with the top edge of the upper triple clamp.

- Tighten screws 2.

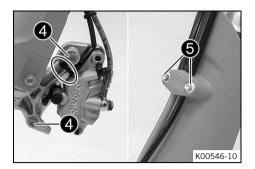
## Guideline

Screw, t	op triple	M8	17 Nm
clamp			(12.5 lbf ft)

- Tighten screws **3**.

# Guideline

Screw, bottom triple	M8	15 Nm
clamp		(11.1 lbf ft)



Position the brake caliper, and mount and tighten screws 4.
 Guideline

Screw, front	M8	25 Nm (18.4 lbf ft)
brake caliper		Loctite®243™

- Mount the cable tie(s).
- Position the brake line, wiring harness, and clamp. Mount and tighten screws **5**.

#### **Finishing work**

- Install the headlight mask with the headlight. (🕮 p. 20)
- Check the headlight setting. (🕮 p. 21)

# 3.9 Installing the front wheel

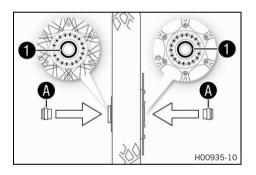


# Warning

**Danger of accidents** Oil or grease on the brake discs reduces the braking effect.

- Always keep the brake discs free of oil and grease.
- Clean the brake discs with brake cleaner when necessary.

V00364-11



- Check the wheel bearing for damage and wear.
  - If the wheel bearing is damaged or worn:
    - Change front wheel bearing.
  - Clean and grease shaft seal rings **1** and contact surface **A** of the spacers.

- Insert the spacers.
- Clean and grease the wheel spindle.

- Position the front wheel and insert the wheel spindle.
  - ✓ The brake linings are correctly positioned.
- Mount and tighten screw 2.

# Guideline

Screw, front wheel	M20x1.5	35 Nm (25.8 lbf ft)
spindle		

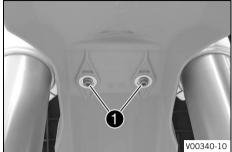
- Operate the hand brake lever several times until the brake linings are seated correctly against the brake disc.
- Operate the front brake and compress the fork a few times firmly.
  - ✓ The fork legs straighten.
- Tighten screws 3.

Guideline

Screw, fork stub	M8	15 Nm (11.1 lbf ft)

4

#### 3.10 Installing front fender





# Main work (EXC-F EU/AU/BR/US)

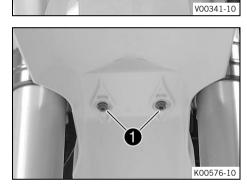
Position front fender. Mount and tighten screws 1. Guideline

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



Mount and tighten screws 2. Guideline

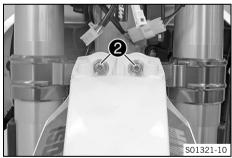
Remaining screws,	M6	10 Nm (7.4 lbf ft)
chassis		



# (EXC-F Six Days)

Position front fender. Mount and tighten screws 1. Guideline

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



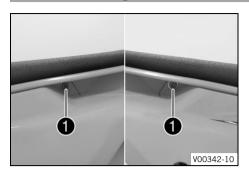
Mount and tighten screws 2. Guideline

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

# Finishing work

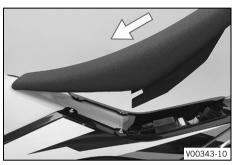
- Install the headlight mask with the headlight. (@ p. 20)
- Check the headlight setting. (🕮 p. 21)

# 3.11 Removing the seat

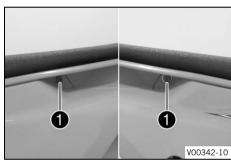


- Remove screws 1.
- Raise the rear of the seat, pull the seat back, and lift it off.

# 3.12 Mounting the seat



- Mount the front of the seat on the collar bushing of the fuel tank, lower the seat at the rear, and push the seat forward.
- Make sure that the seat is correctly locked in.



Mount and tighten screws 1.
 Guideline

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

# •

# 3.13 Removing the battery



# 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.

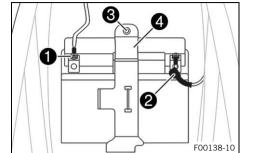
# Preparatory work (EXC-F EU/AU/BR, EXC-F Six Days)

#### (EXC-F US)

- Turn the key in the ignition lock to the position 

   while the engine is idling.
- Remove the seat. (🕮 p. 26)

Main work (EXC-F EU/AU/US, EXC-F Six Days)





# Warning

**Risk of injury** Batteries contain harmful substances.

- Keep batteries out of the reach of children.
- Keep sparks and open flames away from the batteries.
- Only charge batteries in well-ventilated rooms.
- Maintain a minimum clearance from inflammable materials when charging batteries.
   Minimum clearance 1 m (3 ft)
- Do not charge deeply discharged batteries if charge is already below the minimum voltage.
   Minimum voltage 9 V before the start of the charge
- Dispose of batteries with less than the minimum voltage correctly.
- Disconnect negative cable 1 from the battery.
- Pull back positive terminal cover 2 and disconnect the positive cable from the battery.
- Remove screw 3.
- Pull holding bracket 4 forward and remove battery toward the top.

#### (EXC-F BR)

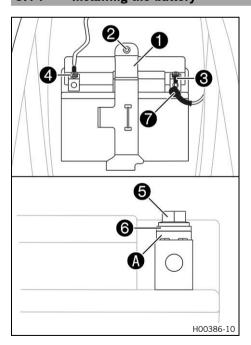


# Warning

**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 batterv.
- 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.
- Disconnect negative cable 1 from the battery.
- Pull back positive terminal cover 2 and disconnect the positive cable from the battery.
- Remove screw 3.
- Pull holding bracket 4 forward and remove battery toward the top.

# 3.14 Installing the battery



### Main work

Insert the battery into the battery compartment with the terminals facing forward and secure with holding bracket ①.

# (EXC-F EU/AU/US, EXC-F Six Days)

Battery (HJTZ5S-FP)

# (EXC-F BR)

Battery (YTX5L-BS)

Mount and tighten screw 2.

# Guideline

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

Connect positive cable 3 to the battery.

# Guideline

Screw, battery termi-	M5	2.5 Nm
nal		(1.84 lbf ft)

- Slide positive terminal cover over the positive terminal.
- Connect negative cable 4 to the battery.

\_

#### Guideline

Screw, battery termi-	M5	2.5 Nm
nal		(1.84 lbf ft)

Contact disks (A) must be mounted under screws (5) and cable sockets (6) with the claws toward the battery terminal.

#### **Finishing work**

Mount the seat. (
 p. 26)

# 3.15 Recharging the battery (EXC-F EU/AU/US, EXC-F Six Davs)



#### Warning

Risk of injury Batteries contain harmful substances.

- Keep batteries out of the reach of children.
- Keep sparks and open flames away from the batteries.
- Only charge batteries in well-ventilated rooms.
- Maintain a minimum clearance from inflammable materials when charging batteries.

Minimum clearance

1 m (3 ft)

- Do not charge deeply discharged batteries if charge is already below the minimum voltage.
   Minimum voltage before the start of the charge 9 V
- Dispose of batteries with less than the minimum voltage correctly.



#### 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.

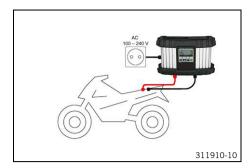
If the battery is depleted from starting the vehicle repeatedly, the battery must be charged immediately.

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.

# Preparatory work

- Remove the seat. (@ p. 26)



#### 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.

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 motorcycle is not in use	3 months	

# Finishing work

- Mount the seat. (
p. 26)

# 3.16 Recharging the battery (EXC-F BR)



#### 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.

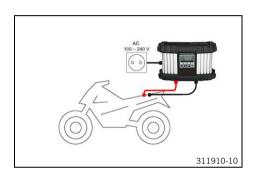
The charging level and the method of charging are very important for the service life of the battery. Rapid recharging with a high charging current shortens the service life of the battery.

If the charging current, charging voltage, or charging time are exceeded, the battery will be destroyed.

If the battery is depleted by repeated starting, the battery must be charged immediately.

If the battery is left in a discharged state for an extended period, over-discharge and sulfating occurs, destroying the battery.

The battery is maintenance-free, i.e., the acid level does not have to be checked.



## Preparatory work

- Remove the seat. (@ p. 26)

#### 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.

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	3 months	
when the motorcycle is not		
in use		

# Finishing work

Mount the seat. (
 p. 26)

#### 3.17 Removing the fuel tank



# **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.

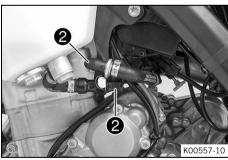
- Avoid skin, eye and clothing contact with fuel.
- Immediately consult a doctor if you swallow fuel.
- Do not inhale fuel vapors.
- In case of skin contact, rinse the affected area with plenty of water.
- Rinse the eyes thoroughly with water, and consult a doctor in case of fuel contact with the eyes.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



#### Preparatory work

Remove the seat. ( p. 26)

- Unplug connector **1** of the fuel pump.
- Remove the hose from the fuel tank breather.



# (EXC-F EU/AU/BR, EXC-F Six Days)

- Thoroughly clean the plug-in connection of the fuel line using compressed air.



## Info

Under no circumstances should dirt enter into the fuel line. Dirt in the fuel line clogs the injection valve!

Disconnect the plug-in connection of the fuel line.

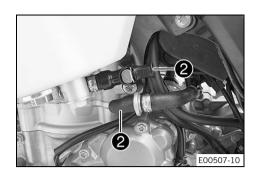


Remaining fuel may flow out of the fuel line.

Mount wash cap set 2.



Wash cap set (81212016100)



## (EXC-F US)

 Thoroughly clean the plug-in connection of the fuel line using compressed air.



## Info

Under no circumstances should dirt enter into the fuel line. Dirt in the fuel line clogs the injection valve!

- Disconnect the plug-in connection of the fuel line.



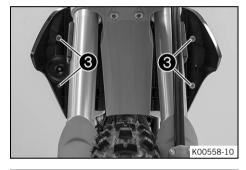
#### nfo

Remaining fuel may flow out of the fuel line.

Mount wash cap set 2.

Wash cap set (81212016100)

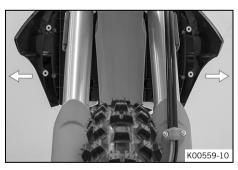
- Remove screws 3 with the collar bushings.
- Hang the horn and horn bracket to one side.



Remove screw 4 with the rubber bushing.



 Pull both spoilers off the sides of the radiator bracket and lift off the fuel tank.



# 3.18 Installing the fuel tank



# **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.

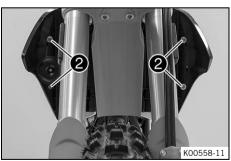
- Avoid skin, eye and clothing contact with fuel.
- Immediately consult a doctor if you swallow fuel.
- Do not inhale fuel vapors.
- In case of skin contact, rinse the affected area with plenty of water.
- Rinse the eyes thoroughly with water, and consult a doctor in case of fuel contact with the eyes.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

#### Main work

- Check throttle cable routing. ( p. 35)
- Position the fuel tank and fit the two spoilers to the sides in front of the radiator bracket.
- Make sure that no cables or throttle cables are trapped or damaged.
- Attach the fuel tank breather hose.
- Mount and tighten screw with the rubber bushing.

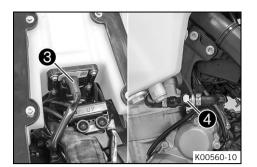
Remaining screws,	M6	10 Nm (7.4 lbf ft)
chassis		





- Position the horn with the horn bracket.
- Mount and tighten screws 2 with the collar bushings.
   Guideline

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



# (EXC-F EU/AU/BR, EXC-F Six Days)

- Plug in connector **3** for the fuel pump.
- Remove the wash cap set.
- Thoroughly clean the plug-in connection of the fuel line using compressed air.



### Info

Under no circumstances should dirt enter into the fuel line. Dirt in the fuel line clogs the injection valve!

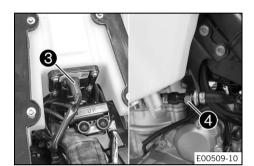
Lubricate the O-ring and connect plug-in connection 4 for the fuel line.





### Info

Route the cable and fuel line at a safe distance from the exhaust system.



# (EXC-F US)

- Plug in connector **3** for the fuel pump.
- Remove the wash cap set.
- Thoroughly clean the plug-in connection of the fuel line using compressed air.



### Info

Under no circumstances should dirt enter into the fuel line. Dirt in the fuel line clogs the injection valve!

Lubricate the O-ring and connect plug-in connection 4 for the fuel line.





### Info

Route the cable and fuel line at a safe distance from the exhaust system.

# **Finishing work**

Mount the seat. (
p. 26)

### 3.19 Checking throttle cable routing

# Preparatory work

- Remove the seat. (
  p. 26)
- Remove the fuel tank. (
  p. 32)



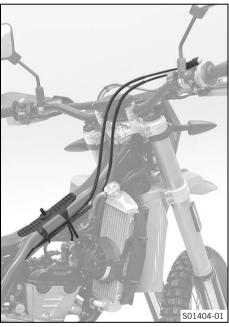
# Main work

# (EXC-F EU/AU/BR, EXC-F Six Days)

- Check throttle cable routing.

Both throttle cables must be routed, side by side, on the back of the handlebars and above the fuel tank bracket, to the throttle valve body. Both throttle cables must be secured behind the fuel tank contact area rubber band.

- » If the throttle cable routing is not as specified:
  - Correct throttle cable routing.



# (EXC-F US)

- Check throttle cable routing.

Both throttle cables must be routed, side by side, on the back of the handlebars and above the fuel tank bracket, to the throttle valve body. Both throttle cables must be secured behind the fuel tank contact area rubber band.

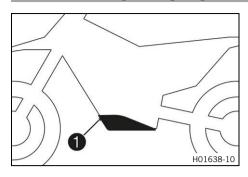
- » If the throttle cable routing is not as specified:
  - Correct throttle cable routing.

# Finishing work

- Mount the seat. (

  p. 26)

# 3.20 Installing the engine guard (EXC-F AU, EXC-F Six Days)



- Attach the engine guard on the frame at the rear and swing up at the front.
- Mount and tighten screws 1.

Guideline

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

3.21 Opening 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.

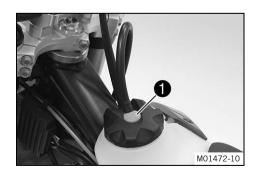
- Avoid skin, eye and clothing contact with fuel.
- Immediately consult a doctor if you swallow fuel.
- Do not inhale fuel vapors.
- In case of skin contact, rinse the affected area with plenty of water.
- Rinse the eyes thoroughly with water, and consult a doctor in case of fuel contact with the eyes.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

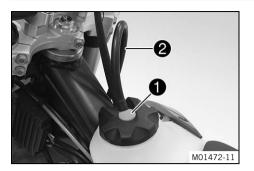
Do not allow fuel to enter the groundwater, the soil, or the sewage system.



- Press release button **1**, turn filler cap counterclockwise and lift it upwards and remove.

•

### 3.22 **Closing filler cap**



Replace the filler cap and turn clockwise until the release button 1 locks in place.



### Info

Route the fuel tank breather hose **2** without kinking.



### 3.23 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.

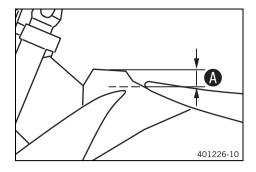
In some countries and regions, the available fuel quality and cleanliness may not be sufficient. This will result in problems with the fuel system.

Refuel only with clean fuel that meets the specified standards.



**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.



Fill the fuel tank with fuel up to level A.
 Guideline

Level (A)		35 mm (1.38 in)	
Total fuel tank capacity, approx.	8.5 I (2.25	5 US gal)	Super unleaded (ROZ 95/RON 95/PON 91) (@ p. 44) (EXC-F EU/AU/US, EXC-F Six Days)
Total fuel tank capacity, approx.			Super unleaded, type C (ROZ 95/RON 95/PON 91) (IPP p. 44) (EXC-F BR)

– Close the filler cap. (🕮 p. 38)

# 3.24 Setting the kilometers or miles

TR1 TR2 A1 A2 S1 S2

LAP CLK H

400329-01

OD0



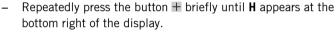
### Info

 $\geqslant \overset{\backslash \, | \, /}{\mathsf{Km/h}} \quad \overset{\backslash \, | \, /}{\mathsf{Mph}} \leqslant$ 

If you change the unit, the value **0D0** is retained and converted accordingly. The values **TR1**, **TR2**, **A1**, **A2** and **S1** are cleared when the unit of measure is changed.

### Condition

The motorcycle is stationary.



- Press the button + for 2-3 seconds.
  - ✓ The Setup menu is displayed and the active functions are shown.

# Setting the Km/h

Press the button ±.

# Setting the Mph

- Press the button ■.
- Wait 3 5 seconds.
  - ✓ The settings are stored.



# Info

If no button is pressed for 10 -12 seconds, or if an impulse comes from the wheel speed sensor, the settings are automatically saved and the setup menu is closed.

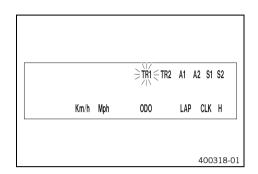
4

# 3.25 Adjusting the combination instrument



### Info

When the vehicle is delivered, only the SPEED/H and SPEED/ODO display modes are activated.



### Condition

The motorcycle is stationary.

- Press the button 

  for 2–3 seconds.
  - The Setup menu is displayed and the active functions are shown.



### Info

If no button is pressed for 10–12 seconds, the settings are automatically saved.

If no button is pressed for 20 seconds, or if an impulse comes from the wheel speed sensor, the settings are automatically saved and the setup menu is closed.

- - ✓ The selected function flashes.

### Activating the function

- Press the button +.
  - The symbol continues to appear in the display and the next function appears.

# **Deactivating a function**

- Press the button =.
  - The symbol disappears in the display and the next function appears.

# 3.26 Setting the clock

# 0-24 18: 2:47

400330-01

### Condition

The motorcycle is stationary.

- Press the button 

  for 2–3 seconds.
  - ✓ The hour display flashes.
- Wait 3 5 seconds.
  - ✓ The next segment of the display flashes and can be set.



# Info

The seconds can only be set to zero. If no button is pressed for 15 -20 seconds, or if an impulse comes from the wheel speed sensor, the settings are automatically saved and the setup menu is closed.

4

# 4.1 Chassis tightening torques

Screw, active carbon filter (EXC-	-	5 Nm (3.7 lbf ft)
F US)		
Screw, pressure regulator	EJOT PT® K60x25-Z	2 Nm (1.5 lbf ft)
Screw, seat fixing	EJOT EJOFORM PT® K60x23/18	2.5 Nm (1.84 lbf ft)
Screw, emergency OFF switch	M4	1 Nm (0.7 lbf ft)
Screw, fixed grip	M4	5 Nm (3.7 lbf ft)
		Loctite®243™
Spoke nipple, front wheel	M4.5	6 Nm (4.4 lbf ft)
Spoke nipple, rear wheel	M4.5	6 Nm (4.4 lbf ft)
Remaining nuts, chassis	M5	5 Nm (3.7 lbf ft)
Remaining screws, chassis	M5	5 Nm (3.7 lbf ft)
Screw, battery terminal	M5	2.5 Nm (1.84 lbf ft)
Screw, intake air temperature sen-	M5	3.5 Nm (2.58 lbf ft)
sor	145	1.11 (0.7.11(0)
Screw, light switch	M5	1 Nm (0.7 lbf ft)
Screw, shock absorber adjusting ring	M5	5 Nm (3.7 lbf ft)
Nut, cable on starter motor	M6	4 Nm (3 lbf ft)
Remaining nuts, chassis	M6	10 Nm (7.4 lbf ft)
Remaining screws, chassis	M6	10 Nm (7.4 lbf ft)
Screw, ball joint of push rod on	M6	10 Nm (7.4 lbf ft)
foot brake cylinder		Loctite®243™
Screw, chain sliding guard	M6	14 Nm (10.3 lbf ft) <b>Loctite®243™</b>
Screw, front brake disc	M6	14 Nm (10.3 lbf ft)  Loctite®243™
Screw, rear brake disc	M6	14 Nm (10.3 lbf ft)  Loctite®243™
Screw, throttle grip	M6	5 Nm (3.7 lbf ft)
Fuel connection on fuel pump	M8	10 Nm (7.4 lbf ft)
Nut, foot brake lever	M8	15 Nm (11.1 lbf ft)
Nut, foot brake lever stop	M8	20 Nm (14.8 lbf ft)
Nut, rear sprocket screw	M8	35 Nm (25.8 lbf ft)
•		Loctite®2701™
Nut, rim lock	M8	12 Nm (8.9 lbf ft)
Remaining nuts, chassis	M8	25 Nm (18.4 lbf ft)
Remaining screws, chassis	M8	25 Nm (18.4 lbf ft)
Screw, bottom triple clamp (EXC-F Six Days)	M8	15 Nm (11.1 lbf ft)
Screw, bottom triple clamp (EXC-F EU/AU/BR/US)	M8	15 Nm (11.1 lbf ft)
Screw, chain sliding piece	M8	15 Nm (11.1 lbf ft)
Screw, engine brace	M8	25 Nm (18.4 lbf ft)  Loctite®2701™
Screw, fork stub	M8	15 Nm (11.1 lbf ft)

Screw, front brake caliper	M8	25 Nm (18.4 lbf ft)  Loctite®243™
Screw, handlebar clamp	M8	20 Nm (14.8 lbf ft)
Screw, manifold on cylinder head brace	M8	15 Nm (11.1 lbf ft)
Screw, side stand attachment	M8	35 Nm (25.8 lbf ft)
Screw, subframe	M8	35 Nm (25.8 lbf ft) <b>Loctite®2701™</b>
Screw, top steering stem (EXC-F Six Days)	M8	17 Nm (12.5 lbf ft)  Loctite®243™
Screw, top steering stem (EXC-F EU/AU/BR/US)	M8	20 Nm (14.8 lbf ft)
Screw, top triple clamp (EXC-F Six Days)	M8	17 Nm (12.5 lbf ft)
Screw, top triple clamp (EXC-F EU/AU/BR/US)	M8	20 Nm (14.8 lbf ft)
Engine attachment bolt	M10	60 Nm (44.3 lbf ft)
Remaining nuts, chassis	M10	45 Nm (33.2 lbf ft)
Remaining screws, chassis	M10	45 Nm (33.2 lbf ft)
Screw, handlebar holder	M10	40 Nm (29.5 lbf ft) <b>Loctite®243™</b>
Nut, fuel pump fixation	M12	15 Nm (11.1 lbf ft)
Screw, bottom shock absorber	M12	80 Nm (59 lbf ft) <b>Loctite®2701™</b>
Screw, top shock absorber	M12	80 Nm (59 lbf ft)  Loctite®2701™
Nut, swingarm pivot	M16x1.5	100 Nm (73.8 lbf ft)
SAS valve	M16x1.5	15 Nm (11.1 lbf ft)
Nut, rear wheel spindle	M20x1.5	80 Nm (59 lbf ft)
Screw, front wheel spindle	M20x1.5	35 Nm (25.8 lbf ft)
Screw, top steering head	M20x1.5	12 Nm (8.9 lbf ft)
Screw-in nozzles, cooling system	M20x1.5	12 Nm (8.9 lbf ft)  Loctite®243™

# 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

ANP (Agência Nacional do Petróleo) #57 (ROZ 95/RON 95/PON 91)

### Cuidalina

- 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).

# Long-life grease

Recommended supplier Motorex®

- Bike Grease 2000





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