

Service manual in English for LX125-54

R420B

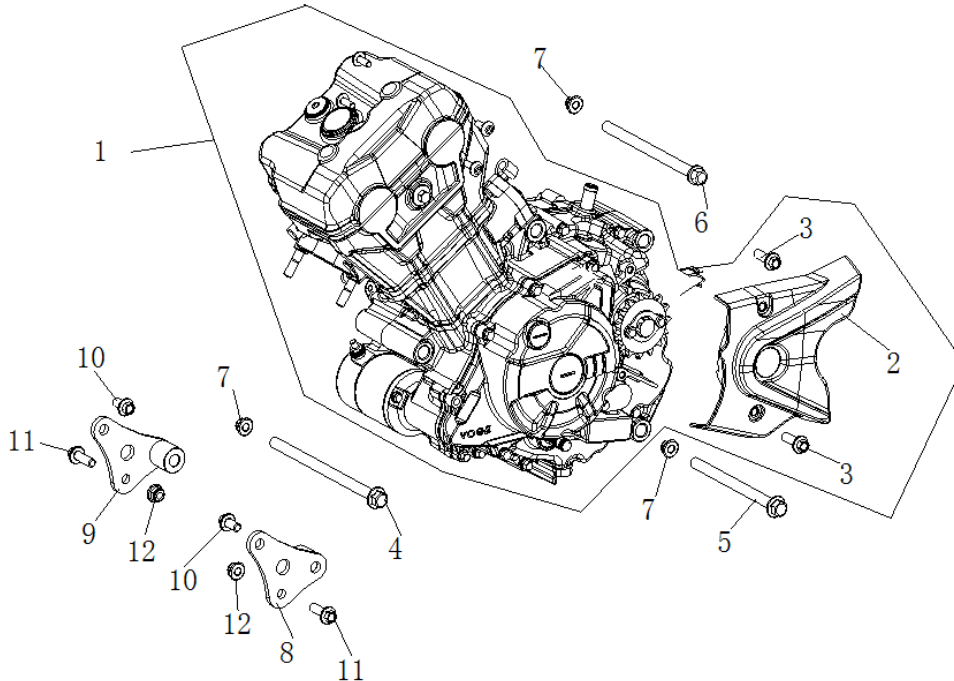
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1 Maintenance, disassembly and re-assembly for engine

1. Engine set and its parts

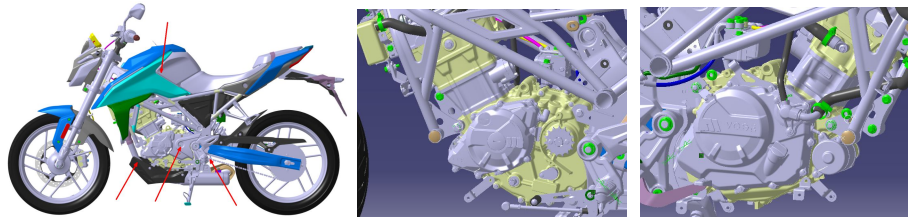


1	Engine	1
2	Left rear cover	1
3	Socket hex. screw	2
4	Axle	1
5	Axle	1
6	Axle	1
7	Metallic flange locking nut	3
8	Left front hanging plate of engine	1
9	Right front hanging plate of engine	1
10	Hex. flange bolt	2
11	Hex. flange bolt	2
12	Metallic flange locking nut	2

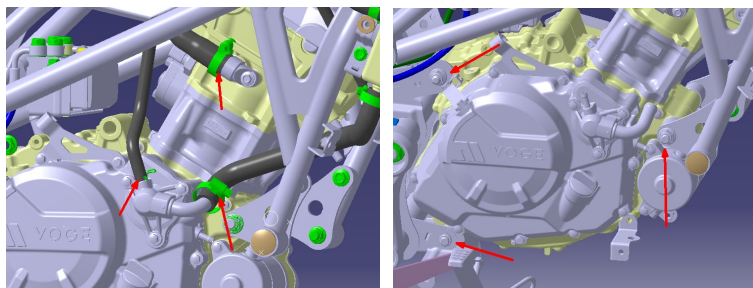
1. Disassembly and re-assembly for engine

- ✧ Caution: the disassembly and re-assembly must be under the assistance of parking stand rack for motorcycle. In case the engine need be completely broken down, please remove the chain, gearshift arm, seat set, fuel tank and its covering parts, throttle valve, clutch cable, throttle cable, cooling water system and iron wire of engine in advance, finally remove the hanging bolt of engine and remove the engine set.

1. Remove the muffler set and lower fairing cover set by referring the disassembly for muffler.
2. Loosen the connection between front end of chain and smaller flying wheel by referring the disassembly for chain.
3. Remove throttle body only by referring the disassembly and re-assembly for air filter.
4. Remove the fuel tank by referring its steps for disassembly.
5. Remove the position of spline by referring the disassembly for footrest.
6. Remove the clutch and throttle cables by referring the disassembly for handle bar, when the change as picture below was reached, please make the following disassembly.



7. Remove the tube clamp as picture 3 shows at the cooling water tube, pull the tube out of engine.
8. Remove the 3 pcs of hanging bolt for engine at the front and rear. (Pay attention to safety when disassembling to avoid the direct drop of engine).
9. Slightly remove the engine and put it down lightly and stably.
10. The re-assembly is precisely opposite to disassembly.



❖ **Issues need pay attention to:**

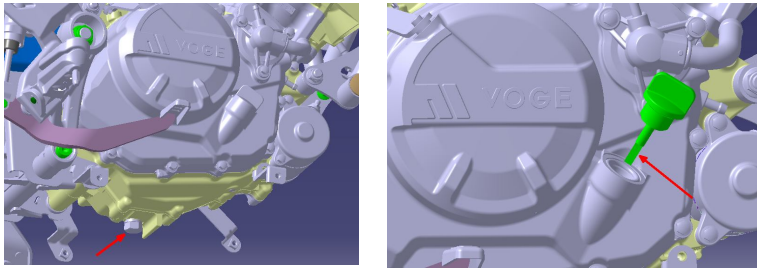
1. Please adopt the tool for engine only when removing the engine, to prevent injury for worker due to the weight of engine.
2. We suggest contact our service station for disassembling and re-assembling for engine to avoid damage on parts and injury for people.

1. Replacement for oil in engine

When every maintenance period was reached, please replace the oil in engine, please replace when the engine is hot to totally drain off the old oil.

1. Remove the lower fairing cover and muffler set by referring the disassembly for muffler.
2. Lay an oil collection case under engine, then open the oil drainage bolt at the bottom of engine, then slightly turn it and slowly remove the bolt to avoid oil splashing.
3. Lay it in static way for a while to totally drain off the oil, re-assemble the bolt. We suggest replace the copper washer for a new one to avoid oil leakage.

4. Open the oil gauge to fill up with new oil, whose specification and capacity please refer to the User manual, finally check the oil volume by the gauge.

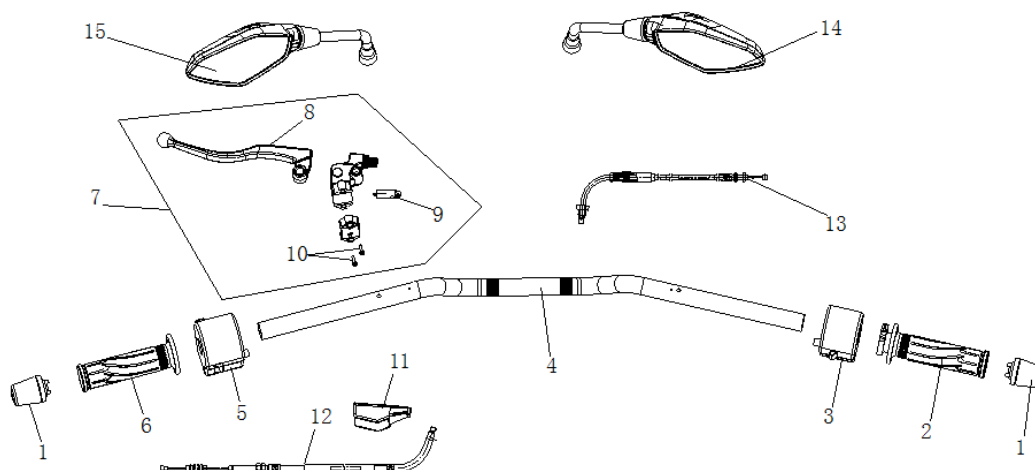


✧ **Issues need pay attention to:**

1. The oil level must be within the upper and lower scale marks on oil gauge, too much or less are both bad for engine and driving safety.
2. Drain off the oil when engine is hot maybe more effective, but the hot engine and muffler may make your injured, so before draining off the oil, please wait until the drainage bolt and muffler basically cooled down.

2 Maintenance, disassembly and re-assembly for handle bar

1. Handle bar set and its parts



Ref. No.	Parts name	Quantity
1	Decorative weight	2
2	Greaser	1
3	Right switch assy.	1
4	Handle bar	1
5	Left switch assy.	1
6	Grip	1
7	Left lever set	1
8	Left lever	1
9	Clutch switch	1
10	Hex. flange bolt	2
11	Clutch cable jacket	1
12	Clutch cable	1
13	Throttle cable	1
14	Right back-view mirror	1
15	Left back-view mirror	1

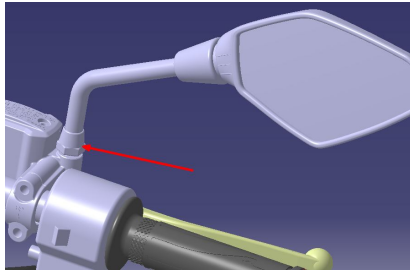
1. Disassembly for handle bar

- ✧ Caution: Please keep motorcycle stable by side stand or parking stand rack for following disassembly and re-assembly.

✧

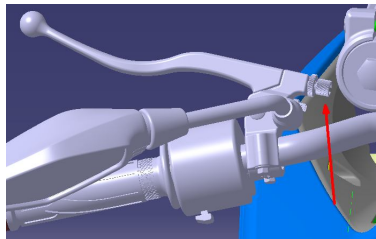
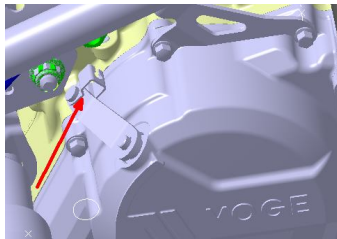
◆ **Back-view mirror**

1. Open the jacket for mirror base, loosen the nut and finally remove the back-view mirror



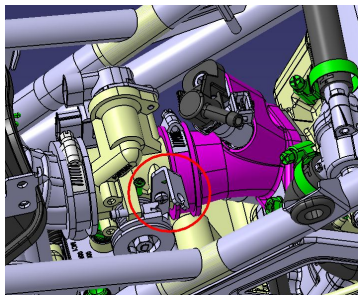
◆ **Clutch cable**

1. Adjust the nut on clutch cable, push clutch arm on engine along the direction of motorcycle front, then loosen the clutch cable.
2. Open the jacket 11 of clutch cable, adjust the nut, remove the head part of clutch cable, then the disassembly is over.
3. Confirm the free travel of clutch lever when re-assembled.



◆ **Throttle cable**

1. Remove right switch assy. before removing the upper end set.
2. Remove the lower end sent when the fuel tank already removed, loosen the bolt, turn the wire disc, then remove the lower end of throttle cable.
3. Confirm the free travel of greaser when re-assembled.



◆ **Left lever set**

1. Loosen the installation bolt 10.

◆ **Greaser and grip**

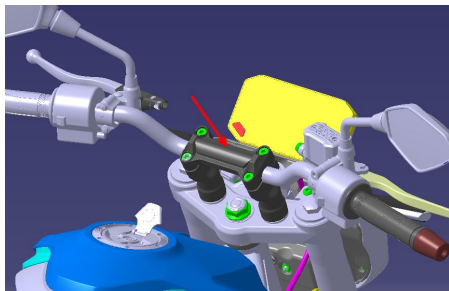
1. Remove the installation bolt on decorative weight on both ends, please powerfully pull out the greaser and grip, but please loosen the upper end of throttle cable first.

◆ **Left and right switch assy.**

1. Loosen the installation screw 3 and 5.
2. When re-assembling the left and right switch assy., align the positioning pin on switch assy. with the corresponding installation hole on handle bar, then lock up the bolt on switch assy.
3. When re-assembling the right switch assy., please correctly install the throttle cable into case body of right switch assy., otherwise it may lead to jamming.

◆ **Replacement for handle bar set**

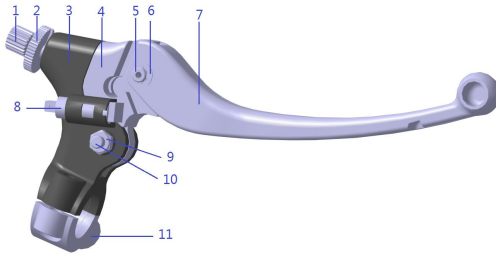
1. Remove the clips for handle bar set, before that, loosen 4 pieces of installation screw as shown below.



Torque for referring:

Fastening torque for handle bar' s clip	Nm	M8	18
Fastening torque for left lever set	Nm	M6	9
Fastening torque for decorative weight of handle bar	Nm	M6	9
Fastening torque for balancing weight on handle bar	Nm	M16	25
Fastening torque for back-view mirror	Nm	M10	25
Fastening bolt on left and right switch assy.	Nm	M5	6
Fastening torque for upper nut on throttle valve body	Nm	M5	6
Fastening torque for upper nut on throttle valve body	Nm	M5	6

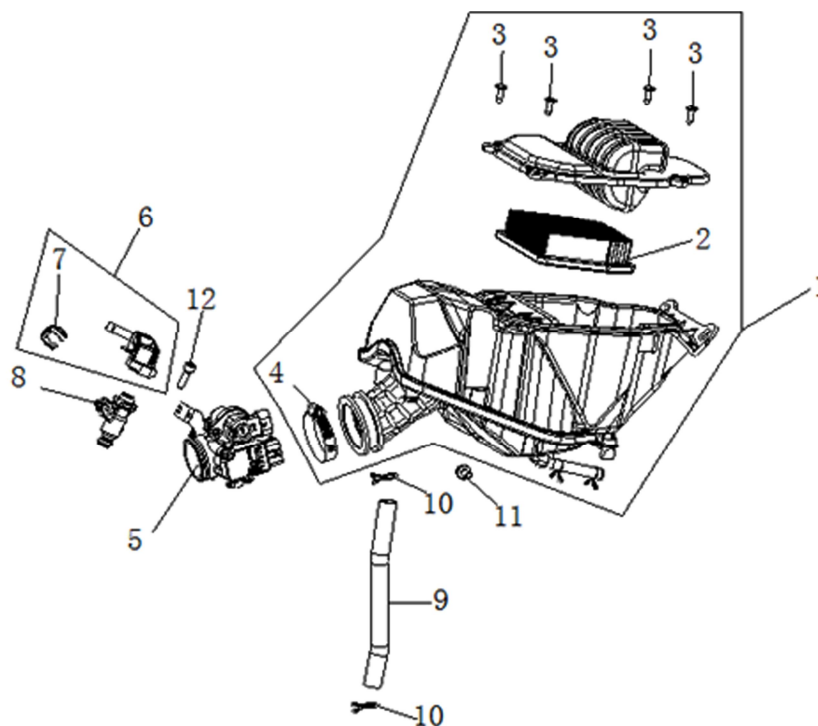
Disassembly and re-assembly of left lever set for referring



1	Adjusting screw of lever	PCS	1
2	Adjusting nut of lever	PCS	1
3	Clip base of left lever	PCS	1
4	Adjusting base of left lever	PCS	1
5	Pin axis	PCS	1
6	Opening circlip	PCS	1
7	Left lever rod	PCS	1
8	Clutch switch	PCS	1
9	Inserting hex. locking nut of non-metallic	PCS	1
10	Connective bolt	PCS	1
11	Clip on left lever	PCS	1

3 Maintenance, disassembly and re-assembly for air filter

1. Air filter set and its parts



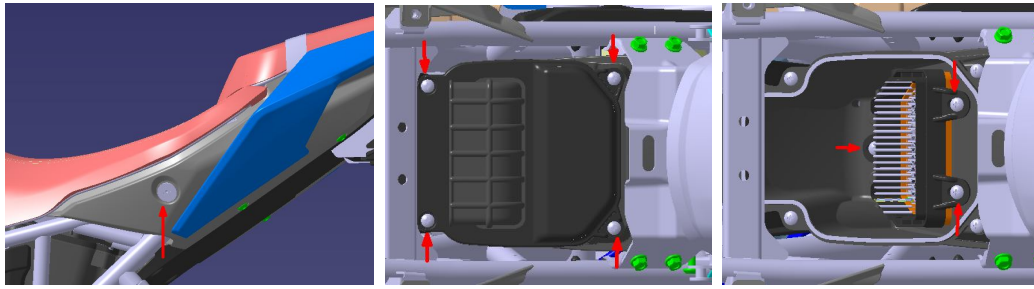
Ref. No.	Parts name	Quantity	Ref. No.	Parts name	Quantity
1	Air filter	1	7	Oil injector clamp	1
2	Element set of air filter	1	8	Oil injector	1
3	Cross head self-tapping screw	4	9	Breathing tube	1
4	Clamp set	1	10	Tube clamp	2
5	Throttle valve body set	1	11	Socket hex. screw	1
6	Oil injector cap	1	12	Socket hex. screw	1

1. Disassembly and re-assembly for element of air filter

✧ Caution: Do the disassembly and re-assembly under assistance of side stand and parking stand rack.

1. Open the seat loc by key, then remove passenger and driver seat in turn.
2. When the screws were loosened by cross screwdriver, remove the screw No. 2 and 4.

3. Loosen the 3 pieces of internal screws, then the element set 6 could be removed.
4. The re-assembly is precisely opposite to disassembly.

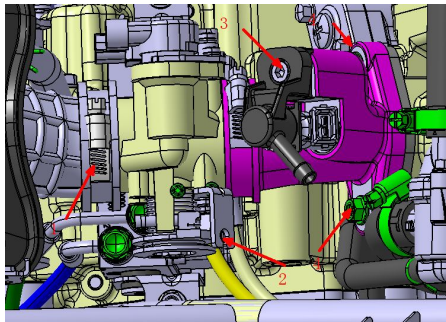


◆ **Issues need pay attention to:**

1. Confirm the seal rings are re-assembled in place before re-assemble element set, otherwise the poor sealing may lead to dust get into engine and bad for its working life.
2. Replace the element in case it is damaged.
3. Replacement element in case it is greasy.
4. Replace the element in case it gets wet.
5. Dispose the element in environment friendly way.

1. Disassembly and re-assembly for throttle valve body

- ✧ Caution: Remove or re-assemble the fuel tank and throttle cable before removing or re-assembling throttle valve body.
1. When the removal or re-assembly of fuel tank and throttle cable finished.
 2. Remove the clamp 1, bolt 3 and 4, then the throttle valve body could be removed.
 3. The re-assembly is precisely opposite to disassembly.



✧ **Issues need pay attention to:**

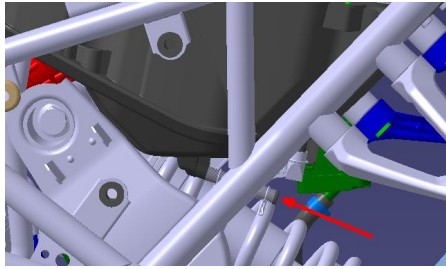
1. Before re-assembling for throttle valve body, confirm the sealing parts between air filter case and the valve body are re-assembled in place, otherwise the poor sealing may lead to dust get into engine and damage the engine.

1. Drain off the oil accumulation in overflow tube of air filter

1. Lay a liquid containing plate at the rear part of engine under overflow tube of air filter.
2. Loosen the clamp of tube, remove the plug of overflow tube, drain off the oil-water mixture

gathering in air filter.

3. The re-assembly is precisely opposite to disassembly.

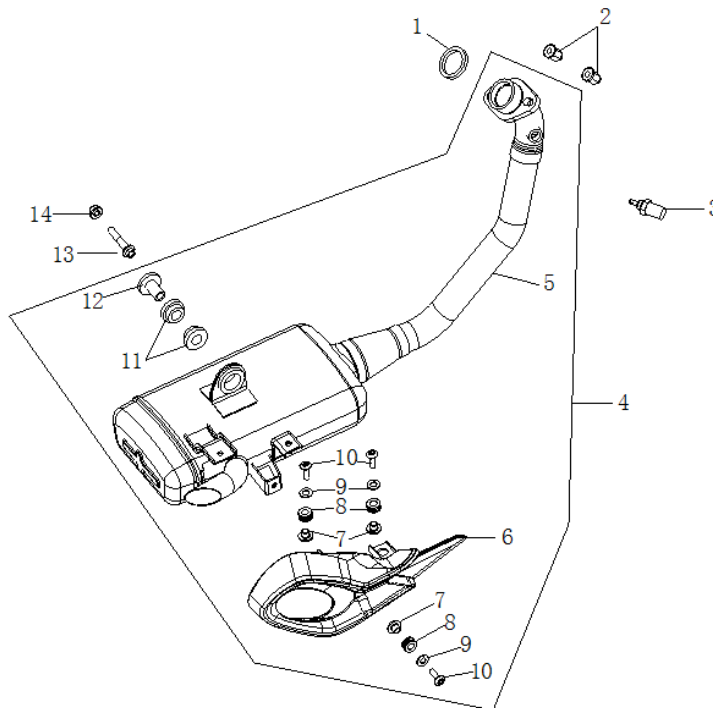


✧ **Issues need pay attention to:**

1. Too much water-oil mixture accumulated in air filter may damage its element, please drain it off timely.
2. Please dispose the drained off and wasted oil in environment friendly way.

4 Maintenance, disassembly and re-assembly for muffler set

1. Muffler set and its parts

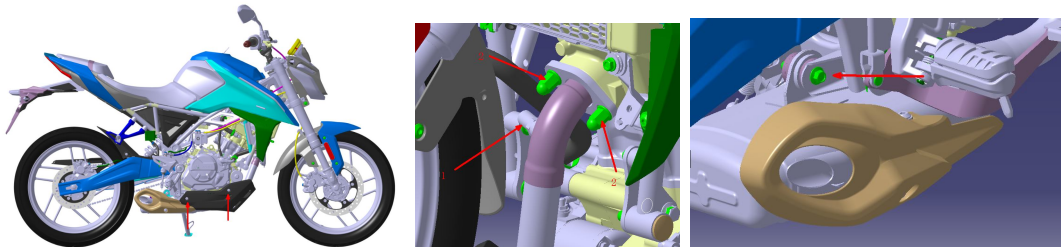


1	Gasket of air exhaust port	1
2	Cap shaped nut	2
3	Oxygen sensor	1
4	Muffler set	1
5	Muffler	1
6	Shield cover of muffler	1
7	Flanging washer	3
8	I-ring	3
9	Flat washer	3
10	Hex. flange bolt	3
11	T shaped rubber ring	2
12	Flanging washer	1
13	Hex. flange bolt	1
14	Metallic flange locking nut	1

1. Disassembly and re-assembly for muffler

- ✧ Caution: We suggest this work shall be under assistance of side stand or parking stand rack.

1. Remove the installation screw 4 pieces in all by socket hex. tool of 5mm.
2. Remove the installation nut on screw of 2 pieces in all on the front part of muffler by tool of 12mm, meanwhile remove the wire joint of oxygen sensor 1 in the picture below.
3. Remove the installation bolt by tool on the rear part of muffler, then the complete muffler set could be removed.
4. The re-assembly is precisely opposite to disassembly.

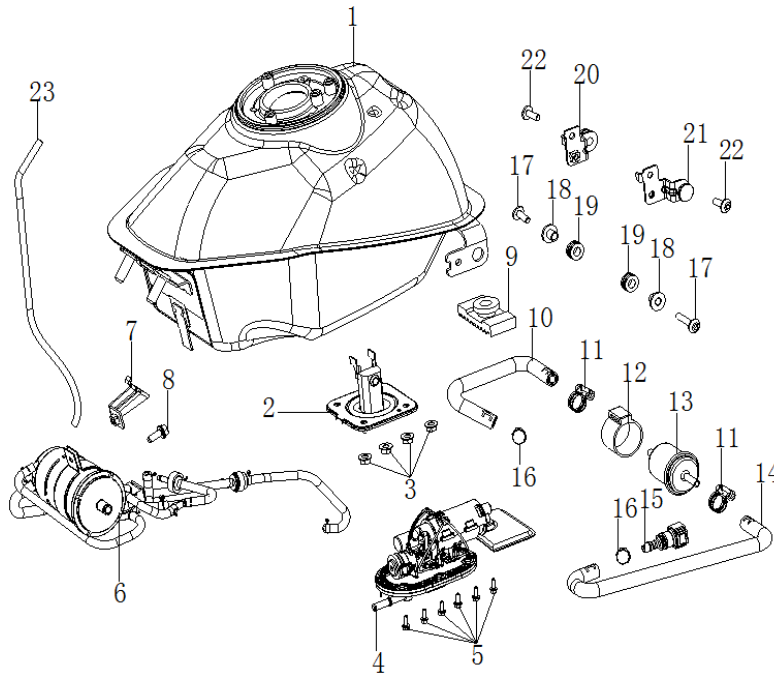


✧ **Issues need pay attention to:**

1. Please don' t remove the graphite ring who connects the front and rear part of muffler in case there is not any abnormal status, because it may damage if it is removed.
2. When disassembling, please pay attention to sudden drop of muffler when removing the bolt, please make protection.
3. Please check the damage on graphite ring when re-assembling, in case it is, the seal performance may be lost, under this case, please replace.
4. Replace the gasket for a new one when re-assembling the front part of muffler, otherwise the old one may make poor sealing performance.
5. When re-assembling the front part of muffler, fasten the nut on air exhaust port first, then fasten the installation bolts behind.
6. Remove the muffler when it completely cooled down to avoid scald.
7. There is steel wire in graphite ring, pay attention to injury when replacing.
8. Start the motorcycle when the muffler re-assembled to check air leakage on sealing positions.
9. Please dispose the replaced parts such as graphite ring in environment friendly way.

5 Maintenance, disassembly and re-assembly for fuel tank set

1. Fuel tank set and its parts



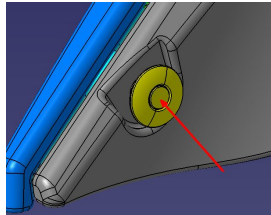
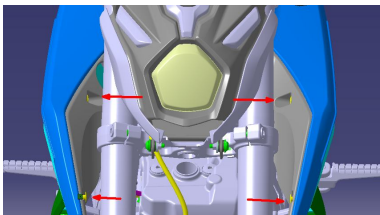
Ref. No.	Parts name	Quantity	Ref. No.	Parts name	Quantity
1	Fuel tank	1	13	Fuel filter	1
2	Fuel sensor	1	14	Fuel tube	1
3	Hex. flange nut	4	15	Fast change joint	1
4	Bracket set for electric fuel pump	1	16	Tube clamp	2
5	Hex. flange bolt	6	17	Socket hex. screw	2
6	Fuel evaporation controller set	1	18	Flanging washer	2
7	Carbon canister bracket	1	19	I-ring	2
8	Hex. flange bolt	1	20	Fuel tank bracket	1
9	Fuel tank damping rubber sheet	1	21	Fuel tank bracket	1
10	Fuel tube	1	22	Socket hex. screw	2
11	Clamp set	2	23	Fuel tube	1
12	Fuel filter rubber jacket	1			

1. Disassembly for fuel tank set

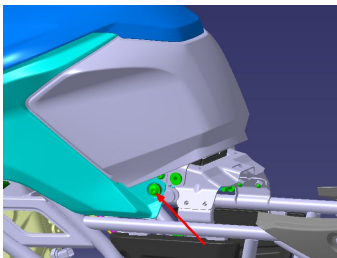
Caution: We suggest do this work under assistance of side stand or parking stand rack.

◆ Disassembly and re-assembly for decorative piece of fuel tank

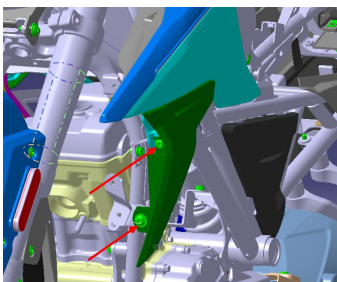
1. Remove the driver and passenger seat by key.
2. Remove the installation bolt of fuel tank lock, it needs open the lock and check the position of installation pillar.
3. Remove 4 pieces of expansion screw on left and right side at front part of motorcycle. Press the expansion screw inwards, it will pop up.



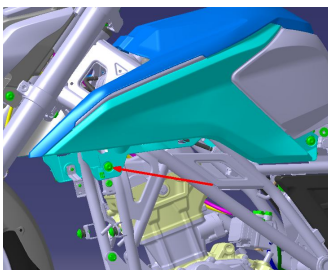
4. Remove the installation screw on left and right decorative cover on the fuel tank both sides by tools.



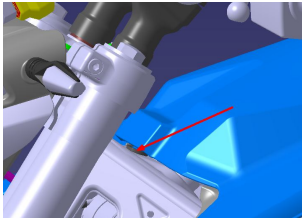
5. Remove the installation screw on decorative cover both sides on the front part of motorcycle, then slightly move forward, the decorative cover on both sides are removable.



6. Remove the bolt on installation point on left and right decorative cover of fuel tank.

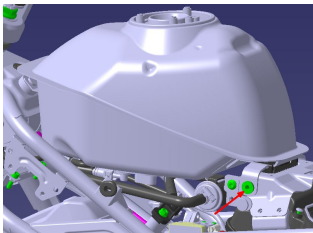


7. At the moment all the fixing screws are removed, it could be lifted up to remove the shield cover, meanwhile please pay attention to and avoid the mushroom end at front, with a little more force.

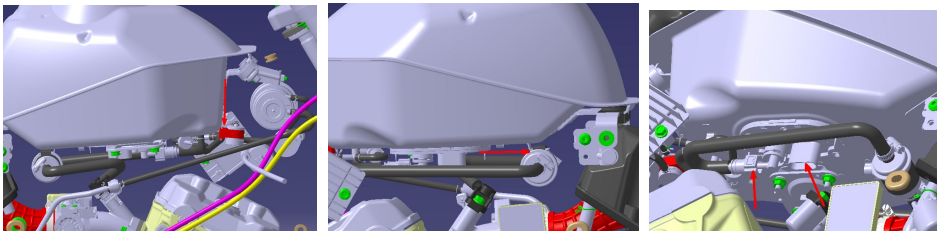


◆ **Disassembly and re-assembly for fuel tank**

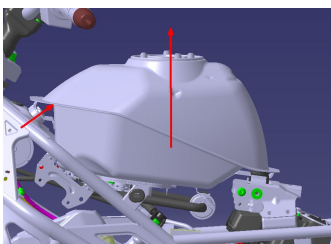
1. Remove the installation screw left and right on the rear part of fuel tank.



2. Remove backwards the fuel filter hanging on the fuel tank, then remove downwards the dumping valve hanging on fuel tank of carbon canister, then draw out the joint of fuel pump, at this moment, a few fuel splashing out is normal.



3. At this moment then installation points of fuel tank are totally removed, which could be lifted up, remove the fuel tank, meanwhile please pay attention to and avoid the mushroom end at front, with a little more force it could be pull out.



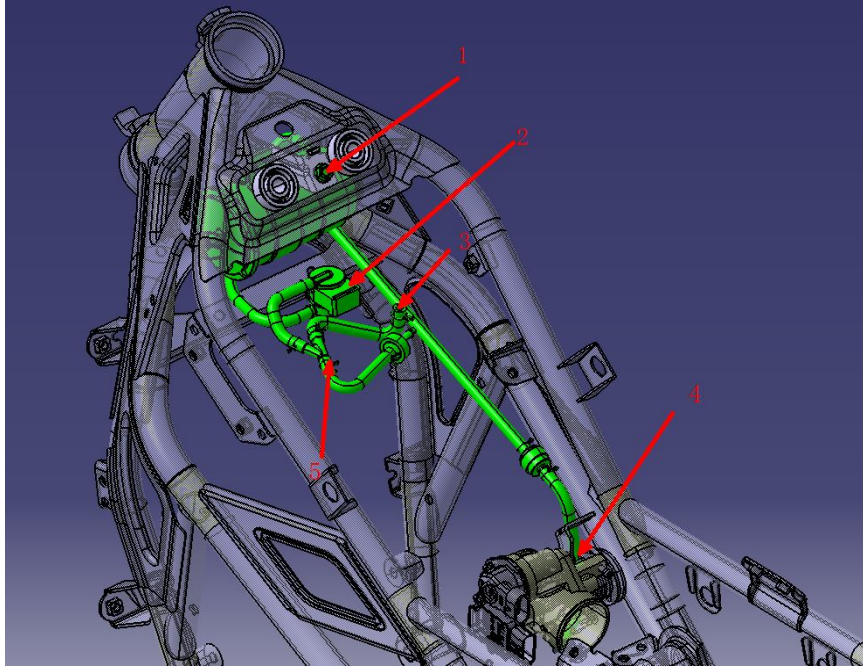
4. The re-assembly is precisely opposite to disassembly.

◇ **Issues need pay attention to:**

1. Because there are too many connectors at lower part fuel tank, please re-assemble them in place to avoid getting pipeline bent or bearing pressure.
2. When re-assembling, there is a overflow tube under fuel tank, whose opposite installation is not allowed, otherwise the fuel evaporation system may be damaged.

6 Maintenance, disassembly and re-assembly for fuel evaporation controller set

Fuel evaporation controller set and its parts



1	Fuel evaporation controller set	PCS	1
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Disassembly for fuel evaporation controller set:

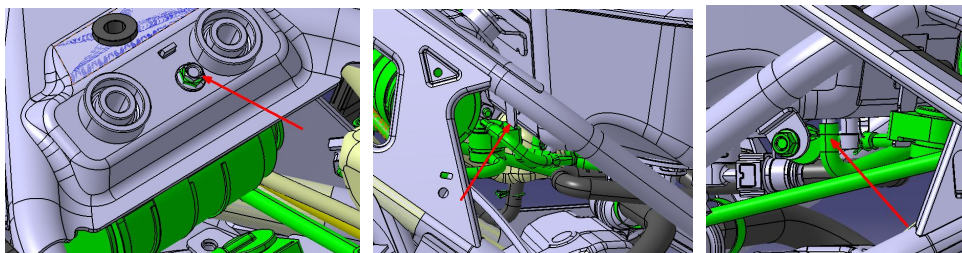
1 : Remove the fuel tank by referring chapter 05 for the disassembly for fuel tank.

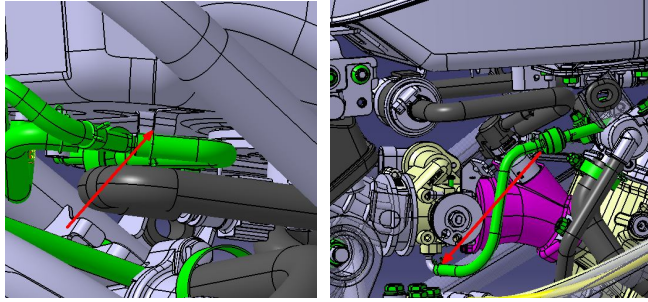
2 : Remove the installation bolt 1 of carbon canister, then remove the hook 2 of dumping valve from fuel tank, pull off the connecting end of breathing tube 3, then pull off the connecting end 4 between breathing tube and throttle valve body, then according to binding situation, loosen the fixing for position 5. Finally the complete fuel evaporation controller set could be removed.

3 : In case the breathing tube needs be removed separately, it could be pulled off when each steel wire got loosened.

The re-assembly is precisely opposite to disassembly.

Show the details:





Caution:

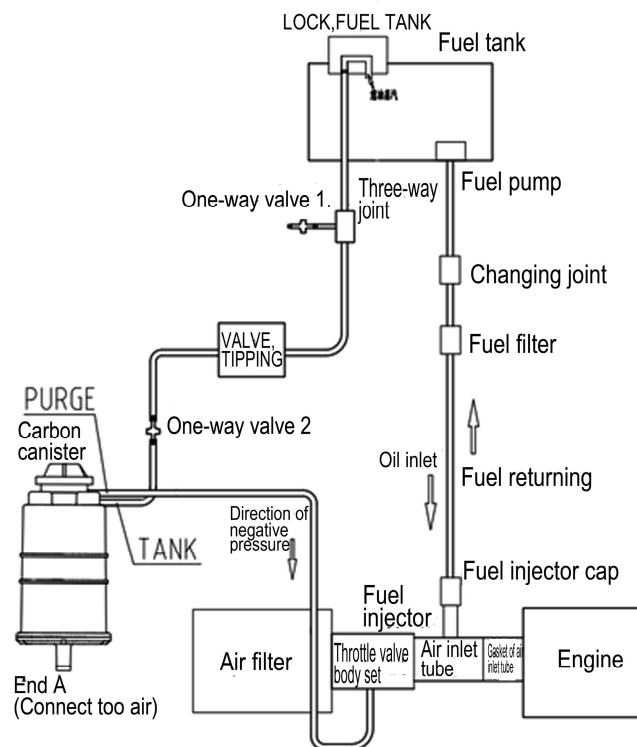
Because the narrow space for layout of fuel evaporation controller, meanwhile there are too many pipelines for this component, so please take record for wiring and layout of pipelines before removing.

Important:

When re-assembling the fuel evaporation controller, please pay attention to the layout and its direction of dumping valve, keep it horizontal to ground after re-assembled, otherwise the dumping valve doesn' t work.

Torque for fastening bolt of covering parts	M6	Nm	6
Fastening torque for carbon canister	M6	Nm	6

Figure for connection of fuel evaporation controller

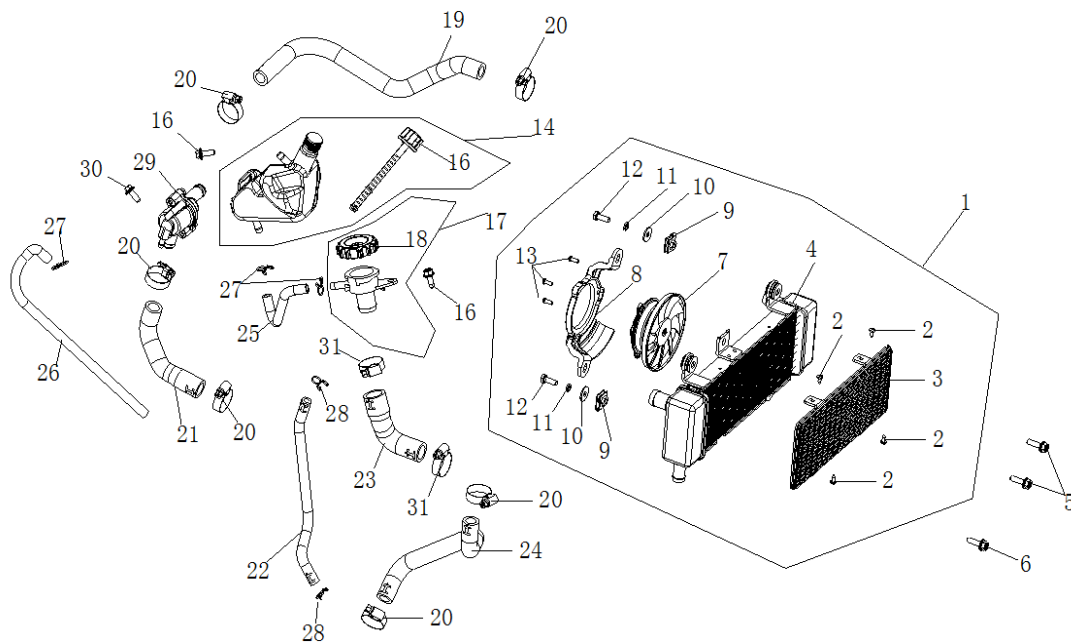


How the fuel evaporation controller system works:

- (1) When the gasoline in fuel tank got heated, the gasoline evaporated, get the end TANK through dumping valve and absorbed.
- (2) When the inclining of motorcycle is over 60°, the dumping valve gets closed, the gasoline fails to reach carbon canister through dumping valve.
- (3) The fresh air reached end PURGE through carbon canister A and brought gasoline steam into throttle valve to join combustion.

7 Maintenance, disassembly and re-assembly for cooling system

1. Cooling system and its parts

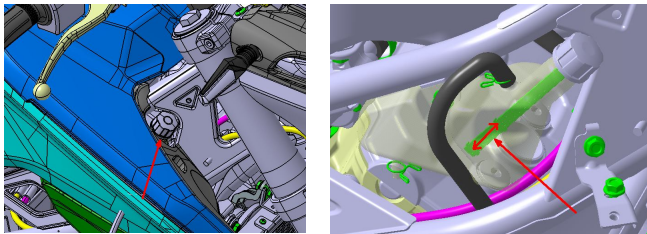


Ref. No.	Parts name	Quantity	Ref. No.	Parts name	Quantity
1	Heat radiator set	1	17	Water filling-up port	1
2	Cross head self-tapping screw	4	18	Water filling-up port cover	1
3	Net plate of heat radiator	1	19	Water tube	1
4	Heat radiator body	1	20	Clamp set	6
5	Hex. flange bolt	2	21	Water	1
6	Hex. flange bolt	1	22	Water	1
7	Cooling fan set	1	23	Water	1
8	Shield of cooling fan	1	24	Water	1
9	Clip nut	2	25	Water	1
10	Flat washer	2	26	Water	1
11	Elastic washer	2	27	Tube clamp	3
12	Hex. bolt	2	28	Tube clamp	2
13	Cross head screw	3	29	Thermostat	1
14	Cooling water tank	1	30	Hex. flange bolt	1
15	Tank cover	1	31	Clamp set	2
16	Hex. flange bolt	2			

2. Check the coolant

✧ Caution: This work needs be done under assistance of side stand or parking stand rack.

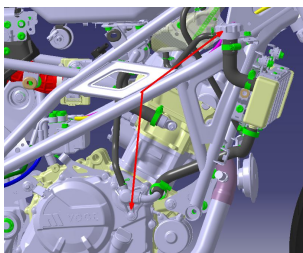
1. Check the scale mark on gauge when removed the cover of water filling-up pot, confirm it is within the scale lines, drain some out if it is too much and fill some in case too less.



3. Replacement for coolant

Caution: This work needs be done under assistance of side stand or parking stand rack.

1. Remove the cover of water filling-up port.
2. Lay the liquid tray under water drainage bolt at left front side of engine.
3. Slowly and slightly loosen the water drainage bolt, when the coolant stably drained off, slightly make motorcycle incline to right until coolant completely flow out.



✧ **Issues need pay attention to:**

1. Collect the drained coolant by suitable container and dispose in environment friendly way.
2. When re-assembling, replace the gasket of water drainage for a new one depends on actual situation.
3. Please pay attention to and clean up the installation surface of gasket of water drainage bolt to avoid impurity on it.
4. When replacement finished, start engine and make it work under high speed to check leakage on wet road with water on it.

4. Coolant filling up

1. Fill up the coolant from port of heat radiator by tools such as funnel until it gets full.
2. Start engine and make it idly run, observe the filling-up port of heat radiator, at this moment, the level on filling-up port may fall down, then keep filling up until it doesn't fall any more.
3. Re-assemble the cover of water filling-up port.
4. Filling up coolant once again into port of supplementary port by funnel and confirm the

level is within upper and lower scale lines.

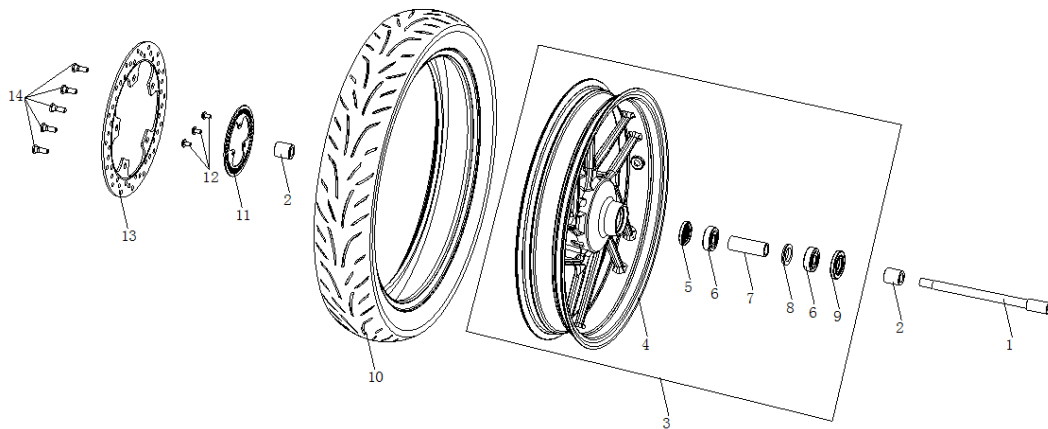
5. Re-assemble the rubber cover of water port of supplementary pot.
6. Finish the filling up.

✧ **Issues need pay attention to:**

1. When replacement finished, start engine and make it work under high speed to check leakage on wet road with water on it.
2. When the work above finished, wash up the surface of engine by cleanser, then dry it up by compressed air.
3. The total capacity of coolant is 0.61L.

8 Maintenance, disassembly and re-assembly for front wheel set

1. Front wheel set and its parts.



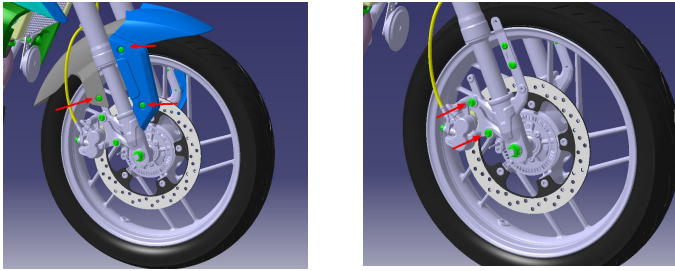
Ref. No.	Parts name	Quantity
1	Axle	1
2	Collar	10
3	Front wheel	2
4	Front wheel body	1
5	Oil seal	3
6	Bearing	1
7	Collar	1
8	Rubber flat sheet	2
9	Oil seal	1
10	Tire	2
11	ABS ring gear	1
12	Socket hex. screw	1
13	Front disc plate	1
14	Fastening bolt for disc brake plate	1

2. Disassembly and re-assembly for front wheel

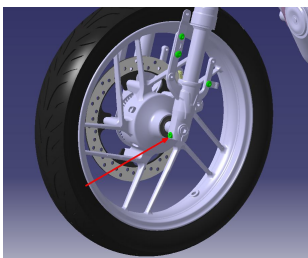
- ✧ Caution: We suggest this work shall be done under assistance of side stand or parking stand rack.

1. Remove the installation bolt for lower pump of front disc brake and fixing

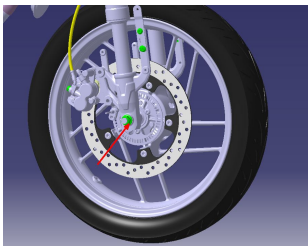
bolt for front fairing cover left and right, then remove the fairing cover and lower pump of front disc brake.



2. Remove the clamping bolt on left front shock absorber



3. Remove the nut on front wheel axle, then draw out the axle, then the front wheel could be removed.



4. The re-assembly is precisely opposite to disassembly.

✧ Issues need pay attention to:

1. Please don't operate the front brake lever when the caliper of front disc brake was removed to avoid piston moving which lead to difficult re-assembly for the caliper.
2. When re-assembling the front fender, recover the fixing way of oil tube on disc brake to the situation before removing.
3. There shouldn't be any dirt on the working surface of disc brake pad and brake plate when re-assembling.
4. Please repeatedly operate the front brake lever to confirm its normal work when replaced.
5. Confirm the moving balance for front wheel when tire re-assembled.
6. Coat with lithium lubricant when re-assembling collar or oil seal for front wheel.

3. Disassembly for brake plate

1. When the front wheel removed, put it on working bench.
2. Remove the fastening bolt on disc brake plate, remove the brake plate 13 and ring gear 11.
3. The re-assembly is precisely opposite to disassembly.

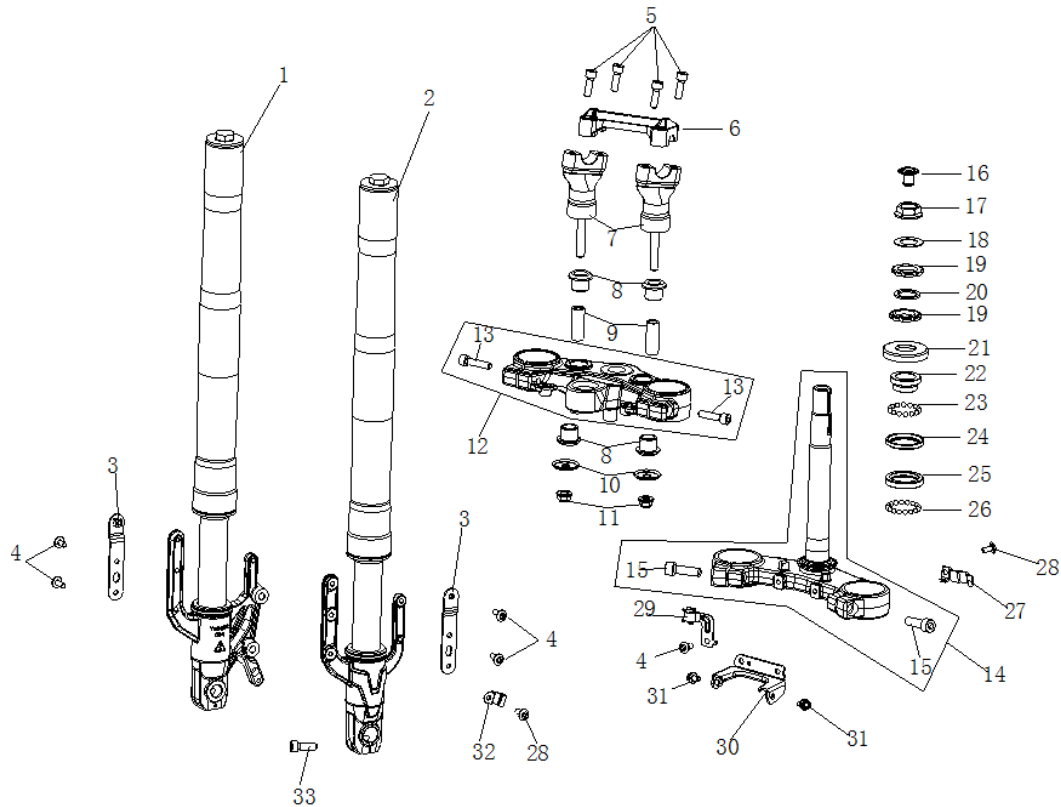


✧ Issues need pay attention to:

1. The threaded part of screw on front brake plate is coating with Loctite, please adopt suitable tools, otherwise it is difficult to be removed.
2. There shouldn' t be any dirt on the working surface of disc brake pad and brake plate when re-assembling.
3. Coat the fastening bolt with Loctite on disc brake plate when re-assembling it.

9 Maintenance, disassembly and re-assembly for front suspension set

1. Front suspension set and its parts



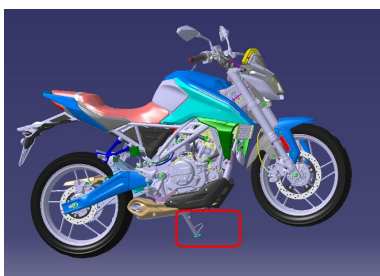
Ref. No.	Parts name	Quantity	Ref. No.	Parts name	Quantity
1	Left front shock absorber	1	18	Washer of steering stem	1
2	Right front shock absorber	1	19	Adjusting nut of steering stem	2
3	Front fender bracket	2	20	Locking washer	1
4	Socket hex. screw	4	21	Dust proof cover of steering stem	1
5	Socket hex. screw	4	22	Circlip of bearing	1
6	Steering clip	1	23	Steel ball set	1
7	Steering clip base	1	24	Bearing base ring	1
8	T-shaped rubber ring	4	25	Bearing base ring 2	1
9	Collar	2	26	Steel ball set 2	1
10	Flanging washer	1	27	Wire clip	1

11	Metallic hex. flange locking nut	1	28	Socket hex. screw	2
12	Upper connective plate set	1	29	Hook of soft hose	1
13	Socket hex. screw	2	30	Connective piece for headlight bracket	1
14	Steering stem body/Circlip set	1	31	Hex. flange bolt	2
15	Socket hex. screw	2	32	Wire clip	1
16	Dust proof cover of steering stem	1	33	Socket hex. screw	1
17	Locking nut of steering stem	1			

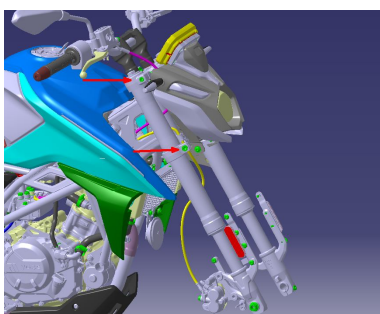
2. Disassembly and re-assembly for front shock absorber

✧ Caution: We suggest this work shall be done under assistance of side stand or parking stand rack.

1. Remove the front wheel set first by referring its corresponding steps. When removing the front wheel, hold the engine under it by a rack to keep motorcycle stable, meanwhile lifting up the shock absorber to ensure enough space for drawing out the shock absorber.



2. Loosen the locking bolt between left & right upper connecting plate and the lower one, only needs to loosen, without removing. When loosening, please pay attention to and avoid sudden dropping, make preparation and protection in advance.



3. The re-assembly is precisely opposite to disassembly.

✧ Issues need pay attention to:

1. When re-assembling the front fender, bind the wires of ABS wire and oil tube to the status before removing, otherwise the long driving may lead to interference

between oil tube and front fender by using shock absorbers even abnormal noise.

2. When re-assembling the front shock absorber, assemble one first, and slightly fasten another, when the front wheel axle feel smoothly getting through its hole on front shock absorber, then fasten the fixing bolt on shock absorber.

3. Removal for upper connecting plate

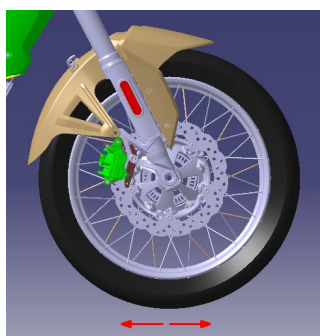
1. Finish the removal for handle bar set first.
2. Finish the removal of front shock absorber, in case remove upper connecting plate only, the removal for shock absorber is unnecessary.
3. Loosen the locking nut 11 at lower end of upper connecting plate and that with No. 17 at upper end, remove the corresponding flat washer, locking washer and adjusting nut with No. 18, 19, and 20. Then draw off the upper connective plate upwards.
4. The re-assembly is precisely opposite to disassembly.

4. Removal for steering stem body

1. Finish the removal of upper connecting plate first.
2. Removal for front shock absorber must be done first, meanwhile the wires for speed counter and ABS are also need be removed.
3. When the two points above finished, the steering stem body is removable.
4. The re-assembly is precisely opposite to disassembly.

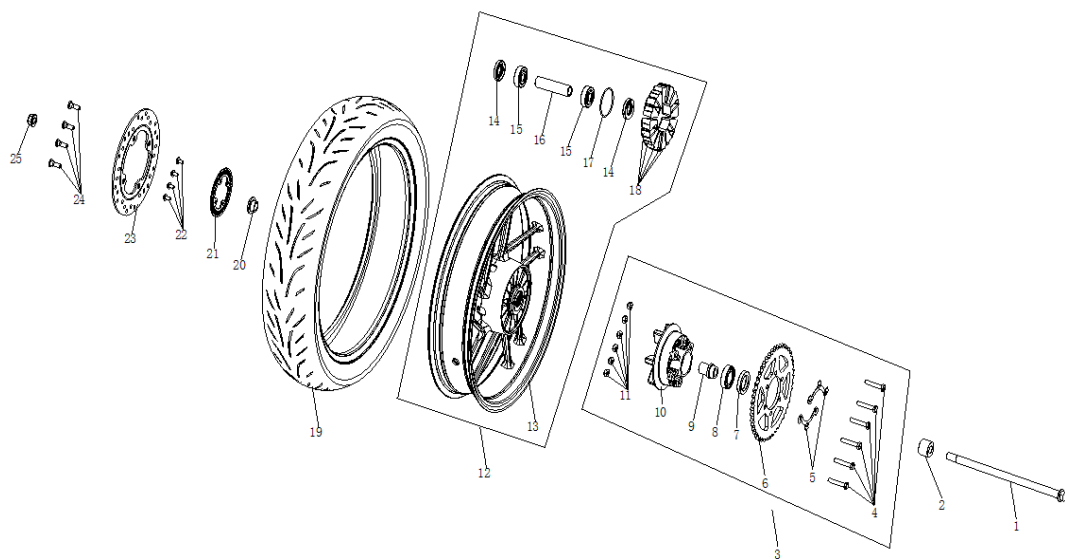
5. Judge the clearance of steering stem's bearing

1. When the motorcycle is under low speed, repeatedly and fast operate the front brake lever to feel the flexibility of steering bearing.
2. Keep the motorcycle upright by parking stand rack.
3. Repeatedly draw the front wheel to feel the flexibility of steering bearing as direction shown in picture.



10 Maintenance, disassembly and re-assembly for rear wheel set

1. Rear wheel set and its parts

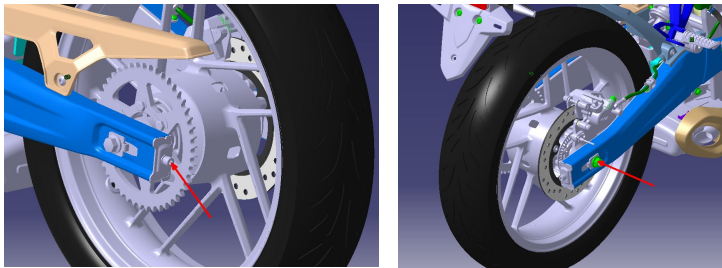


1	Axle	1	14	Oil seal	2
2	Collar	1	15	Bearing	2
3	Damper set	1	16	Seal ring	1
4	Hex. bolt	6	17	Collar	1
5	Locking shim	2	18	Damping piece of rear wheel	6
6	Sprocket wheel	1	19	Tire	1
7	Oil seal	1	20	Collar	1
8	Bearing	1	21	ABS ring gear	1
9	Collar	1	22	Socket hex. screw	4
10	Sprocket wheel base	1	23	Rear disc brake plate	1
11	Metallic hex. locking nut	6	24	Fastening bolt of disc brake plate	4
12	Rear wheel	1	25	Metallic hex. flange locking nut	1
13	Rear wheel body	1	26		

2. Disassembly for rear wheel

1. Keep the motorcycle upright by parking stand rack.

2. Loosen the nut on left and right chain adjuster and locking nut on rear wheel axle.

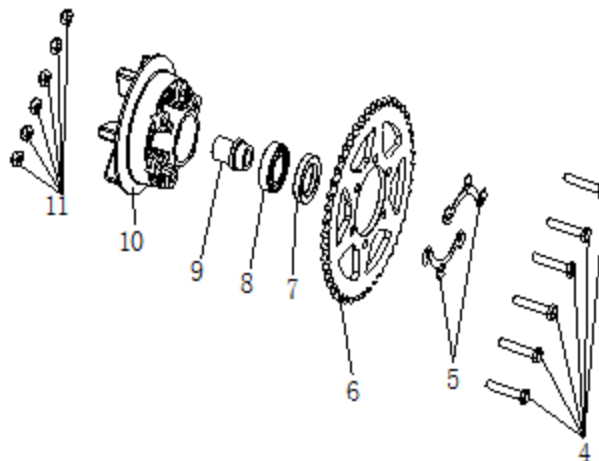


3. Remove the rear wheel axle 1.
4. Remove the chain.
5. Remove the rear wheel set.
6. Remove the damper set.
7. Remove the damping rubber piece.
8. Remove the collar of rear wheel.
9. The re-assembly is precisely opposite to disassembly.

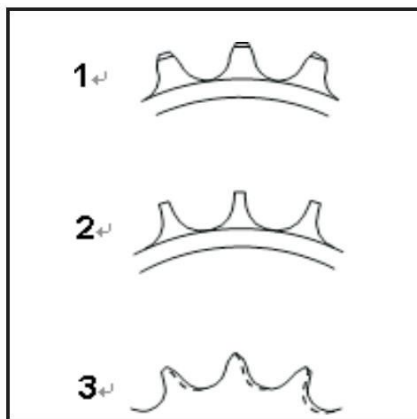
Issues need pay attention to:

1. Please don't operate the rear brake pedal when the rear lower brake caliper was removed, to avoid its piston moving even difficult re-assembly. In case there is clearance in brake pad's adhesion, get it expanded by tool with flat head.
2. There shouldn't be any dirt on the working surface of brake pads or brake plate.
3. Repeatedly step down the rear brake pedal when replaced to confirm if there still abnormal situation.
4. Confirm the moving balance of rear wheel on equipment when its tire re-assembled.
5. Coat with lithium lubricant when re-assembling the collar or oil seal on rear wheel.

3. Disassembly for damper set (Replace sprocket wheel)



1. Remove the connecting nut 11, locking shim 5 and bolt 4 of sprocket wheel.
 2. Remove the sprocket wheel 6.
 3. The re-assembly is precisely opposite to disassembly.
- ✧ Issues need pay attention to:
1. When re-assembling the sprocket wheel, coat the fastening bolt with Loctite.
 2. Coat with lithium lubricant when re-assembling the collar or oil seal on rear wheel.
- ✧ Condition for replacing sprocket wheel
1. The surface of sprocket wheel gets warping.
 2. The tooth of sprocket wheel cracked or damaged.
 3. As shown below, No. 1 is qualified, 2 and 3 need be replaced.

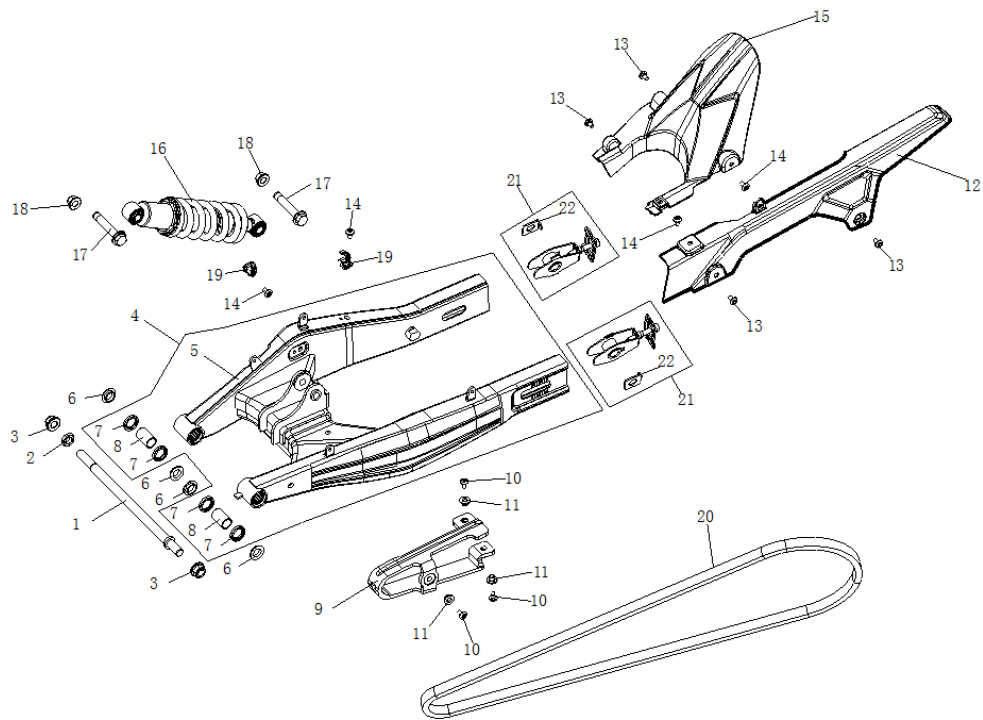


4. Disassembly for brake plate

1. Put the rear wheel on working bench when it was removed.
 2. Remove fastening bolt on disc brake plate, then remove the plate itself and ring gear.
 4. The re-assembly is precisely opposite to disassembly.
- ✧ Issues need pay attention to:
1. The screw on rear brake plate is coated with Loctite, please select suitable tools when disassembling, otherwise it will be difficult to be done.
 2. When re-assembling, there should not be any dirt on working surface of brake pads and brake plate.
 3. When re-assembling the brake plate, its fastening bolts need be coated with Loctite.

11 Maintenance, disassembly and re-assembly for rear suspension set

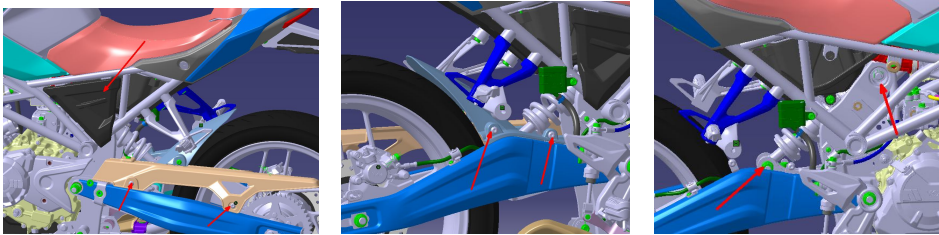
1. Rear suspension and its parts



Ref. No.	Parts name	Quantity	Ref. No.	Parts name	Quantity
1	Axle	1	12	Chain case	1
2	Hex. nut	1	13	Socket hex. screw	4
3	Metallic hex. flange nut	2	14	Socket hex. screw	4
4	Rear fork set	1	15	Inner plate of rear fender	1
5	Rear fork welding set	1	16	Rear shock absorber	1
6	Collar	4	17	Axle	2
7	Oil seal	4	18	Metallic hex. flange locking nut	2
8	Collar	2	19	Tube clamp	2
9	Chain slider	1	20	Chain	1
10	Socket hex. screw	3	21	Chain adjustor	2
11	Flanging washer	3	22	Hanging plate for chain adjustor	2

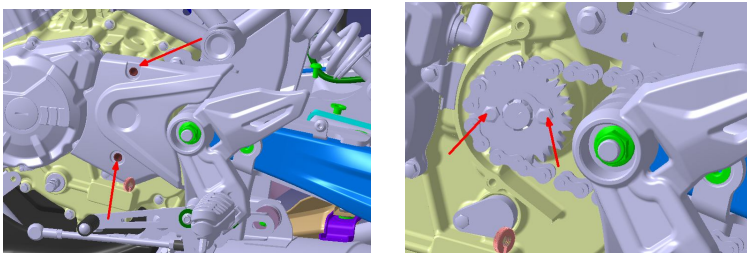
2. Disassembly and re-assembly for rear shock absorber

1. Keep the motorcycle upright and stable by side stand or parking stand rack.
2. Remove the left, right side cover and chain case, draw off the side cover directly and power fully to left or right of direction of motorcycle, remove the left and right installation screw first as picture shows and then the chain case.
3. Remove the installation bolts with No. 17/18 on rear shock absorber, before that, because the tail part of motorcycle may lose the balance, please let another people hold the motorcycle or put a suitable material between tire and rear fender to support it, but this material must be reliable and stable.
4. The re-assembly is precisely opposite to disassembly.



3. Disassembly and re-assembly for chain

1. Keep the motorcycle standing and upright by parking stand rack.
2. Remove the rear wheel by referring is disassembling steps.
3. Remove the rear left cover, after that, loosen the fixing bolt on smaller flying wheel, then remove the front part of chain. (In case the smaller flying wheel needn' t be replaced, please don' t remove it).



4. Let the rear part bypass the left footrest, then remove the chain.
5. The re-assembly is precisely opposite.

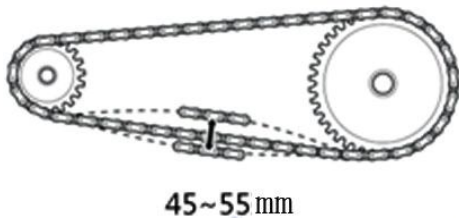
✧ **Issues need pay attention to:**

1. Adjust and fasten the left and right chain adjuster before re-assembling, then fasten the nut on rear wheel axle.
2. Check and confirm the left and right rear chain adjuster are at same scale mark when re-assembling.
3. Check the tensioning force when the motorcycle is with 0 loading.

✧ **Condictions for replacing chain**

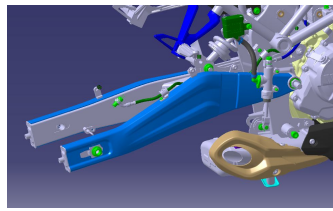
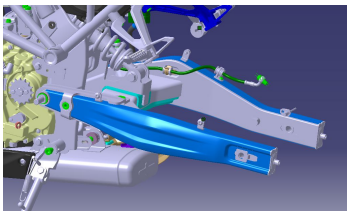
1. There are several dead locks on chain links.

2. There is damage on roller of chain.
3. There are several seal rings on chain are missing.
4. The distance between links are 2 times of normal situation.
5. The chain already adjusted to limit but still failed to meet the conditions below and higher than them.

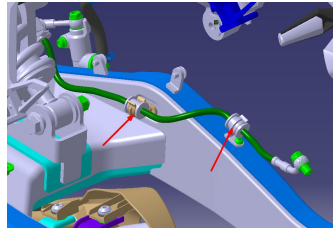
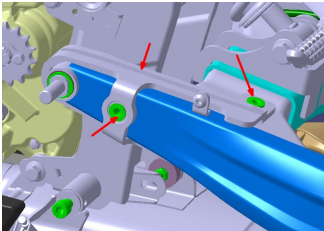


4. Disassembly and re-assembly for rear fork.

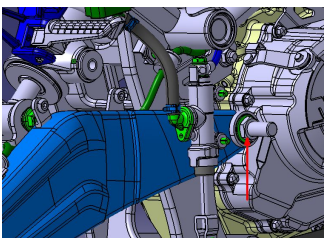
1. Remove the rear wheel first.
2. Remove the left and right footrest by referring their disassembly and re-assembly to get the situation as picture below.



3. Remove the installation screw on chain slider and remove the slider.



4. Remove the screw on right oil tube, then remove the lower pump of rear brake pump apart from rear fork.
5. Remove the locking bolt of rear part of rear fork, then remove the fork' s axle, then the rear fork itself.



6. Put the removed rear fork set on working bench.
7. Put and arrange the parts No. 6, 7, and 8 according to their sequence, then remove the collar,

oil seal and bearings along axial direction.

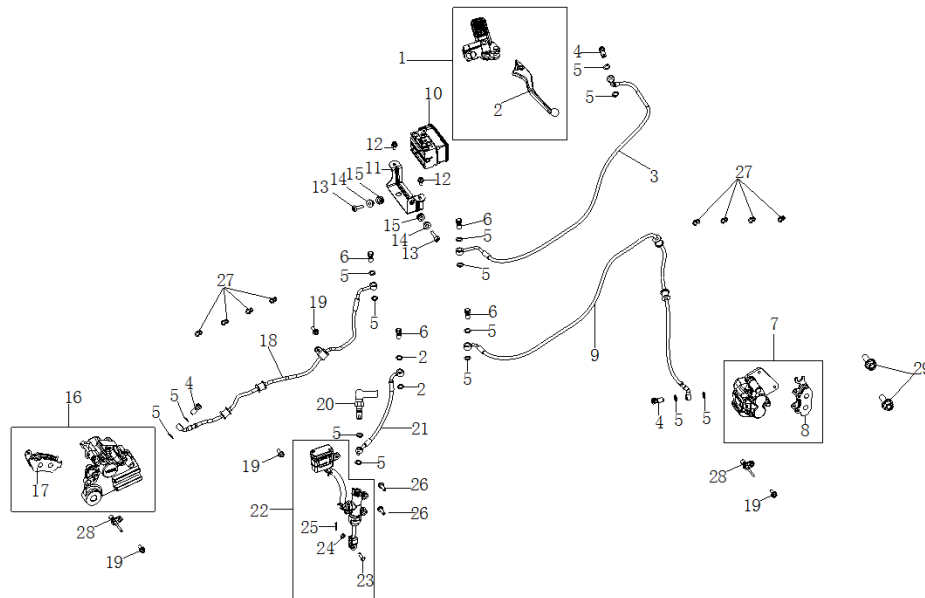
8. The re-assembly is precisely opposite to disassembly.

✧ **Issues need pay attention to:**

1. When re-assembling collar, oil seal and bearing, please coat them with lithium lubricant.

12 Maintenance, disassembly and re-assembly for brake system

1. Brake system and its parts

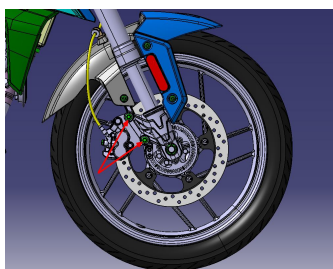


Ref. No.	Parts name	Quantity	Ref. No.	Parts name	Quantity
1	Upper pump of front disc brake	1	16	Lower pump of rear disc brake	1
2	Right lever	1	17	Brake pads set	1
3	ABS connecting oil tube	1	18	ABS connecting oil tube	1
4	Bolt on soft hose of disc brake	3	19	Hex. flanging bolt	3
5	Flat washer	16	20	Rear brake switch	1
6	Bolt on soft hose of disc brake	4	21	ABS connecting oil tube	1
7	Lower pump of front disc brake	1	22	Upper pump of rear disc brake	1
8	Brake pads set	1	23	Pin axis	1
9	ABS connecting oil tube	1	24	Split pin	1

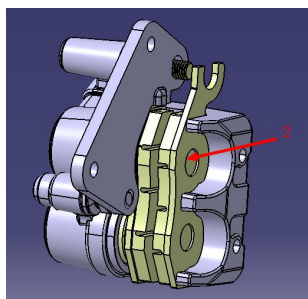
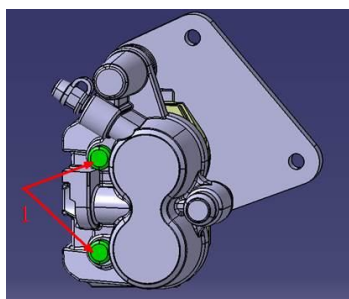
10	ABS anti-locking up device	1	25	Flat washer	1
11	ABS installation bracket	1	26	Hex. flange bolt	2
12	Hex. flange bolt	2	27	Wire clip	8
13	Socket hex. screw	2	28	Speed sensor	2
14	Flanging washer	2	29	Hex. flange bolt	2
15	I-ring	2			

2. Replace the front brake pads

1. Keep the motorcycle upright by parking stand rack.



2. Remove the installation bolt with No. 29 on caliper at front left, then remove the lower pump of front disc brake.



3. Remove the bolt 1 and finally remove brake pads set 2.
 4. Replace the brake pads for a new set.
 5. The re-assembly is precisely opposite to disassembly.
- ✧ Issues need pay attention to:
1. When re-assembling, please don't forget the shim between limit groove of front caliper and end surface of brake pads, please re-assemble them in place.
 2. Please don't operate the front brake lever when the brake pads are removed to avoid moving of piston in front caliper and makes difficult re-assembly latter.
 3. When replacing the brake pads please replace the outer one and inner one as a complete set.
 4. There shouldn't any dirt on working surface of disc brake pads and brake plate when re-assembling.
 5. When re-assembled, repeatedly operate the brake lever by tightly holding to

confirm its normal work.

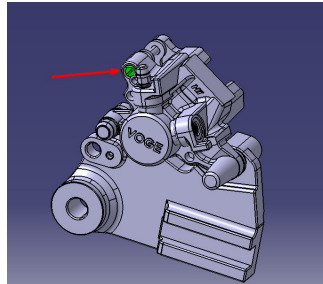
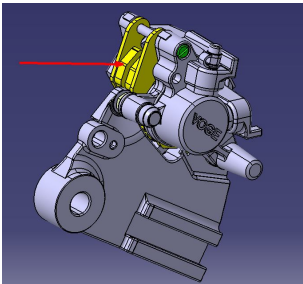
6. Dispose the replaced old brake pads in environment friendly way.

3. Replace the rear brake pads

Keep the motorcycle upright by parking stand rack.

Remove the rear wheel by referring its corresponding steps, then remove the lower pump of rear disc brake.

Remove the guiding rod of rear caliper by screw driver then remove the rear brake pads set.



Remove the rear brake pads set 3.

Replace the rear disc brake pads for a new set.

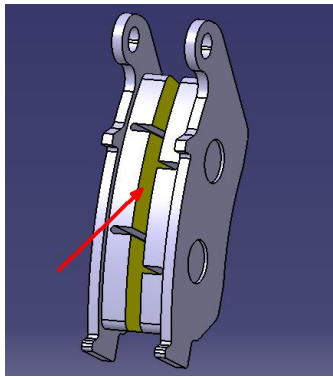
The re-assembly is precisely opposite to disassembly.

✧ Issues need pay attention to:

1. When re-assembling, please don't forget the shim between limit groove of rear caliper and end surface of brake pads, please re-assemble them in place.
2. Please don't operate the rear brake pedal when the brake pads are removed to avoid moving of piston in rear caliper and makes difficult re-assembly latter.
3. When replacing the brake pads please replace the outer one and inner one as a complete set.
4. There shouldn't any dirt on working surface of disc brake pads and brake plate when re-assembling.
5. When re-assembled, repeatedly step down the brake pedal to confirm its normal work.
6. Dispose the replaced old rear brake pads by environment friendly way.

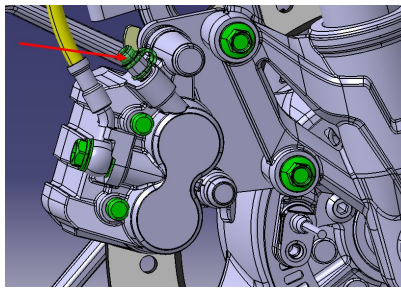
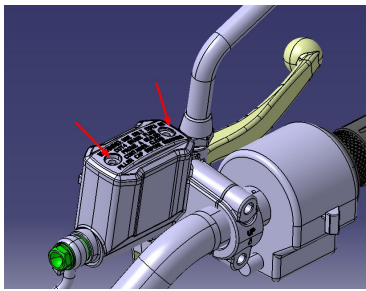
4. Check the brake pads

1. The undercut or uneven wear-out on abrasion surface of brake pad is not allowed, in case there is, please contact the specialized service station.
2. The max. limit of pad's wear-out shall not pass the depth of groove.



5. Replace the front brake liquid (The device for extraction is necessary).

1. Keep the motorcycle upright by parking stand rack.
2. Turn the grip to let the cover of oil cup get horizontal.
3. Remove the oil cup cover and its rubber by tools, meanwhile removing the cap of air exhaust screw on lower pump, then connect the device of liquid extraction to air exhaust screw on brake caliper.



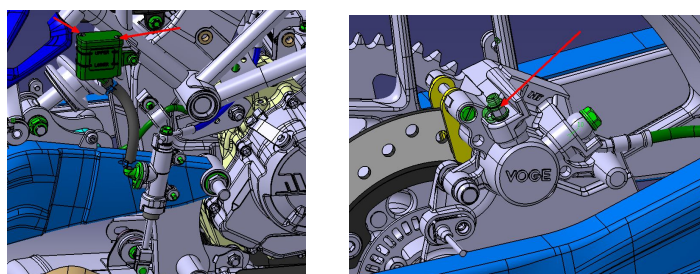
4. Open the air exhausting screw by turning it for half round by tool.
 5. Start the brake liquid extracting device to drain off the brake liquid.
 6. Fill up new brake liquid from oil cup, meanwhile start the device of extraction until the liquid fulfill all the pipeline.
 7. Fasten the air exhaust screw.
 8. Check and confirm if the brake liquid level in oil cup is within scale line UPPER and LOWER.
 9. Connect the diagnosis device for ABS to its controller to check malfunction code, in case there is, please make troubleshooting.
 10. The re-assembly is precisely opposite to re-assembly.
- ✧ Issues need pay attention to:
1. Clean up the residual oil around oil cup, lower caliper and air exhaust screw when the brake liquid filled up.
 2. Don' t let the brake liquid touch any painting parts on motorcycle because it is corrosive.
 3. When extracting the brake liquid, please don' t let the liquid level drop under scale

line LOWER, otherwise the air bubble may get into brake system, in case this situation exists, please extract once again.

4. When filled up, lay stable pressure on brake lever and keep for a while to check leakage on brake pipeline.
5. In case there is problem at brake hose set or connecting part of thread, please replace immediately.
6. Mixture of brake liquid from different brands is not allowed.

6. replace the rear brake liquid (The device for extraction is necessary)

1. Keep the motorcycle upright by parking stand rack.
2. Remove the oil cup cover and its rubber by tools, meanwhile removing the cap of air exhaust screw on lower pump, then connect the device of liquid extraction to air exhaust screw on brake caliper.



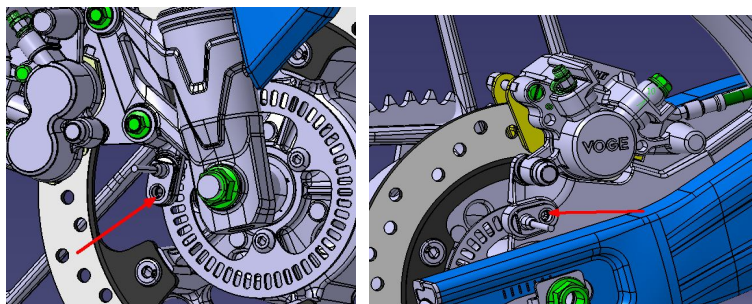
3. Open the air exhausting screw by turning it for half round by tool.
 4. Start the brake liquid extracting device to drain off the brake liquid.
 5. Fill up new brake liquid from oil cup, meanwhile start the device of extraction until the liquid fulfill all the pipeline.
 6. Fasten the air exhaust screw.
 7. Check and confirm if the brake liquid level in oil cup is within scale line UPPER and LOWER.
 8. Connect the diagnosis device for ABS to its controller to check malfunction code, in case there is, please make troubleshooting.
 9. The re-assembly is precisely opposite to re-assembly.
- ✧ Issues need pay attention to:
1. Clean up the residual oil around oil cup, lower caliper and air exhaust screw when the brake liquid filled up.
 2. Don't let the brake liquid touch any painting parts on motorcycle because it is corrosive.
 3. When extracting the brake liquid, please don't let the liquid level drop under scale line LOWER, otherwise the air bubble may get into brake system, in case this situation exists, please extract once again.
 4. When filled up, lay stable pressure on brake lever and keep for a while to check

leakage on brake pipeline.

5. In case there is problem at brake hose set or connecting part of thread, please replace immediately.
6. Mixture of brake liquid from different brands is not allowed.

7. Disassembly for front and rear speed counter on wheel (The ABS goes failure when removed).

1. Keep the motorcycle upright by side stand or parking stand rack.
2. Remove the bolt 1 and then front speed counter.
3. The re-assembly is precisely opposite to re-assembly.

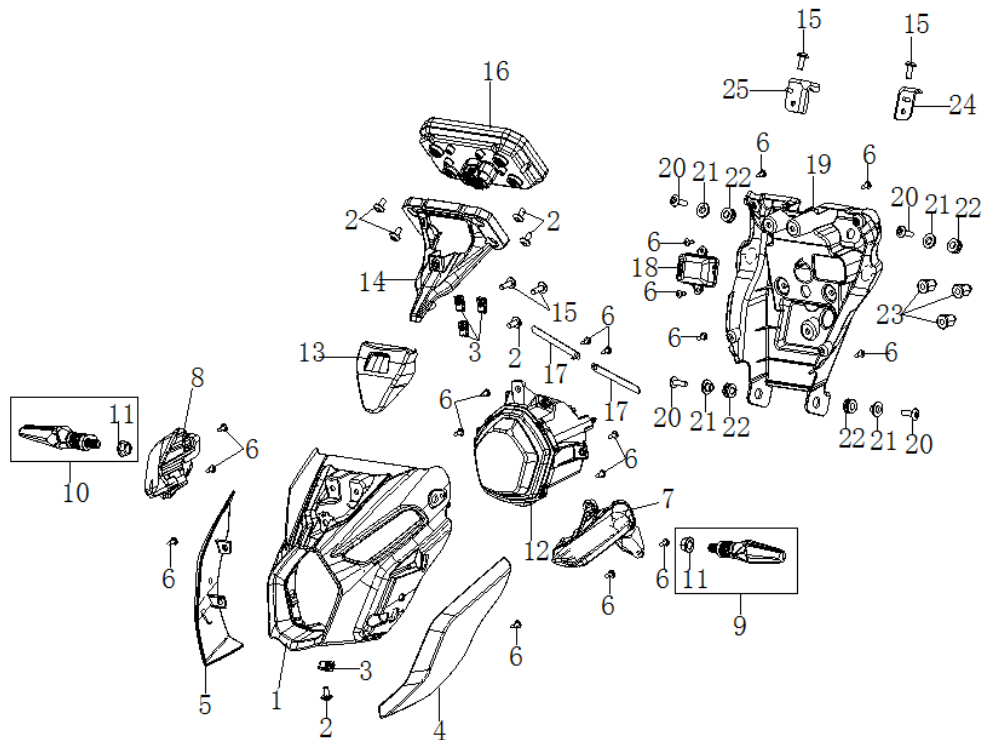


✧ Issues need pay attention to:

1. When the front wheel re-assembled, make front wheel suspend, turn the wheel and check the changes of clearance between speed sensor and ring gear of ABS, normally it should be even of 1mm.

13 ntenance, disassembly and re-assembly for lights set

1. Headlight and its parts

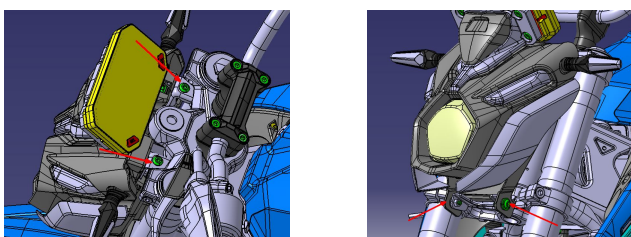


Ref. No.	Parts name	Quantity	Ref. No.	Parts name	Quantity
1	Fairing cover	1	14	Instrument bracket	1
2	Socket hex. screw	6	15	Socket hex. screw	4
3	Clip nut	4	16	Instrument set	1
4	Left protective plate for fairing cover	1	17	Wire clip for locating	2
5	Right protective plate for fairing cover	1	18	USB/AUX	1
6	Cross head self-tapping screw	18	19	Back plate for fairing cover	1
7	Left front position light	1	20	Socket hex. screw	4
8	Right front position light	1	21	Flanging washer	4
9	Left turning signal light	1	22	I-ring	4
10	Right turning signal light	1	23	Cap-shaped nut	3
11	Hex. flange nut	2	24	Connecting piece of headlight bracket	1

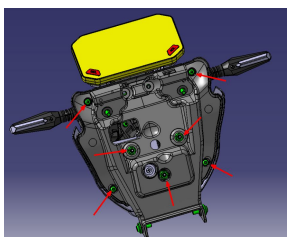
12	Headlight	1	25	Connecting piece of headlight bracket	1
13	Decorative cover for instrument	1			

2.Disassembly for headlight and instrument set

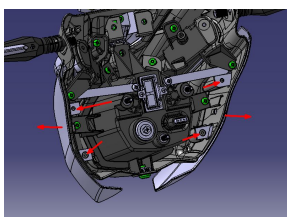
1. Keep the motorcycle upright by parking stand rack.
2. Remove the connecting piece of left and right headlight by tool with No. 24 and 25, meanwhile remove the fixing bolt with No. 20 on headlight bracket at below, at this moment the headlight is removable, pull off the sub wire harness (The instrument connects to wire harness).



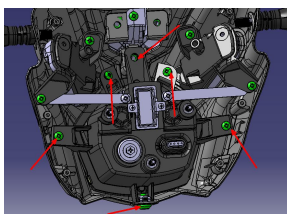
3. Remove the fixing nut and screw with No. 19 for back plate of fairing, then the back plate is removable.



4. Remove the installation screw with No. 4 and 5 on left and right protective plate, then remove the plate outwards.

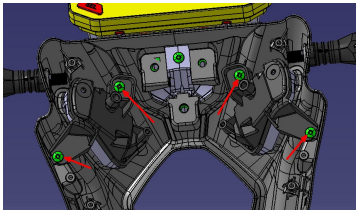


5. Remove the fixing bolt with No. 12 on headlight, then the headlight is removable.

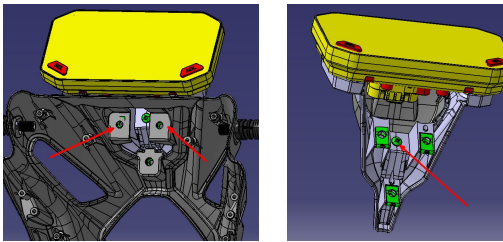


6. Remove the installation with No. 7 and 8 on left and right position light, then the

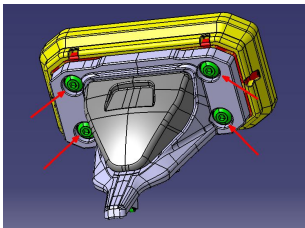
position lights are removable.



7. Remove the installation screw with No. 14 on instrument bracket, then remove the bracket, meanwhile removing the fixing screw for decorating instrument, the decorative cover could be removed separately.

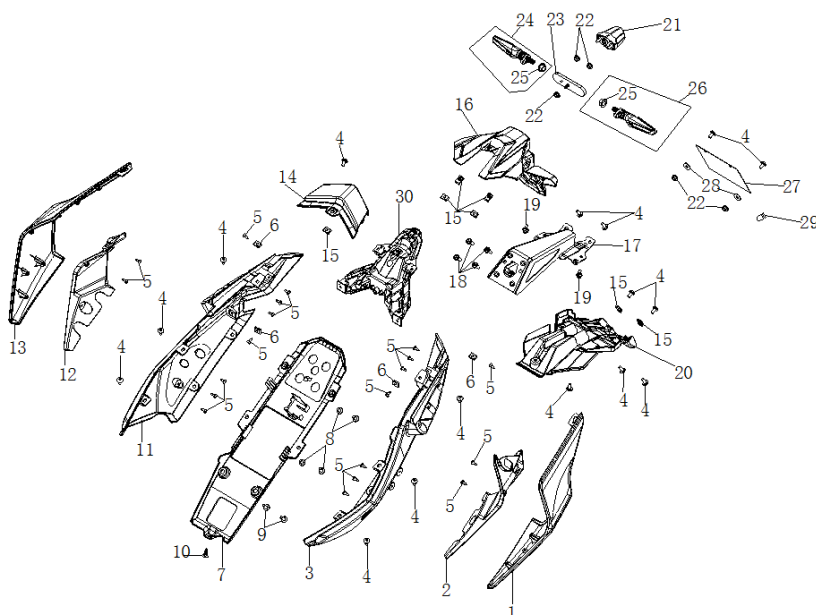


8. Finally remove the fixing bolt for instrument set, so the set could be remove separately.



9. The re-assembly is precisely opposite to disassembly.

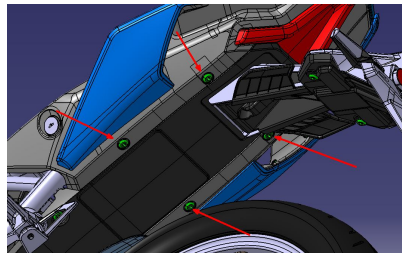
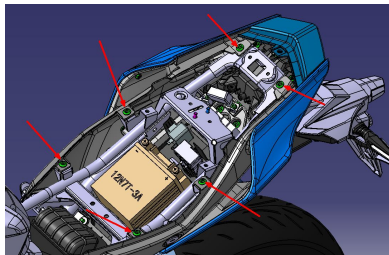
3. Disassembly and re-assembly for rear fender set and its parts



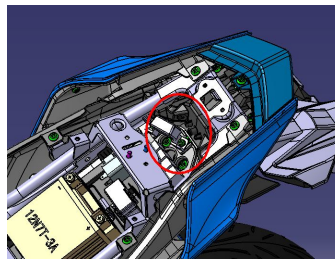
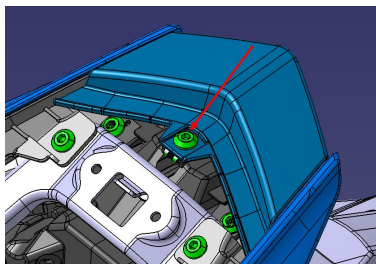
Ref. No.	Parts name	Quantity	Ref. No.	Parts name	Quantity
1	Left body decorative plate	1	16	Rear plate of rear fender	1
2	Left decorative plate	1	17	Rear fender bracket	1
3	Left body cover	1	18	Hex. flange bolt	4
4	Socket hex. screw	16	19	Hex. flange bolt	2
5	Cross head self-tapping screw	20	20	Rear upper fender	1
6	Clip nut	4	21	Rear registration light plate	1
7	Rear fender	1	22	Hex. flange nut	3
8	Socket hex. screw	4	23	Rear reflector	1
9	Socket hex. screw	2	24	Right rear turning signal light	1
10	Clip	1	25	Hex. flange nut	2
11	Right body cover	1	26	Left rear turning signal light	1
12	Right protective plate	1	27	Advertisement plate	1
13	Right body decorative plate	1	28	Flat washer	2
14	Tail cover	1	29	Damping rubber nail	1
15	Clipping nut	7	30	Taillight	1

4.Disassembly for taillight set

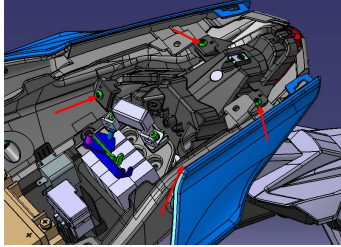
1. Keep the motorcycle upright by parking stand rack.
2. When the driver and passenger seats are removed, remove the 6 pieces of installation screw at upper side and 4 in lower of left and right body cover.



3. Remove the installation on upper taillight, then remove tail cover backwards, meanwhile cut off the connection between taillight & turning signal light and wire harness.



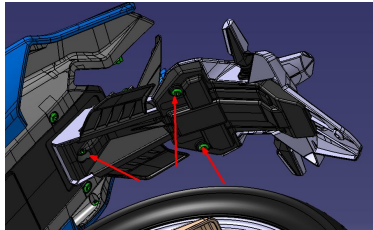
4. At this moment, remove the left and right body cover with covering plastic parts and taillight set backwards as a complete set, please cut off the connection of wires first, then bypass other positions of body and pull off the tail part set.
5. Loosen the fixing bolt on taillight, and remove the taillight.



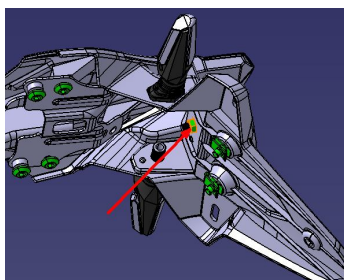
6. The left and right of tail part are symmetric, remove the self-tapping screw is enough.
7. The re-assembly is precisely opposite to disassembly.

5.Rear fender set

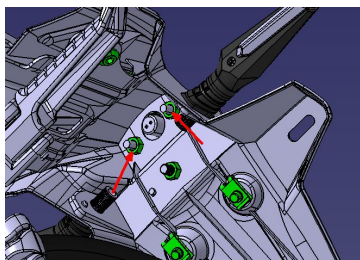
1. Keep the motorcycle upright by parking stand rack.
2. Remove the 3 pieces of fixing screw on rear fender.



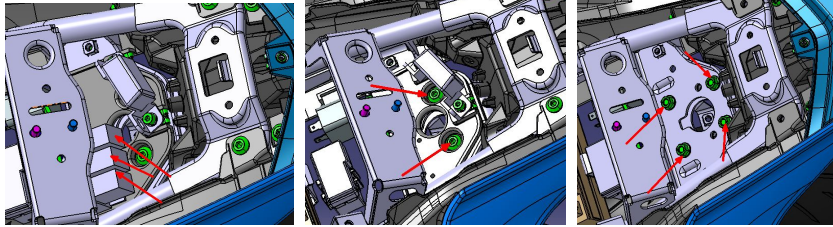
3. When this nut is removed, the rear reflector is removable.



4. When this nut is removed, the rear registration plate light is removable, but before removal, cut off the joint of wires first.



5. In case remove the complete set of rear fender bracket, please finish the operation below, remove controlling relay, then the installation screw of electrical box, remove the box itself, remove the installation bracket for rear fender and the fixing bolt. Cut off the wires, then the complete set of rear fender at tail part is removable.



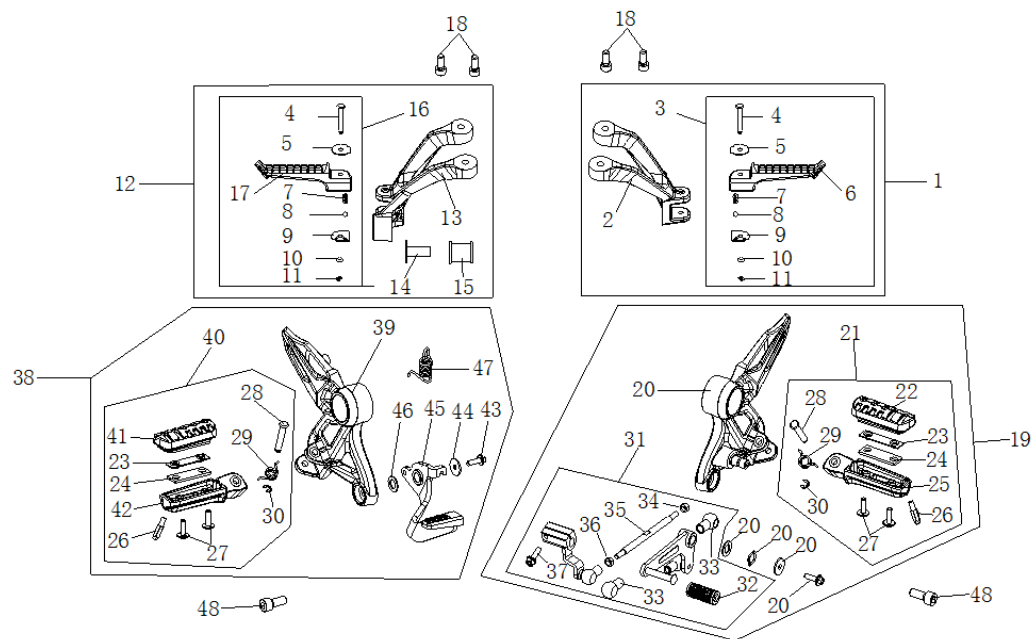
6. The re-assembly is precisely opposite to disassembly.

✧ Issues need pay attention to:

Before removing the lights or electrical parts, cut off the connectors between wires and main wire harness.

14intenance, disassembly and re-assembly for footrest and pillion step

1. Footrest, pillion step and their parts

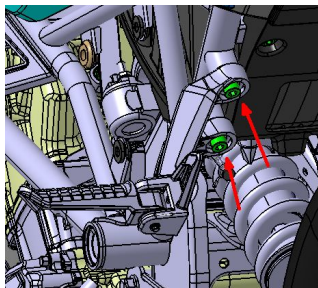


Ref. No.	Parts name	Quantity	Ref. No.	Parts name	Quantity
1	Left pillion step set	1	26	Detective screw	2
2	Bracket for left pillion step	1	27	Socket hex. screw	4
3	Left pillion step body	1	28	Pin axis	2
4	Pin axis	2	29	Turning spring	2
5	Limit plate for installation case	2	30	Opening circlip	2
6	Left pillion step body	1	31	Gearshift pedal	1
7	Pressing spring	2	32	Rubber jacket of gearshift pedal	1
8	Steel ball	2	33	Rubber jacket for ball joint of connecting rod	1
9	Limit piece for pillion step	2	34	Hex. nut	1
10	Seal ring	2	35	Gearshift connective rod	1
11	Opening circlip	2	36	Hex. nut	1
12	Right pillion step set	1	37	Hex. flange bolt	1

13	Bracket for right pillion step	1	38	Right footrest set	1
14	Collar	1	39	Bracket of right footrest	1
15	Muffler damping jacket	1	40	Footrest body	1
16	Right pillion step body	1	41	Footrest rubber jacket	1
17	Right pillion step body	1	42	Footrest main body	1
18	Fastening bolt for disc brake plate	4	43	Hex. flange bolt	1
19	Left footrest body	1	44	Flat washer	1
20	Bracket for left footrest	1	45	Rear brake pedal	1
21	Footrest body	1	46	Flat washer	1
22	Rubber jacket for footrest	1	47	Returning spring on rear brake pedal	1
23	Limit piece for footrest's rubber jacket	2	48	Socket hex. screw	2
24	Rubber sheet for footrest	2			
25	Footrest main body	1			

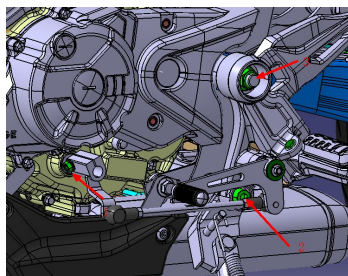
2.Disassembly for left and right pillion step

1. Keep the motorcycle upright by side stand or parking stand rack.
2. Remove the installation bolt by tools first, then the left and right pillion step are removable.
3. The re-assembly is precisely opposite to disassembly.



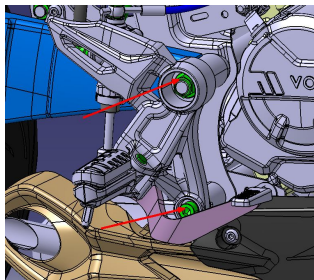
3.Disassembly for left and right footrest

1. Remove the bolt 1 at the spline of gearshift pedal, the installation screw and bolt 2 and 3 will be easily removed, then the left footrest set could be completely removed.

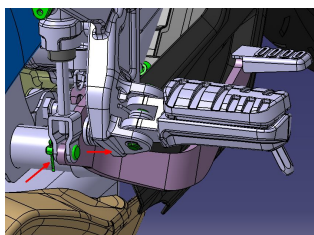


2. Remove the installation screw at right side and the installation nut on rear fork,

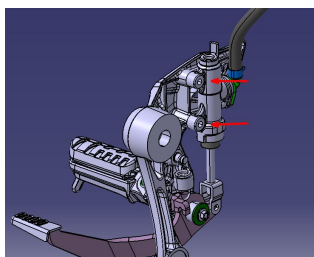
when checking the installation screw at lower end, please press and hold the rear brake pedal to avoid interference between tool and pedal, then the screw is smoothly removable.



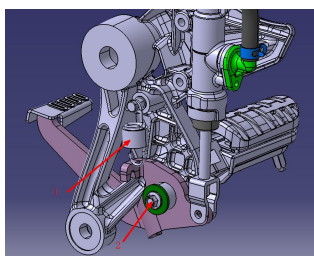
3. Remove the installation pin axis between rear brake pedal and upper pump of rear disc brake, then pull off the opening circlip, the pin axis is removable.



4. Remove the installation bolt between footrest bracket and upper pump at inside of right footrest, then the right footrest could be completely removed.



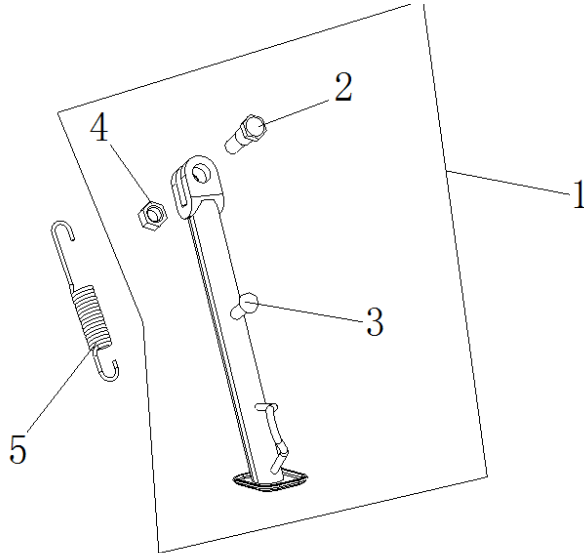
5. In case the rear brake pedal needs be removed separately, please continue the work below, remove drawing spring 1 and installation bolt 2 on rear brake pedal, the pedal could be completely removed.



6. When re-assembling the pillion step, coat the turning set with lithium lubricant.

15.Side stand and drawing spring

1. Side stand and its parts



Ref. No.	Name	Quantity
1	Side stand set	1
2	Hex. shoulder bolt	3
3	Hex. nut	1
4	Hex. nut	1
5	Drawing spring	1

2. Disassembly and re-assembly for side stand

1. Keep motorcycle upright by parking stand rack.
 2. Remove the drawing spring 5 of side stand by tools.
 3. Remove nut 4 at rear side.
 4. Remove bolt 2.
 5. The re-assembly is precisely opposite to disassembly.
- ✧ Issues need pay attention to:
1. Coat the position of turning set with lithium lubricant when re-assembling the side stand.