

450 Rally Factory Replica

Art. no. 3213038en



KTM

DEAR KTM CUSTOMER

Congratulations on your decision to purchase a KTM 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.

Enter the serial numbers of your vehicle below.

| | |
|--------------------------|----------------|
| Chassis number (☛ p. 10) | Dealer's stamp |
| Engine number (☛ p. 10) | |
| Key number (☛ p. 10) | |

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

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Issued by: TÜV Management Service

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KTM-Sportmotorcycle AG
5230 Mattighofen, Austria













| | | | | | |
|------|--|----|-------|---|----|
| 1 | MEANS OF REPRESENTATION | 4 | 7.11 | Display mode SPEED/LAP (lap time)..... | 21 |
| 1.1 | Symbols used | 4 | 7.12 | Display mode SPEED/ODO (odometer) | 21 |
| 1.2 | Formats used..... | 4 | 7.13 | Display mode SPEED/TR1 (trip master 1)..... | 21 |
| 2 | SAFETY ADVICE..... | 5 | 7.14 | Display mode SPEED/TR2 (trip master 2)..... | 22 |
| 2.1 | Use definition - intended use | 5 | 7.15 | Display mode SPEED/A1 (average speed 1) | 22 |
| 2.2 | Safety advice..... | 5 | 7.16 | Display mode SPEED/A2 (average speed 2) | 22 |
| 2.3 | Degrees of risk and symbols | 5 | 7.17 | Display mode SPEED/S1 (stop watch 1)..... | 23 |
| 2.4 | Tampering warning..... | 5 | 7.18 | Display mode SPEED/S2 (stop watch 2)..... | 23 |
| 2.5 | Safe operation | 6 | 7.19 | Table of functions | 23 |
| 2.6 | Protective clothing | 6 | 7.20 | Table of conditions and menu activation | 24 |
| 2.7 | Work rules..... | 6 | 8 | PREPARING FOR USE..... | 25 |
| 2.8 | Environment..... | 6 | 8.1 | Advice on first use | 25 |
| 2.9 | Owner's Manual | 6 | 8.2 | Running in the engine | 26 |
| 3 | IMPORTANT NOTES..... | 7 | 9 | RIDING INSTRUCTIONS..... | 27 |
| 3.1 | Guarantee, warranty | 7 | 9.1 | Checks and maintenance when preparing for use | 27 |
| 3.2 | Operating and auxiliary substances | 7 | 9.2 | Starting..... | 27 |
| 3.3 | Spare parts, accessories | 7 | 9.3 | Starting off..... | 28 |
| 3.4 | Service | 7 | 9.4 | Shifting, riding | 28 |
| 3.5 | Figures | 7 | 9.5 | Braking..... | 28 |
| 3.6 | Customer service..... | 7 | 9.6 | Stopping, parking..... | 29 |
| 4 | VIEW OF VEHICLE | 8 | 9.7 | Transport | 29 |
| 4.1 | View of vehicle, front left | 8 | 9.8 | Refueling | 30 |
| 4.2 | View of vehicle, rear right..... | 9 | 10 | SERVICE SCHEDULE | 31 |
| 5 | SERIAL NUMBERS | 10 | 10.1 | Service schedule..... | 31 |
| 5.1 | Chassis number | 10 | 10.2 | Service work (as additional order) | 32 |
| 5.2 | Type label | 10 | 11 | TUNING THE CHASSIS | 33 |
| 5.3 | Engine number | 10 | 11.1 | Checking the basic chassis setting with the rider's weight..... | 33 |
| 5.4 | Key number..... | 10 | 11.2 | Compression damping of the shock absorber..... | 33 |
| 5.5 | Fork part number | 10 | 11.3 | Adjusting the high-speed compression damping of the shock absorber..... | 33 |
| 5.6 | Shock absorber part number | 11 | 11.4 | Adjusting the low-speed compression damping of the shock absorber | 34 |
| 6 | CONTROLS..... | 12 | 11.5 | Adjusting the rebound damping of the shock absorber..... | 34 |
| 6.1 | Clutch lever..... | 12 | 11.6 | Measuring the unloaded rear wheel sag..... | 34 |
| 6.2 | Hand brake lever..... | 12 | 11.7 | Checking the static sag of the shock absorber.... | 35 |
| 6.3 | Throttle grip | 12 | 11.8 | Checking the riding sag of the shock absorber.... | 35 |
| 6.4 | Kill switch | 12 | 11.9 | Adjusting the spring preload of the shock absorber  | 35 |
| 6.5 | Light switch | 12 | 11.10 | Adjusting the riding sag  | 36 |
| 6.6 | Turn signal switch..... | 13 | 11.11 | Checking the basic setting of the fork | 36 |
| 6.7 | Horn button..... | 13 | 11.12 | Adjusting the compression damping of the fork | 37 |
| 6.8 | Electric starter button..... | 13 | 11.13 | Adjusting the rebound damping of the fork..... | 37 |
| 6.9 | Indicator lamp overview | 13 | 11.14 | Fork offset..... | 37 |
| 6.10 | Ignition switch..... | 13 | 11.15 | Setting the fork offset  | 38 |
| 6.11 | Fuel tank | 14 | 11.16 | Handlebar position | 39 |
| 6.12 | Fuel tap | 14 | 11.17 | Adjusting the handlebar position  | 39 |
| 6.13 | Choke | 15 | 12 | SERVICE WORK ON THE CHASSIS..... | 41 |
| 6.14 | Shift lever | 15 | 12.1 | Raising the motorcycle with the lift stand..... | 41 |
| 6.15 | Foot brake lever | 15 | 12.2 | Removing the motorcycle from the lift stand..... | 41 |
| 6.16 | Side stand..... | 16 | 12.3 | Bleeding the fork legs..... | 41 |
| 6.17 | Steering lock | 16 | 12.4 | Cleaning the dust boots of the fork legs..... | 42 |
| 6.18 | Locking the steering..... | 16 | 12.5 | Dismounting the front fender | 42 |
| 6.19 | Unlocking the steering..... | 17 | 12.6 | Installing the front fender | 42 |
| 7 | SPEEDOMETER | 18 | 12.7 | Removing the fork legs  | 43 |
| 7.1 | Speedometer overview | 18 | 12.8 | Installing the fork legs  | 43 |
| 7.2 | Activation and test | 18 | 12.9 | Removing the lower triple clamp  | 44 |
| 7.3 | Tripmaster switch | 18 | 12.10 | Installing the lower triple clamp  | 45 |
| 7.4 | Setting kilometers or miles..... | 18 | 12.11 | Checking the steering head bearing play..... | 46 |
| 7.5 | Setting the clock..... | 19 | | | |
| 7.6 | Adjusting the speedometer functions | 19 | | | |
| 7.7 | Querying lap time..... | 20 | | | |
| 7.8 | Display mode SPEED (speed)..... | 20 | | | |
| 7.9 | Display mode SPEED/H (service hours) | 20 | | | |
| 7.10 | Display mode SPEED/CLK (time)..... | 21 | | | |

TABLE OF CONTENTS

| | | | | | |
|-------|---|----|--------|---|-----|
| 12.12 | Adjusting the play of the steering head bearing | 47 | 15.5 | Changing fuses of individual power consumers | 75 |
| 12.13 | Greasing the steering head bearing | 48 | 15.6 | Checking the headlight setting | 75 |
| 12.14 | Removing the seat | 48 | 15.7 | Adjusting the headlight range | 76 |
| 12.15 | Mounting the seat | 49 | 16 | COOLING SYSTEM | 77 |
| 12.16 | Removing the air filter | 49 | 16.1 | Cooling system | 77 |
| 12.17 | Installing the air filter | 49 | 16.2 | Checking the antifreeze and coolant level | 77 |
| 12.18 | Removing the main silencer | 50 | 16.3 | Checking the coolant level | 77 |
| 12.19 | Installing the main silencer | 50 | 16.4 | Draining the coolant | 78 |
| 12.20 | Changing the glass fiber yarn filling of the main silencer | 50 | 16.5 | Refilling coolant | 78 |
| 12.21 | Removing the fuel tank toward the front | 51 | 17 | TUNING THE ENGINE | 80 |
| 12.22 | Installing the fuel tank at the front | 51 | 17.1 | Checking the play in the throttle cable | 80 |
| 12.23 | Checking the chain for dirt accumulation | 52 | 17.2 | Adjusting the play in the throttle cable | 80 |
| 12.24 | Cleaning the chain | 52 | 17.3 | Carburetor - idle | 80 |
| 12.25 | Checking the chain tension | 52 | 17.4 | Carburetor - adjusting the idle speed | 81 |
| 12.26 | Adjusting the chain tension | 53 | 17.5 | Emptying the carburetor float chamber | 82 |
| 12.27 | Checking the chain, rear sprocket, engine sprocket, and chain guide | 54 | 17.6 | Checking the basic position of the shift lever | 83 |
| 12.28 | Checking the frame | 55 | 17.7 | Adjusting the basic position of the shift lever | 83 |
| 12.29 | Checking the swingarm | 56 | 18 | SERVICE WORK ON THE ENGINE | 84 |
| 12.30 | Checking the rubber grip | 56 | 18.1 | Checking the engine oil level | 84 |
| 12.31 | Additionally securing the rubber grip | 56 | 18.2 | Changing the engine oil and oil filter, cleaning the oil screen | 84 |
| 12.32 | Adjusting the basic position of the clutch lever | 56 | 18.3 | Adding engine oil | 86 |
| 12.33 | Checking the fluid level of the hydraulic clutch | 57 | 19 | CLEANING, CARE | 88 |
| 12.34 | Changing the hydraulic clutch fluid | 57 | 19.1 | Cleaning motorcycle | 88 |
| 12.35 | Removing the trim | 58 | 19.2 | Checks and maintenance steps for winter operation | 89 |
| 12.36 | Mounting the trim | 58 | 20 | STORAGE | 90 |
| 13 | BRAKE SYSTEM | 59 | 20.1 | Storage | 90 |
| 13.1 | Checking the free travel on the hand brake lever | 59 | 20.2 | Preparing for use after storage | 90 |
| 13.2 | Adjusting the free travel of the hand brake lever | 59 | 21 | TECHNICAL DATA | 91 |
| 13.3 | Checking the brake discs | 59 | 21.1 | Engine | 91 |
| 13.4 | Checking the front brake fluid level | 60 | 21.2 | Engine tightening torques | 91 |
| 13.5 | Adding front brake fluid | 60 | 21.3 | Capacities | 93 |
| 13.6 | Checking the front brake linings | 61 | 21.3.1 | Engine oil | 93 |
| 13.7 | Changing the front brake linings | 61 | 21.3.2 | Coolant | 93 |
| 13.8 | Checking the free travel of the foot brake lever | 63 | 21.3.3 | Fuel | 93 |
| 13.9 | Adjusting the free travel of the foot brake lever | 63 | 21.4 | Chassis | 93 |
| 13.10 | Checking the rear brake fluid level | 64 | 21.5 | Electrical system | 94 |
| 13.11 | Adding rear brake fluid | 64 | 21.6 | Tires | 94 |
| 13.12 | Checking the rear brake linings | 65 | 21.7 | Fork | 94 |
| 13.13 | Changing the rear brake linings | 65 | 21.8 | Shock absorber | 95 |
| 14 | WHEELS, TIRES | 67 | 21.9 | Chassis tightening torques | 95 |
| 14.1 | Removing the front wheel | 67 | 21.10 | Carburetor with carburetor configuration (carburetor sheets) | 97 |
| 14.2 | Mounting the front wheel | 67 | 22 | WIRING DIAGRAM | 98 |
| 14.3 | Removing the rear wheel | 68 | 22.1 | Page 1 of 9 | 98 |
| 14.4 | Installing the rear wheel | 69 | 22.2 | Page 2 of 9 | 100 |
| 14.5 | Checking the rear hub rubber dampers | 70 | 22.3 | Page 3 of 9 | 102 |
| 14.6 | Checking the tire condition | 70 | 22.4 | Page 4 of 9 | 104 |
| 14.7 | Checking the tire air pressure | 71 | 22.5 | Page 5 of 9 | 106 |
| 14.8 | Checking the spoke tension | 71 | 22.6 | Page 6 of 9 | 108 |
| 15 | ELECTRICAL SYSTEM | 73 | 22.7 | Page 7 of 9 | 110 |
| 15.1 | Removing the battery | 73 | 22.8 | Page 8 of 9 | 112 |
| 15.2 | Installing the battery | 73 | 22.9 | Page 9 of 9 | 114 |
| 15.3 | Recharging the battery | 73 | 23 | SUBSTANCES | 116 |
| 15.4 | Changing the main fuse | 74 | 24 | AUXILIARY SUBSTANCES | 118 |
| | | | 25 | STANDARDS | 120 |
| | | | | INDEX | 121 |

1.1 Symbols used

The meaning of specific symbols is described below.

-
- | | |
|--|---|
|  | Indicates an expected reaction (e.g. of a work step or a function). |
|  | Indicates an unexpected reaction (e.g. of a work step or a function). |
|  | 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 KTM workshop. There, your motorcycle will be optimally cared for by specially trained experts using the specialist tools required. |
|  | Indicates 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. |
-

2.1 Use definition - intended use

KTM 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.


- i Info**
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.


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.

- i 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:

- 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.

The vehicle should only be used by trained persons. An appropriate driver's license is needed to ride the vehicle on public roads. Have malfunctions that impair safety promptly eliminated by an authorized KTM 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, KTM 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 KTM dealer will be glad to advise you.

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 KTM 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 Guarantee, warranty

The work prescribed in the service schedule must be carried out by an authorized KTM workshop only and confirmed in the customer's Service & Warranty Booklet and in the **KTM dealer.net**; otherwise, all warranty claims will be void. No warranty claims can be considered for damage resulting from manipulations and/or alterations to the vehicle.

Additional information on the guarantee or warranty and the procedures involved can be found in the Service & Warranty 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 KTM and have them installed by an authorized KTM workshop. KTM 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 authorized KTM dealer will be glad to advise you.

The current **KTM PowerParts** for your vehicle can be found on the KTM website.

International KTM Website: <http://www.ktm.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 KTM dealer will be happy to answer any questions you may have on your vehicle and KTM.

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

International KTM Website: <http://www.ktm.com>

4.1 View of vehicle, front left



601285-10

| | |
|---|------------------------------|
| 1 | Choke (☛ p. 15) |
| 2 | Kill switch (☛ p. 12) |
| 2 | Light switch (☛ p. 12) |
| 2 | Turn signal switch (☛ p. 13) |
| 2 | Horn button (☛ p. 13) |
| 3 | Clutch lever (☛ p. 12) |
| 4 | Steering lock (☛ p. 16) |
| 5 | Shift lever (☛ p. 15) |
| 6 | Side stand (☛ p. 16) |
| 7 | Seat release strap |

4.2 View of vehicle, rear right



- | | |
|---|--------------------------------|
| 1 | Ignition switch (☛ p. 13) |
| 2 | Speedometer overview (☛ p. 18) |
| 3 | Throttle grip (☛ p. 12) |
| 4 | Fuel tap (☛ p. 14) |
| 5 | Foot brake lever (☛ p. 15) |
| 6 | Hand brake lever (☛ p. 12) |

5.1 Chassis number



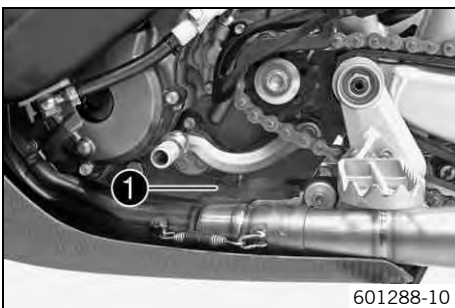
Chassis number ❶ is embossed in the steering head at the right.

5.2 Type label



Type label ❶ is fixed to the right of the steering head.

5.3 Engine number



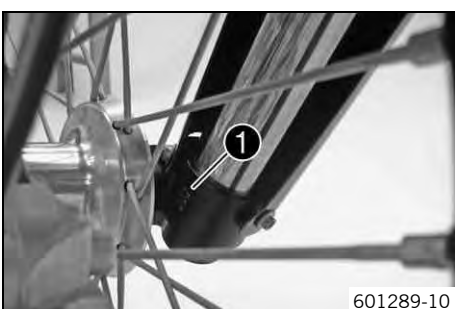
The engine number ❶ is stamped on the left side of the engine under the engine sprocket.

5.4 Key number



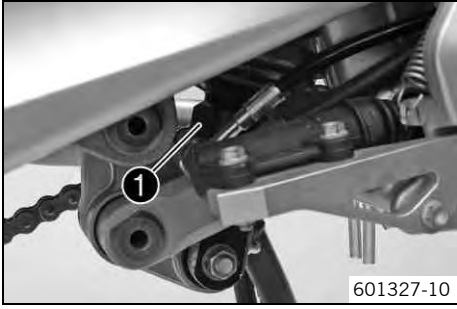
The key number ❶ for the steering lock is stamped onto the key connector.

5.5 Fork part number



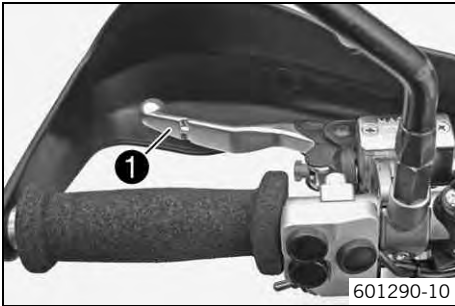
The fork part number ❶ is stamped on the inner side of the fork stub.

5.6 Shock absorber part number



Shock absorber part number ❶ is attached to the lower part of the shock absorber at the rear, opposite to the direction of travel.

6.1 Clutch lever



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

6.2 Hand brake lever



The hand brake lever ❶ is fitted on the right side of the handlebar. The hand brake lever operates the front brake.

6.3 Throttle grip



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

6.4 Kill switch

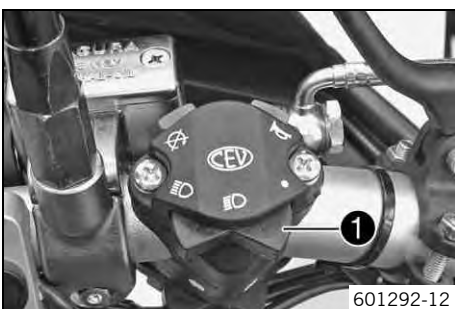


The kill switch ❶ is fitted on the left side of the handlebar.

Possible states

- Kill switch ☒ in basic position – In this position, the ignition circuit is closed, and the engine can be started.
- Kill switch ☒ pressed – In this position, the ignition circuit is interrupted, a running engine stops, and a non-running engine will not start.

6.5 Light switch



The light switch ❶ 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. |
| ☞ | Low beam on – Light switch is in the central position. In this position, the low beam and tail light are switched on. |
| ☜ | High beam on – Light switch is turned to the left. In this position, the high beam and the tail light are switched on. |

6.6 Turn signal switch



The turn signal switch ❶ is fitted on the left side of the handlebar.

Possible states

| | |
|---|--|
| | Turn signal off – Turn signal switch is in the central position. |
| ← | Turn signal, left, on – Turn signal switch turned to the left. |
| → | Turn signal, right, on – Turn signal switch turned to the right. |

6.7 Horn button

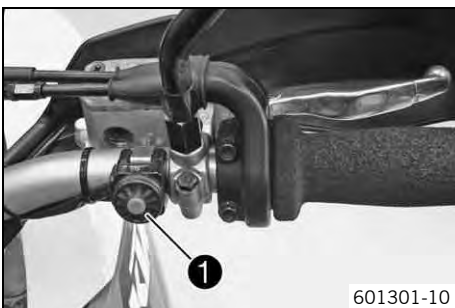


The horn button ❶ is fitted on the left side of the handlebar.

Possible states

- Horn button ❶ in neutral position
- Horn button ❶ pressed – The horn is operated in this position.

6.8 Electric starter button

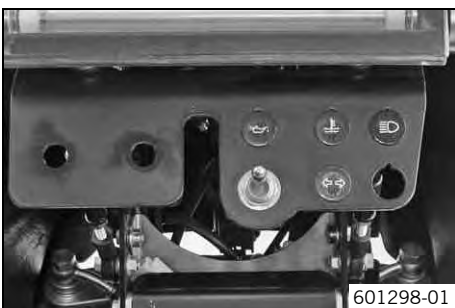


The electric starter button ❶ is fitted on the right side of the handlebar.

Possible states

- Electric starter button ❶ in basic position
- Electric starter button ❶ pressed – In this position, the electric starter is actuated.

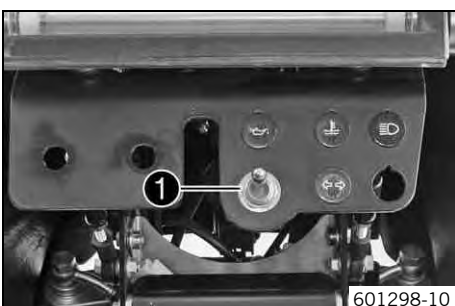
6.9 Indicator lamp overview



Possible states

| | |
|--|--|
| | High beam indicator lamp lights up blue – High beam is switched on. |
| | Turn signal indicator light flashes green – Turn signal is switched on. |
| | The oil pressure warning lamp lights up red – The oil pressure is too low. |
| | The temperature warning lamp lights up red – The coolant temperature has reached a critical value. |

6.10 Ignition switch

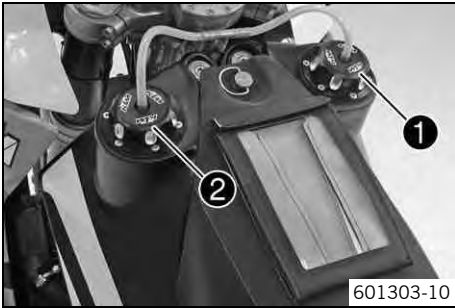


The ignition switch ❶ is located to the left of the indicator lamp on the instrument support.

Possible states

- Ignition off – Ignition switch flipped up. In this position, the ignition circuit is interrupted, a running engine stops, and a non-running engine will not start.
- Ignition on – Ignition switch flipped down. In this position, the ignition circuit is closed, and the engine can be started.

6.11 Fuel tank



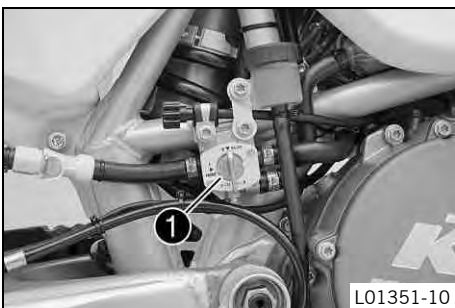
This model has three separate fuel tanks controlled by a fuel tap. Two fuel tanks are located in front of the seat and one fuel tank is located beneath the seat.

The right fuel tank is filled via filler cap ❶ and the left fuel tank is filled via filler cap ❷.



The rear fuel tank is filled via filler cap ❸.

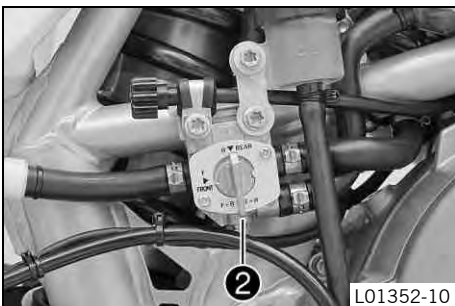
6.12 Fuel tap



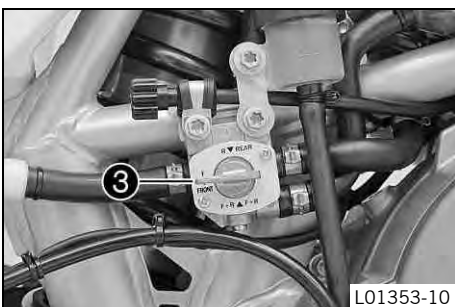
Fuel tap ❶ is located on the right over the pivot point of the swingarm.

The fuel tap can be used to control the individual fuel tanks. The fuel tap does not have an **OFF** position since the fuel pump does not let fuel pass when the engine is stopped.

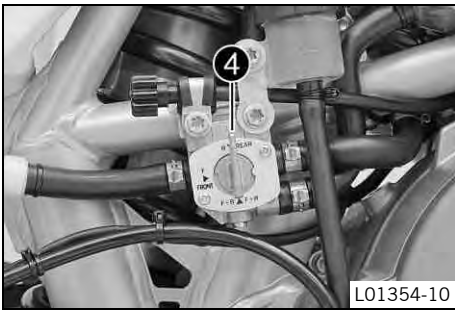
Possible states



- **F+R** – If tap handle ❷ of the fuel tap points down, fuel is taken from all three fuel tanks. All fuel tanks empty out completely.

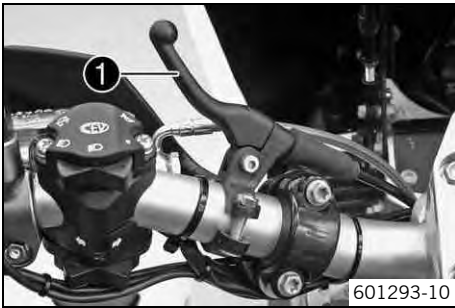


- **F FRONT** – If the tap handle ❸ of the fuel tap points toward the rear, fuel is taken from the two front fuel tanks. Only the front fuel tanks empty out completely.



- **R REAR** – If tap handle ④ of the fuel tap points up, fuel is taken from the rear fuel tank. Only the rear fuel tank empties out completely.

6.13 Choke



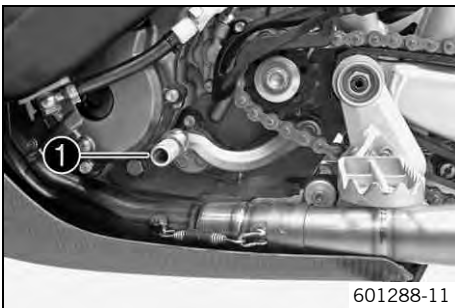
The choke lever ① is fitted on the left side of the handlebar. Activating the choke function frees an opening through which the engine can draw extra fuel. This creates a richer fuel-air mixture, as is required for a cold start.

i Info
If the engine is warm, the choke function must be deactivated.

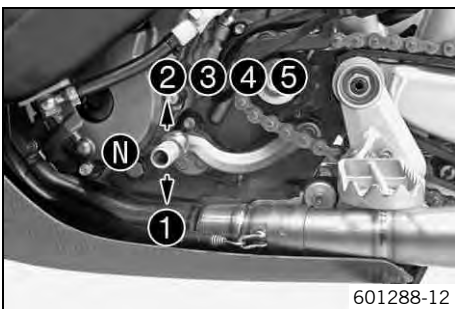
Possible states

- Choke function activated – The choke lever is pulled to the stop.
- Choke function deactivated – The choke lever is pushed back to the stop.

6.14 Shift lever



The 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.

6.15 Foot brake lever

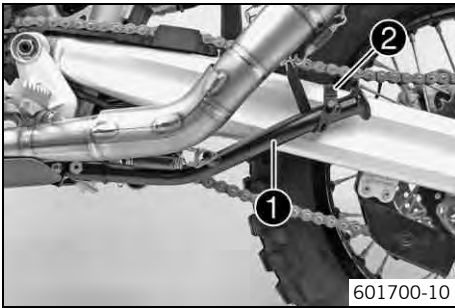


Foot brake lever ① is located in front of the right footrest. The rear brake is engaged with the foot brake lever.

6.16 Side stand



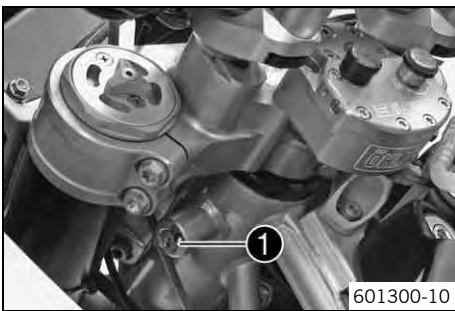
The side stand ❶ is on the left side of the vehicle.



The side stand is used to park the motorcycle.

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

6.17 Steering lock



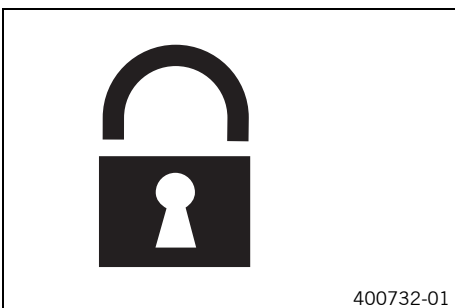
The steering lock ❶ is fitted on the left of the steering head. The steering lock is used to lock the steering. Steering, and therefore riding, is no longer possible.

6.18 Locking the steering

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.

i Info
Never leave the key in the steering lock.

6.19 Unlocking the steering



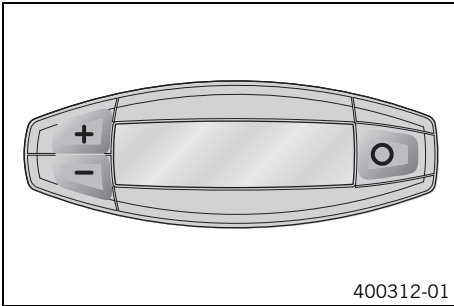
- Insert the key in the steering lock, turn it to the left, pull it out, and turn it to the right. Remove the key.
✓ You can now steer the bike again.



Info

Never leave the key in the steering lock.

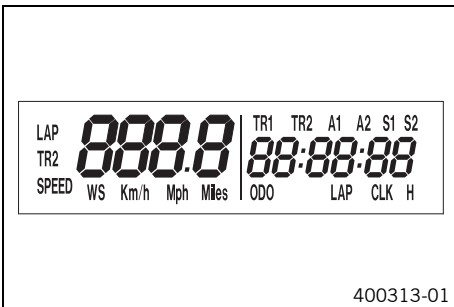
7.1 Speedometer overview



- Press the button to change the display mode or change to one of the Setup menus.
- Press the button to control different functions.
- Press the button to control different functions.

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

7.2 Activation and test

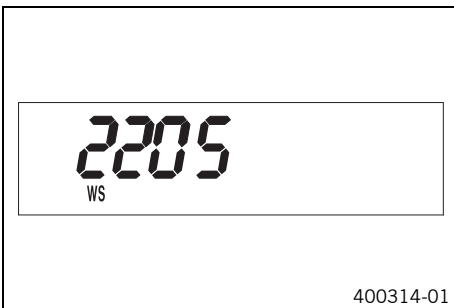


Activating the speedometer

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

Display test

To enable you to check that the display is functioning properly, all display segments light up briefly.



WS (wheel size)

After the display function check, the wheel size **WS** is displayed briefly.

i Info
The number 2205 equals the circumference of the 21" front wheel with standard tires.

The display then changes to the last selected mode.

7.3 Tripmaster switch

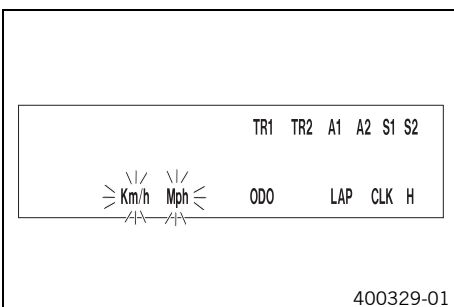
(Option: Tripmaster switch)

The tripmaster switch is used to control the functions of the speedometer from the handlebar.

i Info
The trip master is an optional accessory.

7.4 Setting kilometers or miles

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



Condition

The motorcycle is stationary.


- Press the button briefly and repeatedly until **H** appears at the bottom right of the display.
- Press the button for 3 - 5 seconds.
 - ✓ The Setup menu is displayed and the active functions are shown.
- Press the button repeatedly until the **Km/h/Mph** display flashes.

Adjusting Km/h

- Press the button .

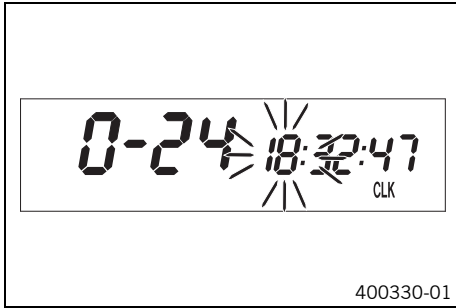
Adjusting Mph

- Press the button .

- Press the button  for 3 - 5 seconds.
- ✓ The settings are stored and the Setup menu is closed.








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

7.5 Setting the clock




Condition

The motorcycle is stationary.

- Press the button  briefly and repeatedly until **CLK** appears at the bottom right of the display.
- Press the button  for 3 - 5 seconds.
- ✓ The hour display flashes.
- Set the hour display with the button  and/or button .
- Press the button  briefly.
- ✓ The next segment of the display flashes and can be set.
- You can set the following segments in the same way as the hours by pressing the button  and the button .

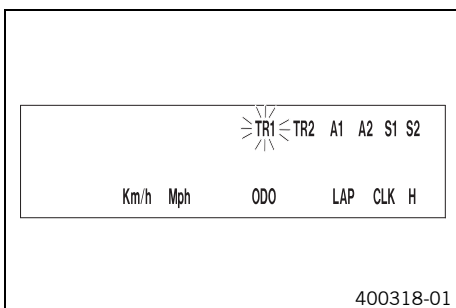
i Info
The seconds can only be set to zero.

- Press the button  for 3 - 5 seconds.
- ✓ The settings are stored and the Setup menu is closed.

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




7.6 Adjusting the speedometer functions

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




Condition



The motorcycle is stationary.

- Press the button  briefly and repeatedly until **H** appears at the bottom right of the display.
- Press the button  for 3 - 5 seconds.
- ✓ The Setup menu is displayed and the activated functions are shown.
- Change to the desired function by pressing the button  briefly.
- ✓ The selected function flashes.

Activating a function

- Press the button .
- ✓ The symbol remains on the screen and the display changes to the next function.

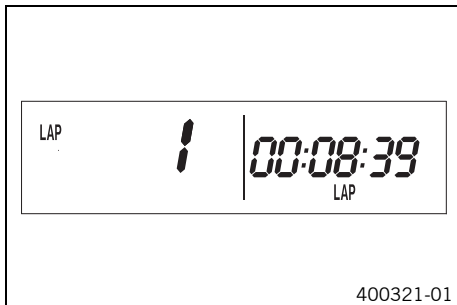
Deactivating the function

- Press the button .
- ✓ The symbol on the screen goes out and the display changes to the next function.
- All desired functions are activated or deactivated accordingly.
- Press the button  for 3 - 5 seconds.
- ✓ The settings are stored and the Setup menu is closed.

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

7.7 Querying lap time

i Info
This function can be called up only if lap times are measured.



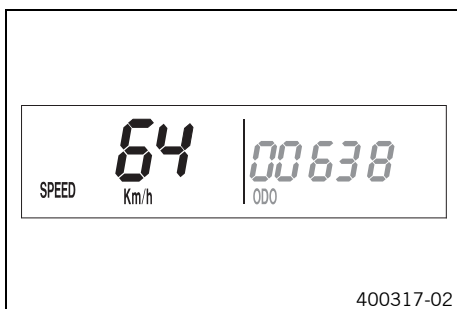
Condition

The motorcycle is stationary.

- Press the button briefly and repeatedly until **LAP** appears at the bottom right of the display.
- Press the button briefly.
- ✓ **LAP 1** appears on the left side of the display.
- Laps 1-10 can be displayed by pressing the button .
- The button has no function.
- Press the button briefly.
- ✓ Next display mode

i Info
If an impulse is received from the wheel speed sensor, the left side of the display changes back to the **SPEED** mode.

7.8 Display mode SPEED (speed)



- Press the button briefly and repeatedly until **SPEED** appears on the left side of the display.

The current speed is displayed in the **SPEED** display mode.
The current speed can be displayed in **Km/h** or **Mph**.

i Info
Making the setting according to the country.
When an impulse comes from the front wheel, the left side of the speedometer display changes to the **SPEED** mode and the current speed is shown.

7.9 Display mode SPEED/H (service hours)



Condition

- The motorcycle is stationary.

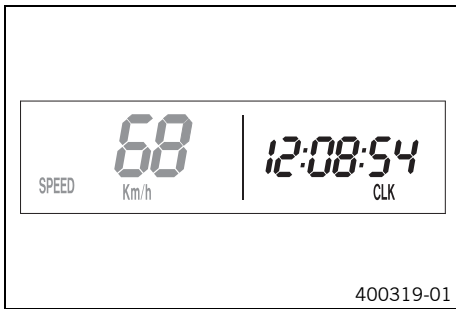
- Press the button briefly and repeatedly until **H** appears at the bottom right of the display.

In display mode **H**, the service hours of the engine are displayed.
The service hour counter stores the total traveling time.

i Info
The service hour counter is necessary for ensuring that service work is carried out at the right intervals.
If the speedometer is in **H** display mode at the start of the journey, it automatically changes to the **ODO** display mode.
The **H** display mode is suppressed during the journey.

| | |
|--------------------------------------|---|
| Press the button . | No function |
| Press the button . | No function |
| Press the button for 3 - 5 seconds. | The display changes to the Setup menu of the speedometer functions. |
| Press the button briefly. | Next display mode |

7.10 Display mode SPEED/CLK (time)

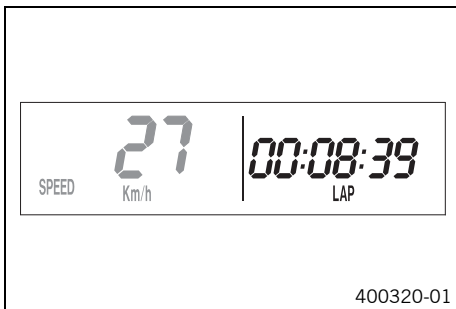


- Press the button briefly and repeatedly until **CLK** appears at the bottom right of the display.

The time is shown in display mode **CLK**.

| | |
|--------------------------------------|---|
| Press the button . | No function |
| Press the button . | No function |
| Press the button for 3 - 5 seconds. | The display changes to the Setup menu of the clock. |
| Press the button briefly. | Next display mode |

7.11 Display mode SPEED/LAP (lap time)



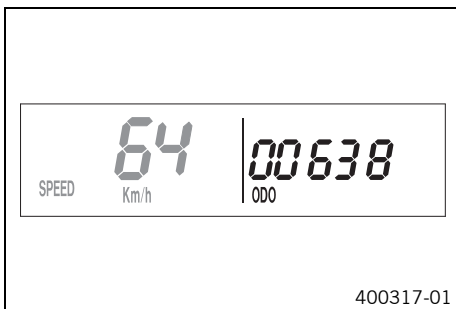
- Press the button briefly and repeatedly until **LAP** appears at the bottom right of the display.

In the **LAP** display mode, up to 10 lap times can be timed with the stop watch.

i Info
If the lap time continues after you press the button , 9 memory locations are already occupied.
Lap 10 must be timed with the button .

| | |
|--------------------------------------|--|
| Press the button . | Starts or stops the clock. |
| Press the button . | Stops the current lap time and saves it, and the stop watch starts the next lap. |
| Press the button for 3 - 5 seconds. | The stop watch and the lap time are reset. |
| Press the button briefly. | Next display mode |

7.12 Display mode SPEED/ODO (odometer)

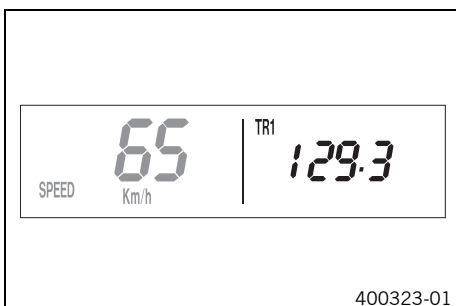


- Press the button briefly and repeatedly until **ODO** appears at the bottom right of the display.

The total distance traveled is displayed in the **ODO** display mode.

| | |
|--------------------------------------|-------------------|
| Press the button . | No function |
| Press the button . | No function |
| Press the button for 3 - 5 seconds. | No function |
| Press the button briefly. | Next display mode |

7.13 Display mode SPEED/TR1 (trip master 1)



- Press the button briefly and repeatedly until **TR1** appears at the top right of the display.

TR1 (trip master 1) runs constantly and counts to 999.9.

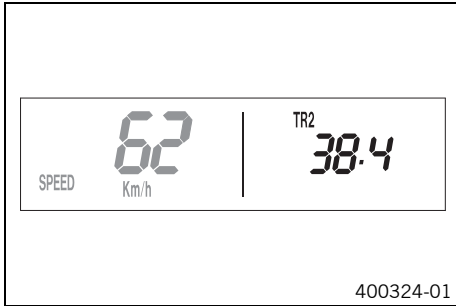
You can use it to measure trips or the distance between refueling stops.


TR1 is coupled with **A1** (average speed 1) and **S1** (stop watch 1).

i Info
If 999.9 is exceeded, the values of **TR1**, **A1** and **S1** are automatically reset to 0.0.



| | |
|--------------------------------------|---|
| Press the button . | No function |
| Press the button . | No function |
| Press the button for 3 - 5 seconds. | The TR1 , A1 and S1 displays are reset to 0.0. |
| Press the button briefly. | Next display mode |

7.14 Display mode SPEED/TR2 (trip master 2)





- Press the button  briefly and repeatedly until **TR2** appears at the top right of the display.





TR2 (trip master 2) runs constantly and counts up to 999.9.

The displayed value can be set manually with the button  and the button . This is a very practical function when riding using the road book.

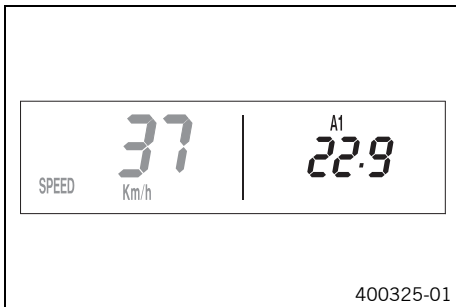
Info


The **TR2** value can also be corrected manually during the journey with the button  and the button .

If 999.9 is exceeded, the value of **TR2** is automatically reset to 0.0.

| | |
|---|---------------------------------|
| Press the button  . | Increases value of TR2 . |
| Press the button  . | Reduces value of TR2 . |
| Press the button  for 3 - 5 seconds. | Deletes value of TR2 . |
| Press the button  briefly. | Next display mode |





7.15 Display mode SPEED/A1 (average speed 1)



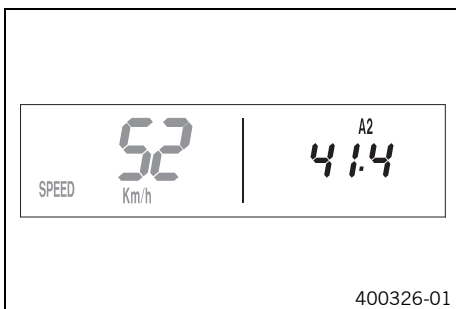
- Press the button  briefly and repeatedly until **A1** appears at the top right of the display.


A1 (average speed 1) shows the average speed calculated on the basis of **TR1** (trip master 1) and **S1** (stop watch 1).

The calculation of this value is activated by the first impulse of the wheel speed sensor and ends 3 seconds after the last impulse.

| | |
|---|---|
| Press the button  . | No function |
| Press the button  . | No function |
| Press the button  for 3 - 5 seconds. | The TR1 , A1 and S1 displays are reset to 0.0. |
| Press the button  briefly. | Next display mode |

7.16 Display mode SPEED/A2 (average speed 2)







- Press the button  briefly and repeatedly until **A2** appears at the top right of the display.

A2 (average speed 2) shows the average speed on the basis of the current speed if the stop watch **S2** (stop watch 2) is running.

Info

The displayed value can differ from the actual average speed if **S2** is not stopped after the ride.

| | |
|---|--|
| Press the button  . | No function |
| Press the button  . | No function |
| Press the button  for 3 - 5 seconds. | Displays of TR2 , A2 and S2 are reset to 0,0. |
| Press the button  briefly. | Next display mode |

7.17 Display mode SPEED/S1 (stop watch 1)



400327-01

- Press the button briefly and repeatedly until **S1** appears at the top right of the display.

S1 (stop watch 1) displays the journey time on the basis of **TR1** and continues when an impulse is received from the wheel speed sensor.

The calculation of this value starts with the first impulse of the wheel speed sensor and ends 3 seconds after the last impulse.

| | |
|--------------------------------------|--|
| Press the button . | No function |
| Press the button . | No function |
| Press the button for 3 - 5 seconds. | Displays of TR1 , A1 and S1 are reset to 0.0. |
| Press the button briefly. | Next display mode |

7.18 Display mode SPEED/S2 (stop watch 2)



400328-01

- Press the button briefly and repeatedly until **S2** appears at the top right of the display.

S2 (stop watch 2) is a manual stop watch.

If **S2** is running in the background, the **S2** display flashes in the speedometer display.

| | |
|--------------------------------------|---|
| Press the button . | Starts or stops S2 . |
| Press the button . | No function |
| Press the button for 3 - 5 seconds. | Displays of S2 and A2 are reset to 0.0. |
| Press the button briefly. | Next display mode |

7.19 Table of functions

| Display | Press the button . | Press the button . | Press the button for 3 - 5 seconds. | Press the button briefly. |
|--|---------------------------------|--|---|----------------------------|
| Display mode SPEED/H (service hours) | No function | No function | The display changes to the Setup menu of the speedometer functions. | Next display mode |
| Display mode SPEED/CLK (time) | No function | No function | The display changes to the Setup menu of the clock. | Next display mode |
| Display mode SPEED/LAP (lap time) | Starts or stops the clock. | Stops the current lap time and saves it, and the stop watch starts the next lap. | The stop watch and the lap time are reset. | Next display mode |
| Display mode SPEED/ODO (odometer) | No function | No function | No function | Next display mode |
| Display mode SPEED/TR1 (trip master 1) | No function | No function | The TR1 , A1 and S1 displays are reset to 0.0. | Next display mode |
| Display mode SPEED/TR2 (trip master 2) | Increases value of TR2 . | Reduces value of TR2 . | Deletes value of TR2 . | Next display mode |
| Display mode SPEED/A1 (average speed 1) | No function | No function | The TR1 , A1 and S1 displays are reset to 0.0. | Next display mode |
| Display mode SPEED/A2 (average speed 2) | No function | No function | Displays of TR2 , A2 and S2 are reset to 0,0. | Next display mode |
| Display mode SPEED/S1 (stop watch 1) | No function | No function | Displays of TR1 , A1 and S1 are reset to 0.0. | Next display mode |
| Display mode SPEED/S2 (stop watch 2) | Starts or stops S2 . | No function | Displays of S2 and A2 are reset to 0.0. | Next display mode |

7.20 Table of conditions and menu activation

| Display | The motorcycle is stationary. | Menu can be activated |
|--|-------------------------------|-----------------------|
| Display mode SPEED/H (service hours) | • | |
| Display mode SPEED/LAP (lap time) | | • |
| Display mode SPEED/TR1 (trip master 1) | | • |
| Display mode SPEED/TR2 (trip master 2) | | • |
| Display mode SPEED/A1 (average speed 1) | | • |
| Display mode SPEED/A2 (average speed 2) | | • |
| Display mode SPEED/S1 (stop watch 1) | | • |
| Display mode SPEED/S2 (stop watch 2) | | • |

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 KTM 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. 56)
- Adjust the free travel of the hand brake lever. (☞ p. 59)
- Adjust the free travel of the foot brake lever. ☞ (☞ p. 63)
- Adjust the basic position of the shift lever. ☞ (☞ p. 83)
- 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 over-stress 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 of weight distribution.

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

Guideline

| | |
|-------------------------------------|------------------|
| Maximum permissible overall weight | 400 kg (882 lb.) |
| Maximum permissible front axle load | 190 kg (419 lb.) |
| Maximum permissible rear axle load | 250 kg (551 lb.) |

- Run in the engine. (🔍 p. 26)

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!

9.1 Checks and maintenance when preparing for use



Info

Before every trip, check the condition of the vehicle and ensure that it is safe to operate. The vehicle must be in perfect technical condition when used.

- Check the engine oil level. (☞ p. 84)
- Check the electrical system.
- Check the front brake fluid level. (☞ p. 60)
- Check the rear brake fluid level. (☞ p. 64)
- Check the front brake linings. (☞ p. 61)
- Check the rear brake linings. (☞ p. 65)
- Check that the brake system is functioning properly.
- Check the coolant level. (☞ p. 77)
- Check the chain for dirt accumulation. (☞ p. 52)
- Check the chain, rear sprocket, engine sprocket, and chain guide. (☞ p. 54)
- Check the chain tension. (☞ p. 52)
- Check the tire condition. (☞ p. 70)
- Check the tire air pressure. (☞ p. 71)
- Check the spoke tension. (☞ p. 71)
- Clean the dust boots of the fork legs. (☞ p. 42)
- Bleed the fork legs. (☞ p. 41)
- Check the air filter.
- Check the fuel 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 reserves.

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.



Info

If the motorcycle is unwilling to start, the cause may be old fuel in the float chamber. The flammable elements of the fuel evaporate after a long time of standing.

If the float chamber is filled with fresh fuel, the engine starts immediately.

Press the starter for a maximum of 5 seconds. Wait for at least 5 seconds before trying again.

Engine has been out of use for more than 1 week

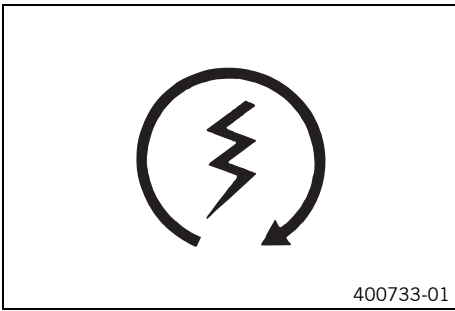
- Empty the carburetor float chamber. ☞ (☞ p. 82)
- Raise the motorcycle off of the stand and secure the stand with rubber band ❶.
- Shift gear to neutral.
- Flip the ignition switch down.

The engine is cold

- Pull the choke lever to the stop.



600012-11



- Press the electric starter button.

i Info
Do not rev up.

9.3 Starting off

i Info
Switch on the light before riding the motorcycle. 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.

i Info
If you hear unusual noises while riding, stop immediately, switch off the engine, and contact an authorized KTM 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.
- If the choke function was activated, deactivate it after the engine has warmed up.
- After reaching maximum speed by fully opening the throttle grip, turn the throttle back so it is $\frac{3}{4}$ 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.

! Warning
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 KTM workshop will be glad to help.)

! 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.
- On long downhill stretches, use the braking effect of the engine. 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 not 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 gear to neutral.
- With the engine idling, flip the ignition switch up until the engine stops.
- Park the motorcycle on firm ground.

9.7 Transport

Note

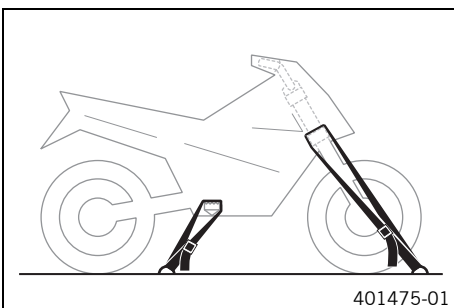
Danger of damage The parked vehicle may roll away or fall over.

- 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.

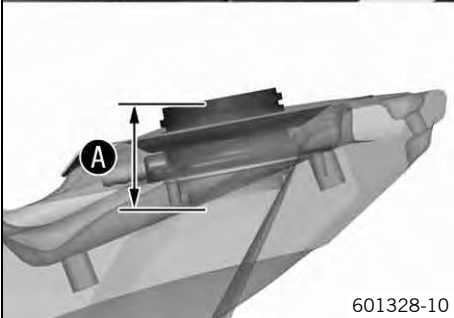
- Fuel must not come into contact with the skin, eyes, or clothing. Do not breathe in the fuel vapors. If contact occurs with the eyes, rinse with water immediately and contact a physician. Immediately clean contaminated areas on the skin with soap and water. If fuel is swallowed, contact a physician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



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.



601328-10

- Switch off the engine.
- Unscrew the filler cap.
- Fill the fuel tank with fuel up to measurement **A**.

Guideline

| | |
|-------------------------|-----------------|
| Measurement of A | 45 mm (1.77 in) |
|-------------------------|-----------------|

| Fuel tank capacity | | |
|--------------------------------------|-------------------------|--|
| Fuel tank half, front left, approx. | 9.0 l (2.38 US gal) | Super unleaded (ROZ 95/RON 95/PON 91) (☛ p. 117) |
| Fuel tank half, front right, approx. | 9.0 l (2.38 US gal) | Super unleaded (ROZ 95/RON 95/PON 91) (☛ p. 117) |
| Rear fuel tank, approx. | 18.0 l (4.76 US gal) | Super unleaded (ROZ 95/RON 95/PON 91) (☛ p. 117) |
| Total fuel capacity, approx. | 36.0 l (9.51 US gal) | Super unleaded (ROZ 95/RON 95/PON 91) (☛ p. 117) |

- Replace the filler cap and turn clockwise until the fuel tank is tightly closed.



Info

Run the fuel tank breather hoses without kinks.

10.1 Service schedule

| | Every 30 operating hours | Every 20 operating hours | Every 10 operating hours/after every race | Once after 1 operating hour |
|--|--------------------------|--------------------------|---|-----------------------------|
| Check that the electrical equipment is functioning properly. | ○ | ● | ● | ● |
| Check and charge the battery. 🛠️ | | ● | ● | ● |
| Change the engine oil and oil filter, clean the oil screen. 🛠️ (📖 p. 84) | ○ | ● | ● | ● |
| Check the front brake linings. (📖 p. 61) | | ● | ● | ● |
| Check the rear brake linings. (📖 p. 65) | | ● | ● | ● |
| Check the brake discs. (📖 p. 59) | | ● | ● | ● |
| Check the brake lines for damage and leakage. | | ● | ● | ● |
| Check the rear brake fluid level. (📖 p. 64) | | ● | ● | ● |
| Check the free travel of the foot brake lever. (📖 p. 63) | | ● | ● | ● |
| Check the frame and swingarm. 🛠️ | | ● | ● | ● |
| Check the swingarm bearing. 🛠️ | | | ● | |
| Check the heim joints at the top and bottom of the shock absorber. 🛠️ | | ● | ● | ● |
| Check the shock absorber linkage. 🛠️ | | ● | ● | ● |
| Conduct a minor fork service. 🛠️ | | ● | ● | ● |
| Conduct a major fork service. 🛠️ | | | | ● |
| Check the tire condition. (📖 p. 70) | ○ | ● | ● | ● |
| Check the tire air pressure. (📖 p. 71) | ○ | ● | ● | ● |
| Check the wheel bearing for play. 🛠️ | | ● | ● | ● |
| Check the wheel hubs. 🛠️ | | ● | ● | ● |
| Check the rim run-out. 🛠️ | ○ | ● | ● | ● |
| Check the spoke tension. (📖 p. 71) | ○ | ● | ● | ● |
| Check the chain, rear sprocket, engine sprocket, and chain guide. (📖 p. 54) | | ● | ● | ● |
| Check the chain tension. (📖 p. 52) | ○ | ● | ● | ● |
| Lubricate all moving parts (e.g., hand lever, chain, ...) and check for smooth operation. 🛠️ | | ● | ● | ● |
| Check the fluid level of the hydraulic clutch. (📖 p. 57) | | ● | ● | ● |
| Check the front brake fluid level. (📖 p. 60) | | ● | ● | ● |
| Check the free travel on the hand brake lever. (📖 p. 59) | | ● | ● | ● |
| Check the steering head bearing play. (📖 p. 46) | ○ | ● | ● | ● |
| Check the valve clearance. 🛠️ | | ● | ● | ● |
| Check the clutch. 🛠️ | | ● | ● | ● |
| Change the absorbing elements in the outer clutch hub. 🛠️ | | | | ● |
| Check all hoses (e.g. fuel, cooling, bleeder, drainage, etc.) and sleeves for cracking, leaks, and incorrect routing. 🛠️ | ○ | ● | ● | ● |
| Check the antifreeze and coolant level. (📖 p. 77) | ○ | ● | ● | ● |
| Check the cables for damage and routing without sharp bends. 🛠️ | | ● | ● | ● |
| Check that the cables are undamaged, routed without sharp bends and set correctly. | ○ | ● | ● | ● |
| Clean the air filter and air filter box. | ○ | ● | ● | ● |
| Change the fuel filter. 🛠️ | | ● | ● | ● |
| Change the glass fiber yarn filling of the main silencer. 🛠️ (📖 p. 50) | | ● | ● | ● |
| Check the screws and nuts for tightness. 🛠️ | ○ | ● | ● | ● |
| Check the headlight setting. (📖 p. 75) | ○ | ● | ● | ● |
| Check the idle. 🛠️ | ○ | ● | ● | ● |
| Final check: Check the vehicle for safe operation and take a test ride. | ○ | ● | ● | ● |
| Make the service entry in KTM DEALER.NET and in the service record. 🛠️ | ○ | ● | ● | ● |

- One-time interval
- Periodic interval

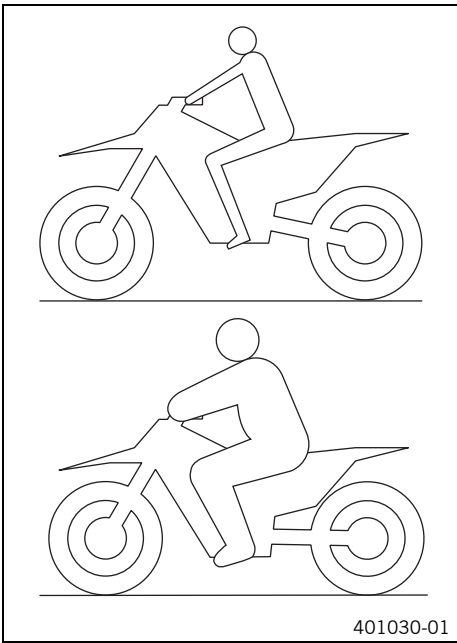
10.2 Service work (as additional order)

| | Once after 20 operating hours / Every 20 operating hours | Every 40 operating hours | Every 80 operating hours | Annually |
|---|--|--------------------------|--------------------------|----------|
| Change the front brake fluid. 🛠️ | | ● | ● | ● |
| Change the rear brake fluid. 🛠️ | | ● | ● | ● |
| Change the hydraulic clutch fluid. 🛠️ (📖 p. 57) | | | ● | ● |
| Grease the steering head bearing. 🛠️ (📖 p. 48) | | ● | ● | ● |
| Check/set the carburetor components. | | ● | ● | ● |
| Service the shock absorber. 🛠️ | ○ | ● | ● | |
| Change the spark plug and spark plug connector. 🛠️ | | ● | ● | |
| Change the piston. 🛠️ | | ● | ● | |
| Change the piston. (in difficult operating conditions) 🛠️ | ● | ● | ● | |
| 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. 🛠️ | | ● | ● | |
| Change the crankshaft bearing. 🛠️ | | ● | ● | |
| Check the transmission and shift mechanism. 🛠️ | | ● | ● | |
| Check the oil pressure. 🛠️ | ● | ● | ● | |
| Check the oil pressure regulator valve. 🛠️ | | ● | ● | |
| Check the oil pumps and lubrication system. 🛠️ | | ● | ● | |
| Check the timing assembly. 🛠️ | | ● | ● | |
| Change all engine bearings. 🛠️ | | | ● | |

- One-time interval
- Periodic interval

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

i 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, KTM offroad motorcycles are adjusted for a standard rider weight (with full protective clothing).

Guideline

| | |
|-----------------------|-----------------|
| Standard rider weight | 80 kg (176 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 the shock absorber

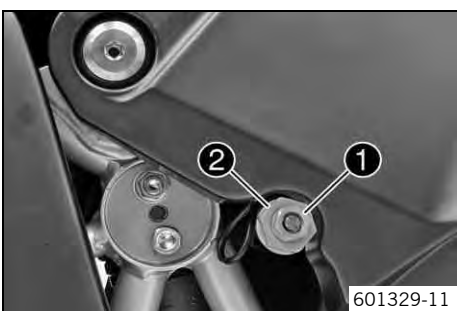
The compression damping of the shock absorber is divided into two ranges: high-speed and low-speed. High-speed and low-speed refer to the compression speed of the rear wheel suspension and not to the vehicle speed. The high-speed setting, for example, has an effect on the landing after a jump: the rear 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 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 KTM workshop will be glad to help.)

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



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

i Info
Do not loosen nut ❷!

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

Guideline

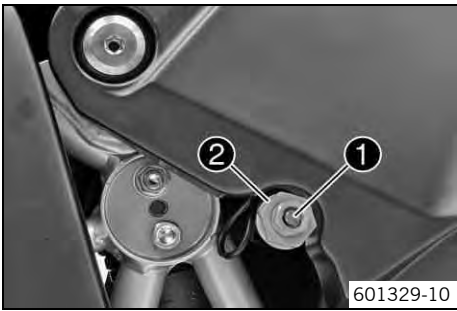
| | |
|---------------------------------|-----------|
| Compression damping, high-speed | |
| Standard | 1.5 turns |

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

11.4 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 KTM workshop will be glad to help.)

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



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

Info
 Do not loosen nut ❷!

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

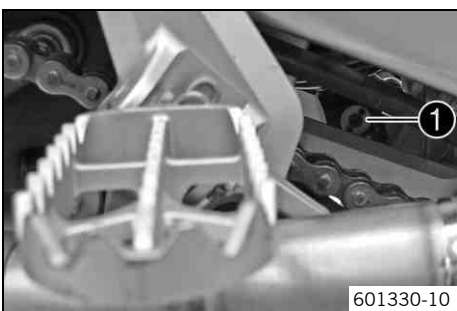
Guideline

| Compression damping, low-speed | |
|--------------------------------|-----------|
| Standard | 10 clicks |

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 KTM workshop will be glad to help.)



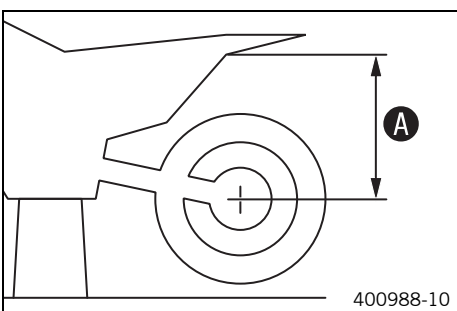
- Turn adjusting screw ❶ clockwise up to the last perceptible click.
- Turn back counterclockwise by the number of clicks corresponding to the shock absorber type.

Guideline

| Rebound damping | |
|-----------------|-----------|
| Standard | 18 clicks |

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

11.6 Measuring the unloaded rear wheel sag



Preparatory work

- Raise the motorcycle with the lift stand. (☛ p. 41)

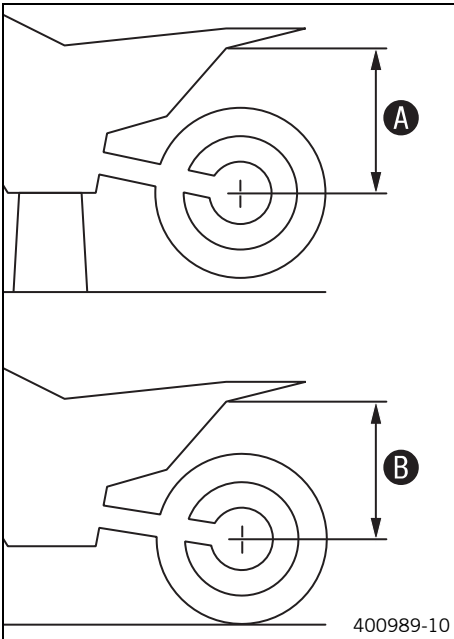
Main work

- Measure the vertical distance between the rear axle and a fixed point such as a marking on the side cover.
- Note down the value as dimension A.

Finishing work

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

11.7 Checking the static sag of the shock absorber



Condition

The fuel tanks are half full.

- Measure distance **A** of rear wheel unloaded. (🔧 p. 34)
- 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

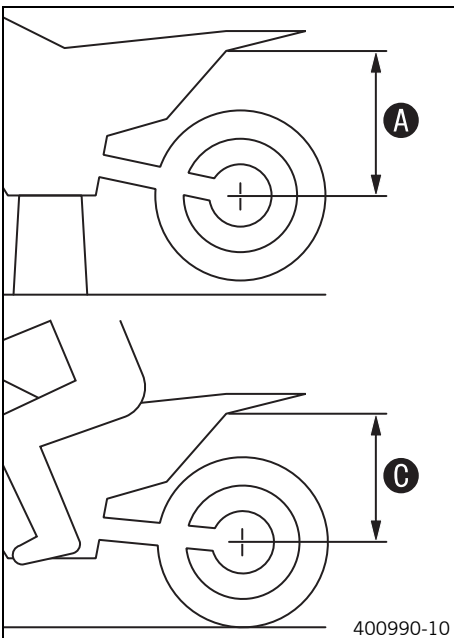
The static sag is the difference between measurements **A** and **B**.

- Check the static sag.

| | |
|------------|-----------------|
| Static sag | 35 mm (1.38 in) |
|------------|-----------------|

- » If the static sag is less or more than the specified value:
 - Adjust the spring preload of the shock absorber. 🛠️ (🔧 p. 35)

11.8 Checking the riding sag of the shock absorber



Condition

The fuel tanks are half full.

- Measure distance **A** of rear wheel unloaded. (🔧 p. 34)
- 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 **C**.

Info

The riding sag is the difference between measurements **A** and **C**.

- Check the riding sag.

| | |
|------------|------------------|
| Riding sag | 100 mm (3.94 in) |
|------------|------------------|

- » If the riding sag differs from the specified measurement:
 - Adjust the riding sag. 🛠️ (🔧 p. 36)

11.9 Adjusting the spring preload of the shock absorber 🛠️

⚠️ Caution

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

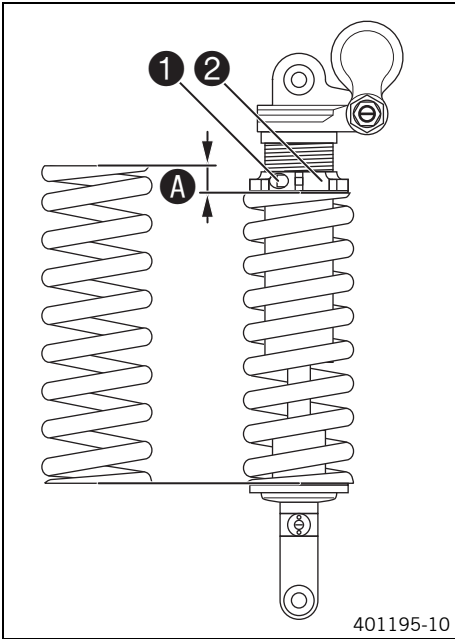
- The shock absorber is filled with high density nitrogen. Adhere to the description provided. (Your authorized KTM workshop will be glad to help.)

Info

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

Preparatory work

- Remove the shock absorber. 🛠️



- 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.

| |
|----------------------------------|
| Combination wrench (50329080000) |
| Hook wrench (T106S) |

- Measure the overall spring length when not under tension.
- Tighten the spring by turning adjusting ring ② to measurement A.

Guideline

| | |
|----------------|-------|
| Spring preload | |
| Standard | 17 mm |



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.

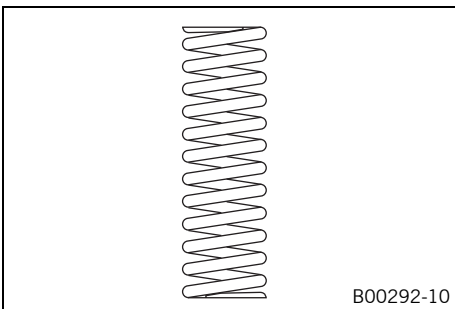
Guideline

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

Finishing work

- Install the shock absorber. 🛠️

11.10 Adjusting the riding sag 🛠️



Preparatory work

- Remove the shock absorber. 🛠️
- After removing the shock absorber, clean it thoroughly.

Main work

- Choose and mount a suitable spring.

Guideline

| | |
|---|---------------------|
| Spring rate | |
| Weight of rider.: 75... 85 kg (165... 187 lb.) | 80 N/mm (457 lb/in) |



Info

The spring rate is shown on the outside of the spring.

Finishing work

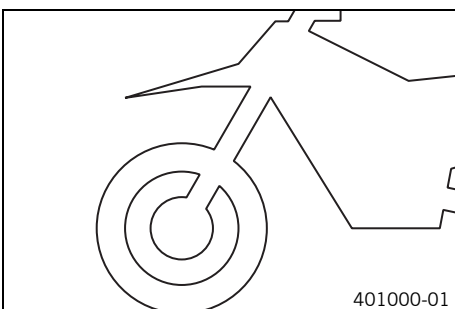
- Install the shock absorber. 🛠️
- Check the static sag of the shock absorber. (👉 p. 35)
- Check the riding sag of the shock absorber. (👉 p. 35)
- Adjust the rebound damping of the shock absorber. (👉 p. 34)

11.11 Checking the basic setting of the fork



Info

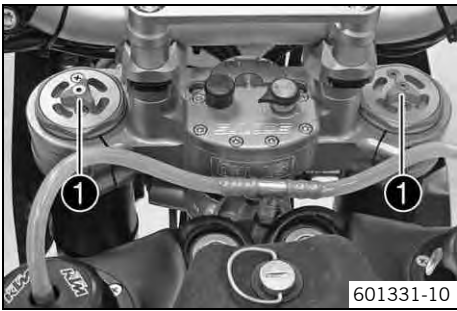
For various reasons, no exact riding sag can be determined for the forks.



- As with the shock absorber, small 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

i Info
The hydraulic compression damping determines the fork suspension behavior.



- Turn adjusting screws ❶ clockwise all the way.

i Info
Adjusting screws ❶ are located at the top end of the fork legs. Make the same adjustment on both fork legs.

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

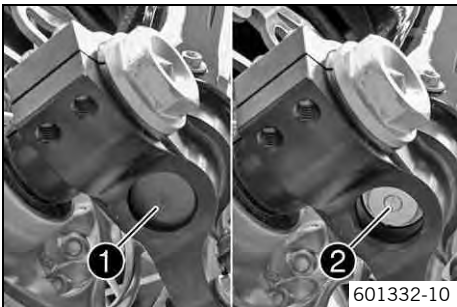
Guideline

| Compression damping | |
|---------------------|-----------|
| Standard | 10 clicks |

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

11.13 Adjusting the rebound damping of the fork

i Info
The hydraulic rebound damping determines the fork suspension behavior.



- Remove protection caps ❶.
- Turn adjusting screws ❷ clockwise all the way.

i Info
Adjusting screws ❷ are located at the bottom end of the fork legs. Make the same adjustment on both fork legs.

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

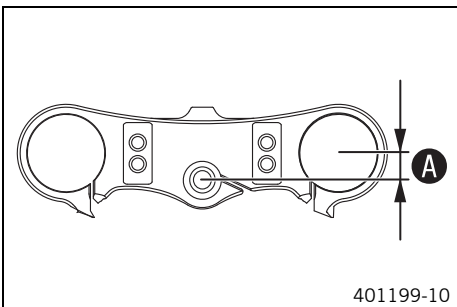
Guideline

| Rebound damping | |
|-----------------|-----------|
| Standard | 20 clicks |

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

- Mount protection caps ❶.

11.14 Fork offset



The fork offset **A** has an impact on the handling of the vehicle. It is calculated from the center of the fork leg to the center of the steering head bearing. The fork offset can optionally be adjusted.



If marking 1 is not visible in drilled hole ❶ (as delivered), you will obtain better riding stability on fast stretches.

| | |
|-------------|-----------------|
| Fork offset | |
| No mark | 22 mm (0.87 in) |

If marking 1 is visible in drilled hole ❶, you obtain better handling in curves.

| | |
|----------------------|-----------------|
| Fork offset | |
| Marking 1 is visible | 20 mm (0.79 in) |

11.15 Setting the fork offset 🛠️

Preparatory work

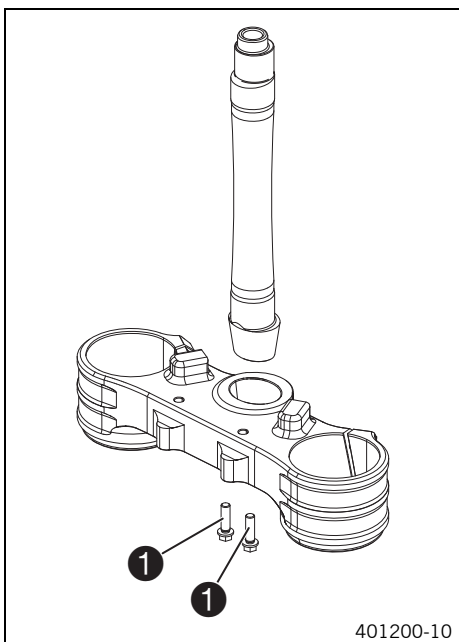
- Raise the motorcycle with the lift stand. (🔧 p. 41)
- Remove the front wheel. 🛠️ (🔧 p. 67)
- Dismount the front fender. (🔧 p. 42)
- Remove the fork legs. 🛠️ (🔧 p. 43)
- Remove the lower triple clamp. 🛠️ (🔧 p. 44)

Main work

- Remove screws ❶. Remove the steering stem.
- Rotate the steering stem 180° and insert into the triple clamp. Mount and tighten screws ❶.

Guideline

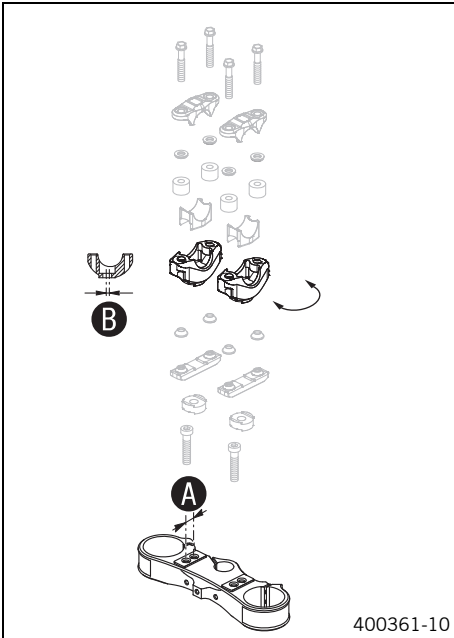
| | | | |
|------------------------------|----|------------------------|---------------|
| Screw, steering stem, bottom | M8 | 25 Nm (18.4 lbf ft) | Loctite® 243™ |
|------------------------------|----|------------------------|---------------|



Finishing work

- Install the lower triple clamp. 🛠️ (🔧 p. 45)
- Check that the wiring harness, cables, and brake and clutch lines can move freely and are routed correctly.
- Install the front fender. (🔧 p. 42)
- Mount the front wheel. 🛠️ (🔧 p. 67)
- Check the steering head bearing play. (🔧 p. 46)
- Remove the motorcycle from the lift stand. (🔧 p. 41)

11.16 Handlebar position



On the upper triple clamp, there are 2 holes at a distance **A** to each other.

| | |
|---------------------------------|-----------------|
| Distance A between holes | 15 mm (0.59 in) |
|---------------------------------|-----------------|

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

| | |
|---------------------------------|-------------------|
| Distance B between holes | 3.5 mm (0.138 in) |
|---------------------------------|-------------------|

The handlebar can be mounted in 4 different positions. In this way, the handlebar can be installed in the position most comfortable for the rider.

The handlebar supports can also be mounted at 2 different heights (with and without spacer).

| | |
|---------------|----------------|
| Spacer height | 9 mm (0.35 in) |
|---------------|----------------|

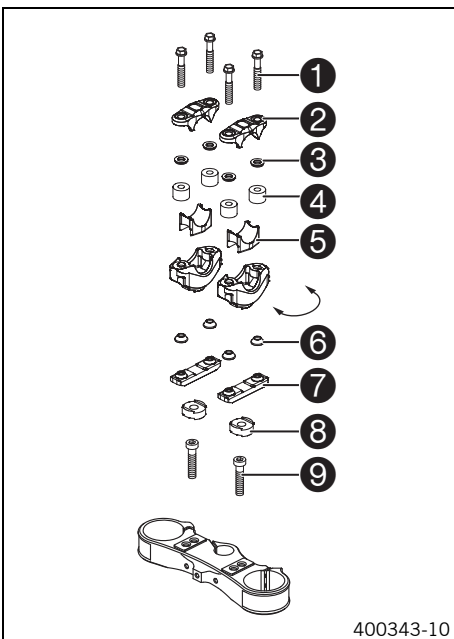
11.17 Adjusting the handlebar position



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**. Remove handlebar clamps **2** with rubber washers **3** and elastomers **4**.
- Remove the handlebar and lay it to one side.



Info

Protect the motorcycle and its attachments against damage by covering them.
Do not bend the cables and lines.

- Remove the lower shells **5**.
- Take out clamp bar **7** with the rubber cones **6**.
- Remove the two screws **9**. Remove the handlebar supports.
- Place the handlebar supports in the required position. Mount and tighten the two screws **8**.

Guideline

| | | | |
|--------------------------|-----|------------------------|---------------|
| Screw, handlebar support | M10 | 40 Nm (29.5 lbf ft) | Loctite® 243™ |
|--------------------------|-----|------------------------|---------------|

Condition

Spacer **3** mounted:

| |
|--------------------|
| Use a M10x35 screw |
|--------------------|

Condition

Without a spacer **3**:

| |
|--------------------|
| Use a M10x25 screw |
|--------------------|



Info

Position the left and right handlebar supports evenly.

- Insert rubber cones **6** and clamp bar **7**.

- Insert lower shells ⑤.
- Position the handlebar.



Info

Make sure cables and wiring are positioned correctly.

- Position handlebar clamps ② with rubber washers ③ and elastomers ④.

| |
|--|
| Elastomer kit green - soft quality (SXS05125203) |
| Elastomer kit yellow - medium quality (standard) (SXS05125204) |
| Elastomer kit red - hard quality (SXS05125205) |



Info

The elastomers are available in different versions.

- Mount and evenly tighten the four screws ①.

Guideline

| | | |
|------------------------|----|------------------------|
| Screw, handlebar clamp | M8 | 16 Nm (11.8 lbf ft) |
|------------------------|----|------------------------|



Info

Make sure the gap width is even.

12.1 Raising the motorcycle with 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.



- Raise the motorcycle at the frame underneath the engine.

Lift stand (54829055000)

- ✓ 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 the side stand ❶ with your foot to the ground and lean the motorcycle on it.

i Info

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

12.3 Bleeding the fork legs



Preparatory work

- Raise the motorcycle with the lift stand. (☛ p. 41)

Main work

- Remove bleeder screws ❶ briefly.
- ✓ Any excess pressure escapes from the interior of the fork.
- Mount and tighten the 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 the lift stand. (☞ p. 41)
- Dismount the front fender. (☞ p. 42)

Main work

- Push dust boots ❶ of both fork legs downward.

Info

The dust boots should remove dust and coarse dirt particles from the 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.

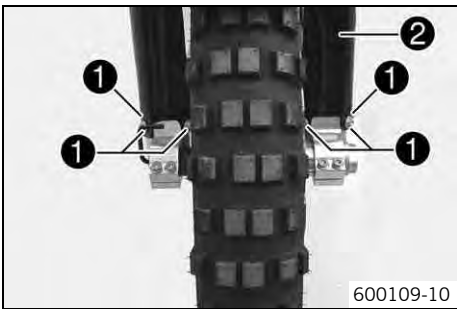
Universal oil spray (☞ p. 119)

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

Finishing work

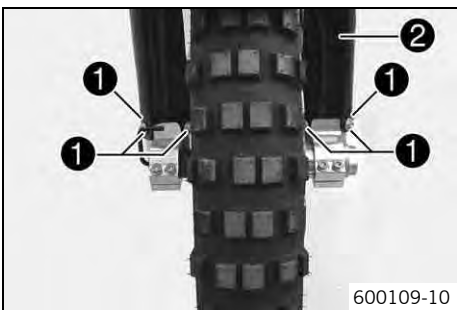
- Install the front fender. (☞ p. 42)
- Remove the motorcycle from the lift stand. (☞ p. 41)

12.5 Dismounting the front fender



- Remove screws ❶. Remove front fender ❷.

12.6 Installing the front fender



- Position front fender ❷. Mount and tighten screws ❶.

Guideline

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

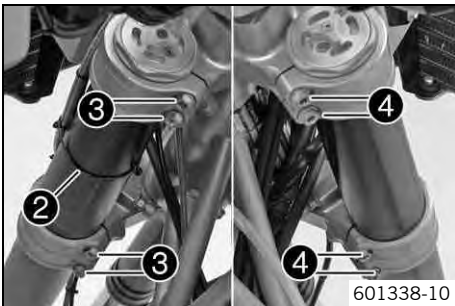
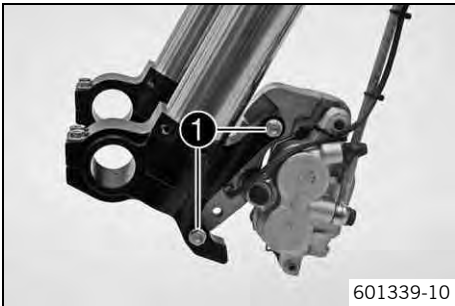
12.7 Removing the fork legs

Preparatory work

- Raise the motorcycle with the lift stand. (☞ p. 41)
- Remove the front wheel. (☞ p. 67)
- Dismount the front fender. (☞ p. 42)

Main work

- Remove screws ❶.
- Allow the brake caliper and brake line to hang tension-free to the side.



- Remove cable binder ❷.
- Loosen screws ❸. Take out the left fork leg.
- Loosen screws ❹. Take out the right fork leg.

12.8 Installing the fork legs

Main work

- Position the fork legs.

i Info

The upper triple clamp must be flush with the upper edge of the fork legs. Position bleeder screws ❶ toward the front.



- Tighten screws ❷.

Guideline

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

- Tighten screws ❸.

Guideline

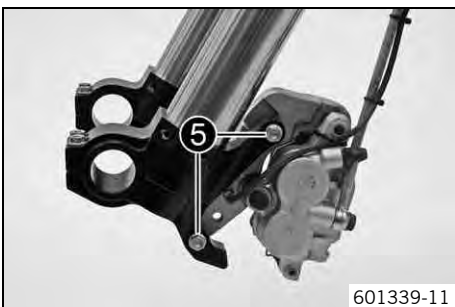
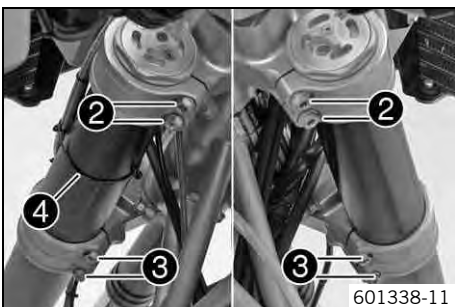
| | | |
|----------------------------|----|--------------------|
| Screw, bottom triple clamp | M8 | 12 Nm (8.9 lbf ft) |
|----------------------------|----|--------------------|

- Secure the brake line with cable binder ❹.

- Position the brake caliper. Mount and tighten screws ❺.

Guideline

| | | | |
|----------------------------|----|------------------------|---------------|
| Screw, front brake caliper | M8 | 30 Nm (22.1 lbf ft) | Loctite® 243™ |
|----------------------------|----|------------------------|---------------|



Finishing work

- Install the front fender. (☞ p. 42)
- Mount the front wheel. (☞ p. 67)

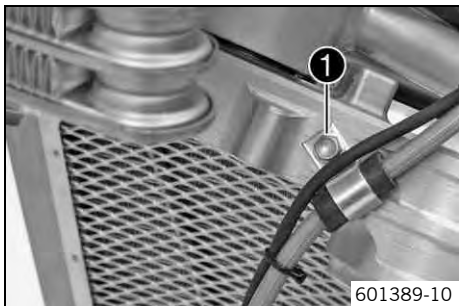
12.9 Removing the lower triple clamp

Preparatory work

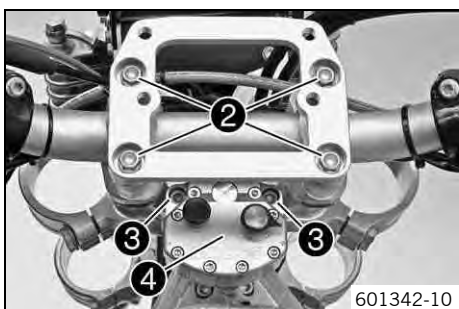
- Raise the motorcycle with the lift stand. (☞ p. 41)
- Remove the front wheel. ☞ (☞ p. 67)
- Dismount the front fender. (☞ p. 42)
- Remove the fork legs. ☞ (☞ p. 43)

Main work

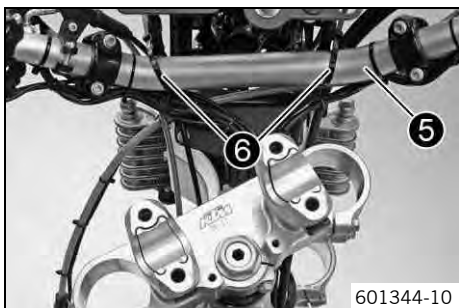
- Remove screw ❶.
- Allow the brake caliper and brake line to hang tension-free to the side.



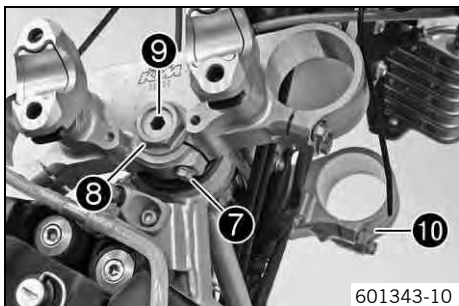
- Remove screws ❷. Remove the holding plate with handlebar clamps.
- Remove screws ❸. Remove steering damper ❹.



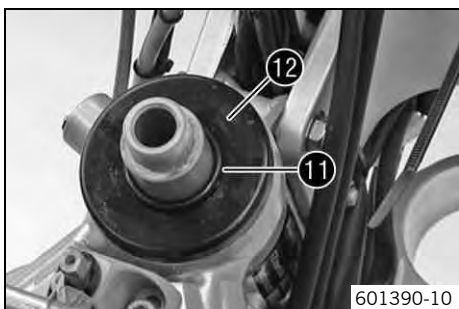
- Fix handlebar ❺ onto the instrument support with cable binders ❻.



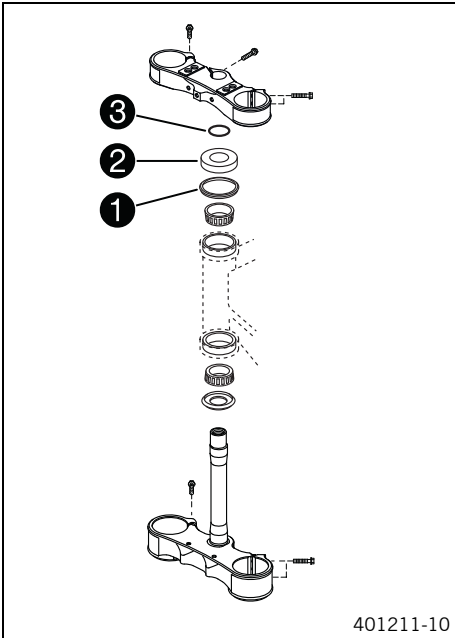
- Loosen screws ❷ and ❸.
- Remove screw ❹ and secure against falling out under triple clamp ❿.



- Remove O-ring ❾. Remove protective ring ❿ and take off the seal ring beneath it.
- Take out the lower triple clamp with the steering stem.
- Remove the upper steering head bearing.



12.10 Installing the lower triple clamp

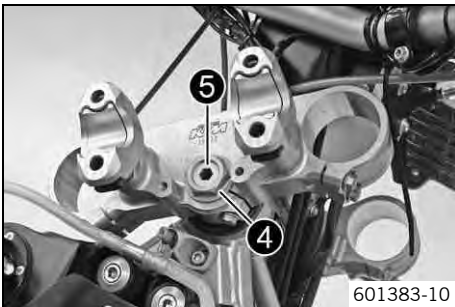


Main work

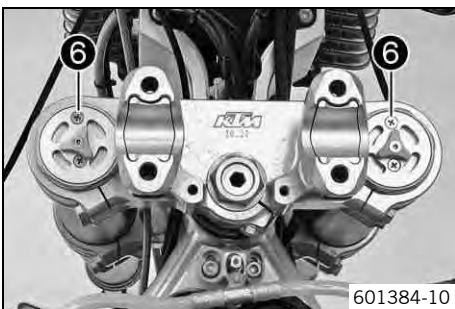
- Clean the bearing and sealing elements, check for damage, and grease.

High viscosity grease (☛ p. 118)

- Insert the lower triple clamp with the steering stem. Mount the upper steering head bearing.
- Check whether the top steering head seal ① is correctly positioned.
- Slide on protective ring ② and O-ring ③.



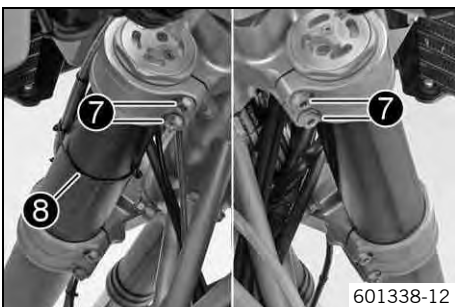
- Position the upper triple clamp.
- Mount nut ④ with screw ⑤ but do not tighten yet.



- Position the fork legs.

Info

The fork legs must be flush with the upper edge of the upper triple clamp. Position bleeder screws ⑥ toward the front.

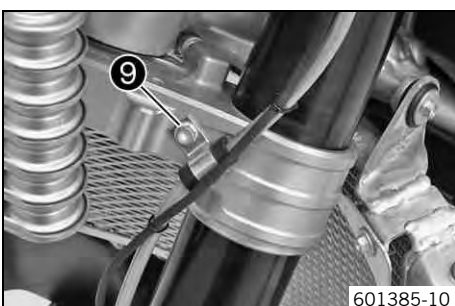


- Tighten screws ⑦.

Guideline

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

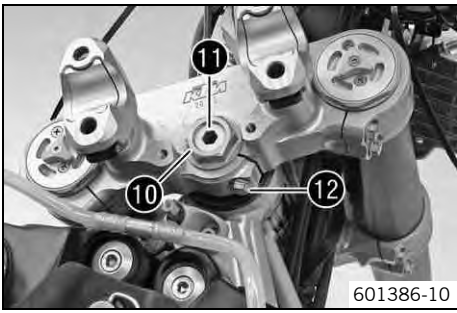
- Secure the brake line on the fork leg with cable binder ⑧.



- Mount and tighten screws ⑨.

Guideline

| | | |
|---|----|-------------------|
| Screw, brake line holder on bottom triple clamp | M5 | 2 Nm (1.5 lbf ft) |
|---|----|-------------------|



- Tighten nut 10.

Guideline

| | | |
|--------------------------|-------|--------------------|
| Nut, upper steering head | M20x1 | 12 Nm (8.9 lbf ft) |
|--------------------------|-------|--------------------|

- Lock screw 11 with nut 10.

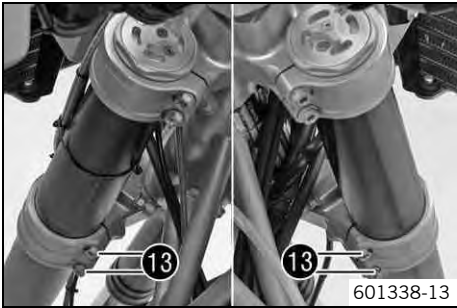
Guideline

| | | |
|--------------------------|-------|--------------------|
| Screw, top steering head | M20x1 | 12 Nm (8.9 lbf ft) |
|--------------------------|-------|--------------------|

- Tighten screw 12.

Guideline

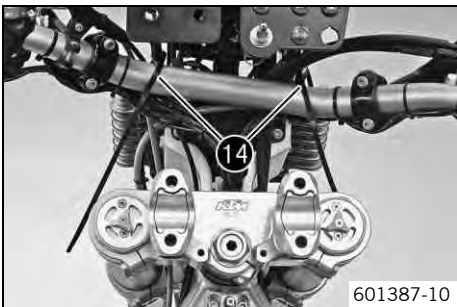
| | | |
|--------------------------|----|---------------------|
| Screw, top steering stem | M8 | 20 Nm (14.8 lbf ft) |
|--------------------------|----|---------------------|



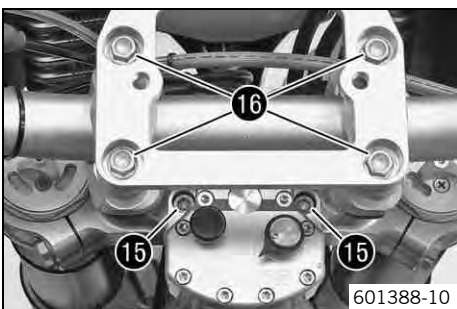
- Tighten screws 13.

Guideline

| | | |
|----------------------------|----|--------------------|
| Screw, bottom triple clamp | M8 | 12 Nm (8.9 lbf ft) |
|----------------------------|----|--------------------|



- Remove cable binders 14 and place the handlebar onto the handlebar clamp base.



- Position the steering damper. Mount and tighten screws 15.

Guideline

| | | |
|------------------------|----|---------------------|
| Screw, steering damper | M6 | 15 Nm (11.1 lbf ft) |
|------------------------|----|---------------------|

- Mount the holding plate with the handlebar clamps and position the handlebar. Mount and tighten screws 16.

Guideline

| | | |
|------------------------|----|---------------------|
| Screw, handlebar clamp | M8 | 16 Nm (11.8 lbf ft) |
|------------------------|----|---------------------|

Finishing work

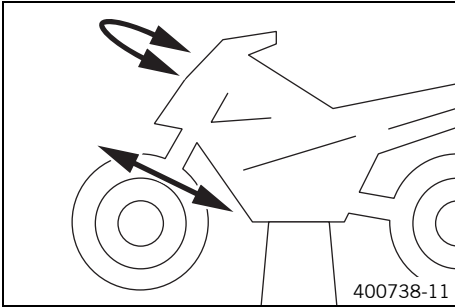
- Check that the wiring harness, cables, and brake and clutch lines can move freely and are routed correctly.
- Install the front fender. (☛ p. 42)
- Mount the front wheel. (☛ p. 67)
- Check the steering head bearing play. (☛ p. 46)
- Remove the motorcycle from the lift stand. (☛ p. 41)

12.11 Checking the steering head bearing play

Warning
Danger of accidents Unstable vehicle handling from incorrect steering head bearing play.

- Adjust the steering head bearing play without delay. (Your authorized KTM workshop will be glad to help.)

Info
 If the bike is ridden with play in the steering head bearing, the bearing and the bearing seats in the frame can become damaged over time.



Preparatory work

- Raise the motorcycle with the lift stand. (☞ p. 41)

Main work

- Move the handlebar to the straight-ahead position. Move the fork legs to and fro in the direction of travel.

No play should be noticeable in the steering head bearing.

- » If there is noticeable play present:
 - Adjust the play of the steering head bearing. ☞ (☞ p. 47)

- Move the handlebar to and fro over the entire steering range.

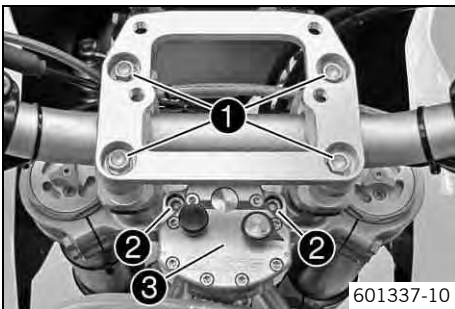
The handlebar must be able to move easily over the entire steering range. No resting locations should be noticeable.

- » If click positions are noticeable:
 - Adjust the play of the steering head bearing. ☞ (☞ p. 47)
 - Check the steering head bearing and replace if required.

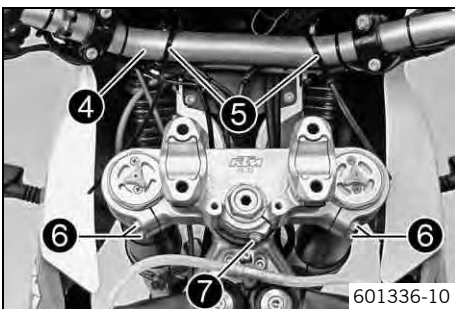
Finishing work

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

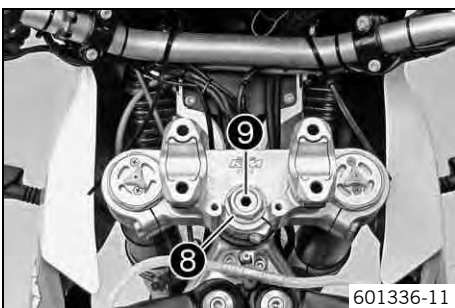
12.12 Adjusting the play of the steering head bearing ☞



- Remove screws **1**. Remove the holding plate with handlebar clamps.
- Remove screws **2**. Take off steering damper **3**.



- Fix handlebar **4** onto the instrument support with cable binders **5**.
- Loosen screws **6** and **7**.



- Loosen nut **8** and screw **9**.
- Retighten nut **8**.

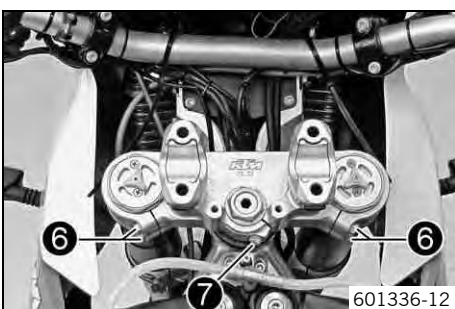
Guideline

| | | |
|--------------------------|-------|--------------------|
| Nut, upper steering head | M20x1 | 12 Nm (8.9 lbf ft) |
|--------------------------|-------|--------------------|

- Lock screw **9** and nut **8**.

Guideline

| | | |
|--------------------------|-------|--------------------|
| Screw, top steering head | M20x1 | 12 Nm (8.9 lbf ft) |
|--------------------------|-------|--------------------|



- Tighten screw **7**.

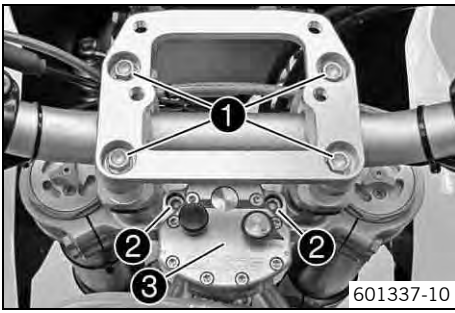
Guideline

| | | |
|--------------------------|----|---------------------|
| Screw, top steering stem | M8 | 20 Nm (14.8 lbf ft) |
|--------------------------|----|---------------------|

- Tighten screws **6**.

Guideline

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



- Position steering damper ❸. Mount and tighten screws ❷.

Guideline

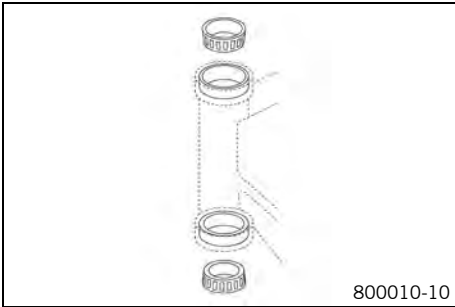
| | | |
|------------------------|----|------------------------|
| Screw, steering damper | M6 | 15 Nm (11.1 lbf ft) |
|------------------------|----|------------------------|

- Remove the cable binders and place the handlebar onto the handlebar clamp base.
- Mount the holding plate with the handlebar clamps and position the handlebar. Mount and tighten screws ❶.

Guideline

| | | |
|------------------------|----|------------------------|
| Screw, handlebar clamp | M8 | 16 Nm (11.8 lbf ft) |
|------------------------|----|------------------------|

12.13 Greasing the steering head bearing



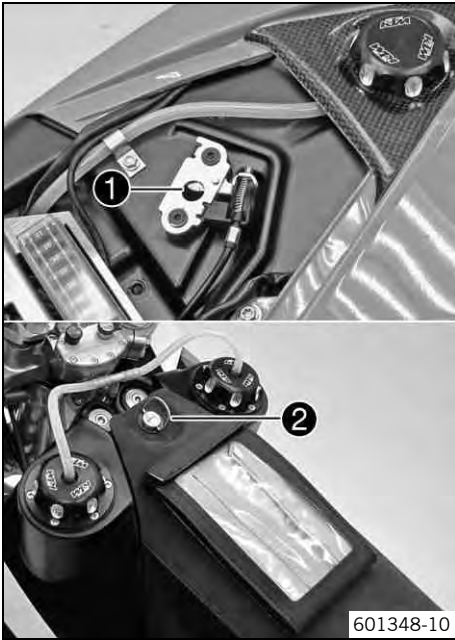
- Remove the lower triple clamp. (p. 44)
- Install the lower triple clamp. (p. 45)

12.14 Removing the seat



- Lift and turn quick release bracket ❶.
- Pull on loop ❷. At the same time, lift the seat at the rear and take it off.

12.15 Mounting the seat



- Let the locking pin of the seat engage in lock housing ❶.
- Lock the seat at the front with quick release ❷.
- Make sure that the seat is correctly locked in.

12.16 Removing the air filter



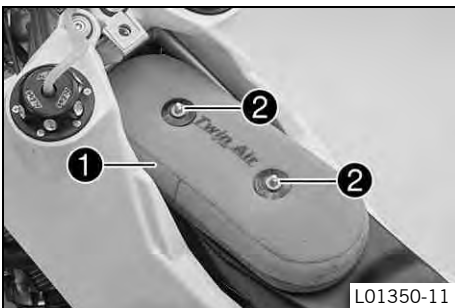
Preparatory work

- Remove the seat. (☛ p. 48)

Main work

- Remove nuts ❶ with washers.
- Remove air filter ❷.

12.17 Installing the air filter



Main work

- Clean the air filter box.
- Mount air filter ❶.

i Info

The air filter must lie flush against the air filter box along the entire sealing surface.

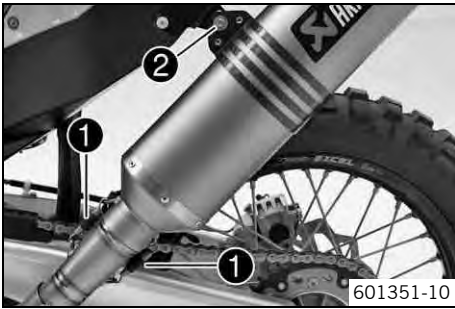
- Mount nuts ❷ with washers and tighten.

Finishing work

- Mount the seat. (☛ p. 49)

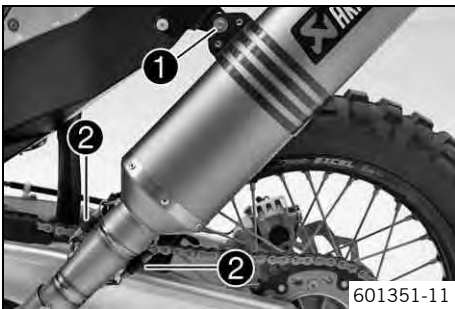
12.18 Removing the main silencer

- 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.



- Detach springs ①.
- Remove screw ② and take off the main silencer.

12.19 Installing the main silencer



- Mount the main silencer. Mount and tighten screw ①.

Guideline

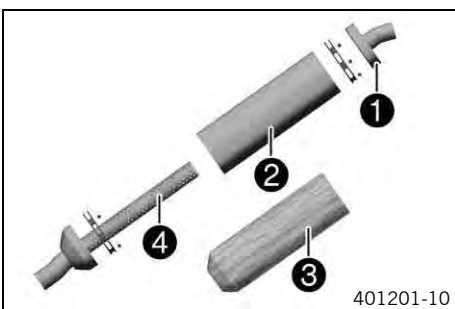
| | | |
|---------------------------|----|--------------------|
| Remaining screws, chassis | M6 | 10 Nm (7.4 lbf ft) |
|---------------------------|----|--------------------|

- Attach springs ②.

12.20 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.

- i Info**
 Over a period, the fibers of the insulating material vanish into the air, and the silencer "burns out". Not only is the noise level higher, the performance characteristic changes.



Preparatory work

- Remove the main silencer. (☛ p. 50)

Main work

- Drill out all rivets on the main silencer and remove the steel bands. Carefully hammer the rivets inward.
- Remove silencer cap ① and external tube ②.
- Pull the glass fiber yarn filling ③ from inner tube ④.
- Clean the parts that are to be reinstalled.
- Wind adhesive tape around the end of inner tube ④.
- Mount new glass fiber yarn ③ on inner tube ④.
- Remove adhesive tape from inner tube ④.
- Slide outer tube ② over the glass fiber yarn ③.
- Insert silencer cap ① into the outer tube.
- Position the steel bands and mount the rivets.

Finishing work

- Install the main silencer. (☛ p. 50)

12.21 Removing the fuel tank toward the front

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.

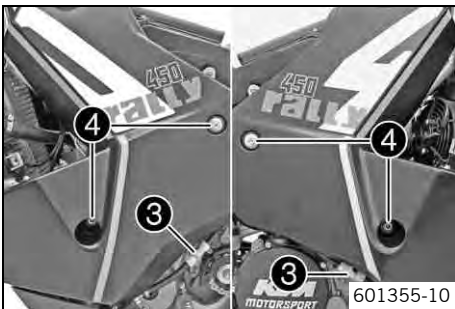
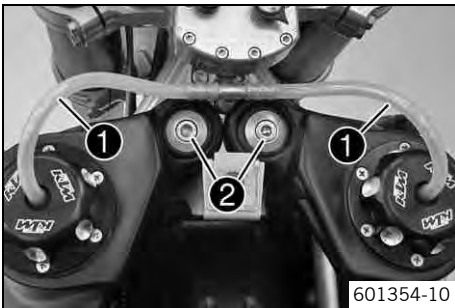
- Fuel must not come into contact with the skin, eyes, or clothing. Do not breathe in the fuel vapors. If contact occurs with the eyes, rinse with water immediately and contact a physician. Immediately clean contaminated areas on the skin with soap and water. If fuel is swallowed, contact a physician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

Preparatory work

- Remove the trim. (☛ p. 58)
- Remove the seat. (☛ p. 48)

Main work

- Pull off the fuel tank breathers **1**.
- Remove screws **2**.

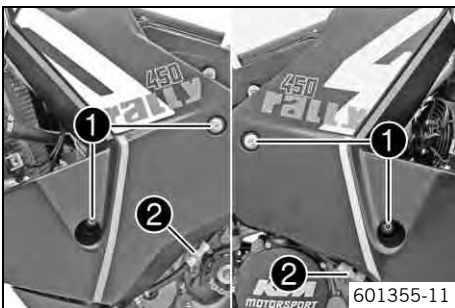


- Open the quick release of the fuel line **3** on the left and right.
- Remove screws **4** of the left and right halves of the fuel tank.
- Remove the fuel tank on the left and right.

Info

Set the fuel tank halves down in an upright position as otherwise fuel can escape from the fuel tank breathers at the filler cap.

12.22 Installing the fuel tank at the front



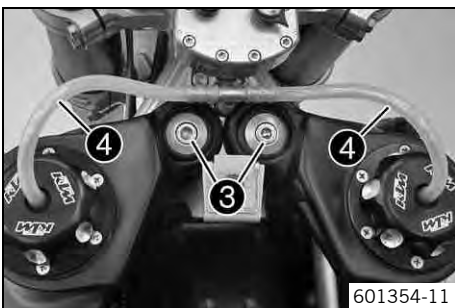
Main work

- Position the fuel tank. Mount and tighten screws **1**.

Guideline

| | | |
|------------------------|----|-------------------|
| Screw, front fuel tank | M8 | 8 Nm (5.9 lbf ft) |
|------------------------|----|-------------------|

- Clean quick release of fuel line **2** and connect it.
- Repeat the operation on the opposite side.



- Mount and tighten screws **3**.

Guideline

| | | |
|------------------------|----|-------------------|
| Screw, front fuel tank | M8 | 8 Nm (5.9 lbf ft) |
|------------------------|----|-------------------|

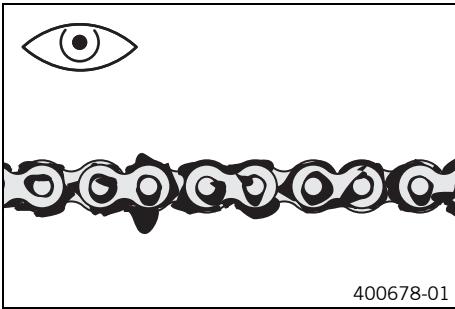
- Connect the hoses **4** of the fuel tank breather without kinking.

Finishing work

- Mount the seat. (☛ p. 49)

- Mount the trim. (☛ p. 58)

12.23 Checking the chain for dirt accumulation



- Check the chain for coarse dirt accumulation.
 - » If the chain is very dirty:
 - Clean the chain. (☛ p. 52)

12.24 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.

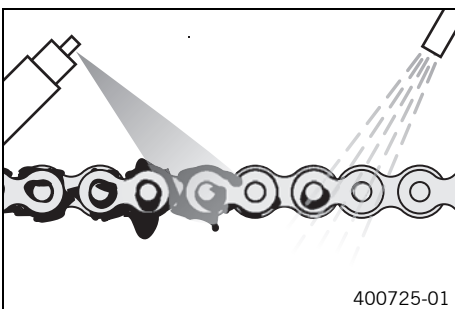
Warning
Danger of accidents Reduced braking efficiency due to oil or grease on the brake discs.

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

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



- Clean the chain regularly and then treat with chain spray.

| |
|---------------------------------|
| Chain cleaner (☛ p. 118) |
| Off-road chain spray (☛ p. 118) |

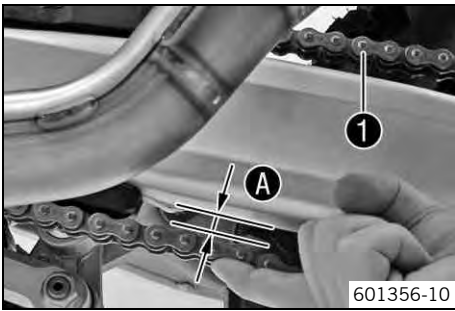
12.25 Checking the chain tension

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 the lift stand. (☛ p. 41)



Main work

- Push the chain upward at the end of the chain sliding guard to measure chain tension **A**.

i Info

The upper chain section **1** must be taut. Chain wear is not always even, so you should repeat this measurement at different chain positions.

| | |
|---------------|------|
| Chain tension | 5 mm |
|---------------|------|

- » If the chain tension does not meet specifications:
 - Adjust the chain tension. (☛ p. 53)

Finishing work

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

12.26 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 the lift stand. (☛ p. 41)

Main work

- Loosen nut **1**.
- Loosen nuts **2**.
- Adjust the chain tension by turning adjusting screws **3** left and right.

Guideline

| | |
|---|------|
| Chain tension | 5 mm |
| 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 A . The rear wheel is then correctly aligned. | |

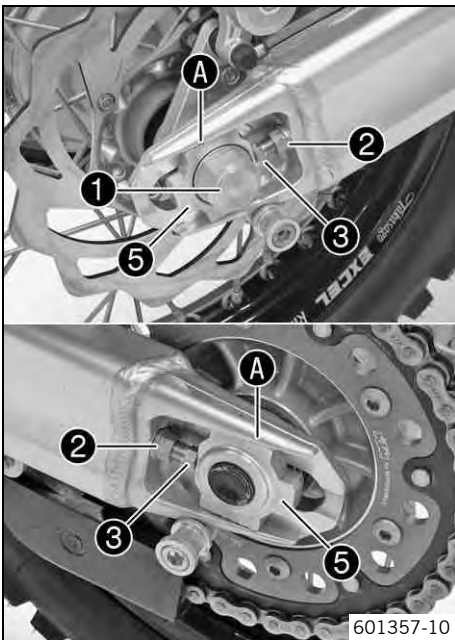
- Tighten nuts **2**.
- Make sure that chain adjusters **4** are fitted correctly on adjusting screws **3**.
- Tighten nut **1**.

Guideline

| | | |
|-------------------------|---------|------------------------|
| Nut, rear wheel spindle | M25x1.5 | 90 Nm (66.4 lbf ft) |
|-------------------------|---------|------------------------|

i Info

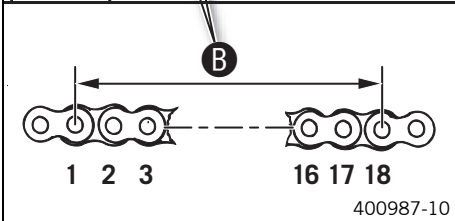
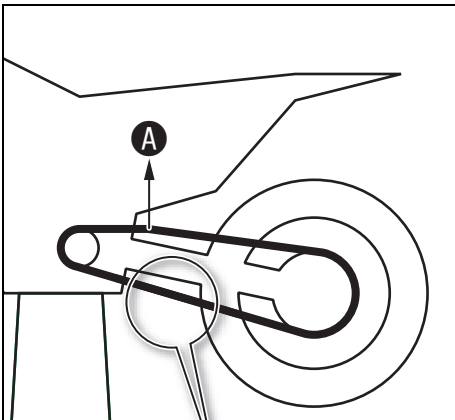
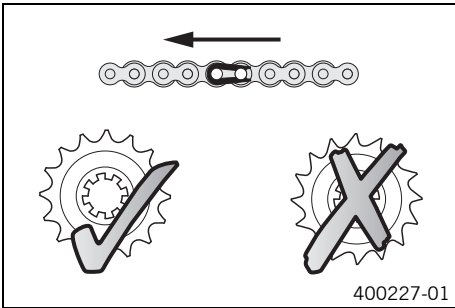
The wide adjustment range of the chain adjusters enables different secondary ratios with the same chain length. Chain adjusters **4** can be turned by 180°.



Finishing work

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

12.27 Checking the chain, rear sprocket, engine sprocket, and chain guide



Preparatory work

- Raise the motorcycle with the lift stand. (☛ p. 41)

Main work

- Shift gear to neutral.
- Check the rear sprocket and engine sprocket for wear.
 - » If the rear sprocket and engine sprocket are worn:
 - Change the drivetrain kit. ☛

i 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 **A**.

Guideline

| | |
|--------------------------------|----------------------------|
| Weight, chain wear measurement | 10... 15 kg (22... 33 lb.) |
|--------------------------------|----------------------------|

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

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

| | |
|--|-------------------|
| Maximum distance B at the longest chain section | 272 mm (10.71 in) |
|--|-------------------|

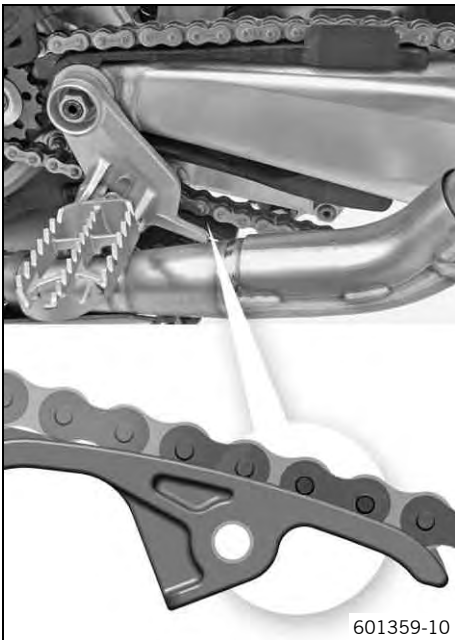
- » If the distance **B** is greater than the specified measurement:
 - Change the drivetrain kit. ☛

i 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

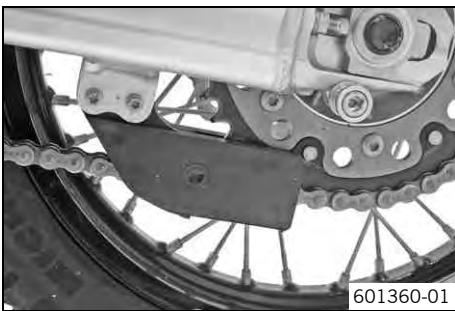
| | | | |
|----------------------------|----|----------------------|---------------|
| Screw, chain sliding guard | M6 | 6 Nm (4.4 lbf ft) | Loctite® 243™ |
|----------------------------|----|----------------------|---------------|



- 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.

i Info

Wear is visible on the front of the chain guide.

- » If 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.

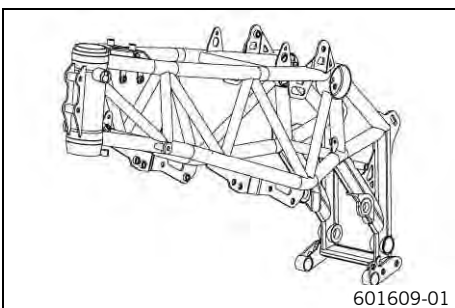
Guideline

| | | |
|---------------------------|----|-----------------------|
| 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)

12.28 Checking the frame 🛠️

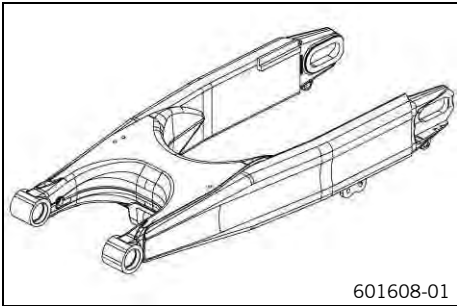



- Check the frame for cracks and deformation.
 - » If the frame exhibits cracks or deformation due to a mechanical impact:
 - Change the frame. 🛠️

i Info

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

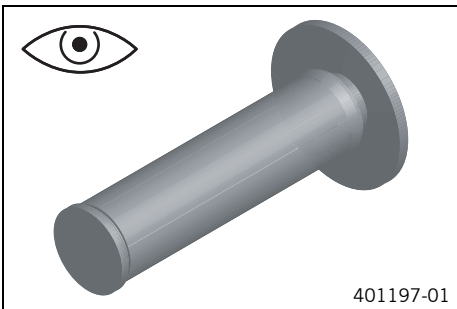
12.29 Checking the swingarm



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

i Info
A damaged swingarm must always be changed. Repair of the swingarm is not authorized by KTM.

12.30 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. 119)

12.31 Additionally securing the rubber grip



Preparatory work

- Check the rubber grip. (🔧 p. 56)

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.

12.32 Adjusting the basic position of the clutch lever

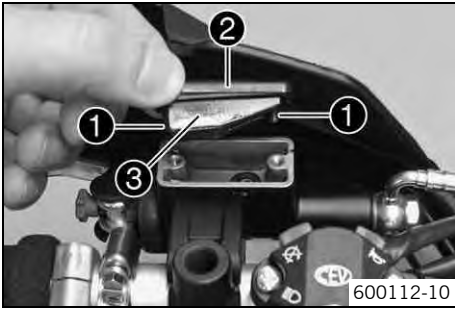


- Adjust the basic setting of the clutch lever to your hand size by turning adjusting screw ❶.

i 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!

12.33 Checking the fluid level of the hydraulic clutch

i Info
 The fluid level rises with increased wear of the clutch lining discs.
 Do not use brake fluid.



- Move the clutch fluid reservoir mounted on the handlebar to a horizontal position.
- Remove screws ❶.
- Remove cover ❷ with membrane ❸.
- Check the fluid level.

| | |
|--|----------------|
| Fluid level under top level of container | 4 mm (0.16 in) |
|--|----------------|

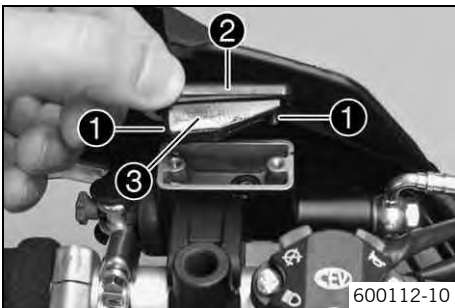
- » If the fluid level does not meet specifications:
 - Correct the fluid level of the hydraulic clutch.

| |
|---------------------------------|
| Hydraulic fluid (15) (☞ p. 117) |
|---------------------------------|

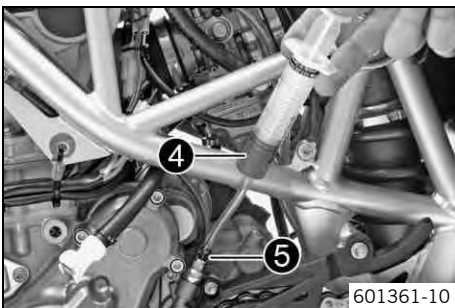
- Position the cover with the membrane. Mount and tighten the screws.

12.34 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.



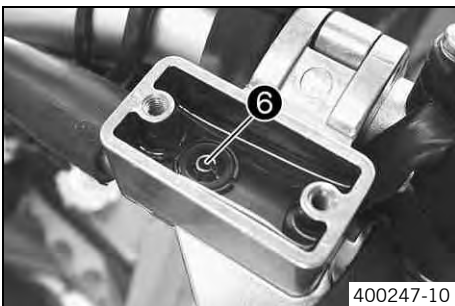
- Move the clutch fluid reservoir mounted on the handlebar to a horizontal position.
- Remove screws ❶.
- Remove cover ❷ with membrane ❸.



- Fill bleeding syringe ❹ with the appropriate fluid.

| |
|---------------------------------|
| Bleed syringe (50329050000) |
| Hydraulic fluid (15) (☞ p. 117) |

- On the slave cylinder, remove bleeder screw ❺ and mount bleeding syringe ❹.



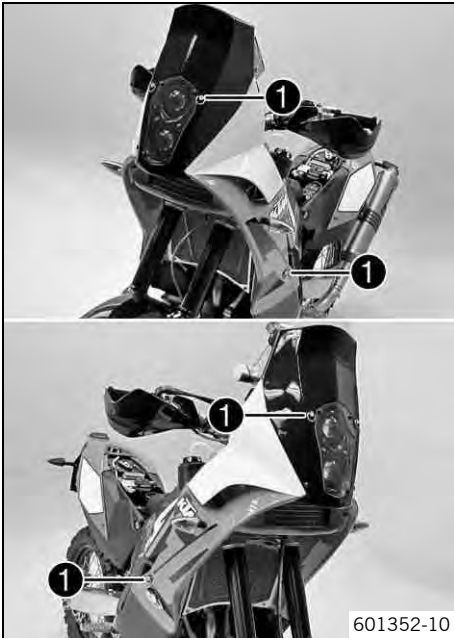
- Inject the fluid into the system until it escapes from hole ❻ of the master cylinder without bubbles.
- To prevent overflow, drain the fluid occasionally from the master cylinder reservoir.
- Remove the bleeding syringe. Mount and tighten the bleeder screw.
- Correct the fluid level of the hydraulic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

Guideline

| | |
|--|----------------|
| Fluid level under top level of container | 4 mm (0.16 in) |
|--|----------------|

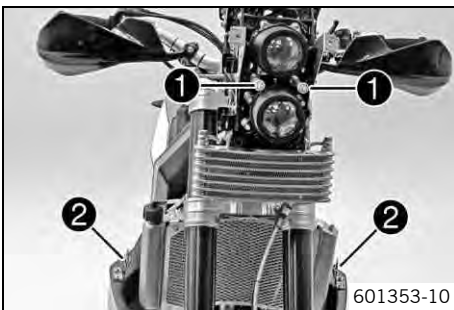
- Position the cover with the membrane. Mount and tighten the screws.

12.35 Removing the trim



- Detach the plug-in connectors on the turn signal cables.
- Open quick releases ❶.
- Remove the trim toward the front.

12.36 Mounting the trim

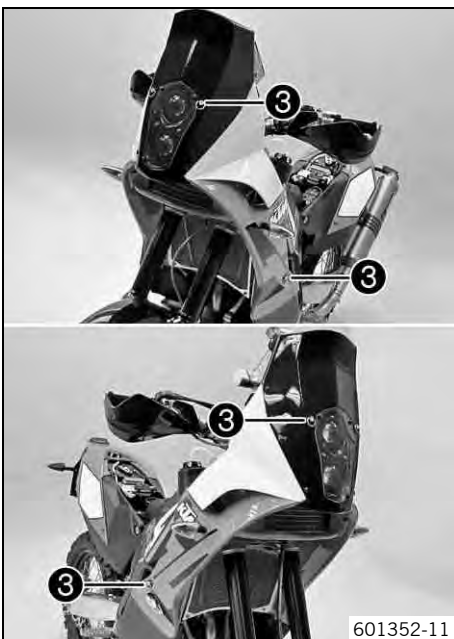


- Attach the trim to guides ❶.



Info

When positioning the trim, exercise caution with counterpieces ❷ of the quick releases to ensure that you do not damage the trim.



- Position the trim and attach it with quick releases ❸.

13.1 Checking the free travel on the 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.

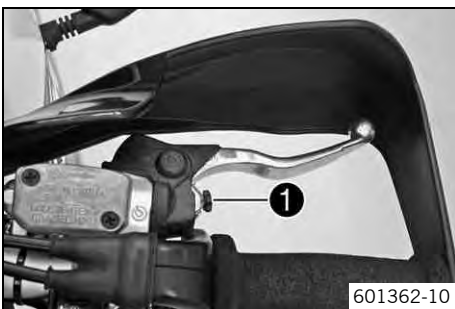


- Push the hand brake to the handlebar and check free travel **A**.

| | |
|---------------------------------|--------------------|
| 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. 59)

13.2 Adjusting the free travel of the hand brake lever



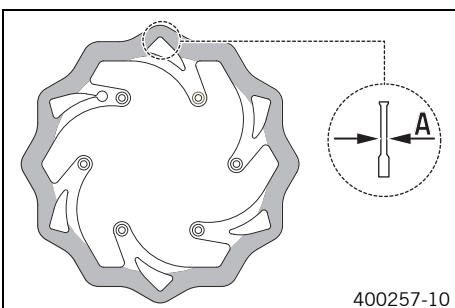
- Check the free travel on the hand brake lever. (☛ p. 59)
- Adjust the free travel of the hand brake lever with adjusting screw **1**.

i Info
 Turn the adjusting screw clockwise to reduce free travel. The pressure point moves away from the handlebar.
 Turn the adjusting 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 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 KTM workshop will be glad to help.)



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

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

| Brake discs - wear limit | |
|--------------------------|-------------------|
| Front | 3.4 mm (0.134 in) |
| Rear | 4.5 mm (0.177 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, cracks, and deformation.
 - » If damage, cracks, or deformation are visible on the brake disc:
 - Change brake disc.

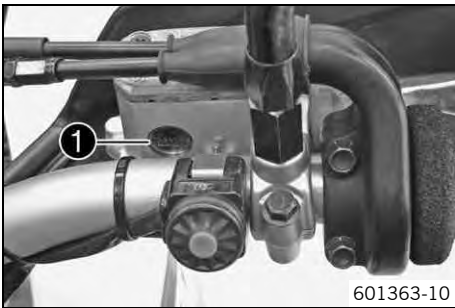
13.4 Checking the front brake fluid level

Warning
Danger of accidents Failure of the brake system.

- If the brake fluid level falls below the **MIN** mark, this indicates a leakage in the brake system or worn-out brake linings. Check the brake system and do not continue riding. (Your authorized KTM workshop will be glad to help.)

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 KTM workshop will be glad to help.)



- 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 is below the **MIN** mark:
 - Add brake fluid of the front brake. 🛠️ (📖 p. 60)

13.5 Adding front brake fluid 🛠️

Warning
Danger of accidents Failure of the brake system.

- If the brake fluid level falls below the **MIN** mark, this indicates a leakage in the brake system or worn-out brake linings. Check the brake system and do not continue riding. (Your authorized KTM workshop will be glad to help.)

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.

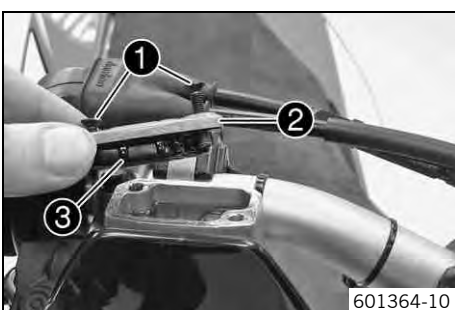
Warning
Danger of accidents Reduced braking efficiency due to old brake fluid.

- Change the brake fluid of the front and rear brake according to the service schedule. (Your authorized KTM workshop will be glad to help.)

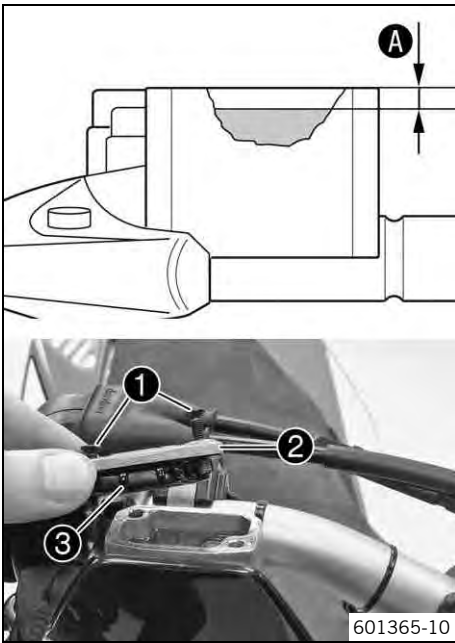
Warning
Environmental hazard Hazardous substances cause environmental damage.

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

i 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 is corrosive!
 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.



- Add brake fluid to level **A**.

| |
|--|
| Brake fluid DOT 4 / DOT 5.1 (☞ p. 116) |
|--|

- Position cover **2** with membrane **3**.
- Mount and tighten screws **1**.

i Info

Clean up overflowed or spilt brake fluid immediately with water.

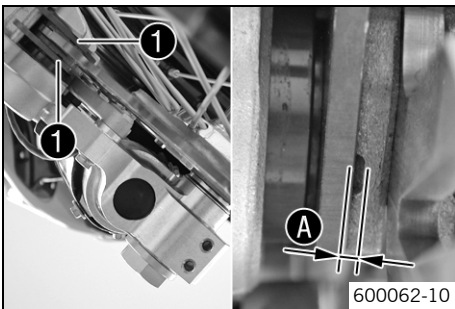
13.6 Checking the front brake linings



Warning

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

- Change worn brake linings immediately. (Your authorized KTM workshop will be glad to help.)



- Check brake linings **1** for minimum thickness **A**.

| | |
|----------------------------|--------------------|
| Minimum thickness A | ≥ 1 mm (≥ 0.04 in) |
|----------------------------|--------------------|

- » If the minimum thickness is less than specified:
 - Change the front brake linings. ☞ (☞ p. 61)
- Check the brake linings for damage and cracking.
 - » If damage or cracking is visible:
 - Change the front brake linings. ☞ (☞ p. 61)

13.7 Changing the front brake linings ☞



Warning

Danger of accident Brake system failure.

- Maintenance work and repairs must be carried out professionally. (Your authorized KTM workshop will be glad to help.)



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 KTM workshop will be glad to help.)



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.



Warning

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 KTM vehicles. The construction and friction factor of the brake linings and therefore the brake power can differ considerably from the original KTM 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.

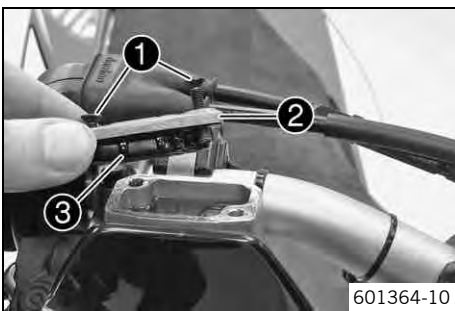


Info

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.

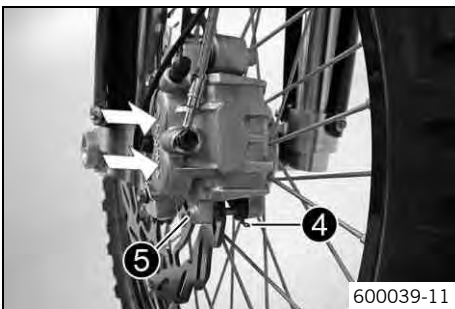
Avoid contact between brake fluid and painted parts. Brake fluid is corrosive!

Use only clean brake fluid from a sealed container.



601364-10

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



600039-11

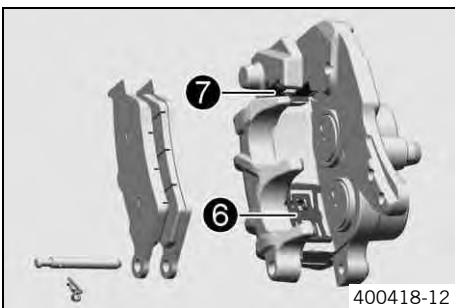
- Press the brake caliper by hand on to the brake disc in order to press back the brake pistons. Ensure that brake fluid does not overflow from the brake fluid reservoir, using suction to remove it if it does.



Info

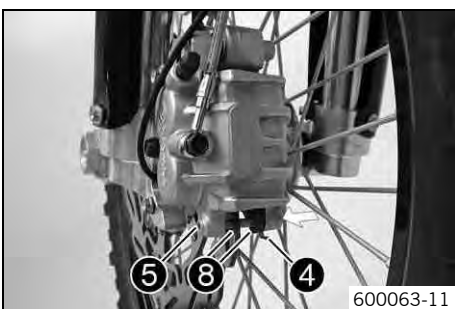
Make sure when pushing back the brake pistons that you do not press the brake caliper against the spokes.

- Remove cotter pin ④, withdraw pin ⑤, and take out the brake linings.



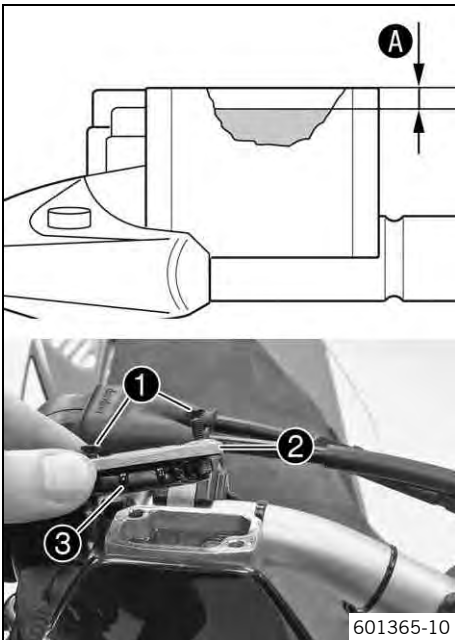
400418-12

- Clean the brake caliper and brake caliper support.
- Check that leaf spring ⑥ in the brake caliper and sliding plate ⑦ in the brake caliper support are seated correctly.



600063-11

- Insert brake linings ⑧, insert pin ⑤, and mount cotter pin ④.



- Operate the hand brake lever repeatedly until the brake linings are in contact with the brake disc and there is a pressure point.
- Add brake fluid to level **A**.

Guideline

| | |
|-------------------------|---------------|
| Measurement of A | 5 mm (0.2 in) |
|-------------------------|---------------|

| |
|--|
| Brake fluid DOT 4 / DOT 5.1 (☞ p. 116) |
|--|

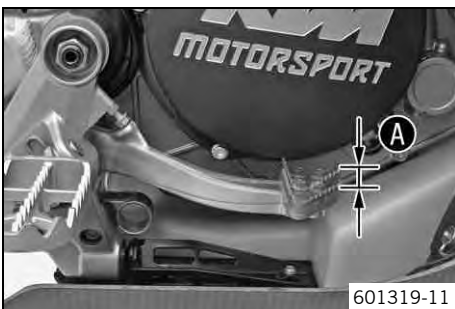
- Position cover **2** with membrane **3**.
- Mount and tighten screws **1**.

i Info
Clean up overflowed or spilt brake fluid immediately with water.

13.8 Checking the free travel 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.



- Detach the spring from the foot brake lever.
- 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 **A**.

Guideline

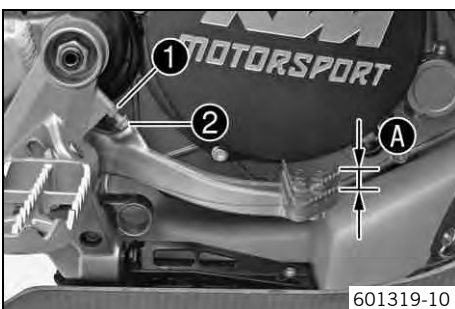
| | |
|-------------------------------------|----------------------------|
| Free travel at the foot brake lever | 3... 5 mm (0.12... 0.2 in) |
|-------------------------------------|----------------------------|

- » If the free travel does not meet specifications:
 - Adjust the free travel of the foot brake lever. ☞ (☞ p. 63)
- Attach the spring to the foot brake lever.

13.9 Adjusting the free travel 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.



- Loosen nut **1** and use screw **2** to adjust free travel **A**.

Guideline

| | |
|-------------------------------------|----------------------------|
| Free travel at the foot brake lever | 3... 5 mm (0.12... 0.2 in) |
|-------------------------------------|----------------------------|

- Hold screw **2** and tighten nut **1**.

Guideline

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

13.10 Checking the rear brake fluid level



Warning

Danger of accidents Failure of the brake system.

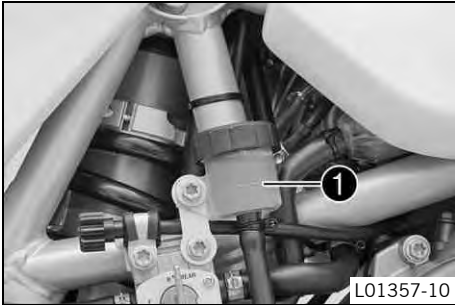
- If the brake fluid level falls below the **MIN** mark, this indicates a leakage in the brake system or worn-out brake linings. Check the brake system and do not continue riding. (Your authorized KTM workshop will be glad to help.)



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 KTM workshop will be glad to help.)



- Stand the vehicle upright.
- Check the brake fluid level in the brake fluid reservoir.
 - » If the fluid level reaches the **MIN** mark ❶:
 - Add rear brake fluid. 🛠️ (📖 p. 64)

13.11 Adding rear brake fluid 🛠️



Warning

Danger of accidents Failure of the brake system.

- If the brake fluid level falls below the **MIN** mark, this indicates a leakage in the brake system or worn-out brake linings. Check the brake system and do not continue riding. (Your authorized KTM workshop will be glad to help.)



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 KTM workshop will be glad to help.)



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.

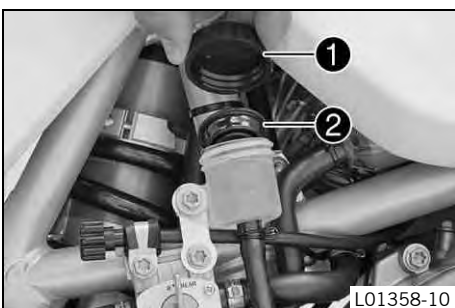


Info

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 is corrosive!

Use only clean brake fluid from a sealed container.



- Stand the vehicle upright.
- Remove screw cap ❶ with the washer and membrane ❷.
- Add brake fluid to the **MAX** level.

Brake fluid DOT 4 / DOT 5.1 (📖 p. 116)

- Mount the screw cap with the washer and membrane.



Info

Clean up overflowed or spilt brake fluid immediately with water.

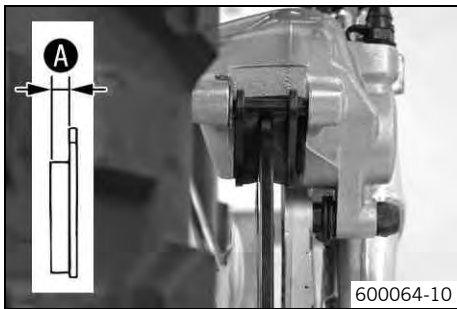
13.12 Checking the rear brake linings



Warning

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

- Change worn brake linings immediately. (Your authorized KTM workshop will be glad to help.)



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

| | |
|----------------------------|--------------------|
| Minimum thickness A | ≥ 1 mm (≥ 0.04 in) |
|----------------------------|--------------------|

- » If the minimum thickness is less than specified:
 - Change the rear brake linings. 🛠️ (📖 p. 65)
- Check the brake linings for damage and cracking.
 - » If damage or cracking is visible:
 - Change the rear brake linings. 🛠️ (📖 p. 65)

13.13 Changing the rear brake linings 🛠️



Warning

Danger of accident Brake system failure.

- Maintenance work and repairs must be carried out professionally. (Your authorized KTM workshop will be glad to help.)



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 KTM workshop will be glad to help.)



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.



Warning

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 KTM vehicles. The construction and friction factor of the brake linings and therefore the brake power can differ considerably from the original KTM 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.

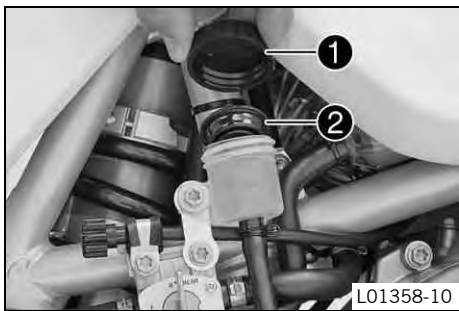


Info

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 is corrosive!

Use only clean brake fluid from a sealed container.

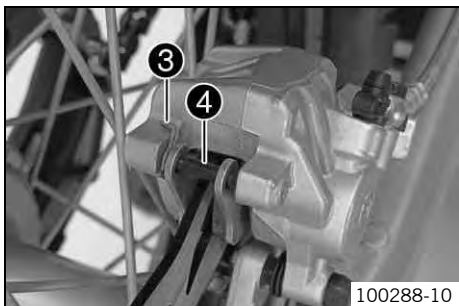


- Stand the vehicle upright.
- Remove screw cap ① with the washer and membrane ②.
- Press the brake caliper by hand on to the brake disc in order to press back the brake piston. Ensure that brake fluid does not overflow from the brake fluid reservoir, using suction to remove it if it does.

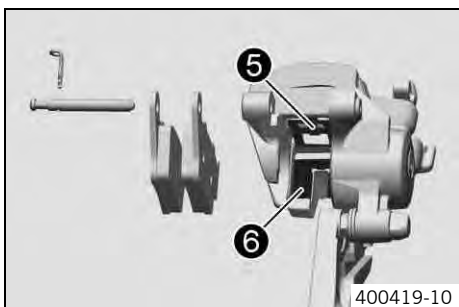


Info

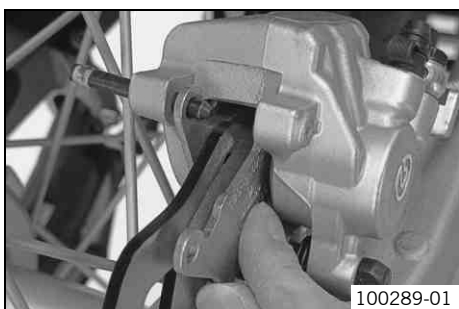
Make sure when pushing back the brake piston that you do not press the brake caliper against the spokes.



- Remove cotter pin ③, remove bolt ④ toward the left by striking it and remove the brake linings.
- Clean the brake caliper and brake caliper support.



- Check that leaf spring ⑤ in the brake caliper and sliding plate ⑥ in the brake caliper support are seated correctly.



- Insert the brake linings, insert the bolt, 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.
- Adjust the brake fluid level to the **MAX** mark.

Brake fluid DOT 4 / DOT 5.1 (☛ p. 116)

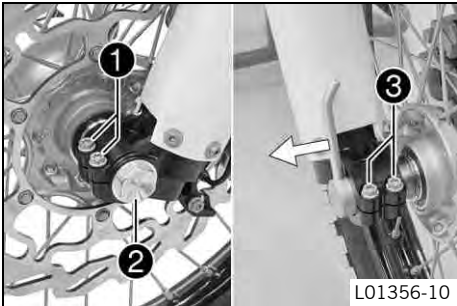
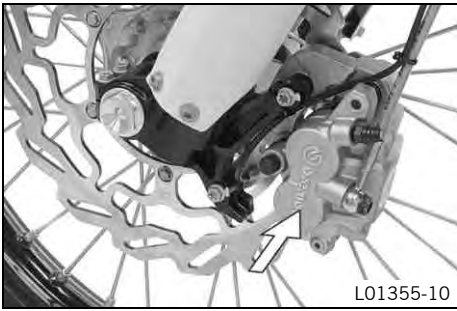
- Mount the screw cap with the washer and membrane.



Info

Clean up overflowed or spilt brake fluid immediately with water.

14.1 Removing the front wheel



Preparatory work

- Raise the motorcycle with the lift stand. (☛ p. 41)

Main work

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

i Info

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

- Loosen screws ❶.
- Remove screw ❷.
- Loosen screws ❸.
- Holding the front wheel, withdraw the wheel spindle. Take the front wheel out of the fork.

i Info

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 damaged.

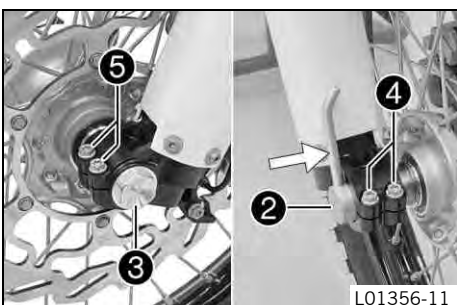
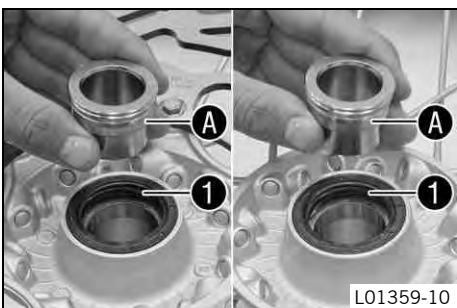
- Remove spacers ❹.

14.2 Mounting 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 shaft seal rings ❶ and contact surface **A** of the spacers. Clean and grease shaft seal rings and the contact surface of the wheel spindle.

Long-life grease (☛ p. 118)

- Insert spacers.
- Lift the front wheel into the fork, position it, and insert wheel spindle ❷.
- Mount and tighten screw ❸.

Guideline

| | | |
|----------------------------|---------|------------------------|
| Screw, front wheel spindle | M24x1.5 | 40 Nm (29.5 lbf ft) |
|----------------------------|---------|------------------------|

i Info

Ensure that the grip of the wheel spindle does not contact with the right fork leg.

- 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 brake and compress the fork powerfully a few times.
✓ The fork legs straighten.
- Tighten screws ④ and ⑤.

Guideline

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

14.3 Removing the rear wheel ☛

Preparatory work

- Raise the motorcycle with the 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.

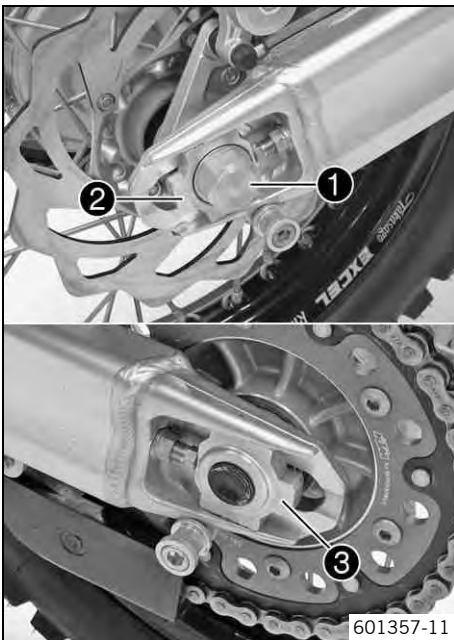
i Info
Make sure when pushing back the brake piston that you do not press the brake caliper against the spokes.

- 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 wheel spindle ③. Take the rear wheel out of the swingarm.

i 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.

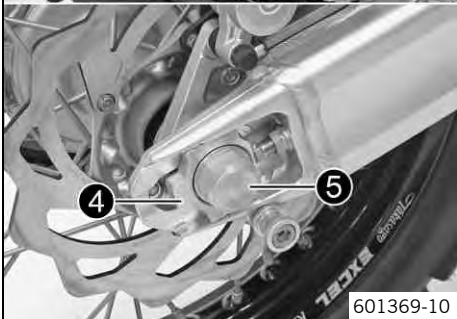
- Remove spacer ④.

- Remove the rear sprocket carrier ⑤.





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.



Main work

- Check the rear hub rubber dampers.  (☞ p. 70)
- 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 and bearing surface of the spacer.

Long-life grease (☞ p. 118)
- Insert spacers ①.
- Clean and grease the shaft seal rings and bearing surface of the spacer in the rear sprocket carrier.
- Insert the rear sprocket carrier ② into the rear hub.

- Lift the rear wheel into the swingarm, position it, and insert wheel spindle ③.
- Attach the chain.
- Position chain adjuster ④. Mount nut ⑤, but do not tighten it yet.
- Check the chain tension. (☞ p. 52)
- Make sure that the chain adjusters are fitted correctly on the adjusting screws.
- Tighten nut ⑤.

Guideline

| | | |
|-------------------------|---------|------------------------|
| Nut, rear wheel spindle | M25x1.5 | 90 Nm (66.4 lbf ft) |
|-------------------------|---------|------------------------|

i Info
 The wide adjustment range of the chain adjusters enables different secondary ratios with the same chain length.
 The chain adjusters can be turned by 180°.

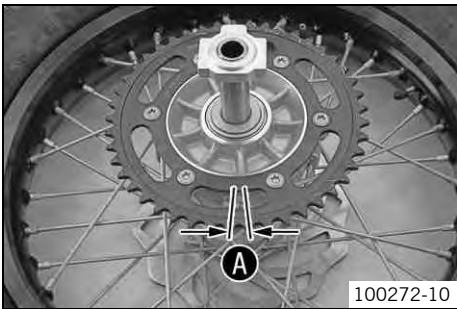
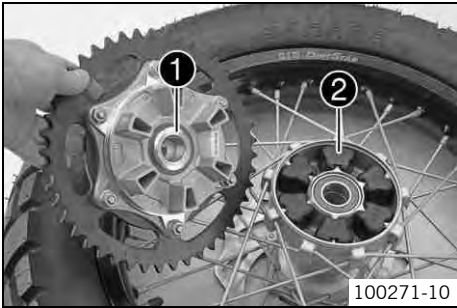
- Operate the foot brake lever repeatedly until the brake linings are in contact with the brake disc and there is a pressure point.

Finishing work

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

14.5 Checking the rear hub rubber dampers

i Info
The engine power is transmitted from the rear sprocket to the rear wheel via 6 rubber dampers. They eventually wear out during operation. If the rubber dampers are not changed in time, the rear sprocket carrier and the rear hub will be damaged.



Preparatory work

- Raise the motorcycle with the lift stand. (☞ p. 41)
- Remove the rear wheel. (☞ p. 68)

Main work

- Check bearing ①.
 - » If the bearing is damaged or worn:
 - Change the bearing. (☞)
- Check rubber dampers ② of the rear hub for damage and wear.
 - » If the rubber dampers of the rear hub are damaged or worn:
 - Change all rubber dampers in the rear hub.

- Lay the rear wheel on a workbench with the rear sprocket facing upward and insert the wheel spindle in the hub.
- To check the play ④, hold the rear wheel tight and try to rotate the rear sprocket.

i Info
Measure the play on the outside of the rear sprocket.

| | |
|------------------------------------|-------------------|
| Play in rubber dampers, rear wheel | ≤ 5 mm (≤ 0.2 in) |
|------------------------------------|-------------------|

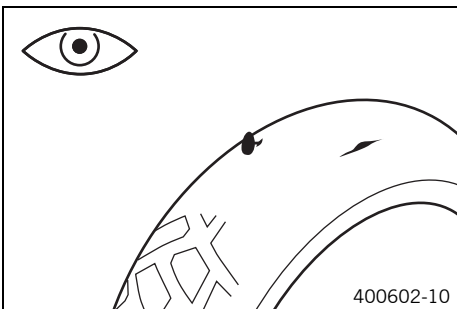
- » If play ④ is larger than the specified value:
 - Change all rubber dampers in the rear hub.

Finishing work

- Install the rear wheel. (☞ p. 69)
- Remove the motorcycle from the lift stand. (☞ p. 41)

14.6 Checking the tire condition

i Info
Only mount tires approved and/or recommended by KTM.
Other tires could have a negative effect on riding behavior.
The type, condition and air pressure of the tires all have an important impact on the riding behavior of the motorcycle.
The tires mounted on the front and rear wheels must have a similar profile.
Worn tires have a negative effect on riding behavior, especially on wet surfaces.



- Examine the front and rear tires for cuts, foreign bodies, and other damage.
 - » If you find cuts, foreign bodies, or other damage on a tire:
 - Change the tire.
- Check the depth of the tread.

i 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 allowable depth:
 - Change the tire.
- Check the tire age.



Info

The tire manufacture date is usually included in the tire identification number and comprises the last four digits of the **DOT** code. The first two digits indicate the week of manufacture and the last two digits the year of manufacture.

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

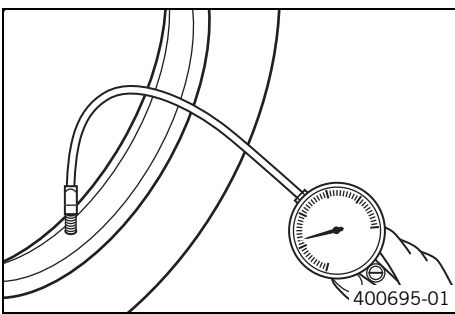
- » If the tire is older than five years:
 - Change the tire.

14.7 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 dust cap.
- Check tire air pressure when tires are cold.

| Tire air pressure off road | |
|----------------------------|-------------------------------|
| Front | 1.0... 1.5 bar (15... 22 psi) |
| Rear | 1.0... 1.5 bar (15... 22 psi) |

| Tire air pressure on road | |
|---------------------------|------------------|
| Front | 1.5 bar (22 psi) |
| Rear | 1.5 bar (22 psi) |

- » If the tire pressure does not meet specifications:
 - Correct the tire air pressure.
- Fit the dust cap.

14.8 Checking the spoke tension



Warning

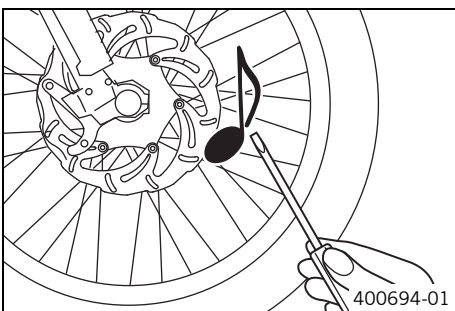
Danger of accidents Instable handling due to incorrect spoke tension.

- Ensure that the spoke tension is correct. (Your authorized KTM workshop will be glad to help.)



Info

A loose spoke causes wheel imbalance and rapidly leads to more loose spokes. If the spokes are too tight, they can break due to local overload. Check the spoke tension regularly, especially on a new motorcycle.



- Briefly strike each spoke with a screwdriver blade.



Info

The frequency of the tone is a function of the spoke length and spoke diameter.

If you hear different tone frequencies from individual spokes of the same length and thickness, this is an indication of different spoke tensions.

You should hear a high note.

- » If the spoke tensions differ:
 - Correct the spoke tension. 🛠️
- Check the spoke tension.

Guideline

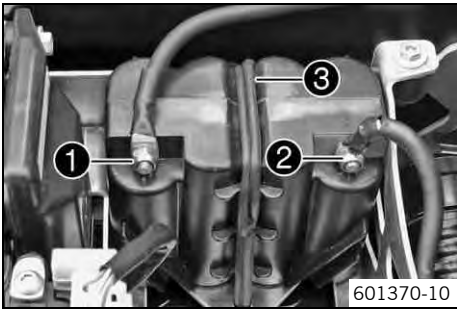
| | | |
|---------------------------|------|-------------------------------|
| Spoke nipple, front wheel | M4.5 | 5... 6 Nm (3.7... 4.4 lbf ft) |
| Spoke nipple, rear wheel | M5 | 5... 6 Nm (3.7... 4.4 lbf ft) |

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.



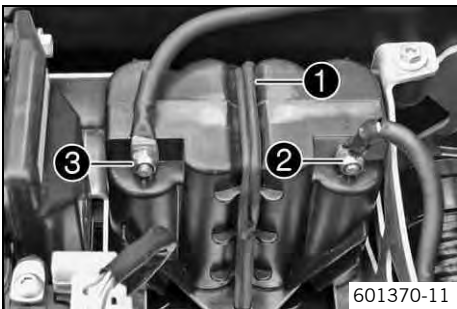
Preparatory work

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

Main work

- Disconnect the negative (minus) cable ❶ of the battery.
- Disconnect the positive (plus) cable ❷ of the battery.
- Detach rubber band ❸ from the bottom.
- Lift the battery up and remove it.

15.2 Installing the battery



Main work

- Place the battery in the battery holder.

Lithium-ion battery (☛ p. 94)

- Reconnect rubber band ❶.
- Connect positive cable ❷.

Guideline

| | | |
|-----------------------|----|-------------------|
| Nut, cable on battery | M6 | 5 Nm (3.7 lbf ft) |
|-----------------------|----|-------------------|

- Attach negative cable ❸.

Guideline

| | | |
|-----------------------|----|-------------------|
| Nut, cable on battery | M6 | 5 Nm (3.7 lbf ft) |
|-----------------------|----|-------------------|

Finishing work

- Mount the seat. (☛ p. 49)

15.3 Recharging the battery

Warning
Environmental hazard The battery contains elements that are harmful to the environment.

- Do not discard batteries with the household waste. Dispose of faulty batteries in an environmentally compatible manner. Give the battery to your authorized KTM dealer or dispose of it at a collection point for used batteries.

Info

Even when there is no load on the battery, it still loses power steadily.
 The charging voltage of the battery must not exceed 14.4 V.
 The charge state and the type of charge are very important for the service life of the battery.
 If the charging voltage is exceeded, the battery capacity will be reduced.
 If the battery is depleted from starting the vehicle repeatedly, the battery must be charged immediately.

Preparatory work

- 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 (58429074000)

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 over-charge the battery.



Info

Only charge the battery with the specified battery charge. This is the only way to ensure that a charging voltage of 14.4 V is not exceeded.

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

Finishing work

- Mount the seat. (☛ p. 49)

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

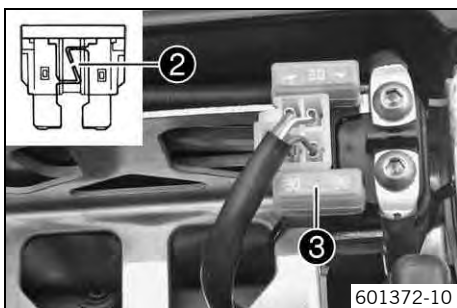
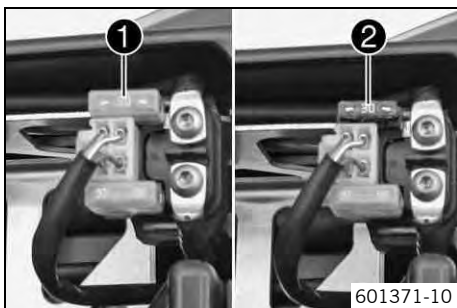
The main fuse protects all power consumers of the vehicle. It is located in the starter relay housing under the seat.

Preparatory work

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

Main work

- Remove protection cap ❶.
- Remove the faulty main fuse ❷.



- Fit a new main fuse.

Fuse (58011109130) (☛ p. 94)



Info

Replace a faulty fuse ❷ by an equivalent fuse only. A reserve fuse ❸ is located in the starter relay.

- Check that the electrical equipment is functioning properly.



Tip

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

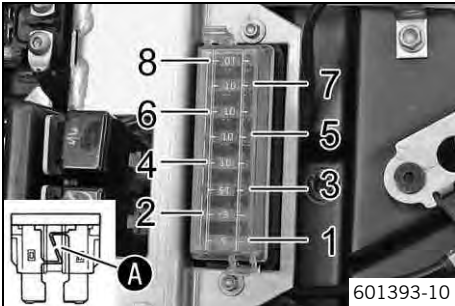
- Attach the protection caps.

Finishing work

- Mount the seat. (☛ p. 49)

15.5 Changing fuses of individual power consumers

i 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 the fuse box cover.
- Remove the defective fuse.

Guideline

| |
|---|
| Fuse 1 - 5 A - for auxiliary equipment (accessories connected to the ignition switch) |
| Fuse 2 - 5 A - for auxiliary equipment (permanent positive) |
| Fuse 3 - 15 A - high beam, low beam, parking light, tail light, license plate lamp, speedometer, horn |
| Fuse 4 - 10 A - for auxiliary equipment (permanent positive) |
| Fuse 5 - 10 A - for auxiliary equipment (accessories connected to the ignition switch) |
| Fuse 6 - 10 A - brake light, turn signal |
| Fuse 7 - 10 A - radiator fan |
| Fuse 8 - 10 A - CDI controller |

i Info
A defective fuse is shown by a burned-out fuse wire **A**.

! 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.

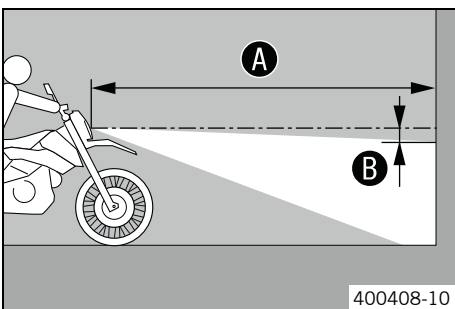
| |
|------------------------------|
| Fuse (58011109105) (☛ p. 94) |
| Fuse (58011109110) (☛ p. 94) |
| Fuse (58011109115) (☛ p. 94) |

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

Finishing work

- Mount the seat. (☛ p. 49)

15.6 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 **B** under the first mark.

Guideline

| | |
|-------------------|-------------|
| Distance B | 5 cm (2 in) |
|-------------------|-------------|

- Position the vehicle vertically a distance **A** away from the wall.

Guideline

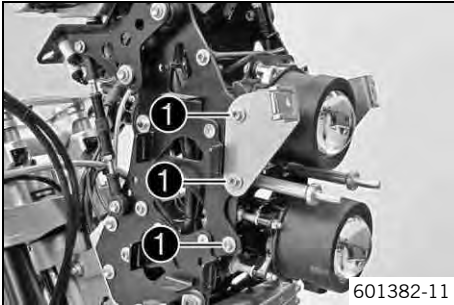
| | |
|-------------------|-------------|
| Distance A | 5 m (16 ft) |
|-------------------|-------------|

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

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

- » If the boundary between light and dark does not meet specifications:
 - Adjust the headlight range. (🔧 p. 76)

15.7 Adjusting the headlight range



Preparatory work

- Check the headlight setting. (🔧 p. 75)
- Remove the trim. (🔧 p. 58)

Main work

- Loosen screw ❶.
- Adjust the headlight range by moving the headlight.

Guideline

The boundary between light and dark must be exactly on the lower mark for an operational motorcycle with a rider (to prepare the mark, see: Checking the headlight setting).



Info

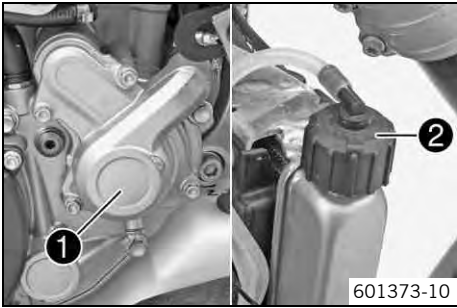
A change in weight on the vehicle may require a correction of the headlight range.

- Tighten screw ❶.

Finishing work

- Mount the trim. (🔧 p. 58)

16.1 Cooling system



Water pump ❶ in the engine circulates the coolant. The pressure resulting from the warming of the cooling system is regulated by a valve in radiator cap ❷. This ensures that operating the vehicle at the specified coolant temperature will not result in a risk 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 thermostwitch.

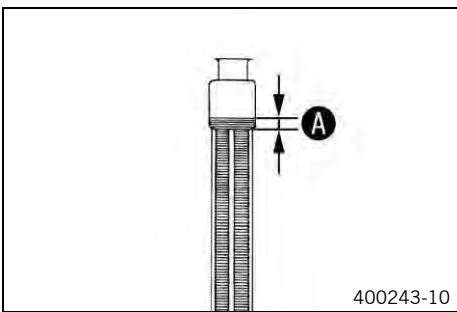
16.2 Checking the antifreeze and coolant level

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 the coolant antifreeze.

| |
|-------------------------------|
| -25... -45 °C (-13... -49 °F) |
|-------------------------------|

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

| | |
|--|-----------------|
| Coolant level ❶ above the radiator fins. | 10 mm (0.39 in) |
|--|-----------------|

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

Alternative 1

| |
|--------------------|
| Coolant (☞ p. 116) |
|--------------------|

Alternative 2

| |
|---|
| Coolant (mixed ready to use) (☞ p. 116) |
|---|

- Mount the radiator cap.

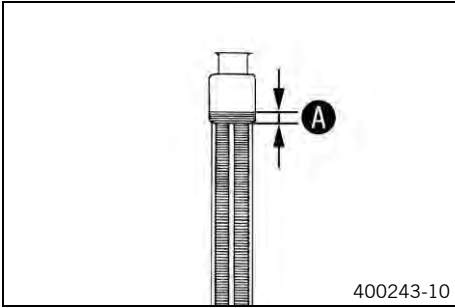
16.3 Checking the coolant level

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 the radiator fins. | 10 mm (0.39 in) |
|---|-----------------|

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

Alternative 1

| |
|--------------------|
| Coolant (☛ p. 116) |
|--------------------|

Alternative 2

| |
|---|
| Coolant (mixed ready to use) (☛ p. 116) |
|---|

- 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.

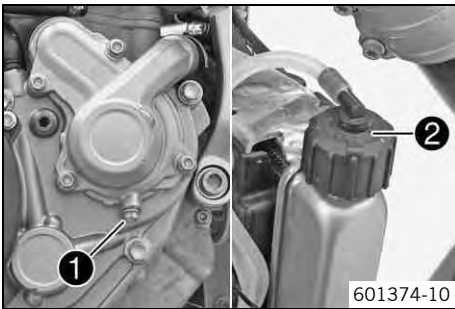
- Do not remove the radiator cap, radiator hoses or other cooling system components when the engine is hot. Allow the engine and cooling system to cool down. In case of scalding, rinse immediately with lukewarm water.



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.

- Stand the motorcycle upright.
- Place a suitable container under the water pump cover.
- Remove screw **1**. Remove radiator cap **2**.
- Completely drain the coolant.
- Mount and tighten screw **1** with a new seal ring.

Guideline

| | | |
|-------------------------|----|--------------------|
| Screw, water pump cover | M6 | 10 Nm (7.4 lbf ft) |
|-------------------------|----|--------------------|

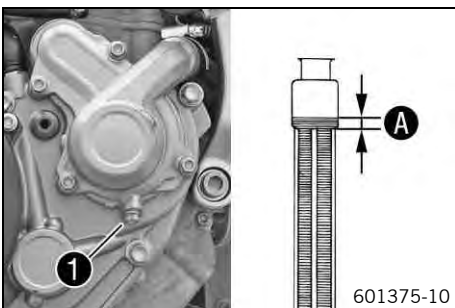
16.5 Refilling coolant ☞



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.



- Make sure that screw **1** is tightened.
- Stand the motorcycle upright.
- Pour coolant in up to measurement **A** above the radiator fins.

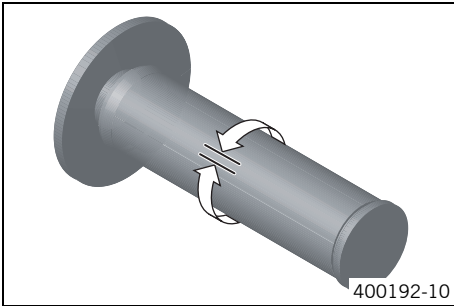
Guideline

| | |
|--|-----------------|
| Coolant level A above the radiator fins | 10 mm (0.39 in) |
|--|-----------------|

| | | |
|---------|-----------------|---|
| Coolant | 1.2 l (1.3 qt.) | Coolant (☛ p. 116) |
| | | Coolant (mixed ready to use) (☛ p. 116) |

- Mount the radiator cap.
- Take a short test ride.
- Check the coolant level. (☛ p. 77)

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. (🔧 p. 80)



Danger

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

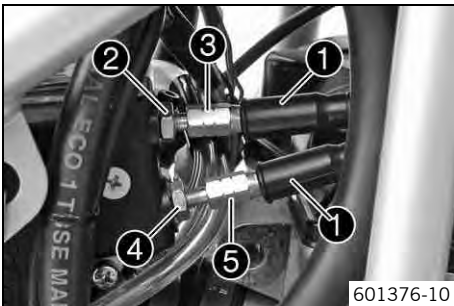
- When running the engine, always make sure there is sufficient ventilation, and do not start or run the engine in an enclosed space without an effective exhaust extraction system.

- 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. (🔧 p. 80)

17.2 Adjusting the play in the throttle cable 🛠️



Preparatory work

- Remove the trim. (🔧 p. 58)
- Remove the seat. (🔧 p. 48)
- Remove the fuel tank toward the front. (🔧 p. 51)
- Check the throttle cable routing.

Main work

- Move the handlebar to the straight-ahead position.
- Push back sleeves ❶.
- Loosen nut ❷. Turn adjusting screw ❸ in as far as possible.
- Loosen nut ❹. Turn adjusting screw ❺ 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 ❹.
- Press and hold the throttle grip in the closed setting. Turn out adjusting screw ❸ until there is no play in the upper throttle cable.
- Tighten nut ❷.
- Push sleeves ❶ on. Check the throttle grip for smooth operation.

Finishing work

- Install the fuel tank at the front. (🔧 p. 51)
- Mount the seat. (🔧 p. 49)
- Mount the trim. (🔧 p. 58)
- Check the play in the throttle cable. (🔧 p. 80)

17.3 Carburetor - idle

The idle setting of the carburetor has a big influence on the starting behavior, stable idling, and the response to throttle opening. That means that an engine with a correctly set idle speed is easier to start than if the idle is set wrongly.

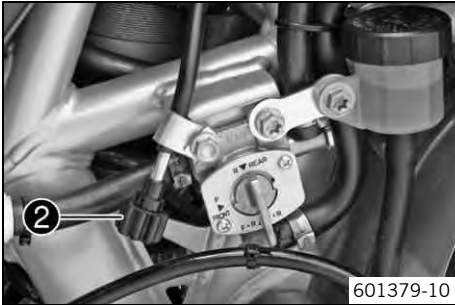


Info

The carburetor and its components are subject to increased wear caused by engine vibration. Wear can result in malfunctioning.



The idle mixture is adjusted with the idle adjusting screw ❶.



The idle speed is adjusted with adjusting screw ❷.

17.4 Carburetor - adjusting the idle speed



- Screw in idle adjusting screw ❶ until it stops and then to the prescribed basic setting.

Guideline

| | |
|------------------------------|-----------|
| Idle mixture adjusting screw | |
| Open | 1.5 turns |

- Run the engine until warm.

Guideline

| | |
|--------------|---------|
| Warm-up time | ≥ 5 min |
|--------------|---------|



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.



- Adjust the idle speed with adjusting screw ❷.

Guideline

| | |
|---|--------------------|
| Choke function deactivated – The choke lever is pushed back to the stop. (☛ p. 15) | |
| Idle speed | 1,550... 1,650 rpm |

- Turn idle adjusting screw ❶ slowly clockwise until the idle speed begins to fall.
- Note the position and turn the idle adjusting screw slowly counterclockwise until the idle speed falls.
- Adjust to the point between these two positions with the highest idle speed.



Info

If there is a big engine speed rise, reduce the idle speed to a normal level and repeat the above steps.

The extreme sport motorcyclist will set the mixture about ¼ of a turn back from this ideal value (leaner, in a clockwise direction) since the engine becomes hotter in sporting use.

If the procedure described here does not lead to satisfactory results, the cause may be a wrongly dimensioned idling jet.

If you can turn the idle adjusting screw to the end without any change of engine speed, you have to fit a smaller idling jet.

The idle adjusting screw must not be opened more than two turns. If more than two turns are necessary (rich mixture), use a larger idling jet.

After changing the idling jet, start from the beginning with the adjusting steps.

- Adjust the idle speed with adjusting screw ②.

Guideline

| | |
|---|--------------------|
| Choke function deactivated – The choke lever is pushed back to the stop. (☞ p. 15) | |
| Idle speed | 1,550... 1,650 rpm |



Info

Following extreme air temperature or altitude changes, adjust the idle speed again.

17.5 Emptying the carburetor float chamber ☞



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. 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.



Info

Carry out this work with a cold engine.



- Direct the hose of the float chamber into a suitable container.

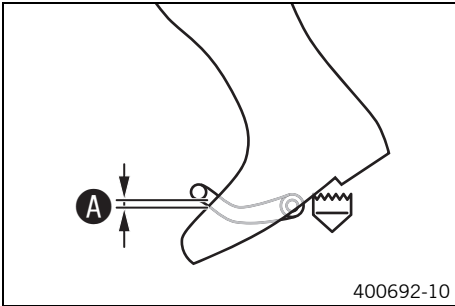


Info

Water in the float chamber results in malfunctioning.

- Loosen screw ① by several turns.
✓ The fuel drains out of the float chamber.
- Tighten screw ①.

17.6 Checking the basic position of the shift lever

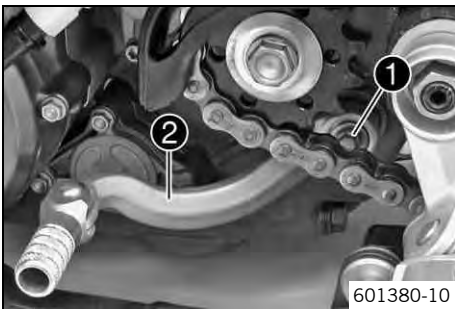


- Sit on the vehicle in the riding position and determine distance **A** between the upper edge of your boot and the shift lever.

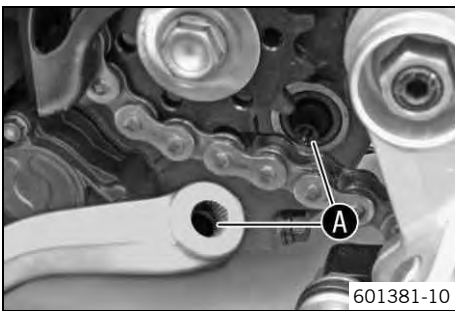
| | |
|---|-------------------------------|
| Distance between shift lever and upper edge of boot | 10... 20 mm (0.39... 0.79 in) |
|---|-------------------------------|

- » If the distance does not meet specifications:
 - Adjust the basic position of the shift lever. (p. 83)

17.7 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.

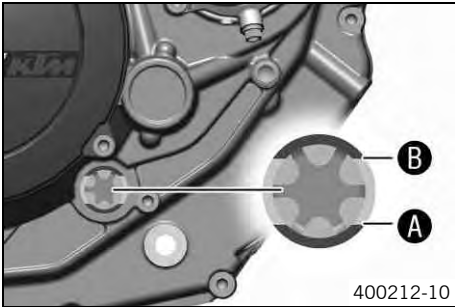
- Mount and tighten the screw.

Guideline

| | | | |
|--------------------|----|------------------------|----------------------|
| Screw, shift lever | M6 | 14 Nm (10.3 lbf ft) | Loctite® 243™ |
|--------------------|----|------------------------|----------------------|

18.1 Checking the engine oil level

i Info
The engine oil level can be checked when the engine is cold or warm.



Preparatory work

- The motorcycle is positioned on a horizontal surface.

Condition

The engine is cold.

- Check the engine oil level.

The engine oil level is up to the bottom edge **A** of the level viewer.

- » If the engine oil is not up to the bottom edge of the level viewer:
 - Add engine oil. (☛ p. 86)

Condition

The engine is at normal operating temperature.

- Check the engine oil level.

i Info
After switching off the engine, wait a minute and then check.

The engine oil level is up to the top edge of the level viewer **B**.

- » If the engine oil is not up to the top edge of the level viewer:
 - Add engine oil. (☛ p. 86)

18.2 Changing the engine oil and oil filter, cleaning the oil screen

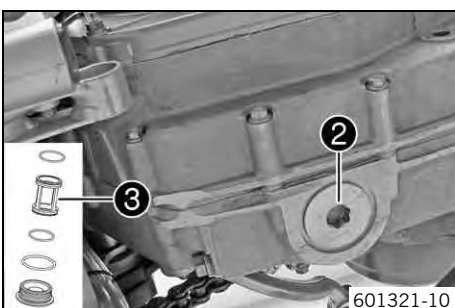
⚠ Warning
Danger of scalding Engine oil and gear oil get very hot when the motorcycle is ridden.

- 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.

i Info
Drain the engine oil only when the engine is warm.



Preparatory work

- Park the motorcycle on a level surface.

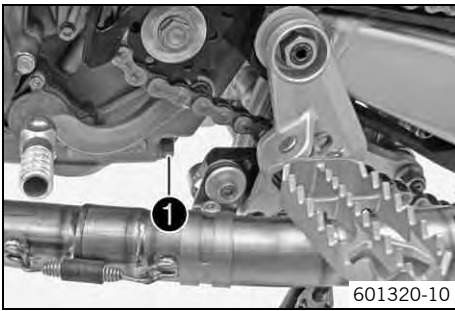
Main work

- Place a suitable container under the engine.
- Remove oil drain plug **1** with the seal ring.

- Loosen screw plug **2** by striking it lightly with a hammer a few times.
- Remove plug **2** with oil screen **3** and the O-rings.
- Completely drain the engine oil.
- Thoroughly clean the parts and sealing surfaces.
- Mount and tighten screw plug **2** with oil screen **3** and the O-rings.

Guideline

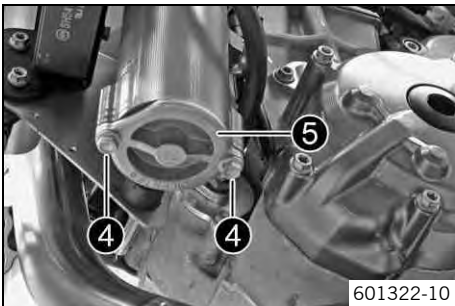
| | | | |
|------------------|---------|------------------------|----------------------------|
| Plug, oil screen | M32x1.5 | 30 Nm (22.1 lbf ft) | Lubricated with engine oil |
|------------------|---------|------------------------|----------------------------|



- Mount and tighten oil drain plug **1** with the seal ring.

Guideline

| | | |
|----------------------------|---------|------------------------|
| Oil drain plug with magnet | M12x1.5 | 20 Nm (14.8 lbf ft) |
|----------------------------|---------|------------------------|



- Remove screws **4**. Remove the lower oil filter cover **5** with the O-ring.



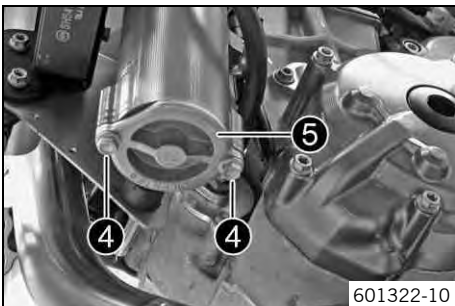
- Pull oil filter **6** out of the oil filter housing.

Circlip pliers reverse (51012011000)

- Completely drain the engine oil.
- Thoroughly clean the parts and sealing area.



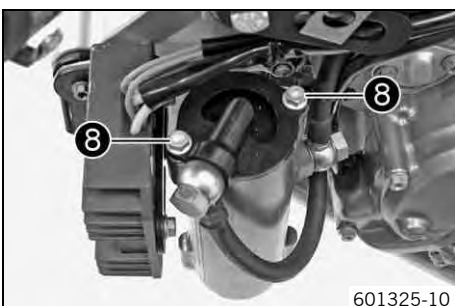
- Oil O-ring **7** and mount on the oil filter cover.



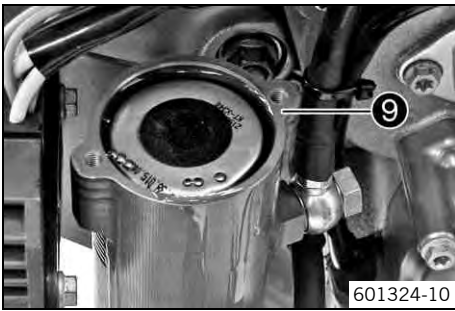
- Position the lower oil filter cover **5**. Mount and tighten screws **4**.

Guideline

| | | |
|-------------------------|----|-------------------|
| Screw, oil filter cover | M5 | 6 Nm (4.4 lbf ft) |
|-------------------------|----|-------------------|

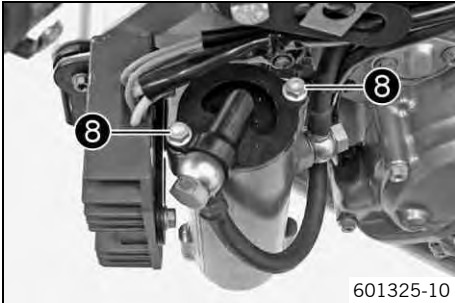


- Remove screws **8**. Remove the upper oil filter cover with the O-ring.



- Fill the oil filter housing 9 with oil and wait until air bubbles stop rising.

| |
|--|
| Engine oil (SAE 10W/60) (00062010035) (☛ p. 116) |
| Engine oil (SAE 10W/50) (☛ p. 116) |



- Position the upper oil filter cover. Mount and tighten screws 8.

Guideline

| | | |
|-------------------------|----|-------------------|
| Screw, oil filter cover | M5 | 6 Nm (4.4 lbf ft) |
|-------------------------|----|-------------------|

- Wipe away excess engine oil.



- Remove the oil filler plug 10 on the clutch cover and fill up with engine oil.

| | | |
|------------|-------------------|--|
| Engine oil | | |
| Oil change | 1.20 l (1.27 qt.) | Engine oil (SAE 10W/60) (00062010035) (☛ p. 116) |
| | | Engine oil (SAE 10W/50) (☛ p. 116) |

i Info
Too little engine oil or poor-quality engine oil results in premature wear of the engine.

- Mount and tighten the oil filler plug.

! 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. 84)

18.3 Adding engine oil

i Info
Too little engine oil or poor-quality engine oil results in premature wear to the engine.



Main work

- Remove the oil filler plug 1 on the clutch cover and fill up with engine oil.

| |
|--|
| Engine oil (SAE 10W/60) (00062010035) (☛ p. 116) |
| Engine oil (SAE 10W/50) (☛ p. 116) |

i Info
For optimal performance of the engine oil, do not mix different types of engine oil.
We recommend making an oil change in this case.

- Mount and tighten the oil filler plug.

**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. 84)

19.1 Cleaning 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.

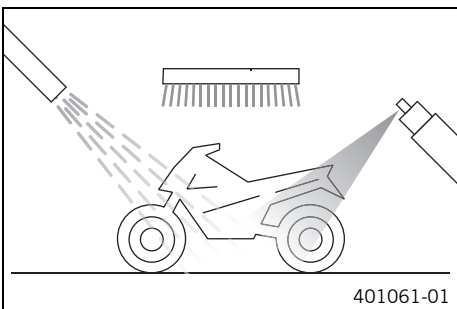
 **Warning**

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.



- Seal the exhaust system to keep water out.
- First remove coarse dirt particles with a gentle water spray.
- Spray very dirty areas with a normal motorcycle cleaner and then clean with a paintbrush.

Motorcycle cleaner (☛ p. 118)

 **Info**

Use warm water containing normal motorcycle cleaner and a soft sponge.

- After rinsing the motorcycle with a gentle spray of water, allow it to dry thoroughly.
- Remove the closure on 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 the brake system to evaporate.

- After the motorcycle has cooled off, lubricate all moving parts and bearings.
- Clean the chain. (☛ p. 52)
- Empty the carburetor float chamber. ☛ (☛ p. 82)
- Treat bare metal parts (except for brake discs and exhaust system) with anti-corrosion materials.

Cleaning and preserving materials for metal, rubber and plastic (☛ p. 118)

- Treat all plastic parts and powder-coated parts with a mild cleaning and care products.

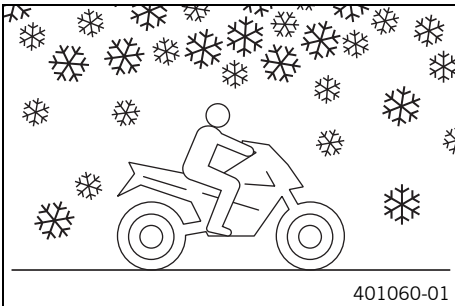
Paint cleaner and polish for high-gloss and matte finishes, bare metal and plastic surfaces (☛ p. 118)

- Oil the steering lock.

Universal oil spray (☛ p. 119)

19.2 Checks and maintenance steps for winter operation

- i Info**
If you use the motorcycle in winter, you can expect salt on the roads. Precautions need to be taken against the aggressive road salt.
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. 88)
- Clean the brake system.

- i 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.

- i 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. 52)

20.1 Storage



Warning

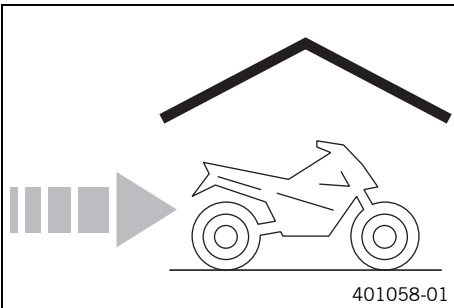
Danger of poisoning Fuel is poisonous and a health hazard.

- 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 actions. 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.



- Clean the motorcycle. (☞ p. 88)
- Change the engine oil and oil filter, clean the oil screen. 🛠️ (☞ p. 84)
- Check the antifreeze and coolant level. (☞ p. 77)
- Add fuel additive the last time you refuel before taking the motorcycle out of service.

Fuel additive (☞ p. 118)

- Drain the fuel from the fuel tanks into a suitable container.
- Empty the carburetor float chamber. 🛠️ (☞ p. 82)
- Check the tire air pressure. (☞ p. 71)
- Remove the battery. 🛠️ (☞ p. 73)
- Recharge the battery. 🛠️ (☞ p. 73)

Guideline

| | |
|--|--------------------------|
| Storage temperature of battery without direct sunshine | 0... 35 °C (32... 95 °F) |
| Charging level of the battery for storage | 50... 75 % |

- Place the vehicle on a dry storage place that is not subject to large temperature variations.



Info

KTM recommends raising the motorcycle.

- Raise the motorcycle with the lift stand. (☞ p. 41)
- Cover the vehicle with an air-permeable cover or blanket.

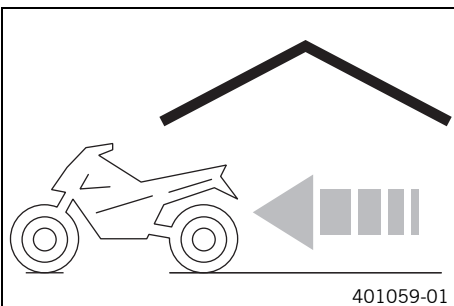


Info

Do not use non-porous materials since they prevent humidity from escaping, thus causing corrosion.

Avoid running the engine for a short time only. Because the engine will not warm up sufficiently, the water vapor produced during combustion will condense, causing engine parts and the exhaust system to rust.

20.2 Preparing for use after storage



- Remove the motorcycle from the lift stand. (☞ p. 41)
- Install the battery. 🛠️ (☞ p. 73)
- Fill up with fuel. (☞ p. 30)
- Perform checks and maintenance steps when preparing for use. (☞ p. 27)
- Take a test ride.

21.1 Engine

| | |
|--------------------------------|---|
| Design | 1-cylinder 4-stroke engine, water-cooled |
| Displacement | 449.3 cm ³ (27.418 cu in) |
| Stroke | 60.8 mm (2.394 in) |
| Bore | 97 mm (3.82 in) |
| Compression ratio | 12.5:1 |
| Idle speed | 1,550... 1,650 rpm |
| Control | DOHC, four valves controlled via cam lever, drive via helical gear pair and tooth-wheel chain |
| Valve diameter, intake | 40.4 mm (1.591 in) |
| Valve diameter, exhaust | 31.7 mm (1.248 in) |
| Valve clearance, cold, intake | 0.10... 0.15 mm (0.0039... 0.0059 in) |
| Valve clearance, cold, exhaust | 0.15... 0.20 mm (0.0059... 0.0079 in) |
| Crankshaft bearing | 2 cylinder roller bearing |
| Conrod bearing | Needle bearing |
| Piston pin bearing | No bearing bush - piston pin made of TiAl alloy with DLC coating |
| Pistons | Forged light alloy |
| Engine lubrication | Pressure circulation lubrication with 3 rotor pumps |
| Primary transmission | 29:74 |
| Clutch | Multidisc clutch in oil bath/hydraulically activated |
| Transmission ratio | |
| 1st gear | 14:35 |
| 2nd gear | 17:33 |
| 3rd gear | 19:30 |
| 4th gear | 21:28 |
| 5th gear | 23:26 |
| Alternator | 12 V, 200 W |
| Ignition | Contactless controlled fully electronic ignition with digital ignition adjustment |
| Spark plug | NGK CR 9 EKB |
| Spark plug electrode gap | 0.7 mm (0.028 in) |
| Cooling | Water cooling, permanent circulation of coolant by water pump |
| Starting aid | Electric starter |

21.2 Engine tightening torques

| | | | |
|---|----|-------------------|----------------|
| Jet, engine case breather | M4 | 4 Nm (3 lbf ft) | Loctite® 243™ |
| Oil jet, cam lever lubrication | M4 | 6 Nm (4.4 lbf ft) | Loctite® 243™ |
| Oil jet, piston cooling | M4 | 4 Nm (3 lbf ft) | Loctite® 243™ |
| Locking screw for bearing | M5 | 6 Nm (4.4 lbf ft) | Loctite® 243™ |
| Oil jet, clutch oil supply | M5 | 6 Nm (4.4 lbf ft) | Loctite® 243™ |
| Screw, bearing bolt of oil pump idler shaft | M5 | 6 Nm (4.4 lbf ft) | Loctite® 243™ |
| Screw, camshaft bearing retaining bracket | M5 | 6 Nm (4.4 lbf ft) | Loctite® 243™ |
| Screw, ignition pulse generator | M5 | 6 Nm (4.4 lbf ft) | Loctite® 243™ |
| Screw, ignition pulse generator adapter | M5 | 6 Nm (4.4 lbf ft) | Loctite® 243™ |
| Screw, locking lever | M5 | 6 Nm (4.4 lbf ft) | Loctite® 243™ |
| Screw, oil filter cover | M5 | 6 Nm (4.4 lbf ft) | – |
| Screw, oil pump cover | M5 | 6 Nm (4.4 lbf ft) | Loctite® 243™ |
| Screw, stator bracket | M5 | 8 Nm (5.9 lbf ft) | Loctite® 2701™ |
| Screw, stator cable holder | M5 | 6 Nm (4.4 lbf ft) | Loctite® 243™ |

| | | | |
|--|----------|---|----------------------------|
| Screw, timing train axle retaining bracket | M5 | 6 Nm (4.4 lbf ft) | Loctite® 243™ |
| 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® 243™ |
| Oil jet, timing chain tensioner | M6 | 6 Nm (4.4 lbf ft) | Loctite® 243™ |
| Screw, alternator cover | M6 | 10 Nm (7.4 lbf ft) | – |
| Screw, clutch cover | M6 | 10 Nm (7.4 lbf ft) | – |
| Screw, clutch slave cylinder | M6 | 10 Nm (7.4 lbf ft) | – |
| Screw, clutch spring | 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® 243™ |
| Screw, ignition pulse generator cable holder | M6 | 10 Nm (7.4 lbf ft) | Loctite® 243™ |
| Screw, oil pump casing | M6 | 10 Nm (7.4 lbf ft) | Loctite® 243™ |
| Screw, shift drum locating | M6 | 10 Nm (7.4 lbf ft) | Loctite® 243™ |
| Screw, shift lever | M6 | 14 Nm (10.3 lbf ft) | Loctite® 243™ |
| Screw, starter motor | M6 | 10 Nm (7.4 lbf ft) | – |
| 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, clutch cover | M7x1 | 14 Nm (10.3 lbf ft) | – |
| Screw, engine case | M7x1 | 14 Nm (10.3 lbf ft) | – |
| Plug, crankshaft location | M8 | 20 Nm (14.8 lbf ft) | – |
| Screw, engine sprocket | M10 | 60 Nm (44.3 lbf ft) | Loctite® 2701™ |
| Spark plug | M10 | 10... 12 Nm (7.4... 8.9 lbf ft) | – |
| Plug, cam lever axle | M10x1 | 10 Nm (7.4 lbf ft) | – |
| Plug, oil channel | M10x1 | 10 Nm (7.4 lbf ft) | – |
| Screw, camshaft gear | M10x1 | 50 Nm (36.9 lbf ft) | Lubricated with engine oil |
| Screw, rotor | M10x1 | 80 Nm (59 lbf ft) | Lubricated with engine oil |
| Screw, unlocking of timing chain tensioner | M10x1 | 10 Nm (7.4 lbf ft) | – |
| Nut, cylinder head | M10x1.25 | Tightening sequence: Tighten in diagonal sequence. Tightening stage 1 10 Nm (7.4 lbf ft) Tightening stage 2 30 Nm (22.1 lbf ft) Tightening stage 3 50° | Lubricated with engine oil |
| Stud, cylinder head | M10x1.25 | 20 Nm (14.8 lbf ft) | – |
| Oil drain plug with magnet | M12x1.5 | 20 Nm (14.8 lbf ft) | – |
| Screw-in fitting, clutch cover | M12x1.5 | 20 Nm (14.8 lbf ft) | Loctite® 243™ |
| Axle, timing chain guide rail | M14x1 | 15 Nm (11.1 lbf ft) | – |
| Axle, timing chain tensioning rail | M14x1 | 15 Nm (11.1 lbf ft) | – |
| Nut, compensating sprocket | M14x1 | 20 Nm (14.8 lbf ft) | Loctite® 243™ |
| Oil suction pipe | M14x1 | 15 Nm (11.1 lbf ft) | Loctite® 243™ |
| Oil pressure regulator valve plug | M14x1.5 | 18 Nm (13.3 lbf ft) | – |
| Nut, inner clutch hub | M18x1.5 | 80 Nm (59 lbf ft) | Loctite® 243™ |
| Plug, timing chain tensioner | M24x1.5 | 25 Nm (18.4 lbf ft) | – |
| Screw, alternator cover | M24x1.5 | 8 Nm (5.9 lbf ft) | – |
| Nut, freewheel hub | M27x1 | 80 Nm (59 lbf ft) | Loctite® 243™ |

| | | | |
|-------------------|---------|---------------------|----------------------------|
| Nut, primary gear | M27x1 | 80 Nm (59 lbf ft) | Loctite® 243™ |
| Plug, oil screen | M32x1.5 | 30 Nm (22.1 lbf ft) | Lubricated with engine oil |

21.3 Capacities

21.3.1 Engine oil

| | | | |
|----------------|-------------------|--|--|
| Engine oil | | | |
| Oil change | 1.20 l (1.27 qt.) | Engine oil (SAE 10W/60) (00062010035) (☛ p. 116) | |
| | | Engine oil (SAE 10W/50) (☛ p. 116) | |
| Engine service | 1.50 l (1.59 qt.) | Engine oil (SAE 10W/60) (00062010035) (☛ p. 116) | |
| | | Engine oil (SAE 10W/50) (☛ p. 116) | |

21.3.2 Coolant

| | | |
|---------|-----------------|---|
| Coolant | 1.2 l (1.3 qt.) | Coolant (☛ p. 116) |
| | | Coolant (mixed ready to use) (☛ p. 116) |

21.3.3 Fuel

| | | |
|--------------------------------------|----------------------|--|
| Fuel tank capacity | | |
| Fuel tank half, front left, approx. | 9.0 l (2.38 US gal) | Super unleaded (ROZ 95/RON 95/PON 91) (☛ p. 117) |
| Fuel tank half, front right, approx. | 9.0 l (2.38 US gal) | Super unleaded (ROZ 95/RON 95/PON 91) (☛ p. 117) |
| Rear fuel tank, approx. | 18.0 l (4.76 US gal) | Super unleaded (ROZ 95/RON 95/PON 91) (☛ p. 117) |
| Total fuel capacity, approx. | 36.0 l (9.51 US gal) | Super unleaded (ROZ 95/RON 95/PON 91) (☛ p. 117) |

21.4 Chassis

| | | |
|----------------------------|---|--|
| Frame | Lattice frame of chromium-molybdenum steel tubes, powder-coated | |
| Suspension travel | | |
| Front | 300 mm (11.81 in) | |
| Rear | 310 mm (12.2 in) | |
| Fork offset | | |
| No mark | 22 mm (0.87 in) | |
| Marking 1 is visible | 20 mm (0.79 in) | |
| Brake system | Disc brakes, brake calipers on floating bearings | |
| Brake discs - diameter | | |
| Front | 300 mm (11.81 in) | |
| Rear | 240 mm (9.45 in) | |
| Brake discs - wear limit | | |
| Front | 3.4 mm (0.134 in) | |
| Rear | 4.5 mm (0.177 in) | |
| Tire air pressure on road | | |
| Front | 1.5 bar (22 psi) | |
| Rear | 1.5 bar (22 psi) | |
| Tire air pressure off road | | |
| Front | 1.0... 1.5 bar (15... 22 psi) | |
| Rear | 1.0... 1.5 bar (15... 22 psi) | |
| Secondary drive ratio | 15:44 (15:48) | |
| Rear sprockets available | 44, 46, 48, 49, 50, 51 | |
| Chain | 5/8 x 1/4" | |
| Wheelbase | 1,533±10 mm (60.35±0.39 in) | |
| Steering head angle | 62.5° | |

| | |
|-------------------------------------|-------------------|
| Seat height unloaded | 980 mm (38.58 in) |
| Ground clearance unloaded | 320 mm (12.6 in) |
| Weight without fuel, approx. | 145 kg (320 lb.) |
| Maximum permissible front axle load | 190 kg (419 lb.) |
| Maximum permissible rear axle load | 250 kg (551 lb.) |
| Maximum permissible overall weight | 400 kg (882 lb.) |
| Standard rider weight | 80 kg (176 lb.) |

21.5 Electrical system

| | | |
|---------------------|---|---------------|
| Lithium-ion battery | Battery voltage: 13.2 V Nominal capacity: 4.6 Ah maintenance-free | |
| Fuse | 58011109105 | 5 A |
| Fuse | 58011109110 | 10 A |
| Fuse | 58011109115 | 15 A |
| Fuse | 58011109130 | 30 A |
| High beam | HB3 / socket P20d | 12 V 60 W |
| Low beam | HB3 / socket P20d | 12 V 60 W |
| Parking light | W5W / socket W2.1x9.5d | 12 V 5 W |
| Indicator lamps | W1.2W / socket W2x4.6d | 12 V 1.2 W |
| Turn signal | RY10W / socket BAU15s | 12 V 10 W |
| Brake / tail light | LED | |
| License plate lamp | W5W / socket W2.1x9.5d | 12 V 5 W |

21.6 Tires

| Front tires | Rear tires |
|--|---|
| 90/90 - 21 54S TT Michelin T63 | 130/80 - 18 66S TT Michelin T63 |
| Additional information is available in the Service section under: http://www.ktm.com | |

21.7 Fork

| | | |
|--|--|--|
| Fork part number | 14.18.7M.40 | |
| Fork | WP Suspension Up Side Down 4860 MXMA CC | |
| Compression damping | | |
| Standard | 10 clicks | |
| Rebound damping | | |
| Standard | 20 clicks | |
| Spring length with preload spacer(s) | 495 mm (19.49 in) | |
| Spring rate | | |
| Weight of rider: 65... 75 kg (143... 165 lb.) | 4.6 N/mm (26.3 lb/in) | |
| Weight of rider (standard): 75... 85 kg (165... 187 lb.) | 4.8 N/mm (27.4 lb/in) | |
| Weight of rider (hard): 75... 85 kg (165... 187 lb.) | 5.0 N/mm (28.6 lb/in) | |
| Gas pressure | 1.8 bar (26 psi) | |
| Fork length | 950 mm (37.4 in) | |
| Oil capacity fork leg without cartridge | 400 ml (13.52 fl. oz.) | Fork oil (SAE 4) (48601166S1) (☛ p. 117) |

21.8 Shock absorber

| | |
|--|--------------------------------|
| Shock absorber part number | 12.18.7M.51 |
| Shock absorber | WP Suspension 5018 DACC |
| Compression damping, low-speed | |
| Standard | 10 clicks |
| Compression damping, high-speed | |
| Standard | 1.5 turns |
| Rebound damping | |
| Standard | 18 clicks |
| Spring preload | |
| Standard | 17 mm |
| Spring rate | |
| Weight of rider:: 75... 85 kg (165... 187 lb.) | 80 N/mm (457 lb/in) |
| Spring length | 250 mm (9.84 in) |
| Gas pressure | 10 bar (145 psi) |
| Static sag | 35 mm (1.38 in) |
| Riding sag | 100 mm (3.94 in) |
| Fitted length | 432 mm (17.01 in) |
| Shock absorber oil | |
| Shock absorber oil (SAE 2.5) (50180342S1) (☛ p. 117) | |

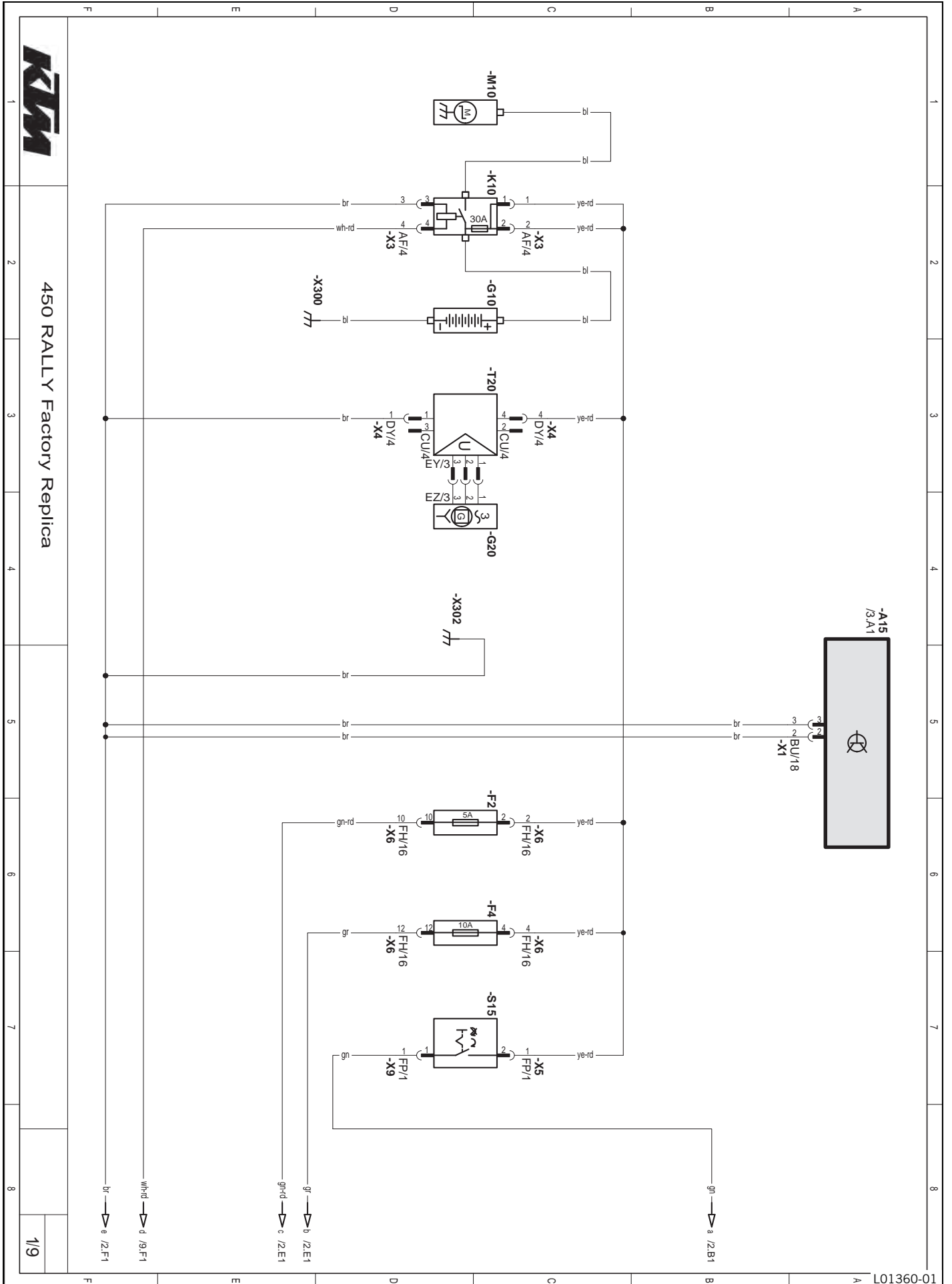
21.9 Chassis tightening torques

| | | | |
|---|--------------------|-------------------------------|----------------------|
| Screw, license plate holder, bottom | EJOT | 3 Nm (2.2 lbf ft) | – |
| Screw, license plate lamp | EJOT PT K50x18 T20 | 1.5 Nm (1.11 lbf ft) | – |
| Screw, tail light | EJOT PT K60x20 | 2 Nm (1.5 lbf ft) | – |
| Spoke nipple, front wheel | M4.5 | 5... 6 Nm (3.7... 4.4 lbf ft) | – |
| Remaining nuts, chassis | M5 | 5 Nm (3.7 lbf ft) | – |
| Remaining screws, chassis | M5 | 5 Nm (3.7 lbf ft) | – |
| Screw, additional tail light | M5 | 2 Nm (1.5 lbf ft) | – |
| Screw, air baffle | M5 | 1 Nm (0.7 lbf ft) | – |
| Screw, brake line holder on bottom triple clamp | M5 | 2 Nm (1.5 lbf ft) | – |
| Screw, foot brake lever foothold | M5 | 6 Nm (4.4 lbf ft) | Loctite® 243™ |
| Screw, fuel tank closure flange | M5 | 2.5 Nm (1.84 lbf ft) | – |
| Screw, fuel tap on frame | M5 | 5 Nm (3.7 lbf ft) | – |
| Screw, headlight cover | M5 | 1 Nm (0.7 lbf ft) | – |
| Screw, shock absorber adjusting ring | M5 | 5 Nm (3.7 lbf ft) | – |
| Screw, trim | M5 | 2 Nm (1.5 lbf ft) | – |
| Spoke nipple, rear wheel | M5 | 5... 6 Nm (3.7... 4.4 lbf ft) | – |
| Nut, cable on battery | M6 | 5 Nm (3.7 lbf ft) | – |
| Nut, cable on starter motor | M6 | 10 Nm (7.4 lbf ft) | – |
| Remaining nuts, chassis | M6 | 10 Nm (7.4 lbf ft) | – |
| Remaining screws, chassis | M6 | 10 Nm (7.4 lbf ft) | – |
| Screw connection, foot brake cylinder | M6 | 10 Nm (7.4 lbf ft) | Loctite® 243™ |
| Screw connection, spring holder at side stand bracket | M6 | 10 Nm (7.4 lbf ft) | Loctite® 243™ |
| Screw connection, voltage regulator | M6 | 8 Nm (5.9 lbf ft) | Loctite® 243™ |
| Screw, air filter box top | M6 | 2 Nm (1.5 lbf ft) | – |
| Screw, bottom radiator bracket | M6 | 5 Nm (3.7 lbf ft) | – |
| Screw, brake fluid reservoir of rear brake | M6 | 5 Nm (3.7 lbf ft) | – |
| Screw, cable on starter relay | M6 | 5 Nm (3.7 lbf ft) | – |

| | | | |
|--|----------|----------------------|---------------|
| Screw, chain sliding guard | M6 | 6 Nm (4.4 lbf ft) | Loctite® 243™ |
| Screw, engine guard bracket on engine bearer | M6 | 15 Nm (11.1 lbf ft) | – |
| Screw, front brake disc | M6 | 14 Nm (10.3 lbf ft) | Loctite® 243™ |
| Screw, rear brake disc | M6 | 14 Nm (10.3 lbf ft) | Loctite® 243™ |
| Screw, seat holder | M6 | 15 Nm (11.1 lbf ft) | – |
| Screw, seat lock | M6 | 5 Nm (3.7 lbf ft) | – |
| Screw, steering damper | M6 | 15 Nm (11.1 lbf ft) | – |
| Screw, steering damper bracket | M6 | 15 Nm (11.1 lbf ft) | – |
| Silentblock, air filter box | M6 | 2 Nm (1.5 lbf ft) | – |
| Nut, rear sprocket screw | M8 | 35 Nm (25.8 lbf ft) | Loctite® 243™ |
| Nut, rim lock | M8 | 10 Nm (7.4 lbf ft) | – |
| Remaining nuts, chassis | M8 | 30 Nm (22.1 lbf ft) | – |
| Remaining screws, chassis | M8 | 25 Nm (18.4 lbf ft) | – |
| Screw connection, rear fuel tank, bottom | M8 | 25 Nm (18.4 lbf ft) | Loctite® 243™ |
| Screw, bottom triple clamp | M8 | 12 Nm (8.9 lbf ft) | – |
| Screw, chain sliding piece | M8 | 15 Nm (11.1 lbf ft) | – |
| Screw, connection lever on frame | M8 | 30 Nm (22.1 lbf ft) | Loctite® 243™ |
| Screw, engine bearer on frame | M8 | 35 Nm (25.8 lbf ft) | Loctite® 243™ |
| Screw, foot brake lever | M8 | 25 Nm (18.4 lbf ft) | Loctite® 243™ |
| Screw, fork stub | M8 | 15 Nm (11.1 lbf ft) | – |
| Screw, front brake caliper | M8 | 30 Nm (22.1 lbf ft) | Loctite® 243™ |
| Screw, front fuel tank | M8 | 8 Nm (5.9 lbf ft) | – |
| Screw, fuel tank bracket | M8 | 15 Nm (11.1 lbf ft) | – |
| Screw, handlebar clamp | M8 | 16 Nm (11.8 lbf ft) | – |
| Screw, license plate holder, top | M8 | 20 Nm (14.8 lbf ft) | – |
| Screw, motor guard | M8 | 25 Nm (18.4 lbf ft) | – |
| Screw, rear fuel tank, top | M8 | 25 Nm (18.4 lbf ft) | Loctite® 243™ |
| Screw, side stand bracket | M8 | 25 Nm (18.4 lbf ft) | Loctite® 243™ |
| Screw, steering stem, bottom | M8 | 25 Nm (18.4 lbf ft) | Loctite® 243™ |
| Screw, top steering stem | M8 | 20 Nm (14.8 lbf ft) | – |
| Screw, top triple clamp | M8 | 17 Nm (12.5 lbf ft) | – |
| Remaining nuts, chassis | M10 | 50 Nm (36.9 lbf ft) | – |
| Remaining screws, chassis | M10 | 45 Nm (33.2 lbf ft) | – |
| Screw connection, engine mounting bracket | M10 | 45 Nm (33.2 lbf ft) | Loctite® 243™ |
| Screw connection, shock absorber, bottom | M10 | 45 Nm (33.2 lbf ft) | Loctite® 243™ |
| Screw connection, shock absorber, top | M10 | 45 Nm (33.2 lbf ft) | Loctite® 243™ |
| Screw, handlebar support | M10 | 40 Nm (29.5 lbf ft) | Loctite® 243™ |
| Screw, side stand | M10 | 35 Nm (25.8 lbf ft) | Loctite® 243™ |
| Banjo bolt | M10x1 | 12 Nm (8.9 lbf ft) | – |
| Nut, turn signal | M10x1.25 | 8 Nm (5.9 lbf ft) | – |
| Nut, angle lever on swingarm | M14x1.5 | 100 Nm (73.8 lbf ft) | – |
| Nut, linkage lever to angle lever | M14x1.5 | 100 Nm (73.8 lbf ft) | – |
| Nut, swingarm pivot | M14x1.5 | 100 Nm (73.8 lbf ft) | – |
| Nut, upper steering head | M20x1 | 12 Nm (8.9 lbf ft) | – |
| Screw, top steering head | M20x1 | 12 Nm (8.9 lbf ft) | – |
| Screw, front wheel spindle | M24x1.5 | 40 Nm (29.5 lbf ft) | – |
| Nut, rear wheel spindle | M25x1.5 | 90 Nm (66.4 lbf ft) | – |

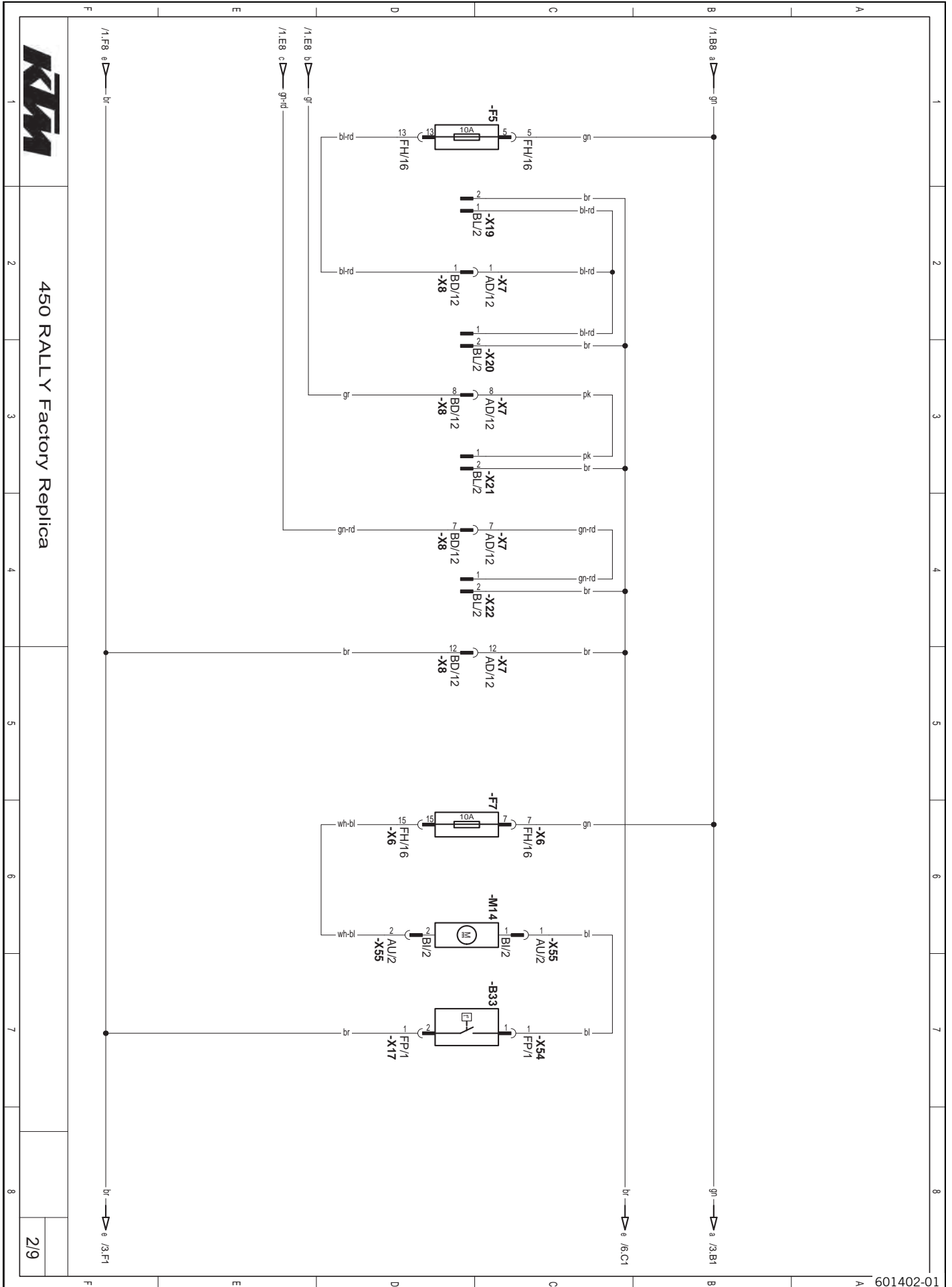
21.10 Carburetor with carburetor configuration (carburetor sheets)

| | |
|----------------------------------|------------------------|
| Carburetor type | KEIHIN FCR-MX 41 |
| Carburetor identification number | 4100D |
| Needle position | 3 th position from top |
| Idle mixture adjusting screw | |
| Open | 1.5 turns |
| Main jet | 185 |
| Jet needle | OBDVT (OBDTQ) |
| Idling jet | 42 |
| Idle air jet | 100 |
| Cold start jet | 85 |



Components:

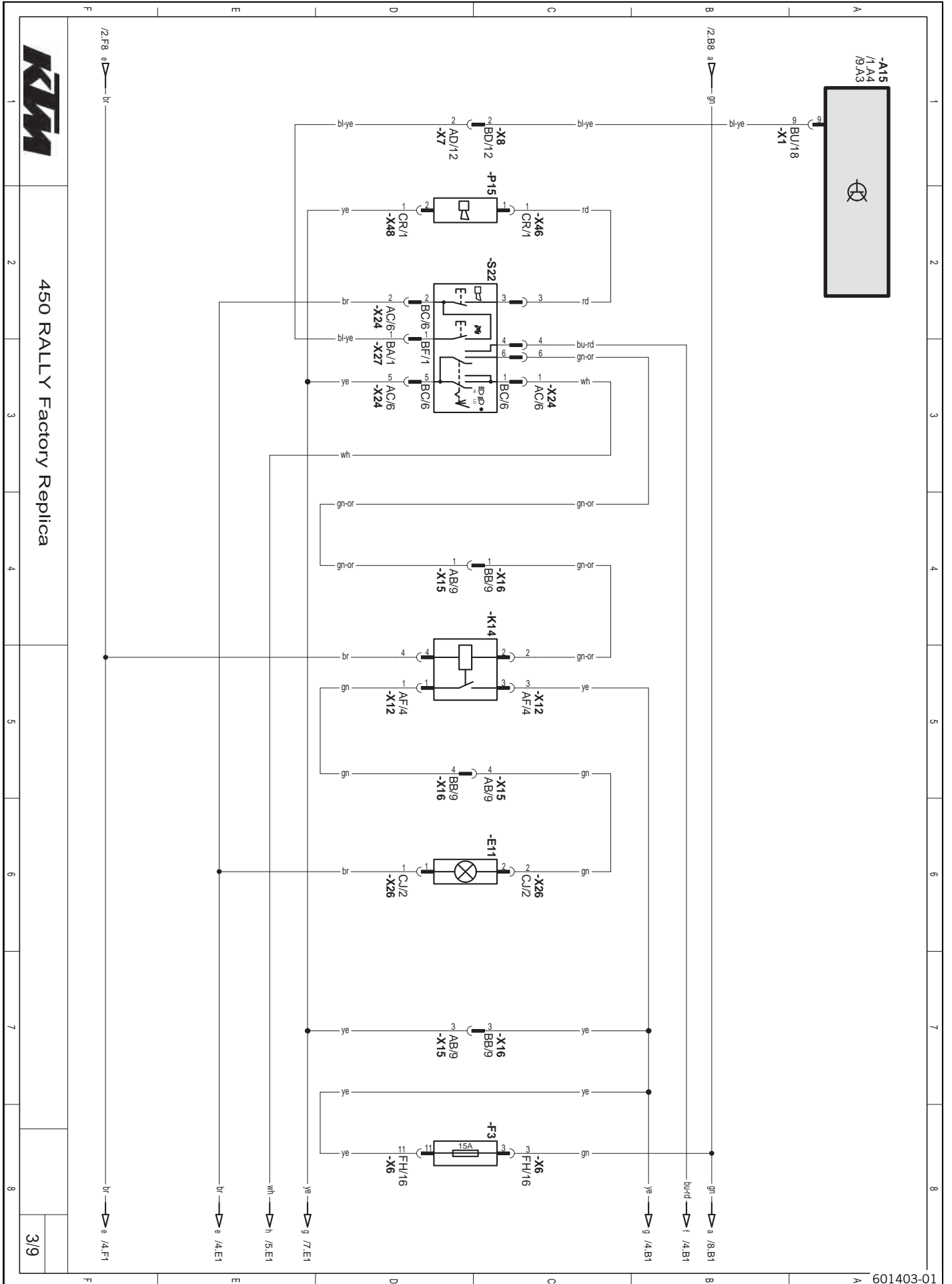
| | |
|-----|------------------------------|
| A15 | CDI controller |
| F2 | Fuse |
| F4 | Fuse |
| G10 | Battery |
| G20 | Alternator |
| K10 | Starter relay with main fuse |
| M10 | Starter motor |
| T20 | Voltage regulator |
| S15 | Ignition switch |



450 RALLY Factory Replica

Components:

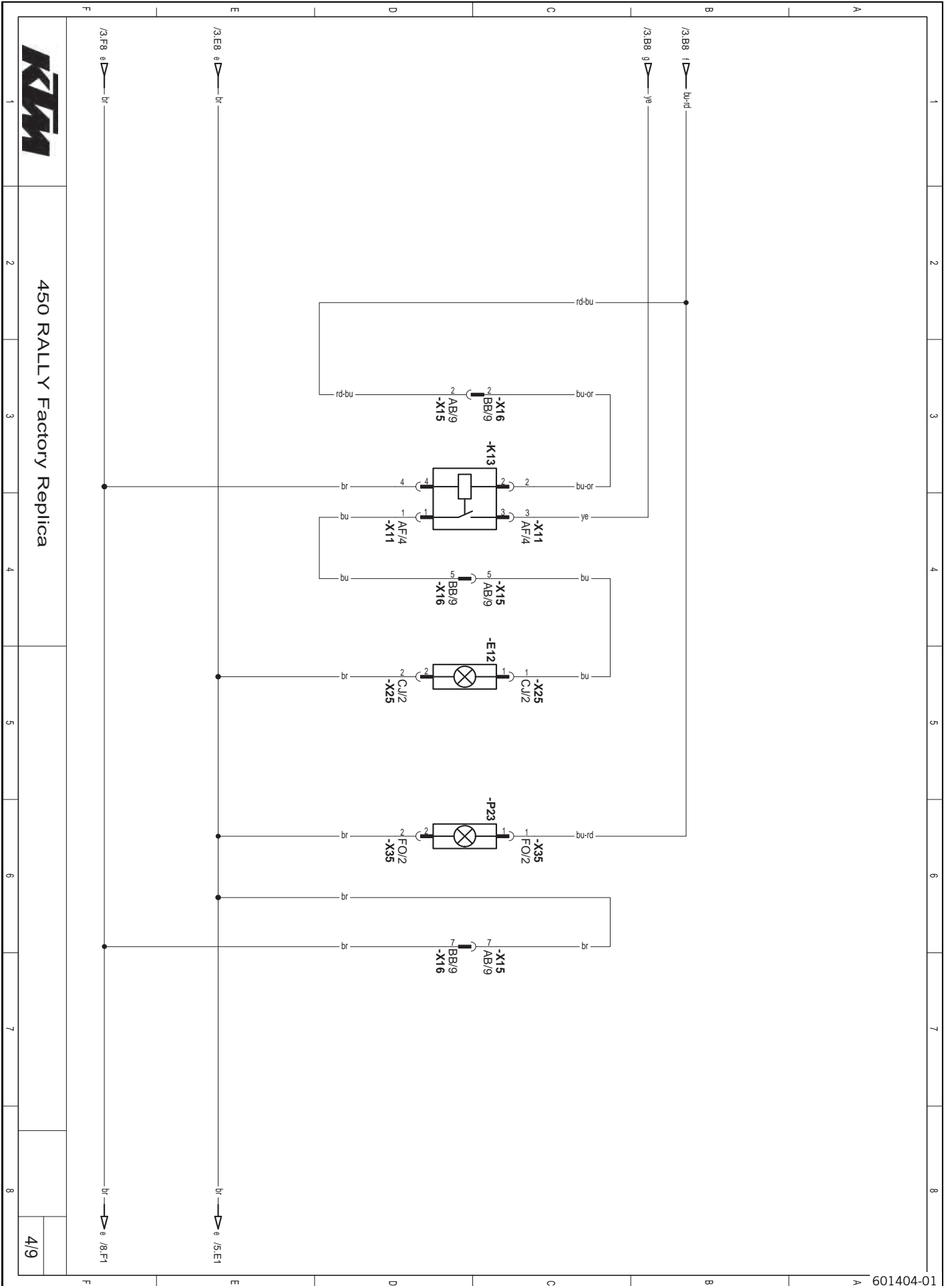
| | |
|-----|---------------------------------|
| B33 | Radiator fan temperature switch |
| F5 | Fuse |
| F7 | Fuse |
| M14 | Radiator fan |



450 RALLY Factory Replica

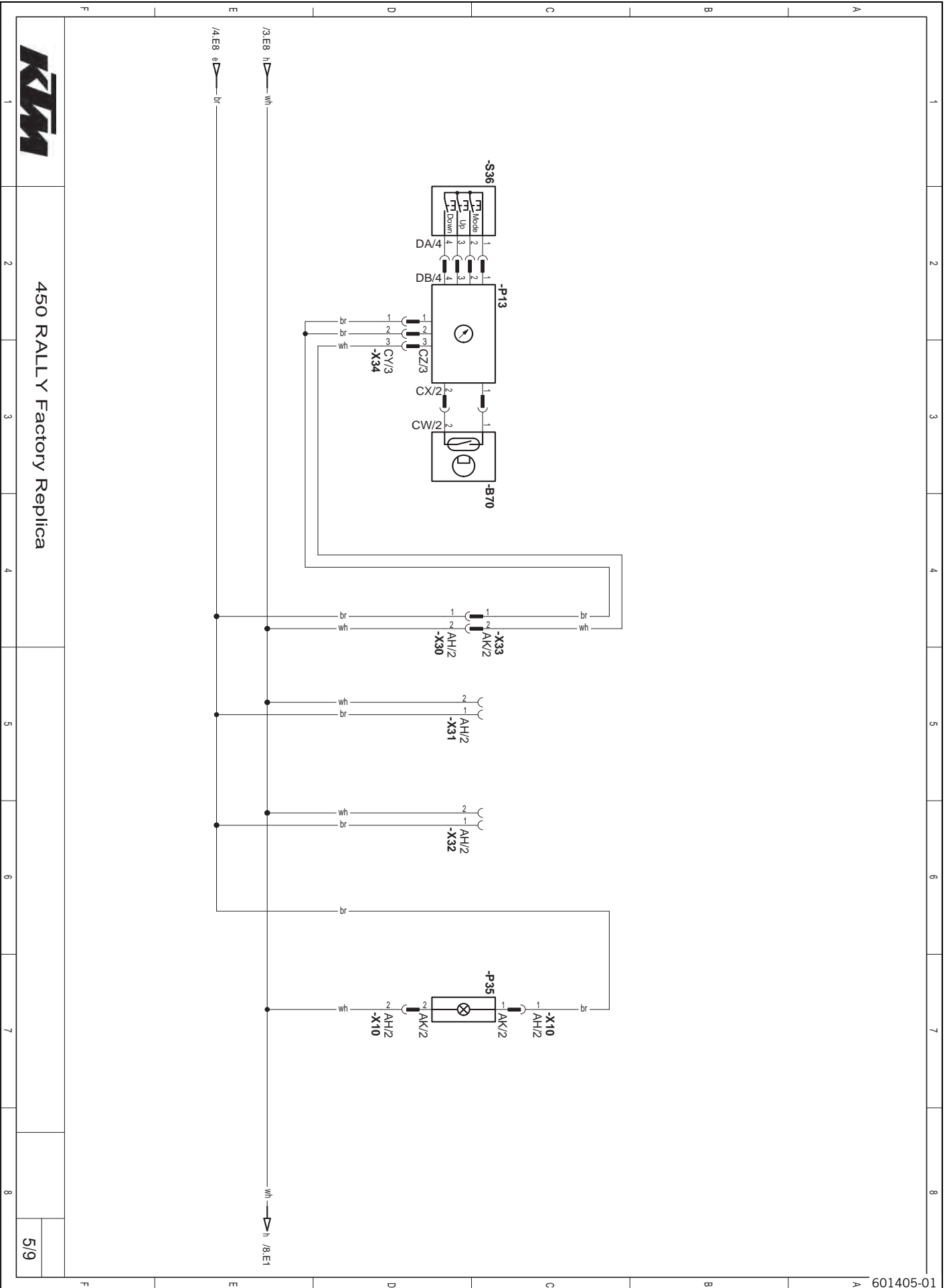
Components:

| | |
|-----|--|
| A15 | CDI controller |
| E11 | Low beam |
| F3 | Fuse |
| K14 | Low beam relay |
| P15 | Horn |
| S22 | Light switch, horn button, kill switch |



Components:

| | |
|-----|---------------------------|
| E12 | High beam |
| K13 | High beam relay |
| P23 | High beam indicator light |



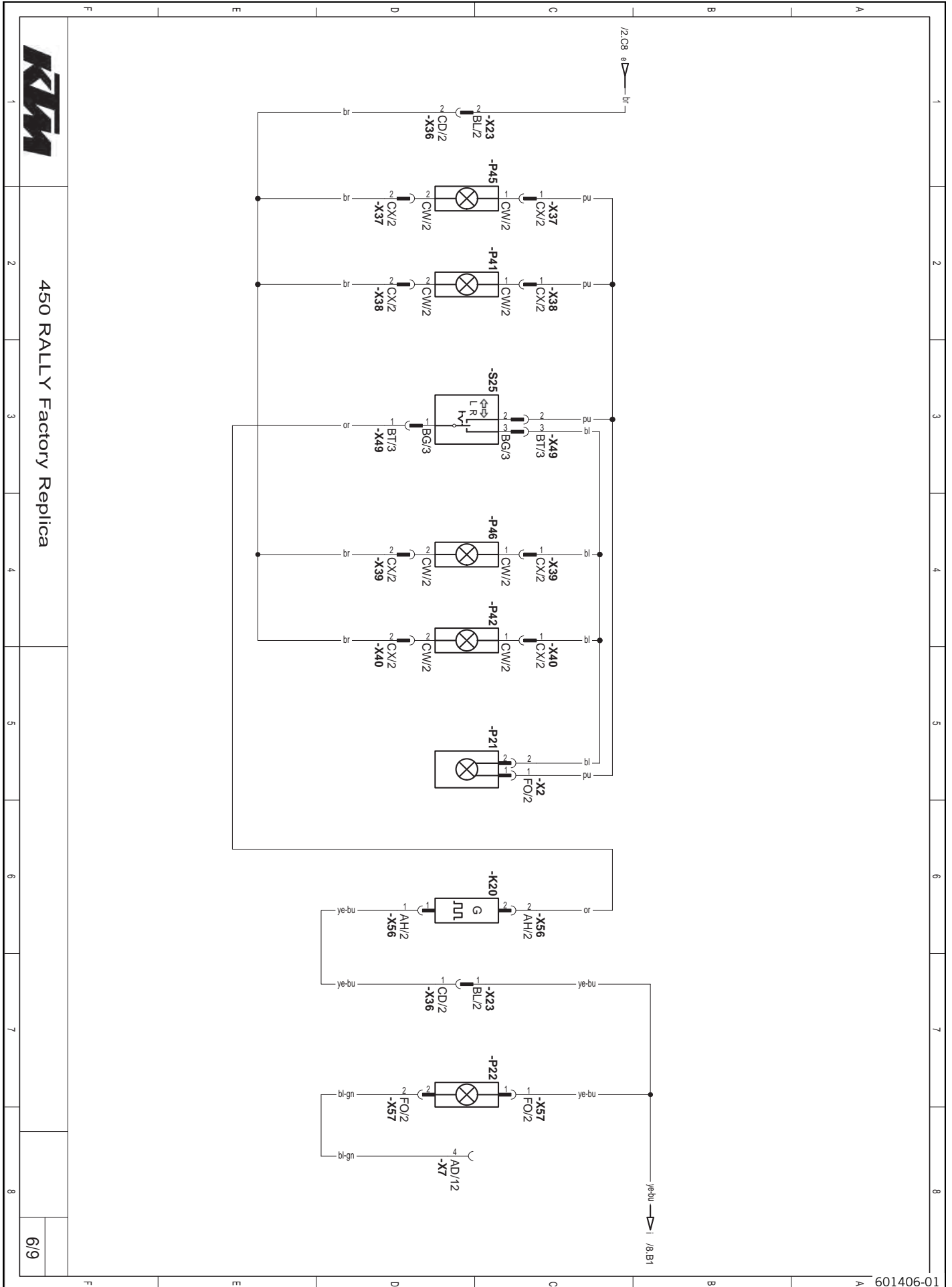
Components:

| | |
|-----|---------------------------|
| B70 | Wheel speed sensor, front |
|-----|---------------------------|

| | |
|-----|-------------|
| P13 | Speedometer |
|-----|-------------|

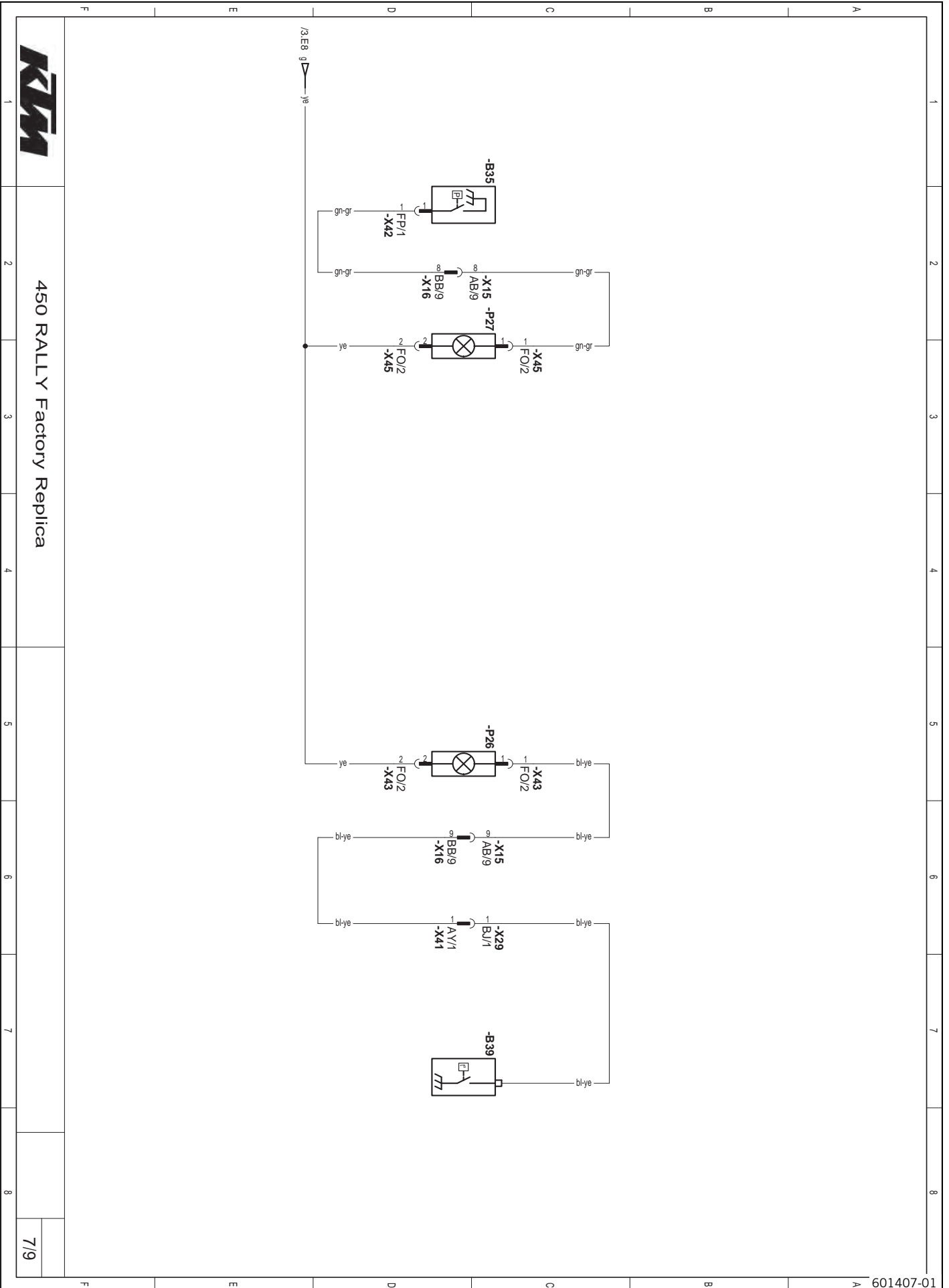
| | |
|-----|---------------|
| P35 | Parking light |
|-----|---------------|

| | |
|-----|-------------------|
| S36 | Tripmaster switch |
|-----|-------------------|



Components:

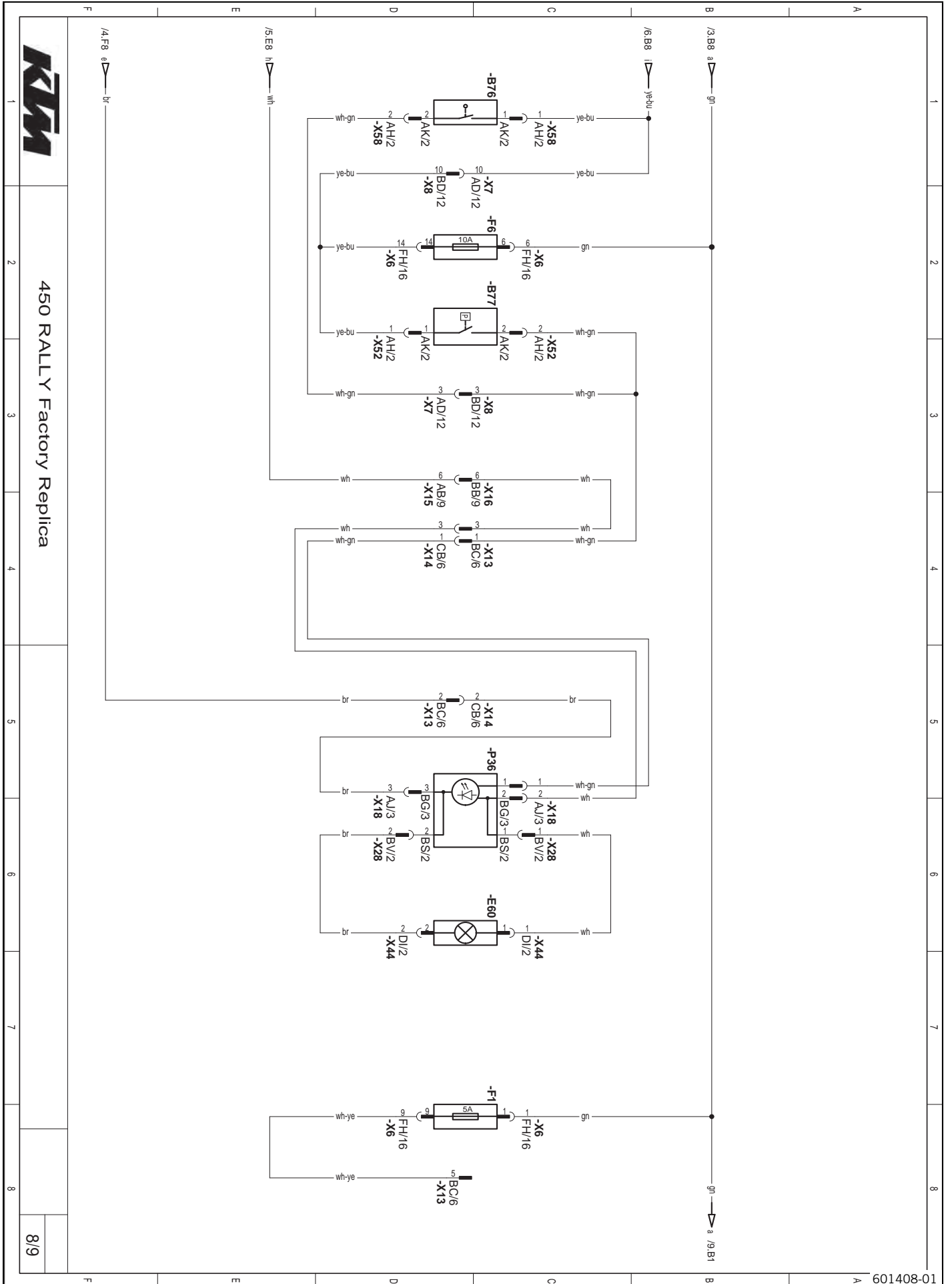
| | |
|-----|-----------------------------|
| K20 | Turn signal relay |
| P21 | Turn signal indicator light |
| P22 | Idling speed indicator lamp |
| P41 | Front left turn signal |
| P42 | Front right turn signal |
| P45 | Rear left turn signal |
| P46 | Rear right turn signal |
| S25 | Turn signal switch |



450 RALLY Factory Replica

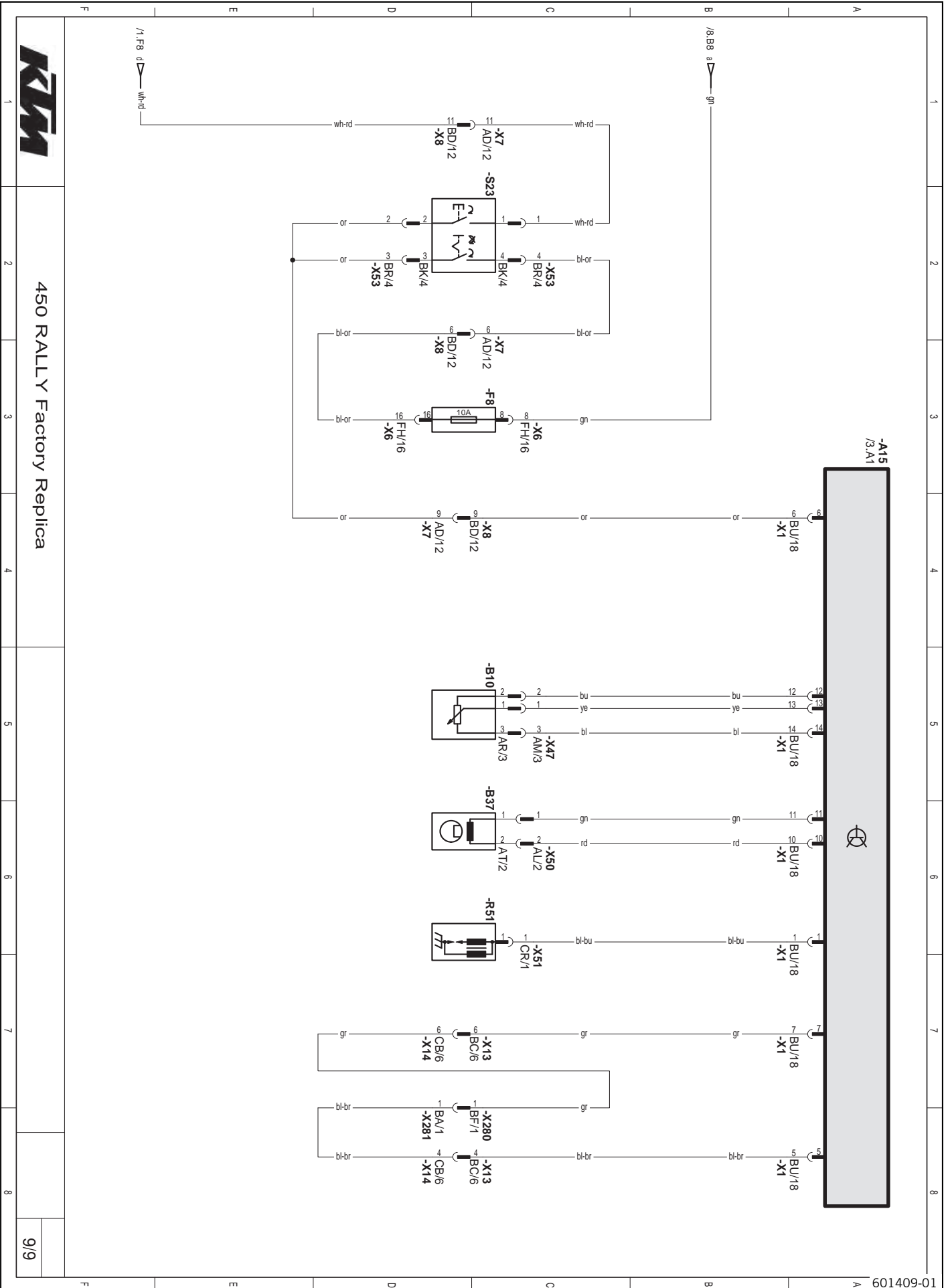
Components:

| | |
|-----|-----------------------------------|
| B35 | Oil pressure sensor |
| B39 | Temperature switch indicator lamp |
| P26 | Temperature warning lamp |
| P27 | Oil pressure warning lamp |



Components:

| | |
|-----|--------------------------|
| B76 | Front brake light switch |
| B77 | Rear brake light switch |
| E60 | License plate lamp |
| F1 | Fuse |
| F6 | Fuse |
| P36 | Brake/tail light |



Components:

| | |
|------|---|
| A15 | CDI controller |
| B10 | Throttle position sensor circuit A |
| B37 | Pulse generator |
| F8 | Fuse |
| R51 | Ignition coil (cylinder 1) |
| S23 | Emergency OFF switch, electric starter button |
| X280 | Connector, ignition curve |
| X281 | Connector, ignition curve |

Cable colors:

| | |
|-----|------------|
| bl | Black |
| br | Brown |
| bu | Blue |
| gn | Green |
| gr | Gray |
| lbu | Light blue |
| or | Orange |
| pk | Pink |
| pu | Violet |
| rd | Red |
| wh | White |
| ye | Yellow |

Brake fluid DOT 4 / DOT 5.1

According to

- DOT

Guideline

- Use only brake fluid that complies with the specified standard (see specifications on the container) and that possesses the corresponding properties. KTM 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 (also in countries with high temperatures). Use of low-quality antifreeze can lead to corrosion and foaming. KTM recommends **Motorex®** products.

Mixture ratio

| | |
|--|---|
| Antifreeze protection: -25... -45 °C (-13... -49 °F) | 50 % corrosion inhibitor/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. 120)
- SAE (☛ p. 120) (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. KTM recommends **Motorex®** products.

| |
|----------------------|
| Synthetic engine oil |
|----------------------|

Supplier

Motorex®

- **Cross Power 4T**

Engine oil (SAE 10W/50)

According to

- JASO T903 MA (☛ p. 120)
- SAE (☛ p. 120) (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. KTM recommends **Motorex®** products.

| |
|----------------------|
| Synthetic engine oil |
|----------------------|

Supplier

Motorex®

- **Cross Power 4T**

Fork oil (SAE 4) (48601166S1)

According to

- SAE (☛ p. 120) (SAE 4)

Guideline

- Use only oils that comply with the specified standards (see specifications on the container) and that possess the corresponding properties.

Hydraulic fluid (15)

According to

- ISO VG (15)

Guideline

- Use only hydraulic oil that complies with the specified standard (see specifications on the container) and that possesses the corresponding properties. KTM recommends **Motorex®** products.

Supplier

Motorex®

- Hydraulic Fluid 75

Shock absorber oil (SAE 2.5) (50180342S1)

According to

- SAE (☛ p. 120) (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).

Chain cleaner

Guideline

- KTM recommends **Motorex®** products.

Supplier

Motorex®

- **Chain Clean**

Cleaning and preserving materials for metal, rubber and plastic

Guideline

- KTM recommends **Motorex®** products.

Supplier

Motorex®

- **Protect & Shine**

Fuel additive

Guideline

- KTM recommends **Motorex®** products.

Supplier

Motorex®

- **Fuel Stabilizer**

High viscosity grease

Guideline

- KTM recommends **SKF®** products.

Supplier

SKF®

- **LGHB 2**

Long-life grease

Guideline

- KTM recommends **Motorex®** products.

Supplier

Motorex®

- **Bike Grease 2000**

Motorcycle cleaner

Guideline

- KTM recommends **Motorex®** products.

Supplier

Motorex®

- **Moto Clean 900**

Off-road chain spray

Guideline

- KTM recommends **Motorex®** products.

Supplier

Motorex®

- **Chainlube Offroad**

Paint cleaner and polish for high-gloss and matte finishes, bare metal and plastic surfaces

Guideline

- KTM recommends **Motorex®** products.

Supplier

Motorex®

- **Clean & Polish**

Rubber grip adhesive (00062030051)

Supplier

KTM-Sportmotorcycle AG

- **GRIP GLUE**

Universal oil spray

Guideline

- KTM recommends **Motorex®** products.

Supplier

Motorex®

- **Joker 440 Synthetic**

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.

| | |
|--|--------|
| A | |
| Accessories | 7 |
| Air filter | |
| installing | 49 |
| removing | 49 |
| Antifreeze | |
| checking | 77 |
| Auxiliary substances | 7 |
| B | |
| Basic chassis setting | |
| checking with rider's weight | 33 |
| Battery | |
| installing | 73 |
| recharging | 73 |
| removing | 73 |
| Brake discs | |
| checking | 59 |
| Brake fluid | |
| front brake, adding | 60 |
| rear brake, adding | 64 |
| Brake fluid level | |
| front brake, checking | 60 |
| rear brake, checking | 64 |
| Brake linings | |
| front brake, changing | 61 |
| front brake, checking | 61 |
| rear brake, changing | 65 |
| rear brake, checking | 65 |
| C | |
| Capacities | |
| coolant | 78, 93 |
| engine oil | 93 |
| fuel | 30, 93 |
| Carburetor | |
| float chamber, emptying | 82 |
| idle | 80 |
| idle, adjusting | 81 |
| Chain | |
| checking | 54 |
| cleaning | 52 |
| Chain guide | |
| checking | 54 |
| Chain tension | |
| adjusting | 53 |
| checking | 52 |
| Chassis number | 10 |
| Choke | 15 |
| Cleaning | 88-89 |
| Clutch | |
| fluid level, checking | 57 |
| fluid, changing | 57 |
| Clutch lever | 12 |
| basic position, adjusting | 56 |
| Compression damping | |
| fork, adjusting | 37 |
| Compression damping, high-speed | |
| shock absorber, adjusting | 33 |
| Compression damping, low-speed | |
| shock absorber, adjusting | 34 |
| Coolant | |
| draining | 78 |
| refilling | 78 |
| Coolant level | |
| checking | 77 |
| Cooling system | 77 |
| Customer service | 7 |
| E | |
| Electric starter button | 13 |
| Engine | |
| running in | 26 |
| Engine number | 10 |
| Engine oil | |
| adding | 86 |
| changing | 84 |
| Engine oil level | |
| checking | 84 |
| Engine sprocket | |
| checking | 54 |
| Environment | 6 |
| F | |
| Figures | 7 |
| Foot brake lever | 15 |
| free travel, adjusting | 63 |
| free travel, checking | 63 |
| Fork legs | |
| basic setting, checking | 36 |
| bleeding | 41 |
| dust boots, cleaning | 42 |
| installing | 43 |
| removing | 43 |
| Fork offset | 37 |
| setting | 38 |
| Frame | |
| checking | 55 |
| Front fender | |
| dismounting at front | 42 |
| installing at front | 42 |
| Front wheel | |
| installing | 67 |
| removing | 67 |
| Fuel tank | 14 |
| Fuel tank, front | |
| installing | 51 |
| removing | 51 |
| Fuel tap | 14 |
| Fuse | |
| main fuse, changing | 74 |
| of individual power consumer, changing | 75 |

| | |
|---|----|
| H | |
| Hand brake lever | 12 |
| free travel, adjusting | 59 |
| free travel, checking | 59 |
| Handlebar position | 39 |
| adjusting | 39 |
| Headlight | |
| headlight range, adjusting | 76 |
| Headlight setting | |
| checking | 75 |
| Horn button | 13 |
| I | |
| Ignition switch | 13 |
| Indicator lamp overview | 13 |
| Intended use | 5 |
| K | |
| Key number | 10 |
| Kill switch | 12 |
| L | |
| Light switch | 12 |
| Lower triple clamp | |
| installing | 45 |
| removing | 44 |
| M | |
| Main fuse | |
| changing | 74 |
| Main silencer | |
| glass fiber yarn filling, changing | 50 |
| installing | 50 |
| removing | 50 |
| Motorcycle | |
| cleaning | 88 |
| raising with lift stand | 41 |
| removing from lift stand | 41 |
| O | |
| Oil filter | |
| changing | 84 |
| Oil screen | |
| cleaning | 84 |
| Operating substances | 7 |
| Owner's Manual | 6 |
| P | |
| Play in throttle cable | |
| adjusting | 80 |
| checking | 80 |
| Preparing for use | |
| advice on first use | 25 |
| after storage | 90 |
| checks and maintenance when preparing for use | 27 |
| Protective clothing | 6 |
| R | |
| Rear hub rubber dampers | |
| checking | 70 |

| | |
|-----------------------------------|-------|
| Rear sprocket | |
| checking | 54 |
| Rear wheel | |
| installing | 69 |
| removing | 68 |
| Rebound damping | |
| fork, adjusting | 37 |
| shock absorber, adjusting | 34 |
| Refueling | |
| fuel | 30 |
| Riding sag | |
| adjusting | 36 |
| Rubber grip | |
| checking | 56 |
| securing | 56 |
| S | |
| Safe operation | 6 |
| Seat | |
| mounting | 49 |
| removing | 48 |
| Service | 7 |
| Service schedule | 31-32 |
| Shift lever | 15 |
| basic position, adjusting | 83 |
| basic position, checking | 83 |
| Shock absorber | |
| compression damping, general | 33 |
| riding sag, checking | 35 |
| spring preload, adjusting | 35 |
| static sag, checking | 35 |
| Side stand | 16 |
| Spare parts | 7 |
| Speedometer | |
| adjusting | 19 |
| clock, setting | 19 |
| kilometers or miles, setting | 18 |
| speedometer overview | 18 |
| Spoke tension | |
| checking | 71 |
| Starting | 27 |
| Steering | |
| locking | 16 |
| unlocking | 17 |
| Steering head bearing | |
| greasing | 48 |
| Steering head bearing play | |
| adjusting | 47 |
| checking | 46 |
| Steering lock | 16 |
| Storage | 90 |
| Swingarm | |
| checking | 56 |
| T | |
| Technical data | |
| capacities | 93 |

| | |
|------------------------------|-----|
| chassis | 93 |
| chassis tightening torques | 95 |
| electrical system | 94 |
| engine | 91 |
| engine tightening torques | 91 |
| fork | 94 |
| shock absorber | 95 |
| tires | 94 |
| Throttle grip | 12 |
| Tire air pressure | |
| checking | 71 |
| Tire condition | |
| checking | 70 |
| Transport | 29 |
| Trim | |
| mounting | 58 |
| removing | 58 |
| Turn signal switch | 13 |
| Type label | 10 |
| U | |
| Use definition | 5 |
| V | |
| View of vehicle | |
| front left | 8 |
| rear right | 9 |
| W | |
| Warranty | 7 |
| Winter operation | |
| checks and maintenance steps | 89 |
| Wiring diagram | |
| page 1 of 9 | 98 |
| page 2 of 9 | 100 |
| page 3 of 9 | 102 |
| page 4 of 9 | 104 |
| page 5 of 9 | 106 |
| page 6 of 9 | 108 |
| page 7 of 9 | 110 |
| page 8 of 9 | 112 |
| page 9 of 9 | 114 |
| Work rules | 6 |



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