SERVICE MANUAL

LX600-2A

LXMT-WX-016

Loncin General Power Co., Ltd. September 2025.10

Preface

With the ever-increasing variety of motorcycles on the market and the continuous adoption of new designs and technologies, this service manual has been compiled to help Loncin users and service personnel better understand the maintenance, adjustment, and repair techniques for the LX600-2A vehicle. It is hoped that this manual will provide convenience and valuable technical guidance to all Loncin users and service personnel, serving as a readily accessible reference.

All information, diagrams, data, and performance specifications contained in this manual are current as of its publication date. Loncin General Power Co., Ltd. reserves the right to revise this manual at any time without prior notice.

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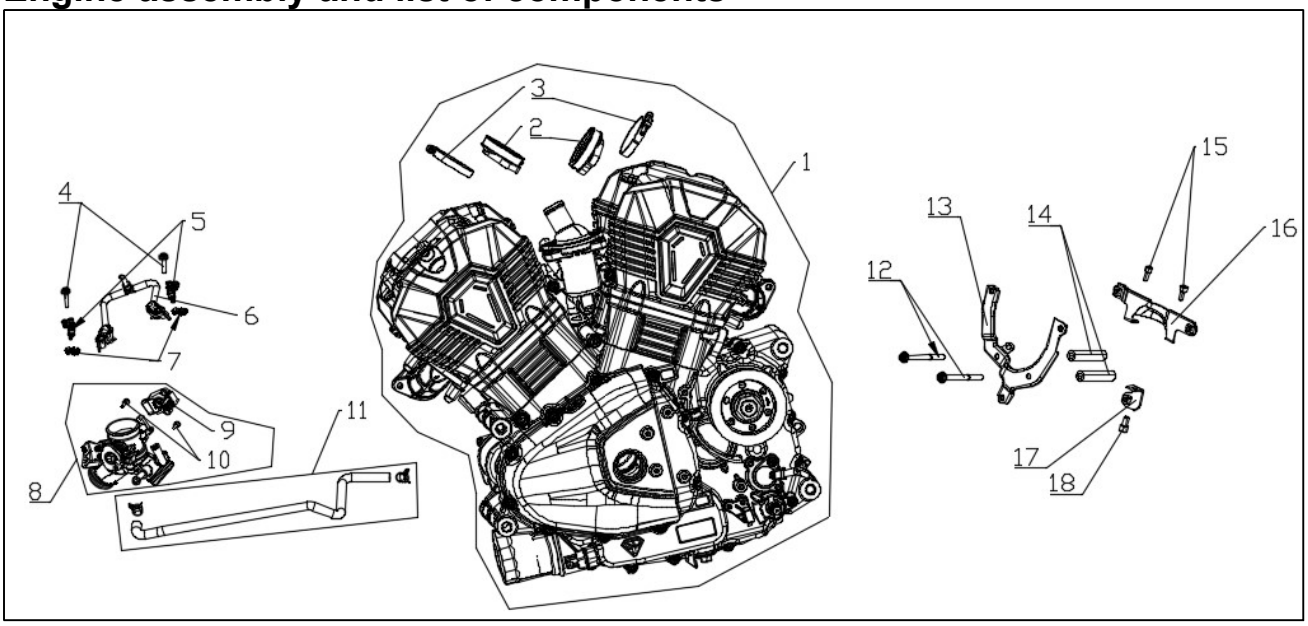
I. Removal and Maintenance of the Engine

Engine assembly and list of components

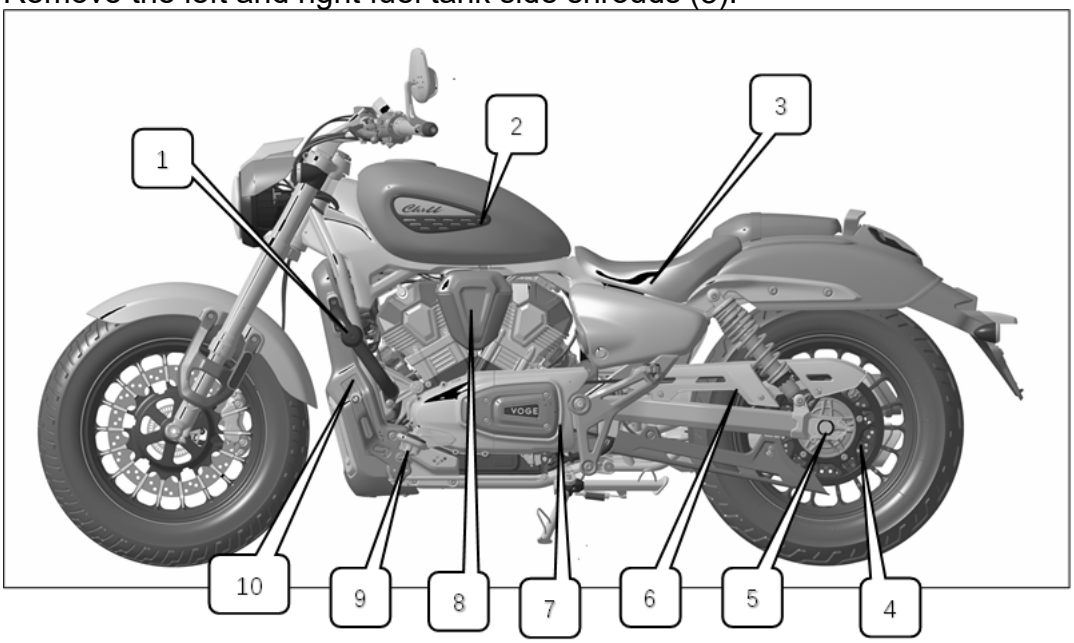


1	Engine assembly	SET	1
2	Intake pipe	PCS	2
3	Clamp assembly	PCS	2
4	Torx flange head bolt	PCS	2
5	Fuel injector	PCS	2
6	Fuel rail assembly	PCS	1
7	Fuel injector clamp	PCS	2
8	Throttle body assembly	PCS	1
9	Sensor	PCS	1
10	Phillips head screw	PCS	2
11	Breather hose	PCS	1
12	Torx flange head bolt	PCS	2
13	Right air guide bracket	PCS	1
14	Bushing	PCS	2
15	Torx head bolt	PCS	2
16	Left air guide bracket	PCS	1
17	Left air guide bracket	PCS	1
18	Torx head bolt	PCS	1

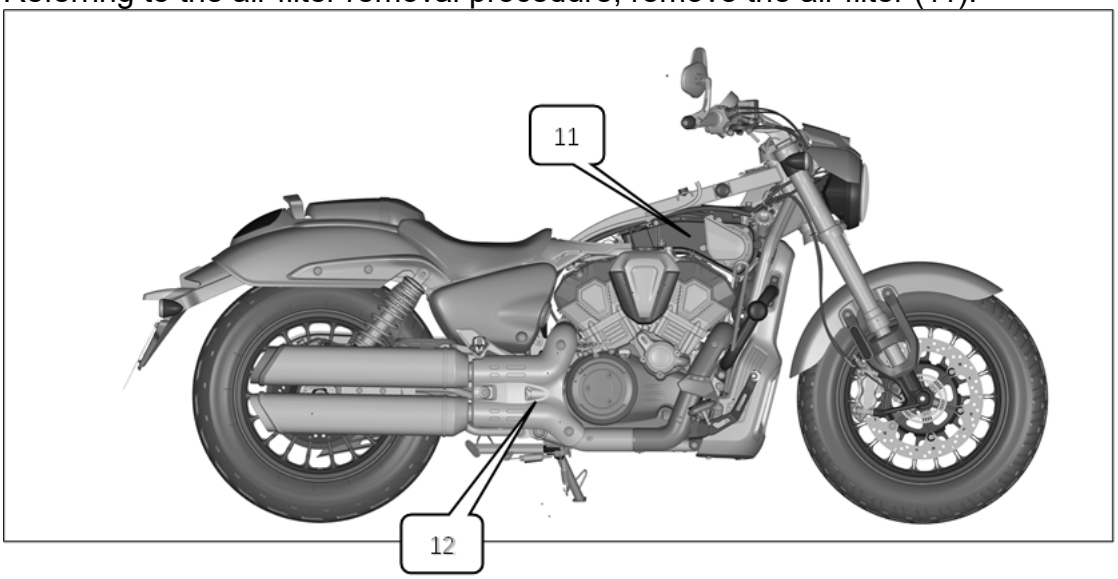
Removing and installing the engine

Support the swingarm using a suitable device, lifting the rear wheel off the ground.
Remove the main and passenger seats (3).
Remove the crash bar (1).

Referring to the fuel tank assembly removal procedure, remove the fuel tank assembly (2).
Referring to the muffler assembly removal procedure, remove the muffler assembly (12).
Referring to the coolant replacement procedure, drain the coolant from the cooling system, disconnect all cooling system hoses connected to the engine, and then, referring to the radiator removal procedure, remove the radiator assembly (10).
Referring to the main footrest assembly removal procedure, remove the main footrest (9).
Remove the left and right fuel tank side shrouds (8).

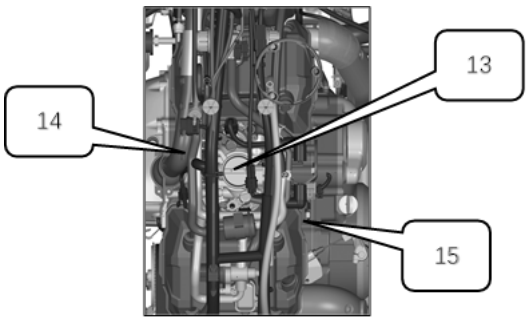


Remove the left rear cover (7).
Loosen the chain adjuster (4), loosen the rear wheel axle (5), and remove the chain case and belt (6).
Referring to the air filter removal procedure, remove the air filter (11).



Disconnect all wiring harness connectors connected to the engine.
Disconnect the ignition coil from the engine.
Disconnect the clutch cable.
Disconnect the throttle cable from the throttle body.
Sequentially remove the engine mounting bolts connecting the engine to the frame.

Remove the throttle body assembly (13).
Remove any remaining related accessories (14, 15) to complete the engine assembly removal.
To reinstall, follow the reverse of the removal procedure.



Note:
When removing the engine, always try to use special tools or lifting equipment to prevent personal injury due to its weight.

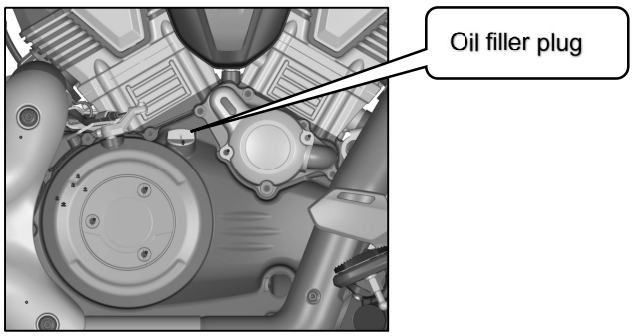
Important:
Dispose of the drained coolant in an environmentally friendly manner.
When refilling the coolant during reassembly, refer to the Coolant Replacement section.
During reassembly, ensure the wiring harnesses are routed and secured in their original positions, carefully considering factors such as coolant ingress, chafing/interference, and heat damage.
When reinstalling the muffler, replace the exhaust port gasket to ensure proper sealing.

Parameters

Rear upper engine mounting bolt	N·m	M14	100
Rear lower engine mounting bolt	N·m	M10	60
Front engine suspension plate bolt	N·m	M10	60
Left main footrest mounting bolt	N·m	M10	60
Right main footrest mounting bolt	N·m	M10	60
Upper bumper mounting bolt	N·m	M10	60
Lower bumper mounting bolt	N·m	M8	25 (thread glue)
Body panel mounting bolts	N·m	M8	25 (thread glue)
Air filter housing mounting bolt	N·m	M8	22
Engine left rear cover mounting bolt	N·m	M10	45
Clutch cable lock nut	N·m	M5	4.5
	N·m	M6	6
Radiator bracket mounting bolt	N·m	M6	6
Rear upper engine mounting bolt	N·m	M6	9
Rear lower engine mounting bolt	N·m	M8	9
Front engine suspension plate bolt	N·m	M6	9

Adding engine oi

Remove the oil filler plug from the right side of the engine.
Add engine oil.
Reinstall the oil filler plug and hold the vehicle upright.
Start the engine and let it idle until the cooling fan runs, then continue idling for one more



minute.
Turn off the engine and wait for one minute to allow the oil to fully drain back.
Check the oil level through the oil sight glass to ensure it is between the upper and lower marks.
If the oil level is not within the specified range, repeat the above steps to add or remove oil until the level is between the upper and lower marks.

Note:
If the engine oil level is above the mark, excess oil can also be extracted from the engine oil filler port using a specialized tool.

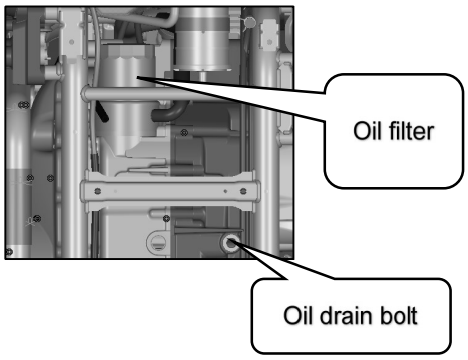
Important:
After filling the engine oil, the vehicle must be started and idled for 30 seconds before checking the oil level.
To check the engine oil level, the vehicle must be kept in a vertical position; otherwise, the oil level cannot be correctly determined.

Parameters:

Engine oil capacity (without changing filter)	L	2.5
Engine oil capacity (with filter changed)	L	2.7
Engine oil capacity (after engine disassembly)	L	2.9
Engine oil type	Recommended engine oil: 10W/40 SL grade and above	

Replacing the Oil Filter

Place an oil drain pan directly under the engine's oil filter.
Using a hex socket or wrench (or a dedicated oil filter wrench), remove the oil filter and allow any remaining oil to drain completely.
Install the new oil filter.
To reinstall, follow the exact reverse steps of removal.



Note:
After completing the above work, use a cleaning agent (degreaser) to clean any oil stains or residue from the surfaces of the engine and muffler, then dry with compressed air.

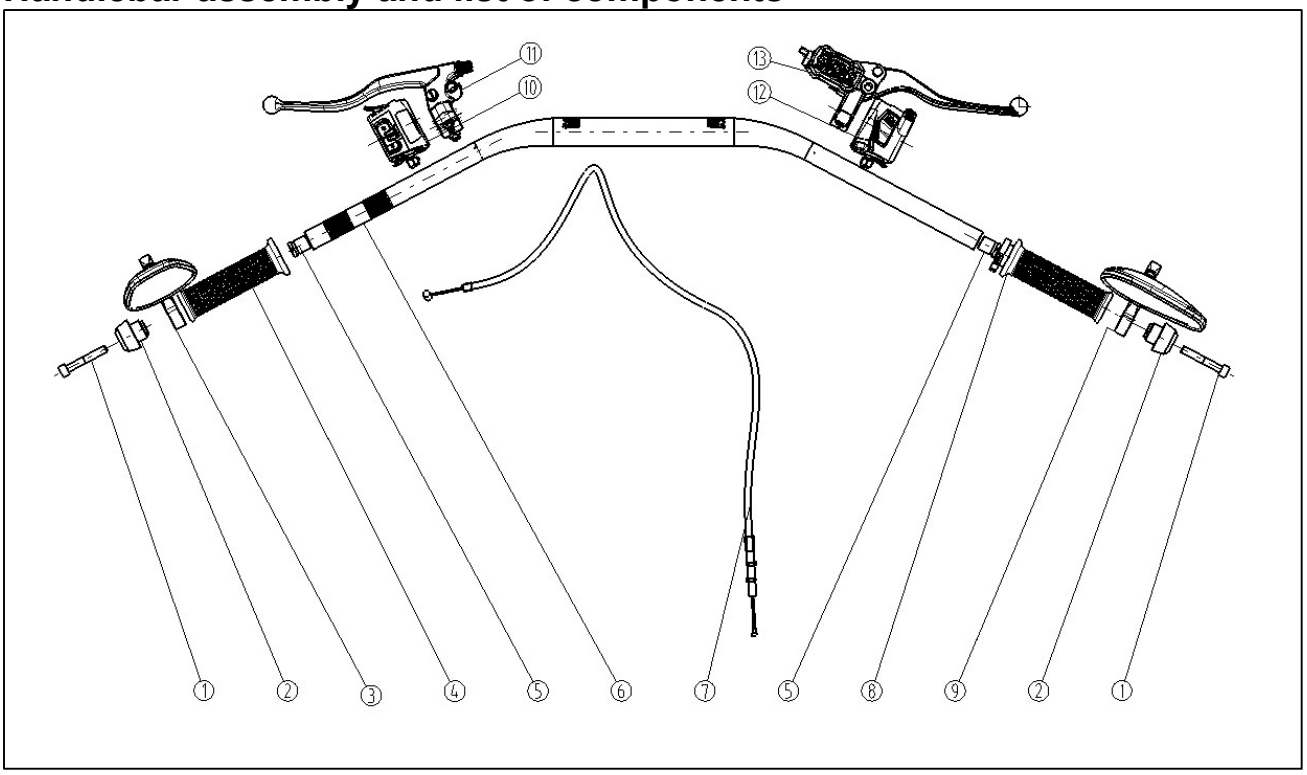
Important:
Dispose of used engine oil and the old oil filter in an environmentally friendly manner.
Always check the sealing ring (gasket) on the new oil filter before installation, and ensure it is properly seated. If it appears damaged or missing, replace the filter or gasket as needed.

Parameters:

Engine oil drain plug	N·m	25
Engine oil filter	N·m	11

II. Removal and Maintenance of the Handlebar Assembly

Handlebar assembly and list of components

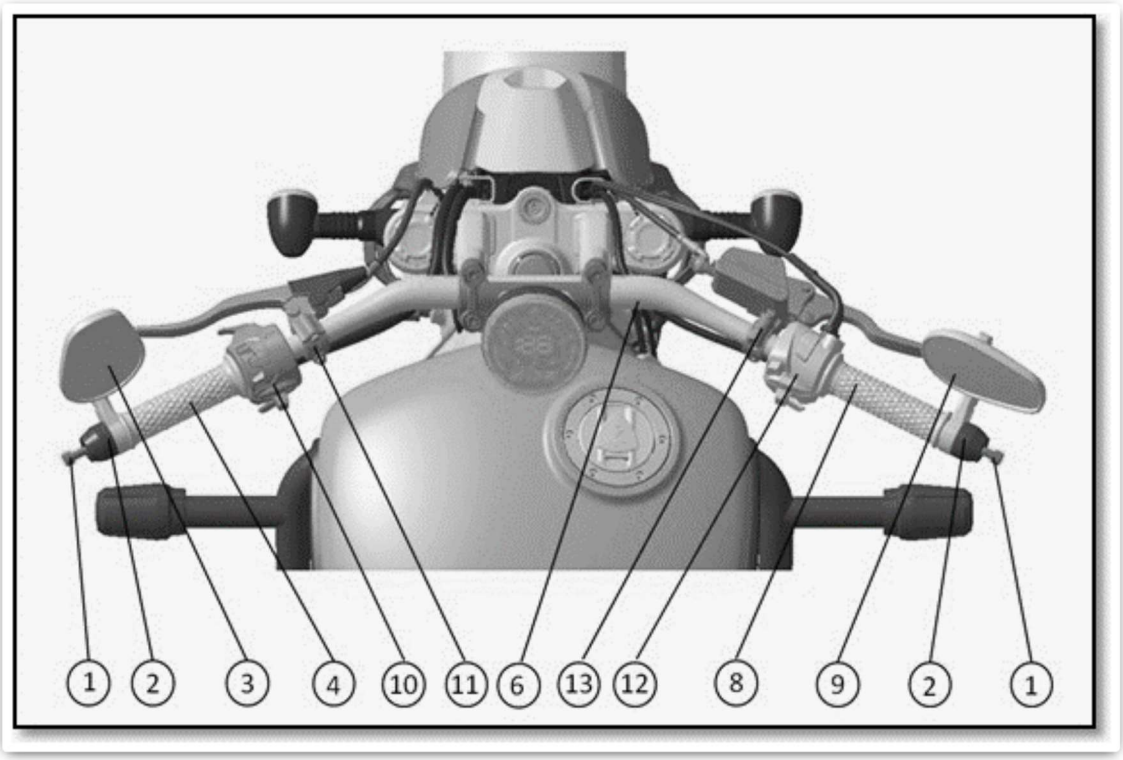


1	Hex socket head screw	PCS	2
2	Decorative cap	PCS	2
3	Left rearview mirror	SET	1
4	Handlebar grip	PCS	1
5	Bar end weight	PCS	2
6	Handlebar tube	PCS	1
7	Clutch cable	PCS	1
8	Throttle assembly	PCS	1
9	Right rearview mirror	SET	1
10	Left brake lever assembly	SET	1
11	Left handlebar assembly	SET	1
12	Right brake lever assembly	SET	1
13	Hex socket head screw	SET	1

Removing the handlebar assembly

Place the vehicle upright using the side stand.
Disconnect all electrical connectors on the handlebar tube component.
Remove the two hex socket head screws (1) from both ends of the handlebar tube.
Remove the left and right decorative caps (2).
Remove the left and right rearview mirrors (3) and (9).

Loosen the fastening bolts of the left and right brake lever assemblies, loosen the throttle cable clamping bolt on the right brake lever assembly, and remove the throttle cable and the left and right brake lever assemblies (10) and (12).
Remove the throttle assembly (8).
Remove the left handlebar assembly fastening bolt, and then the left handlebar assembly (11).
Remove the front brake master cylinder fastening bolt, and then the front brake master cylinder (13).
Remove the handlebar grip (4).
Remove the handlebar bar end weight, remove the handlebar clamp fastening bolts, the handlebar clamps, and remove the handlebar tube (6).
To reinstall, follow the exact reverse procedure of removal.



Note:
When reinstalling the bar end weight, apply thread glue first.
When reinstalling the left and right brake lever assemblies, ensure the lever locating pin is aligned with the corresponding mounting hole in the handlebar tube before tightening the lever assembly bolts.

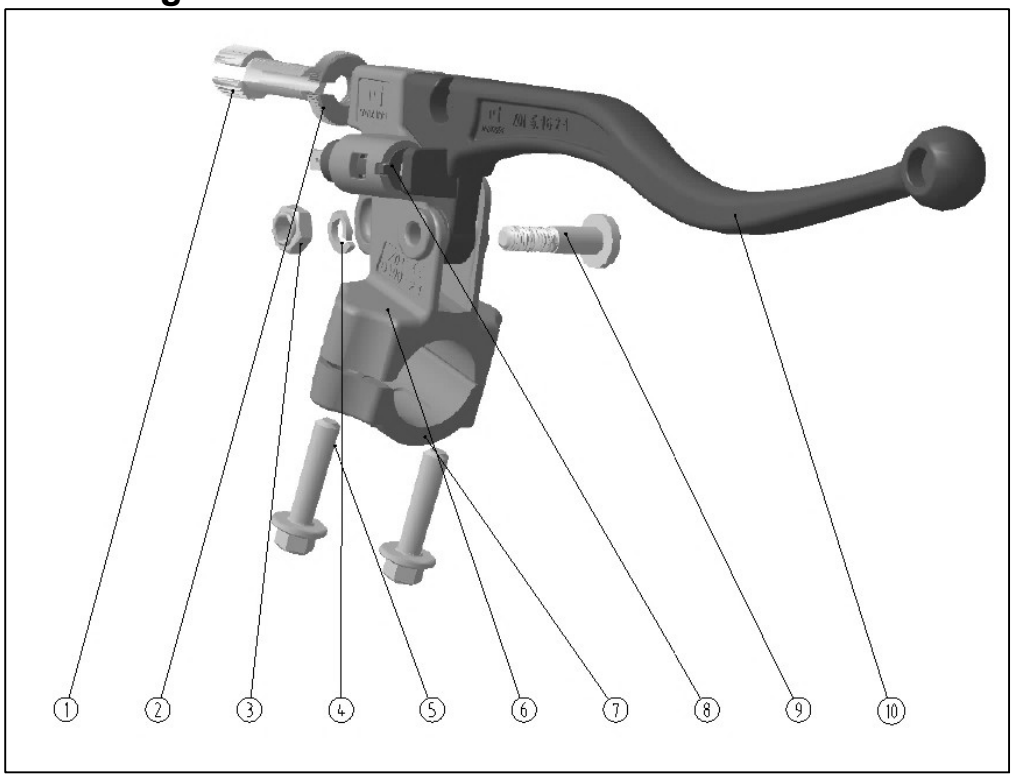
Important:
After reinstallation, confirm the rotational free play of the clutch lever and throttle assembly.
After reinstalling the handlebar assembly, confirm that the handlebar angle is reasonable. Turn the handlebar to its extreme left and right positions to check if the handlebar components and cables interfere with the fuel tank or surrounding related parts. Adjust if necessary, otherwise, there will be safety risks.
When reinstalling the rearview mirrors, readjust their angles to ensure the rearview range is reasonable and safe.

The free play of the clutch lever's ball end should be maintained at 10-15mm. Failure to do so may result in incomplete disengagement of the clutch, leading to engine damage.

Parameters:

Handlebar clamp tightening torque	N·m	M8	18
Left handlebar assembly tightening torque	N·m	M6	9
Handlebar tube decorative cap tightening torque	N·m	M8	22
Handlebar bar end weight tightening torque	N·m	M16	25
Left and right brake levers tightening torque	N·m	M5	4.5

Removing the left handlebar

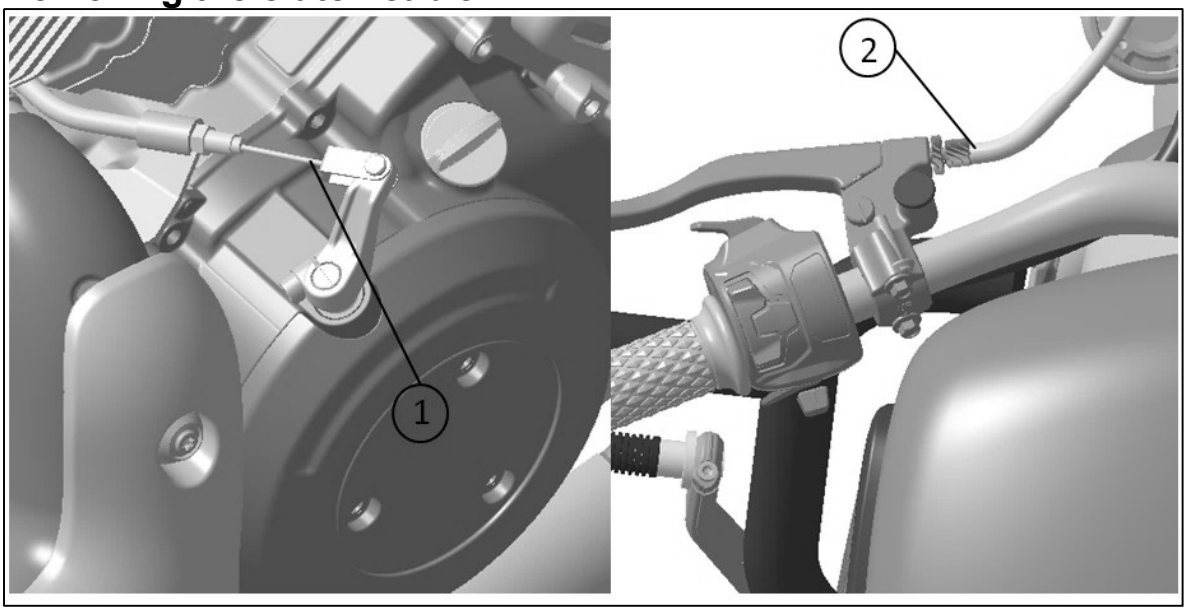


1	Lever adjustment screw	pc	1
2	Lever adjustment nut	pc	1
3	All-metal hex lock nut	pc	1
4	Spring washer	pc	1
5	Hex head flange bolt	pc	1
6	Left lever clamp bracket	pc	1
7	Left lever clamp	pc	1
8	Clutch switch	pc	1
9	Clutch switch	pc	1
10	Slotted shoulder bolt	pc	1
11	Left lever	pc	1

Using a suitable tool, remove the all-metal hex lock nut (3) and spring washer (1).
Pull out the slotted shoulder bolt (10).
Remove the left lever (11).

Important:
When reinstallation, all pivot points (rotating pairs) of the left lever assembly should be coated with lithium-based grease.
After reinstalling the clutch switch, repeatedly confirm correct installation and verify proper ON/OFF function of the clutch switch on the vehicle.

Removing the clutch cable



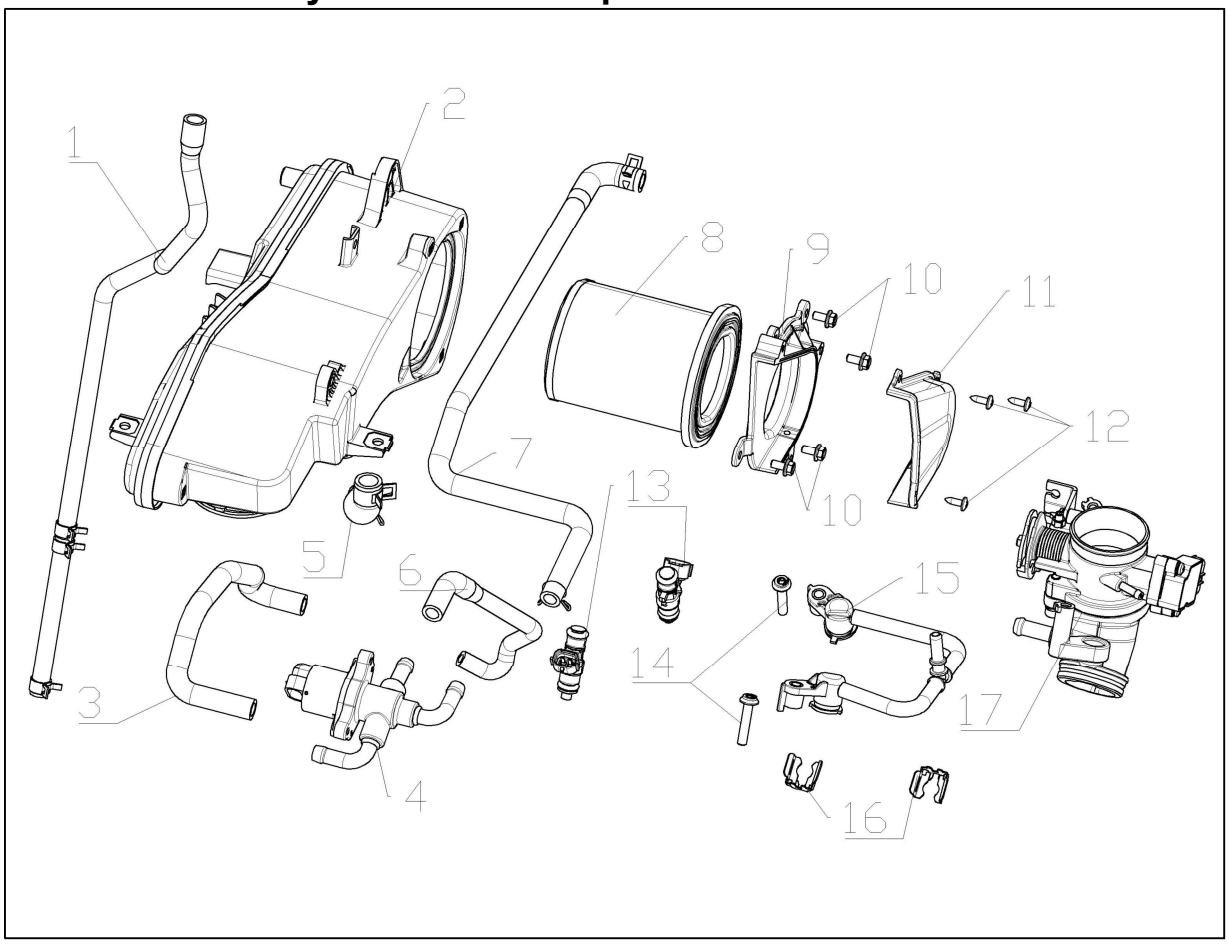
Removal:
Remove the engine-side connector (1) of the clutch cable.
Remove left lever-side connector (2) of the clutch cable.
Finally, completely remove the clutch cable.
Replace with a new clutch cable of the same specification.

Reinstallation:
To reinstall the clutch cable, follow the exact reverse steps of removal.

Important:
When reinstallation, lubricate the pivot point at the lever end with grease to prevent premature wear and extend cable life.
When reinstalling the clutch cable, ensure correct cable routing, maintaining the same path as it was when removal, to avoid issues with clutch return.

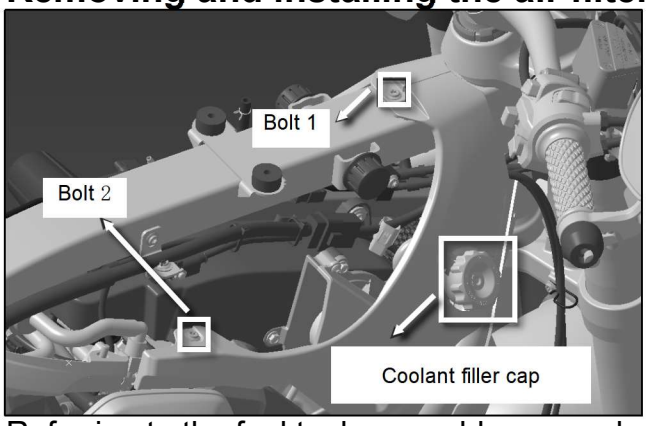
III. Removal and Maintenance of the Air Filter Assembly

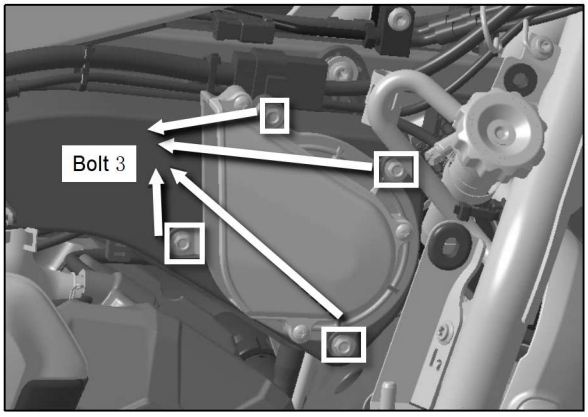
Air filter assembly and list of components



1	Overflow tube	PCS	1
2	Air filter housing	PCS	1
3	Breather tube	PCS	1
4	Idle air control valve	PCS	1
5	Breather tube	PCS	1
6	Breather tube	PCS	1
7	Breather tube	PCS	1
8	Air filter element assembly	PCS	1
9	Filter element upper cover	PCS	1
10	Hex head flange bolt (M5×10)	PCS	4
11	Air filter intake duct	PCS	1
12	Cross recessed pan head tapping screw	PCS	3
13	Fuel injector	PCS	2
14	Torx head bolt (M6×30)	PCS	2
15	Fuel rail assembly	PCS	1
16	Fuel injector clamp	PCS	2
17	Throttle body assembly	PCS	1

Removing and installing the air filter element





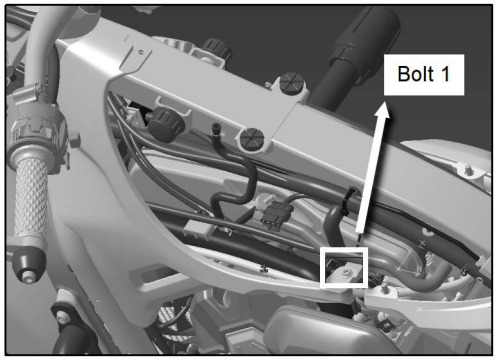
Referring to the fuel tank assembly removal procedure, remove the fuel tank assembly first.
Using a T30 Torx bot, loosen the right cowl mounting bolts (1) and (2), unscrew the filler cap, then remove the right cowl.
Using an 8mm socket tool, loosen the filter element upper cover mounting bolts (3) (total of 4 bolts), then pull out the air filter element assembly.
Remove the air filter element assembly and replace it with a new one.
To reinstall, follow the exact reverse steps of removal.

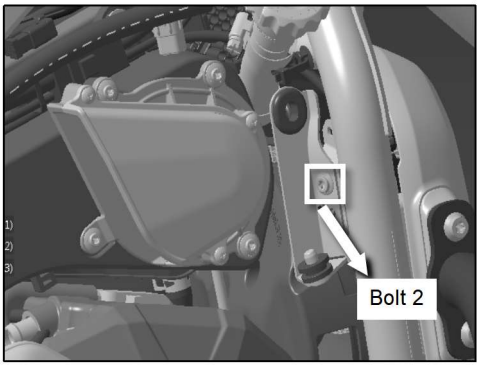
Important:
When reinstalling the filter element assembly, repeatedly confirm it is properly seated. Failure to do so will result in an improper seal around the filter element, allowing dust to enter the engine and shortening its lifespan.
Replace the filter element if it is damaged.
Replace the filter element if it is oily.
Replace the filter element if it is noticeably wet.
Dispose of the removed filter element in an environmentally responsible manner.

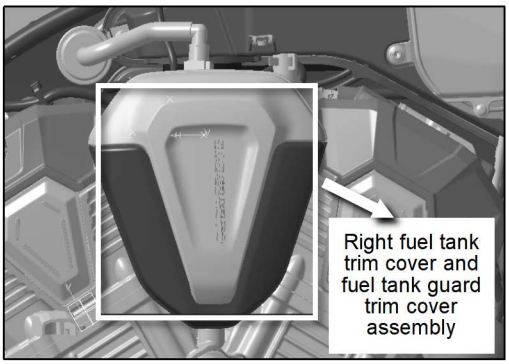
Parameters:

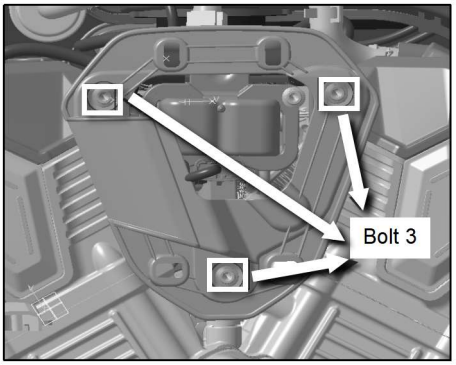
Exterior part mounting bolts	M6	N·m	4.5
	M5	N·m	3

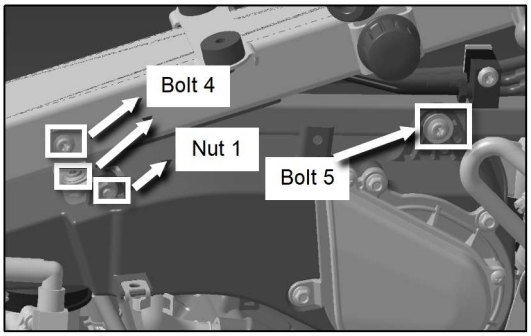
Removing and installing the air filter assembly

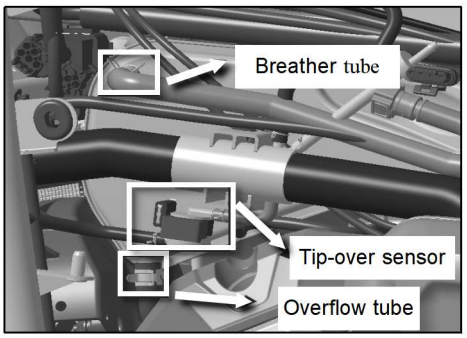


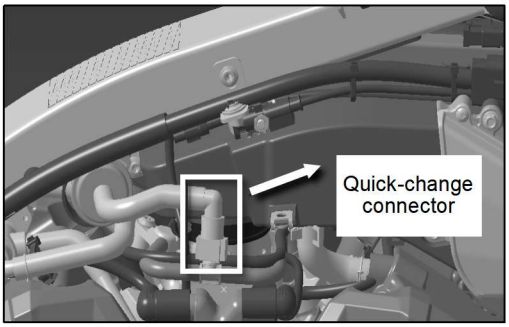


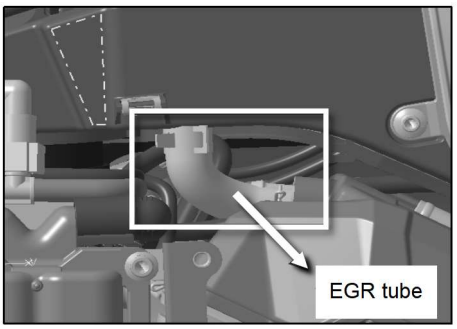






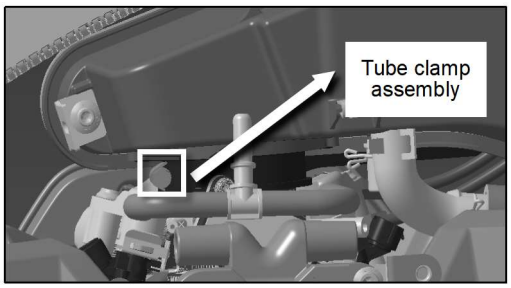






Referring to the air filter element replacement procedure, remove the right side fairing.
Using a T30 Torx tool, loosen the left side fairing mounting bolt (1), and then remove the left side fairing.
Using a T30 Torx tool, loosen the fairing support bracket mounting bolt #2, and then remove the fairing support bracket.

Forcefully detach the right fuel tank trim cover and the right fuel tank guard trim panel assembly. Using a T30 Torx tool, loosen the three fuel tank trim cover bracket mounting bolts (3), and then remove the fuel tank trim cover bracket.
Disconnect the quick-change connector from the fuel rail assembly. Then remove the fuel filter, fuel line, and quick-change connector assembly.
Separate the EGR pipe from the air filter housing.
Using a T30 Torx tool, loosen the air filter housing mounting bolts (4) and (5). Using a 10mm socket tool, loosen the air filter housing mounting nut (1). Remove the air filter bracket mounting lug and the air filter bracket.



Disconnect the overflow tube from the the air filter housing, disconnect the tilt valve from the air filter housing, and disconnect the breather tube from the air filter housing.
Cut the cable ties securing the main wiring harness and ignition coil harness to the air filter housing.
Using a suitable tool, loosen the clamp, and then finally remove the air filter assembly.

Installation:
To reinstall, follow the exact reverse steps of removal.

Removing and installing the throttle body

Remove the fuel tank by referring to the fuel tank assembly removal and installation procedure.
Remove the air filter assembly by referring to the air filter assembly removal and installation procedure.
Disconnect the electrical connectors from the throttle body assembly and the fuel injector.
Using a suitable tool, loosen the tube clamp between the throttle body assembly and the engine intake manifold.
Disconnect the breather tube from the throttle body assembly.
Carefully pull out the throttle body assembly.
Disconnect the throttle cable from the throttle valve.
Remove the throttle body assembly.

Installation:
To reinstall, follow the exact reverse steps of removal.

Important:
When installing the throttle body assembly, ensure that the sealing component(s) between it and the air filter housing are properly installed. If the seal is not tight, dust from the air can enter the engine and cause damage.
Before installation, clean the intake passage of the throttle body assembly with a dedicated cleaner and blow it dry to ensure optimal engine performance.

Parameters:

Air filter housing to frame mounting bolt tightening torque	M6	N·m	9
Throttle body assembly to air filter connecting hose clamp tightening torque	/	N·m	2
Throttle body assembly to engine intake manifold clamp tightening torque	/	N·m	2

Removing and installing the fuel rail assembly

Removal:

Using a suitable tool, remove the bolts connecting the fuel rail assembly to the throttle body assembly.

Forcefully pull and remove the fuel rail assembly.

Installation:

To reinstall, follow the exact reverse steps of removal.

Important:

When installing the fuel rail assembly, pay attention to the O-rings on the fuel injectors. Check for any damage, deformation, or improper seating. Replace or correct as needed; otherwise, an improper seal could lead to abnormal combustion.

When installing the fuel rail and injectors, ensure the locating clips between the injectors and the fuel rail are in the same conditions as they were before removal.

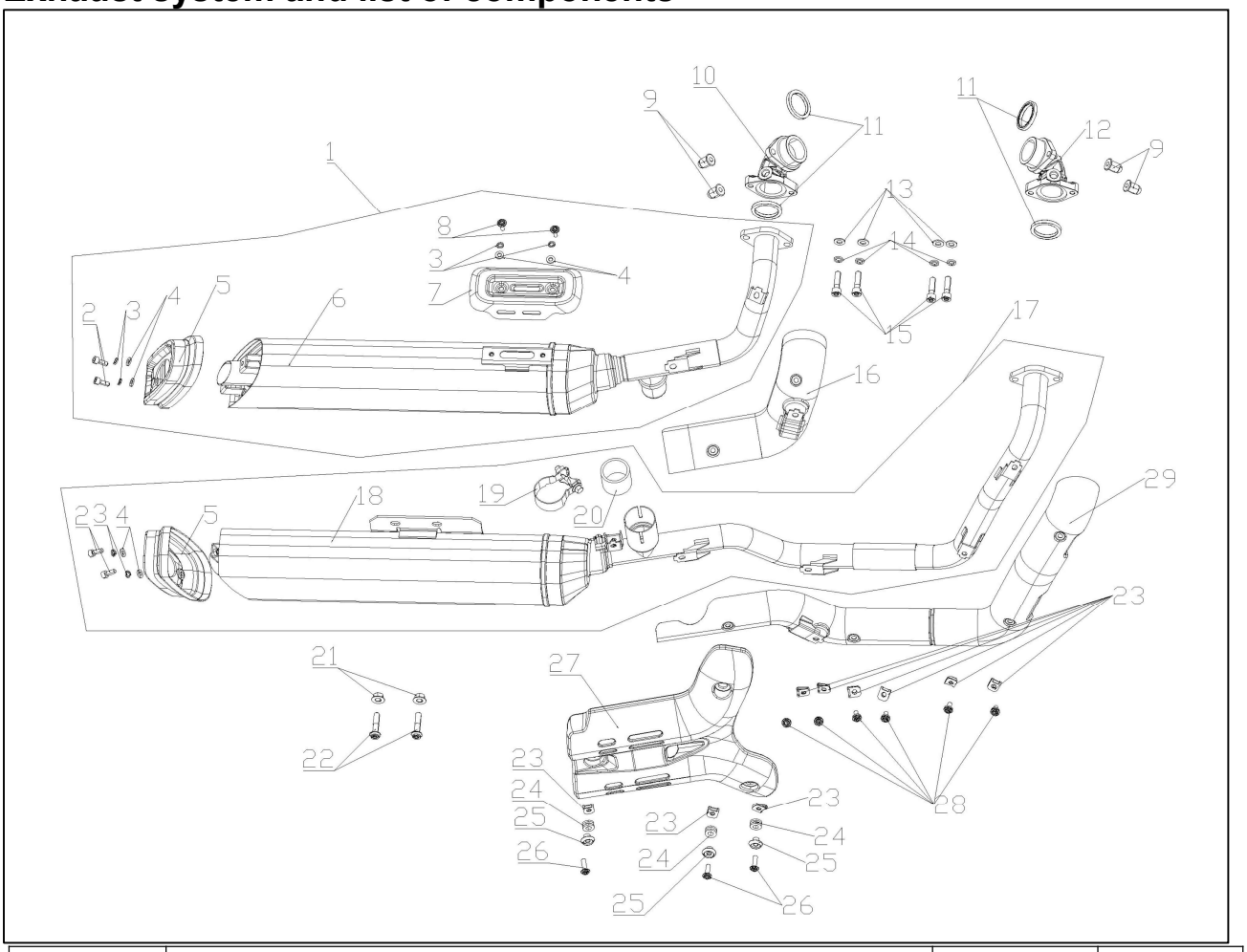
Before reassembly, clean the fuel injectors with a dedicated cleaner and blow them dry to ensure optimal engine performance.

Parameters:

Fuel rail to throttle body bolt tightening torque	M6	N·m	6

IV. Removal and Maintenance of the Exhaust System Assembly

Exhaust system and list of components



1	Muffler assembly	PCS	1
2	Hex socket head screw	PCS	4
3	Spring washer	PCS	6
4	Flat washer	PCS	6
5	Muffler tail cap	PCS	2
6	Muffler body	PCS	1
7	Heat shield	PCS	1
8	Torx head bolt	PCS	2
9	Cap nut (or acorn nut)	PCS	4
10	Exhaust pipe connector	PCS	1
11	Exhaust port gasket	PCS	4
12	Exhaust pipe connector	PCS	1
13	Flat washer	PCS	4
14	Spring washer	PCS	4
15	Torx head bolt	PCS	4
16	Muffler guard	PCS	1
17	Muffler assembly	PCS	1
18	Muffler body	PCS	1
19	Muffler connecting sleeve	PCS	1
20	Graphite ring seal	PCS	1

21	Hex flange nut	PCS	2
22	Torx flange head bolt	PCS	2
23	Clip nut	PCS	9
24	H-shape rubber bushing	PCS	3
25	Bushing	PCS	3
26	Torx head bolt	PCS	3
27	Muffler guard	PCS	1
28	Torx head bolt	PCS	6
29	Muffler guard assembly	PCS	1

Removing and installing the muffler

Keep the vehicle in an upright position using the side stand.
Using a suitable tool, remove the fastening bolts (total of 9) for the muffler guard (parts 27, 16, 29), and then remove the muffler guard.
Using a suitable tool, loosen bolts (22) (total of 2) and bolts (15) (total of 4), then remove the muffler assembly.
Using a suitable tool, loosen the muffler connecting sleeve bolt (19), then separate the front cylinder muffler and the rear cylinder muffler.
To reinstall, follow the exact reverse steps of removal.

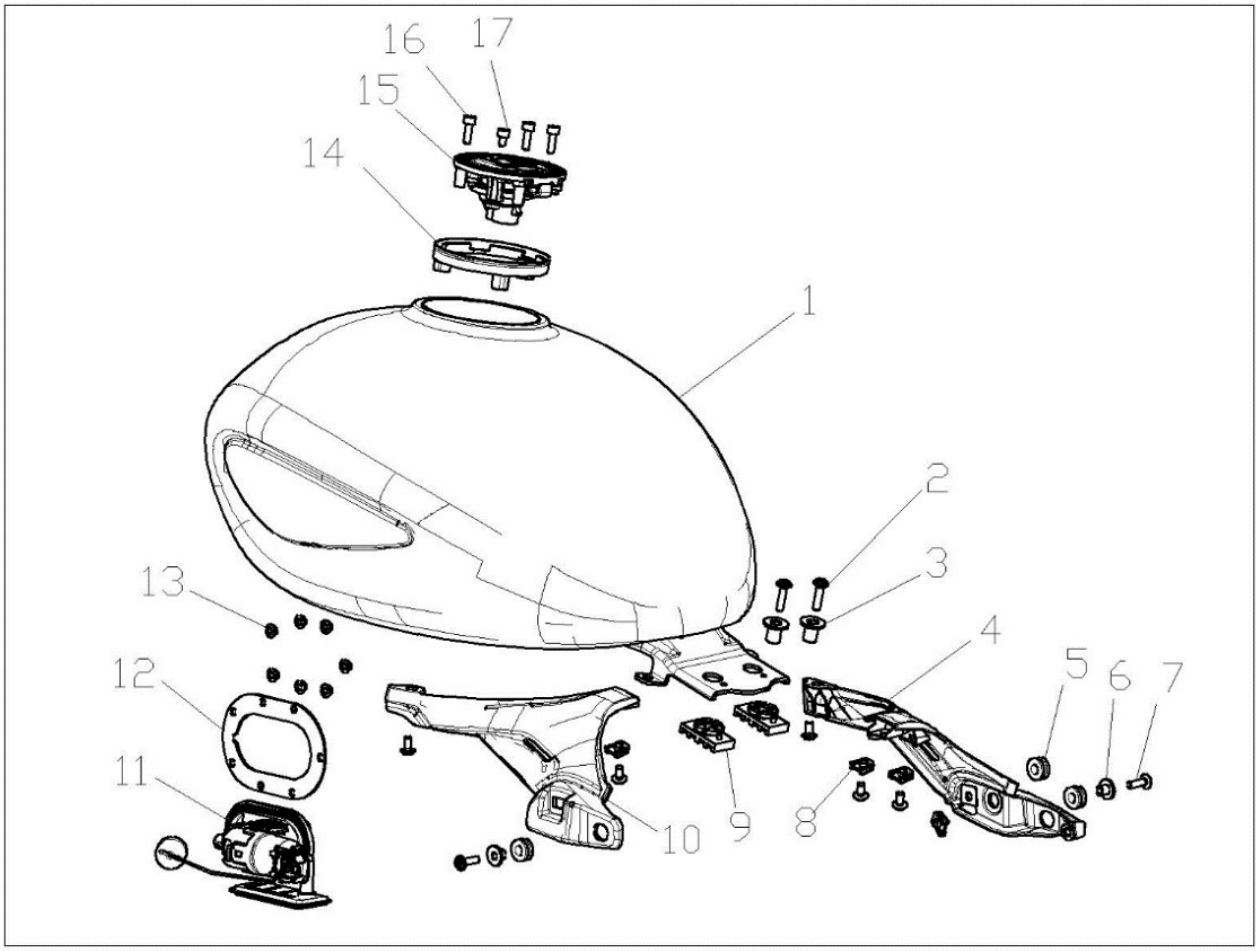
Important:
When reinstalling the muffler, replace the graphite gasket; otherwise, a used graphite gasket will cause poor sealing and exhaust leakage.
Wait for the muffler to cool down before removing it to avoid burns.
After reinstallation is done, start the vehicle and check the sealing points for any signs of exhaust leakage.
Dispose of the replaced graphite gaskets and other parts in an environmentally friendly manner.

Parameters:

Muffler connecting bolt	M8	N·m	22
Muffler guard (parts 27, 16, 29) mounting bolt	M6	N·m	6
Muffler and muffler bracket mounting bolt	M8	N·m	27

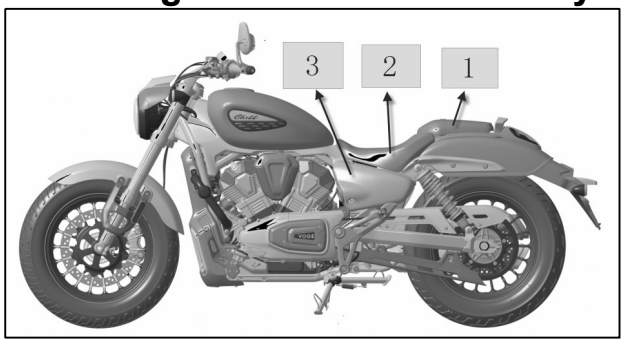
V. Removal and Installation of the Fuel Tank Assembly

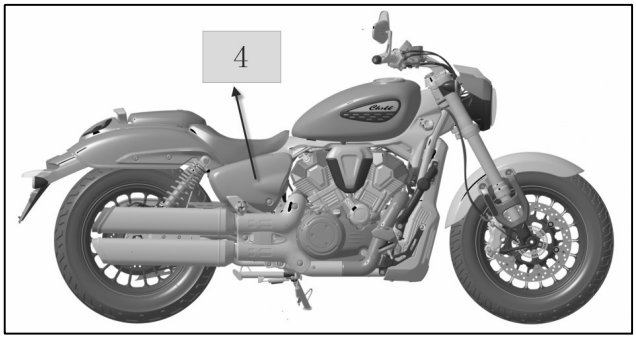
Fuel tank assembly and list of components

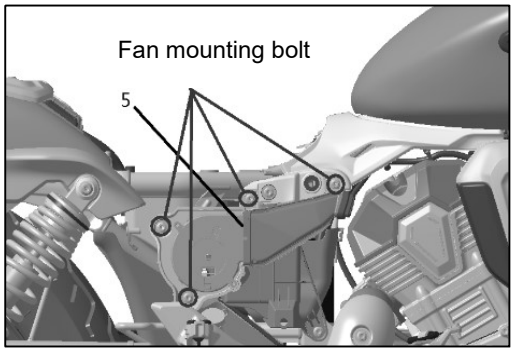


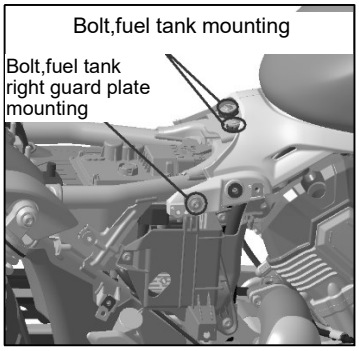
1	Fuel tank	PCS	1
2	Torx head bolt M6x25	PCS	2
3	Flange washer	PCS	2
4	Fuel tank left guard	PCS	4
5	H-shape rubber ring	PCS	3
6	Bushing	PCS	2
7	Torx head bolt M6x20	PCS	2
8	Clip nut M6	PCS	4
9	Torx head bolt M6x12	PCS	5
10	Fuel tank right guard	PCS	4
11	Electronic fuel pump	PCS	4
12	Fuel pump retaining plate	PCS	1
13	Hex flange nut M5	PCS	7
14	Fuel filler rubber sleeve	PCS	1
15	Fuel tank lock	PCS	1
16	Hex socket screw M5x30	PCS	3
17	Hex socket screw M5x8	PCS	1

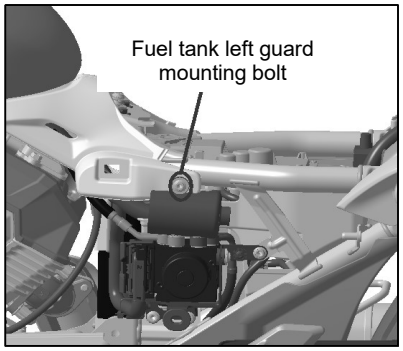
Removing the fuel tank assembly

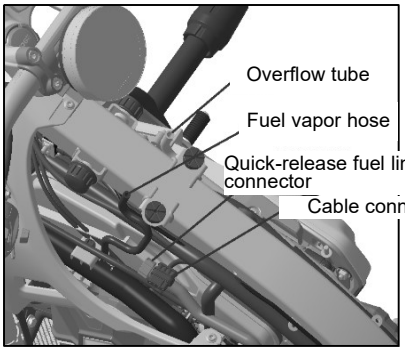












Prop up the vehicle on its side stand.
First, use the key to remove the passenger seat (1) and the rider's seat (2), then remove the left side cover (3).
Loosen the right side cover bolt(s) and remove the right side cover (4).
Loosen the left and right fuel tank shield mounting bolts, and then the fuel tank mounting bolts.
Slightly lift the fuel tank off the vehicle. Then, disconnect the overflow tube, fuel vapor hose, fuel pump wiring harness connector, and the quick-change fuel line connector connected to the fuel rail from the bottom of the fuel tank. Finally, remove the whole fuel tank assembly.
To reinstall, follow the exact reverse steps of removal.

Note:
Due to the numerous connections and fittings located at the bottom of the fuel tank, during reinstallation, ensure all components are properly seated and connected, and avoid excessive bending or pinching of the lines and hoses.

Parameters:

Exterior part mounting bolts	M6	N·m	6
Fuel tank assembly rear mounting bolts	M6	N·m	9

Removing the fuel tank lock

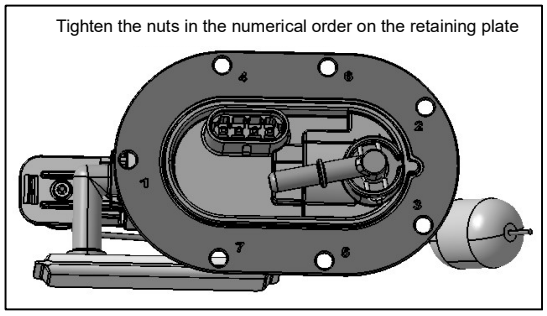
Remove the four bolts securing the fuel tank lock.
Remove the fuel tank lock.
To reinstall, follow the exact reverse steps of removal.

Parameters:

Fuel tank lock bolt	M5	N·m	4.5

Removing the fuel pump

First, drain any residual fuel from the fuel tank.
Invert the removed fuel tank assembly.
Remove the seven nuts securing the fuel pump.
Remove the fuel pump.
To reinstall, follow the exact reverse steps of removal.



Note:
When removing the fuel pump, check the fuel pump filter screen for cleanliness. Clean it if necessary. Cleaning must be done in clean fuel; rinse the filter screen repeatedly.

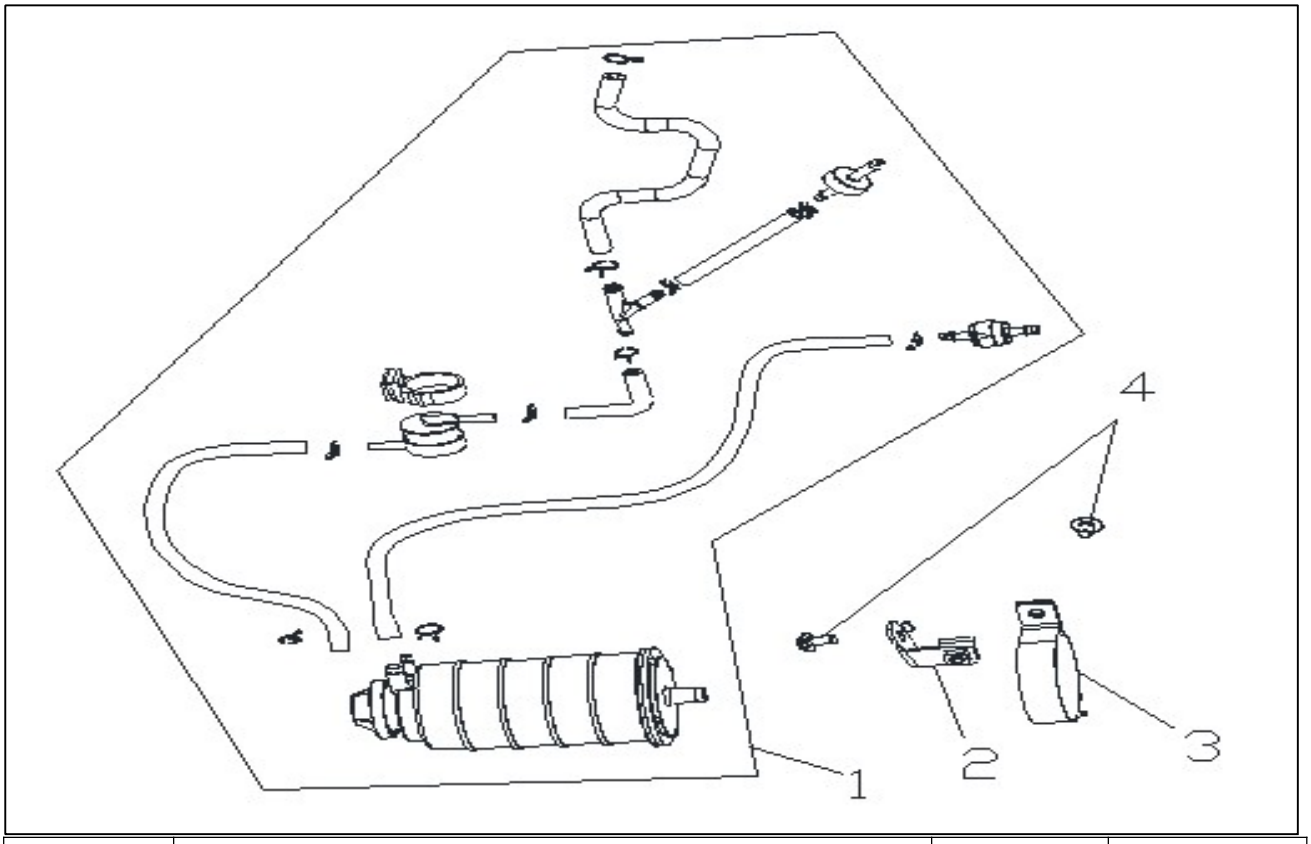
Important:
When reinstalling the fuel pump, tighten the nuts in the numerical order (1-7) indicated on the metal retaining plate to ensure the fuel pump is properly sealed during installation.
After reinstalling the fuel pump, be sure to check it for proper sealing using specialized pressure testing equipment.
Dispose of the removed fuel pump gasket/seal in an environmentally friendly manner.

Parameters:

Fuel pump bolt tightening torque	M5	N·m	6
Fuel tank static pressure value	/	kp	130

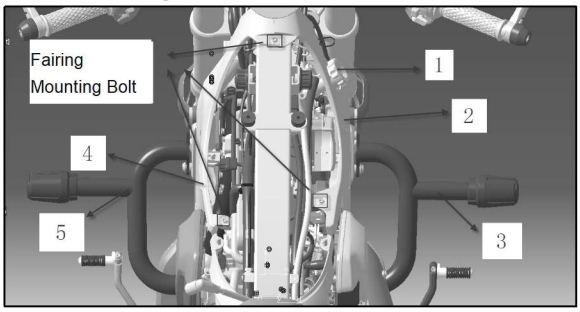
VI. Removal and Maintenance of the Fuel Vapor Control Assembly

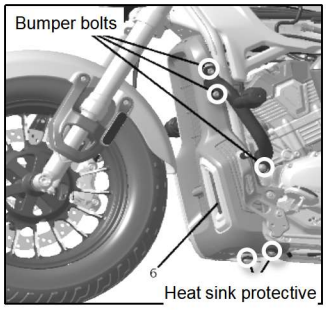
Fuel vapor control assembly and list of components

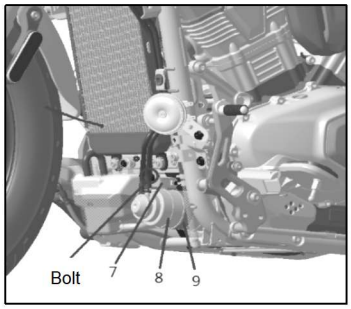


1	Fuel vapor control module	SET	1
2	Mounting bracket	PCS	1
3	Clamp	PCS	1
4	Torx head bolt	PCS	2

Removing the fuel vaper control assembly







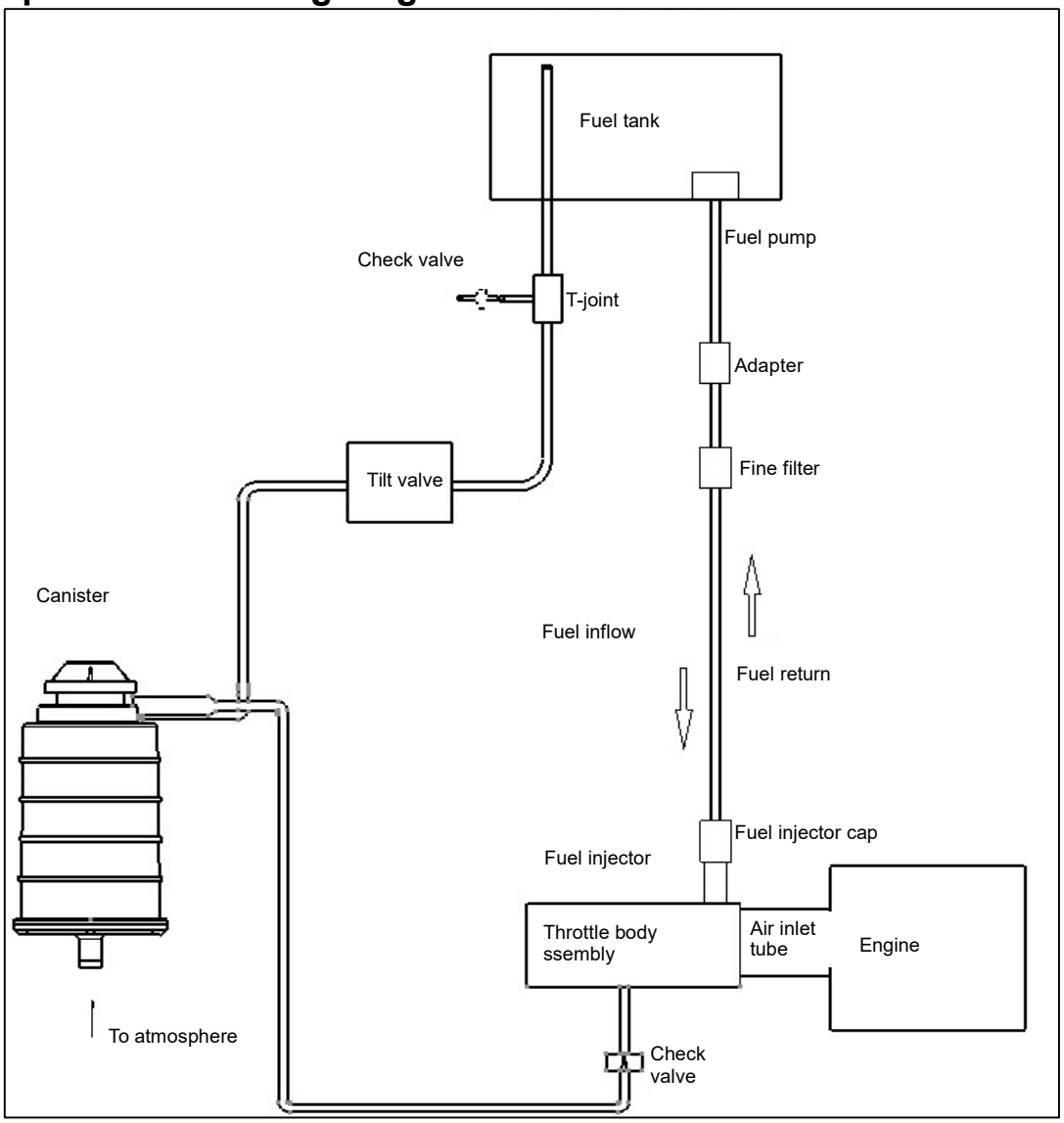
Remove the fuel tank assembly using the steps for removing the fuel tank assembly.
Remove the radiator filler neck (1), loosen the shroud bolts, and remove the left shroud (4) and right shroud (2).
Loosen the bumper bolts, and remove the left bumper (5) and right bumper (3).
Loosen the radiator guard bolts, and remove the radiator guard assembly (6).
Loosen the bolts, and remove fuel vapor control assembly (8), mounting bracket (7), and clamp (9).
To reinstall, follow the exact reverse steps of removal.

Note:
Due to the limited space for the fuel vapor control assembly and its numerous pipelines, it is important to note down the routing and arrangement of the pipelines before removal to ensure correct reinstallation.

Important:
When reinstalling the fuel vapor control assembly, pay attention to the arrangement of the tilt valve. Ensure that this component remains horizontal with the ground after installation; otherwise, the tip-over protection function will be lost.

Exterior par bolt tightening torque	M6	N·m	6
	M5	N·m	4.5
Bumper bolt tightening torque	M8	N·m	22
	M10	N·m	40
Canister bracket tightening torque	M6	N·m	9

Fuel vapor control wiring diagram

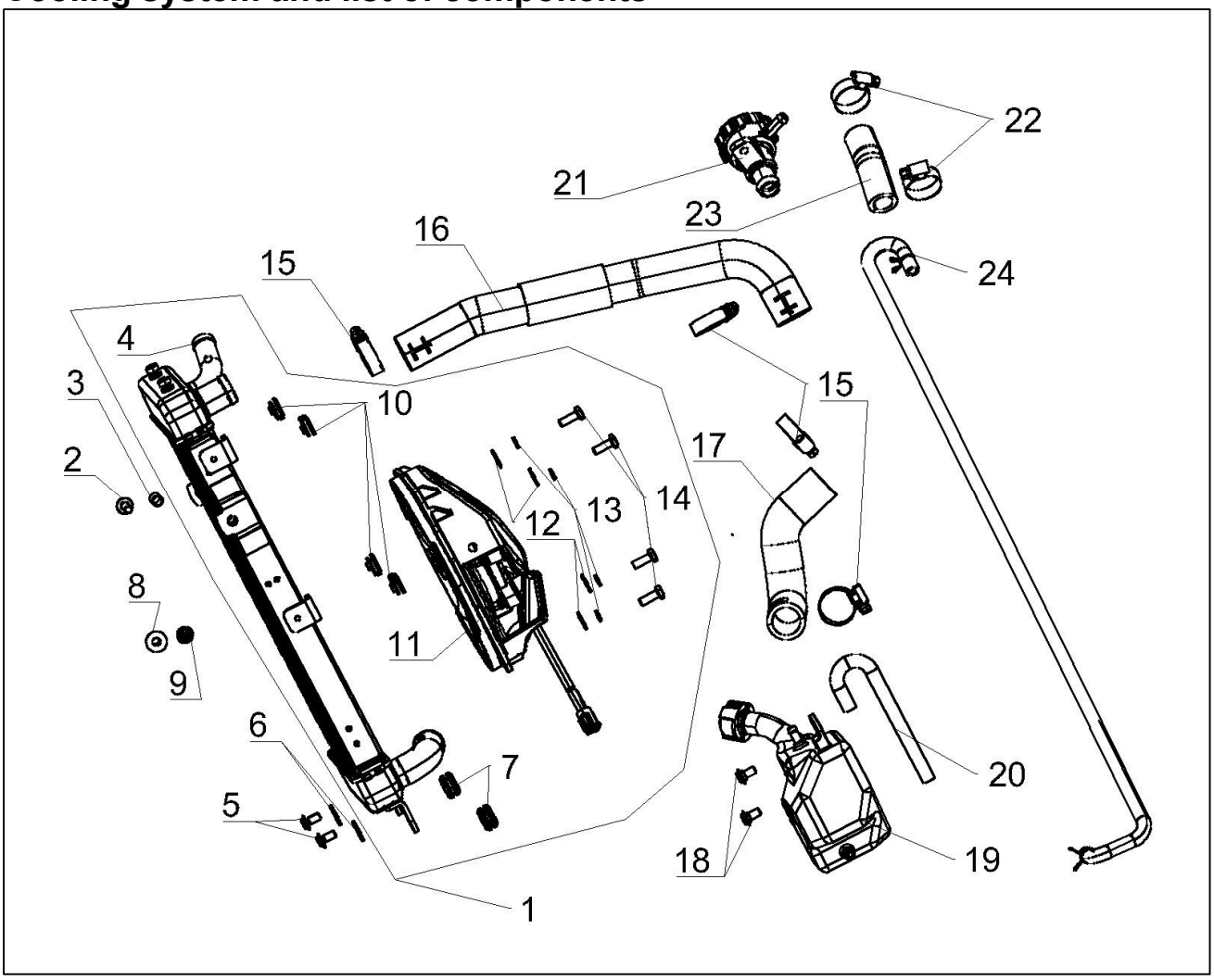


Operating principle of the fuel vapor control system

(1) When the gasoline in the fuel tank heats up, it evaporates and passes through the tilt valve to the TANK port of the charcoal canister, where it is adsorbed.
(2) If the vehicle tilts by more than 60°, the tilt valve closes, preventing fuel from flowing through the tilt valve to the charcoal canister.
(3) Fresh air flows from the atmospheric vent of the charcoal canister to the PURGE port, carrying the fuel vapor into the throttle body, and finally into the engine for combustion.
(4) When the fuel level in the tank drops (creating negative pressure inside the fuel tank), air is supplied to the fuel tank through a check valve to maintain the pressure above the fuel at atmospheric pressure.

VII. Removal and Maintenance of the Cooling System

Cooling system and list of components



1	Radiator assembly	PCS	1
2	Torx head bolt (M6x25)	PCS	1
3	Bushing	PCS	1
4	Radiator	PCS	1
5	Torx head bolt (M6x12)	PCS	1
6	Flat washer	PCS	2
7	H-shaped rubber gasket	PCS	2
8	Bushing	PCS	1
9	Torx head bolt (M6x20)	PCS	1
10	Clip nut M6	PCS	4
11	Fan assembly	PCS	1
12	Spring washer	PCS	4
13	Flat washer	PCS	4
14	Hex head bolt	PCS	4
15	Hose clamp assembly	PCS	4

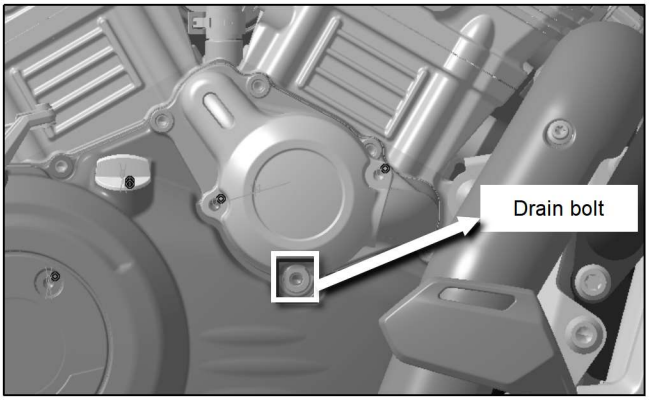
16	Coolant hose	PCS	1
17	Coolant hose	PCS	1
18	Torx head bolt (M6x12)	PCS	2
19	Coolant expansion tank	PCS	1
20	Coolant hose	PCS	1
21	Coolant filler port	PCS	1
22	Hose clamp assembly	PCS	2
23	Coolant hose	PCS	1
24	Coolant hose	PCS	1

Checking the coolant level

Keep the vehicle upright.
Check the coolant expansion tank on the front right side of the engine; the coolant level should be between the upper and lower limit marks. If it is below the lower limi mark, replenish the coolant tank, but the coolant level should not exceed the upper limit.

Replacing the coolant

Keep the vehicle upright.
Remove the coolant filler cap on the right side of the radiator.
Place a drain pan beneath the coolant drain bolt on the front left side of the engine.
Use a suitable tool to remove the drain bolt and drain the coolant completely from the engine's coolant passages.
Reinstall the drain bolt.
Refer to the coolant filling procedure for replenishment.



Important:
Collect the drained coolant in a suitable container and dispose of it in an environmentally friendly manner.
Replace the drain bolt gasket with a new one during installation.
Ensure the mating surface for the drain bolt gasket on the engine is clean, free from any impurities.
After installing the drain bolt, wipe off any coolant remaining on the muffler, engine, and other components with a cloth.
After replacement, start the engine and appropriately raise the RPMs, then check for any leaks in the cooling system.

Parameters:

Coolant drain bolt	M6	N·m	9
Coolant capacity		L	1.7
Coolant type	Ethanol-containing, silicate-free coolant		G40

Coolant filling

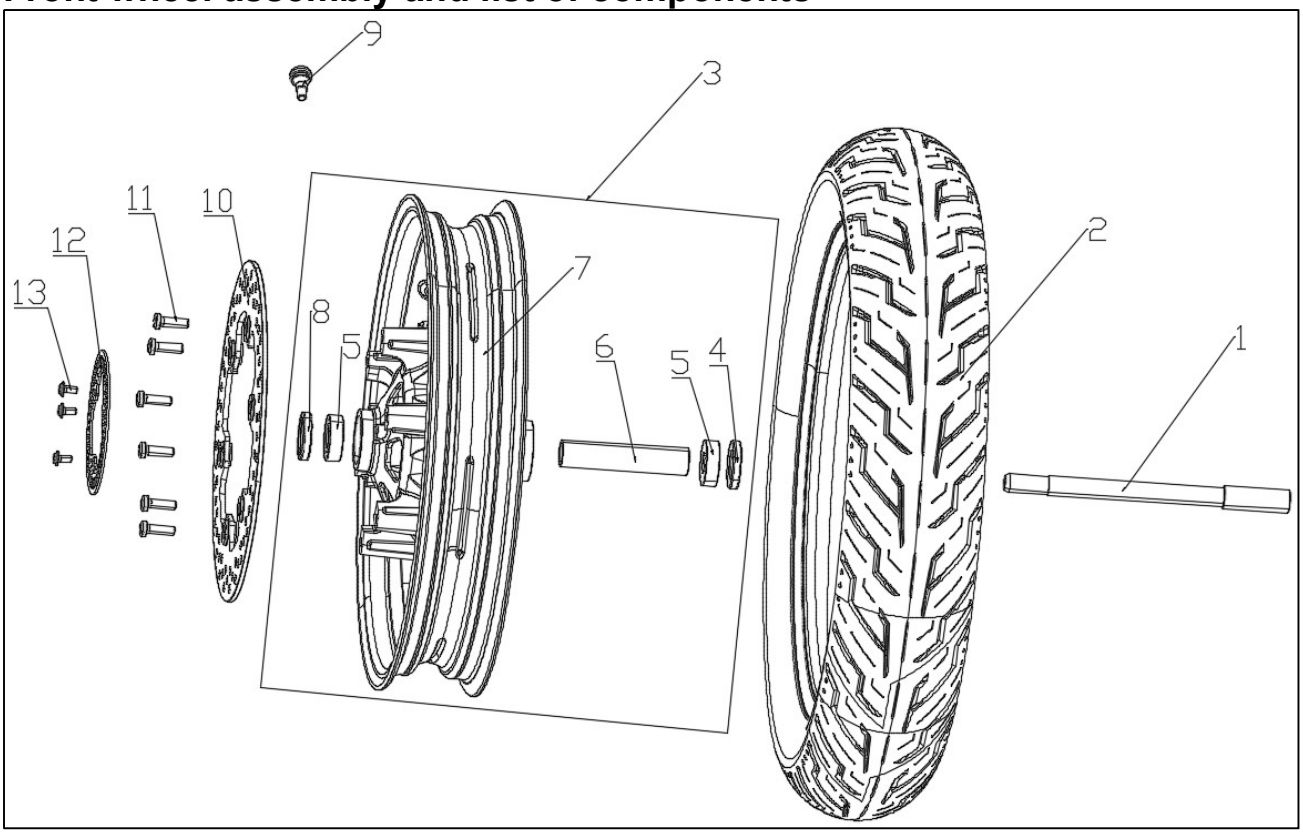
Using a funnel or similar tool, pour coolant into the radiator filler neck until the fluid level reaches the top of the neck.
Start the engine and let it idle. Observe the radiator filler neck; the fluid level in the filler neck will drop. Continue to add coolant until the level no longer drops.
Install the filler neck cap.
Using a funnel or similar tool, add coolant to the expansion tank's filler neck, ensuring the fluid level is between the upper and lower limit marks.
Reinstall the rubber cap on the expansion tank neck.
Coolant filling is now complete.

Important:
After replacement is complete, start the engine and appropriately raise the RPMs, then check for any leaks in the cooling system.

Note:
After the above work is completed, clean any oil stains from the engine surface with a cleaning agent, then dry with compressed air.

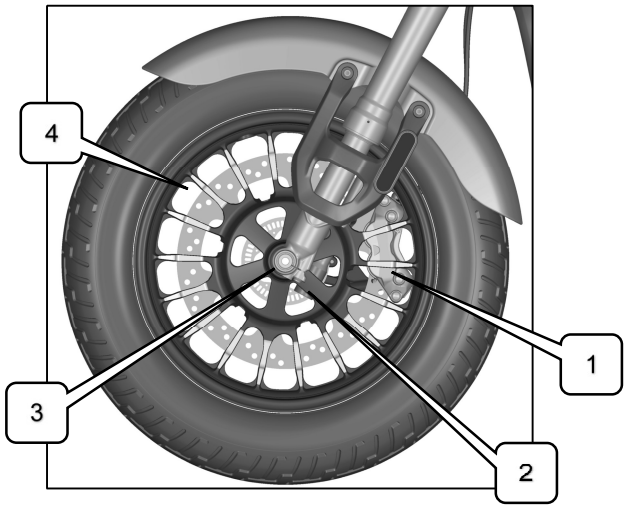
VIII. Removal and Maintenance of the Front Wheel Assembly

Front wheel assembly and list of components



1	Axle	PCS	1
2	Tire	PCS	1
3	Front wheel	SET	1
4	Oil seal	PCS	1
5	Bearing	PCS	2
6	Hub liner assembly	PCS	1
7	Front wheel body	PCS	1
8	Oil seal	PCS	1
9	Valve core assembly	PCS	1
10	Front brake disc	PCS	1
11	Brake disc retaining bolt	PCS	6
12	ABS tone ring	PCS	1
13	Torx head bolt	PCS	3

Removing the front wheel



Position the vehicle upright on a service stand and suspend the front wheel.
Using suitable tools, remove the front brake caliper (1).
Loosen the pinch bolt (2) on the left fork bottom case.
Loosen the front axle (3) and remove it.
Remove the front wheel assembly (4).
To reinstall, follow the exact reverse steps of removal.

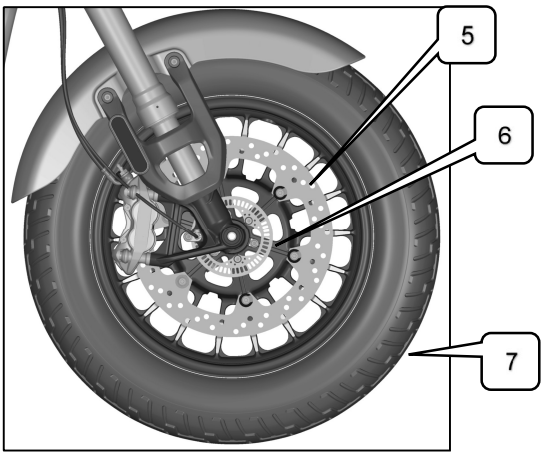
Note:
When removing the front brake caliper, do not use the front brake lever to prevent the front caliper pistons from moving, which could make caliper difficult to reinstall.

Important:
During installation, ensure that the brake pads and the working surface of the brake disc are free from contaminants.
After completing the replacement, repeatedly squeeze and release the front brake lever several times to confirm there are no abnormalities.
After reinstalling the front wheel, its dynamic balance should be re-checked on appropriate equipment.
When reinstalling the front wheel bushings or oil seals, lithium-based grease should be applied.

Parameters:

Front wheel	/	18-rib aluminum wheel	3.0×16
Front tire	/	Tubeless tire	130/90R16
Front wheel axial runout not greater than	/	mm	0.8
Front wheel radial runout not greater than	/	mm	0.8
Front fork top axle pinch bolt	M8	N·m	22
Front axle tightening torque	M16	N·m	70
Front brake caliper tightening torque	M10	N·m	45
Brake disc tightening torque	M8	N·m	35
Thread locker	262 thread glue	ml	10
Grease	/	g	10
Maximum permissible unbalance of front wheel assembly	/	g	5
Tire pressure		kPa	225

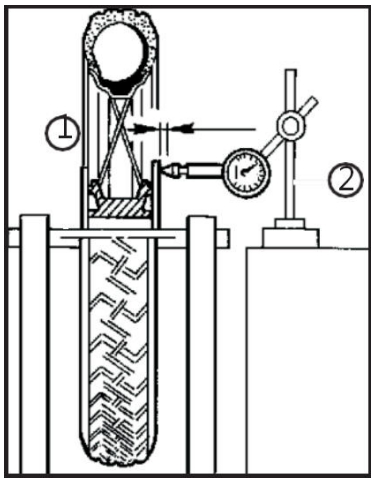
Removing the brake disc



After removing the front wheel assembly, place it on a workbench.
Remove the Torx head bolt, and then the ABS tone ring (5).
Remove the brake disc mounting bolts, and then the front brake disc (6).
To reinstall, follow the exact reverse steps of removal.

Note:
The front brake disc bolts are coated with thread glue When removing them, use a heat gun to melt the thread glue before hand, and ensure you use the right tool, otherwise, removal will be difficult.

Important:
During installation, ensure that the brake pads and the working surface of the brake disc are free from contaminants.
When reinstalling the brake disc, apply thread glue to the brake disc mounting bolts.
After installing the brake disc, the brake disc's axial runout should be re-checked using the method as follows:
Place the front wheel on a balancing stand using a balancing shaft (1).
Use a dial indicator (2) to measure the brake disc's axial runout.



Axial runout not greater than	mm	0.3

Removing the front tire

After removing the front wheel assembly, place it on a workbench.
Use the valve cap to remove the valve core from the valve stem, deflating the tire.
Use a specialized tool to remove the front tire (7).
To reinstall, follow the exact reverse steps of removal.

Note:
Please use specialized equipment for tire removal. Forcing the assembly with external force can cause permanent damage to the tire and the front wheel body.

Important:
When reinstalling the tire, align the tire's balance mark with the valve stem on the wheel hub. This facilitates subsequent dynamic balancing.

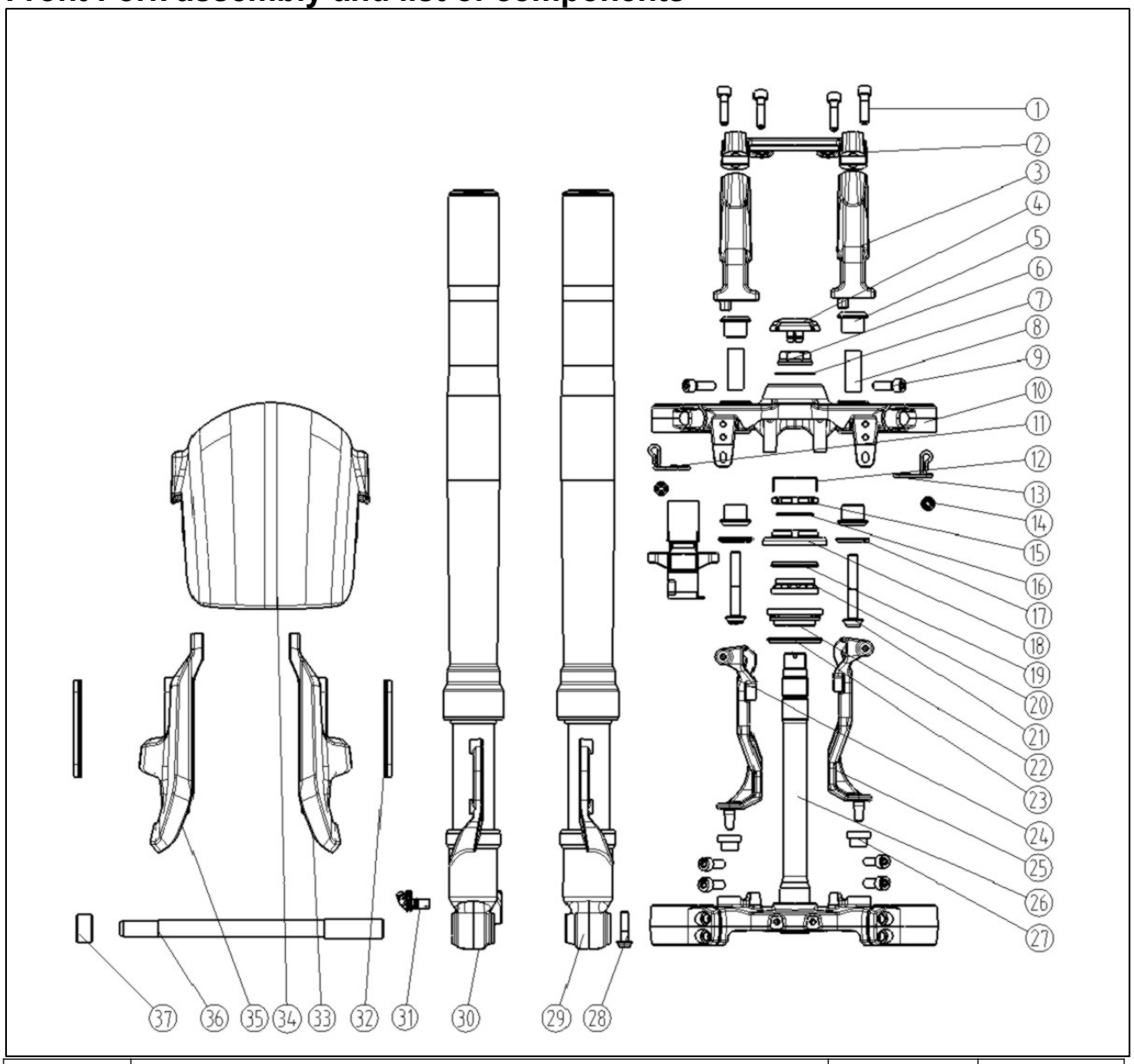
Removing the Front Wheel Bearing and Oil Seal

After removing the front wheel assembly, place it on a workbench.
Remove the brake disc and tire.
Use specialized tools to sequentially remove the front wheel oil seal, bearing, and spacer/bushing.
Replace the bearing and oil seal with ones of the same specifications.
To reinstall, follow the exact reverse steps of removal.

Important:
The front wheel oil seal will be damaged upon removal and needs to be replaced. Otherwise, insufficient watertightness will accelerate bearing wear.
Removing the front wheel bearings requires the use of a specialized puller tool.
To facilitate installation, the front wheel bearing bore can be heated to 100℃ before pressing in the bearing.
When pressing in the bearing, specialized pressing equipment must be used. Press in the bearing on the brake disc side (right side) first until it bottoms out. Then insert the hub's inner spacer assembly before pressing in the bearing on the other side.

IX. Removal and Maintenance of the Front Fork Assembly

Front Fork assembly and list of components

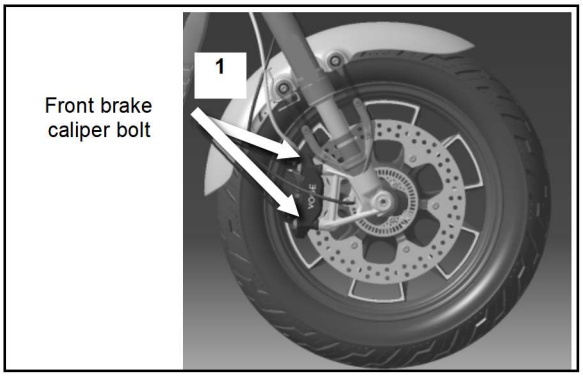


1	Torx head bolt (M8×30 cylindrical head)	PCS	4
2	Steering stem clamp	PCS	1
3	Steering stem clamp seat	PCS	1
4	Upper triple clamp trim cover	PCS	1
5	T-shaped rubber ring	PCS	4
6	Steering stem lock nut	PCS	1
7	Steering stem washer	PCS	1
8	Bushing	PCS	2
9	Torx head bolt (M8×25 cylindrical head)	PCS	6
10	Upper triple clamp	PCS	1
11	Right cable clamp	PCS	1
12	Stop washer	PCS	1
13	Left cable clamp	PCS	1

14	Torx head bolt (M6X12)	PCS	2
15	Steering stem lock nut	SET	1
16	Rubber flat washer	PCS	1
17	Flanged washer	PCS	2
18	Steering stem adjusting nut	PCS	1
19	Oil seal	PCS	1
20	Steering bearing	PCS	1
21	Hex flange head bolt (M10X65)	PCS	2
22	Steering bearing	PCS	1
23	Oil seal	PCS	1
24	Headlight right bracket	PCS	1
25	Headlight left bracket	PCS	1
26	Steering stem body	PCS	1
27	T-shaped rubber ring	PCS	2
28	Internal hex flange head bolt (M8X30)	PCS	1
29	Front shock absorber	PCS	1
30	Front shock absorber 2	PCS	1
31	Speed sensor	PCS	1
32	Side reflector	PCS	2
33	Front fender bracket 1	PCS	1
34	Front fender	PCS	1
35	Front fender bracket 2	PCS	1
36	Axle	PCS	1
37	Bushing	PCS	1

Removing and installing the steering stem

Keep the vehicle upright with the side stand.
Loosen the bolt (1) and remove the handlebar clamp and handlebar assembly.
Loosen the bolt (28) and axle (36) and remove the front wheel assembly.
Loosen the bolt and remove the front lower brake caliper and speed sensor (31).
Loosen the front fender mounting bolts and remove the front fender.
Remove the upper triple clamp trim cover.
Loosen the steering stem lock nut and remove the steering stem washer.



Loosen the upper triple clamp and front shock absorber locking bolts (total 2) and remove the upper triple clamp.
Loosen the bolt securing the ABS oil line to the steering stem (on the left side of the steering stem).
Remove the steering stop washer, remove the steering stem lock nut, remove the rubber flat washer, and loosen and remove the steering stem adjusting nut.
Remove the steering stem assembly.
To reinstall, follow the exact reverse steps of removal.

Note:
When removing the steering stem assembly, be sure to first remove the ABS oil line mounting bolt to prevent the ABS oil line and speed sensor from being damaged by stress.

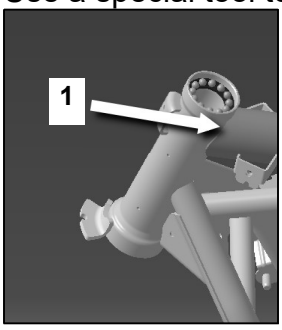
Important:
When reinstalling the steering bearing, lithium-based grease should be applied to ensure proper lubrication of the bearing.
During reinstallation, be sure to check whether the gap between the ABS sensor probe and the front wheel tone ring is reasonable.
The two adjusting and lock nuts of the steering stem should be installed in strict accordance with requirements given in the parameter table below; otherwise, poor steering rotation will result.

Parameters:

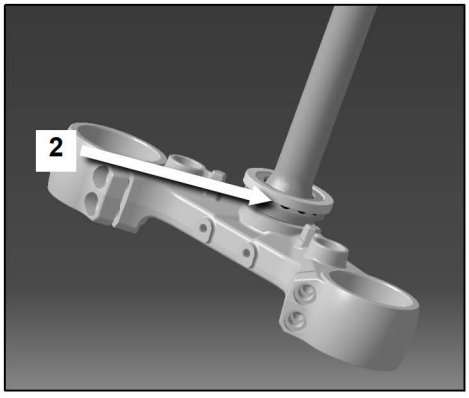
Handlebar clamp bolt torque	M8	N·m	18
Upper triple clamp locking bolt torque	M22	N·m	100
Steering stem and upper triple clamp locking bolt torque	M8	N·m	22
Steering stem lock nut (lower) torque	M26	N·m	50±5 Nm then 160° then 20±2 N·m
Steering stem lock nut (upper) torque	/	mm	0.5-1.5

Removing and installing the steering bearings

Use a special tool to remove bearing race (1) from the frame head tube.



Use a special puller tool (as shown in the figure) to remove the bearing retainer (2) from the steering stem.



Replace the steering bearing with one of the same specifications.
Remove the oil seal under the bearing.

To reinstall, follow the exact reverse steps of removal.

Note:
For removing the steering stem bearing, only use dedicated tools. Avoid using improper or makeshift methods. Otherwise, permanent damage to the steering stem may occur.
When reinstalling the steering stem bearing, pay attention to the installation order of the bearing, oil seal, and flat washer.

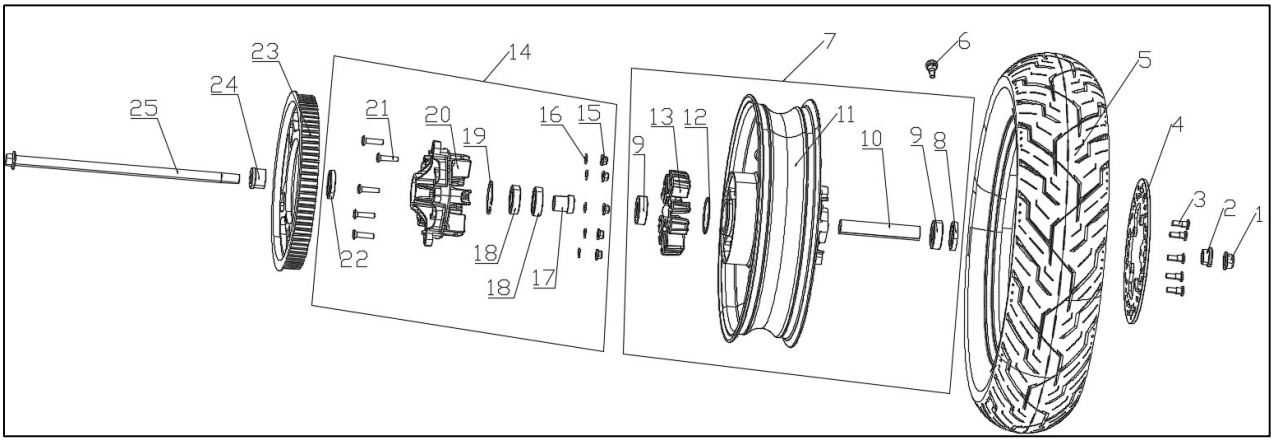
Important:
When pressing in the steering bearing, you can appropriately heat the bearing to 100°beforehand. This facilitates easier pressing fitting of the bearing.

Checking the steering bearing play

When riding at low speed, repeatedly and quickly operate the front brake lever to feel if there is any looseness in the steering bearing.
Keep the vehicle upright using a center stand.
Following the direction shown in the figure, repeatedly pull the front wheel to feel if there is any looseness in the steering bearing.

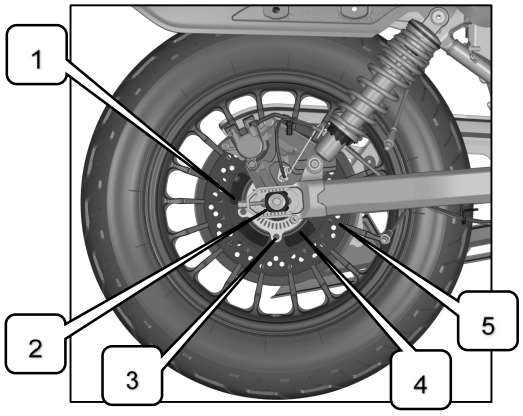
X. Removal and Maintenance of the Rear Wheel Assembly

Rear wheel assembly and list of components



1	Full metal hex flange lock nut	PCS	1
2	Bushing	PCS	1
3	Brake disc mounting bolt	PCS	5
4	Rear brake disc	PCS	1
5	Tire	PCS	1
6	Valve core assembly	PCS	1
7	Rear wheel	SET	1
8	Oil seal	PCS	1
9	Bearing	PCS	2
10	Hub liner assembly	PCS	1
11	Rear wheel body	PCS	1
12	Sealing ring	PCS	1
13	Rear wheel buffer block	PCS	1
14	Buffer body	SET	1
15	Full metal hex flange lock nut	PCS	5
16	Flat washer	PCS	5
17	Bushing	PCS	1
18	Bearing	PCS	2
19	Circlip	PCS	1
20	Chain wheel seat	PCS	1
21	Chain wheel bolt	PCS	5
22	Oil seal	PCS	1
23	Driven pulley	PCS	1
24	Bushing	PCS	1
25	Axle	PCS	1

Removing the rear wheel



Place the vehicle on the center stand to keep it upright and lift the rear wheel off the ground.
Loosen the chain adjuster bolt (1).
Remove the rear axle and nut (2).
Disengage the drive belt.
Remove the rear brake caliper.
Remove the rear wheel assembly.
Remove the rear wheel bushing.
Remove the buffer assembly.
Remove the buffer rubber block.
To reinstall, follow the exact reverse steps of removal.

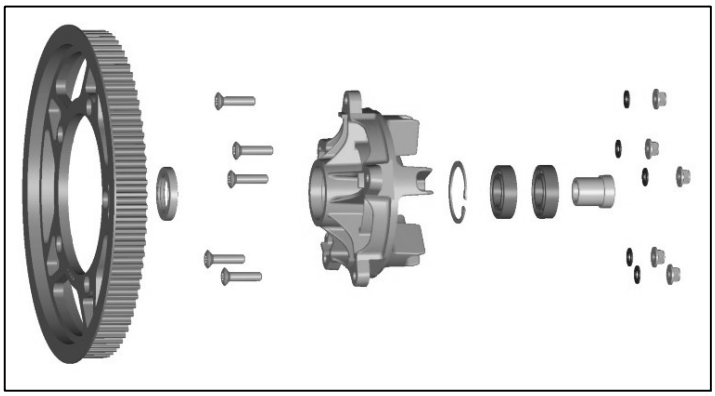
Note:
Do not use the rear brake pedal when removing the rear brake caliper to avoid movement of the caliper piston, which may make installation difficult.

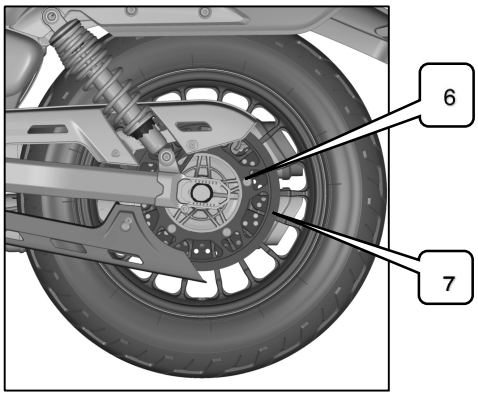
Important:
During removal, ensure no contamination is present on the brake pads or the brake disc working surface.
After replacement, repeatedly press the rear brake pedal several times to check for any abnormalities.
After reinstalling the tire, the rear wheel balance must be checked and corrected on a balancing machine.
When reinstalling the rear wheel bushing or oil seal, apply lithium-based grease to them.

Parameters:

Rear wheel		18-rib aluminum wheel	3.5×16
Rear tire		Vacuum tire	150/80R16
Rear wheel lateral runout not more than		mm	0.8
Rear wheel radial runout not more than		mm	0.8
Chain adjuster nut torque	M8		14
Rear axle fastener torque	M16		100
Brake disc fastener torque	M8		35
Threadlocker	262 thread glue	ml	10
Grease		g	10
Maximum permissible unbalance of rear wheel assembly		g	5
Tire pressure		kPa	225

Removing the buffer body assembly





Remove the driven pulley nut (6) that secures the buffer body.
Remove the driven pulley (7).
Using a special tool, remove the circlip, oil seal, circlip, bearing, and bushing from the buffer body in sequence.
To reinstall, follow the exact reverse step of removal.

Note:
The chain wheel bolt securing the driven pulley to the buffer body has thread glue applied. Use a heat gun to melt the thread glue before removal, and ensure a tool of the correct specification is used, otherwise removal will be difficult.

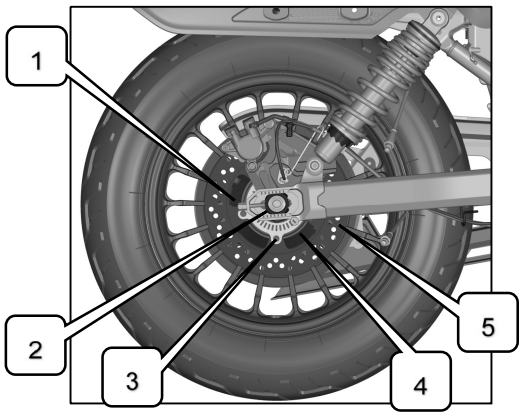
Important:
When reinstalling the buffer body bushing or oil seal, apply lithium-based grease to them.
The buffer body oil seal will be damaged upon removal and must be replaced.
Removing the buffer body bearing requires the use of a special puller tool.
To facilitate installation, the buffer body bearing housing can be heated to 100°C before pressing the bearing into place.

Parameters:

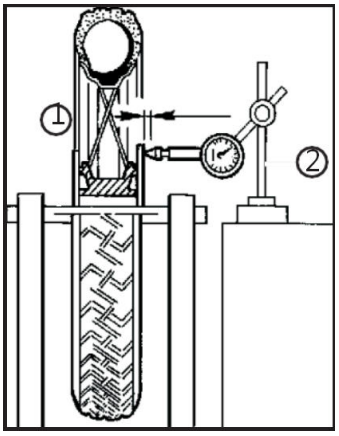
Grease	/	g	5

Removing the brake disc

After removing the rear wheel assembly, place it on a workbench.
Remove the disc brake mounting bolts (3).
Remove the rear brake disc (5) and the tone ring (4).
To reinstall, follow the exact reverse steps of removal.



Note:
The rear brake disc screws have thread glue applied. Use a heat gun to melt the thread glue before removal, and ensure a tool of the correct specifications is used, otherwise removal will be difficult.



Important:
During assembly, ensure no contamination is present on the brake pads or the brake disc working surface.
When reinstalling the brake disc, apply thread glue to the disc brake mounting bolts.
After reinstalling the brake disc, the lateral runout of the brake disc must be rechecked using the method shown in the figure:
Place the rear wheel on the balancing stand using the balancing shaft (1).
Measure the lateral runout of the brake disc using a measuring instrument (2).

Lateral runout not more than	mm	0.3

Removing the rear tire

After removing the rear wheel assembly, place it on a workbench.
Use the valve cap to remove the valve core from the valve core assembly and deflate the tire.
Use a specialized tool to remove the rear tire.
To reinstall, follow the exact reverse steps of removal.

Note:
Use dedicated equipment to reinstall the tire. Forced installation using external force may cause permanent damage to the rear wheel body and the tire.

Important:
When reinstalling the tire, align the tire's weight point with the valve stem on the rim to facilitate subsequent dynamic balancing.

Removing the rear wheel bearing and oil seal

After removing the rear wheel assembly, place it on a workbench.
Remove the brake disc and the tire.
Use a dedicated tool such as circlip pliers to remove the rear wheel oil seal, bearing, and hub liner assembly in sequence.
Replace the parts with ones of the same specifications.
To reinstall, follow the exact reverse steps of removal.

Important:

The rear wheel oil seal will be damaged upon removal and must be replaced. Otherwise, insufficient watertightness may accelerate bearing wear.

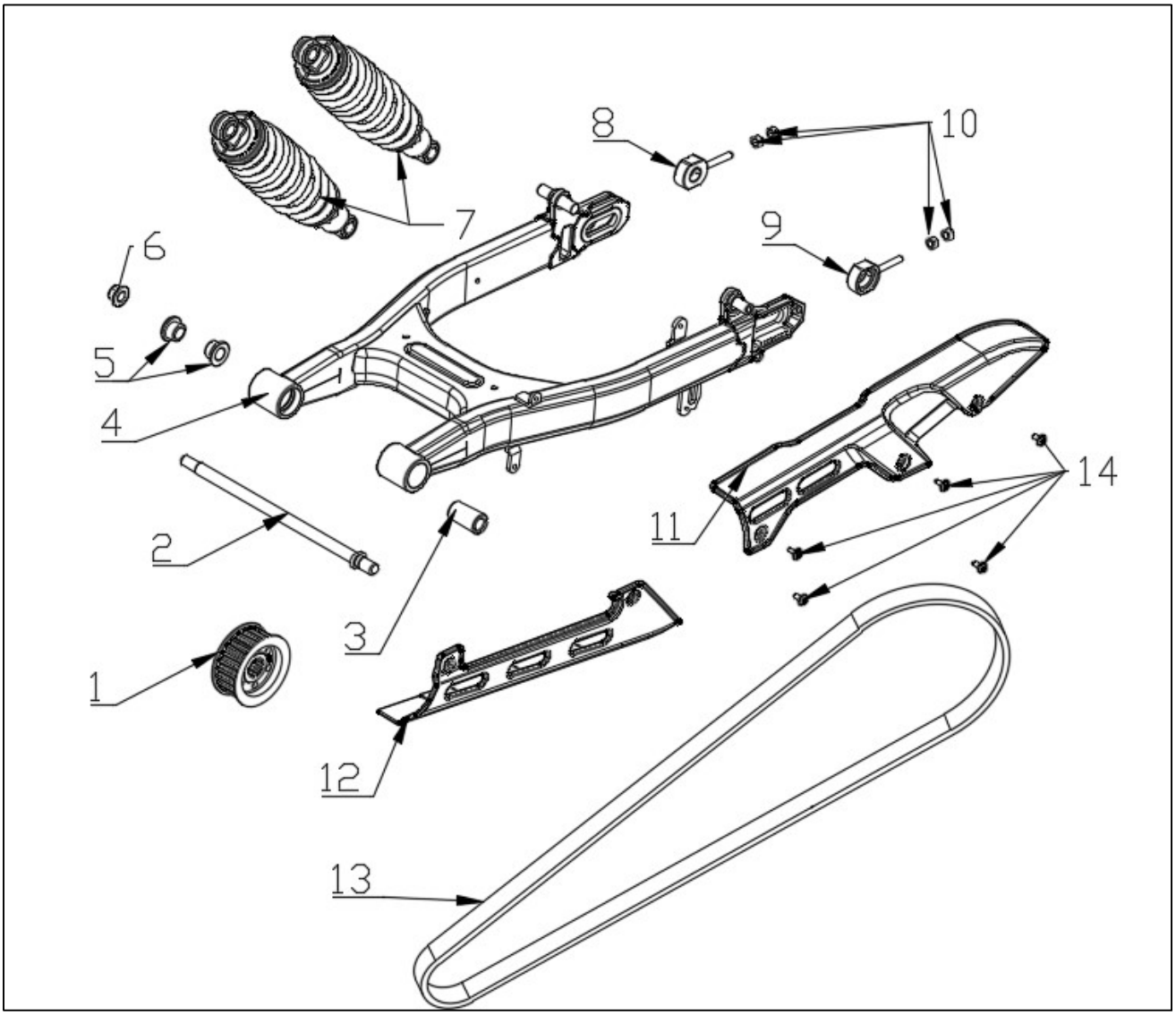
Removing the rear wheel bearing requires the use of a dedicated puller tool.

To facilitate installation, the rear wheel bearing housing can be heated to 100°C before pressing the bearing into place.

When pressing the bearing into place, use a dedicated pressing tool. The bearing on the side with the brake disc (right side) must be pressed into position first, followed by the bearing on the other side.

XI. Removal and Maintenance of the Rear Suspension Assembly

Rear suspension assembly and list of components



1	Drive pulley assembly	PCS	1
2	Shaft	PCS	1
3	Bushing	PCS	1
4	Swingarm assembly	PCS	1
5	Bushing	PCS	1
6	Full metal hex flange lock nut	PCS	1
7	Rear shock absorber	PCS	2
8	Chain adjuster	PCS	1
9	Chain adjuster	PCS	1
10	Hex nut	PCS	4

11	Chain case upper cover	PCS	1
12	Chain case lower cover	PCS	1
13	Drive belt	PCS	1
14	Torx head bolt	PCS	5

Removing and installing the rear shock absorber

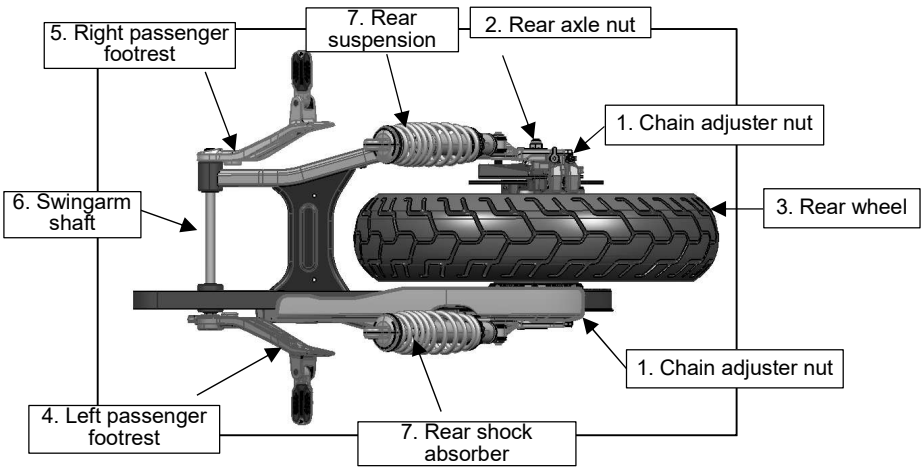
Referring to the muffler removal procedure, remove the muffler.
Referring to the rear wheel removal procedure, remove the rear wheel.
Secure the handlebar and the rear grab rail with a tie-down strap, and hoist the vehicle using a sling with the front wheel on the ground.
Use a suitable tool to remove the four M8 mounting bolts from the upper part of the rear shock absorber.
Remove the rear shock absorber.
To reinstall, follow the exact reverse steps of removal.

Parameters:

Rear shock absorber Upper and lower mounting bolt	M8	N·m	28 (thread glue)
Chain case mounting bolt	M6	N·m	6

Removing and Installing the Swingarm and Drive Belt

Hoist the entire vehicle using a lifting device.
First, remove the rear shock absorber.
Loosen the chain adjuster bolts (1) on both sides.
Loosen the rear axle nut (2), forcefully move the rear wheel forward a short distance, and remove the rear axle.
Remove the rear wheel (3).
Remove the bolt securing the rear brake ABS hose clamp to the swingarm.
Remove the chain case upper cover, chain case lower cover, left rear cover decoration, and left rear cover.
Loosen the swingarm pivot nut, remove the left passenger footrest assembly (4), and loosen the mounting nut for the right passenger footrest assembly (5).
Remove the swingarm pivot (6).
Remove the swingarm.

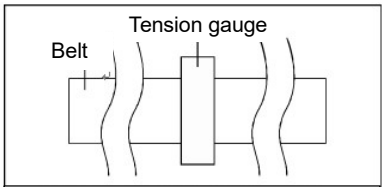


Remove the drive belt.
Replace the drive belt with a new one of the same specifications.
To reinstall, follow the exact reverse steps of removal.

Note:
During reinstallation, adjust the left and right chain adjusters first, then tighten the rear axle nut, and finally tighten the left and right chain adjusters.

Important:
During reinstallation, check if the left and right chain adjusters are on the same scale mark.
Checking and adjusting the drive belt tension must be performed with the vehicle unloaded.

Drive belt adjustment:
First, place the specified belt tension gauge at the very center of the belt span. Gently tap the belt to make it vibrate up and down.
After the belt stabilizes, read the gauge reading (a reading between 50-54 Hz is acceptable).
If the gauge reading is not within the 50-54 Hz range, adjust the tension by loosening or tightening the adjustment nut on the left side of the swingarm to change the belt frequency.



Place the tension gauge at the midpoint of the belt span between the drive pulley and the driven pulley.

Once the belt frequency is adjusted and the gauge reads between 50-54 Hz, remove the tension gauge. Rotate the rear wheel several times.
Turn the adjustment nut on the right side of the swingarm (this adjusts the rear wheel alignment) based on the clearance between the belt and the large pulley. If the clearance is too small, loosen the right nut; if the clearance is too large, tighten the right nut.
Then, rotate the rear wheel again and observe if the belt tracks sideways on the large pulley. If it does not move sideways, reinstall the tension gauge at the center of the belt span and recheck.
If the tension gauge reading is within the 50-54 Hz range, finally tighten the rear axle lock nut on the right side of the swingarm.。

Note:
The specified tension gauge, Model BC-ZLY-002, must be used for belt adjustment.
Do not pry the belt into place or use excessive force to install the belt or rear wheel.
When installing the belt, ensure the drive pulley, driven pulley, and belt are all on the same vertical plane to avoid misalignment or offset installation. Refer to Figure 1 for details.
This belt uses a carbon fiber cord skeleton. An excessively small bending radius can easily compromise the belt strength. Avoid bending the

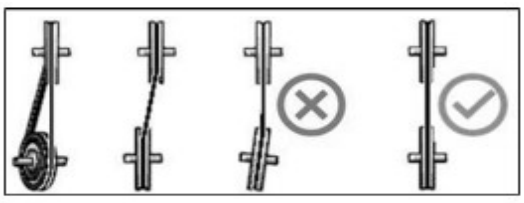


Fig. 1

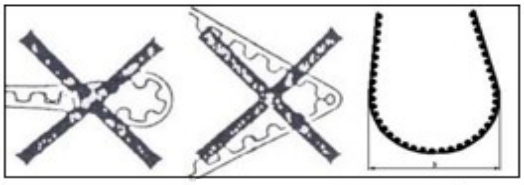


Fig. 2

belt during installation. Refer to Figure 2 for details.

Parameters:

Chain adjuster nut torque	M8	N·m	14
Rear axle nut torque:	M20	N·m	100
Engine left/right cover torque:	M6	N·m	9
Left and right auxiliary footrest assembly fastening: M10	M10	N·m	55
	M14	N·m	100

Removing and installing the swingarm bearing

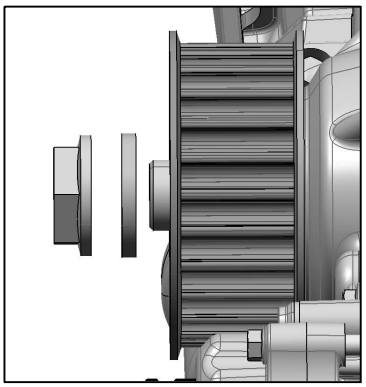
Place the removed swingarm assembly on a workbench.
Use dedicated tools to remove the bushing, swingarm dust cover, and bearing from the swingarm pivot tube in sequence.
To reinstall, follow the exact reverse steps of removal.

Note:
Use dedicated tools to remove the bearing. Forced removal may damage the components.

Important:
Apply lithium-based grease when reinstalling the bushings and bearings.

Removing and Installing the Drive Pulley

Place the vehicle in an upright position using the main stand.
Referring to the belt removal procedure, remove the drive belt.
Remove the drive pulley mounting nut, flat washer, and bushing, then remove the drive pulley.
Replace it with a new drive pulley of the same specifications.
To reinstall, follow the exact reverse steps of removal.



Note:
During reinstallation, adjust the left and right belt adjusters first, then tighten the rear axle nut, and finally tighten the left and right chain adjusters.
The drive pulley retaining nut has thread glue applied. Use a heat gun to melt the thread glue before removal.

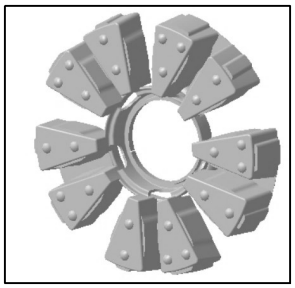
Important:
During reinstallation, check that the left and right belt adjusters are on the same scale mark.
Adjust the belt tension according to the instructions in the previous section after belt installation.
Checking and adjusting the belt tension must be performed with the vehicle unloaded.

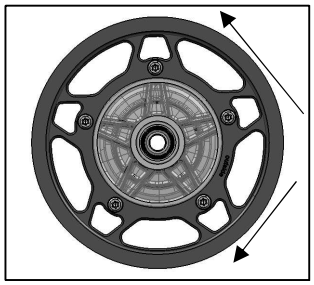
Apply thread glue to the drive pulley bolt during reinstallation.

Parameters:

Left passenger footrest assembly fastening: M10	M10	N.m	55
	M14	N.m	100
Chain case mounting bolt	M6	N.m	6
Drive pulley installation torque	M20	N.m	100
Thread glue	262 thread glue	ml	10

Removing and Installing the rear wheel buffer block



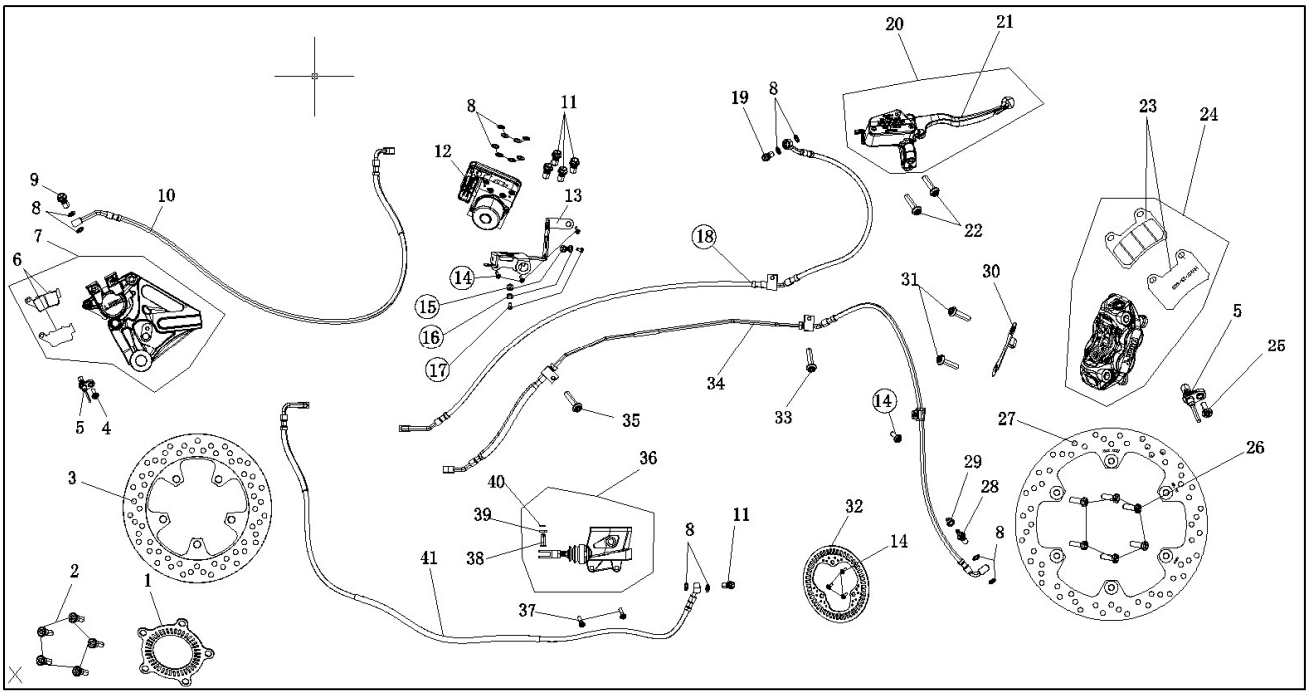


Place the vehicle in an upright position using the main stand.
Referring to the buffer assembly removal procedure, remove the rear wheel buffer rubber block.
Inspect the buffer block for excessive wear or cracking, and replace it if necessary.
Alternatively, a worn buffer block can be diagnosed while on the vehicle: with the vehicle parked and the rear wheel lifted, apply force to the pulley in the direction shown in the diagram. If significant radial play is felt in the buffer assembly, it indicates the buffer rubber block is worn and requires replacement.

Note:
Aggressive, rapid acceleration and deceleration cause repeated impacts on the buffer block, generating heat. Since the buffer block is enclosed within the sealed cavity of the hub and dissipates heat poorly, this will accelerate its wear.

XII. Removal and Maintenance of the Brake System

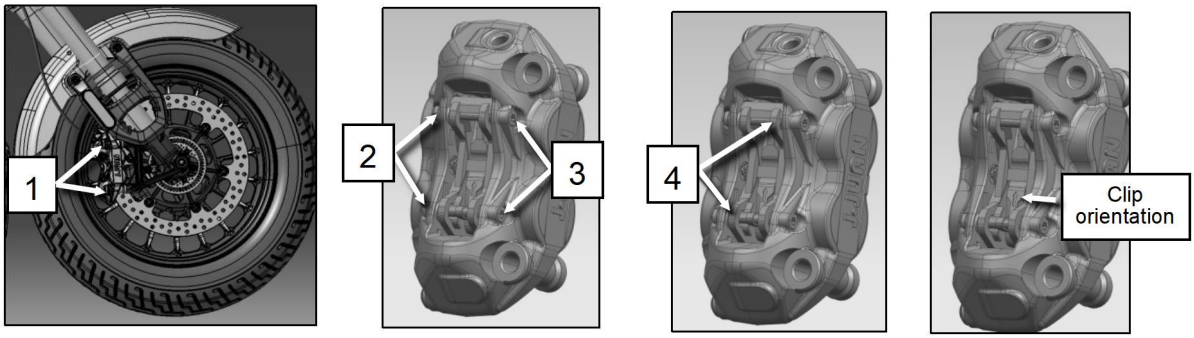
Brake system and list of components



1	ABS tone ring	PCS	1
2	Disc brake mounting bolt	PCS	5
3	Rear brake disc	PCS	1
4	Torx head bolt (M6X16 black)	PCS	1
5	Speed sensor	PCS	2
6	Rear brake pad set	PCS	1
7	Rear brake caliper	PCS	1
8	Flat washer	PCS	16
9	Brake hose bolt (M10×1×19)	PCS	1
10	ABS connection hose (rear outlet)	PCS	1
11	Brake hose bolt (M10×1×19 black)	PCS	5
12	ABS anti-lock braking unit	PCS	1
13	ABS mounting bracket	PCS	1
14	Torx head bolt (M6X12)	PCS	3
15	Spacer bushing	PCS	2
16	Bushing (flanged washer)	PCS	2
17	Torx head bolt (M6X16)	PCS	2
18	ABS connection hose (front inlet)	PCS	1
19	Brake hose bolt (M10X1.25)	PCS	1
20	Front brake master cylinder	PCS	1
21	Brake lever	PCS	1

22	Internal hex flange bolt (M6×22)	PCS	2
23	Front brake pad set	PCS	1
24	Front brake caliper	PCS	1
25	Torx head bolt (M6X12 black)	PCS	1
26	Disc brake mounting bolt (M8×25)	PCS	6
27	Front brake disc	PCS	1
28	Brake hose bolt (with bleeder valve M10×1)	PCS	1
29	Bleeder valve cap	PCS	1
30	Cable clamp	PCS	1
31	Internal hex flange bolt (M10×1.25×65)	PCS	2
32	ABS tone ring	PCS	1
33	Internal hex flange bolt (M6×40)	PCS	1
34	ABS connection hose (front outlet)	PCS	1
35	Internal hex flange bolt (M6×30)	PCS	1
36	Rear brake master cylinder	PCS	1
37	Internal hex flange bolt (M6×25)	PCS	2
38	Connecting pin	PCS	1
39	Flat washer	PCS	1
40	Cotter pin	PCS	1
41	ABS connection hose (rear inlet)	PCS	1

Replacing the front disc brake pads

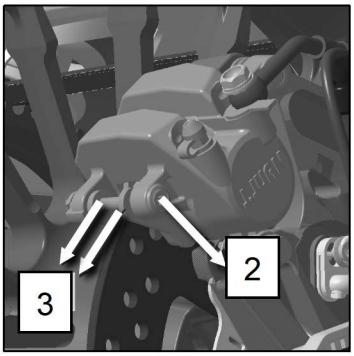


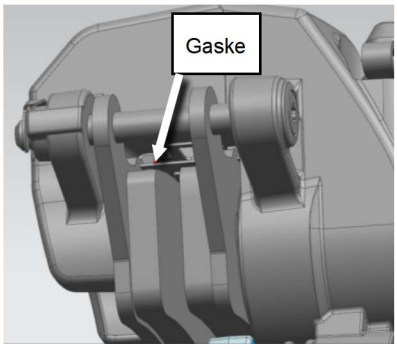
Place the vehicle in an upright position using the center stand.
Remove the lower caliper mounting bolt (1).
Remove the circlip (2).
Use a T25 Torx head bit to remove the brake pad pin (3).
Remove the brake pads (4).
Replace the front brake pads with new ones.
To reinstall, follow the exact reverse steps of removal.

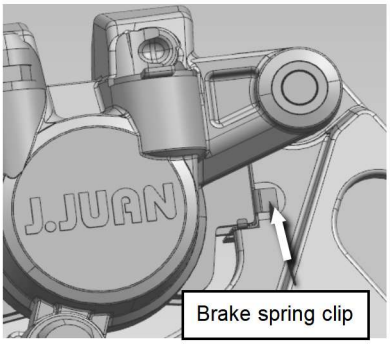
Important:
During reinstallation, ensure the retaining clip on the end of the brake pad is correctly seated into the locating groove in the caliper, paying close attention to its orientation.

Do not operate the front brake lever when the brake pads are removed, to avoid movement of the caliper piston, which may make pad installation difficult.
When replacing the brake pads, both the inner and outer pads must be replaced as a set.
During installation, ensure no contamination is present on the brake pads or the brake disc working surface.
After replacement, repeatedly squeeze the brake lever several times to check for any abnormalities.
Dispose of the replaced front brake pads in a proper, environmentally friendly manner.

Replacing the rear disc brake pads





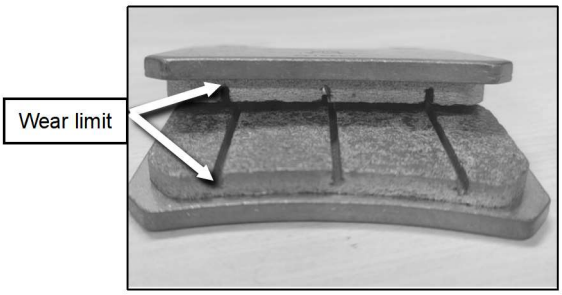


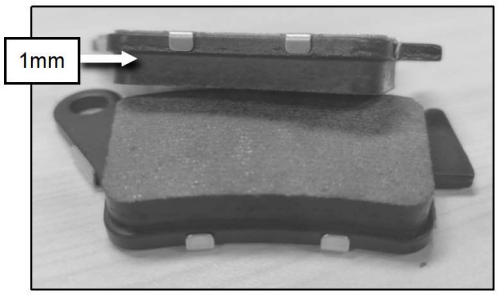
Place the vehicle in an upright position using the center stand.
Remove the circlip.
Use a T25 Torx bit to remove the brake pad pin (2).
Remove the brake pads (3).
Replace the rear brake pads with new ones.
To reinstall, follow the exact reverse steps of removal.

Important:
During installation, ensure that the shim and brake spring clip are correctly seated into the locating groove between the brake pad end and the rear caliper.
Do not depress the rear brake pedal when the brake pads are removed, to avoid movement of the caliper piston, which may make pad installation difficult.
When replacing the brake pads, both the inner and outer pads must be replaced as a set.
During installation, ensure no contamination is present on the brake pads or the brake disc working surface.
After replacement, repeatedly depress the brake pedal several times to check for any abnormalities.
Dispose of the replaced rear brake pads in a proper, environmentally friendly manner.

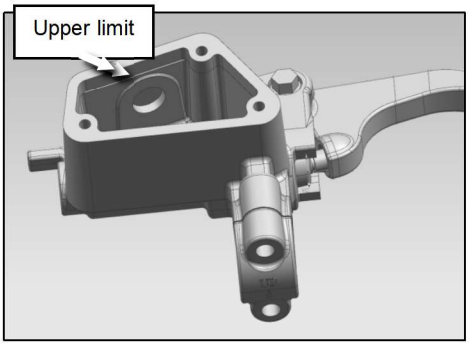
Inspecting the brake pads

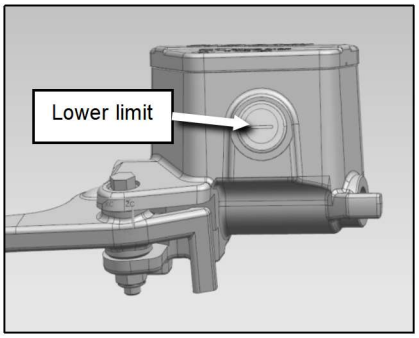
The brake pads must be replaced if they are worn to the limit, or when the minimum pad thickness reaches 1.0 mm.

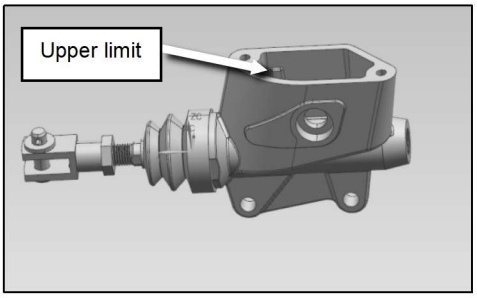


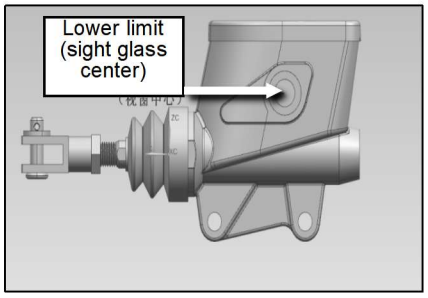


Checking the fluid level in the front and rear brake system





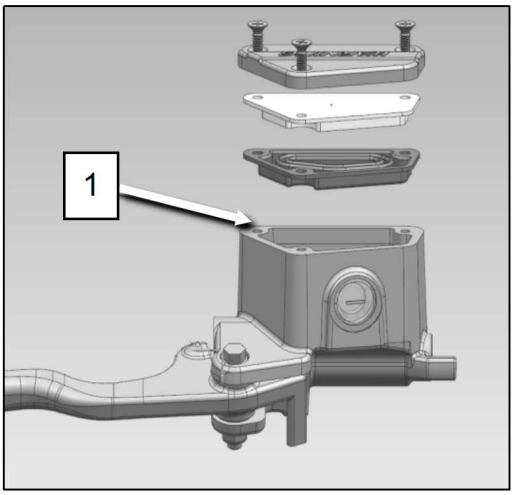


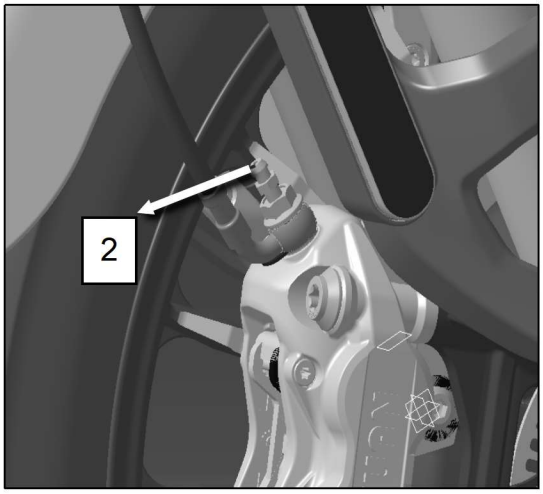


Place the vehicle in an upright position using the center stand.
Turn the handlebar until the front brake master cylinder reservoir is level.
The brake fluid level in both the front and rear master cylinder reservoirs must be between the upper and lower limit marks.

Note:
As the front and rear brake pads wear from new to the minimum thickness limit, the brake fluid level will remain within the acceptable (MIN/MAX) range. Typically, there is no need to add brake fluid solely due to pad wear.
If the brake fluid level falls below the minimum mark during normal pad wear, it may indicate another issue. Identify and resolve the root cause before adding new brake fluid.

Replacing front brake fluid





Place the vehicle in an upright position using the center stand.
Turn the handlebar to position the brake fluid reservoir (1) horizontally.
Use a suitable tool to remove the reservoir cover together with the rubber diaphragm.
Connect a brake fluid extraction device to the bleeder screw (2) on the brake caliper.
Turn the bleeder screw approximately half a turn to open it using a suitable tool.
Start the extraction device to drain all the old brake fluid from the system.
While slowly adding new brake fluid into the reservoir, simultaneously operate the extraction device until new, clean fluid flows through the entire brake line without air bubbles.
Tighten the bleeder screw securely.
Check that the fluid level in the reservoir is between the upper and lower limit marks.
Connect an ABS diagnostic tool to the ABS controller to check for any fault codes. If present, investigate and resolve them.
To reinstall, follow the exact reverse steps of removal.

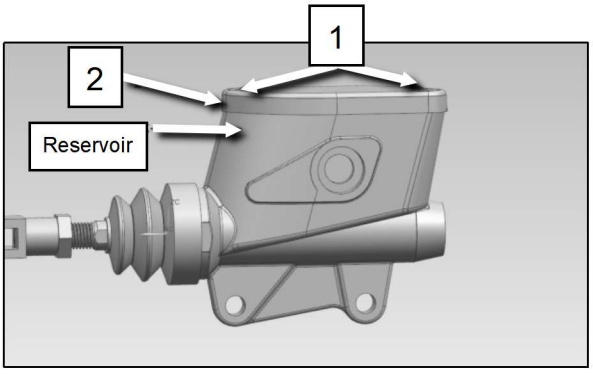
Note:
After adding brake fluid, clean up any fluid spills around the reservoir and the caliper bleeder screw thoroughly.

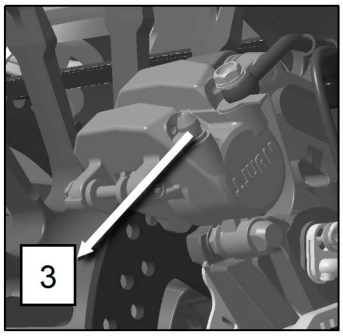
Important:
Do not allow brake fluid to come into contact with any painted surfaces on the vehicle, as it is corrosive.
When extracting the old fluid, never let the fluid level in the reservoir drop below the lower limit mark, otherwise air will enter the brake system. If this occurs, the entire bleeding procedure must be repeated.
After filling, apply steady pressure to the brake lever and hold it to check for any leaks in the brake line.
If any issues are found with the brake hose assembly or threaded connections, replace them immediately.
Do not mix brake fluid of different brands or grades.

Parameters:

Reservoir cap torque	M4	N.m	1~2
Bleeder screw torque	M8	N.m	7~9
Front brake system fluid capacity		mL	125
Brake fluid type/specification		GREATWALL	DOT4

Replacing rear brake fluid





Referring to the radiator guard removal procedure, remove the radiator guard.
Using a Torx head screwdriver, remove the brake fluid reservoir mounting bolts (1).
Remove the reservoir cap (2) together with the rubber diaphragm and gasket.
Connect a brake fluid extraction device to the bleeder screw (3) on the brake caliper.
Turn the bleeder screw approximately half a turn to open it using a suitable tool.
Start the extraction device to drain all the old brake fluid from the system.
While slowly adding new brake fluid into the reservoir, simultaneously operate the extraction device until new fluid fills the entire brake line without air bubbles.
Tighten the bleeder screw securely.
Check that the fluid level in the reservoir is between the upper and lower limit marks.
Connect an ABS diagnostic tool to the ABS controller to check for any fault codes. If present, investigate and resolve them.
To reinstall, follow the exact reverse steps of removal.

Note:
After adding brake fluid, clean up any fluid spills around the reservoir and the rear caliper bleeder screw thoroughly.

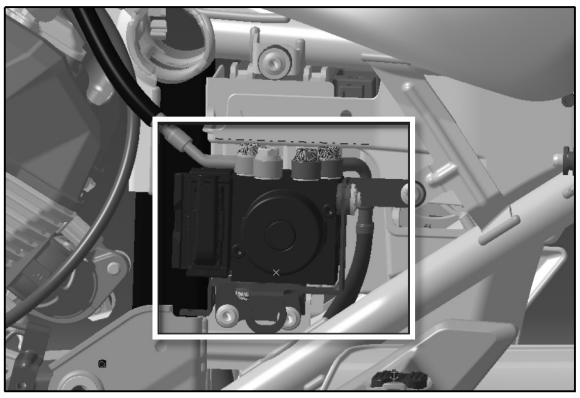
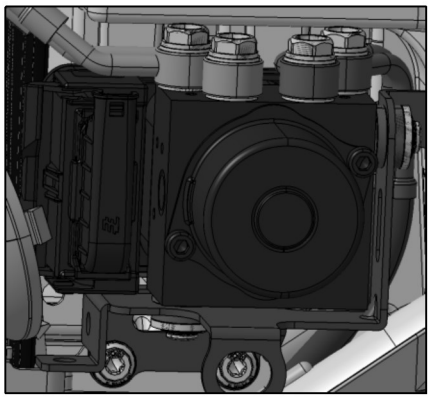
Important:
Do not allow brake fluid to come into contact with any painted surfaces on the motorcycle, as it is corrosive.
When extracting the old fluid, never let the fluid level in the reservoir drop below the lower limit mark. Otherwise, air will enter the brake system. If this occurs, the entire bleeding procedure must be repeated.
After filling, apply steady pressure to the brake pedal, hold it, and check for any fluid leaks in the brake line.

If any issues are found with the brake hose assembly or threaded connections, replace them immediately.
Do not mix brake fluids of different brands or specifications.

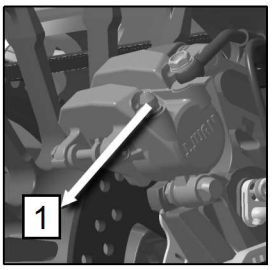
Parameters:

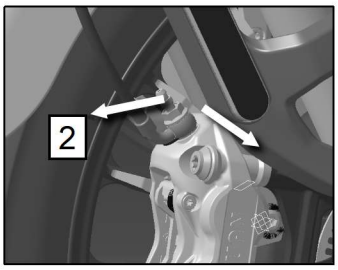
Reservoir cap screw torque	M4	N.m	1~2
Bleeder screw torque	M8	N.m	7~9
Front brake system fluid capacity		mL	125
Brake fluid type		GREATWALL	DOT4

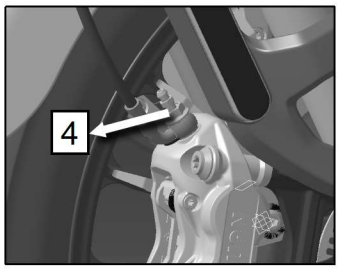
Replacing the ABS and components in the front and rear brake lines

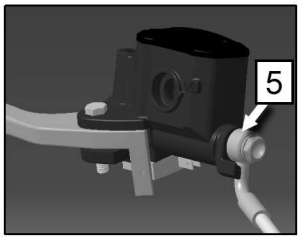
Remove the seat and the left side cover of the vehicle.
Loosen the bleeder screws (1) and (2), and connect a vacuum extractor to the bleeder screws to drain all the brake fluid from the lines, using the same procedure as for the brake fluid replacement described above.

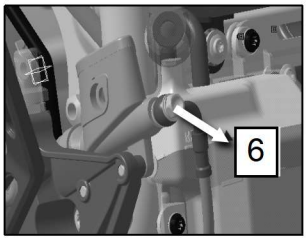


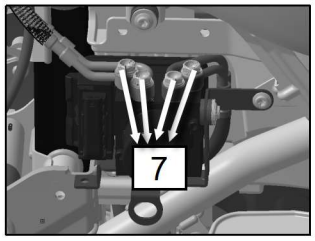


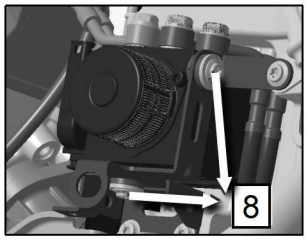


Remove the brake hose bolts (3, 4, 5, 6) and their associated sealing washers that secure the front and rear upper and lower caliper brake hoses.









Remove the brake hose bolt (7) and its sealing washer connecting the brake hose to the ABS controller. Then, remove the two screws (8) securing the ABS controller to the mounting bracket.

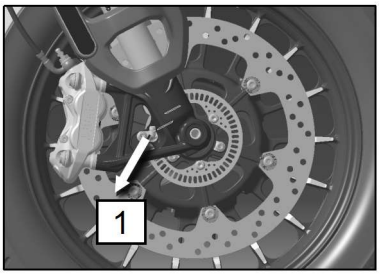
After completing the above steps, the ABS controller and brake hoses can be removed.
To reinstall, follow the exact reverse steps of removal.
Finally, refill the brake fluid according to the method described in the brake fluid replacement procedure and complete the final checks.

Important:
Brake fluid is corrosive. Take care not to splash brake fluid on your skin or clothing during draining and refilling.
The sealing washers at the banjo bolt locations must be replaced with new ones during reassembly. Otherwise, there is a risk of fluid leakage.
A new sealing washer must be installed between each adjacent sealing surface.

Parameters:

Banjo bolt to ABS unit torque	M8	N·m	28
Banjo bolt to front/rear brake caliper torque	M8	N·m	32
Bleeder screw torque	M8	N·m	4~7

Removing the front wheel speed sensor



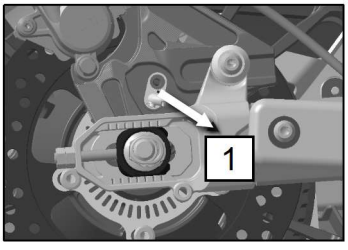
Place the vehicle in an upright position using the center stand.
Remove the bolt (1) and remove the front wheel speed sensor.
To reinstall, follow the exact reverse steps of removal.

Important:
After reinstalling the front wheel speed sensor, lift the front wheel off the ground. Rotate the front wheel and observe the gap variation between the sensor and the front ABS tone ring.

Parameters:

Sensor fastener torque	M6	N·m	9
Sensor to tone ring gap		mm	0.5~1.5

Removing the rear wheel speed sensor



Place the vehicle in an upright position using the center stand.
Loosen the bolt (1) and remove the rear wheel speed sensor.
To reinstall, follow the exact reverse steps of removal.

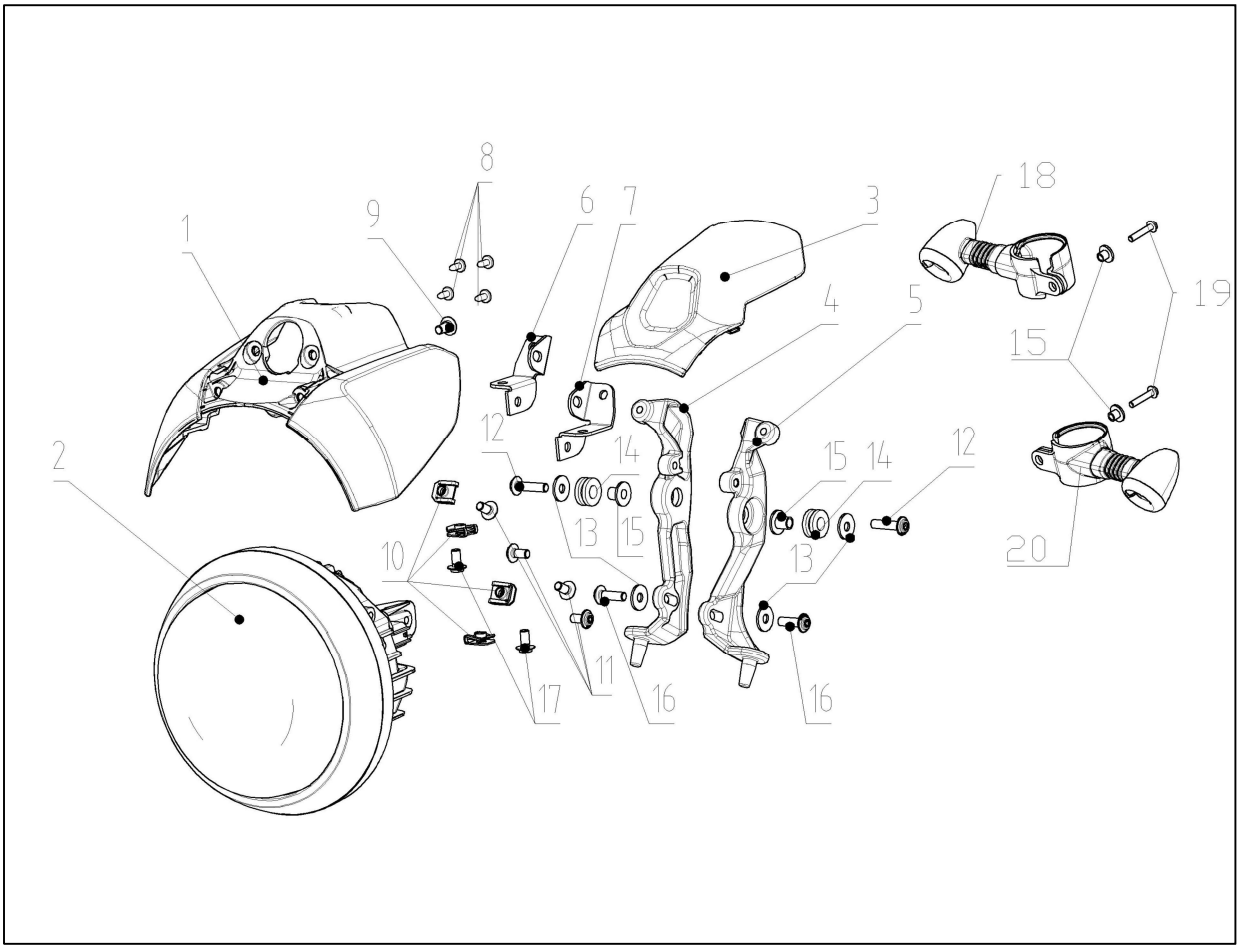
Important:
After reinstalling the rear wheel speed sensor, lift the rear wheel off the ground. Rotate the rear wheel and observe the gap variation between the sensor and the rear ABS tone ring.

Parameters:

Sensor fastener torque	M6	N·m	9
Sensor to tone ring gap		mm	0.5~1.5

XIII. Removal and Maintenance of Lights

Headlight assembly and list of components



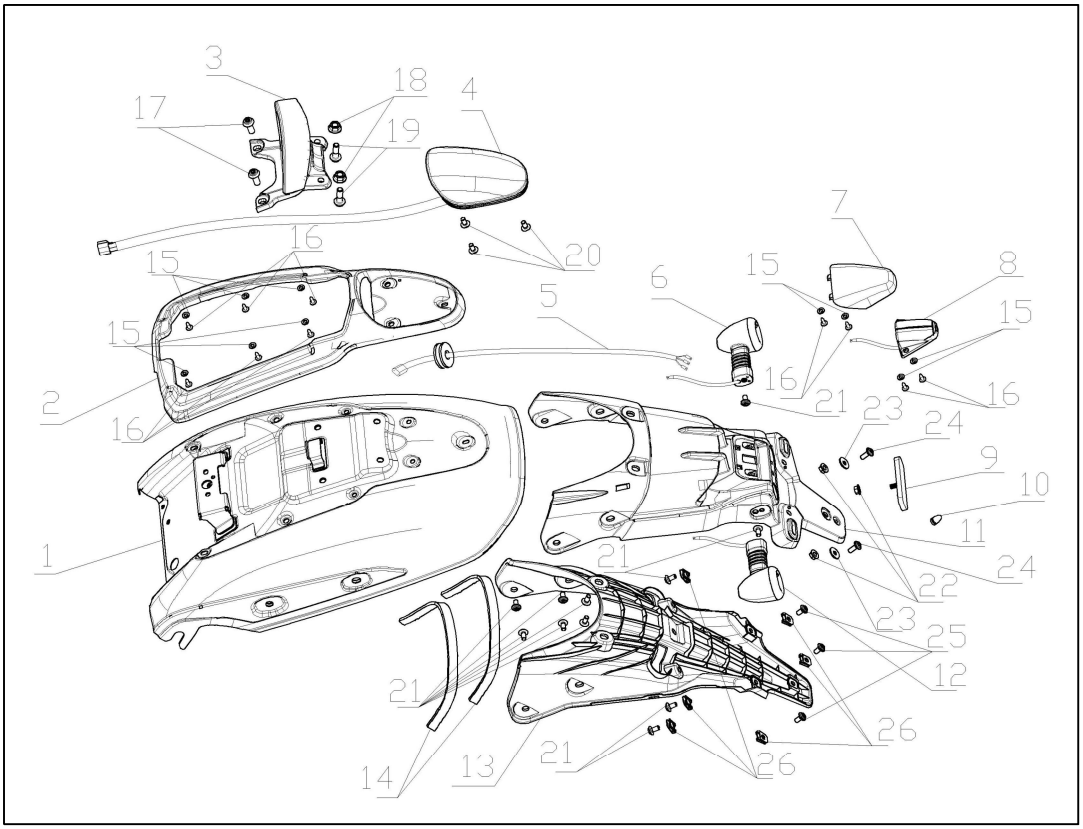
1	Fairing	SET	1
2	Headlight	PCS	1
3	Windshield	PCS	1
4	Headlight right bracket	PCS	1
5	Headlight left bracket	PCS	1
6	Fairing bracket	PCS	1
7	Fairing bracket	PCS	1
8	Cross recessed pan head tapping screw	PCS	1
9	Torx head bolt	PCS	4
10	Clip nut	PCS	1
11	Torx head bolt	PCS	4
12	Torx head bolt	PCS	4
13	Flat washer	PCS	2
14	Spacer bushing	PCS	4
15	Bushing	PCS	4

16	Torx head bolt	PCS	2
17	Torx head bolt	PCS	2
18	Right turn signal light	PCS	1
19	Torx head bolt	PCS	2
20	Left turn signal light	PCS	1

Removing the headlight assembly

Using a T30 bit, loosen the bolt (19), disconnect the headlight connector, and remove the headlight assembly.
Using a T30 bit, loosen the bolts (12) and (16), and remove the headlight bracket.
Using a T30 bit, loosen the bolts (17) and (11), and remove the fairing and windshield.
Using a T30 bit, loosen the bolt (11), and remove the headlight.
To reinstall, follow the exact reverse steps of removal.

Taillight assembly and list of components

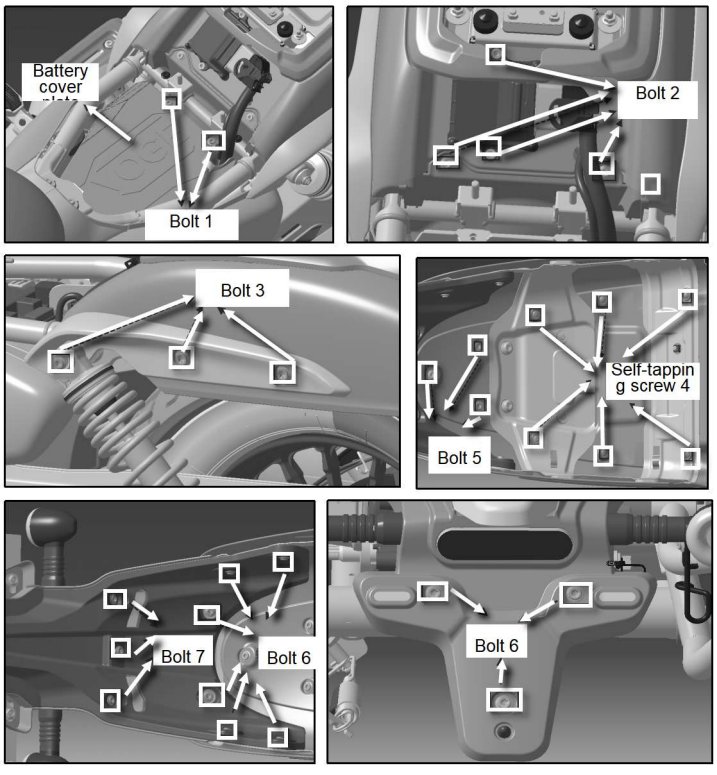


1	Rear fender assembly	PCS	1
2	Tail cover	PCS	1
3	Rear grab rail	PCS	1
4	Taillight	PCS	1
5	Sub-harness	PCS	1
6	Right turn signal light 2	PCS	1

7	Tail cowl	PCS	1
8	Rear license plate light	PCS	1
9	Rear reflector	PCS	1
10	Push rivet	PCS	1
11	Rear fender rear plate	PCS	1
12	Left turn signal light 2	PCS	1
13	Rear fender inner plate	PCS	1
14	Foam pad	PCS	2
15	Flat washer	PCS	10
16	Cross recessed pan head tapping screw	PCS	10
17	Internal hex flange bolt	PCS	2
18	Hex flange nut	PCS	2
19	Internal hex flange bolt	PCS	2
20	Torx head bolt	PCS	3
21	Torx head bolt	PCS	11
22	Hex flange nut	PCS	3
23	Flat washer	PCS	3
24	Torx head bolt	PCS	2
25	Torx head bolt	PCS	3
26	Clip nut	PCS	6

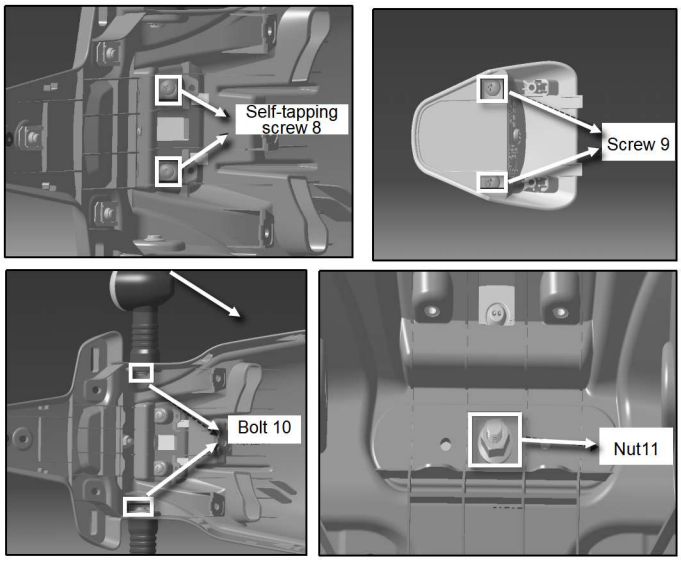
Removing the taillight assembly, turn signals, and license plate light

Place the vehicle in an upright position using the center stand.
Remove the main seat and the passenger seat.
Release the seat cable from the left side cover.
Using a T30 bit, loosen the bolts (1) (2 total), and remove the battery cover.
Disconnect the sub-harness from the main harness, and unplug the taillight connector from the main harness.
Using a T30 bit, loosen the bolts (2) (4 total), and remove the ECU controller.
Using the T40 and T50 bits, loosen the mounting bolts (3) for the left rear shock absorber and the fender bracket.
Remove the rear fender bracket, then reinstall the rear shock absorber for



support.
Repeat the same procedure for removing the right rear shock absorber.
Secure the vehicle, then pull the rear fender assembly rearward to remove it along with related components.

Note:
When pulling forward, be aware that the rear fender rear plate may detach suddenly. Support the rear fender rear plate assembly by hand to prevent it from falling and getting damaged.



Loosen the self-tapping screws (4) (6 total) and bolts (5) (3 total).
Remove the tail cover and the taillight assembly.
Loosen the bolts (6) (9 total) and bolts (7) (3 total), then remove the rear fender inner plate and the rear fender rear plate.
Loosen the self-tapping screws (8) (2 total) and remove the tail cowl and the license plate light.
Loosen the self-tapping screws (9) (2 total) and remove the license plate light.
Loosen the bolts (10) (2 total) and remove the left and rear turn signal lights.
Loosen the bolt (10) (1 total) and remove the rear reflector.

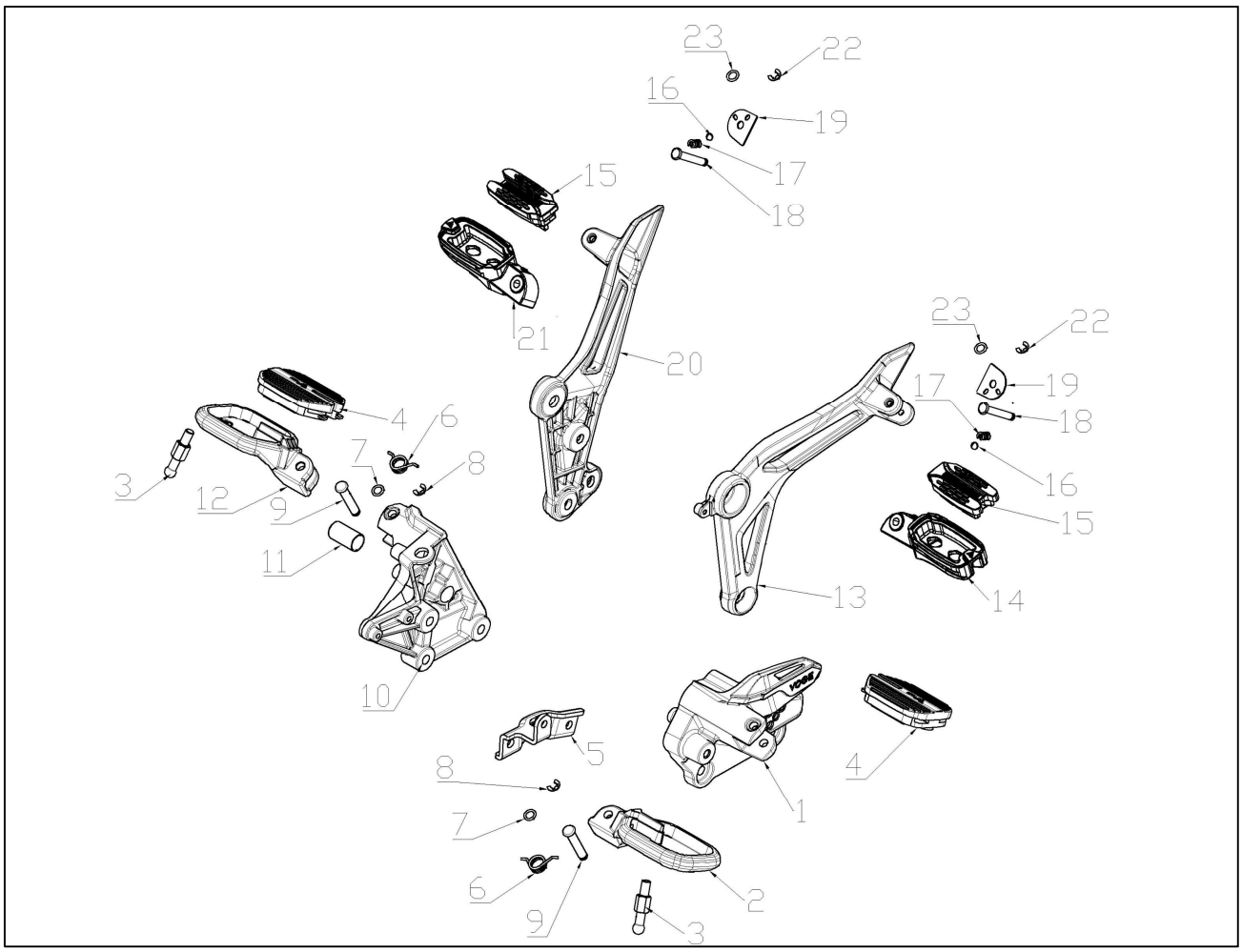
Note:
Before removing the taillight, disconnect its electrical connector from the main harness.
Before removing the license plate light and turn signal lights, disconnect their electrical connectors from the sub-harness.
When reinstalling the turn signals and license plate light, ensure the wiring harness routed between the inner and outer fender plates is properly seated to avoid being pinched.

Parameters:

Exterior part self-tapping screw tightening torque	ST4.2	N·m	1
Hex flange nut tightening torque	M6	N·m	4.5
Exterior part Torx head bolt tightening torque	M5	N·m	3
	M6	N·m	9
Turn signal light bolt tightening torque	M6	N·m	4.5

XIV. Removal and Maintenance of the Rider and Passenger Footrest Assemblies

Rider and passenger footrest assemblies and their components



1	Left rider footrest bracket	SET	1
2	Rider footrest body	PCS	1
3	Inspection screw	PCS	2
4	Rider footrest rubber bushing	PCS	2
5	Rider footrest mounting plate	PCS	1
6	Torsion spring	PCS	2
7	Sealing ring	PCS	2
8	Circlip	PCS	2
9	Pin shaft	PCS	1
10	Right rider footrest bracket	PCS	1
11	Bushing	PCS	1
12	Rider footrest body	PCS	1

13	Left passenger footrest bracket	SET	1
14	Left passenger footrest body	PCS	1
15	Passenger footrest rubber bushing	PCS	2
16	Steel ball	PCS	2
17	Compression spring	PCS	2
18	Pin shaft	PCS	2
19	Limit stop plate	PCS	2
20	Right passenger footrest bracket	PCS	1
21	Right passenger footrest body	PCS	1
22	Circlip	PCS	2
23	Sealing ring	PCS	1

Removing the Left and Right rider and passenger footrests

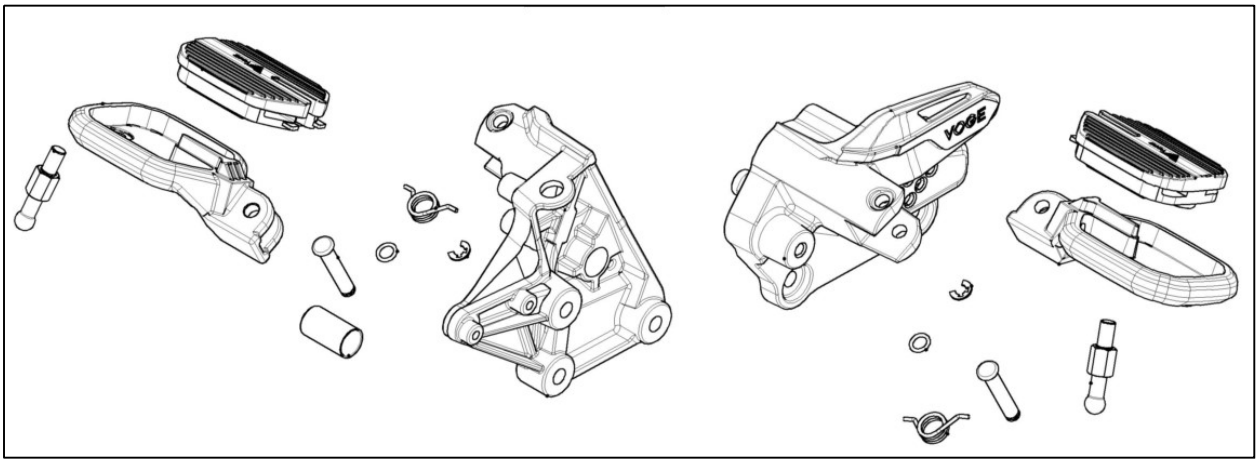
Place the vehicle in an upright position using the center stand.
Referring to the radiator guard removal procedure, remove the radiator guard.
Using a T40 Torx bit, remove the mounting bolts for the left and right rider footrest assemblies (6 total, 3 on each side), then remove the left and right rider footrests.
To reinstall, follow the exact reverse steps of removal.
Using a T40 Torx bit, remove the muffler mounting bolts (6 total), and remove the front and rear cylinder mufflers.
Useing a size 19 external hex socket, loosen the M14 nuts (2 total, 1 on each side).
Using a T50 Torx bit, remove the mounting bolts for the left and right passenger footrest assemblies.
Using a T50 Torx bit, remove the muffler bracket. Apply thread glue when reinstalling the muffler bracket.
To reinstall, follow the exact reverse steps of removal.

Parameters:

Rider footrest mounting bolt	M8	N·m	25 (thread glue)
Passenger footrest mounting bolt	M10	N·m	60
Swingarm pivot nut	M14	N·m	100

Removing the left and right rider footrests

The left and right passenger footrests can be removed as shown in the diagram below.



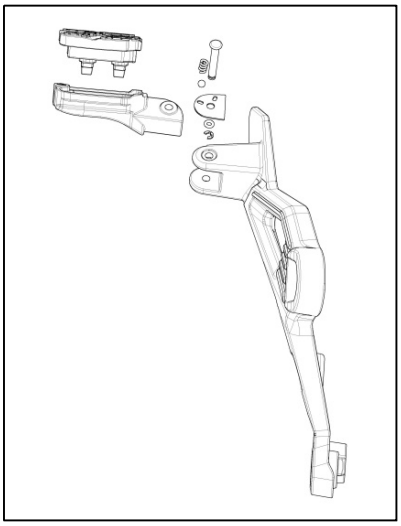
Note:
When reinstalling the footrests, apply lithium-based grease to the rotating pairs.

Parameters:

Lithium-based grease	g	10

Removing the left and right passenger footrests

The left and right passenger footrests can be removed as shown in the diagram below.



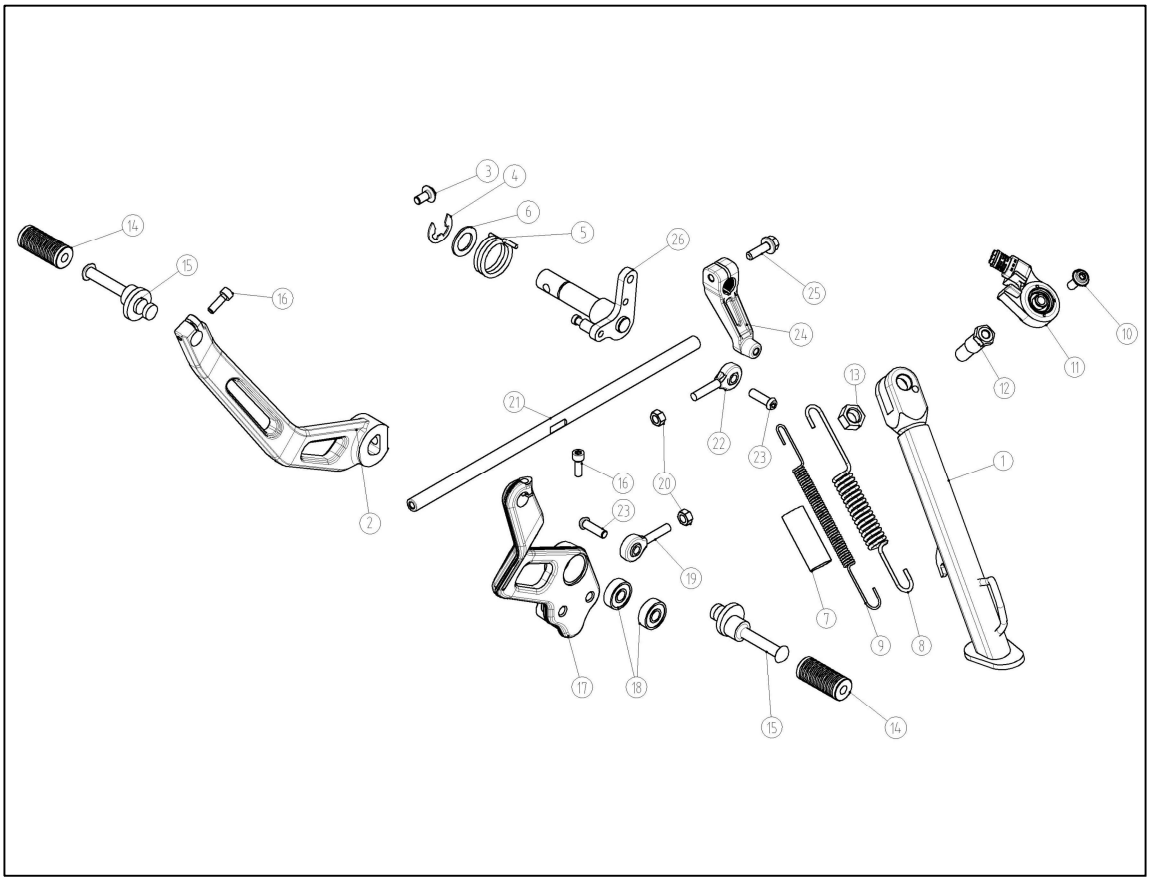
Note:
When reinstalling the footrests, apply lithium-based grease to the rotating pairs.
When reinstalling the footrest limit stop plate, spring, and steel ball, also apply lithium-based grease to the surface of the limit stop plate and the spring.

Parameters:

Lithium-based grease	g	10

XV. Removal and Maintenance of the Side Stand, Gearshift Pedal and Rear Brake Pedal

Side stand, gearshift pedal, rear brake pedal and their components



1	Side stand	PCS	1
2	Rear brake pedal arm	PCS	1
3	Internal hex flange bolt	PCS	1
4	Flat washer	PCS	1
5	Rear brake return spring	PCS	1
6	Wave washer	PCS	1
7	Rubber boot	PCS	1
8	Tension spring	PCS	1
9	Tension spring	PCS	1
10	Torx head bolt	PCS	1
11	Side stand kill switch	PCS	1
12	Hex shoulder bolt	PCS	1
13	Hex nut	PCS	1
14	Gearshift pedal rubber cover	PCS	2
15	Gearshift front lever	PCS	2

16	Torx head bolt	PCS	2
17	Gearshift pedal main body	PCS	1
18	Bearing	PCS	2
19	Linkage rod ball end	PCS	1
20	Hex nut	PCS	2
21	Gearshift linkage rod	PCS	1
22	Linkage rod ball end	PCS	1
23	Internal hex screw	PCS	2
24	Spline seat	PCS	1
25	Hex flange bolt	PCS	1
26	Rear brake pedal bracket	PCS	1

Removing and Installing the side stand and center stand

Support the vehicle using a rear lift stand to raise the rear wheel while keeping the vehicle upright.
Using a suitable tool, remove the side stand tension spring.
Using a T30 Torx bit, remove the side stand kill switch bolt, and remove the kill switch.
Using a suitable tool, remove the hex nut and pull out the shoulder bolt.
Remove the side stand.
To reinstall, follow the exact reverse steps of removal.
Place the vehicle in an upright position using the center stand.

Important:
When reinstalling the side stand, apply lithium-based grease to the pivot points.
The side stand tension spring must be installed using a dedicated tool to avoid injury during installation.

Parameters:

Side stand hex shoulder bolt tightening torque	M10	N.m	40
Side stand nut tightening torque	M10	N.m	40
Side stand kill switch tightening torque	M6	N.m	9 (thread glue)
Lithium-based grease		g	5

Removing and installing the gearshift pedal

Place the vehicle in an upright position using the center stand.
Using a T40 Torx bit, remove the bolt securing the gearshift pedal to the left rider footrest assembly, and then remove the bolt and bushing.
Using a 10mm external hex wrench, loosen the connecting bolt, and separate the gearshift pedal spline seat from the engine spline shaft.
To reinstall, follow the exact reverse steps of removal.

Note:
The length of the gearshift linkage rod can be adjusted by loosening the nut (20), thereby adjusting the height of the gearshift pedal. Once the desired position is achieved, tighten the nut (20).

Important:
When reinstalling the gearshift pedal, apply thread glue to the bolt at the mounting point on the rider footrest.

Parameters:

Gearshift pedal ball end bolt tightening torque	M6	N·m	9 (thread glue applied)
Gearshift pedal tightening torque	M8	N·m	25±2.5N.m (thread glue applied)
Spline seat tightening torque	M6	N·m	14
Gearshift linkage rod adjustment nut tightening torque	M6	N·m	6
Thread glue	/	/	Applied evenly along entire length of threads

Removing and installing the rear brake pedal

Support the vehicle securely on the side stand.
Using a T40 wrench, remove the rear brake pedal mounting bolt.
Remove the rear brake pedal.
Referring to the radiator guard removal procedure, remove the radiator guard.
Remove the right rider footrest assembly mounting bolts (3 total).
Disconnect the linkage between the rear brake master cylinder and the brake pedal (cotter pin, flat washer, and pivot pin).
Remove the circlip, spring washer, and flat washer from the rear brake pedal bracket.
Detach the rear brake switch return spring.
Remove the rear brake pedal bracket and the rear brake pedal return torsion spring.
Loosen the rear brake master cylinder mounting bolts and remove the master cylinder.
To reinstall, follow the exact reverse steps of removal.

Important:
When reinstalling the rear brake pedal, apply lithium-based grease to all pivot points and apply thread glue to the fastener threads at stationary mounting locations.
The height of the rear brake pedal can be adjusted; however, the adjustment nut must be securely tightened after adjustment. Failure to do so may lead to brake failure and a potential safety issue.
When reinstalling the cotter pin connecting the brake pedal to the master cylinder pushrod, always replace it with a new one. A used cotter pin may fracture, resulting in a safety hazard.

Parameters:

Right rider footrest assembly tightening torque	M8	N·m	25 (thread glue applied)
Rear brake master cylinder tightening torque	M6	N·m	9
Rear brake pedal tightening torque	M8	N·m	25 (thread glue applied)
Lithium-based grease	/	g	10