

- Mount engine control unit 11.

Finishing work

- Mount the seat. (📖 p. 55)
- Set the clock. (📖 p. 28)



15.3 Charging the 12-V battery 🛠️



Warning

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

- Keep 12 V 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 12 V battery.
- Only charge 12 V 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.



Note

Environmental hazard 12 V batteries contain environmentally hazardous materials.

- Do not dispose of 12 V batteries as household waste.
- Dispose of 12 V batteries at a collection point for used batteries.



Note

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 12-V battery, it discharges steadily each day.

The charging level and the method of charging are very important for the service life of the 12-V battery.

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

If the charging current, charging voltage, or charging time is exceeded, electrolyte escapes through the safety valves. This reduces the capacity of the 12-V battery.

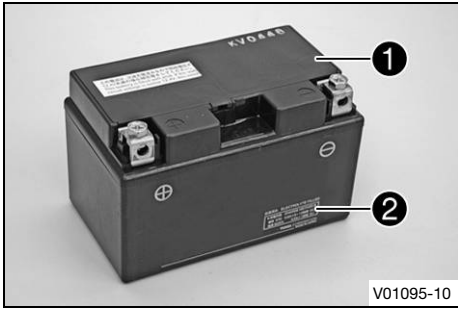
If the 12-V battery is discharged by repeated starting, charge the 12-V battery immediately.

If the 12-V battery is left in a discharged state for an extended period, it will become deeply discharged and sulfating occurs, thus destroying the battery.

The 12-V battery is maintenance-free. The acid level does not have to be checked.

Preparatory work

- Remove the seat. (📖 p. 55)
- Remove the 12-V battery. 🛠️ (📖 p. 87)



Main work

- Connect a battery charger to the 12-V battery. Switch on the battery charger.

Guideline

The battery charger must be suitable for the 12-V battery.



Info

Never remove cover ①.
Charge the 12-V battery to a maximum of 10% of the capacity specified on battery housing ②.

- Switch off the battery charger after charging and disconnect from the 12-V battery.

Guideline

The charging current, charging voltage, and charging time must not be exceeded.	
Recharge the 12-V battery regularly when the motorcycle is not being used	3 months

Finishing work

- Install the 12-V battery. (🔧 p. 88)
- Mount the seat. (📖 p. 55)
- Set the clock. (🕒 p. 28)

15.4 Changing the main fuse



Warning

Fire hazard Incorrect fuses overload the electrical system.

- Only use fuses with the required ampere value.
- Do not bypass or repair fuses.



Info

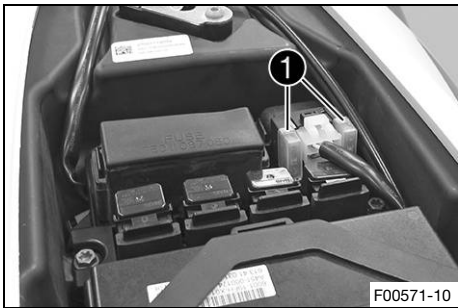
The main fuse protects all electrical power consumers of the vehicle. It is in the housing of the starter relay next to the 12-V battery.

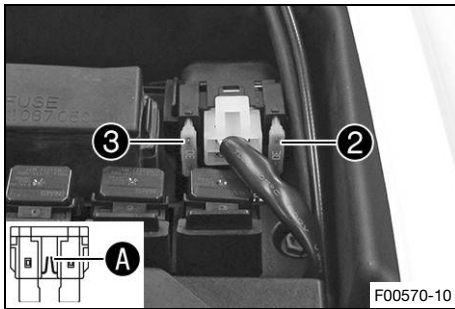
Preparatory work

- Remove the seat. (📖 p. 55)

Main work

- Take off protection caps ①.





- Remove a defective main fuse ② with needle nose pliers.



Info

A faulty fuse has a burned-out fuse wire A. A spare fuse ③ is located in the starter relay.

- Insert a new main fuse.

Fuse (58011109130) (p. 126)



Info

Insert a new spare fuse into the starter relay to have it available when needed.

- Check that the electrical system is functioning properly.
- Mount the protection caps.

Finishing work

- Mount the seat. (p. 55)
- Set the clock. (p. 28)



15.5 Changing the ABS fuses



Warning

Fire hazard Incorrect fuses overload the electrical system.

- Only use fuses with the required ampere value.
- Do not bypass or repair fuses.



Info

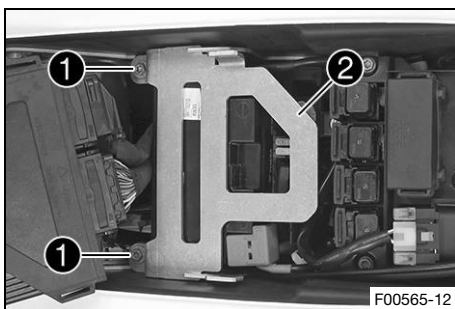
Two fuses for the ABS are located under the seat. These fuses protect the return pump and the hydraulic unit of the ABS. The third fuse, which protects the ABS control unit, is located in the fuse box.

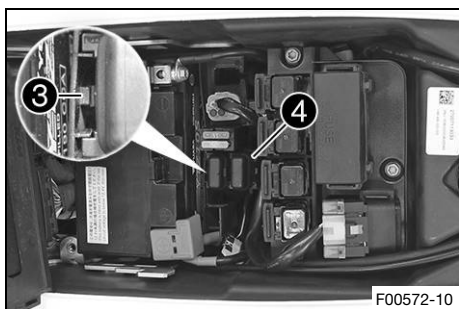
Preparatory work

- Remove the seat. (p. 55)
- Pull the engine control unit off the holder and set it to one side.

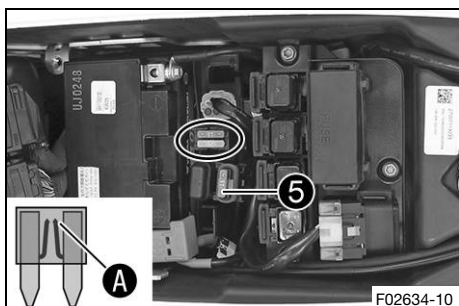
Main work

- Remove screws ①.
- Pull retaining bracket ② of the 12-V battery forward and remove it.





- Unlock holding lug ③ and lift off holder ④.



To change the fuse of the ABS hydraulic unit:

- Take off the protection cap and remove faulty fuse ⑤.



Info

A faulty fuse has a burned-out fuse wire **A**.

A spare fuse is located in the holder for ABS spare fuses.

- Insert the spare fuse with the correct rating.

Fuse (58011109115) (📖 p. 126)



Tip

Insert a spare fuse in the holder for ABS spare fuses so that it is available if needed.

- Mount the protection cap.

To change the fuse of the ABS return pump:

- Take off the protection cap and remove faulty fuse ⑥.



Info

A faulty fuse has a burned-out fuse wire **A**.

A spare fuse is located in the holder for ABS spare fuses.

- Insert the spare fuse with the correct rating.

Fuse (58011109125) (📖 p. 126)



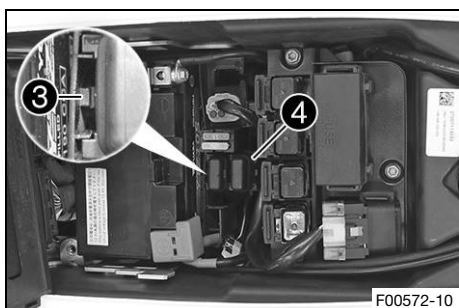
Tip

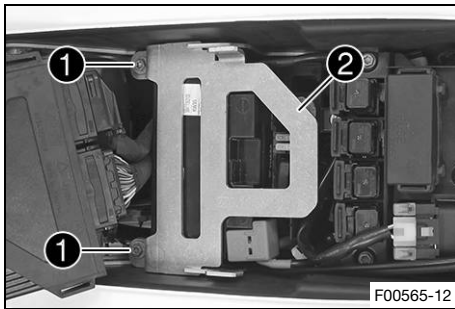
Insert a spare fuse in the holder for ABS spare fuses so that it is available if needed.

- Mount the protection cap.

- Position holder ④.

- ✓ Holding lug ③ engages audibly.





- Position retaining bracket **2** and mount and tighten screws **1**.

Guideline

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

- Position the engine control unit.
- Mount the seat. (p. 55)



15.6 Changing the fuses of individual electrical power consumers

**Info**

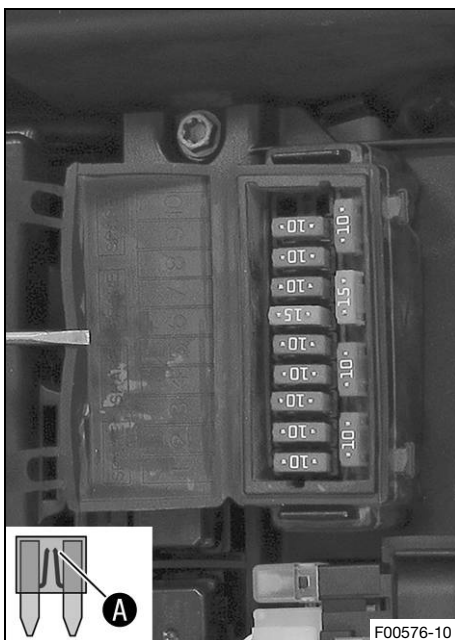
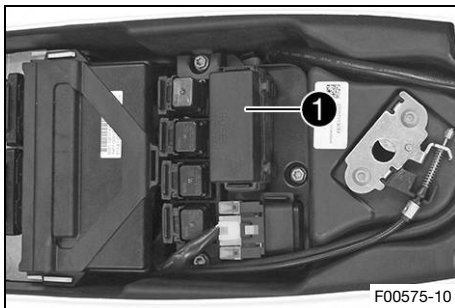
The fuse box containing the fuses of individual electrical power consumers is located under the seat.

Preparatory work

- Remove the seat. (p. 55)

Main work


- Open fuse box cover **1**.



- Remove the faulty fuse.


Guideline

Fuse 1 - 10 A - ignition
Fuse 2 - 10 A - ignition, combination instrument, engine control unit lambda sensor, ABS button
Fuse 3 - 10 A - fuel pump
Fuse 4 - 10 A - radiator fan
Fuse 5 - 10 A - horn, brake light, turn signal, oil pressure sensor
Fuse 6 - 15 A - high beam, low beam, position light, tail light, license plate lamp
Fuse 7 - 10 A - for auxiliary equipment (permanent positive)
Fuse 8 - 10 A - for auxiliary equipment (ignition plus)
Fuse 9 - 10 A - ABS control unit, diagnostics connector
Fuse 10 - not assigned
Fuse SPARE - 10 A/15 A - spare fuses



Info

A faulty fuse has a burned-out fuse wire **A**.




Warning

Fire hazard Incorrect fuses overload the electrical system.

- Only use fuses with the required ampere value.
- Do not bypass or repair fuses.

- Insert the spare fuse with the correct rating.

Fuse (75011088010) (📖 p. 126)
Fuse (75011088015) (📖 p. 126)



Tip

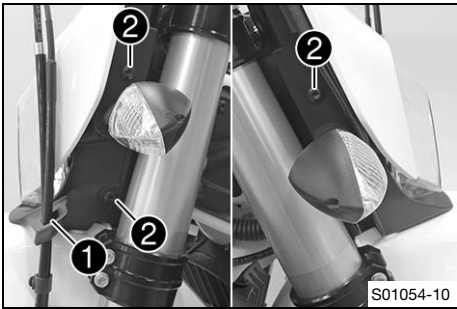
Put a spare fuse in the fuse box so that it is available if needed.

- Check the function of the electrical power consumer.
- Close the fuse box cover.

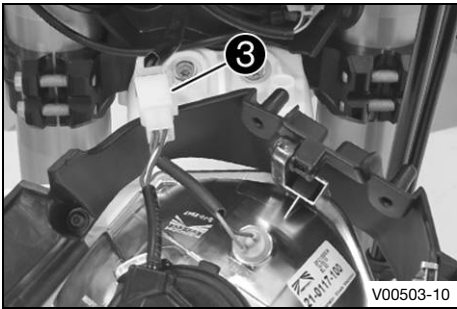
Finishing work

- Mount the seat. (📖 p. 55)

15.7 Removing the headlight mask with the headlight

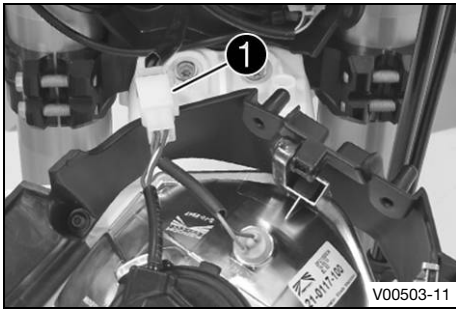


- Cover the fender with a cloth to protect it from damage.
- Detach the brake line and wiring harness from holder **1**.
- Remove screws **2** on both sides.
- Swivel the headlight mask forward.



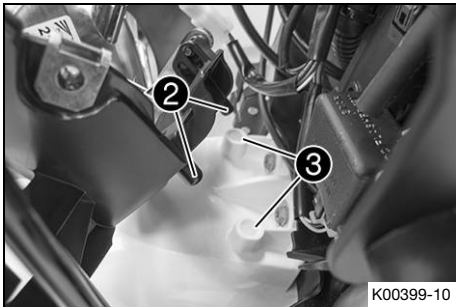
- Disconnect plug-in connector **3** of the headlight.
- Take off the headlight mask.

15.8 Installing the headlight mask with the headlight

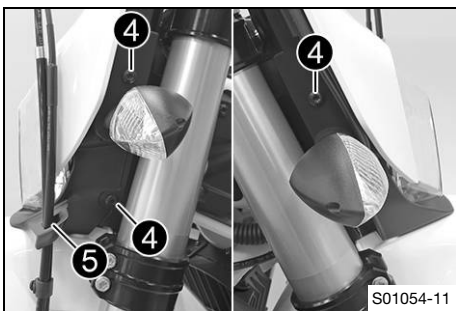


Main work

- Connect plug-in connector ① of the headlight.
- Check that the lighting is functioning properly.



- Remove the cloth from the fender and position the headlight mask.
- ✓ Both holding lugs ② engage in drilled holes ③ of the fender.



- Mount and tighten screws ④.

Guideline

Screw, headlight mask	M5	5 Nm (3.7 lbf ft)
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- Mount the brake line and wiring harness in holder ⑤.

Finishing work

- Check the headlight setting. (📖 p. 97)



15.9 Changing the headlight bulb

Note

Impairments to reflectors and lamps Grease on the reflector reduces the emitted light.

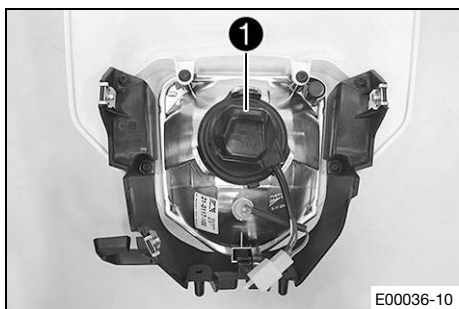
Grease on the bulb will evaporate due to the heat and be deposited on the reflector.

Grease residue on the bulb reduces heat dissipation and increases the heat of the bulb, thus reducing its service life.

- Clean and degrease the bulbs before mounting.
- Do not touch the bulbs with your bare hands.

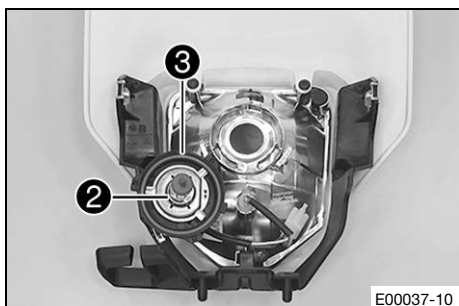
Preparatory work

- Remove the headlight mask with the headlight. (📖 p. 94)



Main work

- Turn protection cap **1** together with the underlying bulb socket counterclockwise all the way and remove it.



- Pull out headlight bulb **2**.
- Insert the new headlight bulb.

Headlight (H4/socket P43t) (p. 126)

- Insert the protection cap with the bulb socket into the reflector and turn it clockwise all the way.



Info

Ensure that O-ring **3** is seated properly.

Finishing work

- Install the headlight mask with the headlight. (p. 95)
- Check the headlight setting. (p. 97)

15.10 Changing the position light lamp

Note

Impairments to reflectors and lamps Grease on the reflector reduces the emitted light.

Grease on the bulb will evaporate due to the heat and be deposited on the reflector.

Grease residue on the bulb reduces heat dissipation and increases the heat of the bulb, thus reducing its service life.

- Clean and degrease the bulbs before mounting.
- Do not touch the bulbs with your bare hands.

Preparatory work

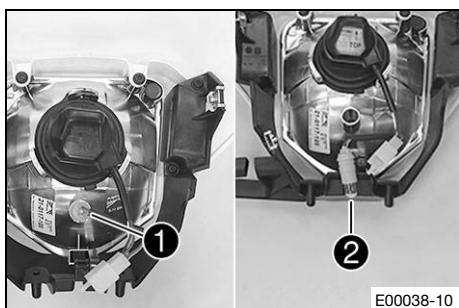
- Remove the headlight mask with the headlight. (p. 94)

Main work

- Pull bulb socket **1** out of the reflector.
- Pull position light lamp **2** out of the bulb socket.
- Insert a new position light lamp in the bulb socket.

Position light (W5W / socket W2.1x9.5d) (p. 126)

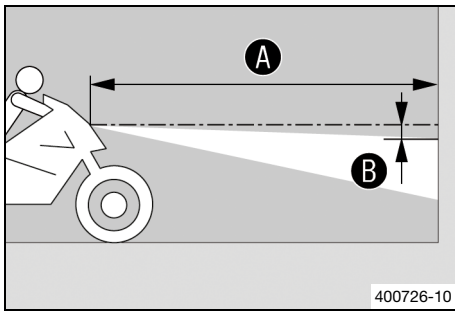
- Insert the bulb socket in the reflector.



Finishing work

- Install the headlight mask with the headlight. (p. 95)
- Check the headlight setting. (p. 97)

15.11 Checking the headlight setting



- Park the vehicle on a horizontal surface in front of a light-colored 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 marking.

Guideline

Distance B	5 cm (2 in)
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- Position the vehicle vertically at a distance **A** away from the wall.

Guideline

Distance A	5 m (16 ft)
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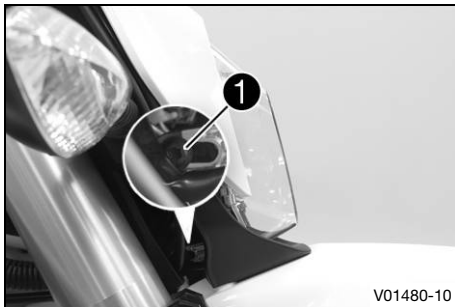
- The rider now mounts the motorcycle with luggage and passenger if applicable.
- Switch on the low beam.
- Check the headlight setting.

The light-dark boundary must be exactly on the lower marking when the motorcycle is ready to be operated with the rider mounted along with any luggage and a passenger if applicable.

- » If the boundary between light and dark does not meet specifications:
 - Adjust the headlight range. (📖 p. 97)



15.12 Adjusting the headlight range



Preparatory work

- Check the headlight setting. (📖 p. 97)

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 rider (instructions on how to apply the mark: Checking the headlight setting).



Info

If you have a payload, you may have to correct the headlight range.

- Tighten screw **1**.



15.13 Changing the turn signal bulb

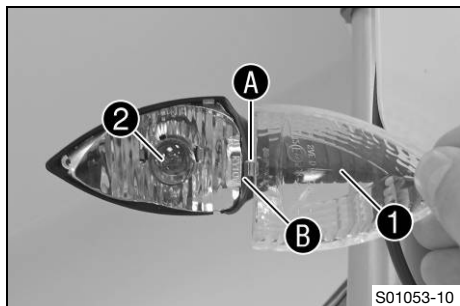
Note

Impairments to reflectors and lamps Grease on the reflector reduces the emitted light.

Grease on the bulb will evaporate due to the heat and be deposited on the reflector.

Grease residue on the bulb reduces heat dissipation and increases the heat of the bulb, thus reducing its service life.

- Clean and degrease the bulbs before mounting.
- Do not touch the bulbs with your bare hands.



- Remove the screw on the rear of the turn signal housing.
- Carefully remove turn signal glass ①.
- Press bulb ② carefully into the socket, turn it counterclockwise by about 30°, and take it out of the socket.



Info

Do not touch the reflector with your fingers and keep it free from grease.

- Push the new bulb gently into the socket and turn it clockwise all the way in.

Turn signal (RY10W/socket BAU15s) (p. 126)

- Check that the turn signal is functioning properly.
- Position the turn signal glass.

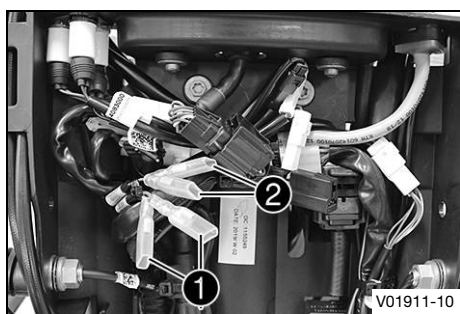


Info

Insert holding lug A into cut-out B.

- Insert the screw and first turn counterclockwise until it engages in the thread with a small jerk. Tighten the screw lightly.

15.14 ACC1 and ACC2



Installation location

- The power supplies ACC1 ① and ACC2 ② are located behind the headlight mask.