

DS900X Frame Service Manual



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Foreword

The motorcycles on market are increasing with each passing day, while new structure and technology are adopting. For easy maintenance, adjustment and repair to Loncin users and service workers of model LX900-A, we made this Service Manual, which provides you convenience and guidance of technology for repair and maintenance.

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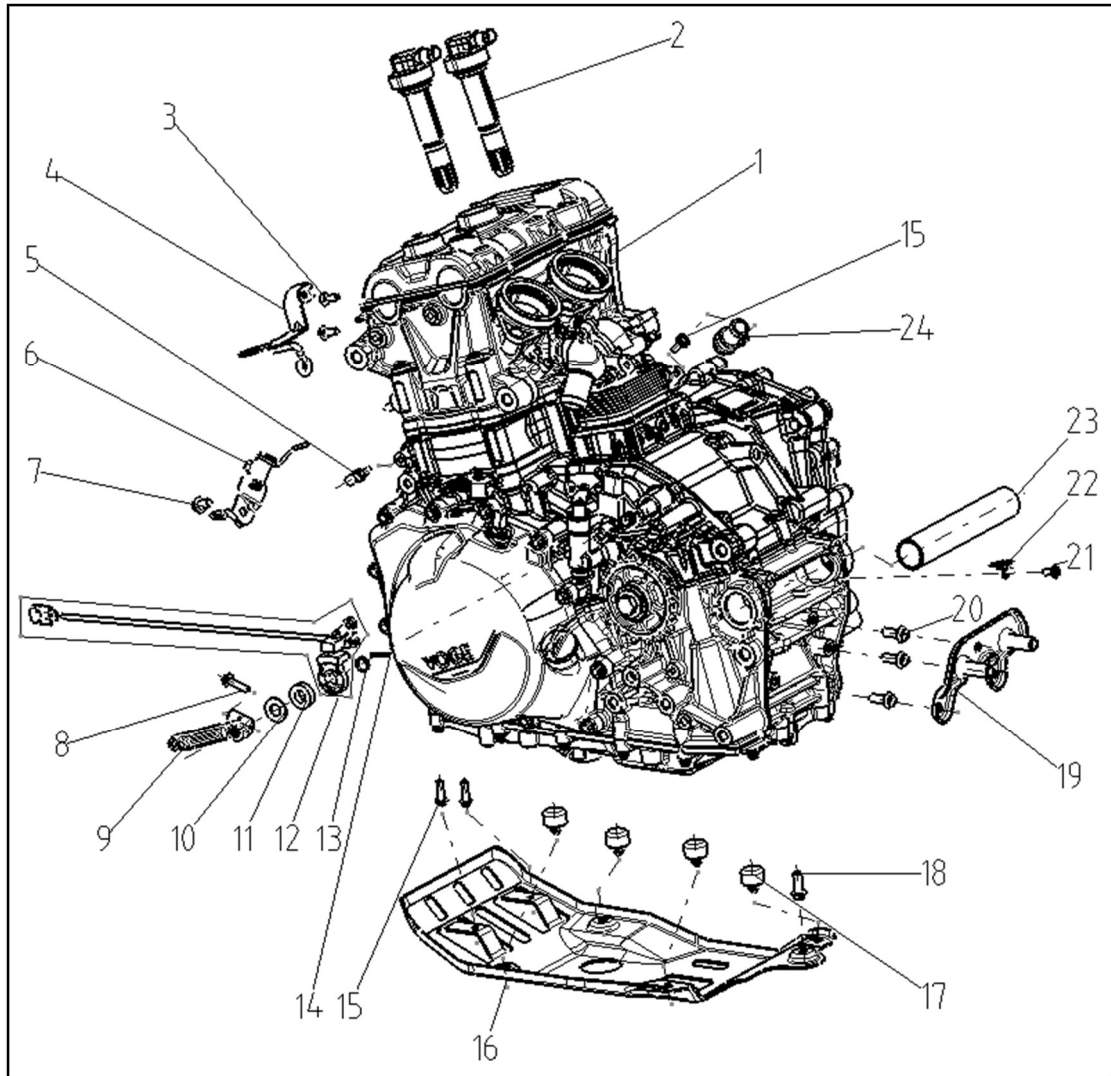
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1. Disassembly, re-assembly and maintenance for engine

Engine kit and its parts



1	Engine kit	SET	1
2	Ignition coil	PCS	1
3	Socket spline head bolt	PCS	2
4	Lower lug for heat radiator	PCS	1
5	Connective piece for side strip	PCS	1
6	Horn bracket	PCS	1
7	Socket hex. spline flange bolt	PCS	1
8	Hex. flange bolt	PCS	1
9	Spline base set	PCS	1

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10	Flat washer	PCS	1
11	Damping cushion	PCS	1
12	Gearshift trending sensor	PCS	1
13	Collar	PCS	1
14	Pin shaft	PCS	1
15	Socket spline head bolt	PCS	3
16	Engine shield cover	PCS	1
17	Damping rubber	PCS	4
18	Socket hex. spline head flange bolt	PCS	1
19	Middle connective holder for muffler	PCS	1
20	Socket hex. spline head flange bolt	PCS	3
21	Socket spline head bolt	PCS	1
22	Tube clamp	PCS	1
23	Collar	PCS	1
24	Tube joint	PCS	1

Disassembly and re-assembly for engine

Lift up tail part of frame by hanging device.

Remove bumper bar 2.

Remove engine shield 4.

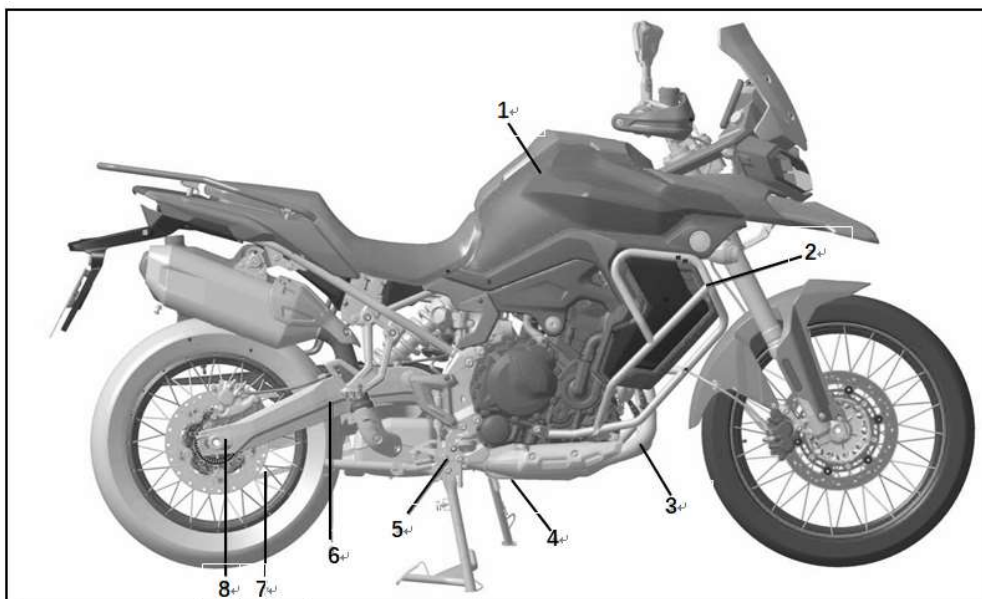
Remove fuel tank kit 1 by referring is steps for disassembly and re-assembly.

Remove muffler kit 3 by referring its steps for disassembly and re-assembly.

Remove main footrest 5 and rear fork 6 by referring disassembly and re-assembly for main footrest.

Removing hanging plate 8 for chain adjustor.

Loosen the chain 7 by referring its steps for disassembly and -re-assembly.



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Loosen connective rubber tube between air filter and engine, then remove air filter kit 9.

Remove all wire joint connect to engine. 。

Remove the ignition coil connects to engine.

Drain off coolant in cooling system by referring replacement for coolant.

Cut off all pipeline of cooling system 11 who connect to engine.

Cut off clutch cable.

Remove bolts connect engine and frame in turn.

Remove throttle valve kit 10.

Remove the other related accessories and to achieve the disassembly for engine.

The re-assembly is precisely opposite to disassembly.

Caution:

Use the tools for removing engine only when disassembling to avoid injury due to the heavy engine.

Important:

Please dispose the drained coolant in environment friendly way.

Please refer to corresponding chapter for coolant filling-up when re-assembling. 。

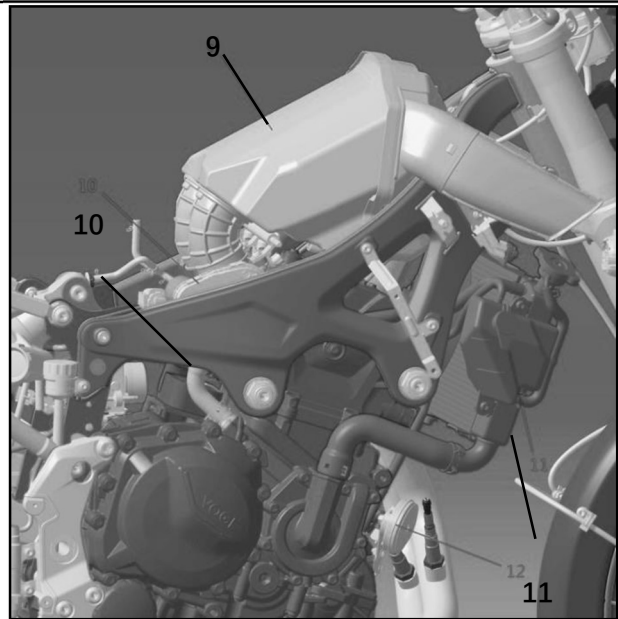
Recover the wire' s binding-up to the status before disassembly, which fully take water proof, interference and harmful heat into consideration.

When re-assembling gearshift trend sensor, to ensure part performance, please

Replace the damping cushion in list (11) above.

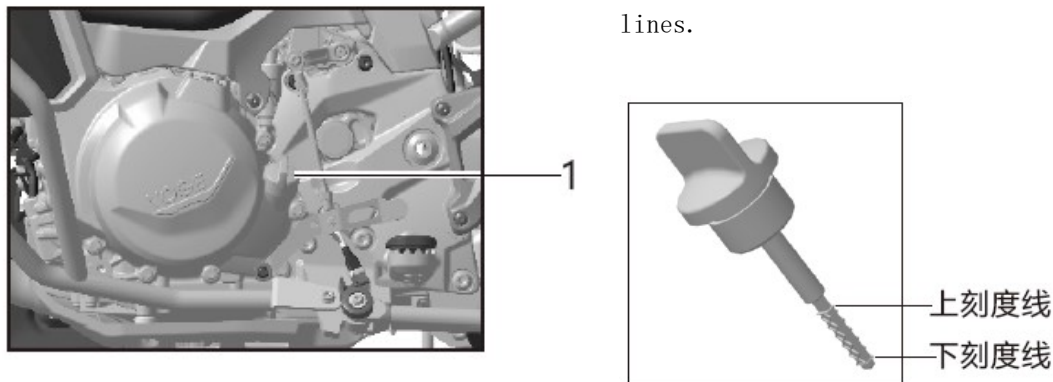
Parameters:

Fastening bolt for rear fork	Nm	M20	70
Left front fastening bolt for engine	Nm	M12	75
Right front fastening bolt for engine	Nm	M12	75
Left rear fastening bolt for engine	Nm	M12	75
Right rear fastening bolt for engine	Nm	M12	75
Fastening bolt for left main footrest	Nm	M10	40
Fastening bolt for right main footrest	Nm	M10	40
Left front fastening bolt for bumper bar	Nm	M8	22
Left rear fastening bolt for bumper bar	Nm	M8	22
Fastening bolt for appearance plastic parts	Nm	M5	3
	Nm	M6	4. 5
Fastening bolt for engine shield	Nm	M6	9
	Nm	M8	22
Fastening nut for clutch cable	Nm	M8	9
Fastening bolt for lug of heat radiator	Nm	M6	9



Oil filling-up for engine

Remove oil gauge at left rear side of engine.
Fill up oil.
Keep motorcycle upright by parking rack.
Re-assemble oil gauge in place.
Start engine , let it idly run until cooling fan works, then keep idling for a minute.。
Stop engine and wait for one minute to wait oil flowing back.
Turn and take out oil gauge and wipe it up then insert once again by turning one Round to check if the oil level is between upper and lower scale line.
In case the oil level is out of range, please repeat the steps above to add or reduce oil until oil level is within two scale lines.



上刻度线: Upper scale line 下刻度线: Lower scale line

Caution:

In case the oil level is above upper scale line, please extract surplus oil by tools for it only from filling-up port.

Important:

When oil filled up, start engine and idly run for 30 seconds, then check the oil level once again.

When checking oil level, please keep motorcycle upright, otherwise the oil level could not be confirmed.

Parameters:

Oil capacity in engine (Without replacing element)	L	2.7
Oil capacity in engine (Replacing element)	L	3.0
Oil capacity (Break up engine)	L	3.2
Oil specification	Specification for suggested oil shall be : Grade 5W/40 SL or above	

Replacement for oil filter

Put the oil collection case under oil filter at right rear side of engine.

Remove oil filter by tool for it only (Picture below shows), remove the oil filter and drain off oil.

Assemble the new oil filter.

Assemble the o-ring onto cover of oil filter.

The re-assembly is precisely opposite to disassembly.

Caution:

When the work above finished, please clean up greasy dirt on surface of engine and muffler by cleanser, then dry them up by compressed air.

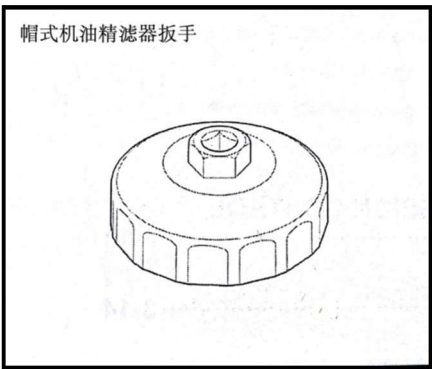
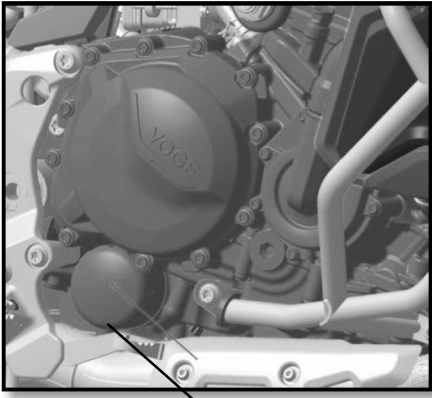
Important:

Please dispose the used oil and its filter by environment friendly way.

Check oil filter and o-ring, replace if it is necessary.

Parameters:

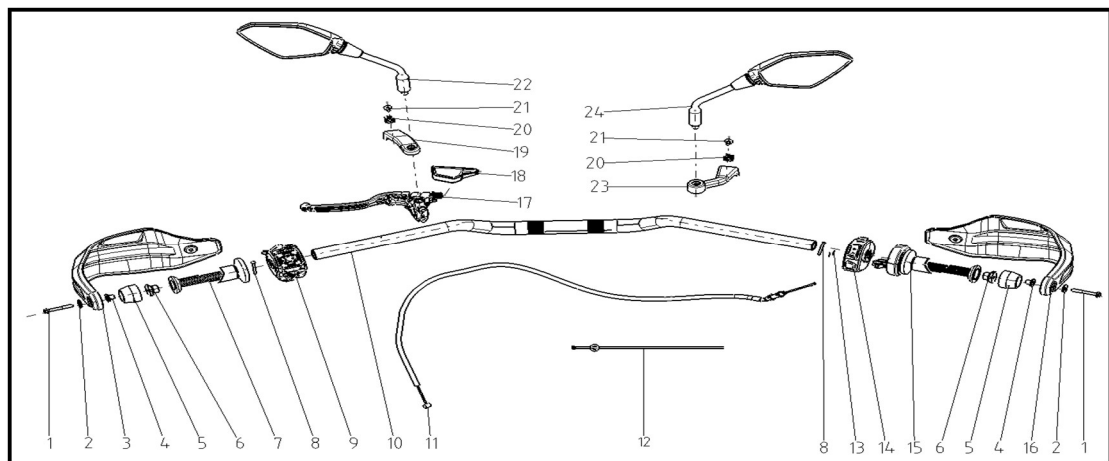
External oil drainage bolt for engine	N.m	2 5
Internal oil drainage bolt for engine	N.m	8
Oil filter	N.m	1 1



帽式机油滤清器扳手: Cap-shaped wrench for secondary oil filter.

2. Disassembly, re-assembly and maintenance for handle bar kit

Handle bar kit and its parts



1	Socket hex. spline flange bolt	PCS	2
2	Flat washer	PCS	2
3	Left grip shield	PCS	1
4	Flanging washer	PCS	2
5	Decorative weight	PCS	2
6	Balancing weight for handle bar	PCS	2
7	Grip (Under heating)	PCS	1
7	Grip (Without hearing)	PCS	1
8	Cross head pan-shaped screw	PCS	2
9	Left switch assembly	SET	1
10	Handle bar	PCS	1
11	Clutch cable	PCS	1
12	Clamping band	PCS	1
13	Cross head self-tapping screw	PCS	2
14	Right switch assembly	SET	1
15	Accelerator	PCS	1
15	Accelerator	PCS	1
16	Right grip shield	PCS	1
17	Left lever kit	SET	1
18	Clutch cable jacket	PCS	1
19	Grip shield bracket	PCS	1
20	Clipping nut	PCS	2
21	Socket spline head bolt	PCS	2

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22	Left back-view mirror	PCS	1
22	Left back-view mirror (With lane shift reminder)	PCS	1
23	Grip shield bracket	PCS	1
24	Right back-view mirror	PCS	1
24	Right back-view mirror (With lane shift reminder)	PCS	1

Disassembly and re-assembly for handle bar kit

Keep motorcycle upright by parking rack.

Cut off all connectors on handle bar kit for electrical parts

Remove left and right back-view mirror 1.

Loosen bolt 2 for grip shield, remove left and right grip shield 5, flat washer 3, collar 6 and decorative weight 4 for handle bar.

Remove balancing weight 7.

Remove left lever kit 8.

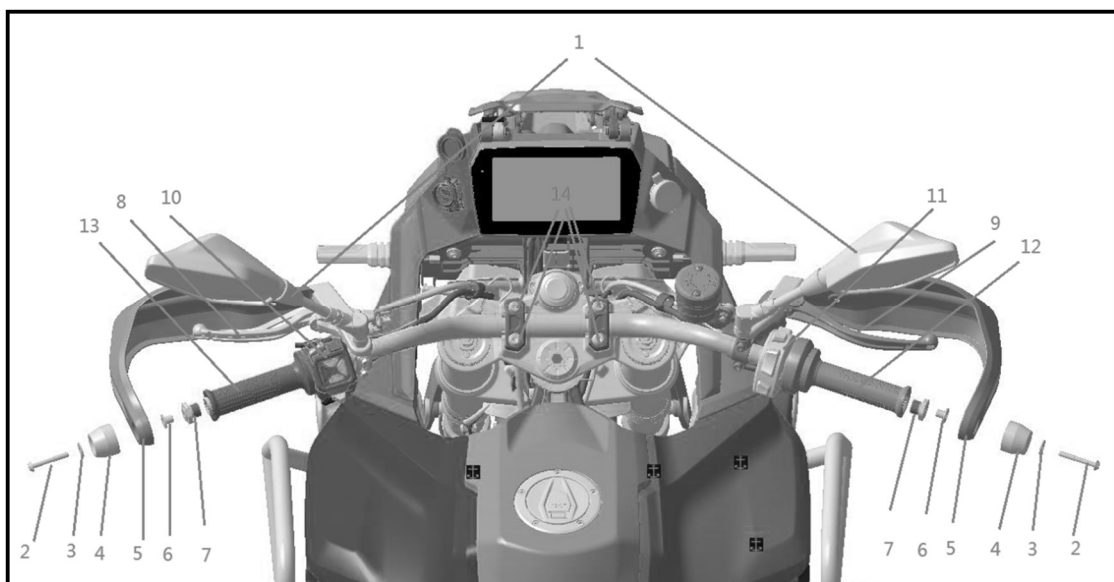
Remove upper pump 9 for front brake.

Remove left switch assembly 10 and right switch assembly 11.

Remove accelerator 12.

Remove grip rubber 13.

Remove steering clip 14 and remove handle bar.



The re-assembly is precisely opposite to disassembly.

Caution:

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When re-assembling left and right switch assembly, please align the positioning pin on handle bar to its corresponding hole on handle bar, then fasten the bolt on switch assembly.

Important:

The re-assembly finished, please confirm the turning free play for clutch lever and accelerator.

When handle bar was re-assembled, please confirm if its angle is correct, turn the handle bar to the left and right limit to check if there is interference among handle bar, cable, fuel tank and surroundings, please adjust if it is necessary, otherwise there will be risk for safety.

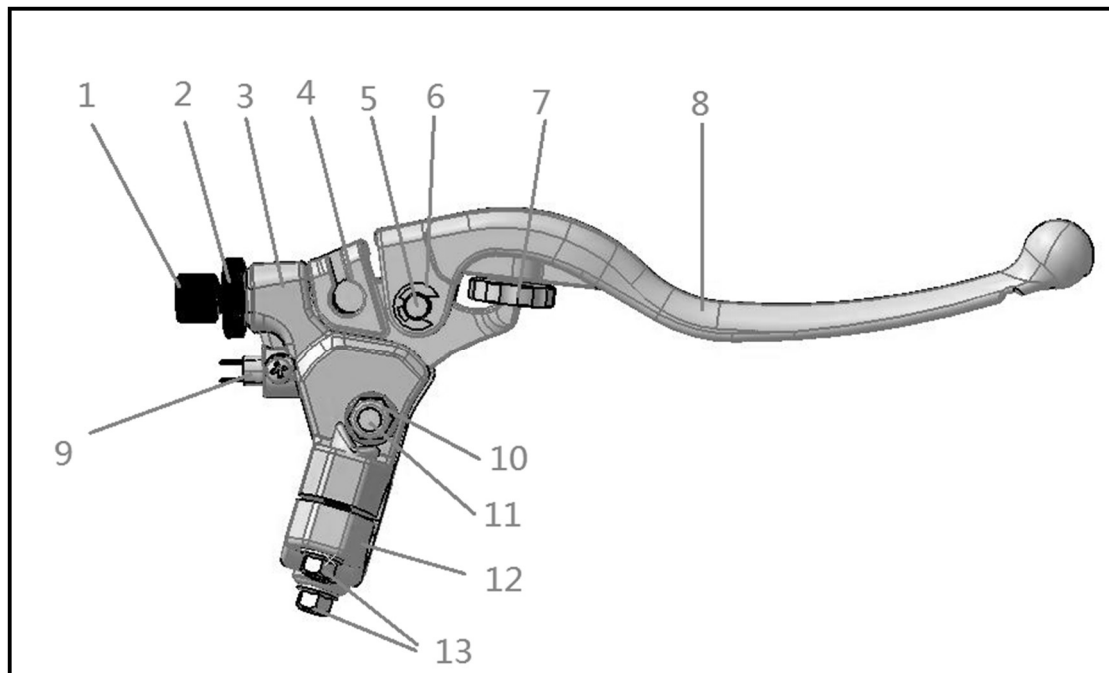
When back-view mirror was re-assembled, adjust the angle of the mirror once again and confirm its viewing range is correct or safe.

Make sure the free play of ball joint on clutch lever is within 10-15mm, otherwise the clutch may not totally separate which leads to engine damage.

Parameters:

Fastening torque for steering clip	Nm	M8	18
Fastening torque for left lever kit	Nm	M6	9
Fastening torque for decorative weight of handle bar	Nm	M6	9
Fastening torque for balancing weight of handle bar	Nm	M16	25
Fastening torque for back-view mirror	Nm	M10	25
Fastening torque for right switch assembly and accelerator	Nm	ST2.5	0.3
Fastening torque for accelerator and grip rubber	Nm	M4	1
Fastening torque for left switch assembly	Nm	M4	1

Disassembly and re-assembly for left lever kit



1	Lever adjusting screw	PCS	1
2	Lever adjusting nut	PCS	1
3	Left lever base	PCS	1
4	Adjusting base for left lever	PCS	1
5	Pin shaft	PCS	1
6	Circlip with opening	PCS	1
7	Lever adjusting nut	PCS	1
8	Left lever rod	PCS	1
9	Clutch switch	PCS	1
10	Hex. locking nut of inserted non-metallic piece	PCS	1
11	Connective bolt	PCS	1
12	Left lever clip	PCS	1
13	Socket hex. cheese head bolt	PCS	2

Remove circlip 6 by tools.

Pull out pin shaft 5.

Remove left lever rod 8.

Important:

Coat every turning set of left lever with lithium lubricant when re-assembling.

When re-assembled clutch switch, repeatedly confirm if it was assembled in place, while

confirming on and off for clutch switch on motorcycle.

Disassembly and re-assembly for clutch cable

Remove left side cover 1.
Remove clamping band 2 for fixing from frame.
Loosen clamping band 3 for fixing wires.
Remove cable end 4 on engine.
Remove cable end 5 on left lever.
Finally pull out the cable.
Replace clutch cable for a new one with same specification.

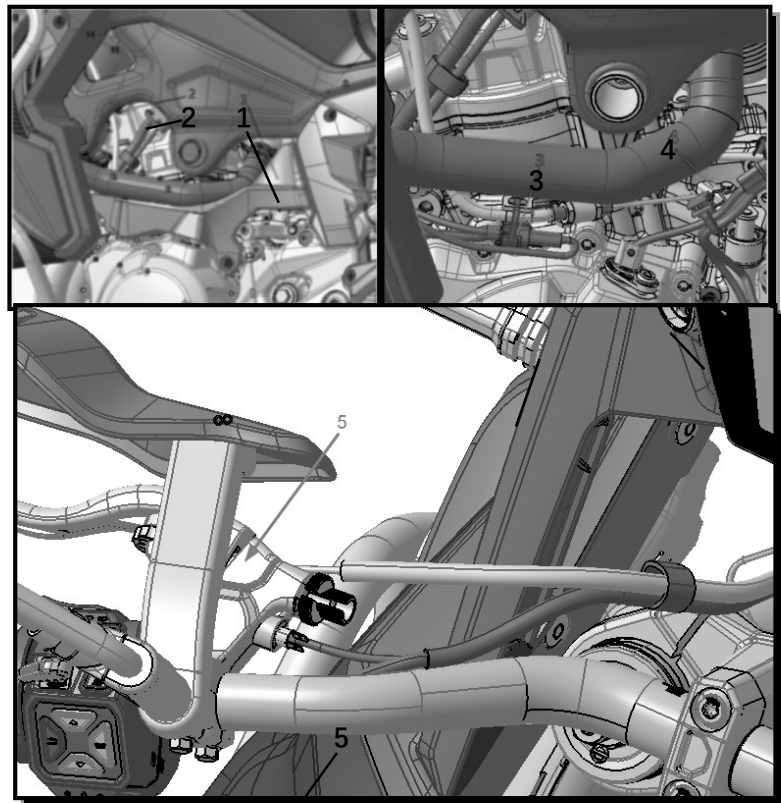
The re-assembly is precisely opposite to disassembly.

Caution:

Coat turning joint of lever end with lithium lubricant, otherwise the working life of cable may get shorter.

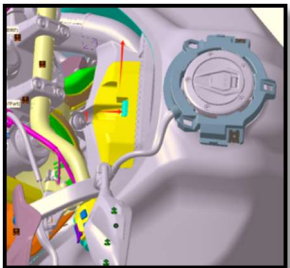
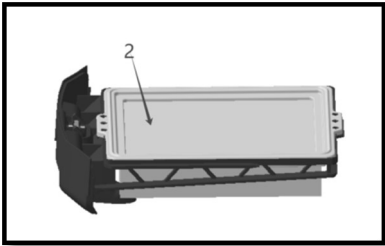
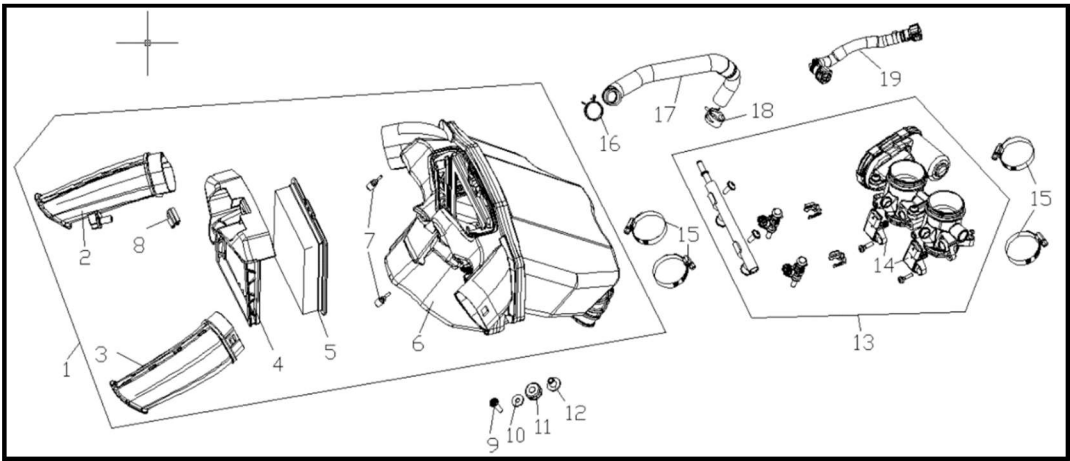
When re-assembling clutch cable, please pay attention to its wiring, which shall be the same to that before disassembling, otherwise there will be problem for its returning.

When re-assembled, hold and release the clutch lever to confirm its correct assembly, which shall not be with jamming or returning failure.



3. Disassembly, re-assembly and maintenance for air filter kit

Air filter kit and its parts



1	Air filter	PCS	1
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2	Air intake tube of air filter	PCS	1
3	Air intake tube for air filter	PCS	1
4	Frame of filter element	PCS	1
5	Air filter element kit	PCS	1
6	Air filter case kit	PCS	1
7	Damping rubber jacket	PCS	2
8	Installation piece for filter element	PCS	1
9	Socket spline head bolt	PCS	1
10	Flat washer	PCS	1
11	I-ring	PCS	1
12	Flanging washer	PCS	1
13	Throttle valve kit	PCS	1
14	Pressure sensor for air intake temperature	PCS	2
15	Clamp kit	PCS	4
16	Tube clamp	PCS	1
17	Breathing tube	PCS	1
18	Tube clamp	PCS	1
19	Fuel tube kit	PCS	1

Disassembly and re-assembly for element of air filter

Keep motorcycle upright by parking rack.

Remove decorative piece, left and right decorative cover kit of fuel tank by referring steps for disassembling and re-assembling fuel tank kit.

Powerfully press installation piece 1 for element in place by finger along the direction of arrow points at, meanwhile pulling frame kit of element of air filter upwards.

Remove element of air filter and replace it for a new one.

The re-assembly is precisely opposite to disassembly.

Important:

Please repeatedly confirm if the re-assembled filter element is installed in place, otherwise it may lead to poor sealing for element, get dust into engine and let engine life shorter.

In case there is damage on filter element, please replace.

In case there is greasy dirt on filter element, please replace.

In case filter element is wet, please replace.

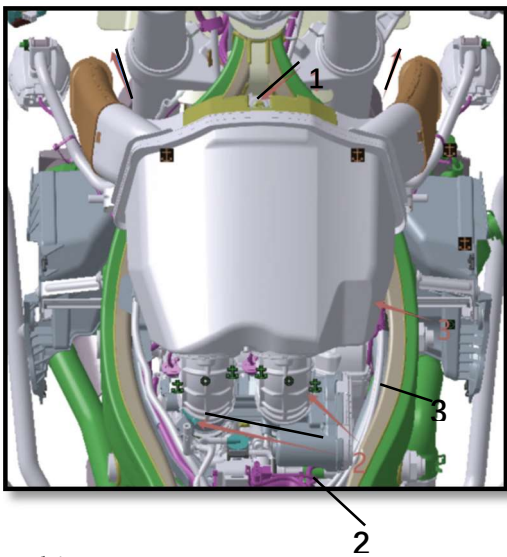
Dispose the replaced filter element in environment friendly way.

Parameters:

Installation bolt for appearance parts	M6	N . m	4.5
	M5	N . m	3

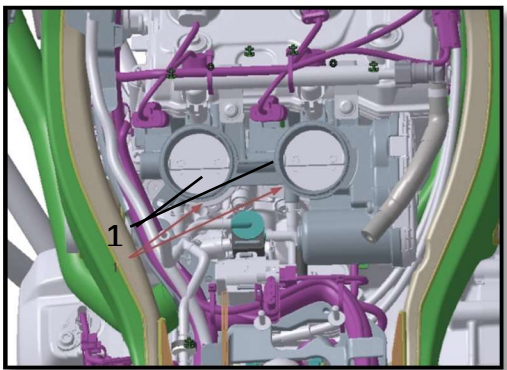
Disassembly and re-assembly for air filter kit

Keep motorcycle upright by parking rack.
Remove fuel tank and its related covering parts by referring their disassembly.
Pull out air intake tube of air filter diagonally below.
Remove bolt 1 connecting frame and air filter.
Loosen clamp 2 connecting throttle valve kit and connective tube of air filter.
Slowly lift up air filter, remove clamp 3 for waste gas tube of crankcase, then cut off connection between the waste gas tube to air filter, finally remove the air filter kit.
The re-assembly is precisely opposite to disassembly.



Disassembly and re-assembly for throttle valve body

Remove connectors on throttle valve body, then pull off fuel and breathing tube kit.
Remove clamp 1 for throttle valve kit by tool.
Powerfully pull out throttle valve kit.
The re-assembly is precisely opposite to disassembly.
Important:
When throttle valve kit assembled, please repeatedly confirm the sealing pieces to air filter case are installed in place, otherwise the poor sealing may let dust get into engine and make engine damage.
Wash up by cleanser for the air intake tube and throttle valve kit only and dry them up before re-assembling to ensure engine performance.



Parameters:

Fastening torque for installation bolt between air filter and frame	M6	Nm	9
Installation torque for clamp between throttle valve kit and connective tube of air filter	M4	Nm	2
Installation torque for clamp of throttle valve kit	M4	Nm	2

Disassembly and re-assembly for oil rail

Remove bolt 1 for connecting throttle valve kit and oil rail by tool.

Powerfully pull the oil rail kit and finally remove it.

The re-assembly is precisely opposite to disassembly.

Important:

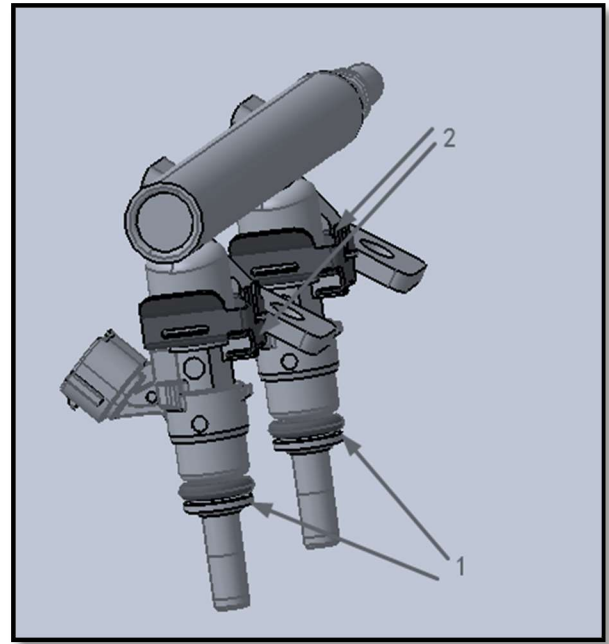
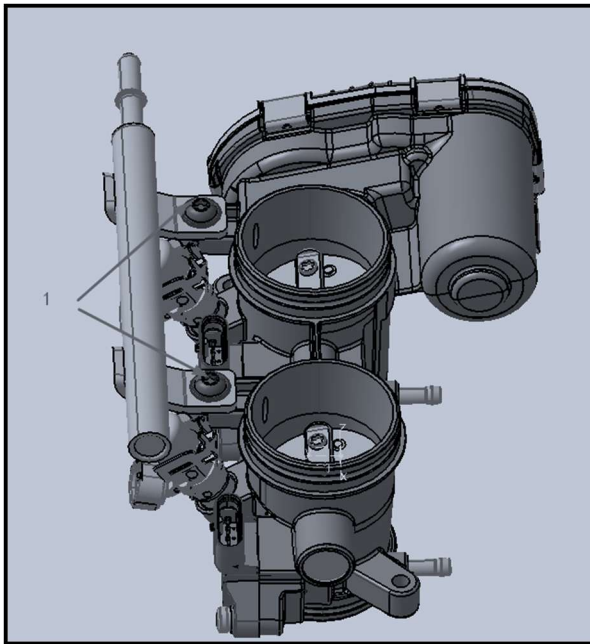
Check if there is damage, distortion or wrong assembly for o- ring 1 on fuel injector when re-assembling the oil rail, please make correction or replacement in case it is necessary, otherwise it may lead to poor sealing even abnormal combustion.

Make sure the locating clip 2 between fuel injector and oil rail is in same condition with that before disassembly when re-assembling fuel injector and oil rail.

Wash fuel injector up by cleanser for it only before re-assembling and dry it up to ensure engine performance.

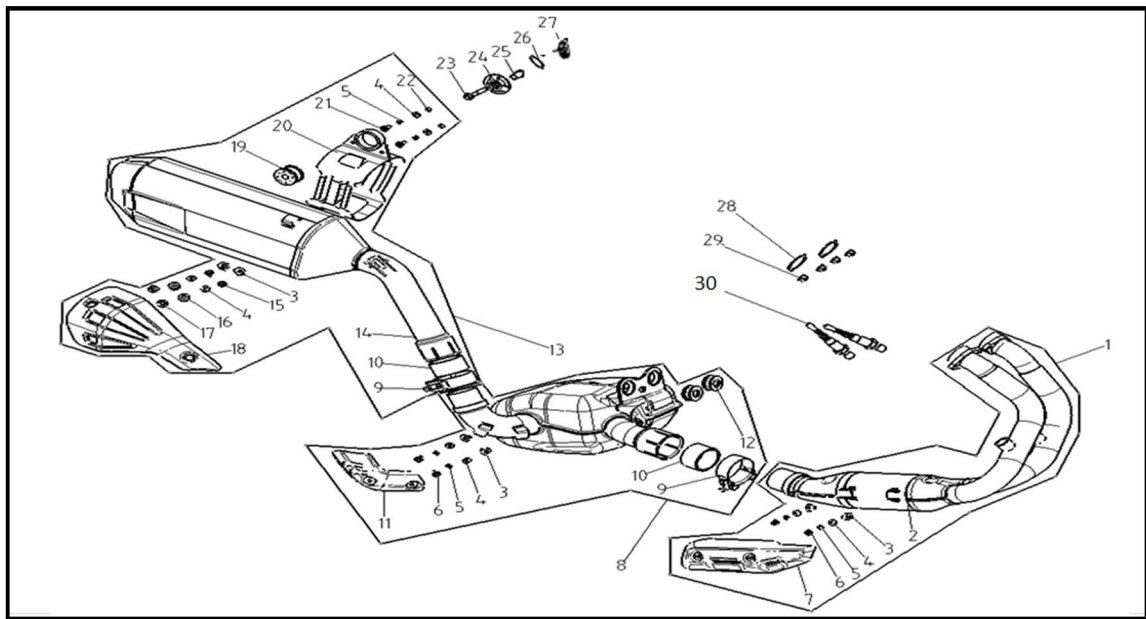
Parameters:

Fastening torque for bolt between oil rail and throttle valve kit	M6	Nm	6
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4. Disassembly, re-assembly and maintenance for air exhaust kit

Air exhaust kit and its parts



1	Front part of muffler and air exhaust pipe	PCS	1
2	Welding kit for air exhaust pie	PCS	1
3	Clipping nut	PCS	3
4	Flat washer	PCS	5
5	Elastic washer	PCS	4
6	Socket hex. spline flange bolt	PCS	2
7	Hot proof shield	PCS	1
8	Middle part of muffler and air exhaust pipe	PCS	1
9	Connective jacket	PCS	2
10	Graphite ring	PCS	2
11	Hot proof shield	PCS	1
12	I-ring	PCS	2
13	Rear part of muffler	PCS	1
14	Muffler body	PCS	1
15	Socket hex. spline flange bolt	PCS	2
16	I-ring	PCS	2
17	Flanging washer	PCS	2
18	Muffler shield	PCS	1
19	I-ring	PCS	1
20	Hanging plate for muffler	PCS	1
21	Socket spline head bolt	PCS	2
22	Hex. nut	PCS	2

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23	Socket hex. spline flange bolt	PCS	1
24	Reinforcing washer for hanging plate	PCS	1
25	Flanging washer	PCS	1
26	Flat washer	PCS	1
27	Metallic hex. flange nut	PCS	1
28	Gasket for air exhaust port	PCS	2
29	Hex. flange nut	PCS	4
30	Oxygen sensor	PCS	2

Disassembly and re-assembly for muffler

Keep motorcycle upright by parking stand.

Remove bolt 1 and bolt 2 of connective jacket for muffler, then remove rear part 3 of muffler.

Remove bolt 4 of connective jacket for middle part of muffler by tool, then remove the middle part 5 of muffler.

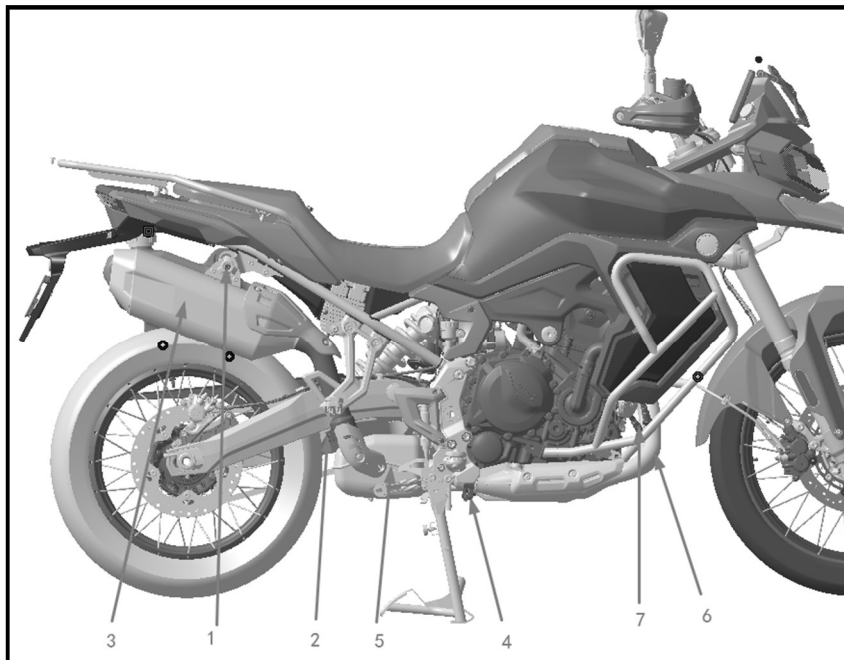
Remove the joint between oxygen sensor and wire harness.

Remove nut on air exhaust port by tool, then remove front part 6 of muffler.

Remove gasket for air exhaust port for muffler.

Remove oxygen sensor 7 by tool.

The re-assembly is precisely opposite to disassembly.



Caution:

Please don't remove graphite ring for sealing at connecting place between front and rear part of muffler under normal conditions, otherwise it may damage.

Important:

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Check if there is damage on graphite ring before re-assembling, the damage may get graphite ring in poor sealing, which needs be replaced.

Before re-assembling the front part of muffler, please replace the gasket of air exhaust port for a new one, otherwise the used gasket is with poor sealing and makes air leakage.

Remove muffler when the muffler is cooled down to avoid scald.

There is steel wire in graphite ring, please avoid injury to hands when replacing.

When re-assembled, please start the engine to check if there is air leakage at sealing position.

Please dispose the replaced graphite ring in environment friendly way.

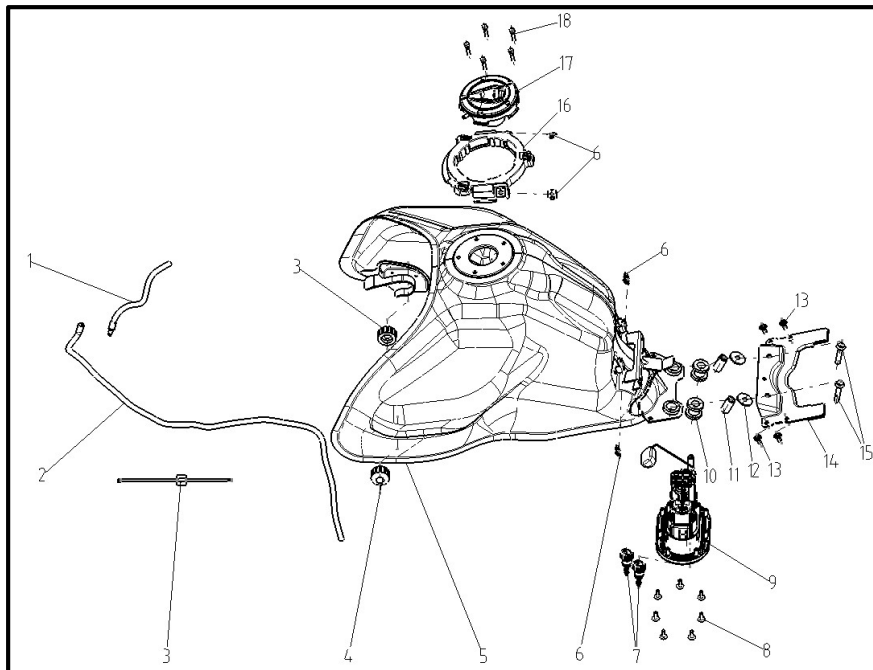
The inserting position of oxygen sensor to wire harness shall be the same to that before disassembling, otherwise the wrong connection makes malfunction for engine even motorcycle.

Parameters:

Connective bolt for rear part of muffler	M8	Nm	22
Bolt on connective sleeve for rear part of muffler	M10	Nm	30
Bolt on connective sleeve for middle part of muffler	M10	Nm	30
Nut on air exhaust port for front part of muffler	M7	Nm	15
Fastening for oxygen sensor	/	Nm	40

5. Disassembly, re-assembly and maintenance for fuel tank kit

Fuel tank kit and its parts



1	Water tube	PCS	1
2	Water tube	PCS	1
3	Clamping band	PCS	1
4	Support rubber jacket for fuel tank	PCS	2
5	Fuel tank welding kit	PCS	1
6	Clipping nut	PCS	4
7	Fast change joint	PCS	2
8	Socket spline head bolt	PCS	7
9	Electric fuel pump	PCS	1
10	T-ring	PCS	4
11	Collar	PCS	2
12	Flat washer	PCS	2
13	Socket spline head bolt	PCS	4
14	Rear holder of fuel tank	PCS	1
15	Socket hex. spline flange bolt	PCS	2
16	Bracket for protective plate of fuel tank	PCS	1
17	Fuel tank lock	PCS	1
18	Socket hex. screw	PCS	5

Removal for fuel tank kit

Keep motorcycle upright by parking stand.

Remove seat 1 by key (Remove connectors to wire harness in case the seat is with heating function).

Loosen bolt, remove left and right bumper bar 2.

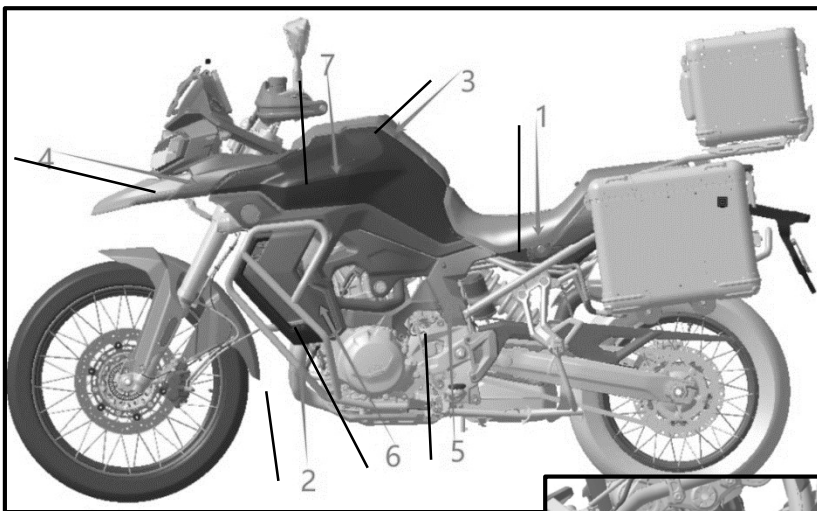
Loosen bolt 3, remove decorative cover 3 for fuel tank.

Loosen bolt, remove left and right fairing cover 4.

Loosen bolt, remove left and right side cover 5.

Remove decorative cover 6 for left and right windshield plate by hand.

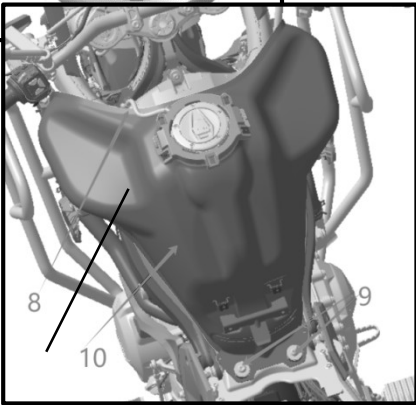
Loosen bolt, remove left and right decorative cover kit 7 for fuel tank.



Cut off water leakage tube 8.

Remove left and right installation bolt 9 on the rear part of fuel tank.

Suitably lift up fuel tank apart from ground, then remove rubber tube for fuel evaporation at bottom of fuel tank, then remove wire joint for fuel pump, fast change joint for fuel tube and finally remove the fuel tank kit 10.



The re-assembly is precisely opposite to disassembly.

Caution:

Because there are so many connectors at lower side of fuel tank, please install every part in place to avoid pipeline excessively getting bent or pressed.

Parameters:

Installation bolt for appearance part	M6	N. m	4.5
	M5	N. m	3
installation bolt for fuel tank kit	M8	N. m	22

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Installation bolt for bumper bar	M8	N. m	22
Installation bolt for bumper bar	M10	N. m	40

Removal for fuel tank lock

Remove the 5 pieces of bolt for installing fuel tank lock.

Remove fuel tank lock.

The re-assembly is completely opposite to disassembly.

Caution:

Repeatedly confirm if the sealing rubber piece between fuel tank lock and port is installed in place when re-assembling fuel tank lock, otherwise the fuel may leak.

Parameter:

Fastening bolt for fuel tank lock	M5	N. m	6
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Removal for fuel pump

Drain off residual fuel in fuel tank first.

Get the removed fuel tank upside down.

Remove the 7 pieces of bolt for installing fuel pump.

Remove fuel pump.

The re-assembly is completely opposite to disassembly.

Caution:

Confirm if the fuel filtering screen is clean when removing the fuel pump, please wash if it is necessary, the washing shall be done in clean fuel and repeatedly wash it.

Important:

Please replace gasket for fuel pump for a new one when re-assembling fuel pump, otherwise it may leak.

When fuel pump re-assembled, please check its sealing performance, which needs pressure measuring device for it only.

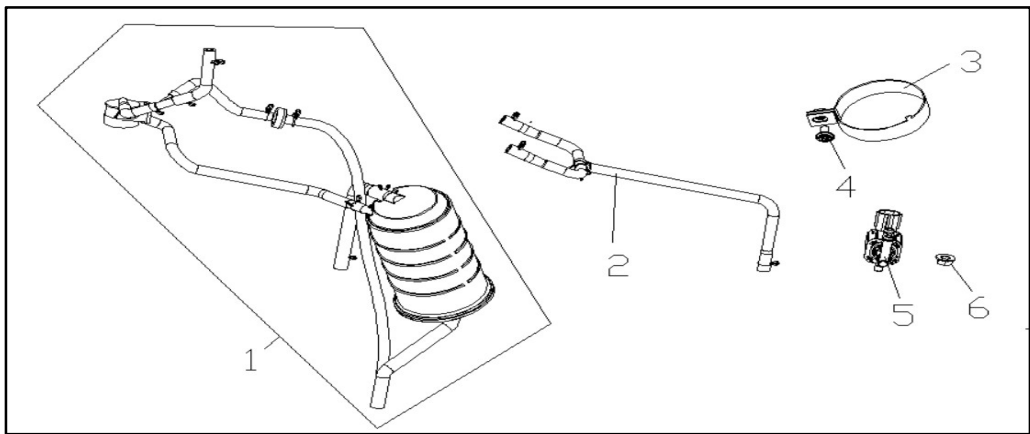
Dispose the replaced gasket for fuel pump in environment friendly way.

Parameters:

Installation torque for bolt of fuel pump	M5	N. m	6
Static pressure for fuel tank	/	kp	130

6. Disassembly, re-assembly and maintenance for fuel evaporation controller kit

Fuel evaporation controller kit and its parts



1	Fuel evaporation controller kit	SET	1
2	Breathing tube kit	SET	1
3	Clamp kit	PCS	1
4	Socket spline head bolt	PCS	1
5	Solenoid valve for carbon canister	PCS	1
6	Hex. flange nut	PCS	1

Disassembly for fuel evaporation controller kit

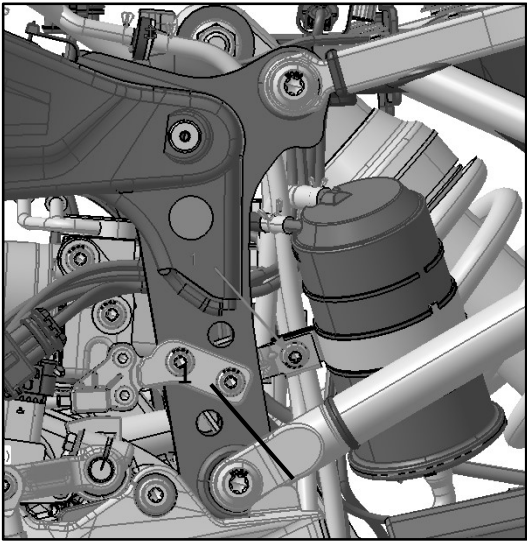
Remove fuel tank kit by referring its corresponding content.

Remove bolt 1, then the fuel evaporation controller kit.

The re-assembly is completely opposite to disassembly.

Caution:

Because the layout space for fuel evaporation controller kit is narrow while pipeline is many, so please take wiring and layout for pipeline into record before disassembling for a correct re-assembly.



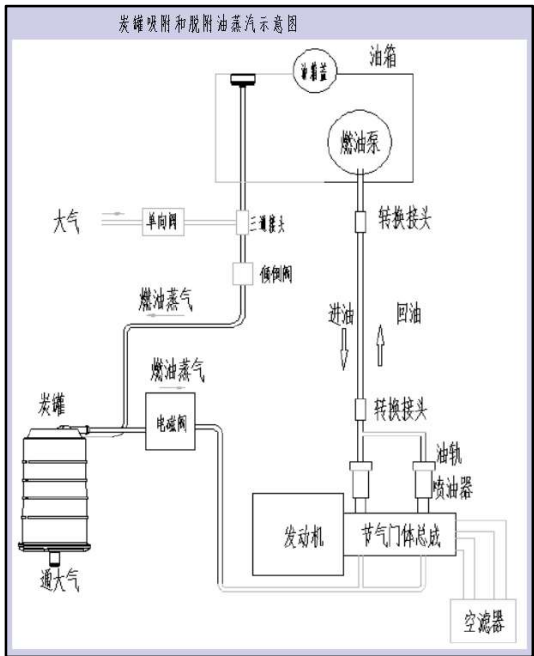
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Important:

Please pay attention to the layout of dumping valve when re-assembling fuel evaporation controller kit, make sure this part is horizontal to ground when re-assembled, otherwise the dumping function doesn' t work.

Fastening torque for bolt of appearance parts	M6	Nm	4.5
	M5	Nm	3
Fastening torque for bracket of carbon canister	M6	Nm	6

Figure of connection for fuel evaporation controller



炭罐吸附和脱附油蒸汽示意图: Showing figure for absorption or desorption for fuel vapor of carbon canister
大气: Air 炭罐: Carbon canister 通大气: Connect to air
单向阀: One-way valve 燃油蒸汽: Fuel vapor 电磁阀: Solenoid valve 三通接头: Three-way joint
倾倒阀: Dumping valve 发动机: Engine 油箱: Fuel tank 油箱盖: Fuel tank cap
燃油泵: Fuel pump 转换接头: Changing joint 进油: Fuel intake 回油: Fuel return 油轨: Oil rail
喷油器: Fuel injector 节气门体总成: Throttle valve body kit 空滤器: Air filter

Working principle for fuel evaporation controller system:

- (1) When gasoline in fuel tank got heat, the fuel vapor runs out, reach end TANK of carbon canister through dumping valve, then absorbed by it.
- (2) When the inclining for motorcycle is over 60° , the dumping valve closed, the

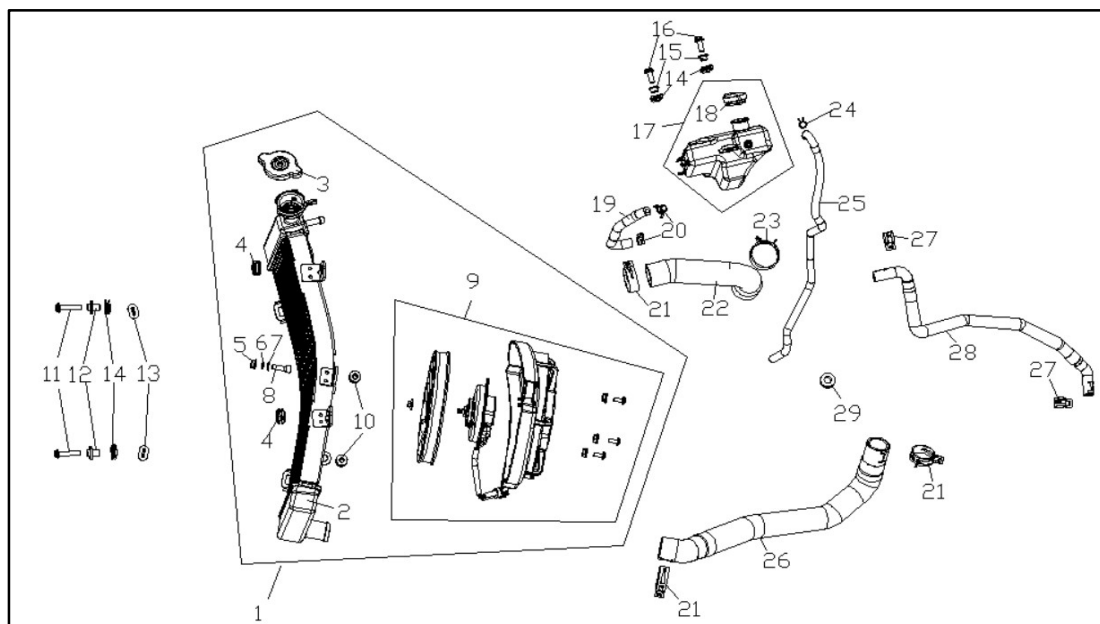
gasoline is unable flow to carbon canister through dumping valve.

(3) The fresh air get to end PURGE through end connects to air of carbon canister then brings fuel vapor to throttle valve, finally gets into engine and joins combustion.

(4) When fuel level in fuel tank fell down (The internal of fuel tank produced negative pressure), make up for air to fuel tank through one-way valve to keep normal air pressure on fuel level.

7. Disassembly, re-assembly and maintenance for heat radiation system

Heat radiation system and its parts



Ref. No.	Parts name	Unit	Qty.	Ref. No.	Parts name	Unit	Qty.
1	Heat radiator kit	PCS	1	16	Socket hex. spline flange bolt	PCS	2
2	Heat radiator body	PCS	1	17	Water supplement pot	PCS	1
3	Tank cover	PCS	1	18	Water filling-up cap	PCS	1
4	I-ring	PCS	2	19	Water tube	PCS	1
5	Hex. flange bolt	PCS	1	20	Tube clamp	PCS	2
6	Flat washer	PCS	1	21	Tube clamp	PCS	3

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7	Elastic washer	PCS	1	22	Water tube	PCS	1
8	Socket hex. screw	PCS	1	23	Tube clamp	PCS	1
9	Electric fan kit	PCS	1	24	Tube clamp	PCS	1
10	I-ring	PCS	2	25	Water tube	PCS	1
11	Socket hex. spline flange bolt	PCS	2	26	Water tube	PCS	1
12	Flanging washer	PCS	2	27	Tube clamp	PCS	2
13	I-ring	PCS	2	28	Water tube	PCS	1
14	Clipping nut	PCS	4	29	I-ring	PCS	2
15	Flanging washer	PCS	2				

Inspection for coolant

Keep motorcycle upright by parking rack.

Check water supplement pot 1 on the right front of engine, the coolant level shall be within upper and lower scale line, in case it is below the lower scale line, please make up for coolant, but shall not be over the upper scale line.

Replacement for coolant

Keep the motorcycle upright by parking rack.

Remove air intake tube 2 on the right of air filter.

Remove water filling-up cap 3 on the right side of heat radiator.

Remove bumper bar 4 on the right side.

Remove decorative cover 5 for muffler.

Remove decorative cover 6 for right windshield plate.

Lay the liquid collection tray under coolant drainage bolt on the

Remove coolant drainage bolt 7 by tool, drain off coolant in water until it finished.

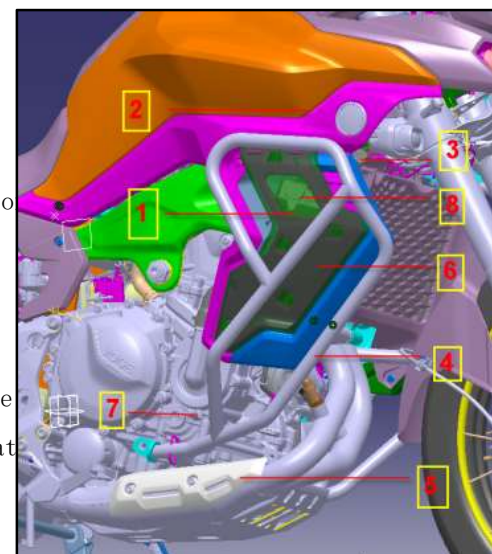
Important:

Collect drained coolant by suitable container and dispose it in environment friendly way.

Replace gasket of coolant drainage bolt for a new one when re-assembling.

Clean up installation surface for gasket of coolant drainage bolt to avoid impurity on it. When coolant drainage bolt assembled, wipe up residual coolant on parts such as muffler or engine.

When replaced, please start engine and suitably run it in high speed to check if the coolant pipeline leaks.



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Parameters:

Coolant drainage bolt	M5	N. m	4.5
Coolant capacity		L	2
Coolant specification	Coolant with ethanol without silicate		G40

Filling-up for coolant

Fill up with coolant from filling port of heat radiator by tools such as funnel until it got full to the filling port.

Start engine to get it idly run, check filling port of heat radiator, at this moment the coolant level on port may fall, then continue filling up until the coolant level without falling.

Assemble filling-up cap.

Fill up with coolant into filling port of water supplement pot by tools such as funnel, confirm if the coolant level is within upper and lower scale line.

Re-assemble rubber cap 8 of water supplement pot.

The coolant filling-up achieved.

Re-assemble air intake tube of air filter, decorative cover of right windshield plate, bumper bar and decorative cover for muffler.

Important:

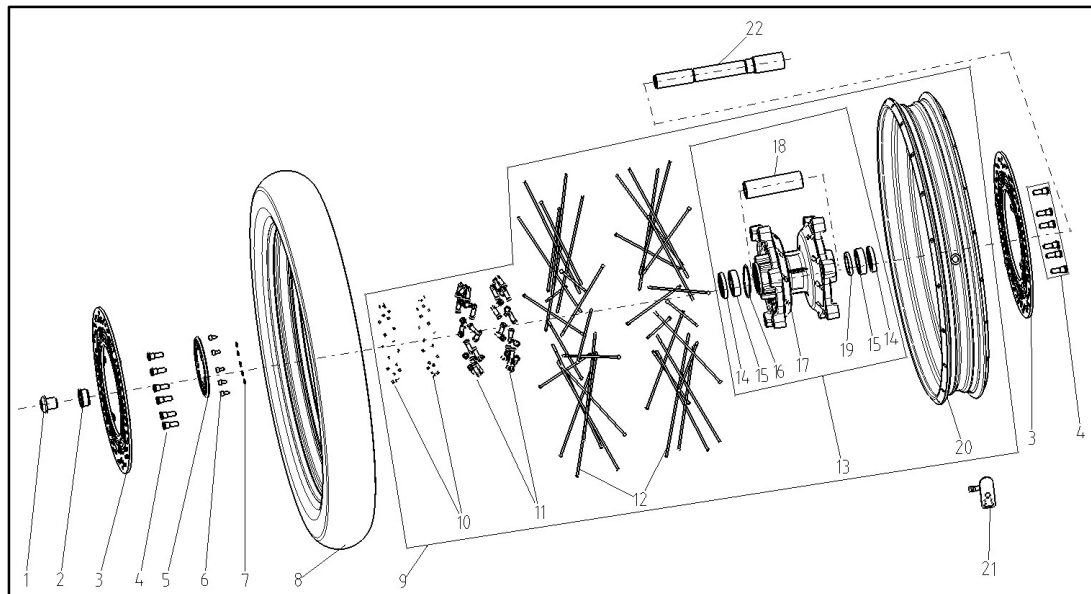
When replacement finished, start engine and suitably run it in high speed to check if the coolant pipeline leaks.

Caution:

When the work above finished, please wash up the greasy dirt on engine surface by cleanser, then dry it up by compressed air.

8. Disassembly, re-assembly and maintenance for front wheel

Front wheel and its parts



1	Socket hex. screw	PCS	1
2	Collar	PCS	1
3	Front disc brake plate	PCS	2
4	Fastening bolt for disc brake plate	PCS	12
5	Speed sensor shim	PCS	1
6	Socket spline head bolt	PCS	5
7	Flat washer	PCS	5
8	Tire	PCS	1
9	Front wheel	PCS	1
10	Bolt of plug	PCS	40
11	Spoke nut for front wheel	PCS	40
12	Inner spoke of front wheel	PCS	40
13	Front wheel hub	SET	1
14	Oil seal	PCS	2
15	Bearing	PCS	2
16	Seal ring	PCS	1
17	Front wheel hub body	PCS	1
18	Collar	PCS	1
19	Rubber jacket	PCS	1

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20	Front wheel rim	PCS	1
21	Tire pressure sensor	PCS	1
22	Axle	PCS	1

Removal for front wheel

Keep motorcycle upright by parking stand.

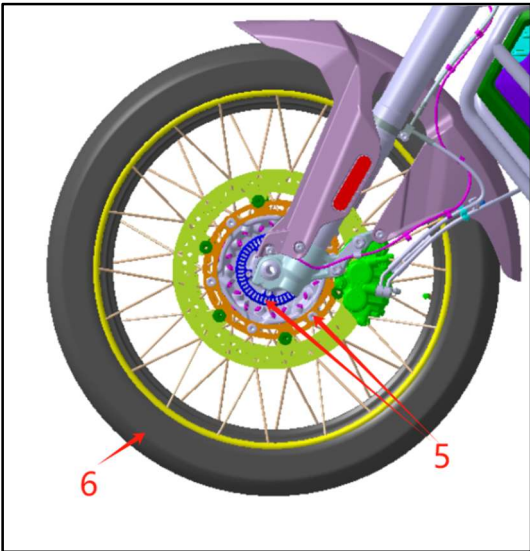
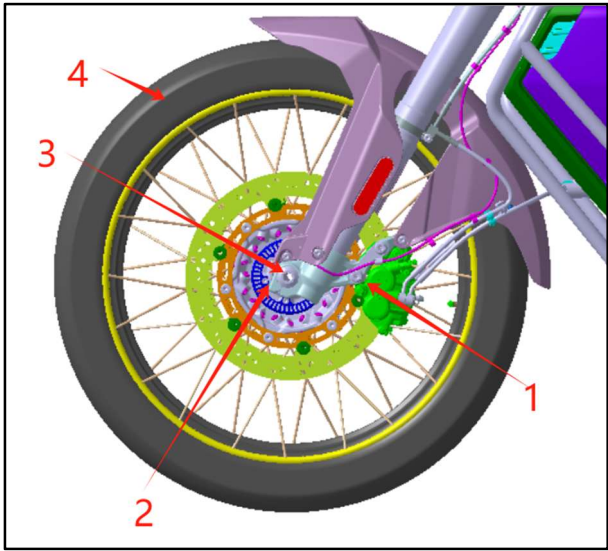
Remove caliper 1 of front disc brake by tool.

Loosen fastening bolt 2 on left and right bottom case of front shock absorber.

Remove front wheel axle and bolt 3.

Remove front wheel kit 4.

The re-assembly is completely opposite to disassembly.



Caution:

When caliper of front disc brake was removed, please don't operate the front lever to avoid piston moving of the front caliper which makes re-assembly difficult.

Important:

There shouldn't be any dirt on working surface between brake pad and disc brake plate.

Repeatedly hold and release front brake lever to confirm its normal work when replaced.

Confirm dynamic balance for front wheel when tire re-assembled.

Coat collar and oil seal with lithium lubricant when re-assembling front wheel.

Parameters

Front wheel	/	Aluminum rim of spoke wheel	2.15×21
Front tire	/	Radial ply tire of tubeless	90/90-21
Run-out for end surface of	/	mm	1

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front wheel shall not bigger than			
Radial run-out of front wheel shall not be bigger than	/	mm	1
Fastening bolt for upper axle of front wheel	M8	Nm	22
Fastening torque for front wheel axle	M20	Nm	70
Fastening torque for caliper of front disc brake	M10	Nm	40
Fastening torque for disc brake plate	M8	Nm	35
Loctite	Loctite 262	ml	10
Lubricant	/	g	10
Allowed maximum imbalance of front wheel	/	g	5
Air pressure in tire		Kp	2.2

Removal for disc brake plate

When front wheel removed, put it on working bench.

Remove fastening bolt of disc brake plate, then remove front disc brake plate and gear ring 5.

The re-assembly is completely opposite to disassembly.

Caution:

There is Loctite on thread of screw for front brake plate, please adopt suitable tools for disassembly, otherwise it would be a difficult work.

Important:

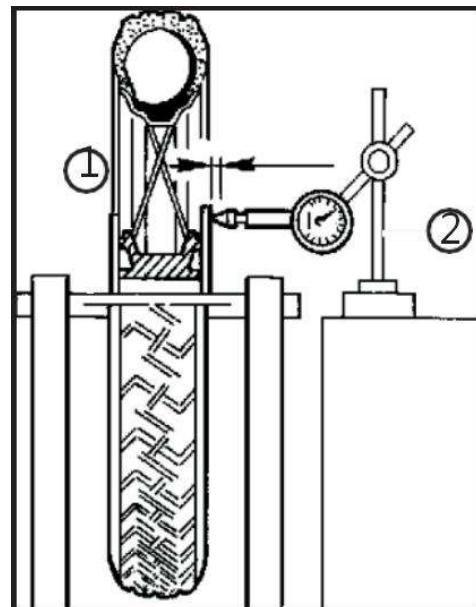
There shouldn't be any dirt on working surface between brake pad and plate when re-assembling.

When re-assembling brake plate, whose fastening bolt shall be coated with Loctite on its thread.

When brake plate re-assembled, please confirm run-out on end surface of brake plate as picture shows:

Put the front wheel on balancing rack by balancing shaft ①.

Measure run-out for end surface of brake plate by measuring device ②.



Run-out for end surface	mm	0.3
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shall not be bigger than		
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Removal for front wheel

Remove front wheel first, then put it onto working bench.

Eject air valve core of tire pressure sensor inward by tool to discharge the air in tire.

Remove front tire by tools for it only.

Remove tire pressure sensor.

The re-assembly is completely opposite to disassembly.

Caution:

The re-assembly for tire needs the equipment for it only, forcedly assemble by external power may permanently damage the tire.

Important:

When re-assembling tire, align the light point of tire to air valve core on wheel hub, this get following work easier

Removal for front wheel bearing and oil seal

Put front wheel onto working bench when it is removed.

Remove brake plate and tire.

Remove oil seal, bearing, collar and rubber jacket for front wheel by tools in turn.

Replace bearing and oil seal for a new one with same specification.

The re-assembly is completely opposite to disassembly.

Important:

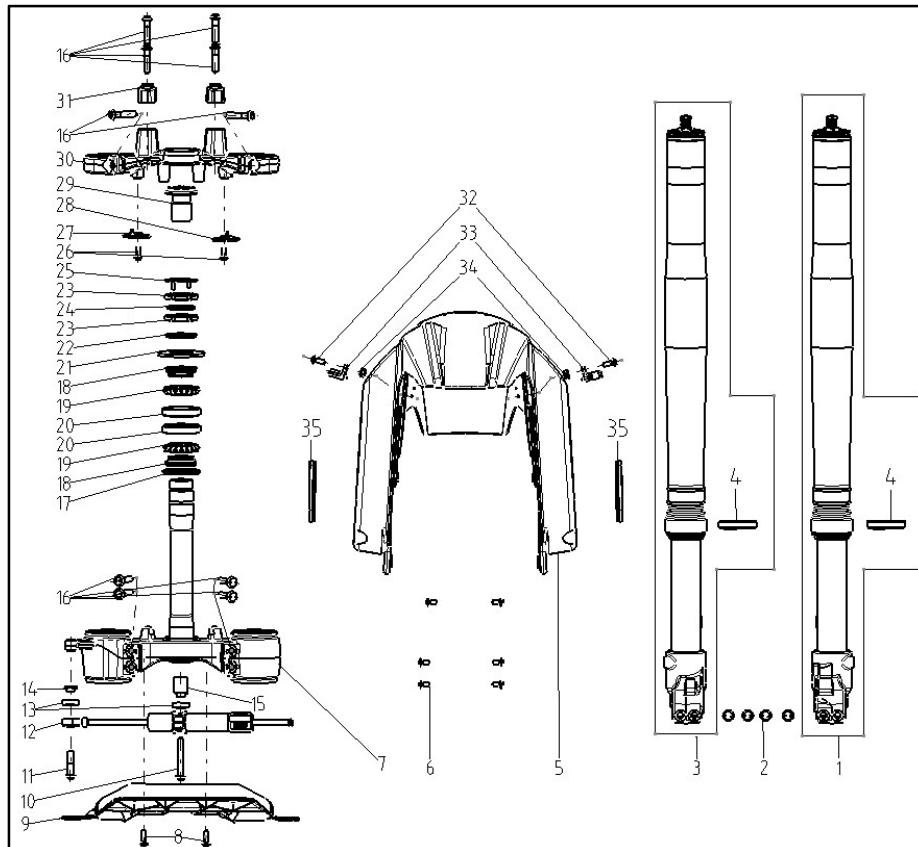
The oil seal on front wheel gets damaged when it is removed, so please replace it for a new one, otherwise its poor water-proof accelerates bearing wear-out.

The removal for front wheel bearing needs pulling tools for it only.

For easy re-assembly, heat the hole of front wheel bearing to 100℃, then press-fit the bearing.

9. Disassembly, re-assembly and maintenance for front fork

Front fork kit and its parts



1	Left front shock absorber	PCS	1
2	Socket hex. spline flange bolt	PCS	4
3	Right front shock absorber	PCS	1
4	Oil seal	PCS	2
5	Front fender	PCS	1
6	Socket spline head bolt	PCS	6
7	Steering stem body	PCS	1
8	Socket spline head bolt	PCS	2
9	Front upper fender	PCS	1
10	Socket hex. spline flange bolt	PCS	1
11	Socket hex. spline flange bolt	PCS	1
12	Turning damper	PCS	1
13	Damping cushion	PCS	2
14	Collar	PCS	1

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15	Collar	PCS	1
16	Socket hex. flange spline bolt	PCS	10
17	Turning seal	PCS	1
18	Bearing circlip	PCS	2
19	Steel ball kit	SET	2
20	Bearing base ring	PCS	2
21	Dust proof cap for steering stem	PCS	1
22	Washer for steering stem	PCS	1
23	Locking nut for steering stem	PCS	2
24	Rubber flat washer	PCS	1
25	Locking washer	PCS	1
26	Socket spline head bolt	PCS	4
27	Wire clip	PCS	1
28	Wire clip	PCS	1
29	Locking bolt for steering stem	PCS	1
30	Upper connective plate	PCS	1
31	Handle bar clip	PCS	2
32	Socket spline head bolt	PCS	2
33	Tube clamp	PCS	2
34	Hex. flange nut	PCS	2
35	Side reflector	PCS	2

Disassembly and re-assembly for steering stem

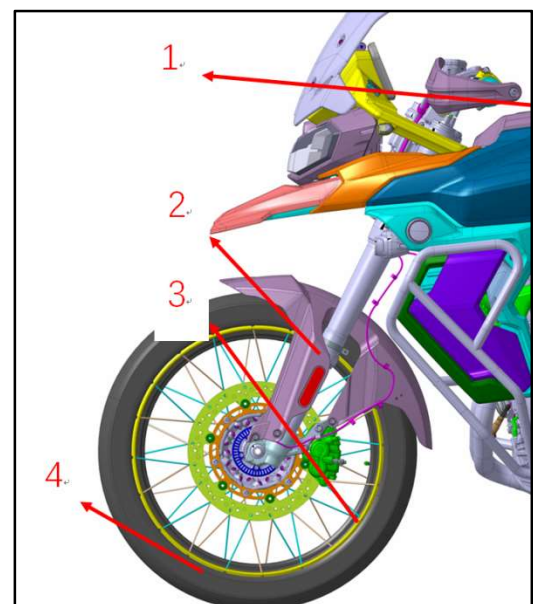
Keep motorcycle upright by parking stand.

Remove handle bar kit 1.

Remove front fender 2.

Remove lower caliper 3 for front brake.

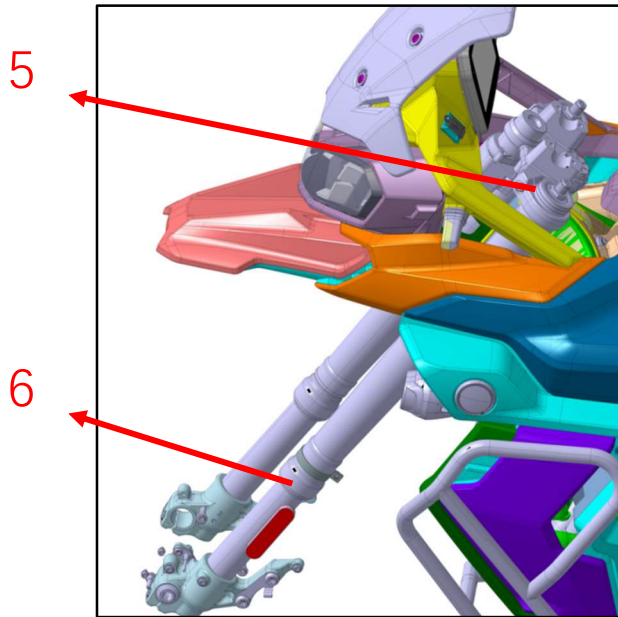
Remove front wheel kit 4.



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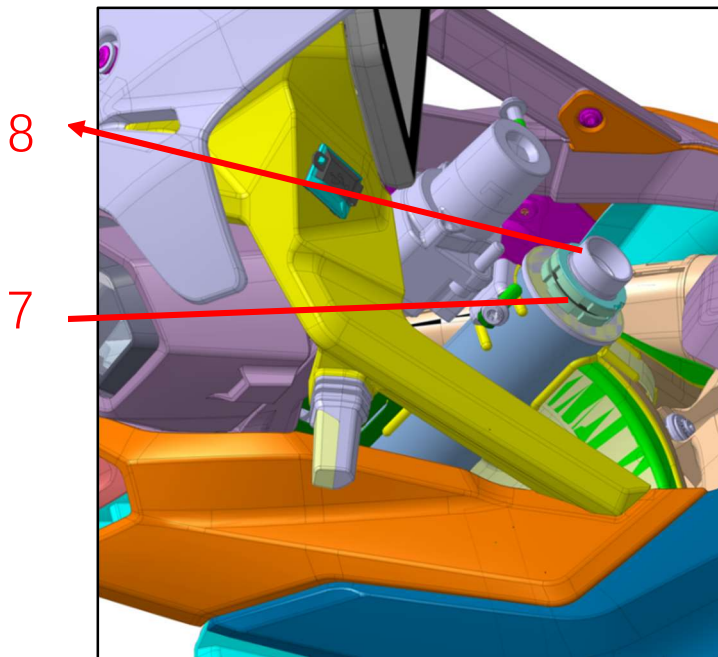
Remove upper connective plate 5.

Remove front shock absorber 6.



Remove locking nut 7.

Remove steering stem 8.



The re-assembly is completely opposite to disassembly.

Caution:

Please bind up the wire package for wire harness when re-assembling, its condition shall be the same to that before disassembling, otherwise the water-proof performance may get bad.

When re-assembling front fender, please bind up the oil tube and wires of ABS to the same with that before disassembling, otherwise there will be interference between oil

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tube and front fender which makes noise.

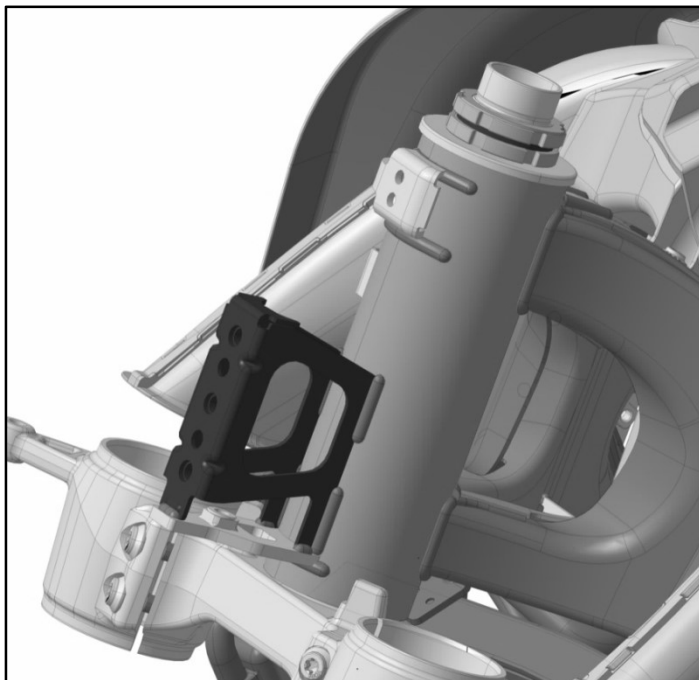
When re-assembling front shock absorber, please pre-fasten front wheel axle, then fasten locking bolt on upper connective plate and steering stem.

Important:

When re-assembling steering bearing, coat it with lithium lubricant to ensure its normal lubrication.

When re-assembling, please ensure correct clearance between detector of sensor ABS and gear ring of front wheel.

The re-assembly for 2 adjusting and locking nuts for steering stem shall strictly follow their requirements for installation, whose parameter refers to corresponding form list, otherwise their turning may be bad.

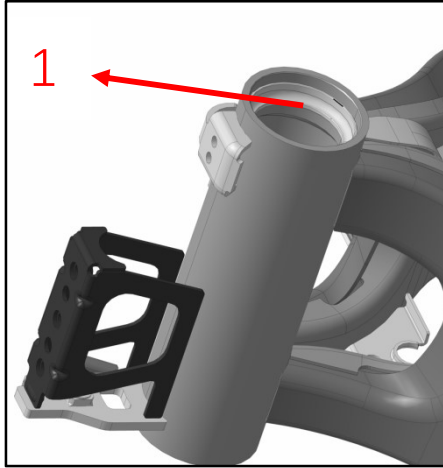


Parameters:

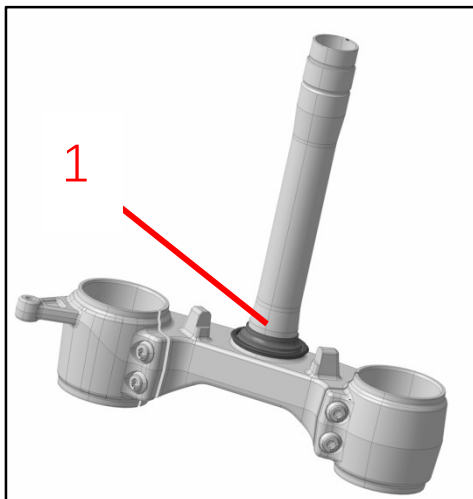
Torque for bolt of handle bar clip	M8	N. m	22
Fastening torque for bolt on upper connective plate	M22	N. m	100
Fastening torque for bolt on steering stem and upper connective plate	M8	N. m	22
Torque for locking nut (lower) of steering stem	M26	N. m	50±5 Return by 45° Rear 35 2
Torque for locking nut (upper) of steering stem			
Clearance between detector and sensitive gear ring of front wheel	/	mm	0.5-1.5

Disassembly and re-assembly for steering bearing

Remove basing ring 1 for bearing in standing tube of frame by tools for it only.



Remove bearing circlip 2 on steering stem by pulling tools (As picture shows)



Replace steering bearing for a new one with same specification.

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Remove oil seal under oil seal.

The re-assembly is completely opposite to disassembly.

Caution:

When removing the steering bearing, the irregular operation should not be adopted, please use the tools for it only, otherwise the steering stem body may permanently damage.

When re-assembling steering bearing, please pay attention to installation sequence of bearing, oil seal and flat washer.

Important:

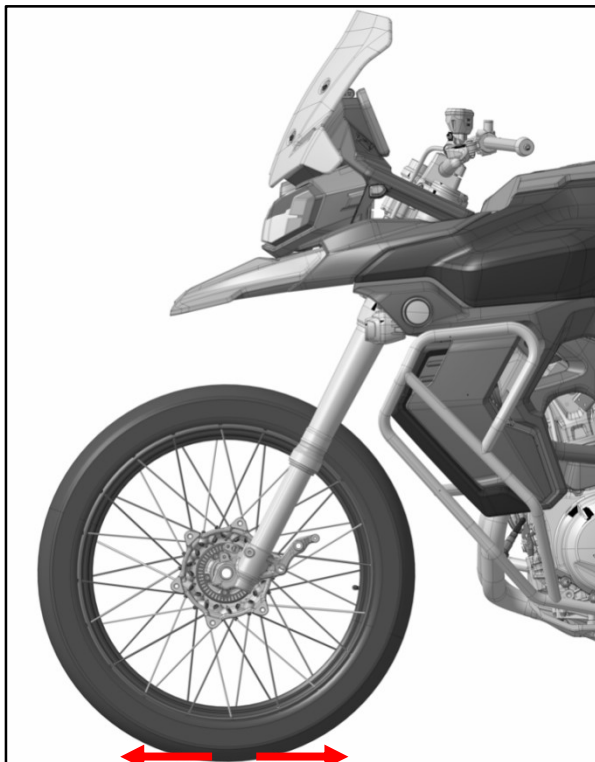
When press-fitting steering bearing, please suitably heat the bearing to 100°C, which is easier for bearing press-fitting.

Judge for clearance of steering bearing

When driving under low speed, please repeatedly and fast operate front brake lever to feel if there is flexibility of steering bearing.

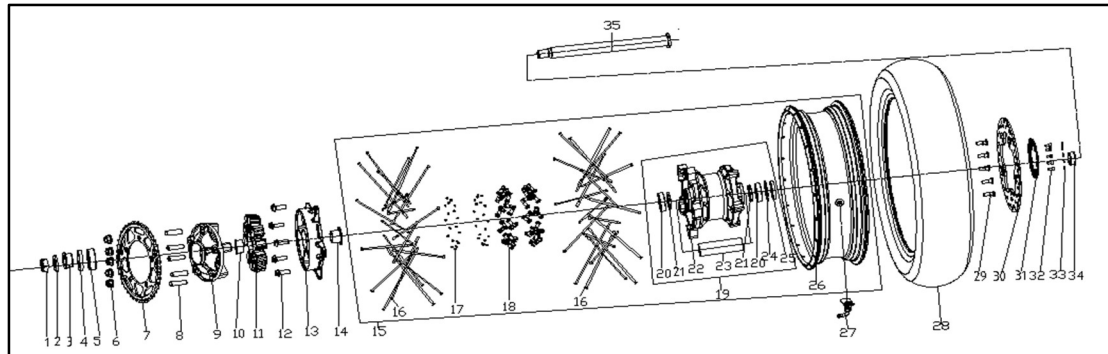
Keep motorcycle upright by parking stand.

Follow the direction in figure below, repeatedly pull the front wheel to feel if there is flexibility on steering bearing.



10. Disassembly, re-assembly and maintenance for rear wheel kit

Rear wheel kit and its parts



1	Metallic hex. locking nut	PCS	1
2	Flat washer	PCS	1
3	Collar	PCS	1
4	Oil seal	PCS	1
5	Bearing	PCS	1
6	Metallic hex. flange locking nut	PCS	5
7	Sprocket wheel	SET	1
8	Bolt for sprocket wheel	PCS	5
9	Base for sprocket wheel	PCS	1
10	Collar	PCS	1
11	Damper piece for rear wheel	PCS	1
12	Socket hex. spline flange bolt	PCS	5
13	Connective plate of rear wheel	PCS	1
14	Collar	PCS	1
15	Rear wheel	PCS	1
16	Outer spoke for rear wheel	PCS	40
17	Bolt for plug	PCS	40
18	Nut for rear wheel spoke	PCS	40
19	Rear wheel hub	PCS	1
20	Bearing	PCS	2
21	Rubber jacket	PCS	2
22	Rear wheel hub body	PCS	1
23	Collar	PCS	1
24	Elastic circlip	PCS	1
25	Oil seal	PCS	1
26	Rear wheel rim	PCS	1
27	Tire pressure sensor	PCS	1
28	Tire	PCS	1

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29	Fastening bolt for disc brake plate	PCS	5
30	Rear disc brake plate	PCS	1
31	Speed sensor shim	PCS	1
32	Socket spline head bolt	PCS	5
33	Flat washer	PCS	5
34	Collar	PCS	1
35	Axle	PCS	1

Removal for rear wheel

Keep motorcycle upright by parking stand.

Loosen nut 1 for chain adjustor.

Remove rear wheel axle and nut 2.

Get chain dropping off.

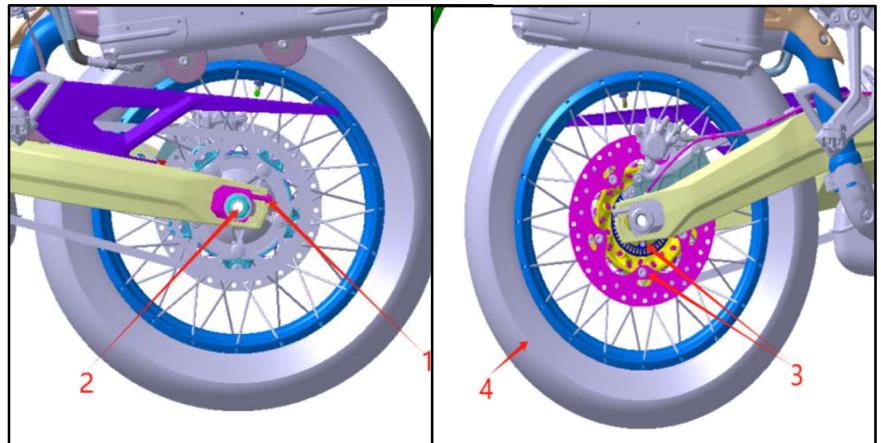
Remove rear wheel kit.

Remove collar of rear wheel.

Remove damper kit.

Remove damping rubber piece.

Re-assembly is completely opposite to disassembly.



Caution:

Please don't operate rear brake pedal when caliper of rear brake was removed to avoid piston moving which makes installation of caliper difficult.

Important:

There should not be any dirt on working surface between brake pad and brake plate.

When replaced, please repeatedly step down the rear brake pedal to confirm its normal work.

When the tire replaced, please confirm dynamic balance on equipment once again.

When re-assembling collar or oil seal for rear wheel, please coat them with lithium lubricant.

Parameters:

Rear wheel		Aluminum rim of spoke wheel	4.25x17
Rear tire		Radial ply tire of tubeless	150/70-R17
Run-out for end surface of rear wheel shall not be bigger than		mm	1
Radial run-out of rear wheel shall not be bigger than		mm	1
Torque for nut on chain adjustor	M8		9
Fastening torque for rear wheel axle	M20		100

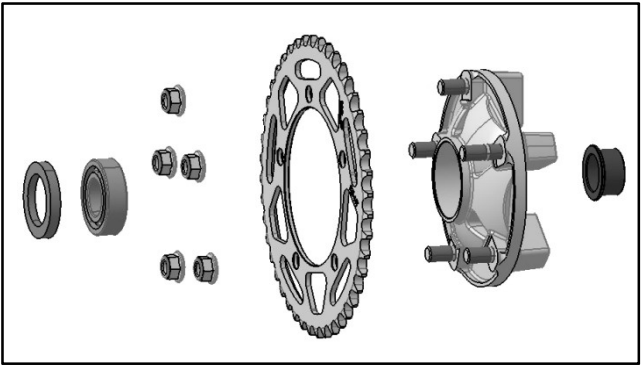
Service Manual for DS900X

Fastening torque for brake plate	M8		35
Loctite	Loctite 262	ml	10
Lubricant		g	5
Allowed maximum imbalance for rear wheel		g	5
Air pressure in tire		bar	2.5

Removal for damper kit

Remove nut connects sprocket wheel first, then the sprocket wheel.

Remove oil seal, bearing and collar in damper kit in turn by tools.



The re-assembly is completely opposite to disassembly.

Important:

When re-assembling collar or oil seal for damper kit, please coat them with lithium lubricant.

The oil seal of damper gets damaged when it removed, please replace immediately.

The removal for bearing of damper needs the pulling tool for it only.

For easy re-assembly, please heat the hole of bearing for damper to 100°C first, then press-fit the bearing.

Parameters:

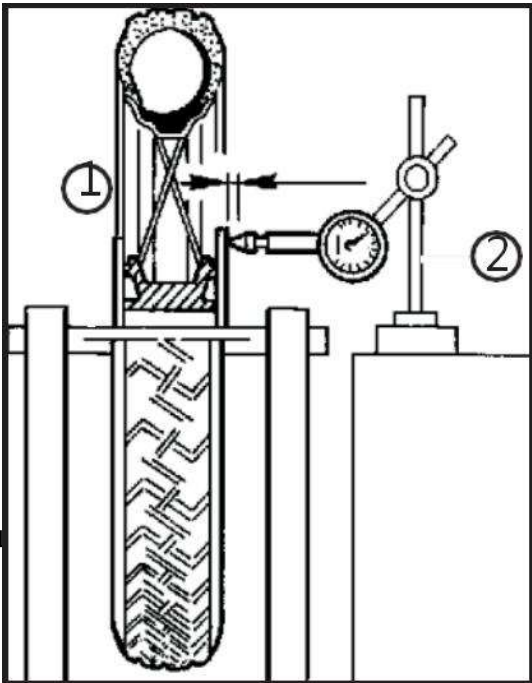
Lubricant	/	g	5
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Removal for brake plate

Remove rear wheel kit and put it onto working bench.

Remove fastening bolt for disc brake plate, then remove rear disc brake plate and ring gear.

The re-assembly is completely opposite to disassembly.



Caution:

The screw of rear brake plate is coated with Loctite, please adopt tools meet demands when removing, otherwise it will be a difficult work.

Important:

There shouldn't be any dirt on working surface between brake pad and brake plate when re-assembling.

Please coat fastening bolt of brake plate with Loctite when re-assembling brake plate. Confirm run-out of end surface for brake plate when it was assembled, whose method is show as figure:

Put rear wheel on balancing rack by balancing shaft (1).

Measure run-out of end surface by measuring gauge (2).

Run-out for end surface shall not be bigger than	mm	0.3
--	----	-----

Removal for rear tire

Remove rear wheel kit and put it on working bench.

Remove air valve core to discharge the air in tire.

Remove rear tire by tools for it only.

Remove air valve core.

The re-assembly is completely opposite to disassembly.

Caution:

The re-assembly for tire please adopt equipment for it only, forcedly assemble by external power may get tire permanently damage.

Important:

When re-assembling tire, please align the light point of tire to air valve core on wheel hub, which makes following works easier.

Removal for bearing and oil seal on rear wheel

Remove rear wheel and put it on working bench.

Remove brake plate and tire.

Remove oil seal, elastic circlip, bearing and inner liner of wheel hub by tools such as circlip pliers.

Replace parts for new ones with same specification.

The re-assembly is completely opposite to disassembly.

Important:

The oil seal on of rear wheel gets damaged when it removed, please replace.

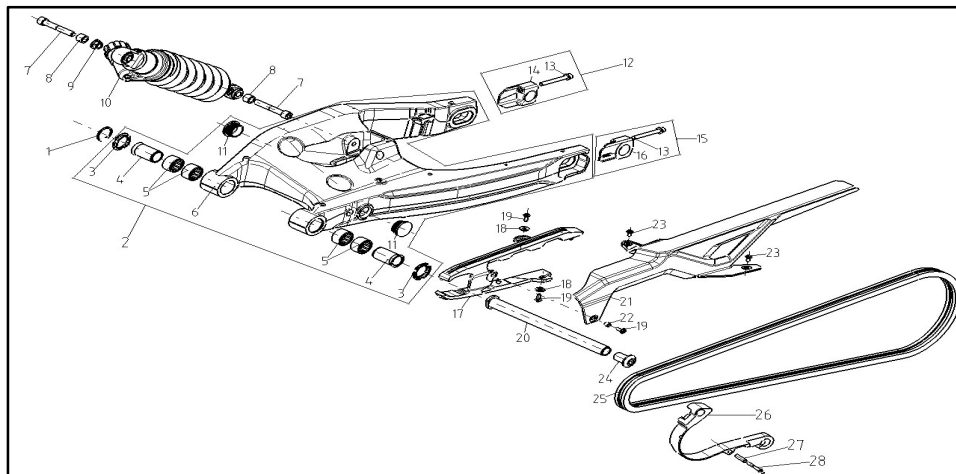
The removal for rear wheel bearing needs pulling tools for it only.

Service Manual for DS900X

For easy re-assembly, heat the hole of bearing to 100°C, then press-fit the bearing.
One side of bearing is with locating circlip, missing assembly is forbidden.
When press-fitting the bearing, it needs the press-fitting equipment for it only,
press-fit the side with elastic circlip (Right side) to the bottom, then the other side
of bearing.

11. Disassembly, re-assembly and maintenance for rear suspension kit

Rear suspension kit and its parts



1	Elastic circlip	PCS	1
2	Rear fork kit	PCS	1
3	Dust-proof cap for rear fork	PCS	2
4	Collar	PCS	2
5	Bearing	PCS	4
6	Rear fork body	PCS	1
7	Socket hex. screw	PCS	2
8	Collar	PCS	1
9	Metallic hex. flange locking nut	PCS	1
10	Rear shock absorber	PCS	1
11	Plug	PCS	2
12	Chain adjustor 2	PCS	1
13	Bolt or screw and flat washer kit	PCS	2
14	Chain adjustor body 2	PCS	1

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15	Chain adjustor	PCS	1
16	Chain adjustor body	PCS	1
17	Chain slider	PCS	1
18	Flanging washer	PCS	2
19	Socket spline head bolt	PCS	3
20	Axle	PCS	1
21	Chain case	PCS	1
22	Collar	PCS	1
23	Socket spline head bolt	PCS	2
24	Socket hex. screw	PCS	1
25	Chain	PCS	1
26	Chain slider	PCS	1
27	Collar	PCS	1
28	Hex. flange bolt	PCS	1

Disassembly and re-assembly for rear shock absorber

Keep the motorcycle upright by parking stand.

Remove fuel tank by referring to corresponding content for its disassembly.

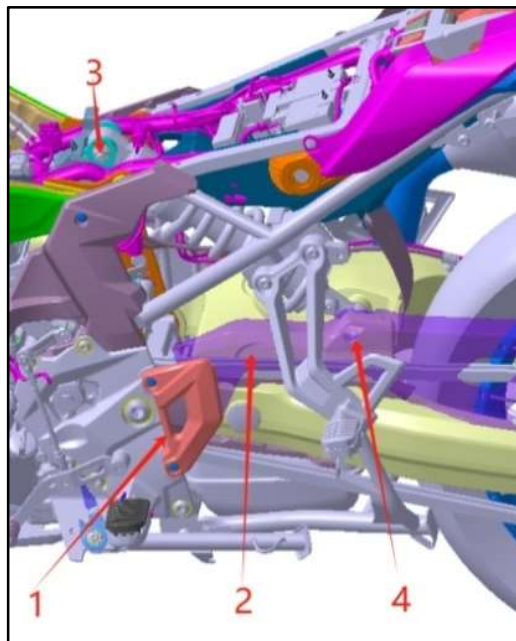
Remove blocking piece 1 for main footrest.

Remove chain case 2.

Remove installation bolt and nut 3 on rear shock absorber by tool.

Remove lower installation bolt 4 on rear shock absorber by tool and finally remove the rear shock absorber.

The re-assembly is completely opposite to disassembly.



Parameters:

Upper and lower installation bolt for rear shock absorber	M12	Nm	60
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Installation bolt for chain case	M6	Nm	6
Installation bolt for blocking piece of main footrest	M5	Nm	3

Disassembly and re-assembly for rear fork and chain

Hang up the motorcycle by lifting device.

Remove the rear shock absorber first.

Loosen bolt 1 of chain adjusters on both sides.

Loosen nut 2 on rear wheel axle, powerfully push rear wheel forward for a short distance, then remove the rear wheel axle.

Remove rear wheel 3.

Remove tube clamp on oil tube of ABS for rear brake and installation bolt for rear fork.

Loosen nut for rear fork shaft, remove left main footrest 4, then loosen installation bolt for right main footrest.

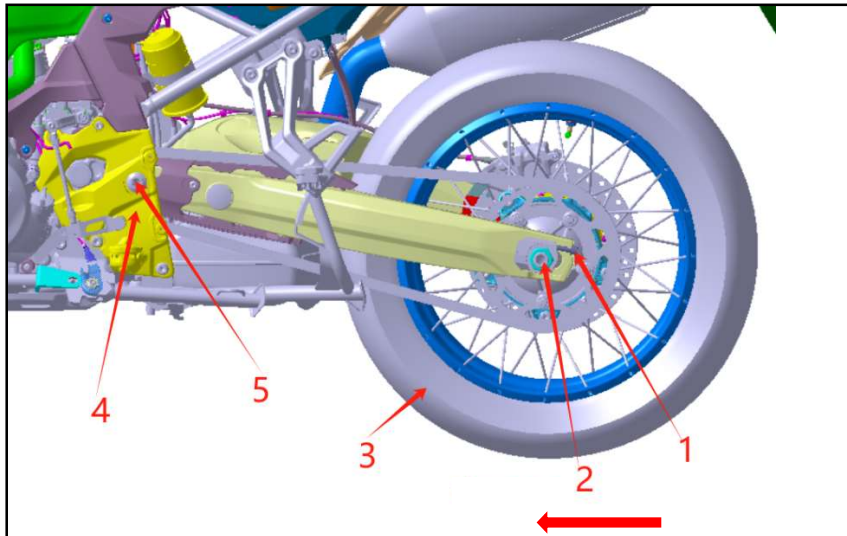
Remove elastic circlip of rear fork shaft, then remove the shaft 5.

Remove rear fork.

Remove chain.

Replace the chain for a new one with same specification.

The re-assembly is completely opposite to disassembly.



Caution:

Adjust the left and right chain adjuster first when re-assembling, then fasten the nut of rear wheel axle, then fasten the left and right chain adjuster.

Important:

Confirm if the left and right chain adjusters are on the same scale line when re-assembling.

Inspection for tensioning force of chain must be under 0 loading of motorcycle.

Parameters:

Torque for nut on chain adjustor	M8	N. m	9
Torque for nut on rear wheel	M2	N. m	100

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axle	0		
Torque for left and right cover of engine	M6	N. m	9
Fastening torque for left main footrest	M8	N. m	22
	M10	N. m	40
	M20	N. m	70
Deflection for chain		N. m	35-45

Disassembly and re-assembly for bearing of rear fork

Put the removed rear fork on working bench.

Remove collar, dust proof cap and bearing at rear fork shaft's tube in turn by tool.

The re-assembly is completely opposite to disassembly.

Caution:

The removal for bearing needs tools for it only, forcedly remove may damage the parts.

Caution:

Coat the collar and bearing with lithium lubricant when re-assembling.

Disassembly and re-assembly for chain slider

Keep motorcycle upright by parking stand.

Remove blocking piece 1 for main footrest.

Remove chain case 2.

Remove chain slider 3 from rear fork.

Replace chain slider for a new one with same specification.

Remove left main footrest 4.

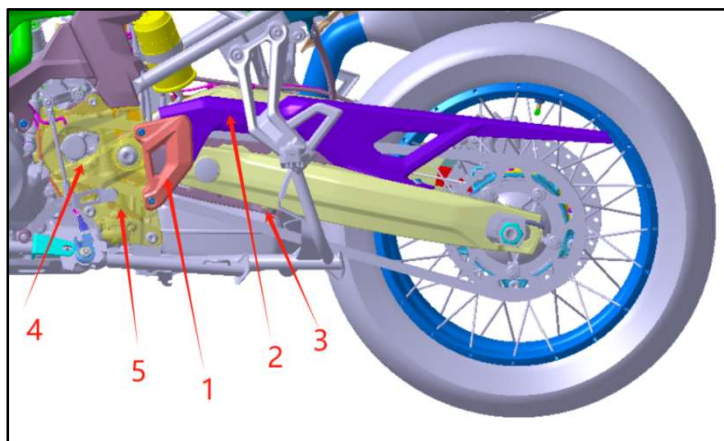
Remove chain slider 5 from engine.

Replace chain slider for a new one with same specification.

The re-assembly is completely opposite to disassembly.

Caution:

When re-assembling chain slider 3, please clip the limit pillar 3 into limit hole on rear fork.



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Parameters:

Installation bolt for blocking piece of main footrest	M5	N. m	3
Torque for bolt between chain slider and engine	M6	N. m	9
Torque for bolt between chain slider and rear fork	M6	N. m	4.5
Fastening torque for left main footrest	M8	N. m	22
	M10	N. m	40
	M20	N. m	70
Installation bolt for chain case	M6	Nm	6

Disassembly and re-assembly for driving sprocket wheel

Keep motorcycle upright by parking stand

Remove chain slider by referring its corresponding content.

Remove installation bolt, collar and butterfly-shaped washer 1, then remove driving sprocket wheel 2.

Replace the driving sprocket wheel for a new one with same specification.

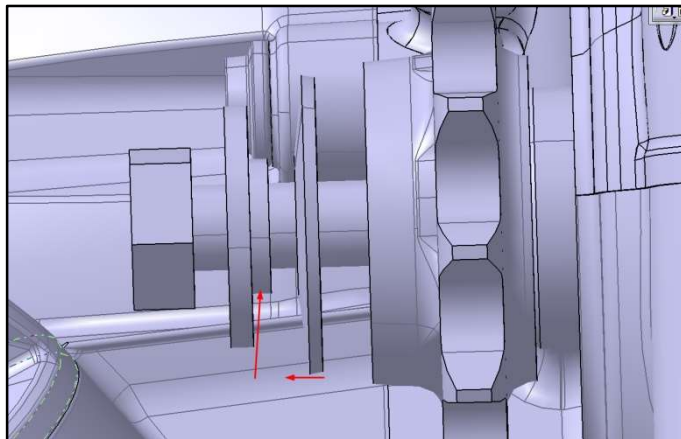
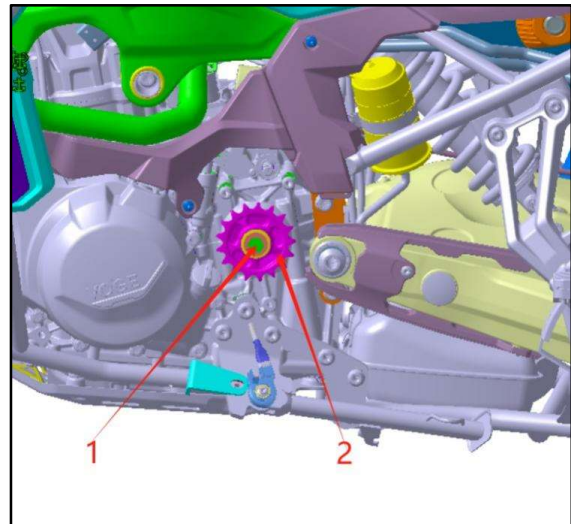
The re-assembly is completely opposite to disassembly.

Caution:

Adjust left and right chain adjuster when re-assembling, then fasten nut on rear wheel axle, then fasten the left and right chain adjuster.

Important:

Check and confirm if the left and right chain adjusters are on the same scale line.



Inspection and adjustment for tensioning force of chain must be under 0 loading of

Service Manual for DS900X

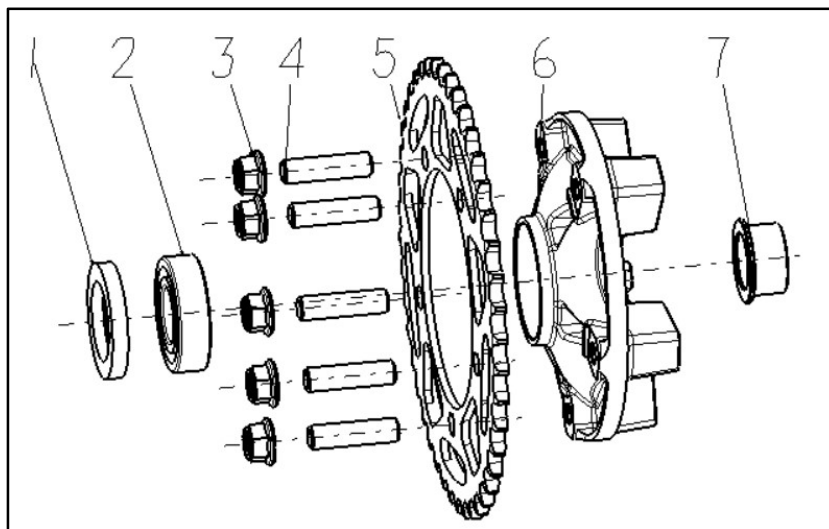
motorcycle.

When re-assembling the driving sprocket wheel, please coat thread of bolt with Loctite, the inner ring of butterfly-shaped washer is a protrusion outwards, insert the flanging side of collar into inner hole of elastic butterfly-shaped washer.

Parameters:

Installation bolt for blocking piece of main footrest	M5	N. m	3
Torque for bolt between chain slider and engine	M6	N. m	9
Torque for bolt between chain slider and rear fork	M6	N. m	4.5
Fastening torque for left main footrest	M8	N. m	22
	M10	N. m	40
	M20	N. m	70
Installation bolt for chain case	M6	N. m	6
Installation torque for driving sprocket wheel	M10	N. m	50
Loctite	/	/	Evenly spread on thread

Disassembly and re-assembly for damper kit



1	Oil seal	PCS	1
2	Bearing	PCS	1
3	Metallic hex. flange locking nut	PCS	5
4	Bolt for sprocket wheel	PCS	5
5	Sprocket wheel	PCS	1
6	Sprocket wheel base	PCS	1
7	Collar	PCS	1

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Keep motorcycle upright by parking stand.

Loosen the nut on chain adjustor.

When nut on rear wheel axle loosened, powerfully push rear wheel forward to remove the rear wheel axle.

Remove damper kit.

Replace damper and its damping rubber for new ones with same specification.

The re-assembly is completely opposite to disassembly.

Caution:

Adjust left and right chain adjustor when re-assembling, then fasten nut on rear wheel axle, then fasten the left and right chain adjustor.

Important:

Check and confirm if the left and right chain adjustor are on the scale line when re-assembling.

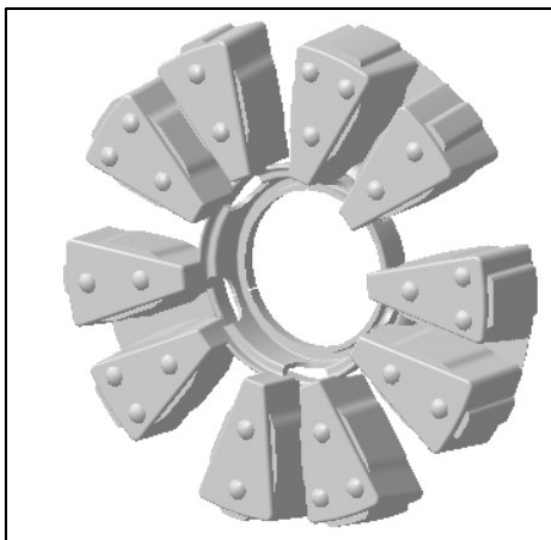
The inspection and adjustment for tensioning force of chain must be under 0 loading of motorcycle.

When replacing the damper kit please coat the position of oil seal with lithium lubricant.

Parameters:

Torque for nut on chain adjustor	M8	N. m	9
Torque for nut on rear wheel axle	M20	N. m	100
Chain deflection		mm	35-45

Disassembly and re-assembly for damper piece of rear wheel



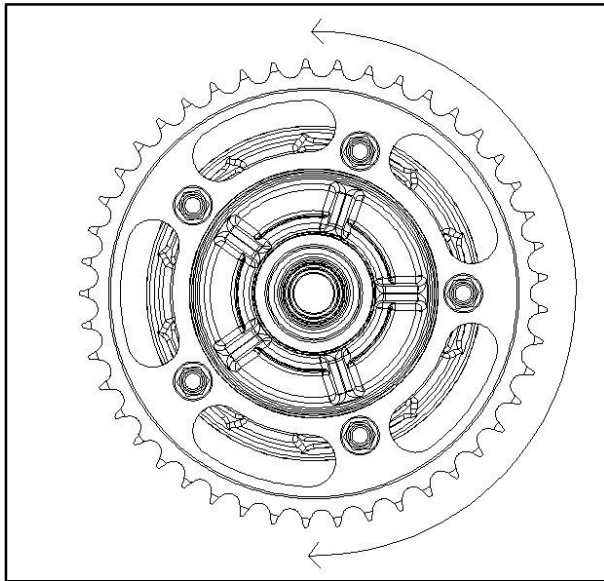
Keep motorcycle upright by parking stand.

Remove rubber damping piece by referring to content of removal for damper kit.

Check if there is wear-out or crack on damper piece, in case it is, please replace.

In addition, it could be judged on motorcycle, when it is parking, lift up the rear wheel,

lay stress on sprocket wheel along the direction of figure showing, in case obvious radial run-out could be felt, which indicates the rubber damper piece was worn out, it needs be replaced.



Caution:

Excessive acceleration or deceleration makes continuous impact on damper rubber, which produce heat, while the damper rubber is sealed in its chamber with poor heat radiation, it accelerates the wear-out of damper rubber piece.

Conditions for replacement for chain

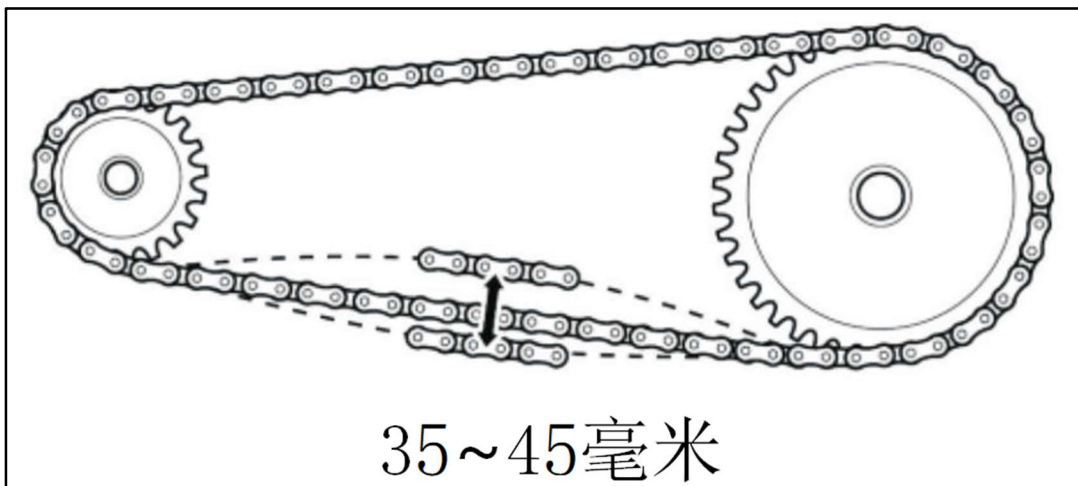
There are several places of dead-lock on chain.

There is crack on roller of chain.

There are missing on seal ring of chain.

The distance between links got to be 2 times of new one.

In case adjust to limit but still fail to meet conditions below, whose data are bigger than it.

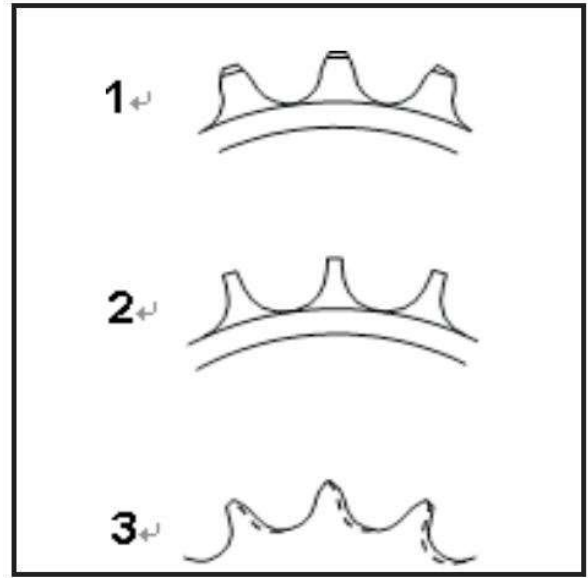


Conditions for replacement of sprocket wheel

There is buckling on surface of sprocket wheel.

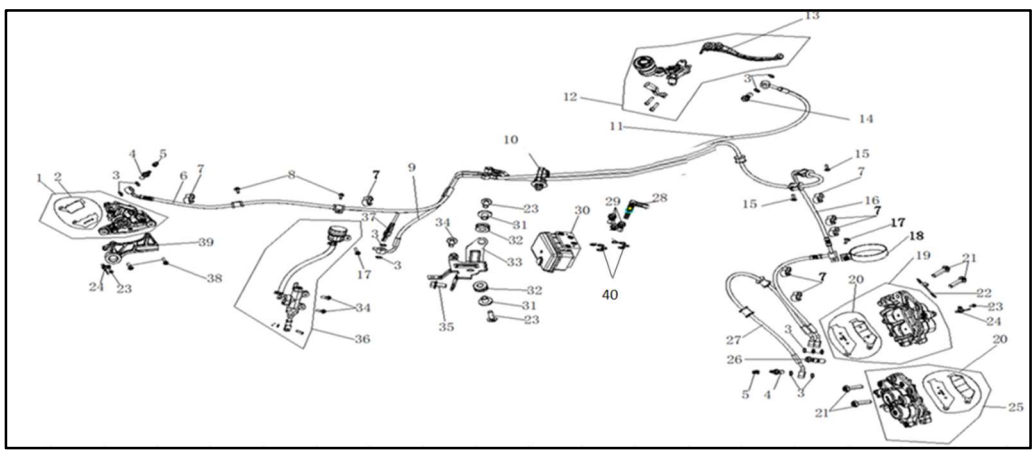
Teeth of sprocket wheel break off or damaged.

In figure below, in which 1 is qualified, 2 and 3 need be replaced.



12. Disassembly, re-assembly and maintenance for brake system

Brake system and its parts



1	Lower pump of rear disc brake	PCS	1
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Service Manual for DS900X

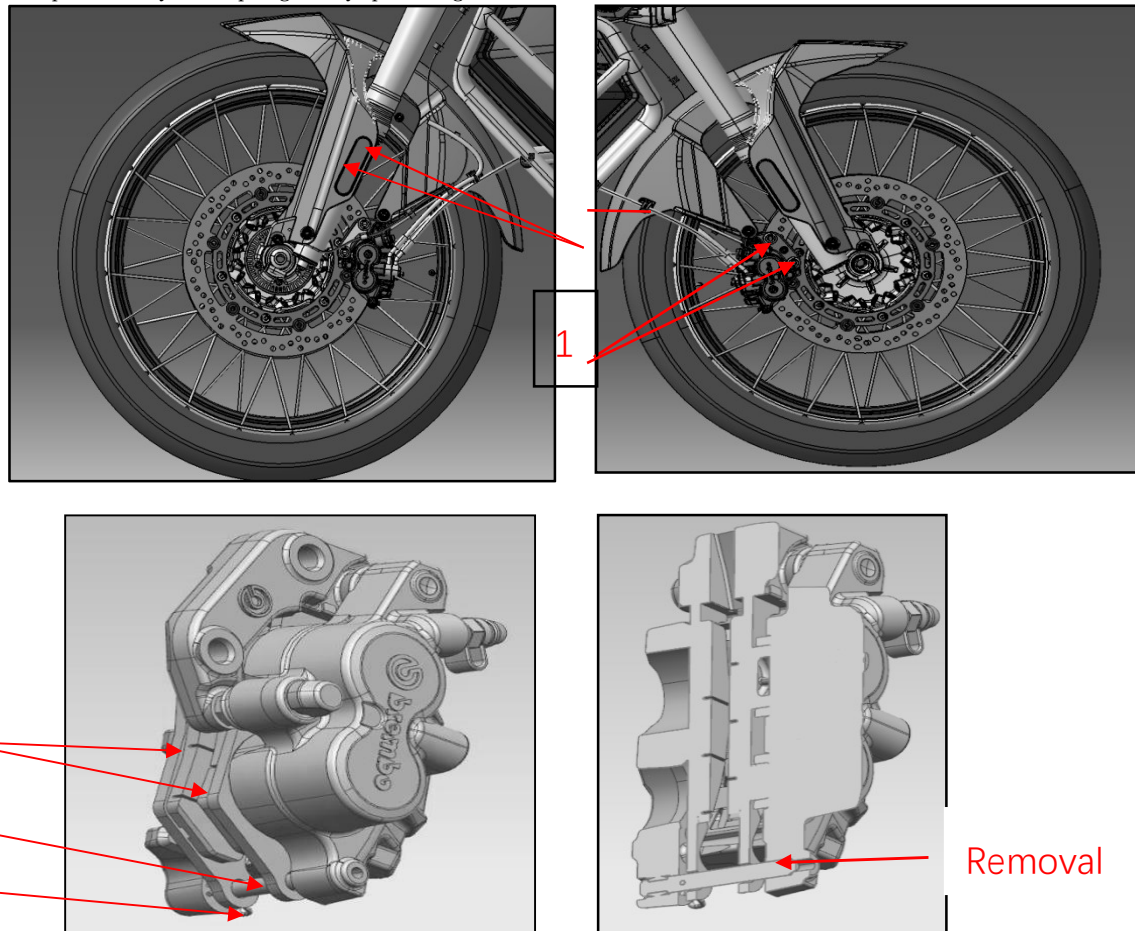
2	Brake pad of rear disc brake	PCS	1
3	Flat washer	PCS	11
4	Bolt for disc brake hose	PCS	2
5	Cap for air exhaust screw	PCS	2
6	Connective oil tube for ABS	PCS	1
7	Wire clip	PCS	9
8	Socket hex. spline flange bolt	PCS	2
9	Connective oil tube for ABS	PCS	1
10	Clamping band	PCS	3
11	Connective oil tube for ABS	PCS	1
12	Upper pump of front disc brake	PCS	1
13	Right lever	PCS	1
14	Bolt for disc brake hose	PCS	2
15	Socket spline head bolt	PCS	2
16	Connective oil tube of ABS	PCS	1
17	Socket spline head bolt	PCS	2
18	Clamp	PCS	1
19	Lower pump of front disc brake	PCS	1
20	Front disc brake pads kit	PCS	2
21	Socket hex. spline flange bolt	PCS	2
22	Speed sensor bracket	PCS	1
23	Socket spline head bolt	PCS	4
24	Speed sensor	PCS	2
25	Lower pump 2 for front disc brake	PCS	1
26	Bolt for disc brake hose	PCS	1
27	Front disc brake hose	PCS	1
28	Front disc brake switch	PCS	1
29	Bolt for disc brake hose	PCS	3
30	ABS kit	PCS	1
31	Collar	PCS	2
32	I-ring	PCS	2
33	Installation bracket for ABS	PCS	1
34	Socket spline head bolt	PCS	3
35	Hex. flange bolt	PCS	1

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36	Upper pump of rear disc brake	PCS	1
37	Rear brake switch	PCS	1
38	Socket hex. spline flange bolt	PCS	2
39	Rear disc brake bracket	PCS	1
40	Flat washer	PCS	8

Replacement for front disc brake

Keep motorcycle upright by parking stand.



Remove installation bolt 1 for lower caliper.

Remove split pin 2.

Press out connective pin 3 of brake pads by pin shaft of 4mm.

Finally remove brake pad 4.

Replace front brake pads for new ones. (The removal for left and right lower pump of front disc brake is symmetrical in same way).

The re-assembly is completely opposite to disassembly.

Important:

When re-assembling, missing assembly for shim between end surface of brake pad and limit groove of front caliper is not allowed, please assemble it in place.

Please don't operate front brake lever when brake pads are removed to avoid piston moving and make difficult re-assembly for brake pad.

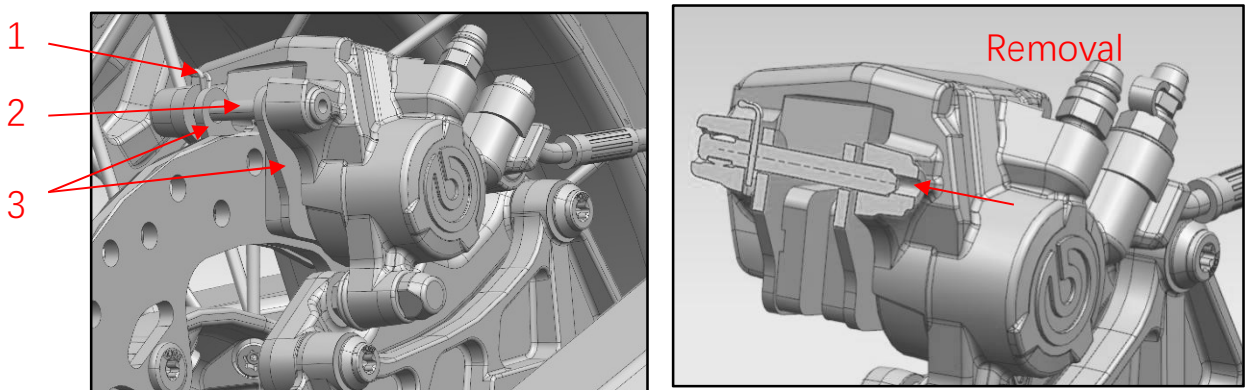
Replace the outer and inner brake pad as a kit when replacing them.

There should not be dirt on working surface between brake pad and brake plate.

When replaced, repeatedly and tightly hold brake lever to confirm its normal work.

Dispose the replaced front brake pads in environment friendly way.

Replacement for rear disc brake pad



Keep motorcycle upright by parking stand.

Remove split pin 1.

Press out connective pin 2 of brake pads by pin shaft of 4mm.

Finally remove brake pad 3.

Replace rear brake pads for new ones.

The re-assembly is completely opposite to disassembly.

Important:

When re-assembling, missing assembly for shim between end surface of brake pad and limit groove of rear caliper is not allowed, please assemble it in place.

Please don't operate rear brake pedal when brake pads are removed to avoid piston moving and make difficult re-assembly for brake pad.

Replace the outer and inner brake pad as a kit when replacing them.

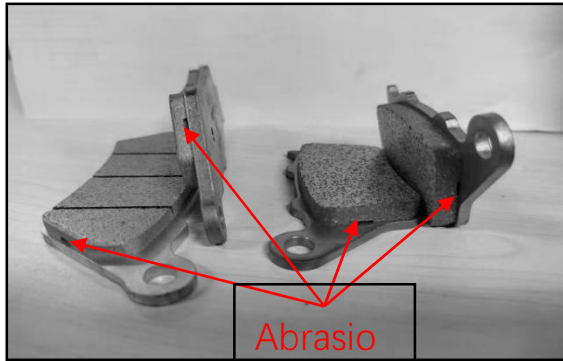
There should not be dirt on working surface between brake pad and brake plate.

When replaced, repeatedly step down brake pedal to confirm its normal work.

Dispose the replaced rear brake pads in environment friendly way.

Inspection for brake pad

The abrasion mark on brake pad must clearly be seen as figure below shows, whose minimum thickness is 1mm.



Inspection for liquid level in front and rear brake system

Keep motorcycle upright by parking stand.

Turn the grip to get oil pump of front brake horizontal.

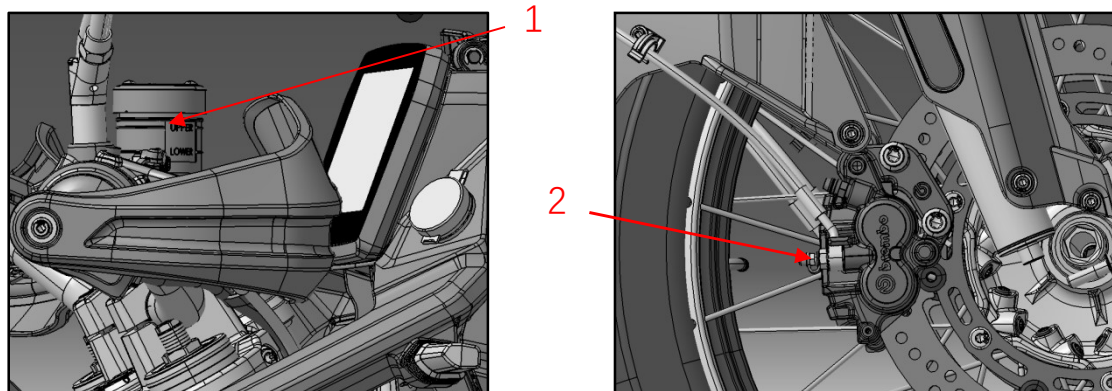
The liquid level in front and rear brake system must be between scale mark UPPER and LOWER on upper pump of front and rear disc brake.

Caution:

During the consumption from brand new to limit, the (Min./Max.) capacity for brake liquid both meet demands, usually needn't fill up due to consumption of brake pads.

In case the brake liquid level is lower than the minimum limit, which indicates there may have other malfunctions.

Replacement for brake liquid in front disc brake



Keep motorcycle upright by parking stand.

Turn the grip to get oil cup cap 1 horizontal.

Remove oil cup cap with its rubber cover by tool.

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Connect the extraction device for brake liquid to air exhaust screw 2 on brake caliper.

Open air exhaust screw by turning half round by tools.

Start brake liquid extraction device to drain off the brake liquid.

Fill up with fresh brake liquid from oil cup, meanwhile starting extraction device until the liquid fulfill the brake pipeline.

Fasten air exhaust screw.

Check if the liquid level is between scale mark UPPER and LOWER.

Connect diagnosis device of ABS into its controller to check if there is malfunction code, in case there is please make troubleshooting.

The re-assembly is completely opposite to disassembly.

Caution:

When brake liquid filled up, please clean up greasy dirt around oil cup and air exhaust screw of lower caliper.

Important:

Please don't let brake liquid touch any painting part of motorcycle, because the brake liquid is corrosive.

When extracting brake liquid, please don't get the liquid level under scale mark LOWER, otherwise the air bubble may get into brake system, under this case, the extraction needs be done once again.

When filled up, lay stress on brake lever and keep for a while to check if there is liquid leakage on brake pipeline.

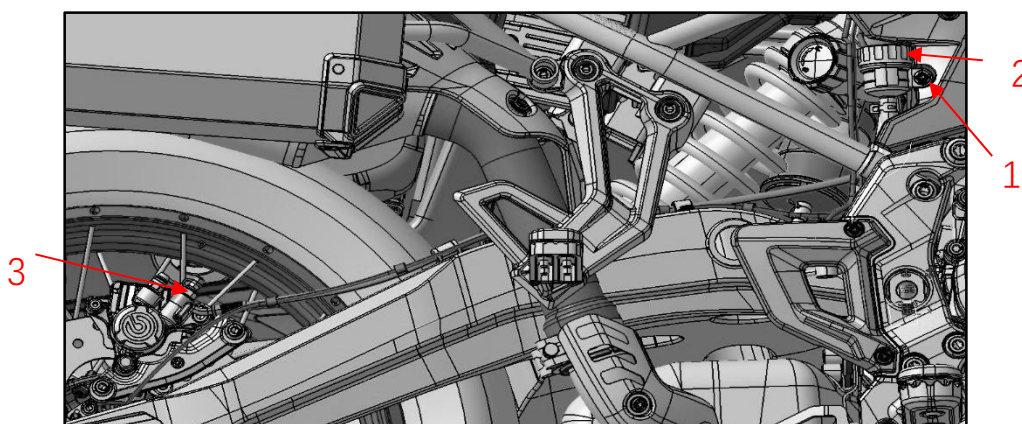
In case there is problem on disc brake hose kit or connection of threaded part, please replace immediately.

Mixture of brake liquid of two brands or specification even above is not allowed.

Parameters:

Torque for oil cup cap	M6	N. m	2~3
Torque for air exhaust screw	M8	N. m	4~7
Capacity for liquid of front brake system		mL	150
Specification for brake liquid		Great wall	DOT4

Replacement for rear brake liquid



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Keep motorcycle upright by parking stand.

Remove the fixing bolt 1 on oil cup of disc brake by socket hex. tool of T25.

Remove oil cup cap 2 with its rubber cover.

Connect the extraction device for brake liquid to air exhaust screw 3 on brake caliper.

Open air exhaust screw by turning half round by tools

Start brake liquid extraction device to drain off the brake liquid.

Fill up with fresh brake liquid from oil cup, meanwhile starting extraction device until the liquid fulfill the brake pipeline.

Fasten air exhaust screw.

Check if the liquid level is between scale mark UPPER and LOWER.

Connect diagnosis device of ABS into its controller to check if there is malfunction code, in case there is please make troubleshooting.

The re-assembly is completely opposite to disassembly

Caution:

When brake liquid filled up, please clean up greasy dirt around oil cup and air exhaust screw of rear caliper.

Important:

Please don't let brake liquid touch any painting part of motorcycle, because the brake liquid is corrosive.

When extracting brake liquid, please don't get the liquid level under scale mark LOWER, otherwise the air bubble may get into brake system, under this case, the extraction needs be done once again.

When filled up, lay stress on brake pedal and keep for a while to check if there is liquid leakage on brake pipeline.

In case there is problem on disc brake hose kit or connection of threaded part, please replace immediately.

Mixture of brake liquid of two brands or specification even above is not allowed.

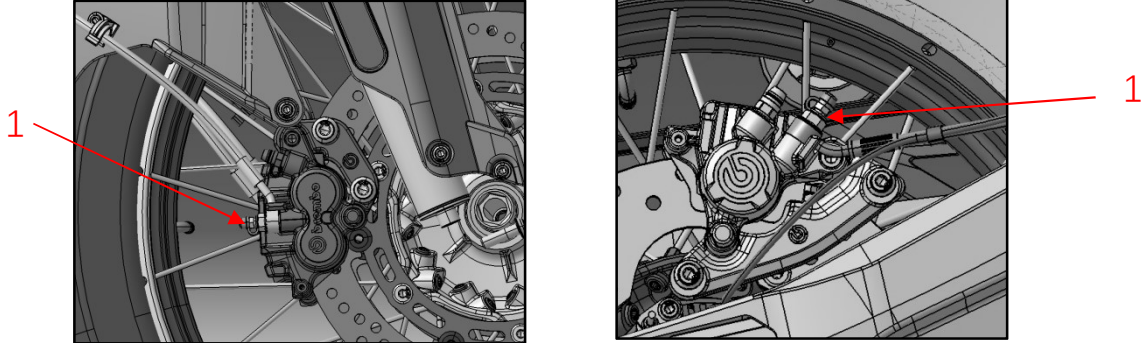
Parameters:

Torque for air exhaust screw	M8	N. m	4~7
Capacity for liquid of rear brake system		mL	150
Specification for brake liquid		Great wall	DOT4

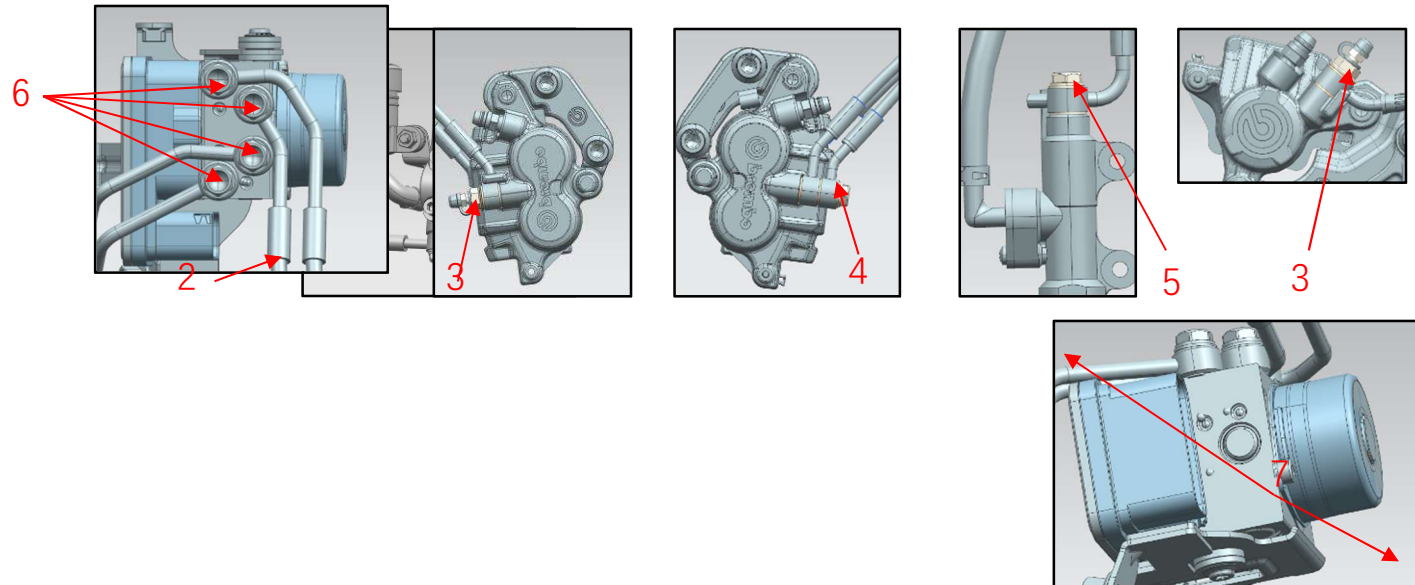
Replacement for ABS and parts in front and rear brake pipeline

Remove seat, covering plastic parts, fuel tank and air filter.

Loosen air exhaust screw 1, then connect the air exhaust screw to vacuum device, drain off liquid in pipeline. Replace the brake liquid according to procedure above.



Remove punching bolt 2 on installation oil tube of upper pump of front disc brake, punching bolt 3 of lower pump of left front disc brake, double punching bolt 4 for lower pump of right front disc brake, hydraulic switch 3 of rear upper pump and its related sealing washer.



Remove punching bolt 6 connects oil tube of brake and controller for ABS and sealing washer, then remove controller of ABS and two screws 7 connect installation bracket. When works above finished, remove controller of ABS and oil tube of brake.

The re-assembly is completely opposite to disassembly.

Finally fill up with brake liquid according to procedure for its replacement above, then check.

Important:

The brake liquid is corrosive, please don' t touch it to skin or cloths when draining off or filling up.

The gasket at place of punching bolt needs be replaced for a new one when re-assembling, otherwise the oil may leak.

Every adjacent sealing surface needs install a gasket.

Parameters:

Torque for ABS and punching	M8	N. m	24
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Service Manual for DS900X

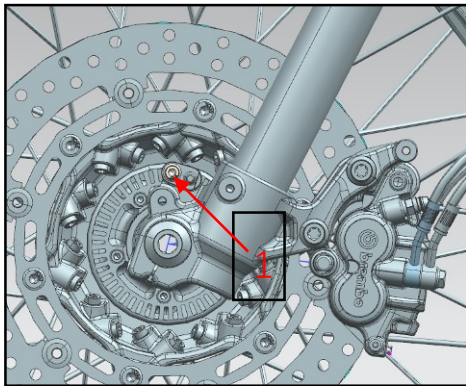
bolt			
Torque for front and rear disc brake pump and punching hole	M8	N. m	32
Torque for air exhaust screw	M8	N. m	4~7

Removal for speed sensor on front wheel

Keep motorcycle upright by parking stand.

Remove bolt 1 and speed sensor on front wheel.

The re-assembly is completely opposite to disassembly.



Important:

When speed sensor of front wheel re-assembled, let front wheel suspend, check clearance change between speed sensor and gear ring of ABS,

Parameters:

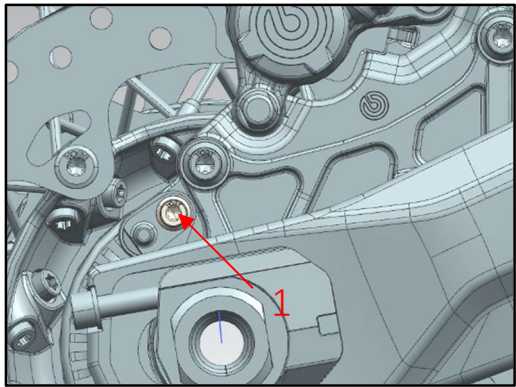
Torque for fastening bolt of sensor	M6	Nm	9
Clearance between sensor and gear ring		mm	0.8~1.5

Removal for speed sensor of rear wheel

Keep motorcycle upright by parking stand.

Remove bolt 1, then remove speed sensor of rear wheel.

The re-assembly is completely opposite to disassembly.



Important:

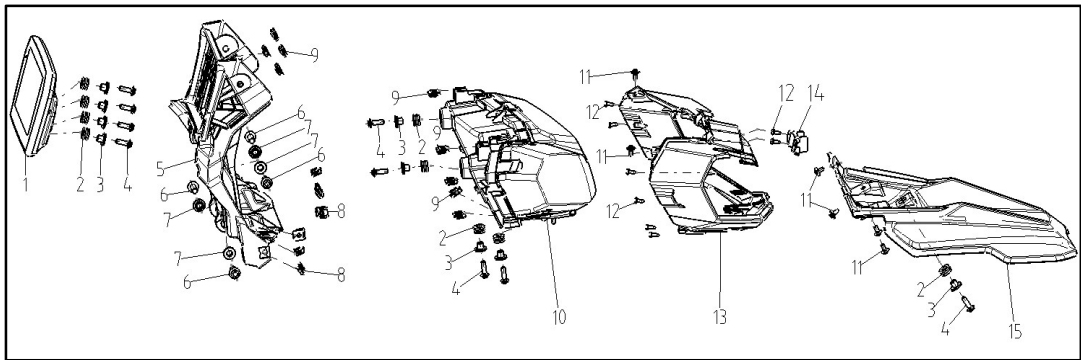
When speed sensor of rear wheel re-assembled, let rear wheel suspend, check clearance change between speed sensor and gear ring of ABS.

Parameters:

Torque for fastening bolt of sensor	M6	Nm	9
Clearance between sensor and gear ring		mm	0.8~1.5

13. Disassembly, re-assembly and maintenance for lights set on motorcycle

Headlight kit and its parts



1	Meter kit	SET	1
2	I-ring	PCS	9
3	Collar	PCS	9
4	Socket spline head bolt	PCS	9
5	Meter bracket	PCS	1

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6	Socket hex. spline flange bolt	PCS	4
7	Collar	PCS	4
8	Clipping nut	PCS	6
9	Clipping nut	PCS	9
10	Headlight	PCS	1
11	Socket spline head bolt	PCS	6
12	Cross self-tapping screw	PCS	6
13	Headlight lens	PCS	1
14	Installation bracket for camera	PCS	1
15	Fairing cover	PCS	1

Removal for headlight kit

Keep motorcycle upright by parking stand.

Loosen bolt and remove windshield glass 3.

Loosen bolt and remove adjustive device 2 of windshield glass.

Loosen bolt and remove decorative cover 1 for meter.

Remove covering parts kit 7 on left and right side by referring removal of fuel tank.

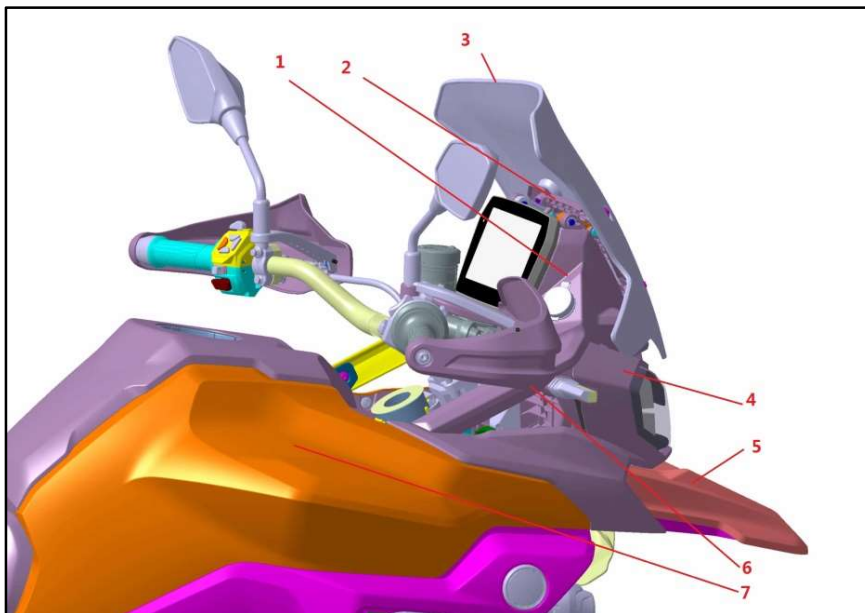
Loosen bolt and remove front fairing cover 5.

Remove bolt 6 and headlight kit.

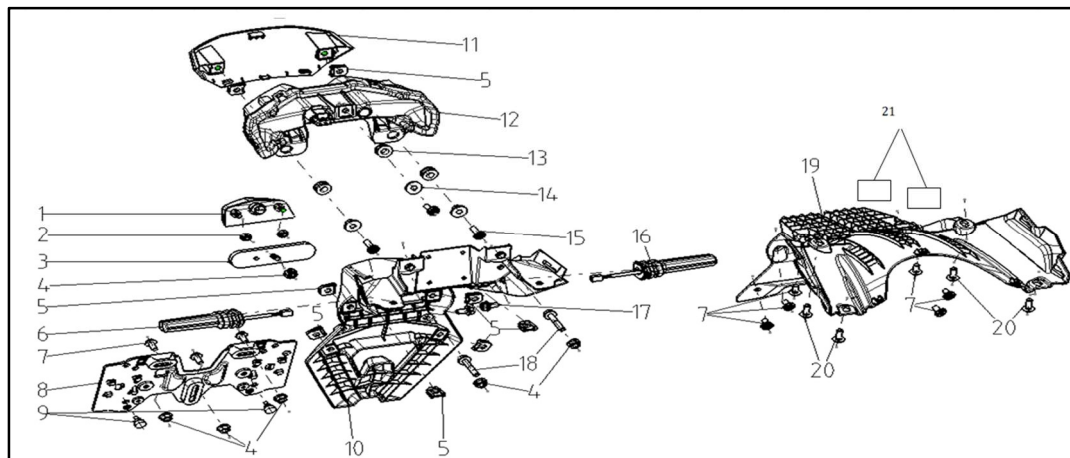
Loosen bolt and remove protective shield 4 of headlight.

Finally remove headlight kit.

The re-assembly is completely opposite to disassembly.



Tail light kit and its parts



1	Rear registration plate light	PCS	1
2	Hex. flange nut	PCS	2
3	Rear reflector	PCS	1
4	Hex. flange nut	PCS	6
6	Clipping nut	PCS	8
6	Right turning signal light	PCS	1
7	Socket hex. spline flange bolt	PCS	3
8	Rear registration plate bracket	PCS	1
9	Damper rubber nail	PCS	2
10	Rear fender	PCS	1
11	Connective piece for tail cover	PCS	1
12	Taillight	PCS	1
13	I-ring	PCS	3
14	Collar	PCS	3
15	Socket spline head bolt	PCS	3
16	Left turning signal light	PCS	1
17	Hex. flange bolt	PCS	2
18	Socket hex. spline flange bolt	PCS	2
19	Linner plate for rear fender	PCS	1
20	Socket spline head bolt	PCS	4
21	Carpet	PCS	2

Removal for taillight kit

Keep motorcycle upright by parking stand.

Remove the seat.

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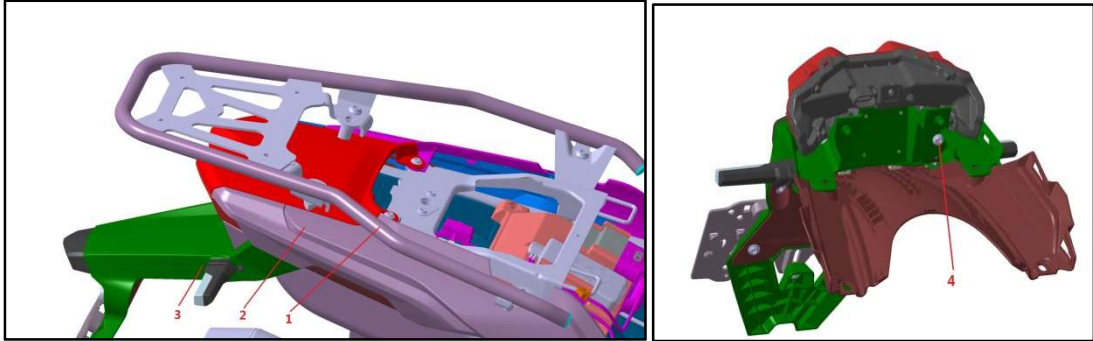
Loosen bolt and remove rear luggage rack 1.

Loosen bolt and remove left and right tail cover and tail cover kit 2.

Loosen bolt and remove rear fender kit 3.

Loosen bolt 4 and remove taillight.

The re-assembly is completely opposite to disassembly.



Caution:

Before removing taillight, please cut off wires for taillight and connectors for wire harness.

Removal for rear turning signal light and rear registration plate light

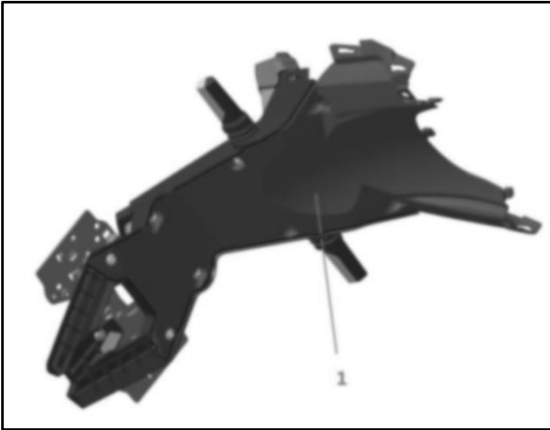
Keep motorcycle upright by parking stand.

The removal way is the same with taillight, then remove rear fender kit.

Loosen bolt and remove liner plate 1 of rear fender.

Remove rear registration plate light and turning signal light.

The re-assembly is completely opposite to disassembly.



Caution:

When re-assembling rear turning signal light and rear registration light, please straighten up wires between inner and outer plate of rear fender to avoid pressed.

Parameters:

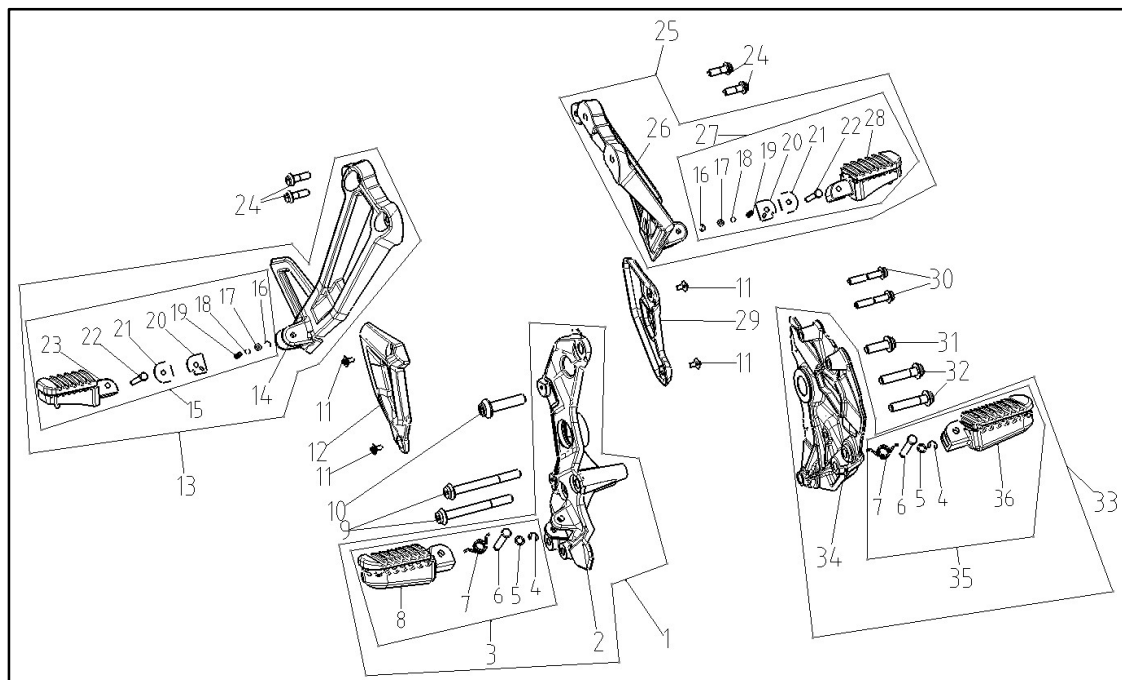
Torque for self-tapping screw for appearance parts	ST4.2	Nm	1
Hex. flange nut	M5	Nm	4.5
Socket spline head bolt for	M5	Nm	3

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appearance part	M6	Nm	4.5
Bolt for headlight and taillight	M6	Nm	6
Bolt for turning signal light	M6	Nm	4.5

14. Disassembly, re-assembly and maintenance for main footrest and pillion step

Main footrest kit, pillion step and their parts



1	Right main footrest	SET	1
2	Bracket for right main footrest	PCS	1
3	Main footrest	PCS	1
4	Circlip with opening	PCS	2
5	Seal ring	PCS	2
6	Pin shaft	PCS	2
7	Twist spring	PCS	2
8	Main footrest body	PCS	1
9	Socket hex. spline flange bolt	PCS	2
10	Socket hex. spline flange bolt	PCS	1
11	Socket spline head bolt	PCS	4

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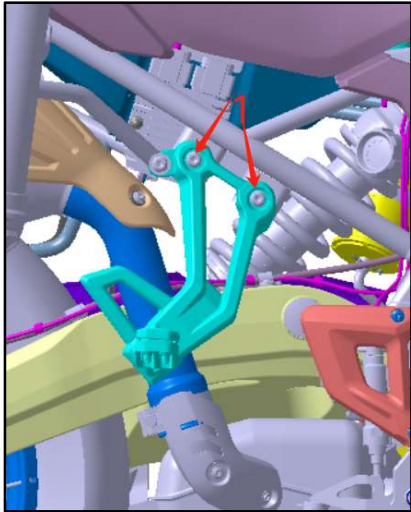
12	Stopping piece for main footrest	PCS	1
13	Right pillion step kit	SET	1
14	Bracket for right pillion step	PCS	1
15	Right pillion step body	PCS	1
16	Circlip with opening	PCS	2
17	Seal ring	PCS	2
18	Steel ball	PCS	2
19	Pressure spring	PCS	2
20	Limit piece for footrest	PCS	2
21	Limit piece for footrest	PCS	2
22	Pin shaft	PCS	2
23	Right pillion step	PCS	1
24	Socket hex. spline flange bolt	PCS	4
25	Left footrest kit	SET	1
26	Bracket for left pillion step	PCS	1
27	Left pillion step body	PCS	1
28	Left pillion step	PCS	1
29	Stopping piece for main footrest	PCS	1
30	Socket hex. spline flange bolt	PCS	2
31	Socket hex. spline flange bolt	PCS	1
32	Socket hex. spline flange bolt	PCS	2
33	Left main footrest kit	SET	1
34	Left main footrest bracket	PCS	1
35	Main footrest body	PCS	1
36	Main footrest body	PCS	1

Removal for left and right footrest and pillion step

Keep motorcycle upright by parking stand.

Remove bolt 1 by tool and finally remove left and right pillions step.

The re-assembly is completely opposite to disassembly.



Remove the left main footrest in same way with that for gearshift pedal.

Remove the right main footrest in same way with that for gearshift pedal.

Parameters:

Installation torque for pillion step	M8	N. m	30
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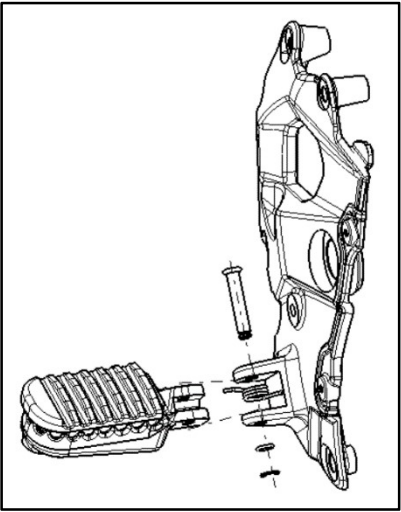
Removal for left and right main footrest

Break down left and right footrest according to picture below.

Caution:

When re-assembling the footrest, please coat the turning place with lithium lubricant.

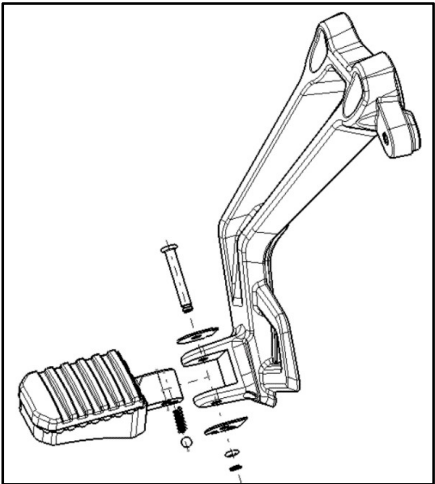
参数:



Lithium lubricant	g	10
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Removal for left and right pillion step

Break down right pillion step according to figure below.



Caution:

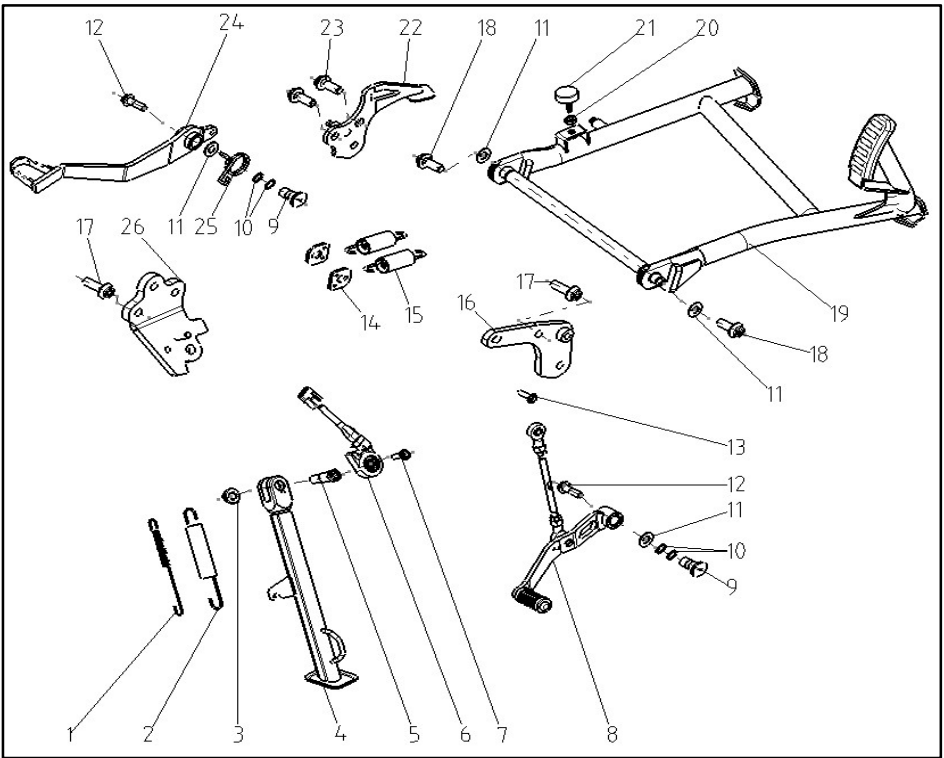
When re-assembling pillion step, please coat turning place with lithium lubricant.

When re-assembling limit piece, spring and steel ball for pillion step, coat the surface of limit piece and spring place with lithium lubricant.

Lithium lubricant	g	10
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15. Disassembly, re-assembly and maintenance for main, side stand, gearshift pedal and brake pedal

Main, side stand, gearshift pedal and rear brake pedal



1	Tension spring	PCS	1
2	Tension spring	PCS	1
3	Metallic hex. flange locking nut	PCS	1
4	Side stand	PCS	1
5	Hex. shoulder bolt	PCS	1
6	Kill switch for side stand	PCS	1

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7	Socket spline head bolt	PCS	1
8	Gearshift pedal	PCS	1
9	Shaft	PCS	2
10	Seal ring	PCS	4
11	Flat washer	PCS	4
12	Socket hex. spline flange bolt	PCS	2
13	Socket spline head bolt	PCS	1
14	Spring hanging plate	PCS	2
15	Tension spring	PCS	2
16	Installation base for main stand	PCS	1
17	Socket hex. flange bolt	PCS	2
18	Socket hex. flange bolt	PCS	2
19	Main stand	PCS	1
20	Hex. nut	PCS	1
21	Damping cushion	PCS	1
22	Installation base for main stand	PCS	1
23	Socket hex. spline flange bolt	PCS	2
24	Rear brake pedal	PCS	1
25	Tension spring	PCS	1
26	Installing body for side stand	PCS	1

Disassembly and re-assembly for main and side stand

Keep motorcycle upright by parking stand.

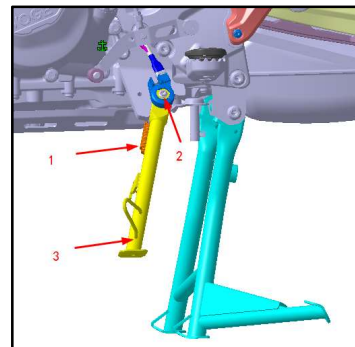
Removing tension spring 1 for side stand by tool.

Remove kill switch 2 of side stand when bolt removed.

Remove side stand 3.

The re-assembly is completely opposite to disassembly.

Keep motorcycle upright by parking stand.



Remove tension spring 1 for main stand by tool.

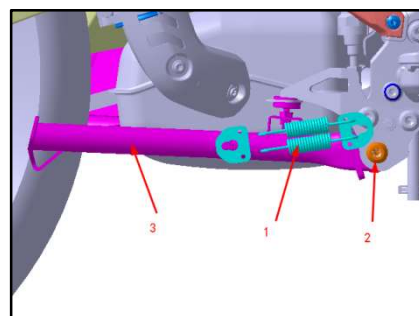
Loosen nut and remove collar 2.

Remove main stand 3.

The re-assembly is completely opposite to disassembly.

Important:

When re-assembling main and side stand, coat its turning place with lithium lubricant.



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The re-assembly for tension spring of main and side stand needs tools for it only for avoid damage when re-assembling.

Parameter:

Fastening torque for hex. shoulder bolt of side stand	M10	Nm	20
Fastening torque for nut of side stand	M10	Nm	40
Fastening torque for kill switch of side stand	M6	Nm	6
Fastening torque for nut of main stand shaft	M10	Nm	40
Lithium lubricant		g	5

Disassembly and re-assembly for gearshift pedal

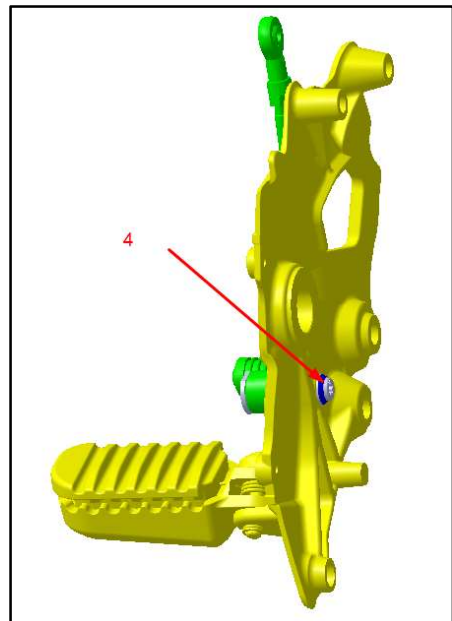
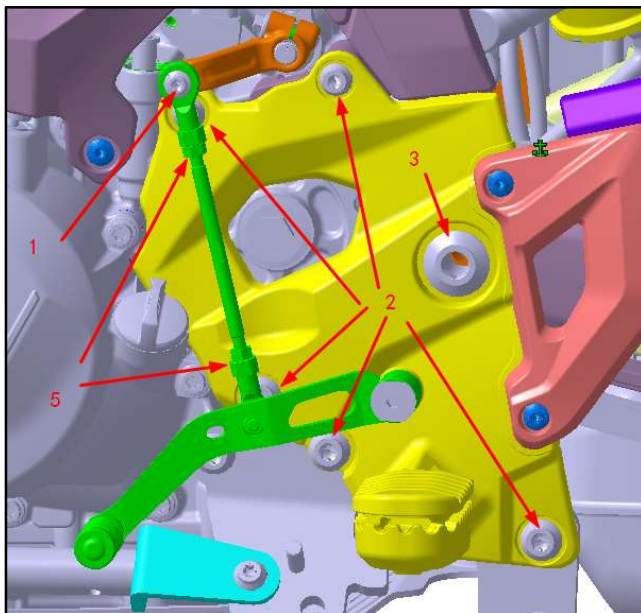
Keep motorcycle upright by parking stand.

Remove bolt 1 by tool and separate gearshift pedal and spline base

Remove bolt 2 by tool and remove bolt 3. Then remove left main footrest and gearshift pedal.

Remove bolt 4 by tool and then remove gearshift pedal.

The re-assembly is completely opposite to disassembly.



Caution:

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Adjust the length of connective bar of gearshift through loosening nut 5, when adjusted to suitable position, then fasten nut 5.

Important:

Coat fixing place 1, 4 with Loctite when re-assembling gearshift pedal.

Coat turning place 3 with lithium lubricant when re-assembling gearshift pedal.

Parameters:

Fastening torque for ball joint of gearshift pedal	M6	Nm	9
Fastening torque for left main footrest	M8	Nm	22
	M10	Nm	40
	M20	Nm	70
Fastening torque for gearshift pedal	M8	Nm	18
Lithium lubricant	/	g	10
Loctite	/	/	Evenly coat onto threaded part

Disassembly and re-assembly for rear brake pedal

Lift up the motorcycle by hanging device.

Remove main stand by referring its description above.

Remove connective bolt 1 for installation base of main stand.

Remove bolt 2 for right main footrest.

Remove elastic circlip 3 on rear fork shaft.

Remove bolt 4 for rear fork shaft, move right main footrest and rear brake pedal kit backwards and get out of operational range.

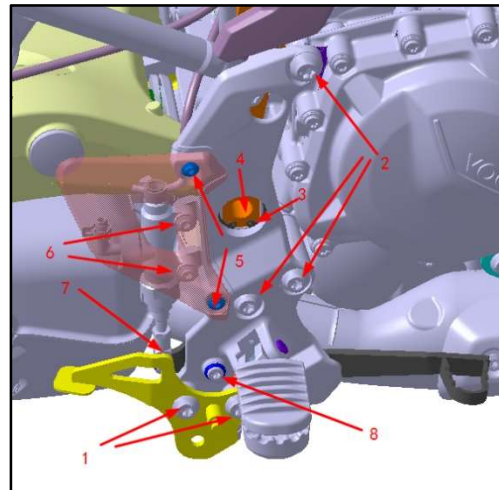
Remove bolt 5 for stopping piece of main footrest.

Remove bolt 6 connects upper pump of rear disc brake.

Remove split pin connects rear brake pedal and main oil cylinder of rear brake, then remove washer and pin shaft 7.

Remove bolt 8 of rear brake pedal and tension spring, finally remove rear brake pedal.

The re-assembly is completely opposite to disassembly.



Caution:

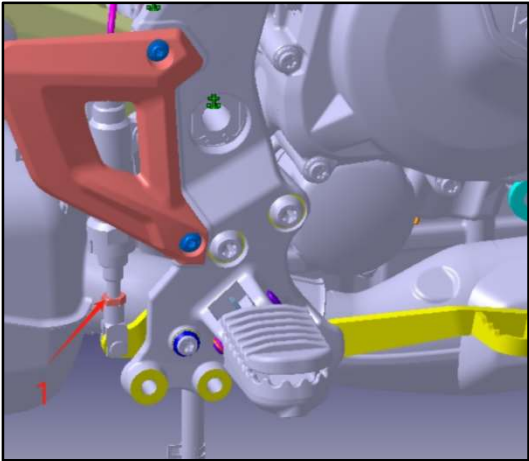
The height of rear brake pedal is adjustable by loosening nut 1.

Important:

When re-assembling rear brake pedal, please coat turning position with lithium lubricant, when it re-assembled, coat the fixing position 8 for rear brake pedal with Loctite.

When the height of rear brake pedal was adjusted, please fasten its nut, otherwise it may get brake failure even accident.

When re-assembling the split pin connects rear brake pedal and main oil cylinder, please replace the split pin for a new one, the used split pin may crack and lead to accident.



Parameters:

Fastening torque for installation base of main stand	M10	Nm	40
Fastening torque for right main footrest	M10	Nm	40
	M12	Nm	95
Fastening torque for rear fork shaft	M20	Nm	70
Fastening torque for stopping piece of main footrest	M5	Nm	3
Fastening torque for upper pump of rear disc brake	M6	Nm	9
Fastening torque for rear brake pedal	M8	Nm	18
Lithium lubricant	/	g	10