



ZF800GY-B/ZF800GY-C
Two-Wheel Motorcycle Instruction Manual

To our distinguished owner

ZF800GY-B/Z800GY-C Two-Wheel Motorcycle Instruction Manual First Edition (July 2024)

First of all, congratulations on your purchase of a brand new KOVEMOTO!

If you choose products of KOVEMOTO, you will become a member of the KOVEMOTO family.

This Instruction Manual introduces the main specifications, basic structure, adjustment method and maintenance knowledge of the motorcycle. It will guide you to master the basic operation of the motorcycle and eliminate or reduce common faults, which can effectively ensure driving safety, play the best performance of the vehicle, and improve the service life of the vehicle.

This Instruction Manual contains the introduction of the basic configuration of the motorcycle. The contents and pictures are for reference only, please refer to the physical object.

Due to the production time, user needs and design improvements, the actual motorcycle may be different from the contents of the Manual. We reserve the right to make changes at any time, and we will no longer notify and assume any obligations. Sorry for any inconvenience caused.

The Instruction Manual is one of the necessary accessories of the motorcycle, and when it is sold to others, it should be attached to the motorcycle.

The copyright of this Instruction Manual belongs to the company, and no reproduction is allowed without the written consent of the company, and violators will be prosecuted.

To ensure your safety, and increase your riding pleasure:

- Please read the Instruction Manual carefully.
- Please follow all recommendations and procedures in the Instruction Manual.
- Please pay close attention to the safety information recorded in the Instruction Manual and pasted on the motorcycle body.

Safety Precautions

The safety of you and others is very important, and the safe driving of this motorcycle is an important responsibility.


To help you make an informed decision about your safety, we provide steps and other information on the safety label and in the Instruction Manual to remind you. This information is intended to alert you to the potential danger of harm to you or others.

It is impractical for us to list all the hazards associated with motorcycle riding and maintenance, and you must make the right judgment yourself.

It is forbidden to install electrical equipment, because the battery used in the motorcycle is a lithium battery. Its battery capacity is small, and the installation of electrical equipment may cause a loss of power.

The motorcycle is equipped with a high-speed engine. For your driving safety, it is recommended that you reduce violent driving.

You'll see important security information in a variety of forms, including:

- Safety labels on the body of a motorcycle;
- The safety information is preceded by a safety warning symbol  and one of the following three warnings : Caution, danger, and warning.

The meanings of the three warnings are as follows:

 **Caution** - If you do not follow the instructions, you may be injured.

 **Danger** - If you do not follow the instructions, you will cause serious casualties.

 **Warning** - If you do not follow the instructions, you will cause serious casualties.

Other important information is listed under the following headings:

Notes -Information to help you avoid damage to your motorcycle, other property, or the environment.

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Motorcycle Safety

This section contains important information about the safe riding of motorcycles, please read this section carefully.

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Safety instructions

To enhance your driving safety, please follow these guidelines:

- Perform all routine and routine inspections as specified in the Instruction Manual.
- Before filling the tank, turn off the engine and keep away from sparks and open flames.
- Do not start the engine for a long time in a closed or semi-closed space, because the exhaust gas contains carbon monoxide, which is a toxic gas and can be fatal.

Always wear a helmet

It has been proven that helmets and protective clothing can significantly reduce the chance of injury to the head and other parts, and reduce the degree of injury. Therefore, please be sure to wear a certified motorcycle helmet and protective clothing when driving.

Before the ride

Make sure you're in good physical condition, paying attention, and not drinking or taking medication. Make sure that you and your passengers are wearing a certified motorcycle helmet and protective clothing. Make sure your passenger to hold onto the rear grab handle or hold your waist, place his/her feet on the pedals, and lean with you when you turn, even when the motorcycle is stopped.

Take time to study and practice

Even if you have driven other motorcycles, you should practice riding this motorcycle in a safe area to familiarize yourself with the operation and operation of this motorcycle and adapt to the size and weight of the motorcycle.

Have a sense of protection when riding

Always pay attention to the vehicles around you, do not think that other drivers can see you, always be prepared to make emergency brakes or avoid detours.

Make yourself easier to see

Especially at night, wear bright reflective clothing to make yourself more eye-catching, stop so that other drivers can see you, turn on the signal light before turning or changing the lane, and when necessary, use the horn to remind pedestrians.

Don't drink and ride

Alcohol and driving are not compatible. Never exceed your personal ability when driving, and do not exceed the speed specified by the vehicle, fatigue and negligence will weaken your ability to make correct judgments and safe driving.

Keep your motorcycle in a safe state

It is important to take good care of your motorcycle so that your motorcycle is always in good condition. Check your motorcycle before each ride and complete all recommended maintenance and repairs. Do not modify motorcycles or add accessories that will affect safety without authorization, and overload is strictly prohibited.

Dealing with incidents

Your personal safety is your first priority. If you or anyone else is injured, you should first carefully evaluate the severity of the injury and determine whether it is safe to continue driving, and call for emergency assistance if necessary. If other persons or vehicles are involved in a collision, the applicable local laws and regulations should also be followed.

If you decide to continue driving, first turn the ignition switch to the "⊗" (off) position, and then evaluate the condition of the motorcycle. Check whether there is oil leakage, check whether the key nuts and bolts are fastened, and check the steering handle, steering column, brake and wheel to ensure that the personnel and vehicle are safe. Please drive slowly and carefully. Your motorcycle may have suffered damage that will not be immediately apparent, please submit it to a special repair shop or a qualified special repair shop of KOVEMOTO for a thorough inspection as soon as possible.

Carbon monoxide hazard

The exhaust gas contains toxic carbon monoxide, a colorless and odorless gas, and inhaling higher concentrations of carbon monoxide can cause people to lose consciousness and may even be fatal.

Do not start the engine for long periods of time in a garage or other enclosed space.

▲ Warning

- If the engine is started for a long time in a closed or semi-closed space, it may cause a rapid accumulation of toxic carbon monoxide gas.
- Inhaling this colorless, odorless gas causes rapid loss of consciousness and death.
- Motorcycle engines should only be started in well ventilated outdoor areas.

Safety Precautions

- Be careful when riding, always keep your hands on the throttle grips and your feet on the pedals.
- Make sure that the passenger grasps the grab handle or hugs your waist while driving, and puts his/her feet on the pedals.
- Always pay attention to the safety of riders, passengers and other drivers on the road.

Protective clothing

Make sure that you and any accompanying passenger are wearing a certified motorcycle helmet, goggles and eye-catching protective clothing, and drive carefully according to the weather and road conditions.

■ Helmet

It is certified to safety standards, eye-catching, and sized to fit your head size.

- It must be safe and comfortable and secured with a chin strap.
- It does not obstruct the line of sight of the mask or other certified goggles.

■ Gloves

High-wear-resistant full-finger leather gloves.

■ Boots or riding shoes

Boots that are strong and slip-resistant and protect the ankle.

■ Clothing

It includes a protective eye-catching long-sleeved shirt suitable for riding and wear-resistant pants (or protective suits).

▲ Warning

- Not wearing a helmet increases the chance of serious injury in an accident.
- Make sure that you and your passengers always wear certified helmets and protective clothing.

Riding precautions

Run-in period

Follow these guidelines during the first 500 km of driving to ensure the motorcycle's later reliability and performance.

- Avoid heavy throttle start or rapid acceleration.
- Avoid emergency braking and rapid downshifting.
- Ride carefully.

Brake

Follow the following guidelines:

- Avoid excessive emergency braking and downshifting
 - ▶ Sudden braking will reduce the stability of the motorcycle.
 - ▶ Slow down before turning, or you may slip.
- Be careful when driving on slippery roads
 - ▶ Tyres are easier to slide on slippery surfaces and require longer braking distances.
- Avoid continuous braking
 - ▶ In the long and steep slope down the slope, repeated braking will lead to serious overheating of the brake, affecting the braking effect. You should use the engine brake and use the brake intermittently to slow down.
- The front and rear brakes can be used at the same time to achieve a complete braking effect.

■ Anti-lock brake system (ABS)

This model is equipped with an anti-lock braking system to prevent tire lock-up during emergency braking.

- When the vehicle speed is less than 10 km/h, the anti-lock braking system does not work.
- During braking, after ABS intervention, the brake handle or Foot brake lever may slightly rebound, which is a normal phenomenon.
- Always use the recommended tyres to ensure that the anti-lock braking system works correctly.

■ Engine brake

When you release the throttle, the engine brake will help the motorcycle slow down. If you want to slow down in a further degree, you can downshift to a low gear. When descending a long and steep slope, the engine should be braked and the brake should be used intermittently to slow down.

■ A humid and rainy environment

In a wet and rainy environment, the road surface will be wet and slippery, and the wet brake will also reduce the braking efficiency. You need to be very careful when braking. If the brake is wet, it can be intermittently repeated during low-speed driving and riding, which helps to dry the brake quickly.

Parking

- Stay on solid, flat ground.
- If you must stop on a slightly inclined or loose ground, make sure to stop the motorcycle and make sure that the motorcycle cannot move or tip over.
- Ensure that high temperature parts do not come into contact with flammable materials.
- Do not touch the engine, muffler, brake and other high temperature parts before cooling.
- To avoid the possibility of theft, be sure to lock the steering handle and remove the key before leaving the unattended motorcycle.

■ Stop the motorcycle with the side support

1. Extinguish engine.
2. Lower side support.
3. Tilt the motorcycle slowly to the left until its weight is concentrated on the side bracket.
4. Turn the steering handle completely to the left.
 - ▶ If the steering handle is turned to the right, it will reduce stability and may cause the motorcycle to fall.
5. Turn the ignition switch to the "🔒" (lock) position and remove the key.

Fueling/brake fluid and fuel guide

Follow these guidelines to protect your engine and catalytic converter:

- It is only allowable to use 95 octane or above unleaded gasoline.
- It is recommended to use high-octane gasoline. Using low octane gasoline will reduce engine performance.
- It is not recommended to use ethanol gasoline, which will reduce the performance of the engine.
- Do not use spoiled or contaminated gasoline, or oil-gasoline blends.
- Prevent dirt and water from entering the tank.
- Since the brake fluid has a certain corrosive effect, be sure to avoid splashing into the eyes, adhering to the skin and avoiding contact with nonmetallic materials of the vehicle when adding.

Spare parts and modifications

We strongly recommend that you do not use any accessories other than KOVEMOTO, and do not modify the original design of the motorcycle, which will cause the motorcycle to be unsafe. Unauthorized modifications to your motorcycle will void your warranty service and result in your motorcycle being unable to legally drive on public roads and highways. Before you decide to add accessories to your motorcycle, first determine which modifications are safe and legal.

It is prohibited to attach a trailer or a sidecar to a motorcycle and to modify or install other equipment at the engine installation point. Your motorcycle does not have the design of these accessories, and their use will seriously damage the maneuverability and safety of the motorcycle.

▲ Warning

- Improper accessories or modifications may cause safety accidents, in which you may be seriously injured or even life-threatening.
- Please follow all instructions in the Instruction Manual for accessories and modifications.

Loading guide

- The additional load will affect the maneuverability, braking and stability of the motorcycle. When riding with heavy loads, be sure to maintain a safe speed.
- Please stay within the specified loading limits: maximum payload is 150kg (ZF800GY-B) or 170kg (ZF800GY-C). Do not exceed these weight restrictions.
- Fix all luggage and place it evenly and smoothly near the center of the motorcycle.
- Do not place objects in the headlights or Mufflers.

▲ Warning

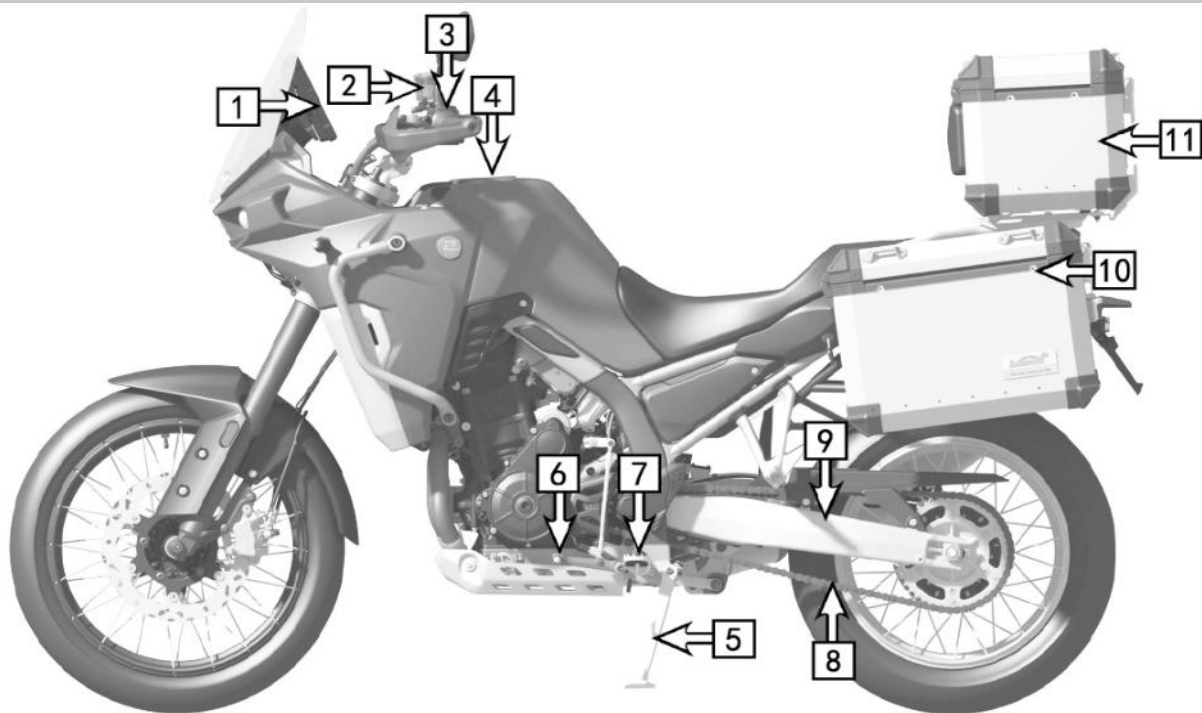
- Overloading or improper loading will lead to accidents, resulting in serious casualties.
- Please follow the loading instructions in the Instruction Manual.

User Manual

This section contains important information about the operation of the motorcycle, please read this section carefully.

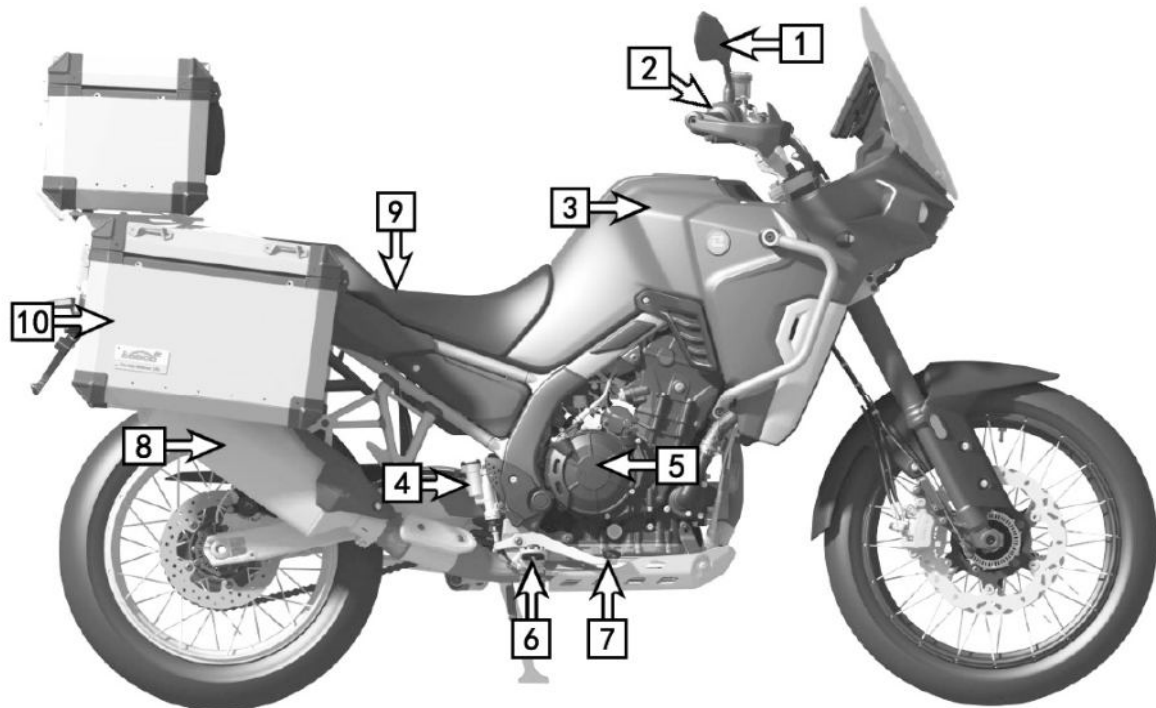
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Parts Location Diagram - ZF800GY-B



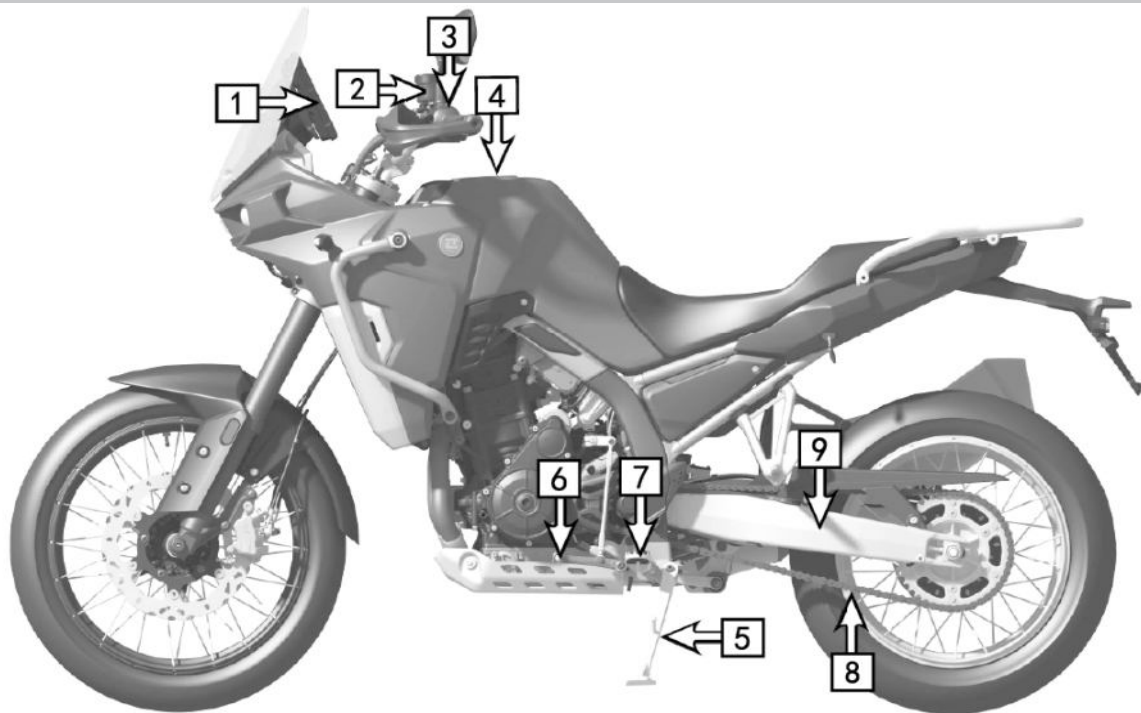
1.Instrument assembly 2.Front brake fluid reservoir 3.Left combination switch 4.Fuel tank lock 5.Side stand 6.Shift pedal 7.Left front footpeg 8.Chain 9.Swingarm 10.Side case - left 11.Top case

Parts Location Diagram - ZF800GY-B



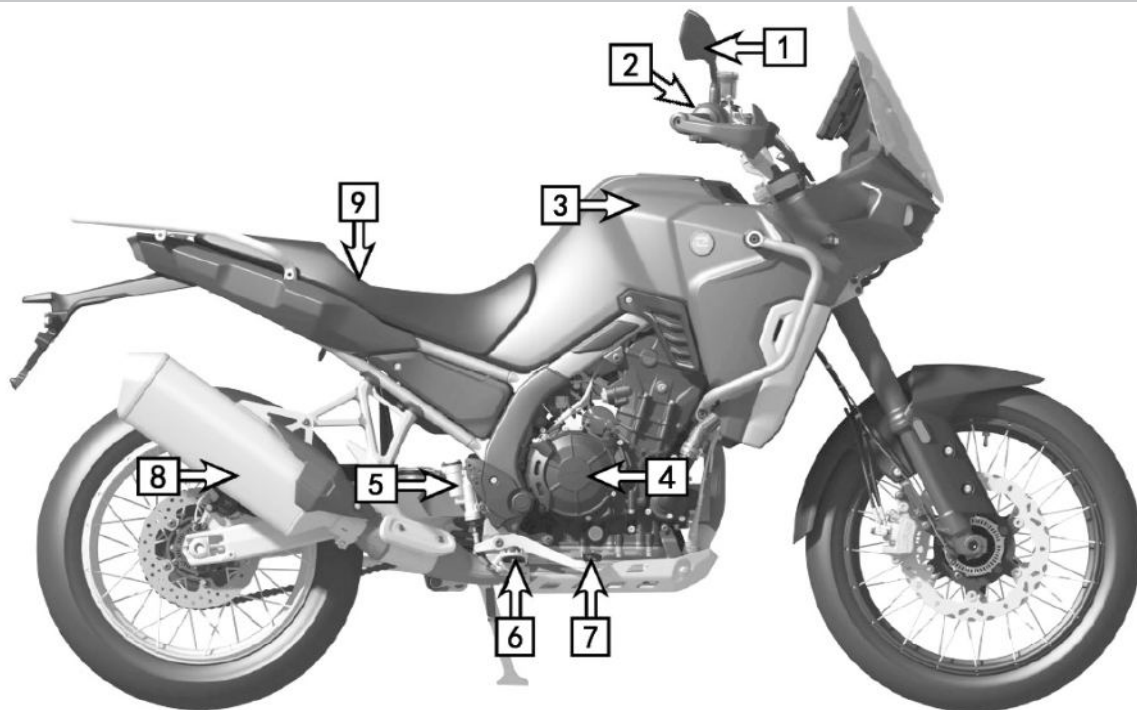
1.Rear view mirror 2.Right combination switch 3.Fuel tank 4.Rear brake pump 5.Engine 6.Right front footpeg 7.Rear brake pedal 8.Muffler 9.Seat cushion 10.Side case - right

Parts Location Diagram - ZF800GY-C



1.Instrument assembly 2.Front brake fluid reservoir 3.Left combination switch 4.Fuel tank lock 5.Side stand 6.Shift pedal
7.Left front footpeg 8.Chain 9.Swingarm

Parts Location Diagram - ZF800GY-C



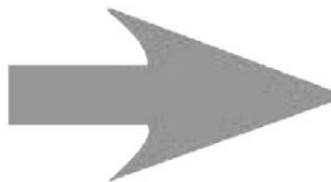
1.Rear view mirror 2.Right combination switch 3.Fuel tank 4.Engine 5.Rear brake pump 6.Right front footrest 7.Rear brake pedal 8.Muffler 9.Seat cushion

Instruments

Instrument Main Interface



Light-sensitive hole



Long press the left handlebar switch
ENT key to toggle the right interface

Menu Interface



Display check

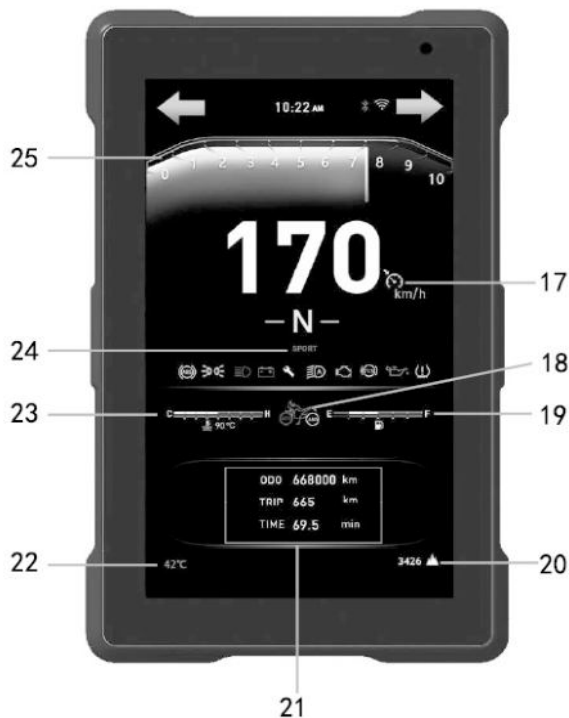
When the ignition switch is turned to "O" (ON), the instrument is powered on to play the start-up animation, and then self-test is performed, and all functional modules and symbols are displayed. If the display is missing during self-test, Please go to the special repair shop of KOVEMOTO for repair.

Main Interface Function Description - 1



S/N	Name	Functional description
1	Turn indicator light	The left turn indicator flashes when the left turn signal is ON The right turn indicator flashes when the right turn signal is ON When the warning indicator is ON, the left and right turn indicators flash simultaneously
2	Time display	Displays the instrument time
3	Speedometer	Display the current speed
4	Bluetooth display	When connected to Bluetooth, this light is ON
5	WIFI display	When connected to WIFI, this light is ON
6	Gear indicator	Display the current gear
7	TP warning	When the tire pressure data is abnormal, this light is ON
8	Oil pressure indicator	When the oil pressure is insufficient, this light is on
9	TCS Indicator	① When TCS Function is Activated: indicator OFF ② When TCS Function is Deactivated: indicator On ③ When TCS Malfunctions: indicator stays On (Function Activated) ④ When TCS Intervenes: indicator flashes
10	Electronic injection malfunction indicator light	When the electronic injection system fails, this lamp lights up (after the engine is powered on and started normally, the failure lamp goes out as a normal phenomenon)
11	Automatic headlights	When when the automatic headlight function is activated, this light is on
12	Service indicator light	When the motorcycle reaches the maintenance setting condition, this lamp is on
13	Low voltage indicator	This light is on when the battery voltage is too low
14	High beam indicator	This light is on when the high beam is switched on
15	Position indicator light	This light is on when the position light is on
16	ABS malfunction indicator light	① This light is on when a fault occurs ② After the whole vehicle is powered on, this lamp flashes as a normal phenomenon (0.5S on, 0.5S off). When the vehicle speed is > 5km/h, the ABS self-test is extinguished immediately after passing

Main Interface Function Description - 2



S/N	Name	Functional description
17	Cruise control display	When the cruise control is activated, this light is ON
18	ABS status display	① Front and rear wheels show a white profile: Front and rear wheel ABS open ② Front and rear wheels shows yellow fill: Front and rear wheel ABS closed
19	Fuel level display	The following fuel level readings are for reference only: 1st bar: Fuel \leq 3.2L (Please refuel as soon as possible when only one bar remains) 2nd bar: 3.2-5.3L 3rd bar: 5.3-7.3L 4th bar: 7.3-9.35L 5th bar: 9.35-13.5L 6th bar: Oil level \geq 13.5 L (Due to the internal structure of the fuel tank, the last bar represents more fuel than the other single bars)
20	Altitude display	Display altitude (requires connection to a mobile phone)
21	Odometer display	Display total vehicle mileage and sub-total mileage
22	Temperature display	Display ambient temperature (requires connection to a mobile phone)
23	Water temperature display	① When the water temperature indicator block displays red and lights up the "water temperature alarm lamp", it means that the water temperature is too high. In the case of ensuring safety, stop for inspection, and continue driving after the water temperature drops ② When the water temperature data is abnormal, all water temperature color blocks and icons will flash together (when the flameout switch is off, the flashing is a normal phenomenon)
24	Riding mode	Displays current engine power output, ABS, and TCS modes
25	Tachometer	Display engine speed

Menu Instructions-1

Level 1 menu	Level 2 menu	Level 3 menu	Description	
Headlight (button)	/	/	1. When using automatic headlights or when the headlights are always on, the "Headlight" option will not appear in the secondary menu. 2. When using button-controlled headlights: Headlights ON: <input type="radio"/> next to the option will be filled; Headlights OFF: only <input type="radio"/> is displayed.	
Riding mode	Rain mode	/	Set engine power output modes (Rain: rainy mode; Comfort: comfort mode; Sport: sport mode; Off road: off-road mode) Note: ① The system retains the current mode (Rain, Comfort, or Sport) after power-off ② If the mode before power-off is Off road or Custom, the system will switch to Sport mode after power-on ※ ③ Off-road mode will disable ABS and TCS; please select it with caution and only when riding conditions are safe	
	Comfort mode	/		
	Exercise mode	/		
	Off-road mode	/		
	Custom mode	Drive mode		The user can select the engine power mode according to the situation
		ABS mode		Users can choose ABS ON, Rear Wheel OFF, or ABS OFF functions (※Note: Selecting ABS OFF will disable the ABS-assisted driving function. Please choose carefully)
TCS mode			Users can choose TCS ON, TCS OFF functions (※Note: Selecting TCS OFF will disable the TCS-assisted driving function. Please choose carefully)	
Handlebar heating	Height	/	The user can adjust the handlebar heating level or turn off the handlebar heating as needed.	
	Middle	/		
	Low	/		
	Close	/		
Seat heating	Height	/	The user can adjust the seat heating level or turn off the seat heating as needed.	
	Middle	/		
	Low	/		
	Close	/		

The instrument functions are as follows:

Menu switch:

Short press ENT key to enter the menu settings; long press ENT key to enter the display interface settings. Short press the up and down keys to turn pages; long press the up key to switch between Sub-total 1 and Sub-total 2 pages; long press the down key to reset the sub-total mileage data.

Information viewing:

When the mobile phone is connected with Bluetooth, the message display panel will reflect the information pushed by the mobile phone. Press the SET key to view the details, and press ESC key to clear it.

Function setting:

Press the ENT key to enter the instrument menu. The automatic headlight (ON/OFF), address book, riding mode (COMFORT/RAIN/SPORT/OFF ROAD), handlebar heating, seat heating, instrument display, riding data, vehicle information, and other functions can be configured through the human-machine dialogue menu.

Instrument and mobile phone interconnection:

1.The navigation function, information push function, weather function, automatic time function, altitude display and other functions in the TFT instrument can only be realized after interconnection with the mobile phone installed with the relevant APP.

2.Mobile APP installation steps: ① Long press the ENT button to enter the display interface settings; ② Select "Simple Navigation" or "Mobile Screen Mirroring Navigation"; ③ Scan the QR code on the interface according to your phone's system, then download and install the APP as prompted; ④ Enable Bluetooth/Wi-Fi on your phone to connect with the instrument (For optimal user experience, please refer to the relevant user guide when using the mobile APP).

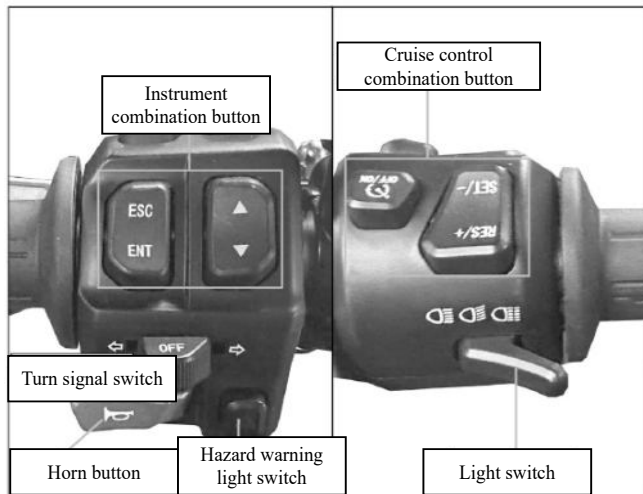
3.When the instrument needs to be disconnected from the phone, enter the phone setting menu and select Disconnect Bluetooth/Disconnect WIFI.

Notes

- If you need to modify the ABS mode or TCS mode, it must be conduct while the vehicle is parked.

Switch

Left combination switch-1



Menu switch: This combination button is used to set different functions of the instrument.

▲▼: Select to switch up and down

ESC: Back button

ENT: Confirm/Menu button

Hazard warning light switch:

△ After the emergency button is pressed, the left and right turn signal lamps flash at the same time.

Turn signal switch:

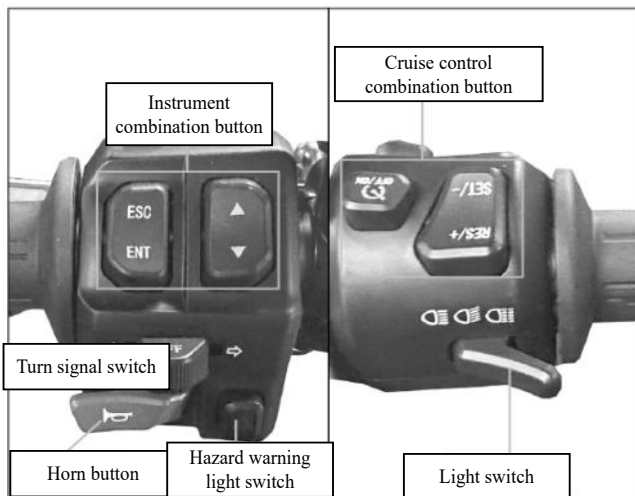
⇐ Turn on the left turn signal: toggle the switch to the left, and the turn signal switch returns to its original position after operation.

⇒ Turn on the right turn signal: toggle the switch to the right, and the turn signal switch returns to its original position after operation.


⊞ Turn off the turn signal: When the turn signal switch is in the middle position, press this button to turn off the turn signal.

Switch

Left combination switch-2




Cruise control button: This combination button is used to activate the vehicle's cruise control function.


 : Cruise control switch


RES/+ : Cruise resume/acceleration switch

SET/- : Cruise control/deceleration switch

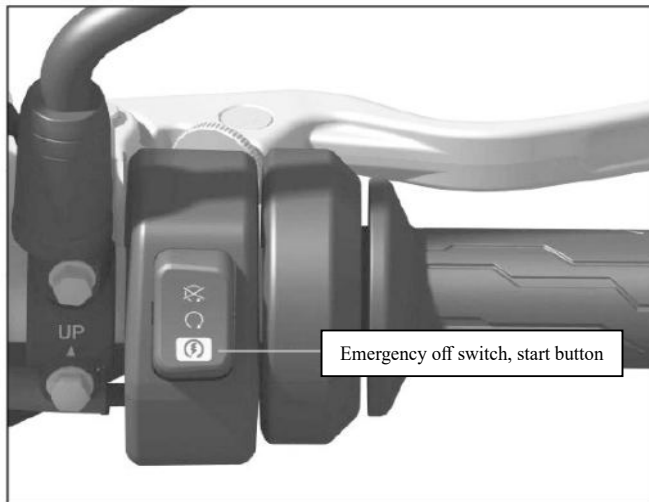
Light switch: The light switch is located on the back of the handlebar switch.

 Turn on the headlight flasher

 Turn on the high beam

 Turn on the low beam

Right combination switch



Emergency OFF switch:

Only when the switch is in "○"(ON) position, the engine can be started.;

When the switch is in "⊗"(OFF) position, the engine cannot be started.

In case of emergency, switch to the "⊗" (stop) position to extinguish the engine.

Electric starter button

When the OFF switch is set to "○" position:

- ① If the engine is in neutral, press the "⚡" button to start the engine.
- ② If the engine is not in neutral, users should retract the side stand and squeeze the clutch handle, then press the "⚡" button to start the engine.

Notes

- When the headlights are illuminated by the automatic headlight function, the light switch cannot turn off the headlights at this time.

Ignition Switch

When the key is in the "⊗" position, turn the direction handle to the leftmost, press the key, and rotate it counterclockwise to the "🔒" position, and the direction can be locked; if users need to unlock, rotate the key clockwise.



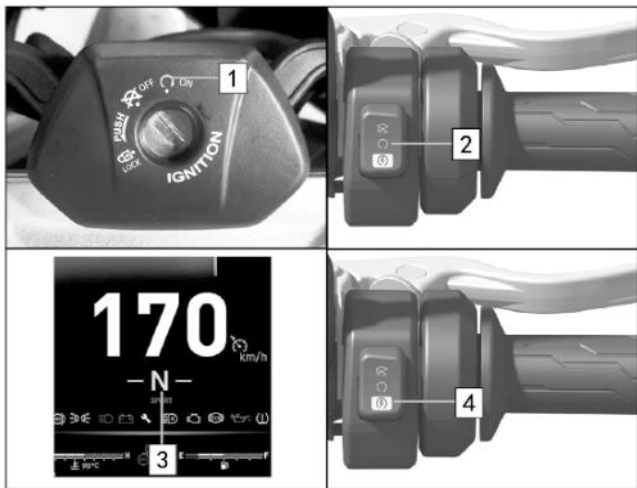
Position	Function	Notes
⊗	Used in parking (vehicle is powered off)	Key can be removed
○	Used in starting or driving	Key cannot be removed
🔒	Use when locking the vehicle (the vehicle is powered off and the direction is locked)	Key can be removed

⚠ Warning

- During the parking (including parking for a long time), the ignition switch must be in the "⊗" or "🔒" position to ensure the safety of the vehicle and prevent the battery from "losing power".
- Do not push the motorcycle while the steering mechanism is locked, otherwise it will be out of balance.

Start The Engine

Regardless of whether the engine is cold or hot, please follow the instructions below to start the engine.



1. Turn the ignition switch to the "○" (ON) position.
2. Ensure that the engine OFF switch is in the "○" position.
3. Shift the gear to neutral to start the engine. If the transmission is in gear, squeeze the clutch lever and ensure the side stand is retracted.
4. With the throttle fully closed, press the starter button to start the motorcycle.

If the engine fails to start:

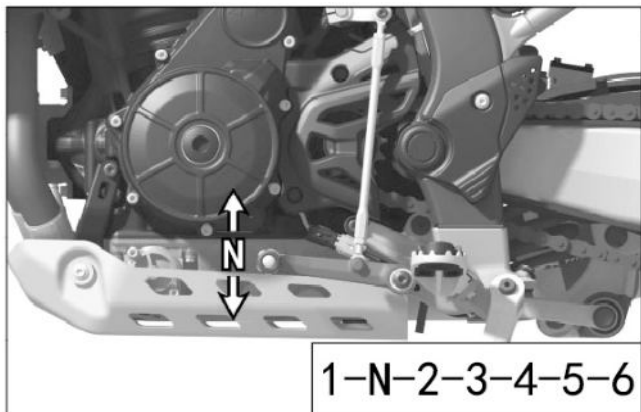
If the engine does not start within 3 seconds, wait for 10 seconds before repeating step 4.

Notes

- If the engine starts but idles unevenly, slightly increase the throttle.
- Prolonged high-speed idling and rotation can harm the engine and exhaust system.
- Sudden acceleration or prolonged idling at high speed for more than 5 minutes may cause the exhaust pipe to discolor.
- If the throttle is heavily opened, the engine will not start.

Gear Shifting

Your motorcycle features 6 forward gears with a 1-down, 5-up shifting pattern.



Gear shifting method:

Warm up the engine to ensure smooth operation.

1. When the engine is idling, disengage the clutch and press the gear shift pedal downward to engage the low gear (1st gear).
2. Gradually increase the engine speed while slowly releasing the clutch lever, coordinating these two actions to ensure a smooth start.
3. When the motorcycle reaches a steady riding state, reduce the engine speed, disengage the clutch, and lift the gear shift pedal to engage the 2nd gear, and so on.

Things to pay attention to while driving:

1. Avoid unnecessary engine idling, and do not allow the engine to idle at high speeds, as this can severely damage the components.
2. Driving with the clutch partially engaged will quickly wear out the clutch plates.
3. If you feel the engine lacks power while climbing a slope, promptly shift to a lower gear.
4. On steep slopes, curves, and situations that may cause loss of vehicle control, do not use the front brake alone or coast in neutral. Do not ride without holding the handlebars.
5. When stopping, reduce the throttle, disengage the clutch at the same time, and then apply the brakes.

Quick Shift System

The motorcycle is equipped with a bi-directional quick shift sensor, enabling you to upshift swiftly without using the clutch. As the throttle handle does not need to be closed, you can shift gears seamlessly and continuously.

- ▶ This function will not operate when upshifting with the throttle off.
- ▶ When operating the clutch lever, this function will not operate.
- ▶ When starting the vehicle or powering it on, ensure the shift lever is in a free state and avoid operations such as pedal use, which may cause errors in the initial position self-learning of the quick shifting sensor. If quick shifting cannot be performed in any gear due to the malfunction of sensor self-learning, you can try restoring this function by powering the vehicle off and then power on again.
- ▶ To ensure the proper operation of the quick shift function, when using this feature to shift gears, make sure the shifting action is continuous and complete. Avoid incomplete shifting operations, as the ECU may exit the torque control function, resulting in a failed shift.
- ▶ If the quick shifting sensor is not running properly, you can also use the clutch to complete the shifting operation.

Notes

- During daily maintenance, ensure the quick shift sensor remains clean (free of stains, sand, metal shavings, etc.) to maintain proper functionality.
- Develop good riding habits during regular rides. After shifting, promptly move your foot to the pedal and avoid placing it above or below the shift lever to prevent accidental shifting. Practice this function regularly to become familiar with its features and fully leverage its capabilities.

Traction Control System (TCS)

The motorcycle is equipped with TCS (Traction Control System), which allows the motorcycle to achieve optimal traction during driving. It effectively suppresses the rear wheel slippage during starts, sudden acceleration, etc., on slippery surfaces (such as ice, snow, rain, muddy), thereby improving driving stability and safety.

Except for the off-road mode, all other modes are equipped with TCS function. It is recommended to keep the TCS function enabled unless under special circumstances. When TCS is turned off and the rear wheel loses grip, the system will not request torque reduction, which may cause the vehicle to yaw or crash. The rider should adjust their riding style accordingly.

On slippery surfaces, TCS will not operate due to the engine's inherent braking intervention. If you suddenly decelerate by releasing accelerator, it may cause uncontrollable rear wheel slippage. Do not suddenly close the accelerator, especially when riding on slippery surfaces.

TCS may not be able to handle rapid refueling operations on rough roads. When accelerating, please consider the road and weather conditions, as well as your skills and physical condition. If motorcycle is stuck in mud, snow, or sand, temporarily turning off the TCS can make it easier to get motorcycle out. Turning off the TCS helps maintain control and balance during off-road riding.

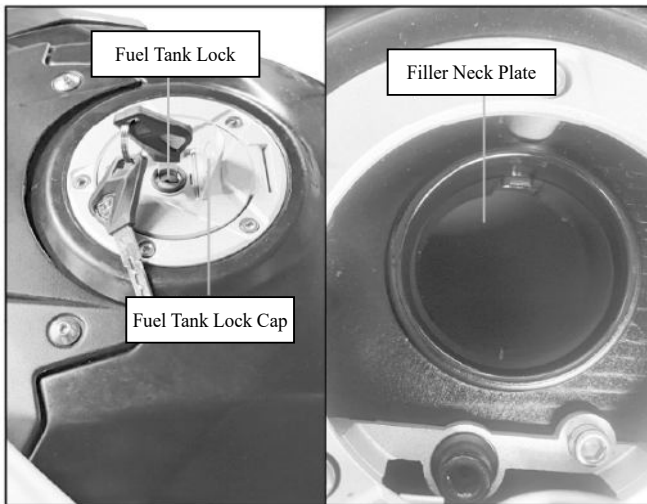
Always use the tire specifications, wheel speed sensors, and ring gears recommended by KOVE to ensure the TCS run properly.

When the TCS function is active, you may feel a weaker power output from the vehicle. This is normal and there is no need to worry or take any additional measures.

Notes

- During riding, when TCS intervenes, the warning light flashes with a pattern of 0.2 seconds on and 0.2 seconds off. When the TCS indicator remains lit, it may indicate that you have turned off the TCS function or that the TCS function has malfunctioned. Please turn off the ignition switch and then turn it back on. If the indicator still remains on, it indicates an abnormality in the TCS function. Please take the vehicle to an authorized KOVE motorcycle repair shop as soon as possible for troubleshooting.

Refueling



Open the fuel tank cap:

Lift the lock cover, insert the ignition key, and turn it clockwise to open the fuel tank cap.

Close the fuel tank cap:

1. After refueling, press down the oil tank until it locks.
2. Remove the key and close the fuel tank cap. If the fuel tank cap is not properly locked, the key cannot be removed.

When refueling:

After using the side stand to stabilize the vehicle, open the fuel tank cap for refueling to avoid overfilling. Monitor the oil level during the process, and it is recommended that the volume added does not exceed 90% of the total tank capacity (to prevent fuel swelling due to heat). The fuel tank capacity is 20L. The capacity of the fuel tank is 20 L. It is recommended to use 95# or above unleaded gasoline. After the fuel is filled, close and lock the fuel tank cap.

Note:

Regularly check if the fuel tank drain pipe is unobstructed to prevent pipeline stuck and drainage failure, avoiding excessive accumulated water entering the fuel tank.

▲ Warning

- When refueling, always do so outdoors, ensure the engine is turned off, stay away from heat sources, sparks, or open flames, and immediately wipe up any spills.

Maintenance

Please carefully read the "The Importance of Maintenance" and "Maintenance Guidelines" sections before preparing for maintenance. Refer to "Technical Parameters" for maintenance data.

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Maintenance

The Importance of Maintenance

Always maintain your motorcycle in good condition, as it is essential for your safety, protecting your property, achieving optimal performance, preventing breakdowns, and reducing air pollution.

Maintenance is a crucial responsibility for motorcycle owners. Make sure to perform checks before each ride and conduct regular inspections according to the maintenance interval table.

Please follow these guidelines during maintenance:

- Extinguish the engine and remove the key.
- Park the motorcycle on a firm and level surface using the side stand, or support it with a maintenance stand.
- Wait for the engine, muffler, brakes, and other high-temperature components to cool down before starting operations; otherwise, it may cause burns.
- Start the engine under specified conditions and ensure it is in a well-ventilated environment.

▲ Warning

- Failure to perform regular maintenance before riding or to properly address faults may result in serious or fatal accidents.
- Please follow the inspection, maintenance recommendations, and maintenance interval table provided in the user manual.

Maintenance Interval Table

The vehicle should be serviced within the specified time frame. To ensure safety, only authorized KOVEMOTO service centers are qualified for the maintenance.

The meanings of the symbols in the table are as follows:

I: Inspect, clean R: Replace A: Adjust L: Lubricate

Maintenance Item		Odometer					Cycle	Notes	
		1000Km	1000Km	20000Km	30000Km	40000Km	1 year		
★	Throttle control system	I	I	I	I	I	I	After the mileage reaches 40,000 km, maintenance should be repeated at each maintenance interval starting from 10,000 km. ★ This item should be serviced by personnel from an authorized KOVEMOTO Motorcycle service center. If the user has specialized tools, repair accessories, and repair skills, they can also perform the maintenance themselves. Repair instructions can be found in this Instruction Manual. ★ ★ To ensure safety, this project can only be serviced by authorized maintenance personnel from an authorized KOVEMOTO Motorcycle service center. Notes: 1. When riding in dusty or heavily polluted areas, the air filter element should be cleaned or replaced more frequently to reduce maintenance intervals. 2. When the operating conditions are harsh, the engine oil and filter should be replaced more frequently to reduce maintenance intervals. 3. Brake pad replacement can only be performed by personnel at an authorized KOVEMOTO Motorcycle service center. When the tire wears to the Δ TW ¹ mark on the sidewall or the wear limit indicator at the center of tire, it must be replaced by personnel from an authorized KOVEMOTO Motorcycle service center.	
★	Air filter element		R	R	R	R	R		
★★	Valve clearance			I/A		I/A	I		
★	Engine oil	Replace at 1000Km, and every 5000Km thereafter					R		Note 2
★	Oil filter element	Replace the oil at the same time					R		
	Transmission chain	Inspect or adjust after every 1,000 km, after car washing, and after riding in rainy weather or humid areas					I/A		
	Brake pad wear	I	I	I	I	I	I		
★	Brake system	I	I	I	I	I	I		
★	Clutch	I	I	I	I	I	I		
★	Fasteners		I	I	I	I	I		
★★	Steering bearing	I	I	I&L	I	I&L	I&L		
★★	Tire		I	I	I	I	I		
★★	Front and rear wheel bearings		I	I	I	I	I		
	Battery	I	I	I	I	I	I		
★★	Fuel system fuel line		I	I	I	I	I		
★★	Fuel filter		R	R	R	R	R		
★★	Spark plug		I	I/R	I	I&R	I&R		
★★	Plain fork bearing		I&L	I&L	I&L	I&L	I&L		
★★	Brake fluid		I	I	I	R	Replace every two years		
	Coolant		I	I	I	R	Replace every two years		

Critical Component Torque Periodic Inspection Checklist

S/N	Name of Fastening Location	Recommended Inspection Interval
1	Front and rear wheel axle tightening	Torque inspection is required during each maintenance cycle.
2	Upper and lower triple clamps tightening to secure the front shock absorber.	
3	Upper triple clamp and steering stem tightening	
4	Steering stem 8-slot nut tightening	
5	Handlebar lower clamp tightening	
6	Engine sprocket installation tightening	
7	Engine mounting fastening	
8	Rear shock absorber fastening	
9	Fastening of cradle bolts	
10	Front section of muffler with engine	
11	Front and rear brake caliper tightening	
12	Rear brake pump tightening	
13	Shift lever and adjustment rod end bearing tightening	
14	Brake pedal and adjusting lever end bearing tightening	
15	Entire brake line tightening	
16	Fuel rail tightening	
17	Fuel pump tightening	When cleaning the fuel lines, perform maintenance according to the specified torque requirements.
18	Front and rear brake discs tightening	During each maintenance cycle inspection or replacement, perform maintenance according to the specified torque and sealing method.
19	ABS ring gear	

Note: For torque cycle inspection items not specified in this Instruction Manual, the torque standards shall be followed as per our company's "Maintenance Manual".

Maintenance Guidelines

To ensure safety, you are responsible for performing a pre-ride inspection and making sure that any issues identified have been resolved. Conducting a pre-ride inspection is essential.

Inspection Items	Inspection Details
Handlebar	Smooth and flexible rotation, free from play or looseness
Brake system	Check its operating condition, and inspect the front and rear brake fluid levels and brake pad wear.
Fuel level	Sufficient fuel for the planned journey (refuel if necessary)
Accelerator	Check if it can open smoothly and close completely in all steering positions.
Clutch	Check its operating condition and adjust the free stroke if necessary.
Wheels/tires	Check its usage status and tire pressure, and inflate if necessary.
Drive chain	Inspect its usage condition and sag, and adjust and lubricate if necessary.
Lighting, horn	Check the lighting system and horn to ensure they are functioning correctly.
Engine oil level	Add engine oil as needed and check for leaks.
Instrument indicators	Check if all indicators on the instrument panel are functioning properly.

Replacement Parts

Battery

Inspect and replace the battery.

1. Before installing the battery, if the electrodes are found to be dirty, clean them thoroughly before installation; otherwise, poor contact may lead to malfunction.
2. If during use, the battery exhibits abnormal phenomena such as deformation, overheating, or smoking, stop using it immediately and have it inspected by an authorized KOVEMOTO Motorcycle service center.
3. If the battery is stored in a high-temperature or humid environment for an extended period, it may malfunction or experience a shortened lifespan. Before reuse, ensure the battery's appearance and functionality are normal.
4. If the vehicle fails to start, check whether the battery is functioning properly. If the battery is damaged, replace it immediately.
5. When installing the battery, ensure the battery terminal bolts are securely tightened.

If the battery is not used for an extended period, please note the following:

- To prevent over-discharge, the battery should be charged every two months.
- When the battery is not in use, it should be stored in a cool, dry environment, and the positive and negative terminals should be protected from short-circuiting.

Notes

- Improper handling of batteries may harm the environment and human health. Please dispose of used batteries in accordance with local environmental regulations.
- The addition of electrical appliances may cause battery drain and even electrical system malfunction.

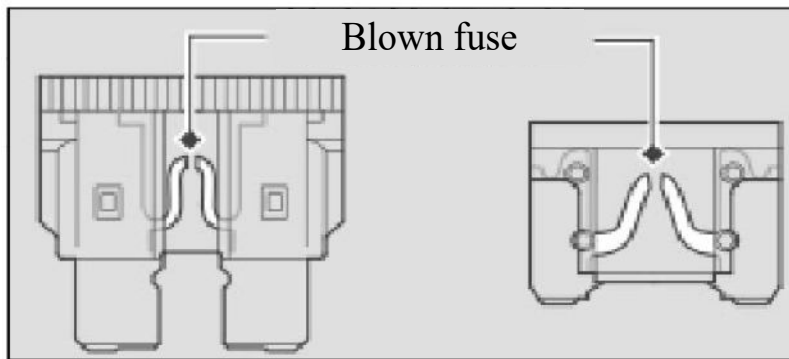
Fuse

Fuses protect your motorcycle's electrical circuits. If any electrical components of your motorcycle stop functioning, inspect and replace the blown fuse.

Inspect and replace the fuses

Turn the ignition switch to the "⊗" (off) position, then remove and inspect the fuse. If the fuse is blown, replace it with a fuse of the same specification. Refer to the "Technical Parameters" section for the fuse Parameters.

If the fuse blows frequently, there may be a hidden issue with the electrical system. Please have it inspected by a authorized KOVEMOTO Motorcycle service center.



Notes

- Fuses must be replaced with ones of the same rating. Using a fuse with a higher rating increases the risk of damaging the electrical system and may pose a fire hazard.
- Installing non-KEVOMOTO electrical accessories can overload the electrical system, lead to battery discharge, and even damage the system.

Engine oil

Engine oil consumption and degradation vary depending on riding conditions and usage duration. The higher the engine speed, the faster the oil consumption rate. When operating at high speeds or high RPM for extended periods, shorten the oil change interval. Regularly check the engine oil level and add the recommended engine oil if necessary.

When used in extreme temperatures, oil degrades more rapidly. Dirty or aged oil should be replaced promptly.

Brake fluid

Do not add or replace brake fluid except in an emergency. Only use brake fluid that has been freshly taken from a sealed container. If you have added brake fluid, please have the brake system inspected by an authorized KOVEMOTO Motorcycle service center as soon as possible.

Coolant

Only use the original undiluted KEVO Motorcycle pre-mixed coolant, which offers superior protection against corrosion and overheating. Regularly check the coolant level and promptly add more if it falls below the minimum mark. The coolant has a freezing point of -38°C and a boiling point of 125°C.

Choosing Engine Oil

The engine oil should be of API classification SN grade or above, with the specification SN_10W50.

Notes

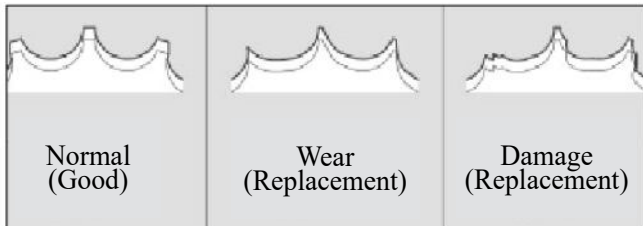
- Brake fluid can damage plastic and painted surfaces. If spilled, wipe it off immediately and clean thoroughly.
- Recommended brake fluid: DOT4 or equivalent.
- Use coolant specifically designed for non-aluminum engines, as ordinary tap water or mineral water can cause corrosion.

Drive Chain

The drive chain must be regularly inspected and lubricated. If frequently ridden on poor road surfaces, at high speeds, or with repeated rapid acceleration, the chain should be checked more often.

If the drive chain does not operate smoothly, produces unusual noises, has damaged rollers or loose pins, or missing or bent seals, have the chain inspected by an authorized KOVEMOTO Motorcycle service center.

Also inspect the drive sprocket and driven sprocket. If either shows wear or damaged teeth, have them replaced by an authorized KOVEMOTO Motorcycle service center.



Notes

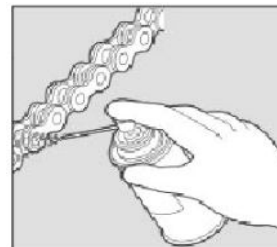
- Using a new drive chain on worn sprockets will accelerate chain wear; both the drive chain and sprockets should be replaced simultaneously.
- Recommended lubricant: Specialized lubricant for chain oil seals.

Cleaning and Lubricating

After checking the sag, clean the chain and sprockets while rotating the rear wheel using a dry cloth, a chain cleaner for sealed chains, or a neutral detergent. If the chain is dirty, use a soft brush. After cleaning, dry it and lubricate with the recommended chain oil.

Avoid using steam cleaners, high-pressure cleaners, wire brushes, volatile solvents like gasoline and benzene, scrubbing agents, chain cleaners, and lubricants that are not specifically designed for oil-sealed chains, as they may damage the chain oil seals.

Avoid getting lubricant on the brakes or tires, and refrain from using excessive lubricant to prevent it from splashing onto clothing or the motorcycle.



Tire (Inspection/Replacement)

Tire specifications

Front tire: 110/80 R19

Rear tire: 150/70 R17

Abnormal wear check

Inspect the tire's contact surface for any signs of abnormal wear.

Inspect the tread depth

Check the tread wear indicator marks; if the wear reaches the indicators, replace the tire immediately.

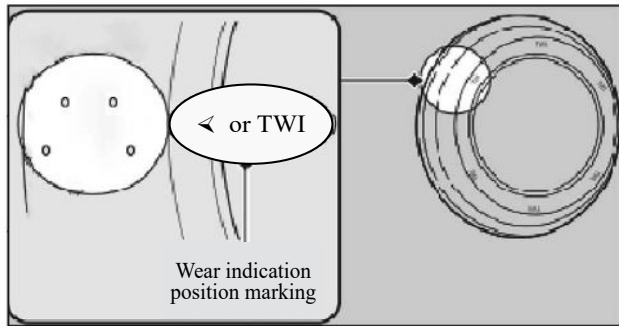
Check the tire pressure

When you feel the tire pressure is low, measure it with a pressure gauge. Check the tire pressure when the tires are cool, and do this at least once a month. Ensure the valve core cap is securely tightened; replace it with a new one if necessary.

The standard tire pressure is: Front tire: 230 kPa; Rear tire: 250 kPa.

Check the damage

Inspect the tires for cuts, cracks, exposed fabric, tire cords, nails, or other foreign matters embedded in the sidewall tread, and also check for any abnormal bulges or swelling on the tire sidewall.



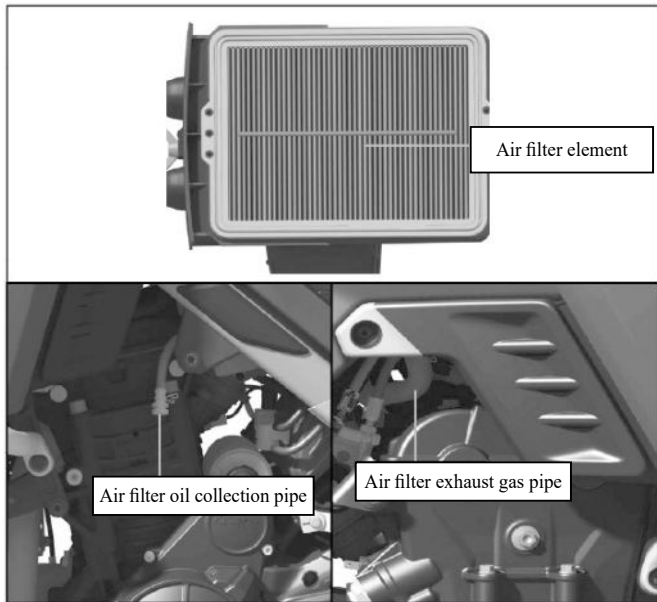
Whenever replacing tires, follow these guidelines:

- Use the recommended tires or equivalent products with the same size, structure, speed rating, and load capacity.
- After installing the tires, use the original KOVEMOTO motorcycle wheel balancer or equivalent equipment to balance and align the wheels.
- This motorcycle rim is designed for use with inner tubeless tires. Do not install Inner tube in tire yourself. If Inner tube is installed, it will rub against rim during rapid acceleration or braking, and the excessive heat will cause Inner tube to burst.

▲ Warning

- Using excessively worn or improperly inflated tires can lead to accidents, resulting in serious injuries or fatalities. Please follow the relevant tire inflation and maintenance guidelines provided in the Instruction Manual.
- Installing unsuitable tires can impair handling and stability, potentially causing accidents and even endangering lives.
- Always use the tire size and type recommended in this Instruction Manual.

Air filter



This motorcycle is equipped with a paper air filter element. Do not perform maintenance yourself. It should be cleaned or replaced by an authorized KOVEMOTO Motorcycle service center.

The oil collection tube of the air filter is located on the lower left side of the air filter. Check whether there is water or oil in the oil collecting tube every 3 month, especially check promptly after washing the motorcycle or exposure to heavy rain. If any, remove the air filter oil collecting tube to conduct discharge, and reinstall it after draining completely.

The air filter exhaust pipe is located on the upper right side of the engine, used to release exhaust gas inside the engine and prevent water or other substances from entering it. When engine power is insufficient, promptly check if the air filter exhaust pipe has a blockage. If any, remove the air filter exhaust pipe to drain the exhaust gas, then reinstall it after ensuring it is completely clean.

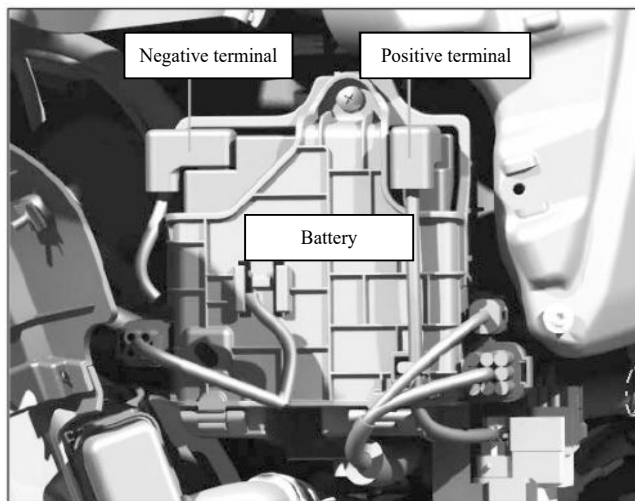
Tools

The onboard tools are embedded under seat cushion towards the back. You can use the onboard tools to conduct some simple repairs, fine-tune, and replacement of parts.

- Double-ended internal torx wrench T25×T30

Removal and Installation of Body Components

Battery



Disassembly

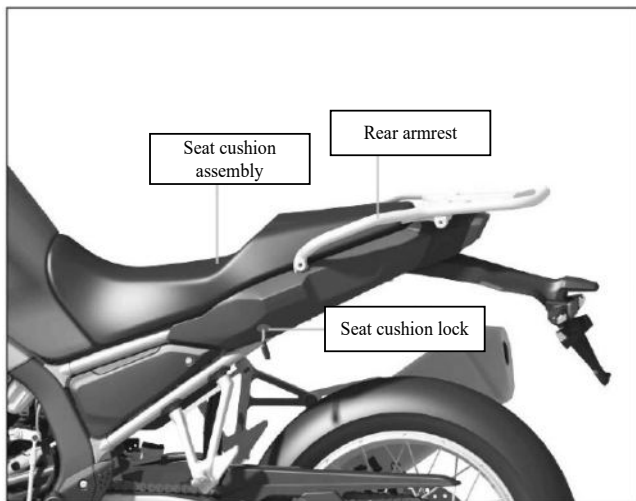
Make sure the ignition switch is turned to the "⊗" (off) position.

- 1.Remove the left fuel tank protector.
- 2.Remove the battery box cover.
- 3.Disconnect the negative (-) terminal of the battery.
- 4.Disconnect the positive (+) terminal of the battery.
- 5.Remove the battery and do not leave the bolts and nuts.

Installation

Install each component in the reverse order of disassembly. Connect the positive terminal (+) first, and finally the negative terminal (-); ensure the bolts and nuts are tightened.

Seat Cushion



Disassembly

Insert the ignition key into the seat cushion lock, rotate the key clockwise, and at the same time, apply slight force to the front end of the seat cushion assembly. Then, lift the rear end upwards to disengage it from the lock, and finally, apply slight force backwards to remove the seat cushion assembly.

Installation

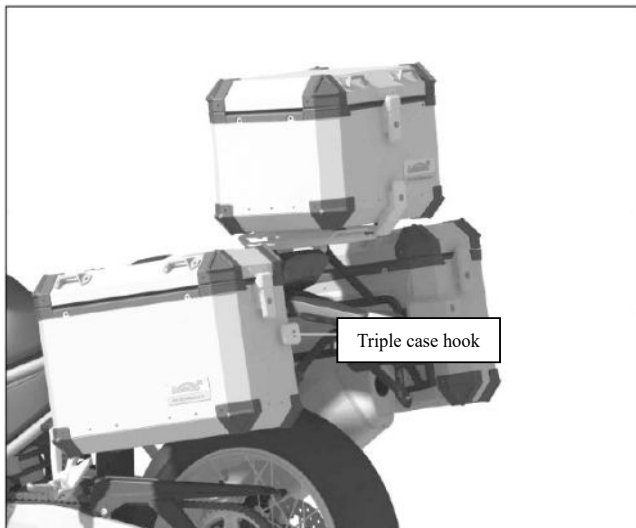
1. Insert the front and rear pins of the seat assembly into the frame slot respectively.
2. Align the seat lock pin with the lock hole, press the rear part of the seat downward, insert the lock pin into the lock hole of the seat lock and lock it automatically by the lock tongue, and pull it up slightly to ensure that the seat is firmly locked in place.

When the seat cushion is closed, the seat cushion will automatically lock.

Notes

- Ensure the seat pin is securely inserted into the frame slot; otherwise, the seat may not support your weight and could be damaged.

Triple Cases-ZF800GY-B



Notes

- The maximum load capacity for each side case is 10 kg, and for the top case it is 5 kg.
- When riding with side cases, ensure proper left-right balance. Do not exceed a maximum speed of 120 km/h.

Disassembly

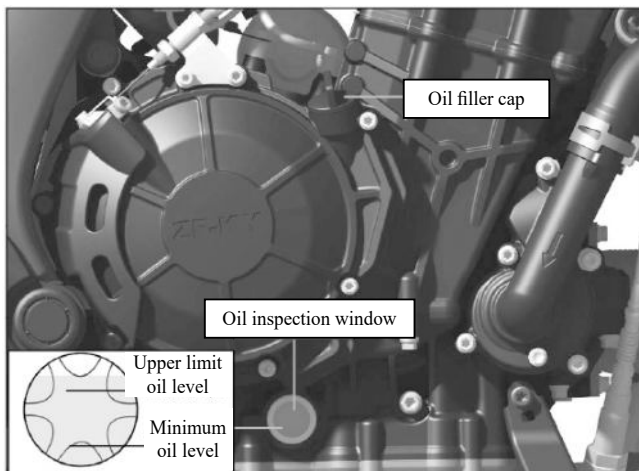
1. Open the case hooks that connect the triple cases to the mounting bracket.
2. Lift the side case upward to disengage the four slots on the back of the side case from the mounting pegs on the side case bracket.

Installation

1. Open the side case hook connected to the side case bracket.
2. After aligning the four slots on the back of the side case with the side case mounts of the three-box bracket, insert the side case slots into the mounting pegs on the bracket from top to bottom.
3. Attach the hook to the side case mounting piece to secure the side case.
4. After aligning the slot at the bottom of the top case with the hook of the bracket, insert the top case slot into the mounting peg on the bracket from back to front.
5. Hook the top case return hook into the top case latch piece and install the latch piece under the top case bracket. Secure the latch piece and bracket with a hex flange self-locking nut, then fasten the hook to the side case mounting piece to fix the top case in place.

Engine Oil

Inspect and top up engine oil



Notes

- Long-term skin contact with oil shall be avoided. Wash thoroughly after contact with oil.
- Overfilling or underfilling the oil will damage the engine. Do not mix oils of different brands and grades, as this will affect lubrication and clutch operation.
- The used engine oil and container are harmful to health and the environment. They cannot be disposed of as household waste and should be handled in accordance with local environmental regulations.

Check the engine oil

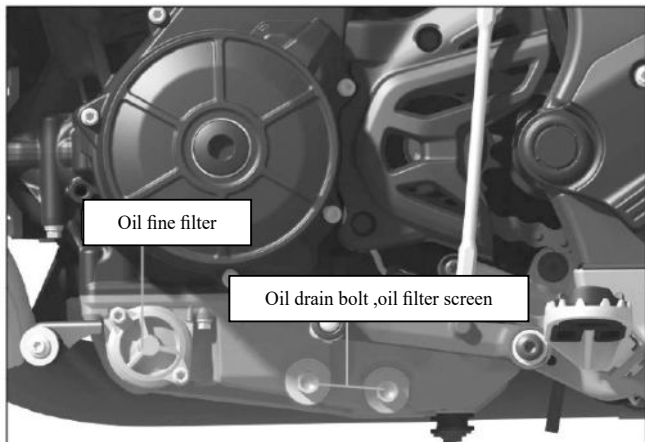
1. Let the engine idle for 3 - 5 minutes, turn the ignition switch to the "⊗" (OFF) position, and then wait for 2 - 3 minutes.
2. Place the motorcycle vertically upward on a stable and flat ground, check whether the oil level is between the upper and lower limit mark from the engine oil inspection window.

Add the engine oil

When the engine oil level is below or close to the lower limit mark, add the recommended engine oil.

1. Remove the engine oil filler cap, add the recommended oil to the upper mark of the oil level. Do not exceed the upper limit mark, and ensure that no foreign matters enter the engine oil filler. If there is any spillage, wipe it off immediately.
2. Reinstall and tighten the engine oil filler cap.

Replace the engine oil and oil fine filter



Replace the engine oil and oil fine filter

Special tools are required to replace the engine oil and the oil fine filter. We recommend that the replacement be completed by an authorized KOVEMOTO service center. Please refer to the "Maintenance Interval Table" for the maintenance interval of engine oil and secondary oil filter. Use the specified KOVEMOTO original engine oil and oil fine filter.

1.If the engine is cold, please idle for 3-5 minutes, turn the

ignition switch to the "⊗" (OFF) position, and then wait for another 2-3 minutes.

2.Park the motorcycle on a firm and flat level.

3.Remove the lower protector of the engine and place an oil drain pan under the oil drain bolt.

4.Remove the filter neck cap, 2 oil drain bolts and sealing washer, and disassemble the oil strainer to drain the oil until it drips.

5.Remove the oil fine filter cap, take out the filter, and drain the remaining oil.

6.Replace the oil fine filter with a new one and install the fine filter cover (torque: $6 \pm 1 \text{ N}\cdot\text{m}$).

7.Reinstall the cleaned oil strainer into the case.

8.Install a new sealing washer on the oil drain bolt and tighten the oil drain bolt (torque: $20 \text{ N}\cdot\text{m}$).

9.Add the recommended original engine oil into the crankshaft tank, and tighten the oil filler cap after filling.

When replacing the filter element, the required oil level: 3 L

When the filter element is not replaced, the required oil level: 2.8 L

When reassembling after disassembling the engine, the required oil level: 3.2 L

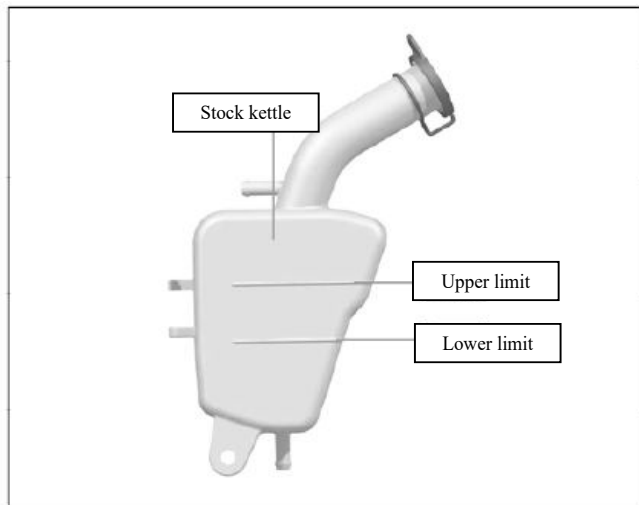
10.Check the engine oil for leakage.

Precautions for replacing the engine oil and the secondary oil filter:

1. Using the wrong engine oil and oil fine filter can seriously damage the engine.
2. Every time the engine oil is replaced, the oil strainer should be checked and cleaned. If the oil strainer is found to be damaged, it should be replaced promptly.
3. Replace the engine oil and install a new oil fine filter when changing the oil.
4. Replace the fine filter cover seal ring and coat grease when installing the oil fine filter cover.
5. The used engine oil, oil fine filter and container are harmful to health and the environment. They cannot be disposed of as household waste and should be handled in accordance with local environmental regulations.

Coolant

Inspect the coolant level

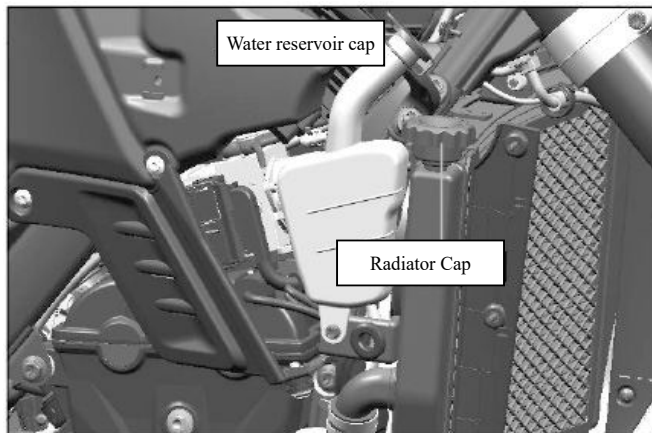


Check the coolant level in the reservoir when the engine is cool.

1. Park the motorcycle on a firm and flat level.
2. Keep the motorcycle upright.
3. Check if the coolant level in the water reservoir is between the upper limit and lower limit marks (at least once per month).

If the coolant level drops significantly or the reservoir is empty, there may be a serious leak. Please have it inspected by an authorized KOVEMOTO Motorcycle service center.

Add coolant



If the coolant is below lower limit, add the recommended coolant until the level reaches upper limit.

When adding the coolant, open the radiator cap to release pressure when the engine is cool, then open the water reservoir at the other end to add coolant. Ensure no foreign matter enter the cap opening and do not exceed upper limit during the process.

After completing the addition, reinstall the relevant caps.

Replace the coolant

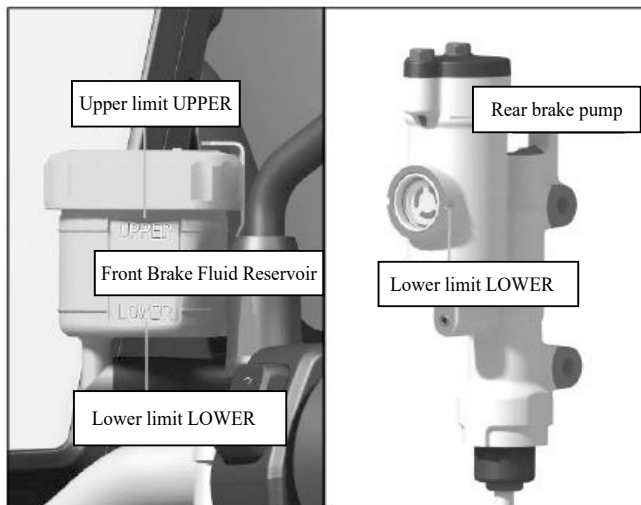
Unless you possess the appropriate tools and qualified mechanical skills, please entrust the coolant replacement to the authorized KOVEMOTO Motorcycle service center.

▲ Warning

- Do not remove the radiator cap while the engine is still hot, as this may cause the coolant to spray out and potentially cause burns.

Brake

Inspect the brake fluid



1. Place the motorcycle vertically on a firm and flat ground.
2. Check if the brake fluid reservoir is level.
3. Check the brake fluid level. If the brake fluid is below the lower limit mark, please add it immediately.

If the brake fluid level in the oil reservoir is lower than the lower limit (LOWER) level mark or the free play of the brake rod and pedal is out of limit, users must check whether the brake pad is worn. If the brake pad is not worn, there may be leakage. Please have it repaired by an authorized KOVEMOTO service center.

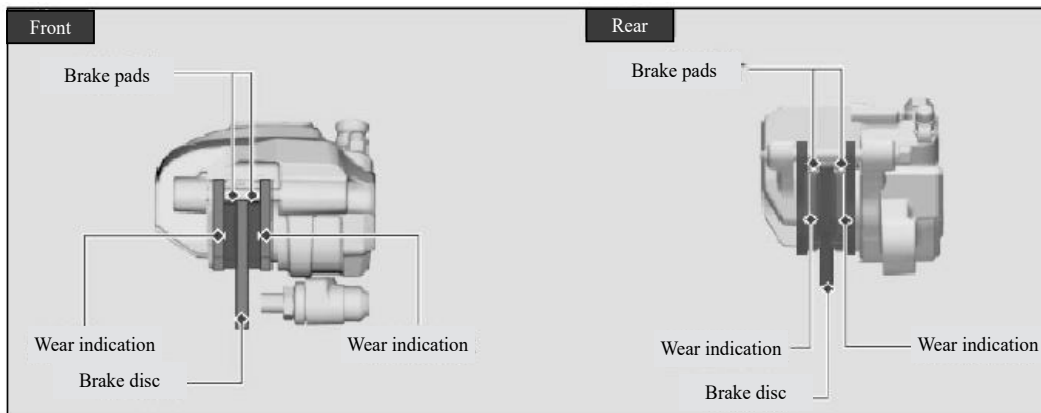
Check the brake pads.

Inspect the condition of the brake pad wear indicator. If the brake pad wears down to the indicator mark, it must be replaced.

Front Inspect the brake pad from beneath the brake caliper.
Brake pad lining thickness: 6.5mm (indicator mark indicates the wear limit)

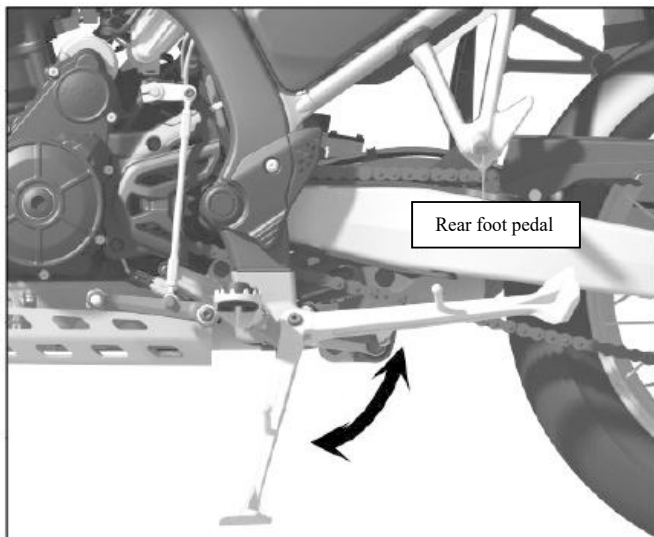
Rear Inspect the brake pad from the right rear of the brake caliper.
Brake pad lining thickness: 7mm (indicator mark indicates the wear limit)

If necessary, please have the brake pads replaced at a authorized KOVEMOTO service center. When the wear limit is reached, both the left and right brake pads must be replaced simultaneously.



Side Stand/Rear Footpeg

Check side stand



Check rear footpeg

Check side stand

1. Check if the side stand operates smoothly. If the side stand is stuck or makes a squeaking noise, clean the pivot area and lubricate with clean grease.
2. Check the spring damages or inelasticity.

Check the rear footpegs after driving on unpaved roads for an extended period:

1. If the left or right rear footpeg is stuck, please use WD-40 or a cleaning agent with similar lubrication effect to spray it on the rotating gap of the footpeg, wait for about 1 minute to remove any internal foreign matter, and restore the footpeg to normal operation.
2. Check if the torque of the left and right footpeg connection to the frame has dropped. If the torque drops below 16 N·m, please restore it to 22 N·m.

Drive Chain

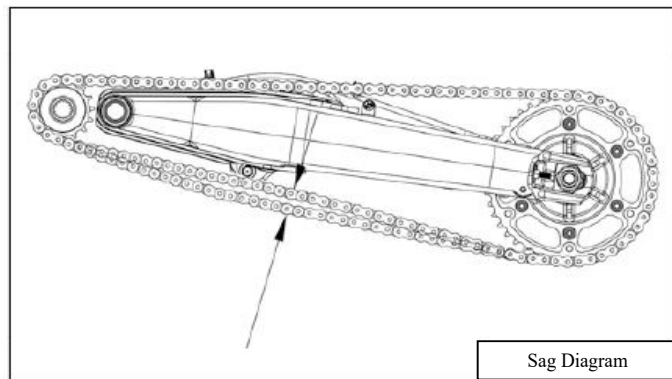
Check the drive chain sag

Check the sag at various points along the chain. If the sag is inconsistent at any point, some links may be bent or kinked. Please have the chain inspected by an authorized KOVEMOTO motorcycle service center.

1. Put the transmission into neutral and turn off the engine.
2. Place the motorcycle vertically on a firm and flat ground.
3. Determine the chain sag by pushing the chain toward the swingarm in the area behind the chain guard.
4. Rotate the rear wheel forward and check if the chain operates smoothly.
5. Inspect the sprocket.
6. Clean and lubricate the drive chain.

Drive chain sag: 30-45 mm

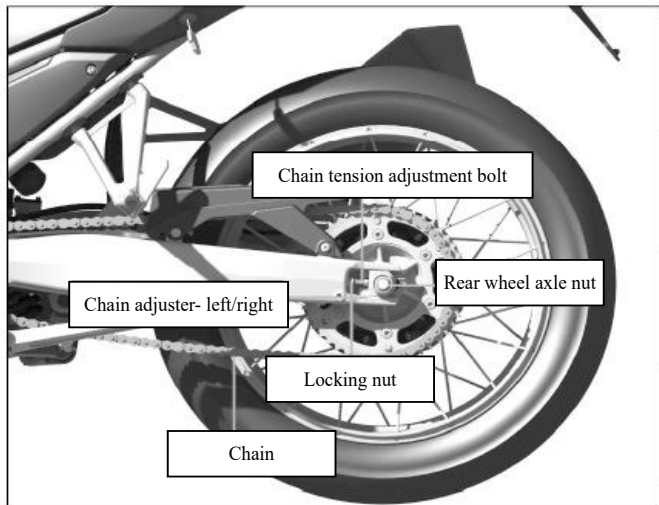
If the sag exceeds 45mm, you must not continue riding the motorcycle.



Notes

- When inspecting the drive chain sag, ensure that the upper section of the chain is properly tensioned.

Adjust the sag of the drive chain



When adjusting the sag of the drive chain:

1. Put the transmission into neutral and turn off the engine.
2. Place the motorcycle vertically on a firm and flat ground.
3. Loosen the rear wheel axle nut.
4. Loosen the locking nut and chain tension adjusting bolt with an open-end wrench.
5. Rotate the chain tension adjusting bolt to adjust the chain tension. The chain tension adjustment range is 25-35mm (see sag diagram for details).
6. Push the chain in the direction of the plate fork at the middle of the upper part of the rear plate fork, to determine the reasonable sag of the chain.
7. The left and right chain adjuster should be adjusted to the same scale line.

Notes

- When adjusting the drive chain sag, ensure that the upper section of the chain is taut.

Clutch

Clutch lever free stroke: 3-6mm



Inspect the clutch cable for any bends or signs of damage. If necessary, have it replaced by an authorized KOVEMOTO motorcycle service center. Lubricate the clutch cable with a dedicated cable lubricant to prevent premature wear and corrosion.

Notes

- Incorrect adjustment of the free stroke can lead to premature wear of the clutch.

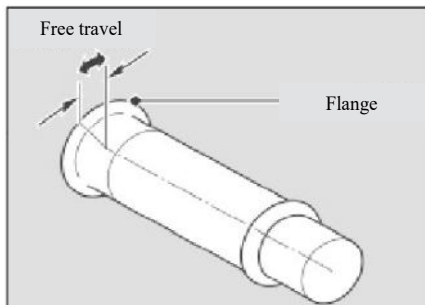
Accelerator

Inspect the throttle

With the engine off, check if the throttle can smoothly transition from fully closed to fully open in all handlebar positions and if the free play is correct.

If the throttle operation is not smooth, it automatically closes, or the cable is damaged, have it inspected by an authorized KOVEMOTO motorcycle service center.

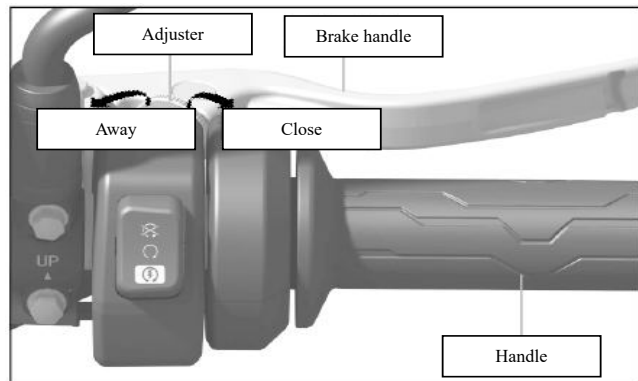
Free play of the throttle handle flange: 2-6mm



Notes

- Do not turn the adjuster beyond its natural limit.

Adjust the brake handle



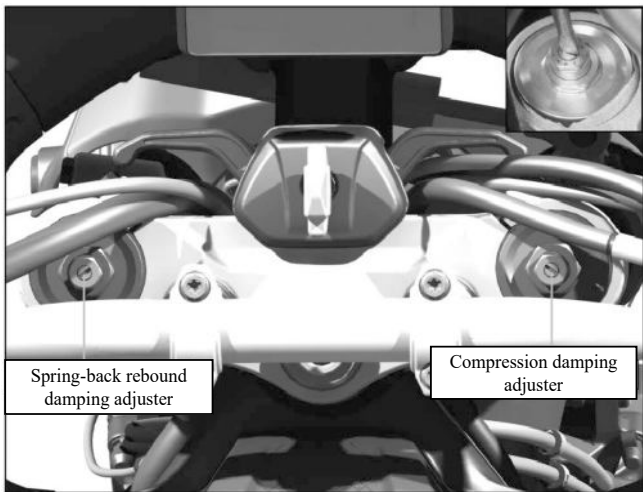
You can adjust the distance between the top of the brake handle and the handlebar grip.

Adjustment method

Push the brake lever outward to the desired position, and then rotate the adjuster. When rotated clockwise, the brake lever will move closer to the handlebar; when rotated counterclockwise, the brake lever will move farther away from the handlebar. After adjustment, check whether the brake handle works correctly before riding.

Front Shock Absorber Adjustment

Compression damping adjustment



Notes

- Do not apply excessive torque to the adjusting bolt, as it may damage the adjustment device. The adjusting torque shall not exceed $0.5\text{N}\cdot\text{m}$.

The adjustment of the compression damping affects the speed at which the front shock absorber compresses. Front Shock Absorber

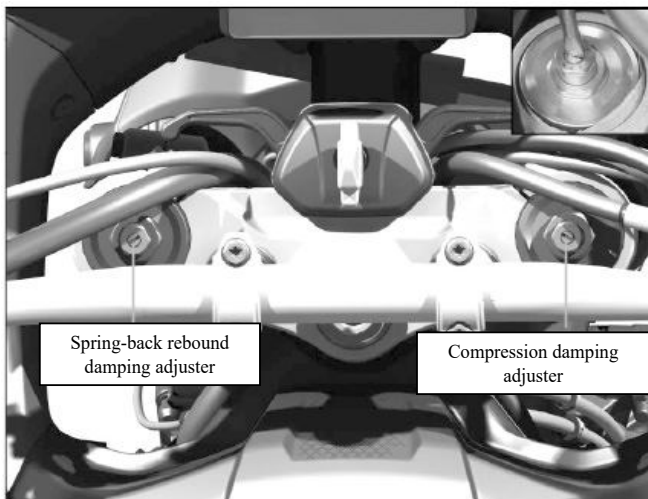
The front shock absorber's compression damping is located on the right side of the shock absorber and is marked with "COMP". Adjust the slotted part of the stud center.

The compression damping has 24 ± 2 clicks. Rotating the adjusting bolt clockwise (H) increases compression damping, while rotating it counterclockwise (S) decreases compression damping.

Set standard compression damping:

1. Clockwise rotate the compression damping adjuster until it cannot be rotated.
2. Rotate the adjuster in a counterclockwise direction. The standard compression damping is set by rotating it 18 clicks counterclockwise from the fully tightened position (where a click sound is heard).

Rebound damping adjustment



The adjustment of rebound damping will affect the rebound speed of the front shock absorber. The rebound damping of the front shock absorber is marked "TEN" on the left side of the front shock absorber. Adjust the slotted part of the stud center.

The front shock absorber has 24 ± 2 rebound damping clicks. Rotating the adjustment bolt clockwise (H) increases rebound damping, while rotating it counterclockwise (S) decreases rebound damping.

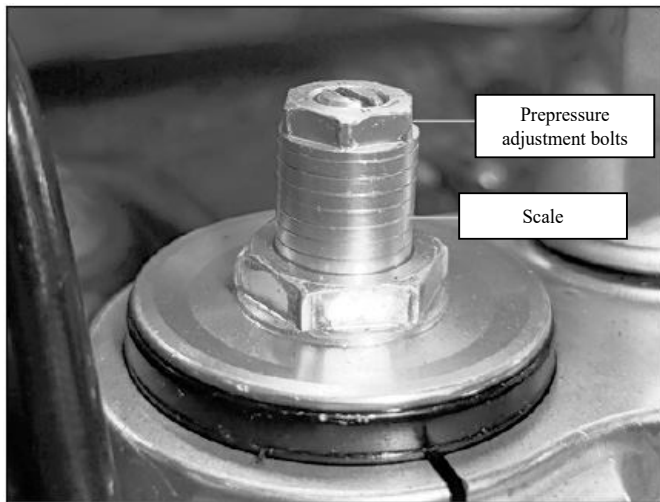
Set the standard rebound damping:

1. Clockwise rotate the spring-back rebound damping adjuster until it cannot be rotated.
2. Rotate the adjuster in a counterclockwise direction. The standard rebound damping is set by rotating it 18 clicks counterclockwise from the fully tightened position (where a click sound is heard).

Notes

- Do not apply excessive torque to the adjusting bolt, as it may damage the adjustment device. The adjusting torque shall not exceed $0.5\text{N}\cdot\text{m}$.
- By turning the adjuster clockwise, both compression damping and rebound damping can be.

Spring pre-compression adjustment



Spring pre-compression adjustment affects the force required to compress the spring. The higher the pre-compression, the greater the force required for the spring to compress the same distance; the lower the pre-compression, the less force the spring needs to compress the same distance. Adjust the hexagonal part of the front shock absorber stud.

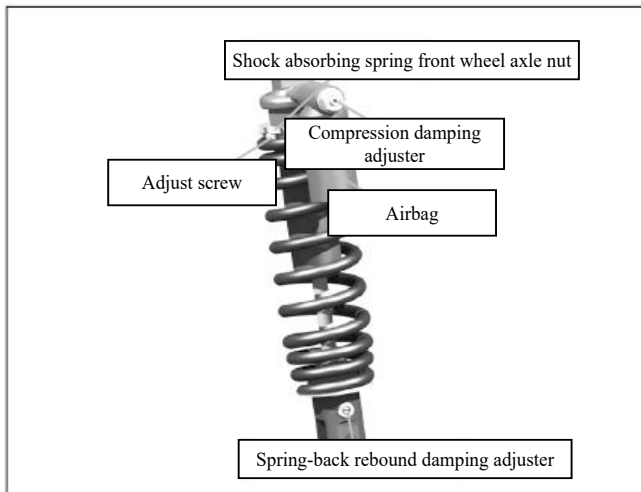
Rotate the pre-compression adjusting bolt clockwise to increase spring preload, and rotate it counterclockwise to decrease spring preload.

When adjusting the spring pre-compression, ensure the scale marks on both the left and right sides of the shock absorber are equal, with one mark representing 2mm.

You can make adjustments based on your weight and riding conditions. Ensure that after each adjustment, the bolts on left and right shock absorbers are set to the same position.

Rear Shock Absorber Adjustment

Airbag



The rear shock absorber assembly includes a shock airbag containing high pressure nitrogen. Do not attempt to remove, repair or dispose of the device. Piercing or exposure to flame may also cause an explosion, causing serious injury. Repair or disposal should be completed by special repair shop of KOVEMOTO.

Spring preload adjustment

Adjust the spring preload after the engine has been stationary for some time. Rotate the shock absorber spring preload adjusting nut to adjust the spring preload. Rotating the nut clockwise to increase spring preload; rotating the nut counterclockwise to reduce spring preload.

Compression damping adjustment

The compression damping adjuster is located at the upper left of the rear shock absorber, with 20 ± 2 clicks of compression damping. The compression damping increases after clockwise (H) adjustment, and the compression damping decreases after counterclockwise (S) adjustment.

Set standard compression damping:

1. Rotate the adjuster clockwise (H) until it cannot be rotated.
2. Rotate the adjuster counterclockwise for 10 clicks from the hardest position.

Rebound damping adjustment

The spring-back rebound damping adjuster is located at the lower left end of the rear shock absorber, with 23 ± 2 clicks of rebound damping. Rotating the adjusting bolt clockwise (H) increases rebound damping; rotating it counterclockwise (S) reduces rebound damping.

Set the standard rebound damping:

1. Rotate the rebound damping adjuster clockwise (H) until it cannot be rotated.
2. Rotate the adjuster in a counterclockwise (S) direction. The standard rebound damping is to rotate 10 clicks counterclockwise from the hardest position (where a click sound is heard).

Notes

- Gently rotate the adjusting bolt to prevent damage to the shock absorber.
- When adjusting compression damping or rebound damping, always use a properly sized tool to avoid damaging the device.
- Make sure that the adjusting bolt is firmly in the fixed position during each adjustment.
- The adjusting torque for compression damping and rebound damping shall not exceed $0.5 \text{ N}\cdot\text{m}$.

Shock absorber inspection

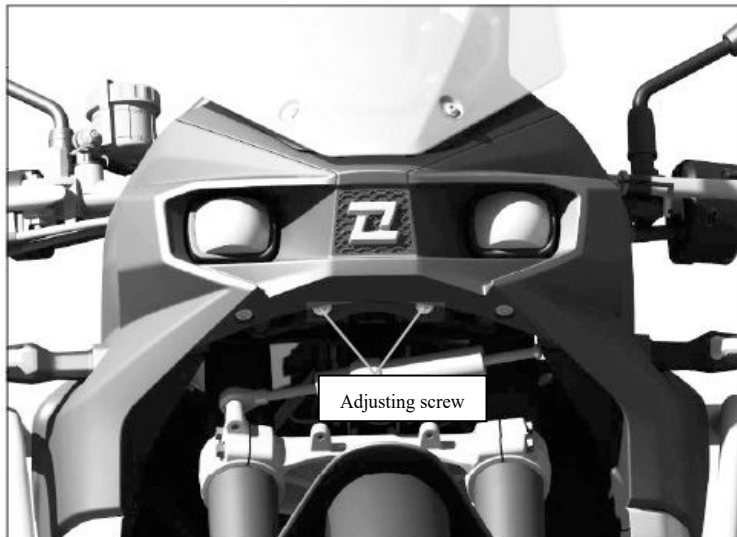
Check and clean all parts of the shock absorber regularly to ensure optimum performance:

1. Check that the front shock absorber trim and dust seal are clean and that there is no soil or dirt on the front shock absorber.
2. Check for oil stains under the spring strut dust seal. If there are signs of oil leakage, replace the damaged dust seal and oil seal.
3. Pinch the hand brake lever and press the steering handlebar back and forth several times to check whether the front shock absorber rebounds smoothly.
4. Press the seat cushion several times to check whether the rear shock absorber works smoothly.

Headlight

Adjust the headlight beam

You can adjust the angle of the headlight beam by rotating the adjusting screw, and the clockwise rotation is the overall decline of the headlight beam; The counterclockwise rotation is the overall rise of the headlight beam. Please comply with local laws and regulations.



Fault Handling

Please carefully review the "Maintenance" and "Technical Parameters" sections before servicing. For repair data, refer to the "Technical Parameters."

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The Engine Fails To Start

The starter motor runs, but the engine fails to start.

Inspect the following items:

- Verify that the correct engine start sequence is being conducted.
- Check if there is fuel in the tank.
- Check whether the battery voltage is too low.

The starter motor is not functioning.

Inspect the following items:

- Verify that the engine start sequence is correct.
- Ensure that the engine OFF switch is in the operating position.
- Check whether the battery voltage is too low, the fuse is blown, or the battery connection is loose. If the problem persists, please have it inspected by an authorized KOVEMOTO motorcycle service center.

Notes

- Continuing to ride with an overheated engine can cause serious engine damage.
- Running the engine at high speed in neutral for an extended period may trigger a high coolant temperature alarm.

Overheating (water temperature warning indicator on)

If the engine gets overheating caused by the water temperature warning indicator on and slow acceleration, push motorcycle to a safe roadside and take the following measures:

1. Extinguish the engine with the ignition switch, then rotate it to the "O" (on) position.
2. Check if radiator fan runs normally, then rotate the ignition switch to the "X" (off) position.

If the fan does not run: Do not start the engine, and have your motorcycle checked and repaired by a KOVE authorized service center.

If the fan runs: Keep the ignition switch in the "X" (off) position and wait for the engine to cool down.

3. After the engine has cooled, check the radiator for leaks. If there is a leak: Do not start Engine, and have your motorcycle by a KOVE authorized service center.

4. Check the coolant in the water reservoir and add if necessary.

5. If all checks from items 1 to 4 are normal, you may continue riding, but please keep a close attention on the indicators.

The Warning Indicator is On or Flashing

Oil pressure indicator

If the oil pressure indicator is on, push the motorcycle to a safe side of the road and turn off the engine, and take the following measures.

1. Check the engine oil level and add oil if necessary.
2. You can continue to ride only after the indicator goes out.
3. When the oil is at or near the lower limit, a rapid increase in speed may cause the indicator light to illuminate.
4. If the oil level is at a normal level and the indicator is still on, please turn off the engine and contact the special repair shop of KOVEMOTO.
5. If the engine oil drops quickly, your motorcycle may leak oil or have other serious problems, please send it to the special repair shop of KOVEMOTO.

Electronic injection malfunction indicator light

If the EFI fault indicator comes on while riding, there may be a serious problem with your electronic fuel injection system. Please slow down and have it inspected by a KOVE authorized service center as soon as possible.

Notes

- Continued driving at low oil pressure can seriously damage the engine.

ABS fault indicator (Anti-lock braking system)

If the ABS fault indicator shows any of the following conditions, it indicates a fault in your ABS, and emergency braking will not provide anti-lock function. Please have it inspected by a KOVE authorized service center as soon as possible.

- During riding, the ABS fault indicator turns on suddenly.
- When the speed exceeds 10 km/h, the indicator does not extinguish.

The ABS fault indicator may flash or stay on under the following conditions:

- Rotating the front wheel alone.
- Rotating the rear wheel alone.
- The rear wheel gets slippery.
- Riding on special road surfaces.

You can rotate the ignition switch to the "⊗" (OFF) position and then to the "○" (ON) position to power on the system.

Puncture

Repairing a flat tire or removing a wheel requires special tools and professional skills. We recommend leaving such maintenance tasks to a KEVO authorized repair shop. If you have performed overtightened tire repair, be sure to have tire inspected or tire replace KOVE authorized service center.

Perform emergency repairs using a tire repair kit

If your tire has a minor puncture, you can use an inner tubeless tire repair kit to perform emergency repairs. Follow the instructions provided by the tire emergency repair kit. Riding a motorcycle with a temporarily repaired tire is very dangerous, and the speed should not exceed 50 kilometers per hour. Please have the tire replaced as soon as possible at an KEVO motorcycle repair shop.

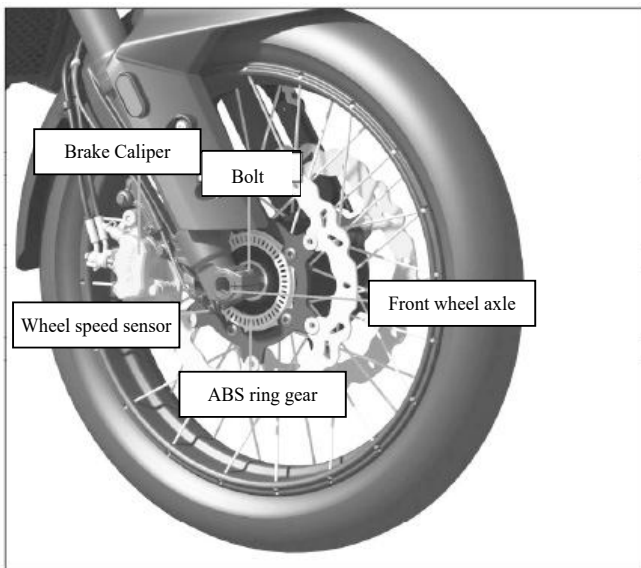
▲ Warning

- Riding a motorcycle with a temporarily patched tire is extremely hazardous. If the patch fails, it could lead to an accident, causing severe injuries or fatalities.
- If you must ride a motorcycle with a temporarily repaired tire, ride cautiously and slowly, not exceeding 50 km/h, until the tire is replaced.

Removing the Wheel

Front wheel

If you need to remove the wheel to repair a punctured tire, follow the steps below. Be careful not to damage the wheel speed sensor and ABS ring gear when removing and installing the wheel.



Disassemble:

1. Securely support your motorcycle with a maintenance bracket or a crane and lift the front wheels off the ground.
2. Remove the left and right brake calipers.
 - Support the brake caliper assembly well and do not hang it on the brake hose. Do not twist the brake hose.
 - Avoid getting lubricating oil, engine oil or dirt on the brake disc or brake pad.
 - When the brake caliper is removed, do not pull the brake handle.
 - Be careful to prevent the brake caliper from scratching the wheel during removal.
3. Loosen the wheel shaft locking bolt and front wheel axle.
4. Remove the front wheel axle and front wheel.

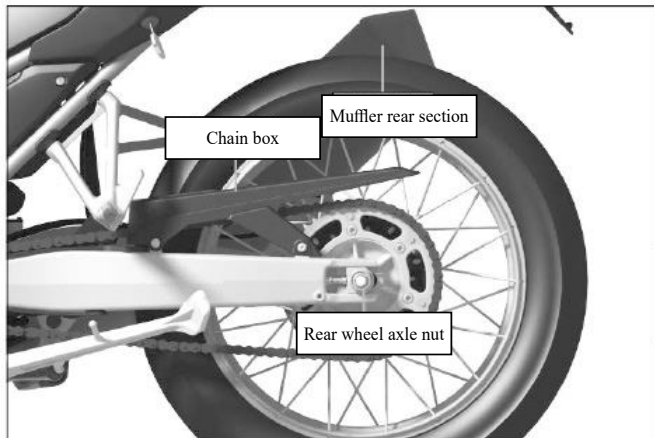
Installation

1. Place the front wheel between the front shock absorbers, insert the front wheel bushings (left and right) into the front wheel oil seals (the left bushing has a step), and position the brake disc into the brake caliper.
2. Insert the front wheel axle from right to left through the front wheel, and tighten the front wheel axle (front wheel axle M16, torque: 70 ± 2 N·m). After operating the hand brake lever several times, move the front fork up and down a few times. Then install the two lock bolts on the right side (front wheel axle locking bolts M8, torque: 22 N·m).
3. Install the brake caliper and tighten the bolt (torque: 30 N·m). Prevent the brake caliper from scratching the wheel during installation. Please use a new assembly bolt when installing the brake caliper.
4. Place the front wheel on the ground.
5. Lift the front wheel off the ground again, and after releasing the brake lever, check if the wheel turns smoothly. If a torque wrench was not used during the installation process, please take it to an authorized KOVEMOTO motorcycle service center as soon as possible. Improper installation may result in reduced braking performance.

Notes

- When reinstalling the wheel or caliper, carefully position the brake disc between the brake pads to prevent scratching them.
- When installing the front wheel, first tighten the front axle, then secure the lock bolt on the right side of the front axle. The order of these steps cannot be reversed.

Rear wheel



Installation

1. Install the rear wheel in the reverse order of removal to prevent the brake caliper from scratching the wheel during installation.
 2. Align the rear wheel bore with the rear swingarm bore. First, install the rear wheel bushing (the bushing should be lubricated with grease), then insert the rear wheel axle from right to left into the wheel assembly bore.
 3. Tighten the rear wheel axle nut (Torque: 128 N·m).
 4. Install the chain guard and the rear section of the muffler.
 5. Check the wheels; they should be rotating freely.
- If a torque wrench was not used during the installation process, please take it to an authorized KOVEMOTO motorcycle service center as soon as possible. Improper installation may result in reduced braking performance.

Disassembly

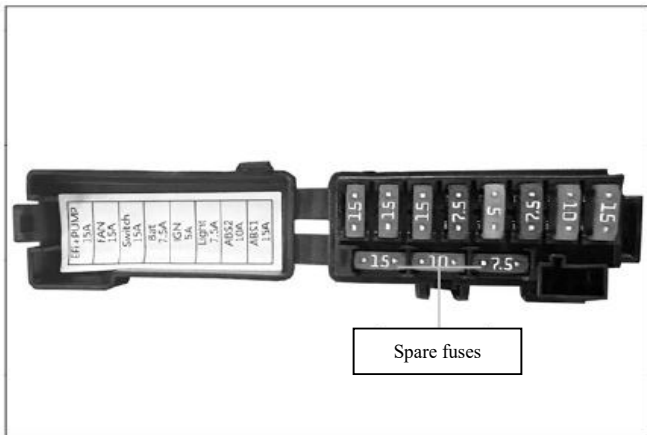
1. Park the motorcycle on a firm and flat level.
2. Firmly support your motorcycle with side brackets or service bracke and lift the rear wheels off the ground.
3. Remove the rear section of the muffler assembly and chain guard.
4. Remove the rear wheel axle nut, rear wheel axle, and rear wheel bushing.
5. Remove the rear wheel.

Notes

- When reinstalling the wheel or caliper, carefully position the brake disc between the brake pads to avoid scratches.

Electrical Malfunction

Fuse blown



Replace the fuse wire.

1. Remove the left fuel tank left side protector.
2. Open the fuse box, remove the fuse, and check if the fuse is blown. If blown, be sure to replace it with the spare fuse with the same specification.
3. Close the fuse box cover and install the fuel tank left side protector.

The battery is dead.

Please use a dedicated charger for motorcycle lithium batteries to charge the battery.

Remove the battery from the motorcycle before charging. If the battery still does not recover after charging, please contact a authorized KOVEMOTO service center.

Notes

- Avoid using a car battery charger or a motorcycle lead-acid battery charger for charging, as this may result in battery damage or even a fire.
- Before handling the fuse, please refer to "Inspect and replace the fuses".

Relevant Information

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Key

Ignition Key



The motorcycle comes with two ignition keys, which are used to start the engine.

- Do not bend the key or subject it to excessive pressure.
- Avoid prolonged exposure to direct sunlight or high-temperature environments.
- Do not grind, bore, or alter its shape in any way.

Notes

- To prevent loss, please keep your key safe. If you are concerned about losing it, make a duplicate immediately.

Instrument, Controls and Other Functions

Ignition Switch, Engine OFF switch

Ignition switch

1. When parked, please set the ignition switch to the "⊗" or "🔒" position to avoid unnecessary battery drain. Excessive battery drain may prevent starting.
2. Do not turn the key while riding.

Engine OFF Switch

Do not use the engine OFF switch unless in an emergency. Doing so while riding will cause the engine to stop suddenly, making the ride unsafe.

Odometer, Trip Meter (Sub-total)

Odometer

When the reading exceeds 999,999, the display will lock at 999,999.

Trip Meter

When the reading exceeds 999.9, the display will automatically reset to zero.

Motorcycle Care

Regular cleaning and polishing ensure a long motorcycle lifespan. A clean motorcycle makes it easier to spot potential faults. It is particularly noteworthy that anti-icing seawater and salt scattered on the road can accelerate corrosion. Be sure to clean the motorcycle thoroughly after driving on the coastal or above-mentioned road.

Cleaning

Wait for the engine, muffler, brakes, and other high-temperature components to cool before cleaning.

1. Thoroughly rinse the motorcycle with a low-pressure hose to remove loose dirt.
2. If necessary, use a sponge or soft towel dipped in mild detergent to remove dust and dirt.
3. Thoroughly rinse the motorcycle with ample clean water and dry it using a clean, soft cloth.
4. After drying the motorcycle, lubricate the moving parts, ensuring that no lubricant splashes onto the brakes or tires. Oil-contaminated brake discs, brake pads, brake drums, or brake shoes can significantly reduce braking performance and may lead to accidents.
5. After washing and drying the motorcycle, lubricate the drive chain promptly.
6. Waxing helps prevent corrosion.

Avoid using products containing strong detergents or chemical solvents, as these substances can damage the motorcycle's metal parts, paint, and plastic components. Do not wax the tires and brakes.

If your motorcycle has parts with a matte finish, avoid waxing these matte surfaces.

Cleaning Precautions

- Avoid using a high-pressure water jet:
 - ▶ High-pressure water jets can damage moving parts and electrical components, rendering them irreparable.
 - ▶ Moisture from the intake port may be drawn into the throttle body or enter the air filter.
- Avoid direct water rinsing of the muffler:
 - ▶ Water ingress into the muffler may cause starting issues and muffler rust.
- Dry the brakes:
 - ▶ Water reduces braking performance. After washing, intermittently use the brakes at low speed, repeatedly pressing the brake pedal lightly to generate heat from friction, drying the water until braking efficiency is restored.
- Avoid direct water contact beneath the seat cushion:
 - ▶ Water entering under the seat cushion may damage electrical components.
- Avoid rinsing the air filter directly with water.
 - ▶ If the air filter gets wet, the engine may fail to start.
- Avoid direct water contact near the headlight:
 - ▶ After washing or riding in the rain, the internal lens of the headlight may temporarily fog up, but this does not affect its functionality. However, if you notice a significant accumulation of water or ice inside the lens, have it inspected by an authorized KOVEMOTO Motorcycle service center.
- Avoid waxing or polishing matte finishes:
 - ▶ Use sufficient water and a mild cleanser to clean matte paint surfaces, and dry them with a clean, soft cloth.

Aluminum Components

Aluminum corrodes when exposed to dirt, mud, or salt. Regularly clean aluminum components and follow these guidelines to prevent scratches:

- Avoid using stiff brushes, steel wool, or any abrasive cleaning materials.
- Do not drive or scrape against the curb.

Panel

Follow these guidelines to prevent scratches and damage:

- Gently clean with a sponge and sufficient water.
- Clean with diluted detergent and rinse thoroughly with ample water to remove stubborn stains.
- Avoid exposing the instrument panel and lamp covers to corrosive liquids like gasoline and brake fluid.

Muffler

The muffler is made of stainless steel, but it can also get dirty from mud or dust. Use a wet sponge with cleaning agent to remove the mud or dust, then rinse thoroughly with clear water, and dry with suede or a soft towel. If necessary, burn marks can be removed with a commercially available compound of fine texture, and then rinsed in the same manner as mud and dust.

If the muffler is painted, use a neutral detergent to clean the exhaust pipe and the painted surface of the muffler. If you are unsure whether the muffler is painted, contact a authorized KOVEMOTO service center.

Notes

- Although the muffler is made of stainless steel, it can still rust. If you notice any signs of rust, please remove all traces and dirt immediately.

Motorcycle Parking

If you leave your motorcycle outdoors, you should consider using a full motorcycle cover. If you do not ride for an extended period of time, please follow these guidelines:

- Wash the motorcycle and wax all painted surfaces (excluding matte finishes), then apply anti-rust oil to all chrome parts.
- Lubricate the drive chain.
- Place the motorcycle on a maintenance stand and elevate it with wooden blocks to ensure both tires are off the ground.
- After rain, remove the body cover and dry it in a ventilated place.
- Remove the battery to avoid discharging.

Fully charge the battery and store it in a cool, well-ventilated area. If you leave the battery in place, disconnect the negative terminal to prevent discharge. Before reusing a stored motorcycle, inspect all items as specified in the maintenance interval table.

Motorcycle Transport

If you need to transport your motorcycle, use a motorcycle trailer, loading ramp, or flatbed truck equipped with a lifting platform, and secure it with motorcycle tie-down straps. Never attempt to tow a motorcycle with its wheels on the ground.

Notes

- Towing a motorcycle can severely damage the drivetrain.

You and Your Environment

Owning and riding a motorcycle is an enjoyable experience, but you must take responsibility for protecting the environment.

Select the appropriate detergent

Use biodegradable detergents when washing your motorcycle, and avoid sprays containing chlorofluorocarbons (CFCs) as they harm the protective ozone layer in the atmosphere.

Waste Recycling

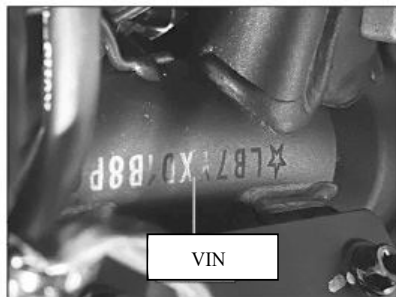
Sort the oil and other toxic wastes into approved containers and send them to the recycling center. Call the local national public affairs or environmental service office for the recycling center in your area and the disposal method of non-recyclable wastes. Do not pour used engine oil into trash cans, sewers or ground, because the used oil, gasoline, coolant and cleaning solvent contain toxic substances, which will hurt cleaners, pollute drinking water, lakes, rivers and seas.

Vehicle Identification Number, Engine Number, And Nameplate

When registering your motorcycle, you need to provide the Vehicle Identification Number(VIN) and Engine Number. These numbers are unique to identify your motorcycle. When ordering replacement components, please keep these numbers well documented and stored in a safe place.

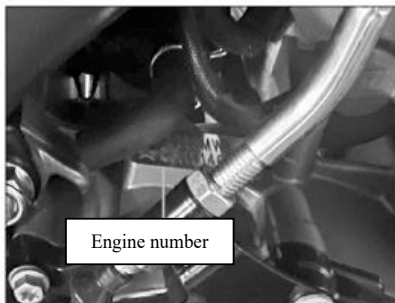
Vehicle Identification Number (VIN)

The VIN is stamped on the left side of the frame upright tube



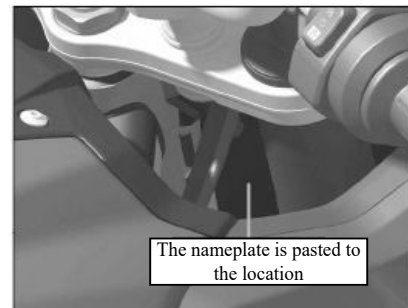
Engine Number

The engine number is engraved on the right side of the engine crankcase.



Nameplate

The nameplate is attached to the right side of the frame's main beam.



Catalytic Converter

This motorcycle is equipped with a three-way catalytic converter. The catalytic converter contains precious metals as catalysts for high-temperature chemical reactions, transforming hydrocarbons (HC), carbon monoxide (CO), and nitrogen oxides (NOx) in the exhaust into compliant mixtures.

A faulty catalytic converter can pollute the air and reduce your engine's performance. When replacing it, always use genuine KOVEMOTO components.

Follow these guidelines to safeguard your motorcycle's catalytic converter:

- Only unleaded gasoline should be used, as leaded gasoline can damage the catalytic converter.
- Maintain the engine in optimal operating condition.
- If the engine fails to start, backfires, stalls, or exhibits other poor performance, stop riding immediately and turn off the engine. Have the motorcycle inspected by an authorized KOVEMOTO service center.

Technical Parameters

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Vehicle-Related Parameters -1

Vehicle Model	ZF800GY-B (with triple cases)	Engine Model	Z288MW
	ZF800GY-C		
Overall length (mm)	2230	Cylinder diameter (mm) × Stroke (mm)	88.0×65.7
Overall width (mm)	930		
Overall height (mm)	1395	Compression ratio	13:1
Wheelbase (mm)	1520	Maximum power (kw/r/min)	71.0 ± 2% / 9000 ± 1.5%
Wheelbase (mm)	/		
Curb weight (kg)	ZF800GY-B (with triple cases): 215	Maximum torque (N·m/rpm)	80.0 ± 2% / 7500 ± 1.5%
Curb weight (kg)	ZF800GY-C:195	Idle speed (rpm)	1400±100
Payload (kg)	ZF800GY-B (with triple cases): 150	Cylinder capacity (mL)	799
Payload (kg)	ZF800GY-C:170	Spark plug	LMAR9AI-10
Front tire specifications	110/80 R19	Spark plug gap (mm)	0.9-1.0
Rear tire specifications	150/70 R17	Valve clearance (mm)	intake valve: 0.1-0.15
Maximum speed (km/h)	210		Exhaust valve: 0.15-0.2

Vehicle-Related Parameters - 2

Lubricating oil capacity (L)	3.2	Main fuse	30A
Fuel capacity (L)	22	Neutral indicator light	LCD lamp
Primary transmission ratio	1.923	Headlight	LED lamp
First gear	2.846	Front position lamp	LED lamp
Second gear	2.000	Rear position lamp/Brake lamp	LED lamp
Third gear	1.550	Front turn signal	LED lamp
Fourth gear	1.273	Rear turn signal	LED lamp
Fifth gear	1.083	Rear license plate lamp	LED lamp
Sixth gear	0.957	Turn indicator light	LCD lamp
Final transmission ratio	3.000	Instrument indicator light	LCD lamp
Battery	12V 2.3Ah (Lithium-ion Battery)	Ignition mode	ECU controls ignition

Torque Parameters

Fastener Type	Torque	Fastener Type	Torque
5mm bolt and nut	6	6mm Screw	8
6mm bolt and nut	12	6mm flange bolt (8mm head, small flange)	10
8mm bolt and nut	22	6mm flange bolt (8mm head, large flange)	12
10mm bolt and nut	60	6mm flange bolt (10mm head) and nuts	12
12mm bolt and nut	80	8mm Flange Bolt and Nut	22
5mm Screw	5	/	/

Notes

- Except for the specified torque, the standard torque values in the above table apply to this vehicle.

Frame Tightening Torque

Item	Thread diameter (mm)	Torque (N·m)	Notes
Self-tapping screw connecting license plate lamp pressure plate to rear fender bracket section	ST3.5	1	
Self-tapping screw connecting OBD Interface rear fender front	ST4.2	1	
Self-tapping screw connecting rear fender rear to license plate lamp pressure plate	ST4.2	1	
Self-tapping screw connecting rear fender rear to bracket	ST4.2	1	
Body liner screw (left, right) connecting with the frame (left, right)	ST4.2	1	
Self-tapping screw connecting fuel tank side trim (left, right) to its side guard (left, right)	ST4.2	1	
Fuel tank side guard liner screw (left, right) with its side guard (left, right)	ST4.2	1	
Fuel tank side trim (left, right) screw with its side guard (left, right)	ST4.2	1	
Body liner screw (left, right) with front rear fender	ST4.8	1	
Philips semi-circular head screw connecting left handlebar grip to handlebar tube	M4	3	
Philips pan head screw connecting fuel tank drain pipe pressure plate to fuel tank	M5	5	
Philips pan head screw connecting ECU bracket to rear fender front	M5	3	
Philips pan head screw connecting taillight assembly to rear tailgate	M5	5	
Philips pan head screw connecting battery box cover to battery box	M5	3	
Philips pan head screw connecting instrument bracket to instrument trim	M5	3	
Philips pan head screw connecting fuel level sensor to fuel tank	M5	3	
Philips pan head screw connecting fuel level sensor mounting bracket to fuel tank	M5	3	
Philips pan head screw connecting fuel pump to fuel tank	M5	3	
Philips pan head screw connecting headlight bracket to headlight assembly	M5	6	
Philips pan head screw connecting instrument bracket to instrument assembly	M5	6	
Hexalobular pan head screw connecting side tilt sensor to its bracket	M5	4	

Item	Thread diameter (mm)	Torque (N·m)	Notes
Hexagon flange bolt connecting side tilt sensor bracket to carbon canister	M5	4	
Philips pan head screw connecting upper triple clamp wire hook	M5	6	
Hexagon flange bolt connecting gear shift sensor to engine	M5	5	
Hexagon flange bolt connecting oil pipe clamp to swingarm	M5	5	
Rear brake pedal hexagon flange bolt (brake rockerarm)	M5	3	Apply Huitian 7272 adhesive to threads
Hexalobular round head bolt connecting headlight pressure plate to headlight bracket	M5	6	
Hexalobular pan head screw connecting rear fender inner panel to rear fender rear	M5	5	
Hexalobular pan head screw connecting rear tailgate to rear fender front	M5	5	
Hexalobular pan head screw connecting rear wheel small fender to rear fender front trim	M5	5	
Hexalobular pan head screw connecting headlight trim to instrument housing	M5	5	
Hexalobular pan head screw connecting headlight trim to instrument bracket	M5	5	
Hexalobular pan head screw connecting rear ABS ring gear to front wheel hub	M5	4	Apply Huitian 7272 adhesive to threads
Screw connecting fuel tank lower guard (left, right) with fuel tank	M5	5	
Headlight trim hexagon screw (left, right fuel tank cowling)	M5	5	
Fuel tank side cowling hexagon screw (left, right fuel tank)	M5	5	
Fuel tank front shield hexagon screw (fuel tank)	M5	5	
Fuel tank protector hexagon screw (left, right instrument rear section)	M5	5	
Instrument rear section hexagon screw (left, right fuel tank)	M5	5	
Fuel tank side cowling screw (left, right instrument housing)	M5	5	
Hexalobular pan head setp screw connecting rear fender inner panel to rear fender rear bracket	M5	5	
Hexalobular pan head screw connecting fuel tank lock base to fuel tank	M5	4	
Hexalobular step screw connecting front windshield to its bracket	M5	6	

Item	Thread diameter (mm)	Torque (N·m)	Notes
Bleed screw for brake hose 5 connection	M6	5	
Hex bolt connecting rear fender inner panel and rear fender rear bracket to frame	M6	10	
Philips semi-circular head screw connecting fuel tank front protector bracket to fuel tank	M6	6	
Philips semi-circular head screw connecting seat cushion mounting bracket to fuel tank	M6	6	
Philips semi-circular head screw connecting magneto plug bracket to fuel tank	M6	5	
Philips semi-circular head screw connecting chain clip pressure plate to swingarm	M6	6	
Hex nut connecting gear shift lever rod end bearing to shift rod	M6	6	
Hex nut connecting gear shift lever rod end bearing to shift rod	M6	6	
Hex bolt with flat gasket connecting water reservoir to radiator	M6	8	
Hexagon flange bolt connecting radiator lower mounting point to frame	M6	10	
Hexagon flange bolt connecting BCM bracket to frame	M6	10	
Hexagon flange bolt connecting brake hose 3 to frame	M6	10	
Hexagon flange bolt connecting horn to frame	M6	10	
Ground wire on frame hexagon flange bolt (left front)	M6	10	
Hexagon flange bolt connecting left fuel tank side protector bracket to frame	M6	10	
Hexagon flange bolt connecting right fuel tank side protector bracket to frame	M6	10	
Hexagon flange bolt connecting front wheel speed sensor to front shock absorber	M6	8	
Hexagon flange bolt connecting battery box to frame	M6	10	
Hexagon flange bolt connecting rear wheel speed sensor to rear caliper bracket assembly	M6	8	
Hexagon flange bolt connecting instrument bracket to frame	M6	10	
Hexagon flange bolt connecting shift rockerarm to engine	M6	10	
Hexagon flange bolt connecting gear shift lever rod end bearing to shift rockerarm	M6	10	
Hexagon flange bolt connecting gear shift lever rod end bearing to shift pedal connecting rod	M6	10	

Item	Thread diameter (mm)	Torque (N·m)	Notes
Hexagon flange bolt connecting carbon canister to frame	M6	10	
Hexagon flange bolt connecting air filter to frame	M6	10	
Hexagon flange bolt connecting brake rockerarm to rear brake rod end bearing	M6	10	
Hexagon flange bolt connecting ABS bracket to frame	M6	10	
Hexagon flange bolt connecting regulating rectifier to fuel tank	M6	6	
Hexagon flange bolt connecting radiator upper mounting point to frame	M6	10	
Hexalobular bolt connecting front brake pump to rear mirror mount	M6	10	
Hexagon flange bolt connecting engine lower protector (lower) rear mounting point	M6	10	
Hexagon flange bolt connecting engine front sprocket cover to engine	M6	10	
Hexagon flange bolt connecting engine heat shield cover to engine	M6	10	
Hexalobular pan head screw connecting seat cushion lock to frame	M6	5	
Hexalobular pan head screw connecting ear fender front to subframe (side mounting point)	M6	5	
ABS bracket hexagon screw (ABS)	M6	5	
Chain guard hexagon screw (plain fork)	M6	8	
Hexalobular pan head step screw connecting vehicle body lining (left, right) to frame	M6	8	
Hexalobular pan head step screw connecting rear fender front to frame	M6	8	
Hexalobular pan head step screw connecting rear fender front trim to rear fender front	M6	5	
Hexalobular pan head step screw connecting side cover (L/R) to frame	M6	8	
Hexalobular pan head step screw connecting rear fender front trim to frame	M6	8	
Hexalobular pan head step screw connecting front windshield bracket to instrument bracket	M6	8	
Hexalobular pan head screw connecting rear brake pump to frame	M6	8	
Hexalobular pan head step screw connected at fuel tank seat cushion limit position	M6	5	

Item	Thread diameter (mm)	Torque (N·m)	Notes
Hexalobular pan head step screw connecting tailgate trim to vehicle bod lining(L/R) and frame	M6	8	
Hexalobular pan head step screw connecting tailgate to tailgate trim and frame	M6	8	
Hexalobular pan head screw connecting muffler heat shield to muffler	M6	8	
Hexalobular pan head screw connecting engine lower protector side mounting point	M6	8	
Hexalobular pan head screw connecting front fender and front shock absorber	M6	8	
Hexalobular pan head screw connecting fuel tank side protectors (L/R) and fuel tank lower protectors (L/R) to frame	M6	8	
Hex nut for adjusting swingarm chains	M8	15	
Muffler hexagon flange nut (engine)	M8	18	
Hex flange self-locking nut connecting muffler rear section to rear footpeg	M8	22	
Hex flange self-locking nut connectin upper bracket to h-bar lower socket	M8	22	
Large sprocket hexagon flange self-locking nut (buffer)	M8	37	
Hexagon flange bolt connecting engine lower reinforcement bracket(right) to frame	M8	22	
Hexagon flange bolt connecting ignition lock to upper bracket	M8	22	
Hexagon flange bolt connecting bumper mounting bracket to the frame (L/R)	M8	22	
Hexagon bolt connecting rear grab handle front mounting point to frame	M8	22	
Hexagon flange bolt connecting OFF switch wire bracket and engine lower reinforcement bracket-left to engine	M8	22	
Hexagon flange bolt connecting engine lower reinforcement bracket-left to frame	M8	22	
Hexagon flange bolt connecting engine lower reinforcement bracket-right to frame	M8	22	
Hexagon flange bolt connecting directional damper to frame	M8	22	
Hexagon flange bolt connecting directional damper to lower bracket	M8	22	

Item	Thread diameter (mm)	Torque (N·m)	Notes
Hexagon flange bolt tightening front shock absorber to front wheel axle lock	M8	22	
Hexagon flange bolt connecting bumper to the frame (L/R)	M8	22	
Hexagon flange bolt connecting rear footpeg (left and right) to frame	M8	22	
Hexagon flange bolt connecting h-bar upper clamp to lower socket	M8	22	
Hexagon flange bolt connecting engine lower protector to right front bracket	M8	22	
Hexagon flange bolt connecting muffler middle section to frame	M8	22	
Hexagon bolt connecting rear grab handle mounting point to frame	M8	22	
Hexagon flange bolt connecting front shock absorber to caliper (TAISKO)	M8	35	
Hexagon flange bolt connecting upper bracket to shock absorber	M8	22	
Hexagon flange bolt tightening lower bracket to shock absorber	M8	22	
Hexagon flange bolt connecting the front and rear mounting points of fuel tank	M8	22	
Hexalobular countersunk screw connecting rear sprocket to buffer	M8	37	
Hexalobular pan head step screw connecting rear disc brake to rear wheel hub	M8	30	Apply Huitian 7272 adhesive to threads
Hexalobular flat round head bolt connecting gear shift pedal connecting rod to frame	M8	22	
Hexalobular flat round head bolt connecting brake rockerarm to frame	M8	22	Apply Huitian 7272 adhesive to threads
Oil passing bolt connecting brake hose 1 to front pump	M10	22	
Oil passing bolt connecting brake hose 2 to front caliper (left)	M10	22	
Oil passing bolt connecting brake hose 5 to rear caliper	M10	22	
Oil passing bolt connecting brake hose to ABS	M10	22	
Oil passing bolt connecting brake hose 2 and brake hose 3 to front caliper (right)	M10	22	
Engine mounting hexagon flange nut (rear)	M10	54	
Rear shock absorber hexagon flange nut (frame)	M10	54	
Hexagon flange bolt connecting muffler rear section to rear footpeg	M10	22	

Item	Thread diameter (mm)	Torque (N·m)	Notes
Hex flange self-locking nut connecting side stand	M10	Fasten the bolt to 2 N·m, then hold the bolt head steady and tighten the locking nut to a torque of 22 N·m.	
Hexagon flange bolt connecting engine front suspension (lower)	M10	54	
Hexagon flange bolt connecting engine reinforcement bracket(left) to engine	M10	44	Apply Huitian 7272 adhesive to threads
Hexagon flange bolt connecting engine upper suspension (right)	M10	54	
Hexagon flange bolt connecting engine front suspension (upper)	M10	54	
Hexagon flange bolt connecting engine reinforcement bracket(right) to engine	M10	44	Apply Huitian 7272 adhesive to threads
Hexagon flange bolt connecting tri-cradle to shock absorber	M10	44	
Hexagon flange bolt connecting rear shock absorber to frame	M10	54	
Hexagon flange bolt connecting bumper bracket to bumper (L/R)	M10	44	
Hexagon flange bolt connecting engine upper suspension (left)	M10	54	
Hexagon flange bolt connecting engine rear suspension	M10	54	
Hex flange self-locking nut connecting U swingarm to frame	M12	60	
Hex flange self-locking nut connecting tri-cradle to swingarm	M12	60	
Hex flange self-locking nut connecting tri-cradle to U swingarm	M12	60	
Hexagon flange bolt connecting tri-cradle to swingarm	M12	60	
Hexagon flange bolt connecting tri-cradle to U swingarm	M12	60	
Hexagon flange bolt connecting U swingarm to frame	M12	60	
Plain fork axle locking nut	M16	88	
Rear wheel axle locking nut	M22	128	

Item	Thread diameter (mm)	Torque (N·m)	Notes
Hex nut for tightening steering stem	M24	108	
8-slot adjusting nut tightening steering stem	M25	First stage: 40N·m, second stage: loosen the adjusting nut by two turns and then tighten it to 10N·m, third stage: keep the direction fixed and loosen by 1/4 turn	



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