# **OWNER'S MANUAL**

**FE 250 EU** 

**FE 250 AUS** 

**FE 250 USA** 

# 2014

Art. no. 3802038en





Congratulations on your decision to purchase a HUSABERG motorcycle. You are now the owner of a state-of-the-art sports motorcycle that will give you enormous pleasure if you service and maintain it accordingly.

We wish you a lot of enjoyment in riding this vehicle.

Please enter the serial number of your vehicle below.

Chassis number (* p. 12)	Stamp of dealer
Engine number (* p. 12)	
Key number (FE 250 EU, FE 250 AUS) ( ₱ p. 12)	

The Owner's Manual contained the latest information for this model series at the time of going to print. Slight deviations resulting from continuing development and design of the motorcycles can, however, not be completely excluded.

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Issued by: TÜV Management Service

KTM-Sportmotorcycle AG / Division HUSABERG 5230 Mattighofen, Austria

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## 1.1 Symbols used

The meaning of specific symbols is described below.



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



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



All work marked with this symbol requires specialist knowledge and technical understanding. In the interest of your own safety, have these jobs performed by an authorized HUSABERG workshop. There, your motorcycle will be optimally cared for by specially trained experts using the specialist tools required.



Identifies a page reference (more information is provided on the specified page).

## 1.2 Formats used

The typographical formats used in this document are explained below.

**Specific name** Identifies a proprietary name.

Name® Identifies a protected name.

Brand™ Identifies a brand available on the open market.

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## 2.1 Use definition - intended use

#### (FE 250 EU. FE 250 AUS)

HUSABERG sport motorcycles are designed and built to withstand the normal stresses and strains of competitive use. The motorcycles comply with currently valid regulations and categories of the top international motorsport organizations.



#### Info

The vehicle should only be used by trained persons. The motorcycle is authorized for public road traffic in the homologous (reduced) version only.

In the derestricted version, the motorcycle must be used only on closed off properties remote from public road traffic. This motorcycle is designed for use in offroad endurance competition and not primarily for use in motocross.

#### (FE 250 USA)

HUSABERG sport motorcycles are designed and built to withstand the normal stresses and strains of competitive use. The motorcycles comply with currently valid regulations and categories of the top international motorsport organizations.



#### Info

The motorcycle may only be used in closed off areas remote from public road traffic.

This motorcycle is designed for use in offroad endurance competition and not primarily for use in motocross.

## 2.2 Safety advice

A number of safety instructions need to be followed to operate the vehicle safely. Therefore, read this manual carefully. The safety instructions are highlighted in the text and are referred to at the relevant passages.



#### Info

The vehicle has various information and warning labels at prominent locations. Do not remove information/warning labels. If they are missing, you or others may not recognize dangers and may therefore be injured.

## 2.3 Degrees of risk and symbols



#### Danger

Identifies a danger that will immediately and invariably lead to fatal or serious permanent injury if the appropriate measures are not taken.



## Warning

Identifies a danger that is likely to lead to fatal or serious injury if the appropriate measures are not taken.



#### Caution

Identifies a danger that may lead to minor injuries if the appropriate measures are not taken.

#### Note

Identifies a danger that will lead to considerable machine and material damage if the appropriate measures are not taken.



## Warning

Identifies a danger that will lead to environmental damage if the appropriate measures are not taken.

## 2.4 Tampering warning

Tampering with the noise control system is prohibited. Federal law prohibits the following acts or the causing thereof:

- 1 The removal or rendering inoperative by any person other than for purposes of maintenance, repair, or replacement, of any device or element of design incorporated into any new vehicle for the purpose of noise control prior to its sale or delivery to the ultimate purchaser or while it is in use, or
- 2 the use of the vehicle after such device or element of design has been removed or rendered inoperative by any person.

Among those acts presumed to constitute tampering are the acts listed below:

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1 Removal or puncturing of the main silencer, baffles, header pipes or any other components which conduct exhaust gases.

- 2 Removal or puncturing of parts of the intake system.
- 3 Lack of proper maintenance.
- 4 Replacing moving part of the vehicle, or parts of the exhaust or intake system, with parts other than those specified by the manufacturer.

## 2.5 Safe operation



## **Danger**

**Danger of accidents** Danger arising from the rider's judgement being impaired.

 Do not operate the vehicle while under the influence of alcohol, drugs and certain medications or physically or mentally impaired.



#### Danger

Danger of poisoning Exhaust gases are toxic and inhaling them may result in unconsciousness and/or death.

 When running the engine, always make sure there is sufficient ventilation, and do not start or run the engine in an enclosed space without an effective exhaust extraction system.



#### Warning

**Danger of burns** Some vehicle components become very hot when the vehicle is operated.

Do not touch hot components such as exhaust system, radiator, engine, shock absorber, and the brake system. Allow these
components to cool down before starting work on them.

Only operate the vehicle when it is in perfect technical condition, in accordance with its intended use, and in a safe and environmentally compatible manner.

An appropriate driver's license is needed to ride the vehicle on public roads.

Have malfunctions that impair safety promptly eliminated by an authorized HUSABERG workshop.

Adhere to the information and warning labels on the vehicle.

## 2.6 Protective clothing



#### Warning

Risk of injury Missing or poor protective clothing presents an increased safety risk.

Wear protective clothing (helmet, boots, gloves, pants and jacket with protectors) every time you ride the vehicle. Always
wear protective clothing that is in good condition and meets the legal requirements.

In the interest of your own safety, HUSABERG recommends that you only operate the vehicle while wearing protective clothing.

## 2.7 Work rules

Special tools are necessary for certain tasks. The tools are not contained in the vehicle but can be ordered under the number in parentheses. E.g.: bearing puller (15112017000)

During assembly, non-reusable parts (e.g. self-locking screws and nuts, seals and seal rings, O-rings, pins, lock washers) must be replaced by new parts.

In some instances, a thread locker (e.g. Loctite®) is required. The manufacturer instructions for use must be followed.

After disassembly, clean the parts that are to be reused and check them for damage and wear. Change damaged or worn parts. After you complete the repair or service work, check the operating safety of the vehicle.

## 2.8 Environment

If you use your motorcycle responsibly, you can ensure that problems and conflicts do not occur. To protect the future of the motorcycle sport, make sure that you use your motorcycle legally, display environmental consciousness, and respect the rights of others. When disposing of used oil, other operating and auxiliary fluids, and used components, comply with the laws and regulations of the respective country.

Because motorcycles are not subject to the EU regulations governing the disposal of used vehicles, there are no legal regulations that pertain to the disposal of an end-of-life motorcycle. Your authorized HUSABERG dealer will be glad to advise you.

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## 2.9 Owner's Manual

It is important that you read this Owner's Manual carefully and completely before making your first trip. The Owner's Manual contains useful information and many tips on how to operate, handle, and maintain your motorcycle. Only then will you find out how to customize the vehicle ideally for your own use and how you can protect yourself from injury.

Keep the Owner's Manual in an accessible place to enable you to refer to it as needed.

If you would like to know more about the vehicle or have questions on the material you read, please contact an authorized HUSABERG dealer.

The Owner's Manual is an important component of the vehicle and should be handed over to the new owner if the vehicle is sold.

## 3.1 Manufacturer and implied warranty

The work prescribed in the service schedule must be carried out by an authorized HUSABERG workshop only and confirmed in the customer's service booklet and in the **HUSABERG dealer.net**; otherwise, all manufacturer warranty claims shall be void. No manufacturer warranty claims can be considered for damage resulting from manipulations and/or alterations to the vehicle. Additional information on the manufacturer or implied warranty and the procedures involved can be found in the service booklet.

## 3.2 Operating and auxiliary substances



#### Warning

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

Do not allow fuel to get into the ground water, the ground, or the sewage system.

Use operating and auxiliary substances (such as fuel and lubricants) as specified in the Owner's Manual.

## 3.3 Spare parts, accessories

For your own safety, only use spare parts and accessory products that are approved and/or recommended by HUSABERG and have them installed by an authorized HUSABERG workshop. HUSABERG accepts no liability for other products and any resulting damage or loss.

Certain spare parts and accessory products are specified in parentheses in the descriptions. Your HUSABERG dealer will be glad to advise you.

The current **HUSABERG Pure Tech** parts for your vehicle can be found on the HUSABERG website. International HUSABERG website: www.husaberg.com

#### 3.4 Service

A prerequisite for perfect operation and prevention of premature wear is that the service, care, and tuning work on the engine and chassis is properly carried out as described in the Owner's Manual. Incorrect adjustment and tuning of the engine and chassis can lead to damage and breakage of components.

Use of the vehicle under difficult conditions, such as on sand or on wet and muddy surfaces, can lead to considerably more rapid wear of components such as the drive train, brake system, or suspension components. For this reason, it may be necessary to inspect or replace parts before the next scheduled service.

It is imperative that you adhere to the stipulated run-in times and service intervals. If you observe these exactly, you will ensure a much longer service life for your motorcycle.

## 3.5 Figures

The figures contained in the manual may depict special equipment.

In the interest of clarity, some components may be shown disassembled or may not be shown at all. It is not always necessary to disassemble the component to perform the activity in question. Please follow the instructions in the text.

## 3.6 Customer service

Your authorized HUSABERG dealer will be happy to answer any questions you may have on your vehicle and HUSABERG.

A list of authorized HUSABERG dealers can be found on the HUSABERG website.

International HUSABERG website: www.husaberg.com

# 4.1 View of vehicle, front left (example)



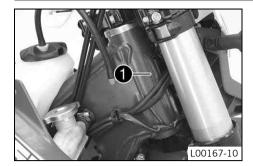
1	Filler cap
2	Air filter box lid
3	Shift lever (♥ p. 18)
4	Engine number (* p. 12)
5	Side stand (♥ p. 18)

# 4.2 View of vehicle, rear right (example)



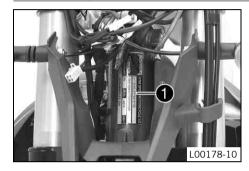
1	Fork compression adjustment
2	Kill switch (* p. 14)
2	Horn button (♥ p. 15)
2	Light switch (♥ p. 15)
2	Turn signal switch (* p. 15)
3	Emergency OFF switch (* p. 15)
3	Electric starter button (* p. 16)
4	Throttle grip (♥ p. 14)
5	Fork rebound adjustment
6	Shock absorber rebound adjustment
7	Level viewer for brake fluid, rear
8	Shock absorber compression adjustment
9	Level viewer, engine oil
10	Foot brake lever (* p. 18)

## 5.1 Chassis number



The chassis number • is stamped on the steering head on the right.

## 5.2 Type label (FE 250 EU, FE 250 AUS)



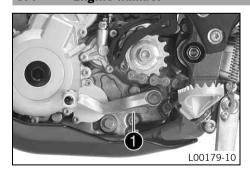
The type label • is fixed to the front of the steering head.

## 5.3 Key number (FE 250 EU, FE 250 AUS)



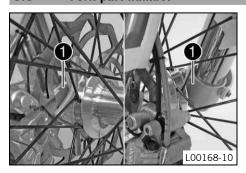
The key number **1** for the steering lock is stamped onto the key connector.

## 5.4 Engine number



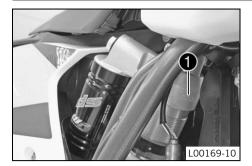
The engine number  $oldsymbol{0}$  is stamped on the left side of the engine under the engine sprocket.

## 5.5 Fork part number



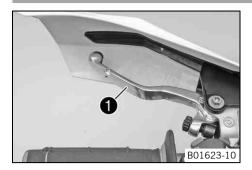
The fork part number • is stamped on the inner side of the fork stub.

## 5.6 Shock absorber part number



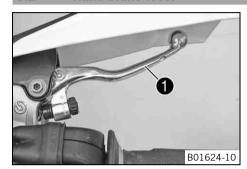
The shock absorber part number  $\pmb{\bullet}$  is stamped on the top of the shock absorber above the adjusting ring on the engine side.

## 6.1 Clutch lever



The clutch lever **1** is fitted on the left side of the handlebar. The clutch is hydraulically operated and self-adjusting.

## 6.2 Hand brake lever



Hand brake lever **1** is located on the right side of the handlebar. The hand brake lever is used to activate the front brake.

## 6.3 Throttle grip



The throttle grip **1** is fitted on the right side of the handlebar.

## 6.4 Kill switch (FE 250 EU, FE 250 AUS)



Kill switch • is fitted on the left side of the handlebar.

### Possible states

- Kill switch ⋈ in basic position the ignition circuit is closed in this position and the engine can be started.
- Kill switch ⋈ pressed the ignition circuit is open in this position, the engine goes out if it was running, or does not start if it was off.

## 6.5 Kill switch (FE 250 USA)



Kill switch **1** is fitted on the left side of the handlebar.

#### Possible states

- Kill switch ⋈ in basic position the ignition circuit is closed in this position and the engine can be started.
- Kill switch ⋈ pressed the ignition circuit is open in this position, the engine goes out if it was running, or does not start if it was off.

## 6.6 Horn button (FE 250 EU, FE 250 AUS)



The horn button **1** is fitted on the left side of the handlebar.

#### Possible states

- Horn button **>** in neutral position
- Horn button 

  pressed the horn is actuated in this position.

## 6.7 Light switch (FE 250 EU, FE 250 AUS)



The light switch • is fitted on the left side of the handlebar.

## Possible states

•	Light off — Light switch is turned to the right. In this position, the light is switched off.
<b></b> ■D	Low beam on – Light switch is in the central position. In this position, the low beam and tail light are switched on.
<b>≣</b> D	High beam on – Light switch is turned to the left. In this position, the high beam and the tail light are switched on.

## 6.8 Light switch (FE 250 USA)



The light switch **1** is on the right of the speedometer.

#### Possible states

- Light off Light switch is pressed in up to the stop. In this position, the light is switched off.
- Light on Light switch is pulled out to the stop. In this position, the low beam and tail light are switched on.

## 6.9 Turn signal switch (FE 250 EU, FE 250 AUS)



Turn signal switch • is fitted on the left side of the handlebar.

## Possible states

	Turn signal light off – Turn signal switch is in the central position.
<b>—</b>	Turn signal light, left, on – Turn signal switch is turned to the left.
•	Turn signal light, right, on – Turn signal switch is turned to the right.

## 6.10 Emergency OFF switch (FE 250 AUS)

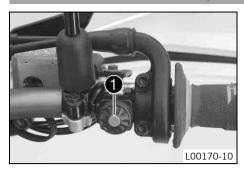


The emergency OFF switch  $\ensuremath{f 0}$  is fitted on the right side of the handlebar.

#### Possible states

$\bigotimes$	Ignition off – the ignition circuit is open in this position, the engine goes out if it was running, or does not start if it was off.
	Ignition on – the ignition circuit is closed in this position and the engine can be started.

## 6.11 Electric starter button (FE 250 EU, FE 250 USA)

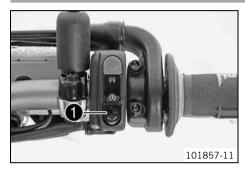


The electric starter button **1** is fitted on the right side of the handlebar.

#### Possible states

- Electric starter button (3) in basic position
- Electric starter button ③ pressed the electric starter is actuated in this position.

## 6.12 Electric starter button (FE 250 AUS)

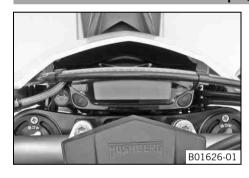


The electric starter button • is fitted on the right side of the handlebar.

## Possible states

- Electric starter button (3) in basic position
- Electric starter button ③ pressed the electric starter is actuated in this position.

## 6.13 Overview of indicator lamps (FE 250 EU, FE 250 AUS)



#### Possible states

	High beam indicator light lights up blue – High beam is switched on.
FI	FI warning lamp (MIL) lights up/flashes orange – The OBD has detected an emission- or safety-critical fault.
	The fuel level warning lamp lights up orange – The fuel level has reached the reserve mark.
( <del>+</del> <del>+</del> <del>+</del> )	Turn signal indicator light flashes green – Turn signal is switched on.

## 6.14 Overview of indicator lamps (FE 250 USA)



## Possible states

FI	FI warning lamp (MIL) lights up/flashes orange – The OBD has detected an emission- or safety-critical fault.
	The fuel level warning lamp lights up orange – The fuel level has reached the reserve mark.

## 6.15 Opening filler cap



#### Dange

Fire hazard Fuel is highly flammable.

- Never refuel the vehicle near open flames or burning cigarettes, and always switch off the engine first. Be careful that no fuel is spilt, especially on hot vehicle components. Clean up spilt fuel immediately.
- The fuel in the fuel tank expands when warm and may emerge if overfilled. Follow the instructions on refueling.



#### Warning

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

Fuel must not come into contact with the skin, eyes, or clothing. Do not breathe in the fuel vapors. If contact occurs with
the eyes, rinse with water immediately and contact a physician. Immediately clean contaminated areas on the skin with
soap and water. If fuel is swallowed, contact a physician immediately. Change clothing that is contaminated with fuel.
Store fuel properly in a suitable canister and keep away from children.



#### Warning

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

- Do not allow fuel to get into the ground water, the ground, or the sewage system.



 Press release button •, turn filler cap counterclockwise and lift it upwards and remove.

## 6.16 Closing filler cap



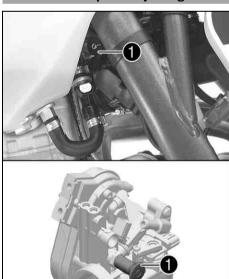
- Replace the filler cap and turn clockwise until the release button **1** locks in place.



#### Info

Route the fuel tank breather hose 2 without kinking.

## 6.17 Idle speed adjusting screw



L00182-10

The idle speed adjusting screw **1** is located on the throttle valve body at the top left. The idle speed adjusting screw has two functions.

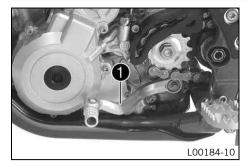
Turning it controls the idle speed.

Pulling it out all the way raises the idle speed during a cold start.

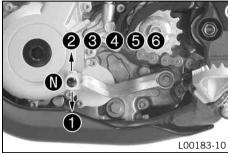
#### Possible states

- RPM increase activated Idle speed adjusting screw is pulled out all the way.
- RPM increase deactivated Idle speed adjusting screw is pushed in all the way.

## 6.18 Shift lever



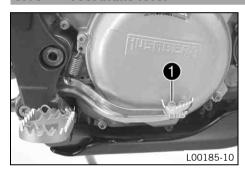
Shift lever **1** is mounted on the left side of the engine.



The gear positions can be seen in the photograph.

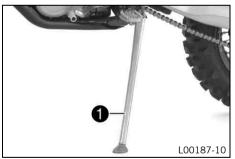
The neutral or idle position is between the first and second gears.

## 6.19 Foot brake lever

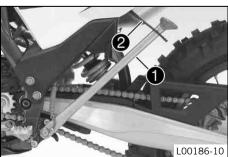


Foot brake lever **1** is located in front of the right footrest. The foot brake lever is used to activate the rear brake.

## 6.20 Side stand



The side stand • is located on the left side of the vehicle.



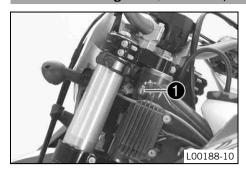
The side stand is used for parking the motorcycle.



#### Info

When you are riding, the side stand • must be folded up and secured with rubber band •.

## 6.21 Steering lock (FE 250 EU, FE 250 AUS)



Steering lock • is fitted on the left side of the steering head.

The steering lock is used to lock the steering. Steering, and therefore riding, is no longer possible.

## 6.22 Locking the steering (FE 250 EU, FE 250 AUS)

#### Note

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

- Always place the vehicle on a firm and even surface.



- Park the vehicle.
- Turn the handlebar as far as possible to the right.
- Insert the key in the steering lock, turn it to the left, press it in and turn it to the right. Remove the key.
  - Steering is no longer possible.



#### Info

Never leave the key in the steering lock.

## 6.23 Unlocking the steering (FE 250 EU, FE 250 AUS)



 Insert the key in the steering lock, turn it to the left, pull it out and turn it to the right. Remove the key.

✓ You can now steer the bike again.

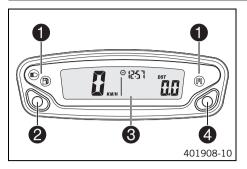


#### Info

Never leave the key in the steering lock.

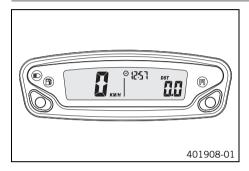
7 SPEEDOMETER 20

## 7.1 Overview



1	Overview of indicator lamps (* p. 16)
2	Left button
3	Display
4	Right button

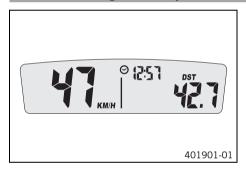
## 7.2 Activation



#### **Activating the speedometer**

The speedometer is activated when one of the buttons is pressed or an impulse comes from the wheel speed sensor.

## 7.3 Message on the speedometer



#### Possible states

<b>(</b>	Battery voltage of the speedometer – Battery voltage of the speedometer is too low. Change the battery.
<b>~</b>	Service – A service is due. Contact an authorized HUSABERG workshop.

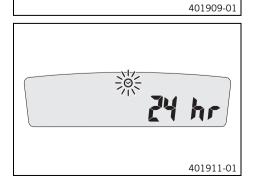
## 7.4 Setting the speedometer



# Condition

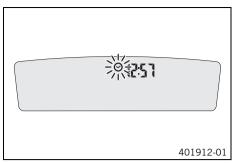
The motorcycle is stationary.

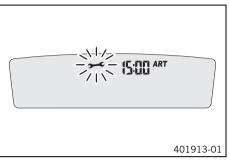
- Press both buttons for 3–5 seconds.
  - ✓ The Setup menu is displayed. The **UNIT** display flashes.
- Press one of the buttons to select UNIT for the speed in kilometers KM/H or miles M/H.

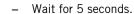


- Wait for 5 seconds.
  - $\checkmark$  The speedometer changes to the next menu item. The  $\, \Theta \,$  symbol flashes.
- Press one of the buttons to select the 24h or 12h display of the clock.

7 SPEEDOMETER







✓ The speedometer changes to the next menu item. The 
② symbol flashes.

21

#### Resetting the time

- Press the left button.
  - ✓ The value decreases.

#### Advancing the time

- Press the right button.
  - ✓ The value increases.
- Wait for 5 seconds.
- Set the service.

#### Guideline

One-time service after	1 h
Service every	15 h

## Shortening the service interval

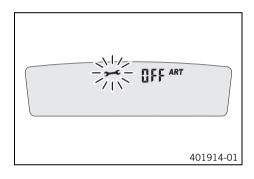
- Press the left button.
  - ✓ The value decreases.

#### **Extending the service interval**

- Press the right button.
  - ✓ The value increases.

## Switching off the service interval display

- Press and hold the left button.
  - ✓ off appears on the display.

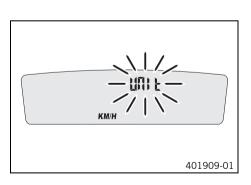


## 7.5 Setting kilometers or miles



## Info

If you change the unit of measure, the **ODO** value is retained and converted accordingly.

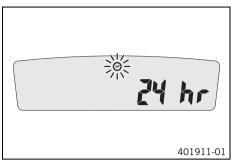


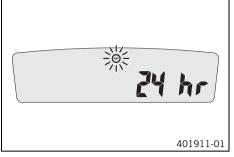
## Condition

The motorcycle is stationary.

- The Setup menu is displayed. The **UNIT** display flashes.
  - ✓ The Setup menu is displayed.
- Press one of the buttons to select **UNIT** for the speed in kilometers **KM/H** or miles **M/H**.

#### 7.6 Setting the clock

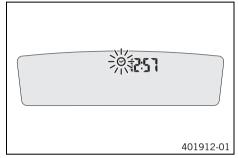




#### Condition

The motorcycle is stationary.

- Press both buttons for 3–5 seconds.
  - ✓ The Setup menu is displayed. The **UNIT** display flashes.
- Wait for the menu of the clock 𝔝 to flash.
- Press one of the buttons to select the 24h or 12h display of the clock.



- Wait for 5 seconds.
  - ✓ The speedometer changes to the next menu item. The ② symbol flashes.

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## Resetting the time

- Press the left button.
  - ✓ The value decreases.

## Advancing the time

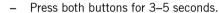
- Press the right button.
  - The value increases.

#### 7.7 Setting the service display

15:00 ART



The motorcycle is stationary.



- ✓ The Setup menu is displayed. The UNIT display flashes.
- Set the service.

Guideline

One-time service after	1 h
Service every	15 h

#### Shortening the service interval 401913-01

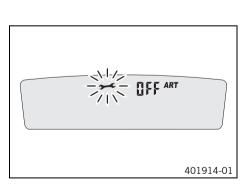
- Press the left button.
  - The value decreases.

## **Extending the service interval**

- Press the right button.
  - The value increases.

## Switching off the service interval display

- Press and hold the left button.
  - ✓ off appears on the display.



7 SPEEDOMETER 23

## 7.8 Speed, time, and DST distance 1



Press one of the buttons until **DST** appears on the speedometer.

**KM/H** or **M/H** shows the speed.

Shows the time.

**DST** shows the distance since the last reset, such as between two refueling stops.



#### Info

If the value of 39999.9 is exceeded, **DST** is automatically reset to 0.0.

Press the left but- ton briefly.	Next display mode
Press the left button for 3 – 5 seconds.	<b>DST</b> can be preset to a value between 0.0 and 39999.9 by pressing the buttons.
Press the right but- ton briefly.	Next display mode
Press the right button for 3 – 5 seconds.	<b>DST</b> is reset to 0.0.

## 7.9 Speed, time, and DST2 distance 2



- Press one of the buttons until **DST2** appears on the speedometer.

**KM/H** or **M/H** shows the speed.

Shows the time.

**DST2** shows the distance 2 since the last reset, such as between two refueling stops.



#### Info

If the value of 39999.9 is exceeded, **DST2** is automatically reset to 0.0.

Press the left button briefly.	Next display mode
Press the left button for 3 – 5 seconds.	<b>DST2</b> can be preset to a value between 0.0 and 39999.9 by pressing the buttons.
Press the right button briefly.	Next display mode
Press the right button for 3 – 5 seconds.	DST2 is reset to 0.0.

## 7.10 AVG average speed, ART operating hours, and ODO total distance covered



Press one of the buttons until AVG, ART and ODO appear in the speedometer.

AVG shows the average speed since the last reset.

ART shows the operating hours.

**0D0** shows the total distance covered.

Press the left but- ton briefly.	Next display mode
Press the left button for 3 – 5 seconds.	The OPEN END WRENCH SYMBOL shows the remaining operating hours until the next service is due.
Press the right button briefly.	Next display mode
Press the right button for 3 – 5 seconds.	AVG is reset to 0.0.

## 8.1 Advice on first use



## **Danger**

**Danger of accidents** Danger arising from the rider's judgement being impaired.

 Do not operate the vehicle while under the influence of alcohol, drugs and certain medications or physically or mentally impaired.



#### Warning

**Risk of injury** Missing or poor protective clothing presents an increased safety risk.

Wear protective clothing (helmet, boots, gloves, pants and jacket with protectors) every time you ride the vehicle. Always
wear protective clothing that is in good condition and meets the legal requirements.



#### Warning

Danger of crashing Poor vehicle handling due to different tire tread patterns on front and rear wheels.

The front and rear wheels must be fitted with tires with similar tread patterns to prevent loss of control over the vehicle.



#### Warning

Danger of accidents Critical riding behavior due to inappropriate riding.

Adapt your riding speed to the road conditions and your riding ability.



#### Warning

**Danger of accidents** Accident risk caused by presence of a passenger.

Your vehicle is not designed to carry passengers. Do not ride with a passenger.



#### Warning

**Danger of accidents** Failure of brake system.

If the foot brake lever is not released, the brake linings drag continuously. The rear brake may fail due to overheating. Take
your foot off the foot brake lever when you are not braking.



#### Warning

**Danger of accidents** Unstable riding behavior.

Do not exceed the maximum permissible weight and axle loads.



#### Warning

**Risk of misappropriation** Usage by unauthorized persons.

- Never leave the vehicle while the engine is running. Secure the vehicle against use by unauthorized persons.



#### Info

When using your motorcycle, remember that others may feel disturbed by excessive noise.

- Make sure that the pre-delivery inspection work has been carried out by an authorized HUSABERG workshop.
- ✓ You receive a delivery certificate and the service record at vehicle handover.
- Before your first trip, read the entire operating instructions carefully.
- Get to know the controls.
- Adjust the basic position of the clutch lever. (\* p. 60)

## (FE 250 EU, FE 250 AUS)

Adjust the free travel of the hand brake lever. ( p. 62)

#### (FE 250 USA)

- Adjust the basic position of the hand brake lever. (\* p. 62)
- Adjust the basic position of the foot brake lever.
   (\* p. 66)
- Adjust the basic position of the shift lever. 4 ( p. 87)
- Get used to handling the motorcycle on a suitable piece of land before making a longer trip.



## Info

Offroad, you should be accompanied by another person on another machine so that you can help each other.

- Try also to ride as slowly as possible and in a standing position to get a better feeling for the vehicle.
- Do not make any offroad trips that exceed your ability and experience.

- Hold the handlebar firmly with both hands and keep your feet on the footrests when riding.
- If you carry any baggage, make sure it is fixed firmly as close as possible to the center of the vehicle and ensure even weight distribution between the front and rear wheels.



#### Info

Motorcycles react sensitively to any changes in weight distribution.

Do not exceed the overall maximum permitted weight and the axle loads.

#### Guideline

Maximum permissible overall weight	335 kg (739 lb.)
Maximum permissible front axle load	145 kg (320 lb.)
Maximum permissible rear axle load	190 kg (419 lb.)

Run in the engine. (♥ p. 25)

## 8.2 Running-in the engine

During the running-in phase, do not exceed the specified engine speed and engine performance.

#### Guideline

Maximum engine speed		
During the first operating hour	7,000 rpm	
Maximum engine performance		
During the first 3 operating hours	≤ 75 %	

Avoid fully opening the throttle!

## 8.3 Preparing the vehicle for difficult riding conditions



#### Info

Use of the vehicle under difficult conditions, such as on sand or on wet and muddy surfaces, can lead to considerably more rapid wear of components such as the drive train, brake system, or suspension components. For this reason, it may be necessary to inspect or replace parts before the next scheduled service.

HUSABERG recommends that you use the specified engine oil for difficult riding conditions and to increase performance.

Engine oil (SAE 10W/60) (00062010035) (\* p. 105)

Clean the air filter and air filter box. 4 (\* p. 50)



#### Info

Check the air filter approx. every 30 minutes.

- Seal the air filter box. ◀ ( p. 50)
- Additionally secure the rubber grip. (\* p. 60)
- Check the electrical connector for humidity and corrosion and to ensure it is firmly seated.
  - » If humidity, corrosion or damage is found:
    - Clean and dry the connector, or change it if necessary.

#### Difficult riding conditions are:

- Rides on dry sand. (♥ p. 26)
- Rides on wet sand. (♥ p. 26)
- Rides on wet and muddy surfaces. (\* p. 27)
- Rides at high temperature and slow speed. (\* p. 27)
- Rides at low temperature or in snow. (\* p. 27)

## 8.4 Preparing for rides on dry sand



Fit a dust cover on the air filter.

Dust protection device for air filter (77206920000)



#### Info

See the **HUSABERG Pure Tech** fitting instructions.



Fit a sand cover on the air filter.

Sand protection device for air filter (59006022000)



#### Info

See the HUSABERG Pure Tech fitting instructions.



- Clean the chain.

Chain cleaner (\* p. 107)

Fit the steel sprocket.



## Tip

Do not grease the chain.

- Clean the radiator fins.
- Straighten bent radiator fins carefully.

## 8.5 Preparing for rides on wet sand



Fit a rain cover on the air filter.

Waterproofing device for air filter (77206921000)



#### Info

See the HUSABERG Pure Tech fitting instructions.



- Clean the chain.

Chain cleaner (\* p. 107)

Fit the steel sprocket.



#### Tip

Do not grease the chain.

- Clean the radiator fins.
- Straighten bent radiator fins carefully.

## 8.6 Preparing for rides on wet and muddy surfaces



Fit a rain cover on the air filter.

Waterproofing device for air filter (77206921000)



#### Info

See the HUSABERG Pure Tech fitting instructions.



- Fit the steel sprocket.
- Clean the motorcycle. (\* p. 92)
- Straighten bent radiator fins carefully.

## 8.7 Preparing for rides at high temperature and slow speed



Adjust the secondary drive to the road conditions.



#### Info

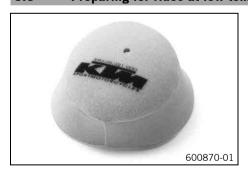
The engine oil heats up quickly when the clutch is operated frequently due to an excessively high secondary drive.

- Clean the chain.

Chain cleaner (\* p. 107)

- Clean the radiator fins.
- Straighten bent radiator fins carefully.
- Check the coolant level. (\* p. 84)

## 8.8 Preparing for rides at low temperature or in snow



Fit a rain cover on the air filter.

Waterproofing device for air filter (77206921000)



## Info

See the **HUSABERG Pure Tech** fitting instructions.

#### 9.1 Checks and maintenance work when preparing for use



## Info

Before riding the vehicle, always check its condition and operating safety. The vehicle must be in perfect technical condition when used.

- Check the engine oil level. (\* p. 88)
- Check the electrical system.
- Check the front brake fluid level. (\* p. 63)
- Check the rear brake fluid level. (\* p. 67)
- Check the front brake linings. (\* p. 64)
- Check the rear brake linings. (\*\* p. 68)
- Check that the brake system is functioning properly.
- Check the coolant level. (\* p. 84)
- Check for chain dirt accumulation. (\* p. 55)
- Check the chain, rear sprocket, engine sprocket and chain guide. (\* p. 57)
- Check the chain tension. (\* p. 56)
- Check the tire condition. (\* p. 73)
- Check the tire air pressure. (\*\* p. 74)
- Check the spoke tension. ( p. 74)
- Clean the dust boots of the fork legs. (\* p. 41)
- Bleed fork legs. (\* p. 41)
- Check the air filter.
- Check the settings of all controls and ensure that they can be operated smoothly.
- Check all screws, nuts, and hose clamps regularly for tightness.
- Check the fuel supply.

#### 9.2 **Starting**



## **Danger**

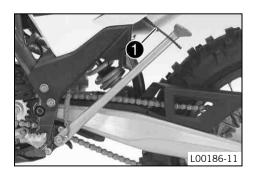
Danger of poisoning Exhaust gases are toxic and inhaling them may result in unconsciousness and/or death.

When running the engine, always make sure there is sufficient ventilation, and do not start or run the engine in an enclosed space without an effective exhaust extraction system.

#### Note

Engine failure High engine speeds in cold engines have a negative effect on the service life of the engine.

Always warm up the engine at low engine speeds.

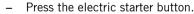


Condition

- Turn the emergency OFF switch to the position ○.

Ambient temperature: < 20 °C (< 68 °F)

Pull the idle speed adjusting screw all the way out.



Shift transmission to neutral.



Info

Press the electric starter button for at most 5 seconds. Wait for a least 5 seconds before trying again.

Warning lamp FI lights up briefly as a functional control when starting.

Raise the motorcycle off of the stand and secure the stand with the rubber band 1.

## 9.3 Starting off



#### Info

If your bike has lights, switch them on before riding. You will then be seen earlier by other motorists. When you are riding, the side stand must be folded up and secured with the rubber band.

Pull the clutch lever, engage 1st gear, release the clutch lever slowly and simultaneously open the throttle carefully.

## 9.4 Shifting, riding



#### Warning

Danger of accidents If you change down at high engine speed, the rear wheel can lock up.

- Do not change into a low gear at high engine speed. The engine races and the rear wheel can lock up.



#### Info

If you hear unusual noises while riding, stop immediately, switch off the engine and contact an authorized HUSABERG workshop.

First gear is used for starting off or for steep inclines.

- When conditions allow (incline, road situation, etc.), you can shift into a higher gear. To do so, release the throttle while simultaneously pulling the clutch lever, shift into the next gear, release the clutch, and open the throttle.
- After reaching maximum speed by fully opening the throttle grip, turn the throttle back so it is ¾ open. This will barely reduce the speed but fuel consumption will be considerably lower.
- Always open the throttle only as much as the engine can handle abrupt throttle opening increases fuel consumption.
- To shift down, brake and close the throttle at the same time.
- Pull the clutch lever and shift into a lower gear, release the clutch lever slowly, and open the throttle or shift again.
- Switch off the engine if you expect to be standing for a long time.

Guideline

≥ 2 min

- Avoid frequent and longer slipping of the clutch. This heats the engine oil, the engine, and the cooling system.
- Ride with a lower engine speed instead of with a high engine speed and a slipping clutch.

## 9.5 Braking



#### Warning

**Danger of accidents** If you brake too hard, the wheels can lock.

- Adapt your braking to the traffic situation and the road conditions.



#### Varning

Danger of accidents Reduced braking efficiency caused by spongy pressure point of front or rear brake.

- Check the brake system and do not continue riding. (Your authorized HUSABERG workshop would be pleased to help you.)



## Warning

Danger of accidents Reduced braking efficiency due to a wet or dirty brake system.

- Clean or dry a dirty or wet brake system by riding and braking gently.
- On sandy, wet or slippery surfaces, use the rear brake.
- Braking should always be completed before you go into a bend. Change down to a lower gear appropriate to your road speed.
- Make use of the braking effect of the engine when driving down long downhill stretches. To do so, shift back one or two gears, but
  do not overrev the engine. You will need to apply the brakes far less often and the brake system will not overheat.

## 9.6 Stopping, parking



## Warning

Risk of misappropriation Usage by unauthorized persons.

Never leave the vehicle while the engine is running. Secure the vehicle against use by unauthorized persons.



## Warning

Danger of burns Some vehicle components become very hot when the vehicle is operated.

Do not touch hot components such as exhaust system, radiator, engine, shock absorber, and the brake system. Allow these
components to cool down before starting work on them.

#### Note

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

Always place the vehicle on a firm and even surface.

#### Note

**Fire hazard** Some vehicle components become very hot when the vehicle is operated.

 Do not park the vehicle near flammable or explosive substances. Do not place objects on the vehicle while it is still warm from being run. Always let the vehicle cool first.

#### Note

Material damage Damage to or destruction of components due to excessive load.

- The side stand is only designed for the weight of the motorcycle. Do no sit on the motorcycle when it is resting on the side stand. The side stand or the frame may become damaged and the motorcycle may fall over.
- Brake the motorcycle.
- Shift transmission to neutral.

#### (FE 250 EU, FE 250 AUS)

#### (FE 250 USA)

- Park the motorcycle on firm ground.

## 9.7 Transport

#### Note

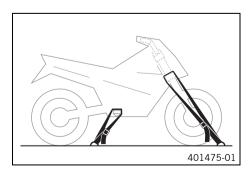
Danger of damage The parked vehicle may roll away or fall over.

- Always place the vehicle on a firm and even surface.

## Note

Fire hazard Some vehicle components become very hot when the vehicle is operated.

 Do not park the vehicle near flammable or explosive substances. Do not place objects on the vehicle while it is still warm from being run. Always let the vehicle cool first.



- Switch off the engine.
- Use tension belts or other suitable devices to secure the motorcycle against accidents or falling over.

## 9.8 Refueling



#### **Danger**

Fire hazard Fuel is highly flammable.

- Never refuel the vehicle near open flames or burning cigarettes, and always switch off the engine first. Be careful that no
  fuel is spilt, especially on hot vehicle components. Clean up spilt fuel immediately.
- The fuel in the fuel tank expands when warm and may emerge if overfilled. Follow the instructions on refueling.



## Warning

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

- Fuel must not come into contact with the skin, eyes, or clothing. Do not breathe in the fuel vapors. If contact occurs with the eyes, rinse with water immediately and contact a physician. Immediately clean contaminated areas on the skin with soap and water. If fuel is swallowed, contact a physician immediately. Change clothing that is contaminated with fuel.

#### Note

Material damage Premature clogging of the fuel filter.

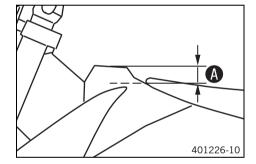
- In some countries and regions, the available fuel quality and cleanliness may not be sufficient. This will result in problems with the fuel system. (Your authorized HUSABERG workshop would be pleased to help you.)
- Only refuel with clean fuel that meets the specified standards.



#### Warning

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

- Do not allow fuel to get into the ground water, the ground, or the sewage system.



- Switch off engine.
- Open the filler cap. (♥ p. 16)
- Fill the fuel tank with fuel up to measurement (a).
   Guideline

Measurement of <b>(A)</b>		35 mm (1.38 in)		
Total fuel tank capacity, approx.	9.5 l (2.51 US gal)	Super unleaded (ROZ 95/RON 95/PON 91) ( p. 106)		

- Close the filler cap. (\* p. 17)

# 10.1 Service schedule

Every 30 operating hour		-	race
Every 15 ope		ours	
Once after 1 operation	_		
Read out the fault memory using the HUSABERG diagnostic tool.	0	•	•
Check that the electrical equipment is functioning properly.	0	•	•
Check and charge the battery. 🌂		•	•
Check the front brake linings. (* p. 64)		•	•
Check the rear brake linings. (** p. 68)		•	•
Check the brake discs. (▼ p. 63)		•	•
Check the brake lines for damage and leakage.		•	•
Check the rear brake fluid level. (* p. 67)		•	•
Check the free travel of the foot brake lever. (* p. 66)		•	•
Check the frame and swingarm.		•	•
Check the swingarm bearing.			•
Check the heim joints at the top and bottom of the shock absorber.		•	•
Check the tire condition. (* p. 73)	0	•	•
Check the tire air pressure. (* p. 74)	0	•	•
Check the wheel bearing for play. 🍑		•	•
Check the wheel hubs.		•	•
Check the rim run-out.	0	•	•
Check the spoke tension. (* p. 74)	0	•	•
Check the chain, rear sprocket, engine sprocket and chain guide. (♥ p. 57)		•	•
Check the chain tension. (* p. 56)	0	•	•
Grease all moving parts (e.g., side stand, hand lever, chain,) and check for smooth operation. 🌂		•	•
Check/rectify the fluid level of the hydraulic clutch. (* p. 60)		•	•
Check the front brake fluid level. (* p. 63)		•	•
Check the free travel of the hand brake lever. (* p. 62)		•	•
Check the steering head bearing play.	0	•	•
Check the valve clearance.	0		•
Check the clutch. 🔏			•
Change the shaft seal rings of the water pump. 🔏			•
Change the engine oil and oil filter, clean the oil screen. 🌂 ( p. 89)	0	•	•
Check all hoses (e. g., fuel, cooling, bleeding, drainage) and sleeves for cracking, leaks, and incorrect routing.	0	•	•
Check the antifreeze and coolant level. (* p. 83)	0	•	•
Check the cables for damage and routing without sharp bends.		•	•
Check that the cables are undamaged, routed without sharp bends and set correctly.	0	•	•
Clean the air filter and air filter box.		•	•
Change the glass fiber yarn filling of the main silencer. 🔌 ( 🕶 p. 51)			•
Check the screws and nuts for tightness.	0	•	•
Check the headlight setting. (* p. 81)	0	•	•
Change the fuel screen. ◀ (▼ p. 88)	0	•	•
Check the fuel pressure.		•	•
Adjust the idle speed. 🌂 (* p. 87)	0	•	•
Final check: Check the vehicle for roadworthiness and take a test ride.	0	•	•
Read out the fault memory using the HUSABERG diagnostics tool after a test ride.	0	•	•
Make the service entry in <b>HUSABERG DEALER.NET</b> and in the service record.	0	•	

- o One-time interval
- Periodic interval

# 10.2 Service work (as additional order)

			Ann	ually			
Every 135 operating hours/every 70 operating hours when used for motorsports							
Every 45 operating hours		ours					
Once after 15 operating h	ours						
Change the front brake fluid. 🍑				•			
Change the rear brake fluid. 🌂				•			
Change the hydraulic clutch fluid. 🔦 ( 🕶 p. 61)				•			
Lubricate the steering head bearing. 🌂 ( p. 47)				•			
Clean the spark arrestor.				•			
Perform a fork service.	0	•	•				
Service the shock absorber.		•	•				
Change the spark plug and spark plug connector. 🌂			•				
Change the piston.			•				
Check/measure the cylinder.			•				
Check the cylinder head.			•				
Change the valves, valve springs and valve spring seats. 🌂			•				
Check the camshaft and cam lever.			•				
Change the connecting rod, conrod bearing and crank pin. 🔏			•				
Check the transmission and shift mechanism.			•				
Check the oil pressure regulator valve.			•				
Change the suction pump.			•				
Check the pressure pump and lubrication system.			•				
Replace the timing chain. 🔏			•				
Check the timing assembly.			•				
Change all engine bearings.			•				

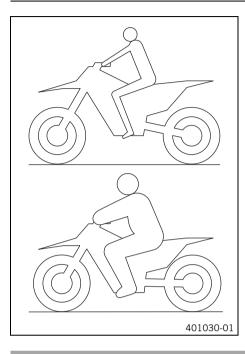
- o One-time interval
- Periodic interval

## 11.1 Checking the basic chassis setting with the rider's weight



#### Info

When adjusting the basic chassis setting, first adjust the shock absorber and then the fork.



- For optimal motorcycle riding characteristics and to avoid damage to forks, shock absorbers, swingarm, and frame, the basic settings of the suspension components must match the rider's weight.
- As delivered, HUSABERG offroad motorcycles are adjusted for a standard rider weight (with full protective clothing).

Guideline

Standard rider weight	75 85 kg (165 187 lb.)
-----------------------	------------------------

- If the rider's weight is above or below this range, the basic setting of the suspension components must be adjusted accordingly.
- Small weight differences can be compensated by adjusting the spring preload, but in the case of large weight differences, the springs must be replaced.

## 11.2 Compression damping of shock absorber

The compression damping of the shock absorber is divided into two ranges: high-speed and low-speed.

High-speed and low-speed refer to the compression speed of the rear wheel suspension and not to the vehicle speed.

The high-speed setting, for example, has an effect on the landing after a jump: the rear wheel suspension compresses more quickly. The low-speed setting, for example, has an effect when riding over long ground swells: the rear wheel suspension compresses more slowly.

These two ranges can be adjusted separately, although the transition between high-speed and low-speed is gradual. Thus, changes in the high-speed range affect the compression damping in the low-speed range and vice versa.

## 11.3 Adjusting the low-speed compression damping of the shock absorber



#### Caution

**Danger of accidents** Disassembly of pressurized parts can lead to injury.

The shock absorber is filled with high density nitrogen. Adhere to the description provided. (Your authorized HUSABERG workshop would be pleased to help you.)



#### Info

The low-speed setting can be seen during the slow to normal compression of the shock absorber.



 Turn adjusting screw • clockwise with a screwdriver up to the last perceptible click.



#### Info

Do not loosen nut 2!

 Turn back counterclockwise by the number of clicks corresponding to the shock absorber type.

Guideline

Compression damping, low-speed		
Comfort	25 clicks	
Standard	20 clicks	
Sport	15 clicks	



#### Info

Turn clockwise to increase damping; turn counterclockwise to reduce damping.

# 11.4 Adjusting the high-speed compression damping of the shock absorber



# Caution

**Danger of accidents** Disassembly of pressurized parts can lead to injury.

The shock absorber is filled with high density nitrogen. Adhere to the description provided. (Your authorized HUSABERG workshop would be pleased to help you.)



# Info

The high-speed setting can be seen during the fast compression of the shock absorber.



- Turn adjusting screw 1 all the way clockwise with a socket wrench.



#### Info

Do not loosen nut 2!

 Turn back counterclockwise by the number of turns corresponding to the shock absorber type.

#### Guideline

Compression damping, high-speed			
Comfort 2 turns			
Standard 1.5 turns			
Sport	1.25 turns		



#### Info

Turn clockwise to increase damping; turn counterclockwise to reduce damping.

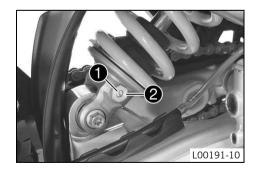
# 11.5 Adjusting the rebound damping of the shock absorber



## Caution

**Danger of accidents** Disassembly of pressurized parts can lead to injury.

The shock absorber is filled with high density nitrogen. Adhere to the description provided. (Your authorized HUSABERG workshop would be pleased to help you.)



Turn adjusting screw • clockwise up to the last perceptible click.



#### Info

Do not loosen nut 2!

 Turn back counterclockwise by the number of clicks corresponding to the shock absorber type.

#### Guideline

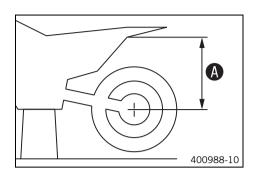
Rebound damping	
Comfort 28 clicks	
Standard	24 clicks
Sport	22 clicks



### Info

Turn clockwise to increase damping; turn counterclockwise to reduce damping.

# 11.6 Measuring rear wheel sag unloaded



#### Preparatory work

- Raise the motorcycle with a lift stand. (\* p. 41)

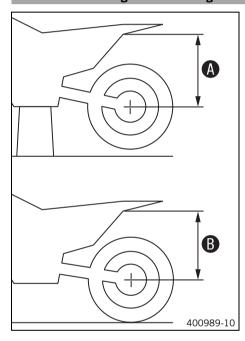
#### Main work

- Measure the distance as vertically as possible between the rear axle and a fixed point such as a mark on the side cover.
- Make note of the value as measurement **a**.

### Finishing work

Remove the motorcycle from the lift stand. (\* p. 41)

# 11.7 Checking the static sag of the shock absorber



- Measure distance **(a)** of rear wheel unloaded. (**\*\*** p. 36)
- Hold the motorcycle upright with the aid of an assistant.
- Measure the distance between the rear axle and the fixed point again.
- Note down the value as dimension B.



#### Info

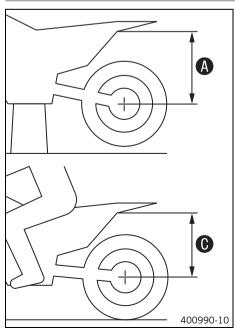
The static sag is the difference between measurements **3** and **3**.

Check the static sag.

Static sag 33... 35 mm (1.3... 1.38 in)

- » If the static sag is less or more than the specified value:
  - Adjust the spring preload of the shock absorber.
     (\* p. 37)

# 11.8 Checking the riding sag of the shock absorber



- Measure distance of rear wheel unloaded. (\* p. 36)
- With another person holding the motorcycle, the rider, wearing full protective clothing, sits on the seat in a normal sitting position (feet on footrests) and bounces up and down a few times.
  - ✓ The rear wheel suspension levels out.
- Another person now measures the distance between the rear axle and a fixed point.
- Note down the value as dimension •.



#### Info

The riding sag is the difference between measurements **3** and **6**.

Check the riding sag.

Riding sag 105... 115 mm (4.13... 4.53 in)

- » If the riding sag differs from the specified measurement:
  - Adjust the riding sag. ◀ (\* p. 37)

# 11.9 Adjusting the spring preload of the shock absorber 🔌



### Caution

**Danger of accidents** Disassembly of pressurized parts can lead to injury.

The shock absorber is filled with high density nitrogen. Adhere to the description provided. (Your authorized HUSABERG workshop would be pleased to help you.)



#### Info

Before changing the spring preload, make a note of the present setting, e.g., by measuring the length of the spring.

# **Preparatory work**

- Raise the motorcycle with a lift stand. (\* p. 41)
- Remove shock absorber. 4 (\* p. 48)
- After removing the shock absorber, clean it thoroughly.

#### Main work

- Loosen screw ①.
- Turn adjusting ring ② until the spring is no longer under tension.

Hook wrench (T106S)

- Measure the overall spring length while the spring is not under tension.
- Tighten the spring by turning adjusting ring 2 to measurement 4.
   Guideline

Spring preload 8 mm (0.31 in)



# Info

Depending on the static sag and/or the riding sag, it may be necessary to increase or decrease the spring preload.

Tighten screw ①.

Guideline

Screw, shock absorber adjusting ring	M5	5 Nm (3.7 lbf ft)
--------------------------------------	----	-------------------

# Finishing work

401026-10

- Install the shock absorber. 4 (\* p. 48)
- Remove the motorcycle from the lift stand. (\* p. 41)

# 11.10 Adjusting the riding sag 🔏

#### Preparatory work

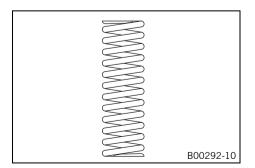
- Raise the motorcycle with a lift stand. (\* p. 41)
- Remove shock absorber. 🔌 (🕶 p. 48)
- After removing the shock absorber, clean it thoroughly.

#### Main work

Choose and mount a suitable spring.

### Guideline

Spring rate		
Weight of rider: 65 75 kg (143 165 lb.)	66 N/mm (377 lb/in)	
Weight of rider: 75 85 kg (165 187 lb.)	69 N/mm (394 lb/in)	
Weight of rider: 85 95 kg (187 209 lb.)	72 N/mm (411 lb/in)	





#### Info

The spring rate is shown on the outside of the spring. Smaller weight differences can be compensated by changing the spring preload.

### Finishing work

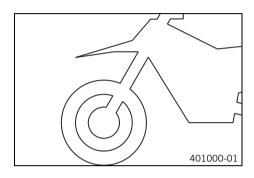
- Install the shock absorber. ⁴ (♥ p. 48)
- Remove the motorcycle from the lift stand. (\* p. 41)
- Check the static sag of the shock absorber. (\* p. 36)
- Check the riding sag of the shock absorber. (\* p. 36)
- Adjust the rebound damping of the shock absorber. (\* p. 35)

# 11.11 Checking basic setting of fork



## Info

For various reasons, no exact riding sag can be determined for the forks.



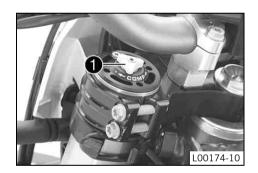
- As with the shock absorber, smaller differences in the rider's weight can be compensated by the spring preload.
- However, if the fork is often overloaded (hard end stop on compression), harder springs must be fit to avoid damage to the fork and frame.

# 11.12 Adjusting the compression damping of the fork



#### Info

The hydraulic compression damping determines the fork suspension behavior.



Turn the white adjusting screw 1 all the way clockwise.



# Info

Adjusting screw **1** is located at the upper end of the left fork leg. The compression damping is located in the left fork leg **COMP** (white adjusting screw). The rebound damping is located in the right fork leg **REB** (red adjusting screw).

Turn back counterclockwise by the number of clicks corresponding to the fork type.

Guideline

Compression damping		
Comfort 15 clicks		
Standard	13 clicks	
Sport	11 clicks	



# Info

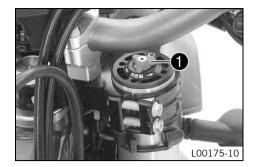
Turn clockwise to increase damping; turn counterclockwise to reduce damping.

# 11.13 Adjusting the rebound damping of the fork



### Info

The hydraulic rebound damping determines the fork suspension behavior.



Turn the red adjusting screw 1 all the way clockwise.



#### Info

Adjusting screw **1** is located at the upper end of the right fork leg. The rebound damping is located in the right fork leg **REB** (red adjusting screw). The compression damping is located in the left fork leg **COMP** (white adjusting screw).

Turn back counterclockwise by the number of clicks corresponding to the fork type.
 Guideline

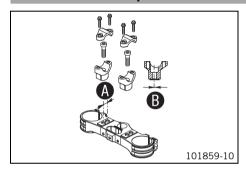
Rebound damping			
Comfort 15 clicks			
Standard 13 clicks			
Sport	11 clicks		



### Info

Turn clockwise to increase damping; turn counterclockwise to reduce damping.

# 11.14 Handlebar position



On the upper triple clamp, there are two holes at a distance of **4** to each other.

Hole distance	15 mm (0.59 in)

The holes on the handlebar supports are placed at a distance of **B** from the center.

Hole distance <b>®</b>	3.5 mm (0.138 in)

The handlebar supports can be mounted in four different positions.

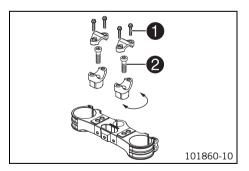
# 11.15 Adjusting the handlebar position 🔌



#### Warning

Danger of accidents Handlebar breakage.

If the handlebar is bent or straightened it will cause material fatigue, and the handlebar can break. Always replace handlebar.



 Remove the four screws ①. Take off the handlebar clamps. Take off the handlebar and set it aside.



# Info

Protect the motorcycle and its attachments against damage by covering them.

Do not bend the cables and lines.

- Remove the two screws 2. Remove the handlebar holders.
- Place the handlebar holders in the required position. Mount and tighten the two screws ②.

Guideline

Screw, handlebar holder	M10	40 Nm	Loctite® 243™
		(29.5 lbf ft)	



#### Info

Position the left and right handlebar holders evenly.

Position the handlebar.



### Info

Make sure the cables and wiring are positioned correctly.

– Position the handlebar clamps. Mount and evenly tighten the four screws lacktriangle. Guideline

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



Info

Make sure the gap width is even.

# 12.1 Raising the motorcycle with a lift stand



#### Note

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

- Always place the vehicle on a firm and even surface.
- Raise the motorcycle at the frame underneath the engine.

Lift stand (81229055100)

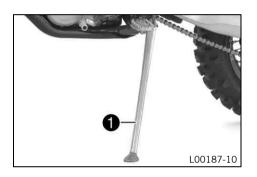
- ✓ The wheels must no longer touch the ground.
- Secure the motorcycle against falling over.

# 12.2 Removing the motorcycle from the lift stand

#### Note

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

- Always place the vehicle on a firm and even surface.



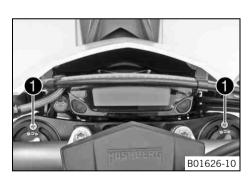
- Remove the motorcycle from the lift stand.
- Remove the lift stand.
- To park the motorcycle, press side stand to the ground with your foot and lean the motorcycle on it.



#### Info

When you are riding, the side stand must be folded up and secured with the rubber band.

# 12.3 Bleeding fork legs



# **Preparatory work**

- Raise the motorcycle with a lift stand. (\* p. 41)

#### Main work

- Release bleeder screws ①.
  - ✓ Any excess pressure escapes from the interior of the fork.
- Mount and tighten bleeder screws.

# Finishing work

Remove the motorcycle from the lift stand. (♥ p. 41)

# 12.4 Cleaning the dust boots of the fork legs

# Preparatory work

- Raise the motorcycle with a lift stand. (\* p. 41)
- Loosen the fork protector. (\* p. 42)

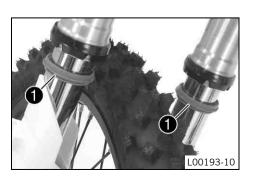
#### Main work

Push dust boot 1 downward of both fork legs.



#### Info

The dust boots remove dust and coarse dirt particles from the inside fork tubes. Over time, dirt can penetrate behind the dust boots. If this dirt is not removed, the oil seals behind can start to leak.





#### Warning

**Danger of accidents** Reduced braking efficiency due to oil or grease on the brake discs.

- Always keep the brake discs free of oil and grease, and clean them with brake cleaner when necessary.
- Clean and oil the dust boots and inner fork tube of both fork legs.

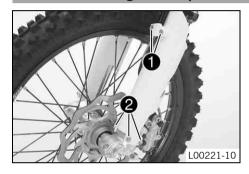
Universal oil spray (\* p. 108)

- Press the dust boots back into their normal position.
- Remove excess oil.

### **Finishing work**

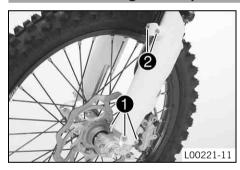
- Position the fork protection. (\* p. 42)
- Remove the motorcycle from the lift stand. (\* p. 41)

# 12.5 Loosening the fork protector



- Remove screws and remove the clamp.
- Remove screws 2 on the left fork leg. Push the fork protector downwards.
- Remove the screws on the right fork leg. Push the fork protector downwards.

# 12.6 Positioning the fork protection



Position the fork protection on the left fork leg. Mount and tighten screws ①.
 Guideline

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

- Position the wiring harness.
- Position the brake line. Put the clamp on, and mount and tighten screws 2.
- Position the fork protection on the right fork leg. Mount and tighten the screws.
   Guideline

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

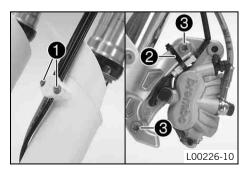
# 12.7 Removing the fork legs

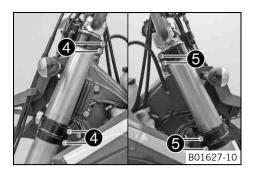
# **Preparatory work**

- Switch off all power consumers and switch off the engine.
- Remove the headlight mask with the headlight. (\* p. 79)
- Raise the motorcycle with a lift stand. (\* p. 41)
- Remove the front wheel. 
   (\* p. 71)

#### Main work

- Remove screws and take off the clamp.
- Remove cable binder 2.
- Remove screws 3 and take off the brake caliper.
- Allow the brake caliper and brake line to hang tension-free to the side.





- Release screws 4. Take out the left fork leg.
- Release screws **6**. Take out the right fork leg.

# 12.8 Installing the fork legs 🔏



#### Main work

- Position the fork legs.



#### Info

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

Position bleeder screws 1 toward the front.

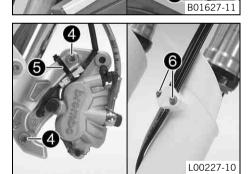
Tighten screws 2.Guideline



Tighten screws **3**.

Guideline

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



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

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

- Mount cable binder 6.
- Position the brake line, wiring harness, and clamp. Mount and tighten screws **6**.

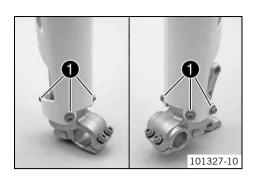
# Finishing work

- Install the front wheel. 4 (\* p. 71)
- Install the headlight mask with the headlight. ( p. 79)
- Check the headlight setting. (\* p. 81)

# 12.9 Removing the fork protector 🔏

#### **Preparatory work**

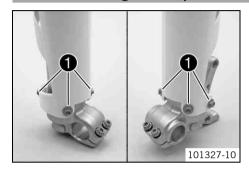
- Switch off all power consumers and switch off the engine.
- Remove the headlight mask with the headlight. (\* p. 79)
- Raise the motorcycle with a lift stand. (\* p. 41)
- Remove the front wheel. ◀ (\* p. 71)
- Remove the fork legs. (\* p. 42)



#### Main work

- Remove screws **①** on the left fork leg. Remove the fork protector upwards.
- Remove the screws on the right fork leg. Remove the fork protector upwards.

# 12.10 Installing the fork protector 🔏



# Main work

- Position the fork protector on the left fork leg. Mount and tighten screws **①**. Guideline

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

Position the fork protector on the right fork leg. Mount and tighten the screws.
 Guideline

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

# Finishing work

- Install the fork legs. 4 (\* p. 43)
- Install the front wheel. ⁴ (▼ p. 71)
- Install the headlight mask with the headlight. (\* p. 79)
- Check the headlight setting. (\* p. 81)

# 12.11 Removing the lower triple clamp 🔌

# Preparatory work

- Switch off all power consumers and switch off the engine.
- Remove the headlight mask with the headlight. (\* p. 79)
- Raise the motorcycle with a lift stand. (\* p. 41)
- Remove the front wheel. 
   <sup>4</sup> ( p. 71)
- Remove the fork legs. (\* p. 42)
- Remove the front fender. (\* p. 47)
- Remove the handlebar cushion.

#### Main work

- Open the cable holder in front of the right radiator and detach the wiring harness.
- Remove screw ①. Remove screw ②, take off the upper triple clamp with the handlebar and set it aside.



## Info

Protect the motorcycle and its attachments against damage by covering them.

Do not bend the cables and lines.

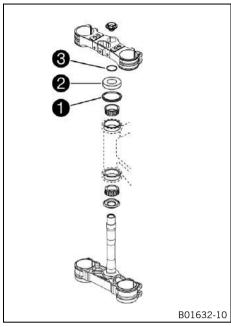


0 3

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- Remove O-ring 3. Remove protective ring 4.
- Take out the lower triple clamp with the steering stem.
- Take out the upper steering head bearing.

# 12.12 Installing the lower triple clamp 🔏



#### Main work

- Clean the bearing and sealing elements, check for damage, and grease.

High viscosity grease (\* p. 107)

- Insert the lower triple clamp with the steering stem. Mount the upper steering head bearing.
- Check whether the top steering head seal is correctly positioned.
- Slide on protective ring 2 and O-ring 3.



- Position the upper triple clamp with the steering.
- Mount screw 4 but do not tighten yet.
- Position the clutch line next to the voltage regulator.



Position the fork legs.



#### Info

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

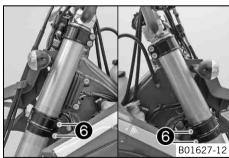
Grooves are milled into the side of the upper end of the fork legs. The second milled groove (from the top) must be flush with the top edge of the upper triple clamp.

Position bleeder screws 6 toward the front.

- Tighten screws 6.

Guideline

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



- Tighten screw 4.

Guideline

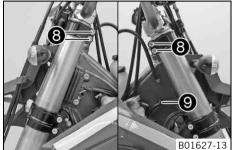
Screw, top steering head	M20x1.5	12 Nm (8.9 lbf ft)





Mount and tighten screw **①**.
 Guideline

Screw, top steering stem	M8	17 Nm (12.5 lbf ft)	Loctite® 243™
		(	

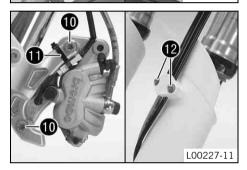


- Tighten screws 8.

Guideline

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

Secure the wiring harness with cable holder 9.



Position the brake caliper. Mount and tighten screws **①**.
 Guideline

Screw, front brake caliper M8 25 Nm Loctite® 243™ (18.4 lbf ft)	S	w, front brake caliper		20 11111	Loctite® 243™
---	---	------------------------	--	----------	---------------

- Mount cable binder ①.
- Position the brake line, wiring harness, and clamp. Mount and tighten screws **@**.

# **Finishing work**

- Mount the handlebar cushion.
- Install the front fender. (\* p. 47)
- Install the front wheel. 
   <sup>▲</sup> ( p. 71)
- Install the headlight mask with the headlight. ( p. 79)
- Check that the wiring harness, throttle cables and brake and clutch lines can move freely and are routed correctly.
- Check the steering head bearing play.
- Remove the motorcycle from the lift stand. (\* p. 41)
- Check the headlight setting. (\* p. 81)

# 12.13 Adjusting the play of the steering head bearing 4

# Preparatory work

Raise the motorcycle with a lift stand. (\* p. 41)



- Loosen screws 1. Remove screw 2.
- Loosen and retighten screw 3.

Guideline

Screw, top steering head	M20x1.5	12 Nm (8.9 lbf ft)
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- Using a plastic hammer, tap lightly on the upper triple clamp to avoid strains.
- Tighten screws ①.

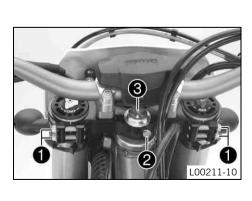
Guideline

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

Mount and tighten screw ②.

Guideline

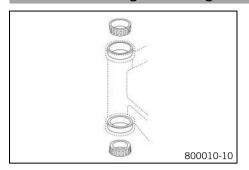
Screw, top steering stem	M8	17 Nm	Loctite® 243™
		(12.5 lbf ft)	



# Finishing work

- Check the steering head bearing play.
- Remove the motorcycle from the lift stand. (♥ p. 41)

# 12.14 Lubricating the steering head bearing 🔌



- Remove the lower triple clamp. ⁴ (\* p. 44)
- Install the lower triple clamp. ⁴ ( p. 45)

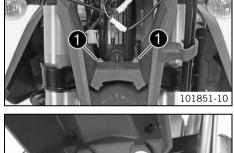
# 12.15 Removing the front fender

#### **Preparatory work**

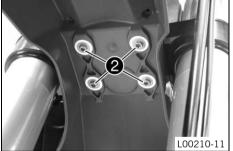
- Switch off all power consumers and switch off the engine.
- Remove the headlight mask with the headlight. (\* p. 79)

# Main work

- Remove screws ①.
- Take the brake line and wiring harness out of the brake line guide.
- Disconnect the connector of the front turn signals.



Remove screws 2. Take off the front fender.



# 12.16 Installing the front fender



#### Main work

Position the front fender. Mount and tighten screws ①.
 Guideline

I Nelliallille sciews, chassis I MO I TO Mili	Remaining screws, chassis	l M6	10 Nm (7.4 lbf ft)
---	---------------------------	------	--------------------

- 2 2
- Position the brake line and wiring harness in the brake line guide.
- Connect the connector of the front turn signals.
- Mount and tighten screws ②.
   Guideline

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

### **Finishing work**

- Install the headlight mask with the headlight. (\* p. 79)
- Check the headlight setting. (\* p. 81)

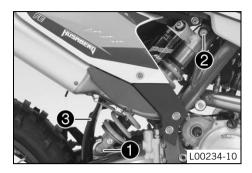
# 12.17 Removing the shock absorber 🔏

#### Preparatory work

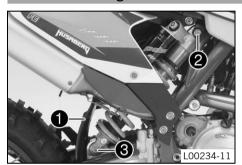
- Raise the motorcycle with a lift stand. (\* p. 41)

#### Main work

- Remove screw and lower the rear wheel with the swing arm as far as possible without blocking the rear wheel. Fix the rear wheel in this position.
- Remove screw ②, push splash protector ③ to the side, and remove the shock absorber.



# 12.18 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 shock absorber M12	80 Nm (59 lbf ft)	Loctite® 2701™
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Mount and tighten screw 3.

#### Guideline

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



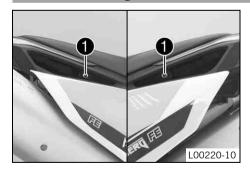
# Info

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. 41)

# 12.19 Removing the seat



- Remove screws 1 in the recessed grips on the left and right.
- Lift up the seat at the rear, pull it back, and then lift it off.

# 12.20 Mounting the seat

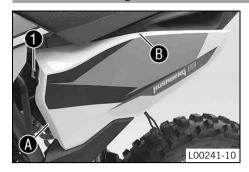


- Attach the front of the seat to the collar bushing of the fuel tank and lower the seat at the rear while pushing forward.
- Make sure that the seat is correctly locked in.
- Mount and tighten the screws for securing the seat.

### Guideline

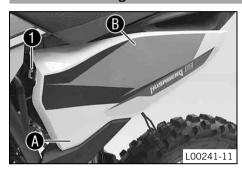
	Remaining screws, chassis	M6	10 Nm (7.4 lbf ft)
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# 12.21 Removing the air filter box lid



Release catch ①, pull off the air filter box lid sideways in areas ② and ③ and remove toward the rear.

# 12.22 Installing the air filter box lid



- Position the air filter box lid and tab ①. Engage the air filter box lid in areas ② and ③.
- Engage tab ①.

# 12.23 Removing the air filter 🔌

#### Note

**Engine failure** Unfiltered intake air has a negative effect on the service life of the engine.

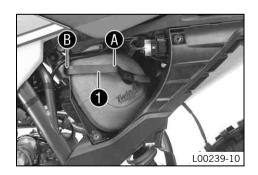
Never ride the vehicle without an air filter since dust and dirt can get into the engine and result in increased wear.



# Warning

**Environmental hazard** Hazardous substances cause environmental damage.

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



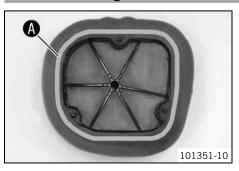
# **Preparatory work**

Remove the air filter box lid. (\* p. 49)

#### Main work

- Push air filter holder 1 toward the air filter at position 2 and detach it at end 3.
   Swing the air filter holder to one side and remove the air filter with the air filter support.
- Remove the air filter from the air filter support.

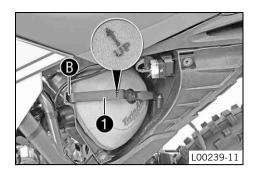
# 12.24 Installing the air filter 🔏



#### /lain work

- Mount the clean air filter on the air filter support.
- Grease the air filter in area A.

Long-life grease (\* p. 107)



Insert both parts together, position them, and fasten them using air filter holder 1 in area **B**.

The arrow of marking **UP** faces up.



If the air filter is not correctly mounted, dust and dirt can enter the engine and cause damage.

#### **Finishing work**

Install the air filter box lid. (\* p. 49)

#### 12.25 Cleaning the air filter and air filter box 🔏



# Warning

**Environmental hazard** Hazardous substances cause environmental damage.

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



#### Info

Do not clean the air filter with fuel or petroleum since these substances attack the foam.

# **Preparatory work**

- Remove the air filter box lid. (\* p. 49)
- Remove the air filter. 4 (\* p. 49)



Wash the air filter thoroughly in special cleaning liquid and allow it to dry properly.

Air filter cleaning agent (\* p. 107)



#### Info

Only press the air filter to dry it, never wring it out.

Oil the dry air filter with a high quality filter oil.

Oil for foam air filter ( p. 108)

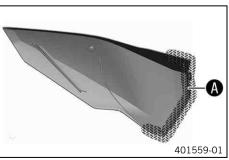
- Clean the air filter box.
- Check the intake flange for damage and looseness.

# **Finishing work**

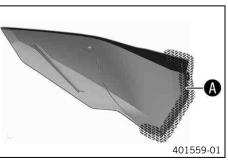
L00189-10

- Install the air filter. 4 (\* p. 49)
- Install the air filter box lid. (\* p. 49)

#### 12.26 Sealing the air filter box 🔌



Seal the air filter box in the marked area **a**.



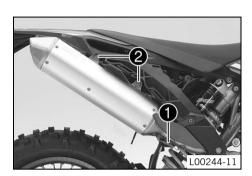
# 12.27 Removing the main silencer



# Warning

**Danger of burns** The exhaust system gets very hot when the vehicle is driven.

- Allow the exhaust system to cool down. Do not touch hot components.



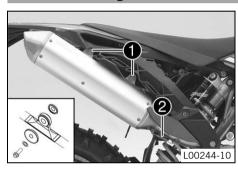
# **Preparatory work**

Remove the right side cover. (♥ p. 52)

#### Main work

- Disconnect spring ①.
- Remove screws 2 and take off the main silencer.

# 12.28 Installing the main silencer



#### Main work

Mount the main silencer. Mount and tighten screws ①.
 Guideline

Remaining screws, chassis	M6	10 Nm (7.4 lbf ft)
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Reconnect spring ②.

## Finishing work

Install the right side cover. (\* p. 53)

# 12.29 Changing the glass fiber yarn filling of the main silencer 🔌



# Warning

**Danger of burns** The exhaust system gets very hot when the vehicle is driven.

- Allow the exhaust system to cool down. Do not touch hot components.

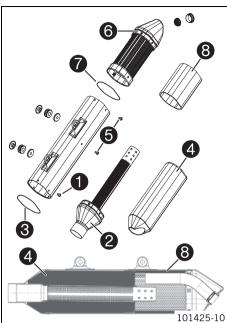


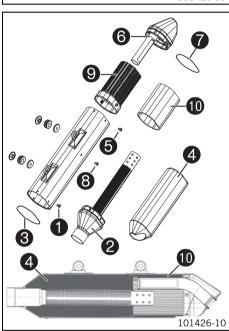
# Info

Over time, the fibers of the glass fiber yarn escape and the damper "burns" out. Not only is the noise level higher, the performance characteristic changes.

# **Preparatory work**

- Remove the right side cover. (\* p. 52)
- Remove the main silencer. (\* p. 51)





### Main work (FE 250 EU. FE 250 AUS)

- Remove screws 1 of connecting cap 2.
- Take off the connecting cap with the perforated pipe, O-ring 3, and glass fiber yarn filling 4.
- Remove screws ⑤ and take off silencer cap ⑥ with O-ring ⑦ and stuffing yarn ⑥.
- Clean the parts that need to be reinstalled and check for damage.
- Mount the O-ring on the silencer cap.
- Mount the new stuffing yarn on the silencer cap and fasten with adhesive tape.
- Position the silencer cap. Mount and tighten the screws.
- Mount the O-ring on the connecting cap.
- Slide the new glass fiber yarn filling over the perforated pipe.
- Mount the connecting cap with the glass fiber yarn filling in the main silencer.



#### Info

Slide the glass fiber yarn filling into the main silencer with a blunt tool.

- Mount and tighten the screws.

### (FE 250 USA)

- Remove screws of connecting cap •.
- Take off the connecting cap with the perforated pipe, O-ring 3, and glass fiber yarn filling 4.
- Remove screw **6** and take off silencer cap **6** with O-ring **7**.
- Remove screw 3 and remove insert 9 together with stuffing yarn 10.
- Clean the parts that need to be reinstalled and check for damage.
- Mount the new stuffing yarn on the insert and fasten with adhesive tape.
- Slide the insert with the stuffing yarn into the main silencer and fasten with the screw.
- Mount the O-ring on the connecting cap.
- Slide the new glass fiber yarn filling over the perforated pipe.
- Mount the connecting cap with the glass fiber yarn filling in the main silencer.



#### Info

Slide the glass fiber yarn filling into the main silencer with a blunt tool.

- Mount and tighten the screws.
- Mount the O-ring on the silencer cap.
- Position the silencer cap. Mount and tighten the screws.

# Finishing work

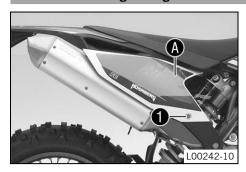
- Install the main silencer. (\* p. 51)
- Install the right side cover. (\* p. 53)

# 12.30 Removing the right side cover



- Remove screw ①.
- Pull off the side cover in area sideways and remove it toward the rear.

# 12.31 Installing the right side cover



- Position the side cover and engage in area **a**.
- Mount and tighten screw ①.

Guideline

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

# 12.32 Removing the fuel tank 🔦



#### Dangei

Fire hazard Fuel is highly flammable.

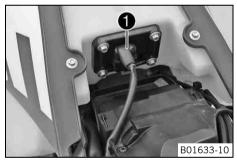
- Never refuel the vehicle near open flames or burning cigarettes, and always switch off the engine first. Be careful that no fuel is spilt, especially on hot vehicle components. Clean up spilt fuel immediately.
- The fuel in the fuel tank expands when warm and may emerge if overfilled. Follow the instructions on refueling.



#### Warning

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

Fuel must not come into contact with the skin, eyes, or clothing. Do not breathe in the fuel vapors. If contact occurs with the eyes, rinse with water immediately and contact a physician. Immediately clean contaminated areas on the skin with soap and water. If fuel is swallowed, contact a physician immediately. Change clothing that is contaminated with fuel. Store fuel properly in a suitable canister and keep away from children.

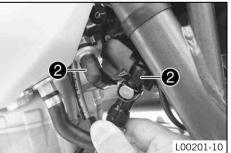


#### Preparatory work

- Remove the seat. (\* p. 48)

#### Main worl

- Disconnect electric plug-in connection of the fuel pump.
- Remove the tube from the fuel tank breather.



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



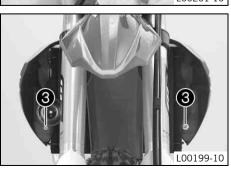
#### Info

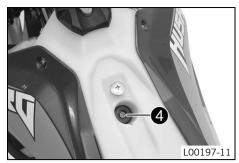
Under no circumstances should dirt enter into the fuel line. Dirt in the fuel line clogs the injection valve.

- Disconnect the plug-in connection of the fuel line.
- Mount wash cap set ②.

Wash cap set (81212016100)

Remove screws 3 with the collar bushings and horn.





Remove screw 4 with the rubber bushing.



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

# 12.33 Installing the fuel tank 🐴



#### **Danger**

Fire hazard Fuel is highly flammable.

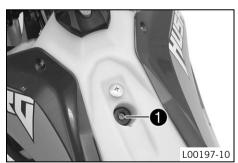
- Never refuel the vehicle near open flames or burning cigarettes, and always switch off the engine first. Be careful that no fuel is spilt, especially on hot vehicle components. Clean up spilt fuel immediately.
- The fuel in the fuel tank expands when warm and may emerge if overfilled. Follow the instructions on refueling.

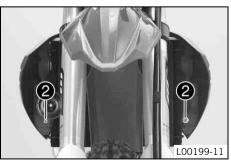


# Warning

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

- Fuel must not come into contact with the skin, eyes, or clothing. Do not breathe in the fuel vapors. If contact occurs with the eyes, rinse with water immediately and contact a physician. Immediately clean contaminated areas on the skin with soap and water. If fuel is swallowed, contact a physician immediately. Change clothing that is contaminated with fuel.





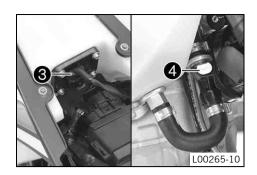
#### Main work

- Check the routing of the throttle cable. (▼ p. 59)
- Position the fuel tank and fit the two spoilers to the sides of the radiator bracket.
- Make sure that no cables are trapped or damaged.
- Mount the fuel tank breather.
- Mount and tighten screw with the rubber bushing.
   Guideline

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

Position the horn, and fit and tighten screws ② with collar bushings.
 Guideline

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



- Connect the electrical plug-in connection 3.
- Remove the wash cap set.
- Thoroughly clean the plug-in connection of the fuel line using compressed air.



#### Info

Never let dirt enter the fuel line. Dirt in the fuel line clogs the injection valve

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



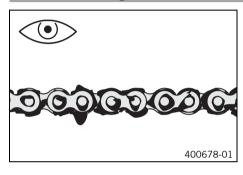
#### Info

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

#### **Finishing work**

Mount the seat. (\* p. 48)

# 12.34 Checking for chain dirt accumulation



- Check the chain for coarse dirt accumulation.
  - » If the chain is very dirty:
    - Clean the chain. (\* p. 55)

# 12.35 Cleaning the chain



# Warning

Danger of accidents Oil or grease on the tires reduces their grip.

Remove oil and grease with a suitable cleaning material.



#### Warning

Danger of accidents Reduced braking efficiency due to oil or grease on the brake discs.

Always keep the brake discs free of oil and grease, and clean them with brake cleaner when necessary.



#### Varning

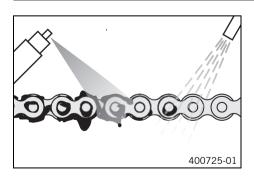
**Environmental hazard** Hazardous substances cause environmental damage.

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



#### Info

The service life of the chain depends largely on its maintenance.



Clean the chain regularly and then treat with chain spray.

Chain cleaner (\* p. 107)

Chain spray (\* p. 107)

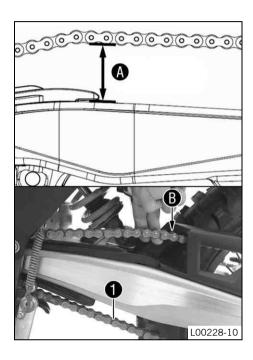
# 12.36 Checking the chain tension



# Warning

**Danger of accidents** Danger caused by incorrect chain tension.

If the chain is too taut, the components of the secondary power transmission (chain, engine sprocket, rear sprocket, bearings in the transmission and in the rear wheel) will be under additional load. In addition to premature wear, this can cause the chain or the countershaft of the transmission to break in extreme cases. If the chain is too loose, however, it may fall off the engine sprocket or rear sprocket and block the rear wheel or damage the engine. Ensure that the chain tension is correct and adjust it if necessary.



# **Preparatory work**

Raise the motorcycle with a lift stand. (\* p. 41)

#### Main work

 Push the chain at the end of the chain sliding component upwards to measure the chain tension .



#### Info

The lower chain section **1** must be taut.

When the chain guard is mounted, it must be possible to pull up the chain at least to the point where it makes contact with chain guard **3**. Chain wear is not always even, so you should repeat this measurement at different chain positions.

Chain tension	55 58 mm (2.17 2.28 in)

- » If the chain tension does not meet specifications:
  - Adjust the chain tension. (\* p. 56)

### Finishing work

Remove the motorcycle from the lift stand. (\* p. 41)

# 12.37 Adjusting the chain tension



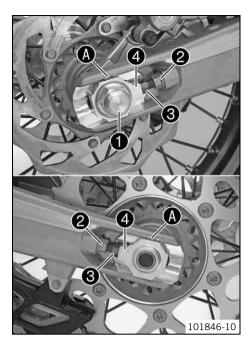
# Warning

**Danger of accidents** Danger caused by incorrect chain tension.

If the chain is too taut, the components of the secondary power transmission (chain, engine sprocket, rear sprocket, bearings in the transmission and in the rear wheel) will be under additional load. In addition to premature wear, this can cause the chain or the countershaft of the transmission to break in extreme cases. If the chain is too loose, however, it may fall off the engine sprocket or rear sprocket and block the rear wheel or damage the engine. Ensure that the chain tension is correct and adjust it if necessary.

# **Preparatory work**

- Raise the motorcycle with a lift stand. (\* p. 41)
- Check the chain tension. (\* p. 56)



#### Main work

- Loosen nut ①.
- Loosen nuts ②.
- Adjust the chain tension by turning adjusting screws left and right.
   Guideline

Chain tension 55... 58 mm (2.17... 2.28 in)

Turn adjusting screws **3** on the left and right so that the markings on the left and right chain adjusters are in the same position relative to the reference marks **3**. The rear wheel is then correctly aligned.

- Tighten nuts 2.
- Make sure that the chain adjusters are fitted correctly on the adjusting screws •.
- Tighten nut ①.

Guideline

Nut, rear wheel spindle	M20x1.5	80 Nm (59 lbf ft)



#### Info

The wide adjustment range of the chain adjusters (32 mm (1.26 in)) enables different secondary ratios with the same chain length. Chain adjusters 4 can be turned by 180°.

# Finishing work

- Remove the motorcycle from the lift stand. (\* p. 41)

# 12.38 Checking the chain, rear sprocket, engine sprocket and chain guide

### **Preparatory work**

Raise the motorcycle with a lift stand. (\* p. 41)

#### Main work

- Shift gear to neutral.
- Check the rear sprocket and engine sprocket for wear.
  - » If the rear sprocket or engine sprocket is worn:
    - Change the power set.



# Info

The engine sprocket, rear sprocket and chain should always be replaced together.

Pull on the upper part of the chain with the specified weight .
 Guideline

Weight of chain wear measurement 10... 15 kg (22... 33 lb.)

Measure the distance **3** of 18 chain links in the lower chain section.



#### Info

Chain wear is not always even, so you should repeat this measurement at different chain positions.

Maximum distance <b>3</b> at the longest	272 mm (10.71 in)
chain section	

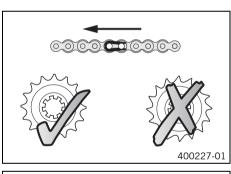
- » If the distance **1** is greater than the specified measurement:
  - Change the power set. 🔌

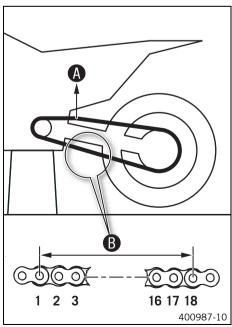


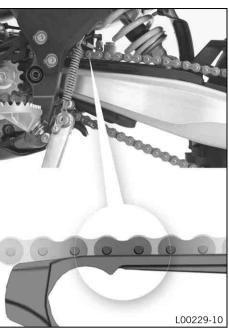
#### Info

When the chain is replaced, the rear sprocket and engine sprocket should also be changed.

New chains wear out faster on old, worn sprockets.



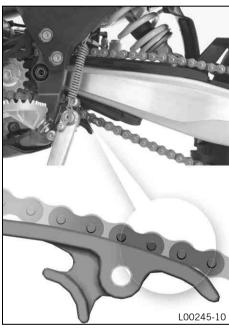




- Check the chain sliding guard for wear.
  - » If the bottom edge of the chain bolt is in line with or below the chain sliding guard:
    - Change the chain sliding guard.
- Check that the chain sliding guard is firmly seated.
  - » If the chain sliding guard is loose:
    - Tighten the chain sliding guard.

Guideline

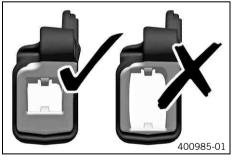
	Screw, chain sliding	M6	6 Nm	Loctite <sup>®</sup> 243™
1	guard		(4.4 lbf ft)	



- Check the chain sliding piece for wear.
  - » If the bottom edge of the chain bolt is in line with or below the chain sliding piece:
    - Change the chain sliding piece. 🔌
- Check that the chain sliding piece is firmly seated.
  - » If the chain sliding piece is loose:
    - Tighten the chain sliding piece.

Guideline

Screw, chain sliding piece	M8	15 Nm
		(11.1 lbf ft)



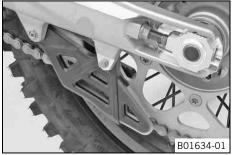
Check the chain guide for wear.



#### Info

Wear is visible on the front of the chain guide.

- » If the light part of the chain guide is worn:
  - Change the chain guide. 🔌



- Check that the chain guide is firmly seated.
  - » If the chain guide is loose:
    - Tighten the chain guide.

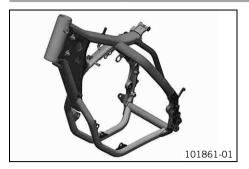
Guideline

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

# Finishing work

- Remove the motorcycle from the lift stand. (\* p. 41)

# 12.39 Checking the frame 🔦



- Check the frame for cracks and deformation.
  - » If the frame exhibits cracks or deformation due to a mechanical impact:
    - Change the frame. 🔌



#### Info

A frame that has been damaged due to a mechanical impact must always be changed. Repair of the frame is not authorized by HUS-ABERG

# 12.40 Checking the swingarm 🔦



- Check the swingarm for damage, cracking, and deformation.
  - » If the swingarm shows signs of damage, cracking, or deformation:
    - Change the swingarm. 🔏



#### Info

A damaged swingarm must always be changed. Repair of the swingarm is not authorized by HUSABERG.

# 12.41 Checking the routing of the throttle cable

## Preparatory work

- Remove the seat. (\* p. 48)
- Remove the fuel tank. 🔌 (🕶 p. 53)

#### Main work

- Check the routing of the throttle cable.

Both throttle cables must be routed to the throttle valve body side by side behind the handlebars and above the fuel tank bearing.

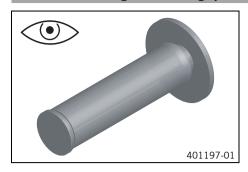
- » If the throttle cable is not routed as specified:
  - Correct the routing of the throttle cable.



# Finishing work

- Install the fuel tank. 🔌 (🕶 p. 54)
- Mount the seat. (\* p. 48)

# 12.42 Checking the rubber grip



- Check the rubber grips on the handlebar for damage, wear, and looseness.
  - » If a rubber grip is damaged, worn, or loose:
    - Change and secure the rubber grip.

Rubber grip adhesive (00062030051) (\* p. 108)

# 12.43 Additionally securing the rubber grip

#### Preparatory work

Check the rubber grip. (♥ p. 60)

#### Main work

Secure the rubber grip at two points using the securing wire.

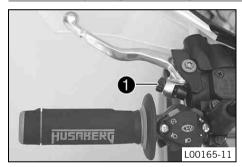
Securing wire (54812016000)

Wire twister forceps (U6907854)

The twisted wire ends face away from the hands and are bent toward the rubber grip.



# 12.44 Adjusting the basic position of the clutch lever



 Adjust the basic setting of the clutch lever to your hand size by turning adjusting screw 1.



#### Info

Turn the adjusting screw clockwise to increase the distance between the clutch lever and the handlebar.

Turn the adjusting screw counterclockwise to decrease the distance between the clutch lever and the handlebar.

The range of adjustment is limited.

Turn the adjusting screw by hand only, and do not apply any force.

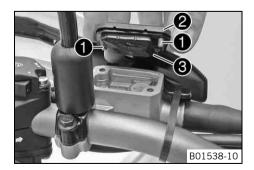
Do not make any adjustments while riding!

# 12.45 Checking/rectifying the fluid level of the hydraulic clutch



#### Info

The fluid level rises with increased wear of the clutch lining discs.



- Move the clutch fluid reservoir mounted on the handlebar to a horizontal position.
- Remove screws ①.
- Remove cover **2** with membrane **3**.
- Check the fluid level.

Fluid level below container rim 4 mm (0.16 in)

- » If the fluid level does not meet specifications:
  - Correct the fluid level of the hydraulic clutch.

Brake fluid DOT 4 / DOT 5.1 ( ≠ p. 105)

- Position the cover with the membrane. Mount and tighten the screws.



#### Info

Clean up overflowed or spilt brake fluid immediately with water.

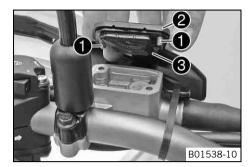
# 12.46 Changing the hydraulic clutch fluid 🔧



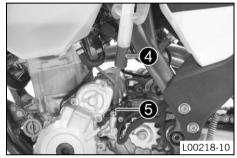
#### Warning

**Environmental hazard** Hazardous substances cause environmental damage.

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



- Move the clutch fluid reservoir mounted on the handlebar to a horizontal position.
- Remove screws ①.
- Remove cover **2** with membrane **3**.

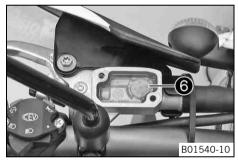


Fill bleeding syringe with the appropriate hydraulic fluid.

Bleed syringe (50329050000)

Brake fluid DOT 4 / DOT 5.1 ( **\*** p. 105)

 On the slave cylinder of the clutch, remove bleeder screw 6 and mount bleeding syringe 4.



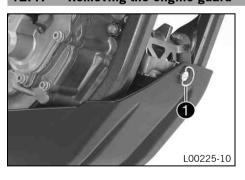
- Inject the liquid into the system until it escapes from openings 6 of the master cylinder without bubbles.
- To prevent overflow, drain fluid occasionally from the master cylinder reservoir.
- Remove the bleeding syringe. Mount and tighten screws bleeder screw.
  - Correct the fluid level of the hydraulic clutch.

    Guideline

Fluid level below container rim 4 mm (0.16 in)

Position the cover with the membrane. Mount and tighten the screws.

# 12.47 Removing the engine guard



 Turn quick release • counterclockwise until it disengages. Remove the engine guard.

# 12.48 Installing the engine guard



- Attach the engine guard on the frame at the rear and swing up at the front.
- Turn quick release 1 clockwise all the way.

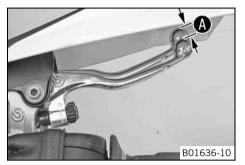
# 13.1 Checking free travel of hand brake lever



# Warning

Danger of accidents Brake system failure.

If there is no free travel on the hand brake lever, pressure builds up on the front brake circuit. The front brake can fail due
to overheating. Adjust the free travel on hand brake lever according to specifications.

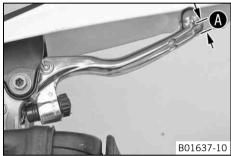


#### (FE 250 EU. FE 250 AUS)

- Push the hand brake to the handlebar and check free travel **a**.

_		
	Free travel of hand brake lever	≥ 3 mm (≥ 0.12 in)

- » If the free travel does not meet specifications:
  - Adjust the free travel of the hand brake lever. (\* p. 62)



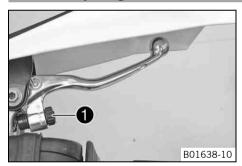
#### (FE 250 USA)

Push the hand brake lever forwards and check free travel ...

Free travel of hand brake lever	≥ 3 mm (≥ 0.12 in)	
rice traver or rially brake level	= 3 mm (= 0.12 m)	

- » If the free travel does not meet specifications:
  - Adjust the basic position of the hand brake lever. (\* p. 62)

# 13.2 Adjusting free travel of hand brake lever (FE 250 EU, FE 250 AUS)



- Check the free travel of the hand brake lever. (\* p. 62)
- Adjust the free travel of the hand brake lever with adjusting screw •.



### Info

Turn the adjustment screw clockwise to reduce free travel. The pressure point moves away from the handlebar.

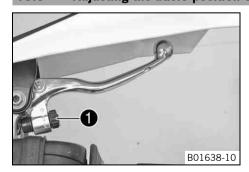
Turn the adjustment screw counterclockwise to increase free travel. The pressure point moves towards the handlebar.

The range of adjustment is limited.

Turn the adjusting screw by hand only, and do not apply any force.

Do not make any adjustments while riding!

# 13.3 Adjusting the basic position of the hand brake lever (FE 250 USA)



- Check the free travel of the hand brake lever. (\* p. 62)
- Adjust the basic setting of the hand brake lever to your hand size by turning adjusting screw •.



#### Info

Turn the adjusting screw clockwise to increase the distance between the hand brake lever and the handlebar.

Turn the adjusting screw counterclockwise to decrease the distance between the hand brake lever and the handlebar.

The range of adjustment is limited.

Turn the adjusting screw by hand only, and do not apply any force.

Do not make any adjustments while riding!

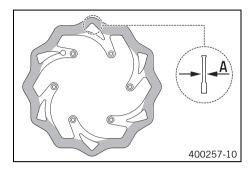
# 13.4 Checking the brake discs



# Warning

**Danger of accidents** Reduced braking efficiency due to worn brake disc(s).

- Change the worn brake disc(s) without delay. (Your authorized HUSABERG workshop would be pleased to help you.)



 Check the thickness of the front and rear brake discs at several places on the disk to see if it conforms to measurement .



#### Info

Wear reduces the thickness of the brake disc around the area used by the brake linings.

Brake discs - wear limit	
Front	2.5 mm (0.098 in)
Rear	3.5 mm (0.138 in)

- » If the brake disc thickness is less than the specified value:
  - Change the brake disc.
- Check the front and rear brake discs for damage, cracking and deformation.
  - » If the brake disc shows signs of damage, cracking, or deformation:
    - Change the brake disc.

# 13.5 Checking the front brake fluid level



#### Warning

**Danger of accidents** Brake system failure.

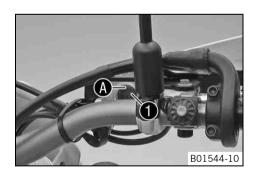
If the brake fluid level drops below the specified marking or the specified value, this is an indication that the brake system
is leaking or that the brake linings are completely worn down. Check the brake system and do not continue riding. (Your
authorized HUSABERG workshop would be pleased to help you.)



### Warning

Danger of accidents Reduced braking efficiency due to old brake fluid.

Change the brake fluid of the front and rear brake according to the service schedule. (Your authorized HUSABERG workshop would be pleased to help you.)



- Move the brake fluid reservoir mounted on the handlebar to a horizontal position.
- Check the brake fluid level in the viewer ①.
  - » If the brake fluid level has dropped below marking **@**:
    - Add front brake fluid. 4 (\* p. 63)

# 13.6 Adding front brake fluid 🔌



#### Warning

**Danger of accidents** Brake system failure.

If the brake fluid level drops below the specified marking or the specified value, this is an indication that the brake system
is leaking or that the brake linings are completely worn down. Check the brake system and do not continue riding. (Your
authorized HUSABERG workshop would be pleased to help you.)



## Warning

**Skin irritation** Brake fluid can cause skin irritation on contact.

- Avoid contact with skin and eyes, and keep out of the reach of children.
- Wear suitable protective clothing and goggles.
- If brake fluid comes into contact with the eyes, flush the eyes thoroughly with water and consult a physician immediately.

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#### Warning

Danger of accidents Reduced braking efficiency due to old brake fluid.

Change the brake fluid of the front and rear brake according to the service schedule. (Your authorized HUSABERG workshop would be pleased to help you.)



### Warning

**Environmental hazard** Hazardous substances cause environmental damage.

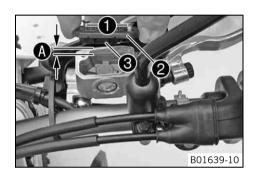
- Oil, grease, filters, fuel, cleaners, brake fluid, etc., should be disposed of as stipulated in applicable regulations.



# Info

Never use DOT 5 brake fluid. It is silicone-based and purple in color. Oil seals and brake lines are not designed for DOT 5 brake fluid.

Avoid contact between brake fluid and painted parts. Brake fluid attacks paint! Use only clean brake fluid from a sealed container.



### **Preparatory work**

Check the front brake linings. (\* p. 64)

#### //ain work

- Move the brake fluid reservoir mounted on the handlebar to a horizontal position.
- Remove screws ①.
- Remove cover ② with membrane ③.
- Add brake fluid to level A.

Guideline

Level (brake fluid level below con-	5 mm (0.2 in)
tainer rim)	

Brake fluid DOT 4 / DOT 5.1 (\* p. 105)

- Position the cover with the membrane. Mount and tighten the screws.



# Info

Clean up overflowed or spilt brake fluid immediately with water.

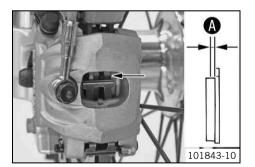
# 13.7 Checking the front brake linings



### Warning

**Danger of accidents** Reduced braking efficiency caused by worn brake linings.

- Change worn brake linings immediately. (Your authorized HUSABERG workshop would be pleased to help you.)



- Check the brake linings for minimum thickness **A**.

Minimum thickness  $\bullet$   $\geq 1 \text{ mm } (\geq 0.04 \text{ in})$ 

- If the minimum thickness is less than specified:
- Change the front brake linings. 4 (\* p. 65)
- Check the brake linings for damage and cracking.
  - » If damage or cracking is visible:
    - Change the front brake linings. 
       <sup>4</sup> ( p. 65)

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# 13.8 Changing the front brake linings 🔏



#### Warning

**Danger of accident** Brake system failure.

 Maintenance work and repairs must be carried out professionally. (Your authorized HUSABERG workshop would be pleased to help you.)



### Warning

**Skin irritation** Brake fluid can cause skin irritation on contact.

- Avoid contact with skin and eyes, and keep out of the reach of children.
- Wear suitable protective clothing and goggles.
- If brake fluid comes into contact with the eyes, flush the eyes thoroughly with water and consult a physician immediately.



#### Warning

Danger of accidents Reduced braking efficiency due to old brake fluid.

Change the brake fluid of the front and rear brake according to the service schedule. (Your authorized HUSABERG workshop would be pleased to help you.)



### Warning

Danger of accidents Reduced braking efficiency due to oil or grease on the brake discs.

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



#### Varning

Danger of accidents Reduced braking efficiency due to use of non-approved brake linings.

Brake linings available from accessory suppliers are often not tested and approved for use on HUSABERG vehicles. The construction and friction factor of the brake linings and therefore the brake power can differ considerably from the original HUSABERG brake linings. If brake linings are used that differ from the originals, there is no guarantee that they comply with the original license. The vehicle no longer corresponds to the condition at delivery, and the warranty is no longer valid.



# Warning

**Environmental hazard** Hazardous substances cause environmental damage.

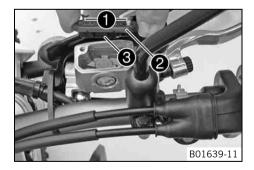
- Oil, grease, filters, fuel, cleaners, brake fluid, etc., should be disposed of as stipulated in applicable regulations.

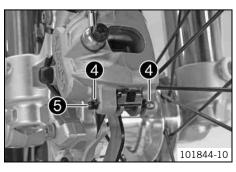


# Info

Never use DOT 5 brake fluid. It is silicone-based and purple in color. Oil seals and brake lines are not designed for DOT 5 brake fluid.

Avoid contact between brake fluid and painted parts. Brake fluid attacks paint! Use only clean brake fluid from a sealed container.





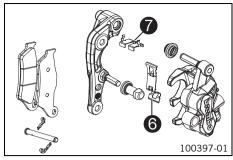
- Move the brake fluid reservoir mounted on the handlebar to a horizontal position.
- Remove screws ①.
- Remove cover ② with membrane ③.
- Press the brake caliper onto the brake disc by hand in order to push back the brake pistons. Ensure that brake fluid does not flow out of the brake fluid reservoir, extracting it by suction if it does.



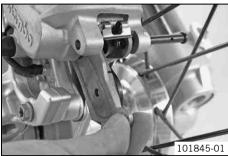
#### Info

Make sure when pushing back the brake pistons that you do not press the brake caliper against the spokes.

- Remove cotter pins **4**, pull out pin **5**, and remove the brake linings.
- Clean the brake caliper and brake caliper support.



Check that leaf spring • in the brake caliper and sliding plate • in the brake caliper support are seated correctly.



- Insert the brake linings, insert the pin, and mount the cotter pin.
- Operate the hand brake lever repeatedly until the brake linings are in contact with the brake disc and there is a pressure point.



Adjust the brake fluid level to level **a**.
 Guideline

Level <b>(a)</b> (brake fluid level below container rim)	5 mm (0.2 in)
--	---------------

Brake fluid DOT 4 / DOT 5.1 ( **p**. 105)

Position the cover with the membrane. Mount and tighten the screws.



#### nfo

Clean up overflowed or spilt brake fluid immediately with water.

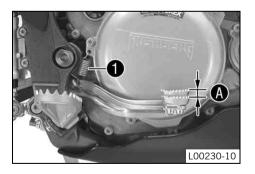
# 13.9 Checking the free travel of foot brake lever



# Warning

Danger of accidents Brake system failure.

If there is no free travel on the foot brake lever, pressure builds up on the rear brake circuit. The rear brake can fail due to
overheating. Adjust the free travel on foot brake lever according to specifications.



- Disconnect spring ①.
- Move the foot brake lever back and forth between the end stop and the contact to the foot brake cylinder piston and check free travel .
   Guideline

Free travel at foot brake lever

3... 5 mm (0.12... 0.2 in)

- » If the free travel does not meet specifications:
  - Adjust the basic position of the foot brake lever.
     (\* p. 66)
- Reconnect spring ①.

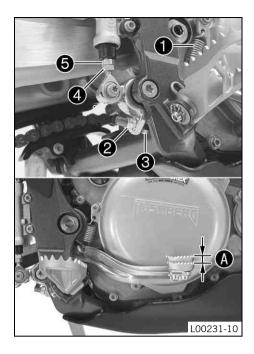
# 13.10 Adjusting the basic position of the foot brake lever 🔧



# Warning

**Danger of accidents** Brake system failure.

If there is no free travel on the foot brake lever, pressure builds up on the rear brake circuit. The rear brake can fail due to
overheating. Adjust the free travel on foot brake lever according to specifications.



- Disconnect spring ①.
- Loosen nut 3 and, with push rod 5, turn it back until you have maximum free travel.

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 To adjust the basic position of the foot brake lever individually, loosen nut ② and turn screw ③ accordingly.

# i

#### Info

The range of adjustment is limited.

Turn push rod **6** accordingly until you have free travel **6**. If necessary, adjust the basic position of the foot brake lever.

#### Guideline

Free travel at foot brake leve	3 5 mm (0.12 0.2 in)
--------------------------------	----------------------

- Hold screw 3 and tighten nut 2.

#### Guideline

Nut, foot brake lever stop	M8	20 Nm
		(14.8 lbf ft)

Hold push rod 6 and tighten nut 4.

#### Guideline

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

Reconnect spring ①.

# 13.11 Checking the rear brake fluid level



#### Warning

Danger of accidents Brake system failure.

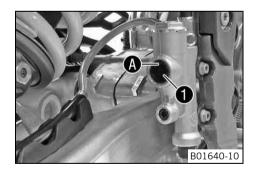
If the brake fluid level drops below the specified marking or the specified value, this is an indication that the brake system
is leaking or that the brake linings are completely worn down. Check the brake system and do not continue riding. (Your
authorized HUSABERG workshop would be pleased to help you.)



#### Warning

Danger of accidents Reduced braking efficiency due to old brake fluid.

Change the brake fluid of the front and rear brake according to the service schedule. (Your authorized HUSABERG workshop would be pleased to help you.)



- Stand the vehicle upright.
- Check the brake fluid level in level viewer ①.
  - » If the brake fluid level has dropped below marking  $oldsymbol{\Theta}$ :
    - Add rear brake fluid. (\* p. 67)

# 13.12 Adding rear brake fluid 🔌



#### Warning

**Danger of accidents** Brake system failure.

If the brake fluid level drops below the specified marking or the specified value, this is an indication that the brake system
is leaking or that the brake linings are completely worn down. Check the brake system and do not continue riding. (Your
authorized HUSABERG workshop would be pleased to help you.)



#### Warning

**Skin irritation** Brake fluid can cause skin irritation on contact.

- Avoid contact with skin and eyes, and keep out of the reach of children.
- Wear suitable protective clothing and goggles.
- If brake fluid comes into contact with the eyes, flush the eyes thoroughly with water and consult a physician immediately.



#### Warning

Danger of accidents Reduced braking efficiency due to old brake fluid.

Change the brake fluid of the front and rear brake according to the service schedule. (Your authorized HUSABERG workshop would be pleased to help you.)



### Warning

**Environmental hazard** Hazardous substances cause environmental damage.

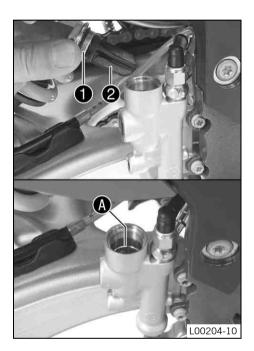
- Oil, grease, filters, fuel, cleaners, brake fluid, etc., should be disposed of as stipulated in applicable regulations.



#### Info

Never use DOT 5 brake fluid. It is silicone-based and purple in color. Oil seals and brake lines are not designed for DOT 5 brake fluid.

Avoid contact between brake fluid and painted parts. Brake fluid attacks paint! Use only clean brake fluid from a sealed container.



# **Preparatory work**

Check the rear brake linings. (\* p. 68)

#### Main work

- Stand the vehicle upright.
- Remove screw cap 1 with membrane 2 and the O-ring.
- Add brake fluid to level **a**.

Brake fluid DOT 4 / DOT 5.1 (\* p. 105)

- Mount the screw cap with the membrane and O-ring.



#### Info

Clean up overflowed or spilt brake fluid immediately with water.

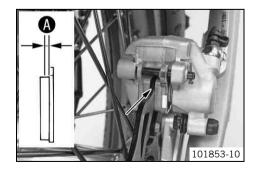
# 13.13 Checking the rear brake linings



# Warning

Danger of accidents Reduced braking efficiency caused by worn brake linings.

- Change worn brake linings immediately. (Your authorized HUSABERG workshop would be pleased to help you.)



Check the brake linings for minimum thickness **4**.

Minimum thickness

≥ 1 mm (≥ 0.04 in)

- If the minimum thickness is less than specified:
  - Change the rear brake linings. ⁴ (▼ p. 69)
- Check the brake linings for damage and cracking.
  - » If damage or cracking is visible:
    - Change the rear brake linings. ⁴ ( p. 69)

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# 13.14 Changing the rear brake linings 🔌



# Warning

**Danger of accident** Brake system failure.

 Maintenance work and repairs must be carried out professionally. (Your authorized HUSABERG workshop would be pleased to help you.)



#### Warning

**Skin irritation** Brake fluid can cause skin irritation on contact.

- Avoid contact with skin and eyes, and keep out of the reach of children.
- Wear suitable protective clothing and goggles.
- If brake fluid comes into contact with the eyes, flush the eyes thoroughly with water and consult a physician immediately.



# Warning

Danger of accidents Reduced braking efficiency due to old brake fluid.

Change the brake fluid of the front and rear brake according to the service schedule. (Your authorized HUSABERG workshop would be pleased to help you.)



### Warning

Danger of accidents Reduced braking efficiency due to oil or grease on the brake discs.

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



#### Varning

Danger of accidents Reduced braking efficiency due to use of non-approved brake linings.

Brake linings available from accessory suppliers are often not tested and approved for use on HUSABERG vehicles. The construction and friction factor of the brake linings and therefore the brake power can differ considerably from the original HUSABERG brake linings. If brake linings are used that differ from the originals, there is no guarantee that they comply with the original license. The vehicle no longer corresponds to the condition at delivery, and the warranty is no longer valid.



## Warning

**Environmental hazard** Hazardous substances cause environmental damage.

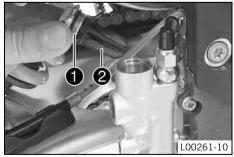
- Oil, grease, filters, fuel, cleaners, brake fluid, etc., should be disposed of as stipulated in applicable regulations.

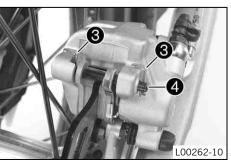


#### Info

Never use DOT 5 brake fluid. It is silicone-based and purple in color. Oil seals and brake lines are not designed for DOT 5 brake fluid.

Avoid contact between brake fluid and painted parts. Brake fluid attacks paint! Use only clean brake fluid from a sealed container.





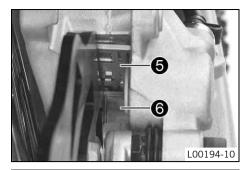
- Stand the vehicle upright.
- Remove screw cap with membrane and the O-ring.
- Press the brake piston back to its basic position and make sure that no brake fluid overflows from the brake fluid reservoir. Suction it off if necessary.



#### Info

Make sure when pushing back the brake piston that you do not press the brake caliper against the spokes.

- Remove cotter pins **3**, pull out pin **4**, and remove the brake linings.
- Clean the brake caliper and brake caliper support.



Check that leaf spring **6** in the brake caliper and sliding plate **6** in the brake caliper support are seated correctly.



- Insert the brake linings, insert the pin, and mount the cotter pin.
- Operate the foot brake lever repeatedly until the brake linings are in contact with the brake disc and there is a pressure point.



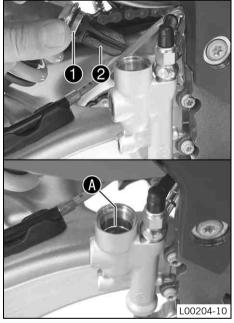
Correct the brake fluid level to marking **A**.

Brake fluid DOT 4 / DOT 5.1 ( **\*** p. 105)

Mount screw cap **1** with membrane **2** and the O-ring.



Clean up overflowed or spilt brake fluid immediately with water.



#### 14.1 Removing the front wheel 🔌



### Preparatory work

Raise the motorcycle with a lift stand. (\* p. 41)

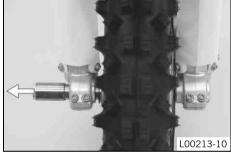
Press the brake caliper onto the brake disc by hand in order to push back the brake pistons.



#### Info

Make sure when pushing back the brake pistons that you do not press the brake caliper against the spokes.

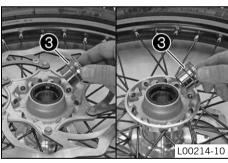
- Remove screw 1.
- Release screws 2.



Holding the front wheel, withdraw the wheel spindle. Take the front wheel out of the fork.



Do not pull the hand brake lever when the front wheel is removed. Always lay the wheel down in such a way that the brake disc is not dam-



Remove spacers 3.

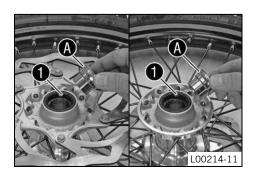
#### 14.2 Installing the front wheel 🔌



### Warning

**Danger of accidents** Reduced braking efficiency due to oil or grease on the brake discs.

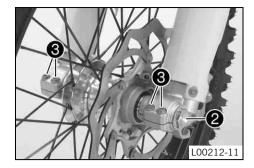
Always keep the brake discs free of oil and grease, and clean them with brake cleaner when necessary.



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

Long-life grease (\* p. 107)

Insert the spacers.



- Lift the front wheel into the fork, position it, and insert the wheel spindle.
- Mount and tighten screw ②.

Guideline

Screw, front wheel spindle	M24x1.5	45 Nm
		(33.2 lbf ft)

- Activate the hand brake lever multiple times until the brake linings are in contact with the brake disc.
- Remove the motorcycle from the lift stand. (\* p. 41)
- Pull the front wheel brake and push down hard on the fork several times to align the fork legs.
- Tighten screws 3.

Guideline

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

## 14.3 Removing the rear wheel 🔌

#### Preparatory work

Raise the motorcycle with a lift stand. (\* p. 41)

#### Main work

 Press the brake caliper by hand on to the brake disc in order to press back the brake piston.



#### Info

Make sure when pushing back the brake piston that you do not press the brake caliper against the spokes.

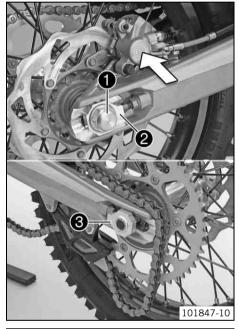
- Remove nut ①.
- Remove chain adjuster ②. Withdraw wheel spindle ③ only enough to allow the rear wheel to be pushed forward.
- Push the rear wheel forward as far as possible. Remove the chain from the rear sprocket
- Holding the rear wheel, withdraw the wheel spindle. Take the rear wheel out of the swingarm.

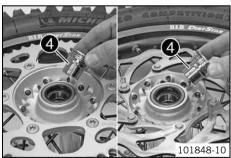


## Info

Do not operate the foot brake when the rear wheel is removed. Always lay the wheel down in such a way that the brake disc is not damaged.

Remove spacers 4.





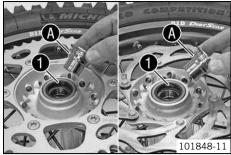
## 14.4 Installing the rear wheel 🔌

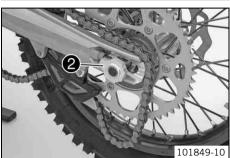


#### Warning

**Danger of accidents** Reduced braking efficiency due to oil or grease on the brake discs.

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



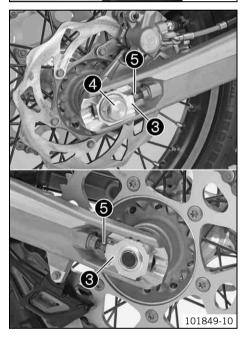




- Check the wheel bearing for damage and wear.
  - » If the wheel bearing is damaged or worn:
    - Change the wheel bearing.
- Clean and grease the shaft seal rings 1 and bearing surface 1 of the spacers.

Long-life grease (\* p. 107)

- Insert the spacers.
- Lift the rear wheel into the swingarm, position it, and insert wheel spindle 2.
- Attach the chain.



- Position chain adjusters 3. Mount nut 4, but do not tighten it yet.
- Make sure that chain adjusters **3** are fitted correctly on adjusting screws **5**.
- Check the chain tension. (\* p. 56)
- Tighten nut 4.

Guideline

Nut, rear wheel spindle M20x1.5 80 Nm (59 lbf ft)



#### Info

The wide adjustment range of the chain adjusters (32 mm (1.26 in)) enables different secondary ratios with the same chain length. Chain adjusters 3 can be turned by 180°.

 Operate the foot brake lever repeatedly until the brake linings are in contact with the brake disc and there is a pressure point.

## Finishing work

Remove the motorcycle from the lift stand. (\* p. 41)

## 14.5 Checking the tire condition



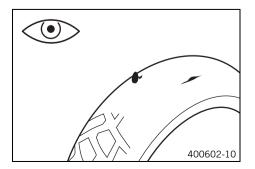
## Info

Only mount tires approved and/or recommended by HUSABERG.

Other tires could have a negative effect on handling characteristics.

The type, condition, and air pressure of the tires all have a significant impact on the handling characteristics of the motorcycle. The tires mounted on the front and rear wheels must have a similar profile.

Worn tires have a negative effect on handling characteristics, especially on wet surfaces.



- Check the front and rear tires for cuts, run-in objects, and other damage.
  - » If the tire exhibits cuts, run-in objects, or other damage:
    - Change the tire.
- Check the depth of the tread.



#### Info

Note local national regulations concerning the minimum tread depth.

Minimum tread depth ≥ 2 mm (≥ 0.08 in)
--

- » If the tread depth is less than the minimum permissible depth:
  - Change the tire.
- Check the tire age.



### Info

The tire's date of manufacture is usually part of the tire markings and is indicated by the last four digits of the **DOT** marking. The first two digits indicate the week of manufacture and the last two digits the year of manufacture

HUSABERG recommends that the tires be changed after 5 years at the latest, regardless of the actual state of wear.

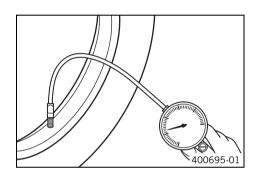
- » If the tire is older than five years:
  - Change the tire.

## 14.6 Checking the tire air pressure



## Info

Low tire air pressure leads to abnormal wear and overheating of the tire. Correct tire air pressure ensures optimal riding comfort and maximum tire service life.



- Remove the protection cap.
- Check the tire air pressure when the tires are cold.

Tire air pressure off road	
Front	1.0 bar (15 psi)
Rear	1.0 bar (15 psi)

Road tire pressure (FE 250 EU, FE 250 AUS)	
Front	1.5 bar (22 psi)
Rear	1.5 bar (22 psi)

- » If the tire air pressure does not meet specifications:
  - Correct the tire air pressure.
- Mount protection cap.

## 14.7 Checking spoke tension



#### Warning

**Danger of accidents** Instable handling due to incorrect spoke tension.

- Ensure that the spoke tension is correct. (Your authorized HUSABERG workshop would be pleased to help you.)

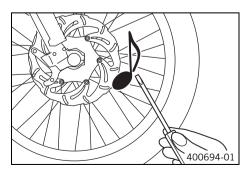


### Info

A loose spoke can cause wheel imbalance, which leads to more loose spokes in a short time.

If the spokes are too tight, they can break due to local overload.

Check the spoke tension regularly, especially on a new motorcycle.



Tap each spoke with a screwdriver.



### Info

The sound frequency depends on the length and thickness of the spoke. If there are different sound frequencies in spokes with the same length and thickness, this indicates different spoke tensions.

You should hear a high note.

- » If the spoke tension varies:
  - Correct the spoke tension.
- Check the spoke torque.

## Guideline

Spoke nipple, front wheel	M4.5	5 6 Nm (3.7 4.4 lbf ft)
Spoke nipple, rear wheel	M4.5	5 6 Nm (3.7 4.4 lbf ft)

Torque wrench with various accessories in set (58429094000)

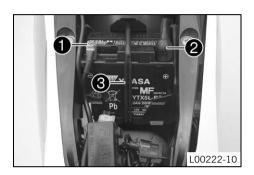
## 15.1 Removing the battery 🔌



## 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.



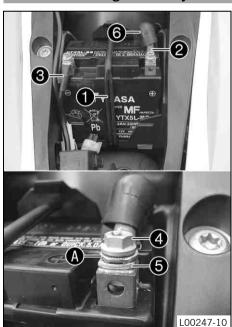
## **Preparatory work**

- Switch off all power consumers and switch off the engine.
- Remove the seat. (\* p. 48)

#### Main work

- Disconnect negative cable **1** of the battery.
- Pull back the positive terminal cover ② and disconnect the positive (plus) cable of the battery.
- Detach rubber band 3 at the bottom.
- Lift the battery up and out.

## 15.2 Installing the battery 🔦



#### Main work

Insert battery into the battery compartment with the terminals facing to the front.

Battery (YTX5L-BS) (\* p. 102)

- Reconnect rubber band ①.
- Attach positive cable ②.

Guideline

(1.84 lbf ft)	Screw, battery terminal	M5	2.5 Nm
			(1.84 lbf ft)



## Info

Contact disk **4** must be mounted between screw **4** and cable socket **5** with the claws facing down.

- Slide positive terminal cover 6 over the positive terminal.
- Attach negative cable 3.

Guideline

Screw, battery terminal	M5	2.5 Nm
		(1.84 lbf ft)



#### Info

Contact disk **3** must be mounted between screw **4** and cable socket **5** with the claws facing down.

## **Finishing work**

- Mount the seat. (\* p. 48)

## 15.3 Charging 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** Battery components and acid are harmful to the environment.

Do not dispose of batteries with the regular garbage. Dispose of defective batteries in an environmentally responsible manner. Take the batteries to your HUSABERG dealer or to a collection point for old batteries.



#### Warning

**Environmental hazard** Hazardous substances cause environmental damage.

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



#### Info

Even when there is no load on the battery, it still loses power steadily.

The charge state and the type of charge are very important for the service life of the battery.

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

If the charging current, charging voltage and charging time are exceeded, electrolyte escapes through the safety valves. This reduces the battery capacity.

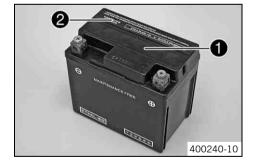
If the battery is depleted from starting the vehicle repeatedly, the battery must be charged immediately.

If the battery is left in a discharged state for an extended period, it will become over-discharged and sulfate, destroying the battery.

The battery is maintenance-free, which means that the acid level does not need to be checked.



- Switch off all power consumers and switch off the engine.
- Remove the seat. (\* p. 48)
- Disconnect the negative cable of the battery to avoid damage to the onboard electronics.



## Main work

- Connect the battery charger to the battery. Switch on the battery charger.

Battery charger (81229074000)

You can also use the battery charger to test the open-circuit voltage and starting voltage of the battery, and to test the alternator. With this device, you cannot overcharge the battery.



#### Info

Never remove lid 1.

Charge the battery with a maximum of 10% of the capacity specified on battery housing ②.

Switch off the battery charger after charging. Disconnect the battery.
 Guideline

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

#### **Finishing work**

Mount the seat. (\* p. 48)

## 15.4 Changing the main fuse



## Warning

Fire hazard The electrical system can be overloaded if the wrong fuses are used.

Use only fuses with the prescribed amperage. Never by-pass or repair fuses.



## Info

The main fuse protects all power consumers of the vehicle. It is located in the starter relay housing under the air filter box lid.



#### **Preparatory work**

- Switch off all power consumers and switch off the engine.
- Remove the air filter box lid. (\* p. 49)

#### Main work

- Remove protection caps ①.
- Remove the faulty main fuse 2.



#### Info

A defective fuse can be identified by the burned-out fuse wire  $\bf \Phi$ . A reserve fuse  $\bf \Theta$  is located in the starter relay.

Install a new main fuse.

Fuse (58011109120) (\* p. 102)

- Check that the electrical equipment is functioning properly.



#### Tip

Insert the spare fuse so that it is available if needed.

- Mount the protection caps.
- Mount the starter relay onto the holder and lay the cable.



Finishing work

− Install the air filter box lid. ( p. 49)

## 15.5 Changing the fuses of individual power consumers

L00248-10



### Info

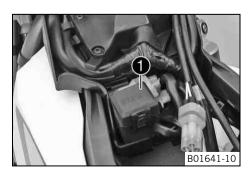
The fuse box containing the fuses of individual power consumers is located under the seat.

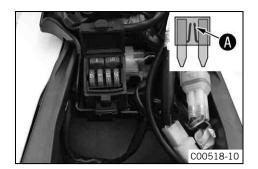
#### Preparatory work

- Switch off all power consumers and switch off the engine.
- Remove the seat. (\* p. 48)

### Main work

Open fuse box cover ①.





Remove the defective fuse.

Guideline

Fuse 1 - 10 A - EFI control unit

Fuse 2 - 5 A - fuel pump

Fuse 3 - 10 A - high beam, low beam, parking light, tail light, license plate lamp

Fuse 4 - 10 A - horn, brake light, turn signal, radiator fan (optional)

Fuses res - 10 A - spare fuse

Fuses res - 5 A - spare fuse

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#### Info

A defective fuse can be identified by the burned-out fuse wire **①**.



#### Warning

**Fire hazard** The electrical system can be overloaded if the wrong fuses are used.

- Use only fuses with the prescribed amperage. Never by-pass or repair fuses.
- Use spare fuses with the correct rating only.

Fuse (75011088010) ( p. 102)

Fuse (58011109105)



### Tip

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

- Check that the power consumer is functioning properly.
- Close the fuse box cover.

## **Finishing work**

Mount the seat. (\* p. 48)

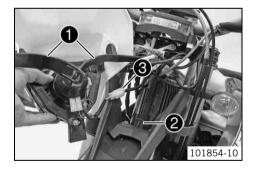
## 15.6 Removing the headlight mask with the headlight

## **Preparatory work**

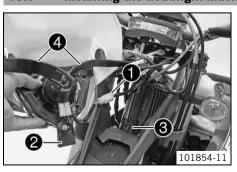
Switch off all power consumers and switch off the engine.

#### Main work

- Open rubber bands on the fork legs.
- Tilt the headlight mask forward and detach at catch ②.
- Disconnect connector 3.
- Take off the headlight mask with headlight.

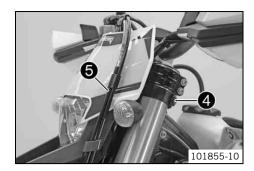


## 15.7 Installing the headlight mask with the headlight



#### Main work

- Plug in connector ①.
- Check that the lighting is functioning properly.
- Attach headlight holder 2 at catch 3 and position the headlight mask.



- Position rubber bands 4 around the fork legs and close them.
  - ✓ The wiring harness and brake line **⑤** are routed in front of the headlight mask.

#### **Finishing work**

Check the headlight setting. (\* p. 81)

## 15.8 Changing the headlight bulb

### Note

Damage to reflector Reduced brightness.

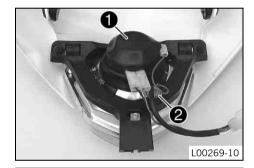
 Grease on the lamp will evaporate due to the heat and be deposited on the reflector. Clean the lamp and keep it free of grease before mounting.

### Preparatory work

- Switch off all power consumers and switch off the engine.
- Remove the headlight mask with the headlight. (\* p. 79)

#### Main work

- Turn protection cap with the bulb socket beneath it all the way counterclockwise and lift it off.
- Pull bulb socket ② of the parking light out of the reflector.



- Press headlight bulb 3 lightly into the bulb socket, turn it all the way counterclockwise, and pull it out.
- Insert the new headlight bulb.

Headlight (S2 / socket BA20d) (\* p. 102)

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

## Finishing work

- Install the headlight mask with the headlight. (\* p. 79)
- Check the headlight setting. (\* p. 81)

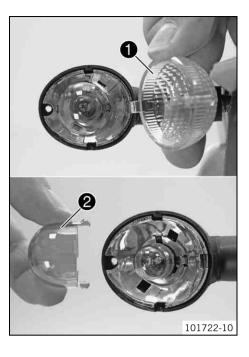
## 15.9 Changing the turn signal bulb (FE 250 EU, FE 250 AUS)

L00270-10

### Note

Damage to reflector Reduced brightness.

 Grease on the lamp will evaporate due to the heat and be deposited on the reflector. Clean the lamp and keep it free of grease before mounting.



#### Main work

- Remove the screw on the rear of the turn signal housing.
- Carefully remove diffuser ①.
- Lightly squeeze orange cap 2 in the area of the holding lugs and take it off.
- Press the turn signal bulb lightly into the socket, turn it counterclockwise by about 30°, and take it out of the socket.

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#### Info

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

 Press the new turn signal bulb carefully into the socket and turn it clockwise until it stops.

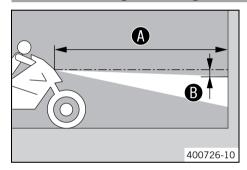
Turn signal (R10W / socket BA15s) (\* p. 102)

- Mount the orange cap.
- Position the diffuser.
- Insert the screw and turn it counterclockwise first until it engages in the thread with a light jerk. Tighten the screw slightly.

#### Finishing work

Check that the turn signal system is functioning properly.

## 15.10 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 a distance 
   • under the first mark.

Guideline

Distance **9** 5 cm (2 in)

Position the vehicle vertically a distance 
 away from the wall.

Guideline

Distance 6 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 driver.

- » If the light-dark border does not meet specifications:
  - Adjust the headlight range. (\* p. 81)

## 15.11 Adjusting the headlight range

### Preparatory work

Check the headlight setting. (\* p. 81)

#### Main work

Turn adjusting screw • to adjust the headlight range.
 Guideline

The boundary between light and dark must be exactly on the lower mark for a motorcycle with driver (instructions on how to apply the mark: Checking the headlight setting).



#### Info

Turn clockwise to reduce the headlight range; turn counterclockwise to increase the headlight range.

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



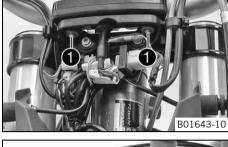
## 15.12 Changing the speedometer battery

#### Preparatory work

- Switch off all power consumers and switch off the engine.
- Remove the headlight mask with the headlight. (\* p. 79)

#### Main work

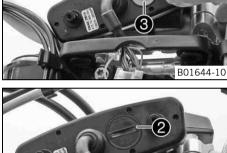
- Remove screws 1.
- Pull the speedometer upward out of the holder.



- Using a coin, turn protection cap  ${\bf 2}$  all the way counterclockwise and remove it.
- Remove speedometer battery 3.
- Insert the new battery with the label facing upward.

Speedometer battery (CR 2032) (\* p. 102)

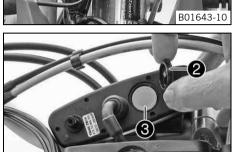
Check the O-ring of the protection cap for correct seating.



- Position protection cap ② and turn all the way clockwise using a coin.
- Press any button on the speedometer.
  - ✓ The speedometer is activated.
- Position the speedometer in the holder.
- Mount and tighten the screws with washers.

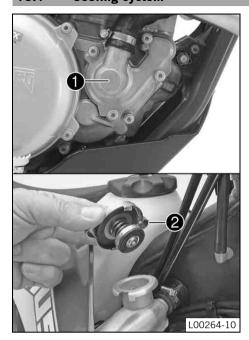
## Finishing work

- Install the headlight mask with the headlight. ( p. 79)
- Check the headlight setting. (♥ p. 81)
- Set the speedometer. (\* p. 20)





## 16.1 Cooling system



The water pump **1** in the engine forces the coolant to flow.

The pressure resulting from the warming of the cooling system is regulated by a valve in radiator cap ②. The specified coolant temperature is therefore permissible without the danger of malfunctions.

120 °C (248 °F)

Cooling is effected by the air stream.

The lower the speed, the less the cooling effect. Dirty cooling fins also reduce the cooling effect.

The radiator fan provides extra cooling. It is controlled by a thermoswitch.

## 16.2 Checking the antifreeze and coolant level



## Warning

Danger of scalding During motorcycle operation, the coolant gets very hot and is under pressure.

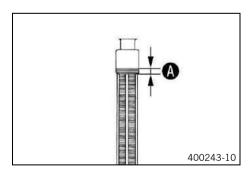
Do not remove the radiator cap, radiator hoses or other cooling system components when the engine is hot. Allow the
engine and cooling system to cool down. In case of scalding, rinse immediately with lukewarm water.



#### Warning

**Danger of poisoning** Coolant is poisonous and a health hazard.

Coolant must not come into contact with the skin, eyes, or clothing. If contact occurs with the eyes, rinse with water immediately and contact a physician. Immediately clean contaminated areas on the skin with soap and water. If coolant is swallowed, contact a physician immediately. Change clothing that is contaminated with coolant. Keep coolant out of reach of children.



## Condition

The engine is cold.

- Stand the motorcycle upright on a horizontal surface.
- Remove the radiator cap.
- Check antifreeze of coolant.

- » If the antifreeze of the coolant does not meet specifications:
  - Correct the antifreeze of the coolant.
- Check the coolant level in the radiator.

Coolant level 3 above radiator fins. 10 mm (0.39 in)

- If the coolant level does not meet specifications:
  - Correct the coolant level.

## Alternative 1

Coolant (\* p. 105)

#### Alternative 2

Coolant (mixed ready to use) ( p. 105)

Mount the radiator cap.

## 16.3 Checking the coolant level



## Warning

**Danger of scalding** During motorcycle operation, the coolant gets very hot and is under pressure.

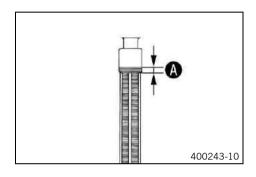
Do not remove the radiator cap, radiator hoses or other cooling system components when the engine is hot. Allow the
engine and cooling system to cool down. In case of scalding, rinse immediately with lukewarm water.



#### Warning

**Danger of poisoning** Coolant is poisonous and a health hazard.

Coolant must not come into contact with the skin, eyes, or clothing. If contact occurs with the eyes, rinse with water immediately and contact a physician. Immediately clean contaminated areas on the skin with soap and water. If coolant is swallowed, contact a physician immediately. Change clothing that is contaminated with coolant. Keep coolant out of reach of children.



#### Condition

The engine is cold.

- Stand the motorcycle upright on a horizontal surface.
- Remove the radiator cap.
- Check the coolant level in the radiator.

Coolant level **a** above radiator fins. 10 mm (0.39 in)

- If the coolant level does not meet specifications:
  - Correct the coolant level.

#### Alternative 1

Coolant (\* p. 105)

#### Alternative 2

Coolant (mixed ready to use) ( p. 105)

Mount the radiator cap.

## 16.4 Draining the coolant 🔏



## Warning

**Danger of scalding** During motorcycle operation, the coolant gets very hot and is under pressure.

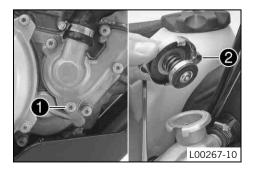
Do not remove the radiator cap, radiator hoses or other cooling system components when the engine is hot. Allow the
engine and cooling system to cool down. In case of scalding, rinse immediately with lukewarm water.



#### Warning

**Danger of poisoning** Coolant is poisonous and a health hazard.

Coolant must not come into contact with the skin, eyes, or clothing. If contact occurs with the eyes, rinse with water immediately and contact a physician. Immediately clean contaminated areas on the skin with soap and water. If coolant is swallowed, contact a physician immediately. Change clothing that is contaminated with coolant. Keep coolant out of reach of children.



### Condition

The engine is cold.

- Position the motorcycle upright.
- Place a suitable container under the water pump cover.
- Remove screw ①. Take off radiator cap ②.
- Completely drain the coolant.
- Mount and tighten screw with a new seal ring.
   Guideline

Screw, water pump cover	M6	10 Nm (7.4 lbf ft)

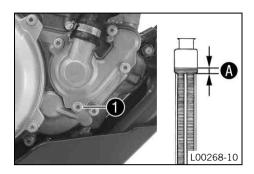
## 16.5 Refilling coolant 🔏



## Warning

**Danger of poisoning** Coolant is poisonous and a health hazard.

Coolant must not come into contact with the skin, eyes, or clothing. If contact occurs with the eyes, rinse with water immediately and contact a physician. Immediately clean contaminated areas on the skin with soap and water. If coolant is swallowed, contact a physician immediately. Change clothing that is contaminated with coolant. Keep coolant out of reach of children.



#### Main work

- Make sure that the screw 1 is tightened.
- Stand the vehicle upright.
- Pour coolant in up to measurement 

   above the radiator fins.

   Guideline

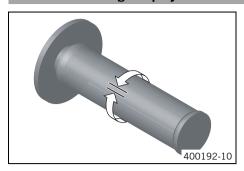
10 mm (0.39 in)		
Coolant	1.2 l (1.3 qt.)	Coolant (* p. 105)
		Coolant (mixed ready to use) (*p. 105)

Refit the radiator cap.

## **Finishing work**

- Take a short test ride.
- Check the coolant level. (\* p. 84)

## 17.1 Checking the play in the throttle cable



- Check the throttle grip for smooth operation.
- Move the handlebar to the straight-ahead position. Move the throttle grip backwards and forwards to ascertain the play in the throttle cable.

Play in throttle cable	3 5 mm (0.12 0.2 in)

- » If the throttle cable play does not meet specifications:
  - Adjust the play in the throttle cable. 4 (\* p. 86)



#### Danger

**Danger of poisoning** Exhaust gases are toxic and inhaling them may result in unconsciousness and/or death.

- When running the engine, always make sure there is sufficient ventilation, and do not start or run the engine in an enclosed space without an effective exhaust extraction system.
- Start the engine and let it run idle. Move the handlebar to and fro over the entire steering range.

The idle speed must not change.

- » If the idle speed changes:
  - Adjust the play in the throttle cable. 4 (\* p. 86)

## 17.2 Adjusting the play in the throttle cable 🔌

#### Preparatory work

- Remove the seat. (\* p. 48)
- Remove the fuel tank. 4 (\* p. 53)
- Check the routing of the throttle cable. (\* p. 59)



- Move the handlebar to the straight-ahead position.
- Push back sleeves ①.
- Loosen nut 2. Turn adjusting screw 3 in as far as possible.
- Loosen nut 4. Turn adjusting screw 5 so that there is play in the throttle cable at the throttle grip.

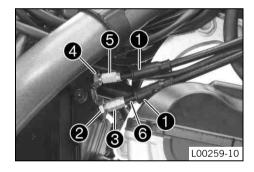
Guideline

Play in throttle cable	3 5 mm (0.12 0.2 in)

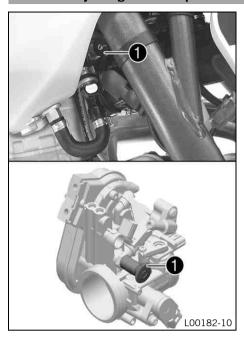
- Tighten nut 4.
- Press and hold the throttle grip in the closed setting. Turn adjusting screw out until there is no play in throttle cable o.
- Tighten nut ②.
- Push sleeves on. Check the throttle grip for smooth operation.

#### **Finishing work**

- Install the fuel tank. 🔌 (🕶 p. 54)
- Mount the seat. (▼ p. 48)
- Check the play in the throttle cable. (\* p. 86)



## 17.3 Adjusting the idle speed 🐴



- Run the engine warm and push the idle speed adjusting screw all the way in.
- Set the desired idle speed by turning the idle speed adjusting screw.
   Guideline

Idle speed 2,050... 2,150 rpm

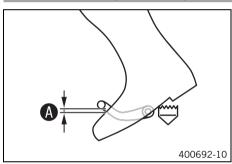


#### Info

Turn counterclockwise to increase the idle speed.

Turn clockwise to decrease the idle speed.

## 17.4 Checking the basic position of the shift lever

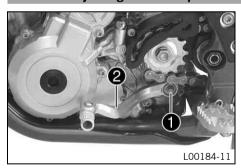


Sit on the vehicle in the riding position and determine the distance between the upper edge of your boot and the shift lever.

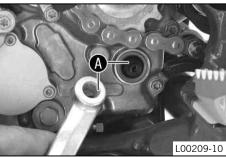
Gap between the shift lever and the top of the boot 10... 20 mm (0.39... 0.79 in)

- » If the distance does not meet the specifications:
  - Adjust the basic position of the shift lever. ⁴ ( p. 87)

## 17.5 Adjusting the basic position of the shift lever 🔌



Remove screw 1 and take off shift lever 2.



- Clean gear teeth **a** of the shift lever and shift shaft.
- Mount the shift lever on the shift shaft in the required position and engage the gearing.



## Info

The range of adjustment is limited.

The shift lever must not come into contact with any other vehicle components during the shift procedure.

- Mount and tighten the screw.

### Guideline

Screw, shift lever	M6	14 Nm (10.3 lbf ft)	Loctite® 243™

## 18.1 Changing the fuel screen 🔌



## **Danger**

Fire hazard Fuel is highly flammable.

- Never refuel the vehicle near open flames or burning cigarettes, and always switch off the engine first. Be careful that no
  fuel is spilt, especially on hot vehicle components. Clean up spilt fuel immediately.
- The fuel in the fuel tank expands when warm and may emerge if overfilled. Follow the instructions on refueling.



#### Warning

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

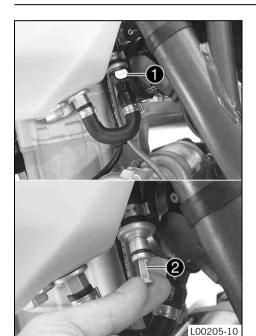
- Fuel must not come into contact with the skin, eyes, or clothing. Do not breathe in the fuel vapors. If contact occurs with the eyes, rinse with water immediately and contact a physician. Immediately clean contaminated areas on the skin with soap and water. If fuel is swallowed, contact a physician immediately. Change clothing that is contaminated with fuel.



## Warning

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

- Do not allow fuel to get into the ground water, the ground, or the sewage system.



- Clean the plug-in connection **1** of the fuel line thoroughly with 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.
- Pull fuel screen **②** out of the connecting piece.
- Insert the new fuel screen all the way into the connecting piece.
- Lubricate the O-ring and connect plug-in connection of the fuel line.



#### Danger

**Danger of poisoning** Exhaust gases are toxic and inhaling them may result in unconsciousness and/or death.

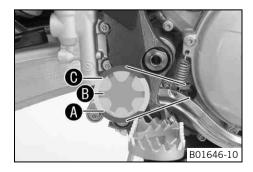
- When running the engine, always make sure there is sufficient ventilation, and do not start or run the engine in an enclosed space without an effective exhaust extraction system.
- Start the motor and check the response.

## 18.2 Checking the engine oil level



#### Info

The engine oil level can be checked when the engine is cold or warm.



#### Preparatory work

- Stand the motorcycle upright on a horizontal surface.

## Condition

The engine is cold.

- Check the engine oil level.

The engine oil is at a level between the lower edge **3** and the middle **3** of the level viewer.

- » If the engine oil is not up to the lower edge **a** of the level viewer:
  - Add engine oil. (\* p. 91)

#### Condition

The engine is at operating temperature.

- Check the engine oil level.



#### Info

After switching off the engine, wait one minute before checking the level.

The engine oil is at a level between the lower edge **3** and the upper edge **9** of the level viewer.

- » If the engine oil is not up to the lower edge **(4)** of the level viewer:
  - Add engine oil. (\* p. 91)

## 18.3 Changing the engine oil and oil filter, cleaning the oil screen 🔌



#### Warning

**Danger of scalding** Engine oil and gear oil get very hot when the motorcycle is ridden.

- Wear appropriate protective clothing and safety gloves. In case of burns, rinse immediately with lukewarm water.



#### Warning

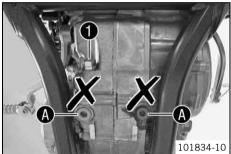
**Environmental hazard** Hazardous substances cause environmental damage.

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



#### Info

Drain the engine oil only when the engine is warm.



#### Preparatory work

- Park the motorcycle on a level surface.
- Remove the engine guard. (\* p. 61)

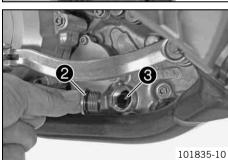
#### Main work

- Place a suitable container under the engine.
- Remove oil drain plug with the magnet and seal ring.

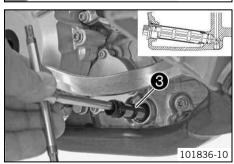


#### Info

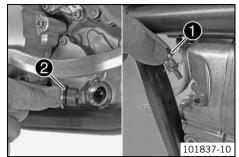
Do not remove screws **a** on both sides.

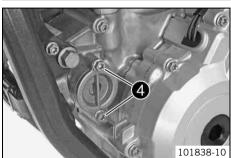


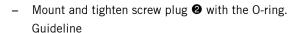
- Remove plug 2 with oil screen 3 and the O-rings.
- Completely drain the engine oil.
- Thoroughly clean the parts and sealing surfaces.



- Push the oil screen @with O-rings onto a pin wrench.
- Push the pin wrench through the opening into the drill hole of the opposite engine case wall and push the oil screen as far as possible into the engine case.





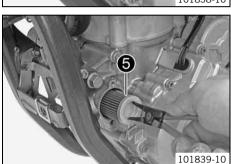


Screw plug, oil screen	M20x1.5	15 Nm
		(11.1 lbf ft)

Mount and tighten the oil drain plug • with the magnet and a new seal ring.

Oil drain plug with magnet	M12x1.5	20 Nm
		(14.8 lbf ft)

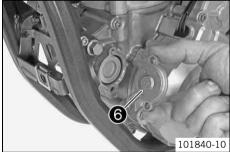
Remove screws 4. Remove the oil filter cover with the O-ring.



Pull oil filter 6 out of the oil filter housing.

Circlip pliers reverse (51012011000)

- Completely drain the engine oil.
- Thoroughly clean the parts and sealing area.





- Lay the motorcycle on its side and fill the oil filter housing to about 1/3 full with engine oil.
- Fill the oil filter with engine oil and place it in the oil filter housing.
- Oil the O-ring of the oil filter cover and mount it with the oil filter cover **6**.
- Mount and tighten the screws.

Guideline

Screw, oil filter cover	M6	10 Nm (7.4 lbf ft)
-------------------------	----	--------------------

- Stand the motorcycle upright.
- Remove the oil filler plug **②** with the O-ring from the clutch cover and fill up with engine oil.

Engine oil	1.20 l (1.27 qt.)	Engine oil (SAE 10W/50) ( p. 105)	
		Alternative engine oil for harsh oper- ating conditions and increased per- formance	Engine oil (SAE 10W/60) (00062010035) ( p. 105)



### Info

Too little engine oil or poor-quality engine oil results in premature wear to the engine.

Install and tighten the oil filler plug with O-ring.



#### Danger

**Danger of poisoning** Exhaust gases are toxic and inhaling them may result in unconsciousness and/or death.

When running the engine, always make sure there is sufficient ventilation, and do not start or run the engine in an enclosed space without an effective exhaust extraction system.

- Start the engine and check that it is oil-tight.

#### **Finishing work**

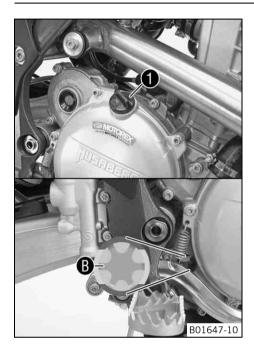
- Check the engine oil level. (\* p. 88)
- Install the engine guard. (\* p. 61)

## 18.4 Adding engine oil



#### Info

Too little engine oil or poor-quality engine oil results in premature wear to the engine.



#### Main work

- Remove the oil filler plug with the O-ring from the clutch cover.

Engine oil (SAE 10W/50) (\* p. 105)

#### Alternative 1

Engine oil (SAE 10W/60) (00062010035) (\* p. 105)



#### Info

For optimal performance of the engine oil, do not mix different types of engine oil.

If appropriate, change the engine oil.

Install and tighten the oil filler plug with O-ring.



#### **Danger**

**Danger of poisoning** Exhaust gases are toxic and inhaling them may result in unconsciousness and/or death.

- When running the engine, always make sure there is sufficient ventilation, and do not start or run the engine in an enclosed space without an effective exhaust extraction system.
- Start the engine and check that it is oil-tight.

## Finishing work

- Check the engine oil level. (\* p. 88)

## 19.1 Cleaning the motorcycle

#### Note

Material damage Damage and destruction of components by high-pressure cleaning equipment.

When cleaning the vehicle with a pressure cleaner, do not point the water jet directly onto electrical components, connectors, cables, bearings, etc. Maintain a minimum distance of 60 cm between the nozzle of the pressure cleaner and the component. Excessive pressure can cause malfunctions or destroy these parts.



#### Warning

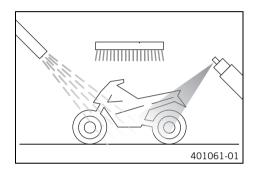
**Environmental hazard** Hazardous substances cause environmental damage.

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



#### Info

If you clean the motorcycle regularly, its value and appearance will be maintained over a long period. Avoid direct sunshine on the motorcycle during cleaning.



- Close off the exhaust system to prevent water from entering.
- First remove coarse dirt particles with a gentle spray of water.
- Spray very dirty areas with a normal motorcycle cleaner and then clean with a paintbrush.

Motorcycle cleaner (\* p. 108)



#### Info

Use warm water containing normal motorcycle cleaner and a soft sponge. Never apply motorcycle cleaner to a dry vehicle; always rinse the vehicle with water first.

- After rinsing the motorcycle with a gentle spray of water, allow it to dry thoroughly.
- Remove the closure of the exhaust system.



## Warning

**Danger of accidents** Reduced braking efficiency due to a wet or dirty brake system.

- Clean or dry a dirty or wet brake system by riding and braking gently.
- After cleaning, ride a short distance until the engine reaches operating temperature.



#### Info

The heat produced causes water at inaccessible locations in the engine and on the brake system to evaporate.

- After the motorcycle has cooled off, lubricate all moving parts and bearings.
- Clean the chain. (\* p. 55)
- Treat bare metal parts (except for brake discs and exhaust system) with anti-corrosion materials.

Cleaning and polishing materials for metal, rubber and plastic (\* p. 107)

Treat all plastic parts and powder-coated parts with a mild cleaning and care product

Cleaner and polish for shiny and matte paints, metal and plastic surfaces (\* p. 107)

## (FE 250 EU, FE 250 AUS)

- Lubricate the steering lock.

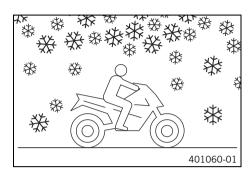
## 19.2 Checks and maintenance steps for winter operation



## Info

If the motorcycle is used in the winter, salt can be expected on the roads. Precautions need to be taken against road salt corrosion.

If the vehicle was operated in road salt, clean it with cold water after riding. Warm water would enhance the corrosive effects of salt



- Clean the motorcycle. (\* p. 92)
- Clean the brake system.



#### Info

After **EVERY** trip on salted roads, thoroughly wash the brake calipers and brake linings with cold water and dry carefully. This should be done after the parts are cooled down and while they are installed.

After riding on salted roads, thoroughly wash the motorcycle with cold water and dry it well.

 Treat the engine, swingarm, and all other bright and zinc-plated parts (except for the brake discs) with a wax-based corrosion inhibitor.



#### Info

Corrosion inhibitor is not permitted to come in contact with the brake discs as this would greatly reduce the braking force.

Clean the chain. (\* p. 55)

20 STORAGE 94

## 20.1 Storage



#### Warning

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

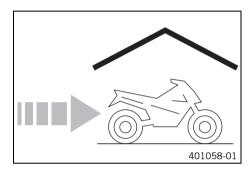
Fuel must not come into contact with the skin, eyes, or clothing. Do not breathe in the fuel vapors. If contact occurs with the eyes, rinse with water immediately and contact a physician. Immediately clean contaminated areas on the skin with soap and water. If fuel is swallowed, contact a physician immediately. Change clothing that is contaminated with fuel. Store fuel properly in a suitable canister and keep away from children.



#### Info

If you want to garage the motorcycle for a longer period, take the following steps.

Before storing the motorcycle, check all parts for function and wear. If service, repairs or replacements are necessary, you should do this during the storage period (less workshop overload). In this way, you can avoid long workshop waiting times at the start of the new season.



 When refueling for the last time before taking the motorcycle out of service, add fuel additive.

Fuel additive ( p. 107)

- Refuel. (\* p. 31)
- Clean the motorcycle. (\* p. 92)
- Change the engine oil and oil filter, clean the oil screen. ⁴ ( p. 89)
- Check the antifreeze and coolant level. (\* p. 83)
- Check the tire air pressure. (\* p. 74)
- Remove the battery. ◀ (\* p. 76)
- Charge the battery. ◀ (\* p. 77)

Guideline

Storage temperature of battery without direct sunlight 0... 35 °C (32... 95 °F)

Store the vehicle in a dry location that is not subject to large fluctuations in temperature.



#### Info

HUSABERG recommends raising the motorcycle.

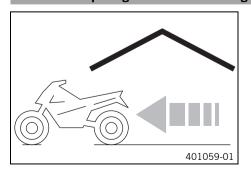
- Raise the motorcycle with a lift stand. (\* p. 41)
- Cover the motorcycle with a porous sheet or blanket. Do not use non-porous materials since they prevent humidity from escaping, thus causing corrosion.



#### Info

Avoid running the engine for a short time only. Since the engine cannot warm up properly, the water vapor produced during combustion condenses and causes valves and exhaust system to rust.

## 20.2 Preparing for use after storage



- Remove the motorcycle from the lift stand. (\* p. 41)
- Install the battery. 🔌 (🕶 p. 76)
- Perform checks and maintenance work when preparing the vehicle for use.
   (\*\* p. 28)
- Take a test ride.

Faults	Possible cause	Action
The engine cannot be cranked (elec-	Operating error	<ul> <li>Carry out the start procedure. (♥ p. 28)</li> </ul>
tric starter)	Battery is discharged	<ul> <li>Charge the battery. <sup>→</sup> (* p. 77)</li> </ul>
		<ul> <li>Check the charging voltage.</li> </ul>
		<ul> <li>Check the closed current.</li> </ul>
		– Check the stator winding of the alternator. $ extstyle  extstyl$
	Main fuse blown	<ul> <li>Change the main fuse. (♥ p. 78)</li> </ul>
	Starter relay defective	<ul> <li>Check the starter relay.</li> </ul>
	Starter motor defective	<ul> <li>Check the starter motor.</li> </ul>
Engine turns but does not start	Operating error	<ul> <li>Carry out the start procedure. (* p. 28)</li> </ul>
	Coupling of fuel hose connection not joined together	<ul> <li>Join the fuel hose connection.</li> </ul>
	Fuse 1 blown	<ul> <li>Change the fuses of individual power consumers. (** p. 78)</li> </ul>
	Fuse <b>2</b> blown	<ul> <li>Change the fuses of individual power consumers. (* p. 78)</li> </ul>
	Idle speed is not set correctly	- Adjust the idle speed. 🔌 (🕶 p. 87)
	Spark plug oily or wet	<ul> <li>Clean and dry the spark plug or replace if necessary.</li> </ul>
	Electrode distance (plug gap) of spark	<ul> <li>Adjust the plug gap.</li> </ul>
	plug too wide	Guideline Spark plug electrode gap 1.0 mm (0.039 in)
	Ignition system defective	<ul> <li>Check the ignition system.</li> </ul>
	Short-circuit cable in wiring harness	Check the wiring harness. (visual check)
	frayed, kill switch or emergency OFF switch defective	- Check the electrical system.
	Defect in fuel injection system	<ul> <li>Read out the fault memory using the HUS- ABERG diagnostic tool. ◀</li> </ul>
Engine does not speed up	Defect in fuel injection system	<ul> <li>Read out the fault memory using the HUS- ABERG diagnostic tool. </li> </ul>
	Ignition system defective	<ul> <li>Ignition coil - check the secondary winding.</li> </ul>
		<ul> <li>Check the spark plug connector.</li> </ul>
		<ul> <li>Check the stator winding of the alternator.</li> </ul>
Engine has too little power	Air filter heavily contaminated	<ul> <li>Clean the air filter and air filter box.</li> <li>p. 50)</li> </ul>
	Fuel filter is very dirty	<ul> <li>Change the fuel filter.</li> </ul>
	Fuel screen is very dirty	<ul> <li>Change the fuel screen. ♣ (* p. 88)</li> </ul>
	Defect in fuel injection system	<ul> <li>Read out the fault memory using the HUS- ABERG diagnostic tool. ◀</li> </ul>
	Exhaust system leaky, deformed or	<ul> <li>Check exhaust system for damage.</li> </ul>
	too little glass fiber yarn filling in main silencer	<ul> <li>Change the glass fiber yarn filling of the main silencer. → ( p. 51)</li> </ul>
	Valve clearance too little	<ul> <li>Adjust the valve clearance.</li> </ul>
	Ignition system defective	- Ignition coil - check the secondary winding.
		<ul> <li>Check the spark plug connector.</li> </ul>
		<ul> <li>Check the stator winding of the alternator.</li> </ul>
Engine dies during the trip	Lack of fuel	– Refuel. ( <b>*</b> p. 31)
	Fuse 1 blown	<ul> <li>Change the fuses of individual power consumers. (** p. 78)</li> </ul>
	Fuse <b>2</b> blown	<ul> <li>Change the fuses of individual power consumers. (** p. 78)</li> </ul>
Engine overheats	Coolant level low in cooling system	- Check the cooling system for leaks.
		<ul> <li>Check the coolant level. (* p. 84)</li> </ul>
	Insufficient airflow	<ul> <li>Switch off engine when stationary.</li> </ul>
	Radiator fins very dirty	<ul> <li>Clean radiator fins.</li> </ul>

Faults	Possible cause	Action		
Engine overheats	Foam formation in cooling system	<ul> <li>Drain the coolant. ♣ (♥ p. 84)</li> </ul>		
		<ul> <li>Refill the coolant.  ⁴ (♥ p. 85)</li> </ul>		
	Bent radiator hose	- Change the radiator hose.		
	Thermostat defective	<ul> <li>Check the thermostat.</li> </ul>		
		Guideline		
		Opening temperature: 70 °C (158 °F)		
<b>FI</b> warning lamp ( <b>MIL</b> ) lights up/flashes	Defect in fuel injection system	<ul> <li>Stop the motorcycle and identify the faulty part using the blink code.</li> </ul>		
		Info See blink code		
		Check the cabling for damage and the electrical plug-in connections for corrosion and damage.		
		<ul> <li>Read out the fault memory using the HUS- ABERG diagnostic tool.</li> </ul>		
High oil consumption	Engine vent hose bent	Route the vent hose without bends or replace it if necessary.		
	Engine oil level too high	- Check the engine oil level. (* p. 88)		
	Engine oil too thin (low viscosity)	<ul> <li>Change the engine oil and oil filter, clean the oil screen.</li></ul>		
	Piston and cylinder worn	<ul> <li>Measure the piston/cylinder mounting clear- ance. ◀</li> </ul>		
Battery discharged	Battery is not being charged by alter-	- Check the charging voltage. 🔏		
	nator	<ul> <li>Check the stator winding of the alternator.</li> </ul>		
	Undesired power consumer	- Check the closed current.		
Speedometer values deleted (time, stop watch, lap times)	The battery in the speedometer is discharged	<ul> <li>Change the speedometer battery. (▼ p. 82)</li> </ul>		
The high beam, low beam, parking light, tail light, and license plate lamp are not working	Fuse 3 blown	<ul> <li>Change the fuses of individual power consumers. (** p. 78)</li> </ul>		
The speedometer, horn, brake light, turn signal, and radiator fan are not working	Fuse <b>4</b> blown	<ul> <li>Change the fuses of individual power consumers. (** p. 78)</li> </ul>		

Blink code FI warning lamp (MIL)	e FI warning lamp (MIL)	
	45 <b>FI</b> warning lamp ( <b>MIL</b> ) flashes 4x long, 5x short	
Error level condition	FE 250 EU	
	Lambda sensor heater cylinder 1, sensor 1 - short circuit to ground or open circuit	
	Lambda sensor heater cylinder 1, sensor 1 - input signal too high	
Blink code FI warning lamp (MIL)		
	09 FI warning lamp (MIL) flashes 9x short	
Error level condition	Manifold absolute pressure sensor cylinder 1 - input signal too low	
	Manifold absolute pressure sensor cylinder 1 - input signal too high	
Plink and El warning lamp (MIL)		
Blink code FI warning lamp (MIL)	l(FI)	
	13 <b>FI</b> warning lamp ( <b>MIL</b> ) flashes 1x long, 3x short	
Error level condition	Intake air temperature sensor - input signal too low	
	Intake air temperature sensor - input signal too high	
Blink code FI warning lamp (MIL)	(F)	
	10 Flowersing legen (MIII) fleebee 1y leng 2y shout	
Form level andition	12 FI warning lamp (MIL) flashes 1x long, 2x short	
Error level condition	Engine coolant temperature sensor - input signal too low	
	Engine coolant temperature sensor - input signal too high	
Blink code FI warning lamp (MIL)		
	06 <b>FI</b> warning lamp ( <b>MIL</b> ) flashes 6x short	
Error level condition Throttle position sensor circuit A - input signal too low		
Throttle position sensor circuit A - input signal too high		
Blink code FI warning lamp (MIL)		
(F)		
	17 FI warning lamp (MIL) flashes 1x long, 7x short	
Error level condition FE 250 EU		
	Lambda sensor cylinder 1, sensor 1 - circuit fault	
Blink code FI warning lamp (MIL)		
<b>5</b> 1 · ····-,		
	33 FI warning lamp (MIL) flashes 3x long, 3x short	
Error level condition	Injector cylinder 1 - circuit fault	
Blink code FI warning lamp (MIL)		
Zimit cont it marning ramp (MIL)		
	02 FI warning lamp (MIL) flashes 2x short	
Error level condition	Crankshaft position sensor - circuit fault	
Blink code FI warning lamp (MIL)		
Dillik Code 11 Walling Jailly (MIL)	(FI)	
	37 <b>FI</b> warning lamp ( <b>MIL</b> ) flashes 3x long, 7x short	
Error level condition	Ignition coil 1, cylinder 1 - circuit fault	
Blink code FI warning lamp (MIL)	(FI)	
	54 <b>FI</b> warning lamp ( <b>MIL</b> ) flashes 5x long, 4x short	
Error level condition	Secondary air valve - open/short circuit to ground	
FILOR IEACL COMMISSION	Secondary air valve - open/short circuit to ground  Secondary air valve - input signal too high	
	Secondary all valve - iliput signal too lligii	

22 BLINK CODE 98

Blink code FI warning lamp (MIL)	(F)	
	53 <b>FI</b> warning lamp ( <b>MIL</b> ) flashes 5x long, 3x short	
Error level condition	FE 250 USA	
	Fuel evaporation valve - open/short circuit to ground	
	FE 250 USA	
	Fuel evaporation valve - input signal too high	
Blink code FI warning lamp (MIL)	(F)	
	41 FI warning lamp (MIL) flashes 4x long, 1x short	
Error level condition	Fuel pump control - open/short circuit to ground	
	Fuel pump control - input signal too low	
Blink code FI warning lamp (MIL)	15 FI warning lamp (MIL) flashes 1x long, 5x short	
Error level condition	Rollover sensor (A/D type) - input signal too low	
	Rollover sensor (A/D type) - input signal too high	

# 23.1 Engine

Design	1-cylinder 4-stroke engine, water-cooled
Displacement	249.91 cm <sup>3</sup> (15.2505 cu in)
Stroke	52.3 mm (2.059 in)
Bore	78 mm (3.07 in)
Compression ratio	12.8:1
Idle speed	2,050 2,150 rpm
Control	DOHC, four valves controlled via cam lever, drive via timing
	chain
Valve diameter, intake	32.5 mm (1.28 in)
Valve diameter, exhaust	26.5 mm (1.043 in)
Valve clearance	
Intake at: 20 °C (68 °F)	0.10 0.15 mm (0.0039 0.0059 in)
Exhaust at: 20 °C (68 °F)	0.13 0.18 mm (0.0051 0.0071 in)
Crankshaft bearing	2 cylinder bearings
Conrod bearing	Slide bearing
Piston pin bearing	Bearing bush
Pistons	Forged light alloy
Piston rings	1 compression ring, 1 oil scraper ring
Engine lubrication	Pressure circulation lubrication with two Eaton pumps
Primary transmission	24:73
Clutch	Multidisc clutch in oil bath/hydraulically activated
Transmission ratio	
1st gear	13:32
2nd gear	16:30
3rd gear	16:24
4th gear	23:28
5th gear	23:23
6th gear	26:22
Alternator	12 V, 168 W
Ignition	Contactless controlled fully electronic ignition with digital ignition adjustment
Spark plug	NGK LMAR9AI-10
Spark plug electrode gap	1.0 mm (0.039 in)
Cooling	Water cooling, permanent circulation of coolant by water pump
Starting aid	Electric starter

# 23.2 Engine tightening torques

Nozzle, crank chamber ventilation	M4	2 Nm (1.5 lbf ft)	Loctite <sup>®</sup> 243™
Oil nozzle for alternator cooling	M4	2 Nm (1.5 lbf ft)	Loctite <sup>®</sup> 243™
Oil nozzle for balancer shaft lubrication	M4	2 Nm (1.5 lbf ft)	Loctite <sup>®</sup> 243™
Oil nozzle for conrod bearing lubrication	M4	2 Nm (1.5 lbf ft)	Loctite <sup>®</sup> 243™
Screw, oil nozzle for piston cooling	M4	2 Nm (1.5 lbf ft)	Loctite <sup>®</sup> 243™
Locking screw for bearing	M5	6 Nm (4.4 lbf ft)	Loctite <sup>®</sup> 243™
Oil nozzle for cam lever lubrication	M5	3 Nm (2.2 lbf ft)	Loctite <sup>®</sup> 243™
Oil nozzle for clutch lubrication	M5	6 Nm (4.4 lbf ft)	Loctite <sup>®</sup> 243™
Oil nozzle, piston cooling	M5	2 Nm (1.5 lbf ft)	Loctite <sup>®</sup> 243™
Screw cap, oil channel in alternator cover	M5	3 Nm (2.2 lbf ft)	Loctite <sup>®</sup> 243™
Screw, clutch spring	M5	6 Nm (4.4 lbf ft)	_
Screw, crankshaft position sensor	M5	6 Nm (4.4 lbf ft)	Loctite <sup>®</sup> 243™

Screw, locking lever	M5	6 Nm (4.4 lbf ft)	Loctite® 243 <sup>TM</sup>
<u> </u>			
Screw, oil pump cover	M5	6 Nm (4.4 lbf ft)	Loctite® 243 <sup>TM</sup>
Screw, stator	M5	6 Nm (4.4 lbf ft)	Loctite® 648™
Nut, cylinder head	M6	10 Nm (7.4 lbf ft)	Lubricated with engine oil
Nut, water-pump wheel	M6	6 Nm (4.4 lbf ft)	Loctite <sup>®</sup> 243 <sup>™</sup>
Screw, alternator cover	M6	6 Nm (4.4 lbf ft)	-
Screw, clutch cover	M6	10 Nm (7.4 lbf ft)	-
Screw, clutch slave cylinder	M6	10 Nm (7.4 lbf ft)	-
Screw, engine case	M6	10 Nm (7.4 lbf ft)	-
Screw, exhaust flange	M6	10 Nm (7.4 lbf ft)	Loctite <sup>®</sup> 243™
Screw, oil filter cover	M6	10 Nm (7.4 lbf ft)	-
Screw, shift drum locating	M6	10 Nm (7.4 lbf ft)	Loctite <sup>®</sup> 243™
Screw, shift lever	M6	14 Nm (10.3 lbf ft)	Loctite <sup>®</sup> 243™
Screw, starter motor	M6	10 Nm (7.4 lbf ft)	-
Screw, timing chain guide rail	M6	10 Nm (7.4 lbf ft)	Loctite <sup>®</sup> 243™
Screw, timing chain securing guide	M6	10 Nm (7.4 lbf ft)	Loctite <sup>®</sup> 243™
Screw, valve cover	M6	8 Nm (5.9 lbf ft)	_
Screw, water pump cover	M6	10 Nm (7.4 lbf ft)	-
Stud, cylinder head	M6	10 Nm (7.4 lbf ft)	_
Screw, camshaft bearing bridge	M7x1	14 Nm (10.3 lbf ft)	Lubricated with engine oil
Screw plug, crankshaft location	M8	10 Nm (7.4 lbf ft)	-
Screw, timing chain tensioning rail	M8	15 Nm (11.1 lbf ft)	Loctite <sup>®</sup> 243™
Screw, engine sprocket	M10	60 Nm (44.3 lbf ft)	Loctite® 2701™
Plug, oil channel	M10x1	15 Nm (11.1 lbf ft)	Loctite® 243™
Rotor screw	M10x1	70 Nm (51.6 lbf ft)	Thread, oiled with engine oil/cone degreased
Screw plug, cam lever axis	M10x1	10 Nm (7.4 lbf ft)	-
Screw, unlocking of timing chain tensioner	M10x1	10 Nm (7.4 lbf ft)	-
Spark plug	M10x1	10 12 Nm (7.4 8.9 lbf ft)	-
Nut, cylinder head	M10x1.25	Tightening sequence: Tighten diagonally. 1st tightening stage 10 Nm (7.4 lbf ft) 2nd tightening stage 30 Nm (22.1 lbf ft) 3rd tightening stage 50°	Thread, oiled with engine oil/cone greased
Stud, cylinder head	M10x1.25	20 Nm (14.8 lbf ft)	Loctite <sup>®</sup> 243™
Screw, camshaft drive sprocket	M12x1	70 Nm (51.6 lbf ft)	Loctite® 243 <sup>TM</sup> /cone degreased
Engine coolant temperature sensor	M12x1.5	12 Nm (8.9 lbf ft)	-
Oil drain plug with magnet	M12x1.5	20 Nm (14.8 lbf ft)	-
Plug, oil pressure regulator valve	M12x1.5	20 Nm (14.8 lbf ft)	-
Oil drain plug	M14x1.5	15 Nm (11.1 lbf ft)	-
Nut, inner clutch hub	M18x1.5	100 Nm (73.8 lbf ft)	Loctite <sup>®</sup> 243™
Nut, primary gear	M18LHx1.5	100 Nm (73.8 lbf ft)	Loctite <sup>®</sup> 243™
Screw plug, oil screen	M20x1.5	15 Nm (11.1 lbf ft)	-
Plug, timing chain tensioner	M24x1.5	25 Nm (18.4 lbf ft)	-
Screw, alternator cover	M24x1.5	18 Nm (13.3 lbf ft)	-

# 23.3 Capacities

# 23.3.1 Engine oil

Engine oil	1.20 I (1.27 qt.)	Engine oil (SAE 10W/50) ( p. 105)	
		Alternative engine oil for harsh operating conditions and increased performance	Engine oil (SAE 10W/60) (00062010035) ( p. 105)

# 23.3.2 **Coolant**

Coolant	1.2 l (1.3 qt.)	Coolant (* p. 105)
		Coolant (mixed ready to use) ( p. 105)

## 23.3.3 Fuel

Total fuel tank capacity, approx.	9.5 I (2.51 US gal)	Super unleaded (ROZ 95/RON 95/PON 91) (* p. 106)
Fuel reserve, approx.		1.5   (1.6 qt.)

## 23.4 Chassis

Frame	Central tube frame made of chrome molybdenum steel tubing
Fork	WP Suspension Up Side Down 4860 4CS
Suspension travel	
Front	300 mm (11.81 in)
Suspension travel	
Rear	335 mm (13.19 in)
Fork offset	20 mm (0.79 in)
Shock absorber	WP Suspension PDS 5018 DCC
Brake system	Disc brakes, brake calipers on floating bearings
Brake discs - diameter	
Front	260 mm (10.24 in)
Rear	220 mm (8.66 in)
Brake discs - wear limit	
Front	2.5 mm (0.098 in)
Rear	3.5 mm (0.138 in)
Tire air pressure off road	
Front	1.0 bar (15 psi)
Rear	1.0 bar (15 psi)
Road tire pressure (FE 250 EU, FE 250 AUS)	
Front	1.5 bar (22 psi)
Rear	1.5 bar (22 psi)
Final drive (FE 250 EU, FE 250 AUS)	14:52 (13:52)
Final drive (FE 250 USA)	13:52
Chain	5/8 x 1/4"
Rear sprockets available	38, 40, 42, 45, 48, 49, 50, 51, 52
Steering head angle	63.5°
Wheelbase	1,482±10 mm (58.35±0.39 in)
Seat height unloaded	970 mm (38.19 in)
Ground clearance unloaded	345 mm (13.58 in)
Homologated weight without fuel, approx. (FE 250 EU, FE 250 AUS)	108 kg (238 lb.)
Weight without fuel, approx. (FE 250 USA)	105 kg (231 lb.)
Maximum permissible front axle load	145 kg (320 lb.)
Maximum permissible rear axle load	190 kg (419 lb.)

Maximum permissible overall weight 335 kg	(739 lb.)
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## 23.5 Electrical system

Battery	YTX5L-BS	Battery voltage: 12 V Nominal capacity: 4 Ah Maintenance-free
Speedometer battery	CR 2032	Battery voltage: 3 V
Fuse	75011088010	10 A
Fuse	58011109120	20 A
Headlight	S2 / socket BA20d	12 V 35/35 W
Parking light	W5W / socket W2.1x9.5d	12 V 5 W
Indicator lamps	W2.3W / socket W2x4.6d	12 V 2.3 W
Turn signal (FE 250 EU, FE 250 AUS)	R10W / socket BA15s	12 V 10 W
Brake/tail light	LED	
License plate lamp (FE 250 EU, FE 250 AUS)	W5W / socket W2.1x9.5d	12 V 5 W

## **23.6** Tires

Validity	Front tires	Rear tires	
(FE 250 EU, FE 250 AUS)	90/90 - 21 M/C 54R TT Michelin ENDURO COMPETITION IV	140/80 - 18 M/C 70R TT Michelin ENDURO COMPETITION III	
(FE 250 USA)	<b>80/100 - 21 51M TT</b> Dunlop GEOMAX MX51 FA	<b>110/100 - 18 64M TT</b> Dunlop GEOMAX MX51	
Additional information is available in the Service section under: www.husaberg.com			

# 23.7 Fork

Fork part number		24.18.7N.67	
Fork		WP Suspension Up Side Down 4860 4CS	
Compression damping			
Comfort		15 clicks	
Standard		13 clicks	
Sport		11 clicks	
Rebound damping			
Comfort		15 clicks	
Standard		13 clicks	
Sport		11 clicks	
Spring length with preload spacer(s)		472 mm (18.58 in)	
Spring rate			
Weight of rider: 65 75 kg (143 165 lb.)		4.0 N/mm (22.8 lb/in)	
Weight of rider: 75 85 kg (165 187 lb.)		4.2 N/mm (24 lb/in)	
Weight of rider: 85 95 kg (187 209 lb.)		4.4 N/mm (25.1 lb/in)	
Fork length		932 mm (36.69 in)	
Air chamber length		100 mm (3.94 in)	
Fork oil per fork leg	635 ml (21.47 fl. oz.)	Fork oil (SAE 4) (48601166S1) ( p. 106)	

23.8	Shock	absorber
23.0	SHUCK	ansoinei

Shock absorber part number	12.45.7M.67
Shock absorber	WP Suspension PDS 5018 DCC
Compression damping, low-speed	·
Comfort	25 clicks
Standard	20 clicks
Sport	15 clicks
Compression damping, high-speed	
Comfort	2 turns
Standard	1.5 turns
Sport	1.25 turns
Rebound damping	
Comfort	28 clicks
Standard	24 clicks
Sport	22 clicks
Spring preload	8 mm (0.31 in)
Spring rate	
Weight of rider: 65 75 kg (143 165 lb.)	66 N/mm (377 lb/in)
Weight of rider: 75 85 kg (165 187 lb.)	69 N/mm (394 lb/in)
Weight of rider: 85 95 kg (187 209 lb.)	72 N/mm (411 lb/in)
Spring length	250 mm (9.84 in)
Gas pressure	10 bar (145 psi)
Static sag	33 35 mm (1.3 1.38 in)
Riding sag	105 115 mm (4.13 4.53 in)
Fitted length	417 mm (16.42 in)

Damper oil Shock absorber oil (SAE 2.5) (50180342S1) (**\*** p. 106)

# 23.9 Chassis tightening torques

Screw, pressure regulator	EJOT PT®	3 Nm (2.2 lbf ft)	-
Spoke nipple, front wheel	M4.5	5 6 Nm (3.7 4.4 lbf ft)	_
Spoke nipple, rear wheel	M4.5	5 6 Nm (3.7 4.4 lbf ft)	_
Screw, battery terminal	M5	2.5 Nm (1.84 lbf ft)	-
Screw, intake air temperature sensor	M5	2 Nm (1.5 lbf ft)	-
Screw, shock absorber adjusting ring	M5	5 Nm (3.7 lbf ft)	_
Screw, spoiler on fuel tank (FE 250 USA)	M5x12	1.5 Nm (1.11 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 foot brake cylinder	M6	10 Nm (7.4 lbf ft)	Loctite <sup>®</sup> 243™
Screw, chain sliding guard	M6	6 Nm (4.4 lbf ft)	Loctite® 243™
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 <sup>®</sup> 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 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	M8	15 Nm (11.1 lbf ft)	-
Screw, chain sliding piece	M8	15 Nm (11.1 lbf ft)	-
Screw, engine brace	M8	33 Nm (24.3 lbf ft)	-
Screw, fork stub	M8	15 Nm (11.1 lbf ft)	-
Screw, front brake caliper	M8	25 Nm (18.4 lbf ft)	Loctite <sup>®</sup> 243™
Screw, handlebar clamp	M8	20 Nm (14.8 lbf ft)	-
Screw, manifold	M8	15 Nm (11.1 lbf ft)	-
Screw, side stand attachment	M8	45 Nm (33.2 lbf ft)	Loctite® 2701™
Screw, subframe	M8x20	30 Nm (22.1 lbf ft)	Loctite® 2701™
Screw, subframe	M8x30	30 Nm (22.1 lbf ft)	Loctite® 2701™
Screw, top steering stem	M8	17 Nm (12.5 lbf ft)	Loctite <sup>®</sup> 243™
Screw, top triple clamp	M8	17 Nm (12.5 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)	Loctite <sup>®</sup> 243™
Nut, fuel pump fixation	M12	15 Nm (11.1 lbf ft)	-
Screw, bottom shock absorber	M12	80 Nm (59 lbf ft)	Loctite® 2701™
Screw, top shock absorber	M12	80 Nm (59 lbf ft)	Loctite® 2701™
Nut, swingarm pivot	M16x1.5	100 Nm (73.8 lbf ft)	_
Nut, rear wheel spindle	M20x1.5	80 Nm (59 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 <sup>®</sup> 243™
Screw, front wheel spindle	M24x1.5	45 Nm (33.2 lbf ft)	_

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## Brake fluid DOT 4 / DOT 5.1

### **According to**

DOT

#### Guideline

Use only brake fluid that complies with the specified standards (see specifications on the container) and that possesses the corresponding properties. HUSABERG recommends Castrol and Motorex® products.

#### **Supplier**

#### Castrol

RESPONSE BRAKE FLUID SUPER DOT 4

#### Motorex®

Brake Fluid DOT 5.1

## Coolant

## Guideline

Use only suitable coolant (even in countries with high temperatures). Using inferior antifreeze can result in corrosion and foaming.
 HUSABERG recommends Motorex® products.

#### Mixture ratio

Antifreeze: -2545 °C (-1349 °F)	50 % anti-corrosion/antifreeze
	50 % distilled water

## Coolant (mixed ready to use)

Antifreeze	-40 °C (-40 °F)

#### **Supplier**

#### Motorex®

COOLANT G48

## Engine oil (SAE 10W/60) (00062010035)

## **According to**

- JASO T903 MA (♥ p. 109)
- SAE (**\*** p. 109) (SAE 10W/60)
- KTM LC4 2007+

#### Guideline

Use only engine oils that comply with the specified standards (see specifications on the container) and that possess the corresponding properties. HUSABERG recommends Motorex® products.

Synthetic engine oil

#### **Supplier**

#### Motorex®

Cross Power 4T

## Engine oil (SAE 10W/50)

## **According to**

- JASO T903 MA (♥ p. 109)
- SAE (♥ p. 109) (SAE 10W/50)

#### Guideline

Use only engine oils that comply with the specified standards (see specifications on the container) and that possess the corresponding properties. HUSABERG recommends Motorex® products.

Synthetic engine oil

## **Supplier**

## Motorex®

Cross Power 4T

24 SUBSTANCES 106

## Fork oil (SAE 4) (48601166S1)

#### **According to**

SAE (\* p. 109) (SAE 4)

#### Guideline

 Use only oils that comply with the specified standards (see specifications on the container) and that possess the corresponding properties.

## Shock absorber oil (SAE 2.5) (50180342S1)

#### **According to**

- SAE (\* p. 109) (SAE 2.5)

### Guideline

 Use only oils that comply with the specified standards (see specifications on the container) and that possess the corresponding properties.

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

## **According to**

DIN EN 228 (ROZ 95/RON 95/PON 91)

#### Guideline

- Only use unleaded super fuel that matches or is equivalent to the specified fuel grade.
- Fuel with an ethanol content of up to 10 % (E10 fuel) is safe to use.



#### Info

Do not use fuel containing methanol (e. g. M15, M85, M100) or more than 10 % ethanol (e. g. E15, E25, E85, E100).

## Air filter cleaning agent

#### Guideline

- HUSABERG recommends Motorex® products.

**Supplier** 

Motorex®

Twin Air Dirt Bio Remover

## **Chain cleaner**

#### Guideline

HUSABERG recommends Motorex® products.

Supplier

Motorex®

- Chain Clean

## **Chain spray**

#### Guideline

HUSABERG recommends Motorex® products.

**Supplier** 

Motorex®

- Chainlube Offroad

## Cleaner and polish for shiny and matte paints, metal and plastic surfaces

#### Guideline

- HUSABERG recommends Motorex® products.

**Supplier** 

Motorex®

- Clean & Polish

## Cleaning and polishing materials for metal, rubber and plastic

#### Guideline

HUSABERG recommends Motorex® products.

**Supplier** 

Motorex®

Protect & Shine

#### **Fuel additive**

#### Guideline

HUSABERG recommends Motorex® products.

**Supplier** 

Motorex®

Fuel Stabilizer

## High viscosity grease

### Guideline

HUSABERG recommends SKF® products.

**Supplier** 

**SKF®** 

- LGHB 2

## Long-life grease

#### Guideline

HUSABERG recommends Motorex® products.

## Supplier

Motorex®

- Bike Grease 2000

## Motorcycle cleaner

#### Guideline

- HUSABERG recommends **Motorex®** products.

#### **Supplier**

Motorex®

- Moto Clean 900

## Oil for foam air filter

## Guideline

- HUSABERG recommends **Motorex®** products.

#### **Supplier**

Motorex®

Twin Air Liquid Bio Power

## Rubber grip adhesive (00062030051)

#### Sunnlie

KTM-Sportmotorcycle AG / Division HUSABERG

- GRIP GLUE

## Universal oil spray

#### Guideline

- HUSABERG recommends **Motorex®** products.

#### **Supplier**

Motorex®

- Joker 440 Synthetic

26 STANDARDS 109

## **JASO T903 MA**

Different technical development directions required a new specification for 4-stroke motorcycles – the JASO T903 MA Standard. Earlier, engine oils from the automobile industry were used for 4-stroke motorcycles because there was no separate motorcycle specification. Whereas long service intervals are demanded for automobile engines, high performance at high engine speeds are in the foreground for motorcycle engines. In most motorcycles, the gearbox and the clutch are lubricated with the same oil as the engine. The JASO MA Standard meets these special requirements.

## SAE

The SAE viscosity classes were defined by the Society of Automotive Engineers and are used for classifying oils according to their viscosity. The viscosity describes only one property of oil and says nothing about quality.

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