ZT125-250-350-368-368(ETC)T-E Maintenance Manual



2026-10-12

Introduction

All the materials, illustrations, photos, etc. collected in this manual are compiled according to the latest products of ZT350-D National IV. However, due to the continuous improvement of the product and other changes, there may be some inconsistencies between your motorcycle and this manual. For colors or upgrades, please refer to the part codes on the official website of Zontes. This manual will not be listed in detail; if the part names in this manual are inconsistent with the official website of Zontes, please refer to the official website of Zontes.Individual parts of different displacements that differ in shape or size but are disassembled and assembled in the same way, will not listed in this manual.

If part of the content of this manual is insufficient, please refer to the "Driver's Manual" included with the bike. The latest version of the driver's manual can be downloaded as a PDF in the model introduction corresponding to the official website of Zontes.

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User notice

This manual is compiled by Guangdong Tayo Motorcycle Technology Co., Ltd. to guide dealers or service personnel to use it. This manual cannot provide more detailed knowledge about motorcycles, and is only for reference for maintenance. If you do not have the corresponding knowledge such as electrician, machine repair, etc., improper assembly or repair failure may occur during repair.

If you need to clean or wash the body parts of the motorcycle, you should use neutral car wash fluid or tap water, diesel, kerosene, etc. Acidic or alkaline car wash liquid will cause irreversible corrosion of the surface paint, electroplating surface, and anodized surface of the parts; gasoline will cause premature aging or hardening of sealants, gaskets, and rubber parts, reducing the service life. Non-woven fabrics should be used for wiping with no residue. Ordinary rags may leave cloth scraps or wool, etc., which may affect the assembly or cause other adverse effects.

Our company will update this manual as soon as possible after the product changes.

The following is the meaning of the icons marked in this manual :

	Failure to observe will cause personal injury or death of the driver or maintenance personnel; or cause serious damage to parts and shorten the service life, etc.
	Failure to comply may result in personal injury or death of the driver or maintenance personnel; or damage to parts, abnormalities, etc.
	Failure to observe the warning will cause personal injury to the driver or maintenance personnel; or matters requiring special attention during disassembly and assembly
	Indicates that there is a requirement for torque there
	Indicates that the piece needs to be replaced after disassembly

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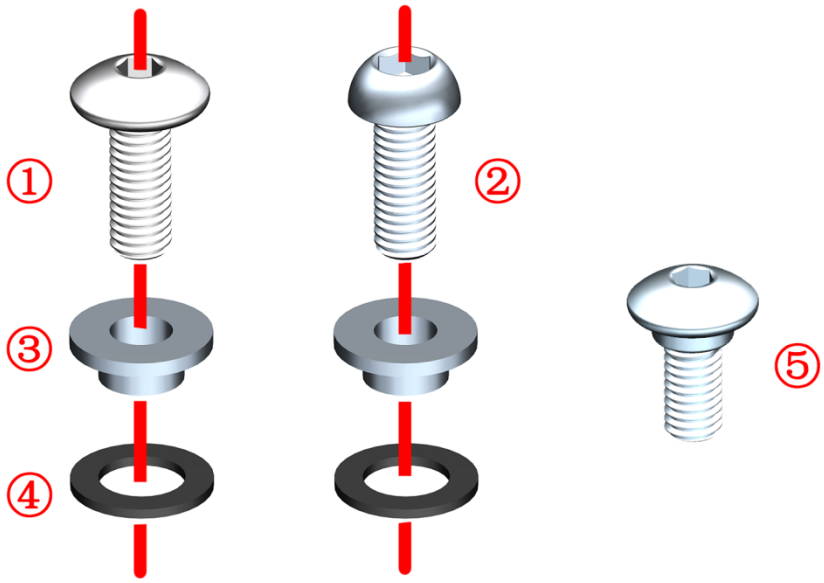
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1. Motorcycle information

Know Before Service

1. Use good quality tools, or special tools and fixtures designed by our company. The use of inferior tools may cause damage to parts, peeling of plating, improper assembly, etc.
2. The O-rings, paper gaskets, copper gaskets, and component sealing rings used for sealing must be replaced before assembling.
3. Fasteners with torque requirements need to use a torque wrench to check the torque; if the torque is not required, refer to the general torque value recommended by general fasteners.
4. Clean up before assembly; after assembly, check whether the assembly is correct and in place.
5. The motorcycle should be parked balanced and pay attention to safety during disassembly and assembly. Including but not limited to the use of electric tools, hand tools, pneumatic tools, hydraulic tools, handling; prevent contact with skin, eyes, burns, etc.
6. The replaced oils, liquids, batteries, etc. must be recycled and handed over to qualified institutions for disposal; it is forbidden to dump them at will to pollute the environment or water sources.
7. Swallowing or inhaling coolant, brake fluid, etc. will cause certain harm to the human body. Any exposed skin such as hands and face should be cleaned thoroughly after each addition. If swallowed by mistake, immediately contact the poison control center or hospital; if inhaled, please immediately go to a ventilated environment. If it accidentally splashes into the eyes, immediately rinse the eyes with a large amount of running water and seek medical advice or consultation in time. Keep away from children and pets.
8.If your 350-D motorcycle is constructed of M6×16 bolts + flange bushings + flange bushing seating rubber, you can use the M6×14 axle shoulder hexagonal bolts instead. Similar explanations will not be repeated in subsequent sections of this manual.



①:1251100-102000 非标螺栓M6×16（304不锈钢）
Non-standard bolt M6×16 (304 stainless steel)
②:1251100-120093 非标螺栓M6×16（环保彩）
Non-standard bolts M6×16 (environmental color)
③:1274100-057095 翻边衬套φ6.2×φ8.4×3.5＋φ14×1.5
Flanging bushing φ6.2×φ8.4×3.5＋φ14×1.5
④:1244100-052000 翻边衬套缓冲胶（φ8.5×φ14×1）
Buffer rubber of flanging bushing (φ8.5×φ14×1)
⑤:1251100-328000 内六角轴肩螺丝 M6×14+8.5×3 SUS302
Hexagon socket head screw M6×14+8.5×3 SUS302

Only part of the basic requirements for matters needing attention, prevention of accidental injury, etc. can be listed; it is not possible to list all situations in detail. Be vigilant during disassembly and assembly to prevent accidents.

Body label

①The motorcycle identification code VIN can be seen after opening the seat Seat, and the VIN code is engraved on the cross tube at the rear of the frame.

②The muffler code is on the inner side above the muffler.

③The nameplate is above the radiator.

④Right front compartment warning label, affixed to the right front compartment lid.

⑤Left front compartment warning label, affixed to the left front compartment lid.

⑥The storage box warning label is pasted on the front of the storage box.

⑦The engine identification code is engraved on the left crankcase.

Note: The content of the nameplate, muffler regulation code, and warning labels varies depending on the engine displacement.



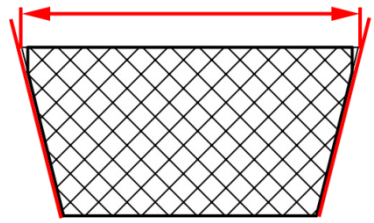
E350 Technical specification

Item		Specification	
Motorcycle	Front tire specification	120/70－15 CM576 56S	
	Rear tire specification	140/70－14 CM577 68S	
	Front rim specification	MT:3.5×15	
	Rear rim specification	MT:3.75×14	
	Brake fluid	DOT4 0.25L（0.07 US gal,0.06 lmp gal）	
	Oil consumption	Replace fine filter :	1.75L（0.46 US gal,0.39 lmp gal）
		Without replacing the fine filter :	1.55L（0.41 US gal,0.34 lmp gal）
	Gearbox oil consumption	0.20L（0.05 US gal,0.04 lmp gal）	
Engine	Fuel oil	95 and above	
	Idle speed (r/min)	1600±100	
Spark plug	Spark plug model	LMAR8A－9	
	Gap	0.8～0.9mm(0.031～0.035 in)	
	Resistance (kΩ)	3～7.5	
Cooling system	Total amount of coolant	1.54L（0.41 US gal,0.34 lmp gal）	
	Thermostat opening temperature	80～84℃(176～183.2F)	
	Thermostat fully open temperature	95℃(203F)	
	Thermostat opening stroke	≥3.5mm (0.13 in)	
	Coolant type	Ethylene glycol + distilled water	

Front wheel/steering system

Item		Standard	Limit
Tread depth		-	≥1.6mm (0.063 in)
Normal temperature standard tire pressure		240kPa(2.45 kgf/cm^2,34.8 PSI)	-
Front wheel rim runout	Radial	-	1.5mm (0.006 in)
	Axial	-	1.5mm (0.006 in)

Rear wheel/suspension system

Item		Standard	Limit
Tread depth		-	≥1.6mm (0.063 in)
Normal temperature standard tire pressure		260kPa (2.65 kgf/cm^2,37.7 PSI)	-
Rear wheel rim runout	Radial	-	1.5mm (0.006 in)
	Axial	-	1.5mm (0.006 in)
V belt 	Top width（1）	27.8mm(1.094 in)	≥26.8mm(1.055 in)
Standard position of rear shock absorber and preload regulator		Fourth gear	-

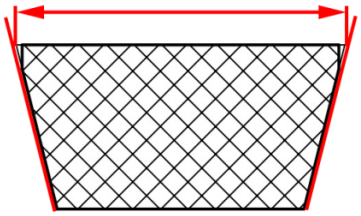
E125 Technical specification

Item		Specification	
Motorcycle	Front tire specification	100/80-14 48P	
	Rear tire specification	120/70-14 61P	
	Front rim specification	MT:2.50×14	
	Rear rim specification	MT:3.50×14	
	Brake fluid	DOT4 0.25L（0.07 US gal,0.06 lmp gal）	
	Oil consumption	Replace fine filter :	0.95L（0.25 US gal,0.21 lmp gal）
		Without replacing the fine filter :	0.9L（0.24 US gal,0.2 lmp gal）
	Gearbox oil consumption	0.16L（0.04 US gal,0.04 lmp gal）	
Engine	Fuel oil	95 and above	
	Idle speed (r/min)	1500±100	
Spark plug	Spark plug model	CPR8EA-9	
	Gap	0.8～0.9mm(0.031～0.035 in)	
	Resistance (kΩ)	3～7.5	
Cooling system	Total amount of coolant	0.78L（0.21 US gal,0.17 lmp gal）	
	Thermostat opening temperature	80～84℃(176～183.2F)	
	Thermostat fully open temperature	95℃(203F)	
	Thermostat opening stroke	≥3.5mm (0.13 in)	
	Coolant type	Ethylene glycol + distilled water	

Front wheel/steering system

Item		Standard	Limit
Tread depth		-	≥1.6mm (0.063 in)
Normal temperature standard tire pressure		220kPa(2.24 kgf/cm^2,31.9 PSI)	-
Front wheel rim runout	Radial	-	1.5mm (0.006 in)
	Axial	-	1.5mm (0.006 in)

Rear wheel/suspension system

Item			Standard	Limit
Tread depth			-	≥1.6mm (0.063 in)
Normal temperature standard tire pressure			270kPa (2.75 kgf/cm^2,39.15 PSI)	-
Rear wheel rim runout	Radial		-	1.5mm (0.006 in)
	Axial		-	1.5mm (0.006 in)
V belt 		Top width（1）	27.8mm(1.094 in)	≥26.8mm(1.055 in)
Standard position of rear shock absorber and preload regulator			Fourth gear	-

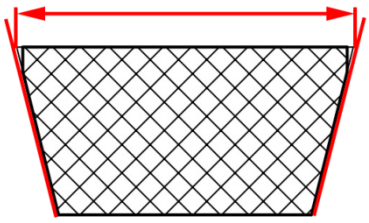
E250 Technical specification

Item		Specification	
Motorcycle	Front tire specification	120/70-15 M/C 56S	
	Rear tire specification	140/70-14 M/C 68S	
	Front rim specification	MT: 3.50×15	
	Rear rim specification	MT: 3.75×14	
	Brake fluid	DOT4 0.25L（0.07 US gal,0.06 lmp gal）	
	Oil consumption	Replace fine filter :	1.75L（0.46 US gal,0.39 lmp gal）
		Without replacing the fine filter :	1.70L（0.45 US gal,0.37 lmp gal）
	Gearbox oil consumption	0.20L（0.05 US gal,0.04 lmp gal）	
Engine	Fuel oil	95 and above	
	Idle speed (r/min)	1600±100	
Spark plug	Spark plug model	LMAR8A-9	
	Gap	0.8～0.9mm(0.031～0.035 in)	
	Resistance (kΩ)	3～7.5	
Cooling system	Total amount of coolant	1.54L（0.41 US gal,0.34 lmp gal）	
	Thermostat opening temperature	80～84℃(176～183.2F)	
	Thermostat fully open temperature	95℃(203F)	
	Thermostat opening stroke	≥3.5mm (0.13 in)	
	Coolant type	Ethylene glycol + distilled water	

Front wheel/steering system

Item		Standard	Limit
Tread depth		-	≥1.6mm (0.063 in)
Normal temperature standard tire pressure		240kPa(2.45 kgf/cm^2,34.8 PSI)	-
Front wheel rim runout	Radial	-	1.5mm (0.006 in)
	Axial	-	1.5mm (0.006 in)

Rear wheel/suspension system

Item		Standard	Limit
Tread depth		-	≥1.6mm (0.063 in)
Normal temperature standard tire pressure		260kPa (2.65 kgf/cm^2,37.7 PSI)	-
Rear wheel rim runout	Radial	-	1.5mm (0.006 in)
	Axial	-	1.5mm (0.006 in)
V belt 	Top width（1）	27.8mm(1.094 in)	≥26.8mm(1.055 in)
Standard position of rear shock absorber and preload regulator		Fourth gear	-

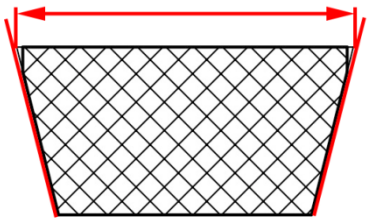
E368/E368(ETC) Technical specification

Item		Specification	
Motorcycle	Front tire specification	120/70-15 M/C 56S	
	Rear tire specification	140/70-14 M/C 68S	
	Front rim specification	MT: 3.50×15	
	Rear rim specification	MT: 3.75×14	
	Brake fluid	DOT4 0.25L（0.07 US gal,0.06 lmp gal）	
	Oil consumption	Replace fine filter :	1.75L（0.46 US gal,0.39 lmp gal）
		Without replacing the fine filter :	1.55L（0.41 US gal,0.34 lmp gal）
	Gearbox oil consumption	0.20L（0.05 US gal,0.04 lmp gal）	
Engine	Fuel oil	95 and above	
	Idle speed (r/min)	1600±100	
Spark plug	Spark plug model	LMAR8A-9	
	Gap	0.8～0.9mm(0.031～0.035 in)	
	Resistance (kΩ)	3～7.5	
Cooling system	Total amount of coolant	1.54L（0.41 US gal,0.34 lmp gal）	
	Thermostat opening temperature	80～84℃(176～183.2F)	
	Thermostat fully open temperature	95℃(203F)	
	Thermostat opening stroke	≥3.5mm (0.13 in)	
	Coolant type	Ethylene glycol + distilled water	

Front wheel/steering system

Item		Standard	Limit
Tread depth		-	≥1.6mm (0.063 in)
Normal temperature standard tire pressure		240kPa(2.45 kgf/cm^2,34.8 PSI)	-
Front wheel rim runout	Radial	-	1.5mm (0.006 in)
	Axial	-	1.5mm (0.006 in)

Rear wheel/suspension system

Item		Standard	Limit
Tread depth		-	≥1.6mm (0.063 in)
Normal temperature standard tire pressure		260kPa (2.65 kgf/cm^2,37.7 PSI)	-
Rear wheel rim runout	Radial	-	1.5mm (0.006 in)
	Axial	-	1.5mm (0.006 in)
V belt 	Top width（1）	27.8mm(1.094 in)	≥26.8mm(1.055 in)
Standard position of rear shock absorber and preload regulator		Fourth gear	-

125/250/368/368（ETC）Brake system

Item		Standard	Limit
Front brake disc	Brake fluid	DOT4	-
	Brake pad use limit	-	Trough bottom
	Brake disc thickness	≥5.0mm(0.197 in)	＜4.5mm(0.177in)
Rear brake disc	Brake fluid	DOT4	-
	Brake pad use limit	-	Trough bottom
	Brake disc thickness	≥4.5mm(0.177 in)	＜4.0mm(0.157 in)

125/250/368/368（ETC）Battery/charging system(These are all E350's data.)

Item			Standard
Battery	Type		YTX12-BS
	Capacity		12Ah
	Battery self-discharge current		1.1mA average
	Voltage	Full	13.1～13.3V
		Charging voltage required for unloaded bike	≤12.8V
		Charging voltage required for loading	≤12V
	Constant voltage charging mode	Constant voltage range	14.4～14.8V
		Initial charging current	0.1～0.2 times the battery capacity
		Charging time	6～24 hours
	Constant current charging mode	Maximum charging current	0.1 times the battery capacity
		Charging time	5～8 hours
		Charging current × charging time must be controlled within the current range of 0.5 to 0.8 times the battery capacity	

125/250/368/368（ETC）0Lamp/Speedometer/switch description

Item			Specification
Light（LED）	Front headlight	High beam	12V～45W
		Low beam	12V～30W
	Front position light		3W
	Front turning light		2.5W
	Rear turning light		2.8W
	License plate light		0.5W
	Brake lights/tail lights		11/5.2W
	Storage box atmosphere light		0.2W
Insurance	Main insurance		25A
	ECM		15A
	ABS hydraulic control unit motor		15A
	Hydraulic control unit ECU		10A
	Lights		15A
	Regular power supply		15A
	spare		15A
Water temperature sensor	Room temperature		1.5～4.0 KΩ

Tightening torque

Bolt tightening torque of general tightening part

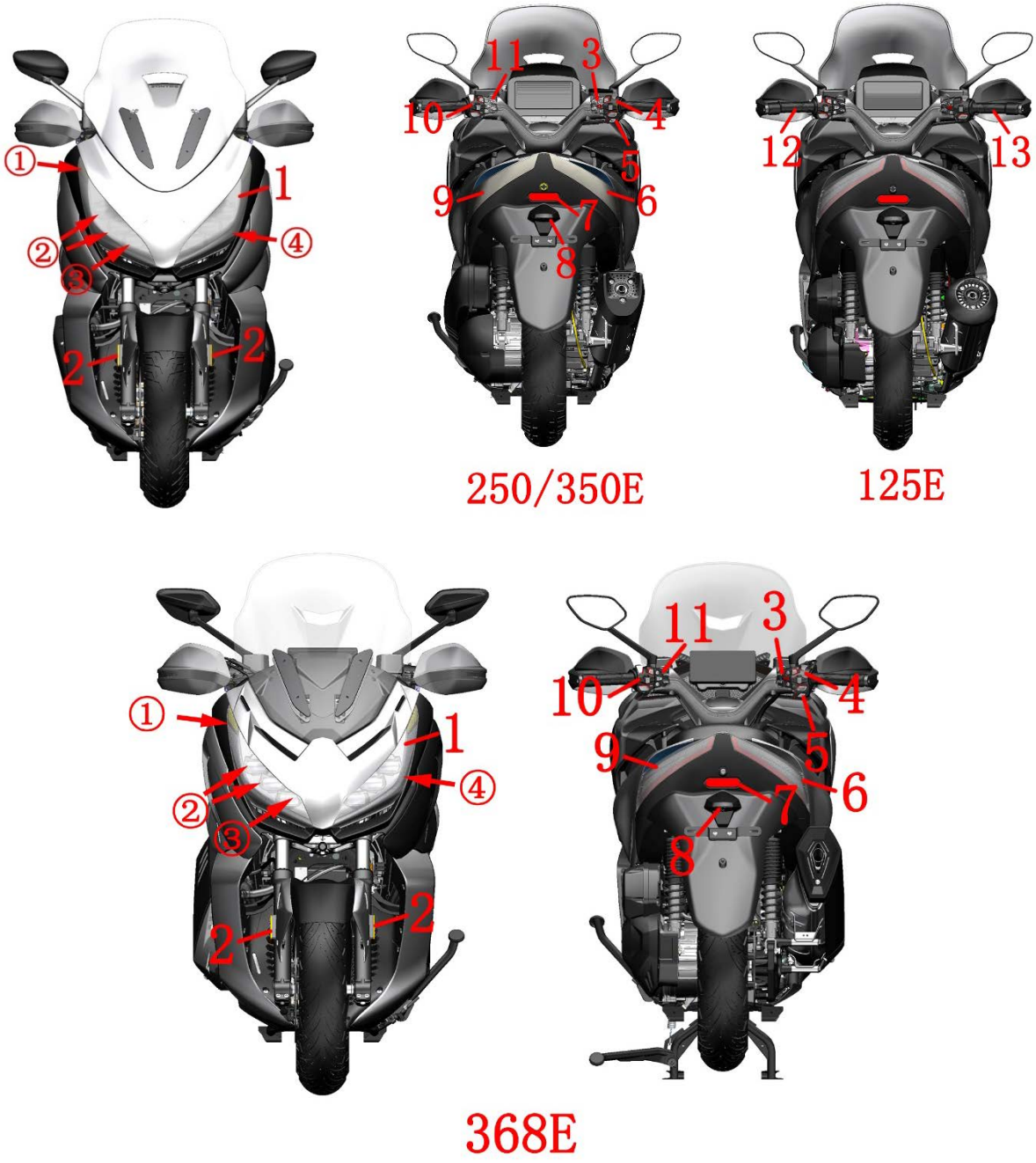
Intensity level	Grade 4.8-6.8 (mark "4" on the head of the bolt)			Grade 8.8 (mark "7" or "8.8" on the head of the bolt)		
Bolt diameter	Tightening torque range	Standard value	Breaking torque	Tightening torque range	Standard value	Breaking torque
M4	1-2	1.4	/	1.5-3	2.5	/
M5	2-4	2.9	4.5	3-6	4.5	8
M6	4-7	4.9	10	8-12	10	14.5
M8	10-16	12.2	20	18-28	22	34
M10	22-25	24.5	45	40-60	44	76
M12	35-55	43	75	70-100	77	112
M14	50-80	69	123	110-160	124	200
M16	80-130	110	195	170-250	200	300
M18	130-190	150	285	200-280	270	450

Remarks: The connection tightening torque of plastic parts is half of the tightening torque of grade 6.8 bolts

Cable/cable/pipe/electrical device distribution map

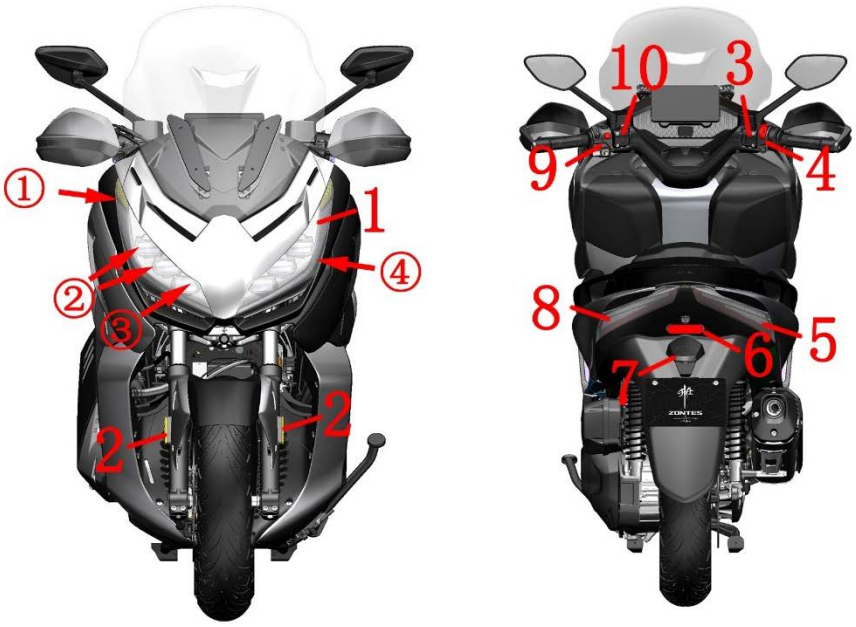
1.Distribution map of lamps and lanterns

1.1 E125/250/350/368



1- Headlights (①-Front turning light position ②-Low beam position ③-High beam position ④-Position light/daytime running light position) 2-Side reflector 3-Right handle sub-switch 4-Right handbar switch 5-Heated handle bar switch 6-Right tail light (right turning light / brake light / position light) 7- Rear reflector 8- License plate light 9 - Left rear turning light (left turning light / brake light / position light) 10 - Left handle switch 11 – Left handle sub-switch 12- left handle rubber 13- right handle rubber

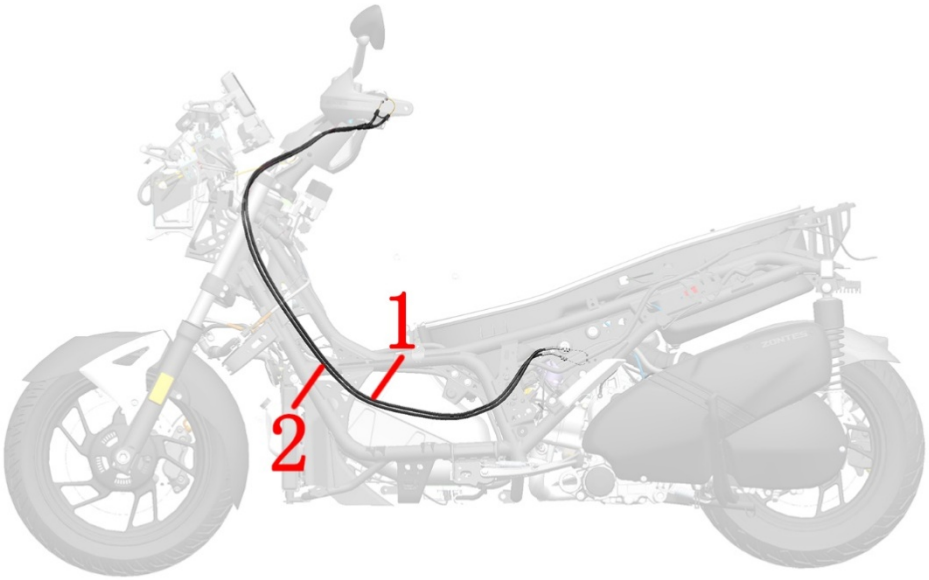
1.2 E368(ETC)



1- Headlights (①-Front turning light position ②-Low beam position ③-High beam position ④-Position light/daytime running light position) 2-Side reflector 3- Right Handlebar Half 4-Right handbar switch 5-Right tail light (right turning light / brake light / position light) 6- Rear reflector 7- License plate light 8-Left rear turning light (left turning light / brake light / position light) 9-Left handle switch 10- Left handlebar half cover

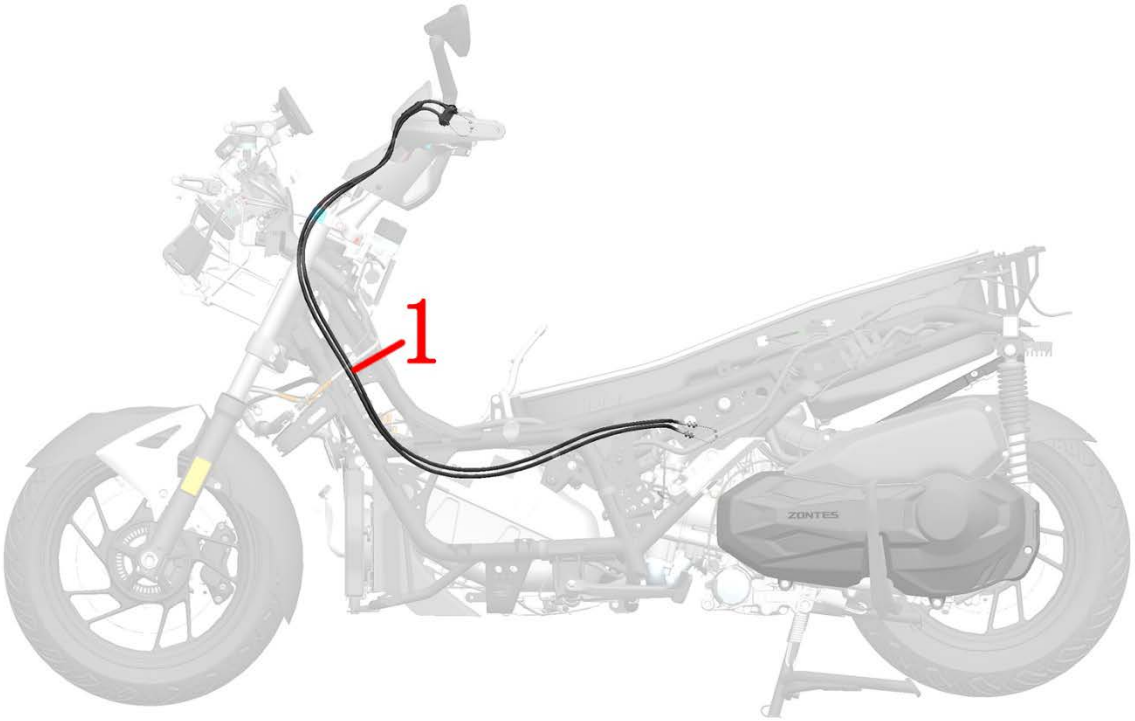
2.Throttle cable

E350-E125-E250



1- Oil return line 2- Fuel line

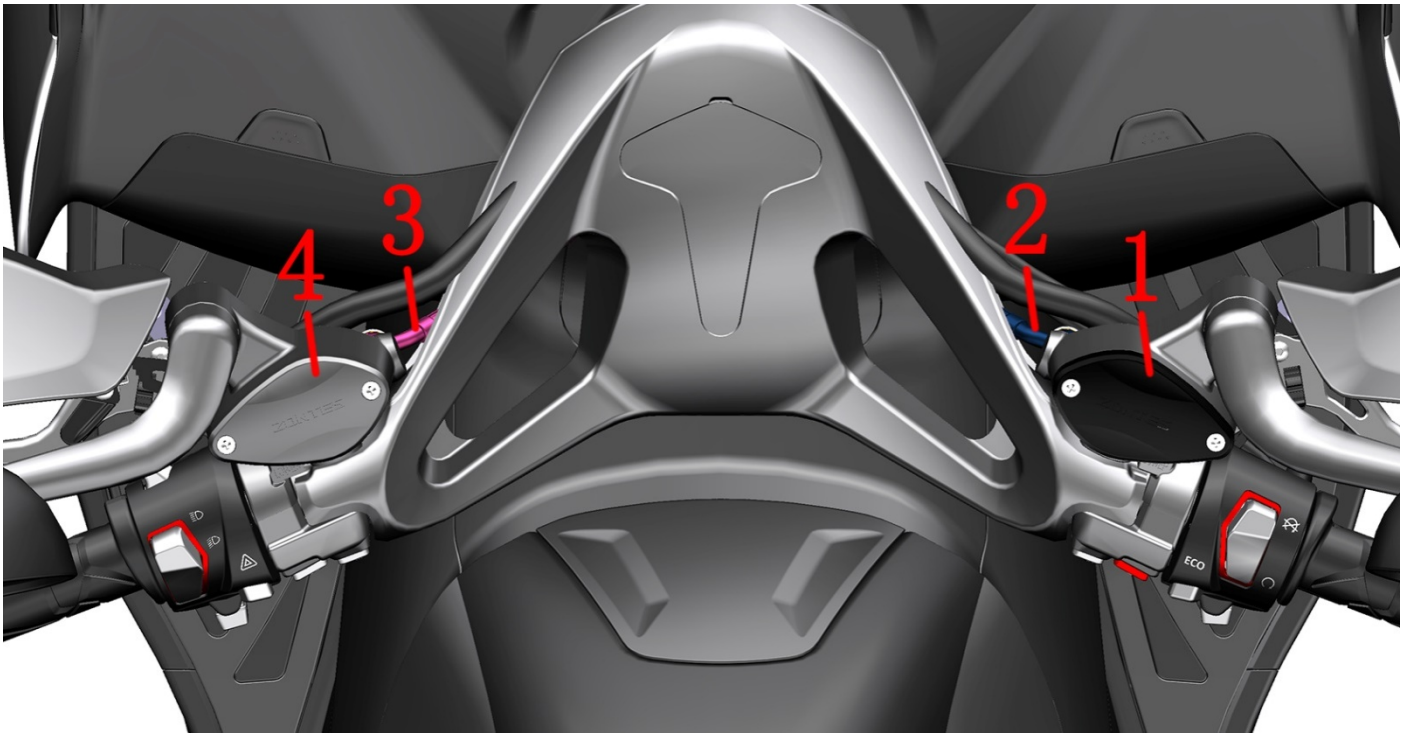
E368 Throttle cable (ETC without throttle cable)



1- throttle cable (Integrated)

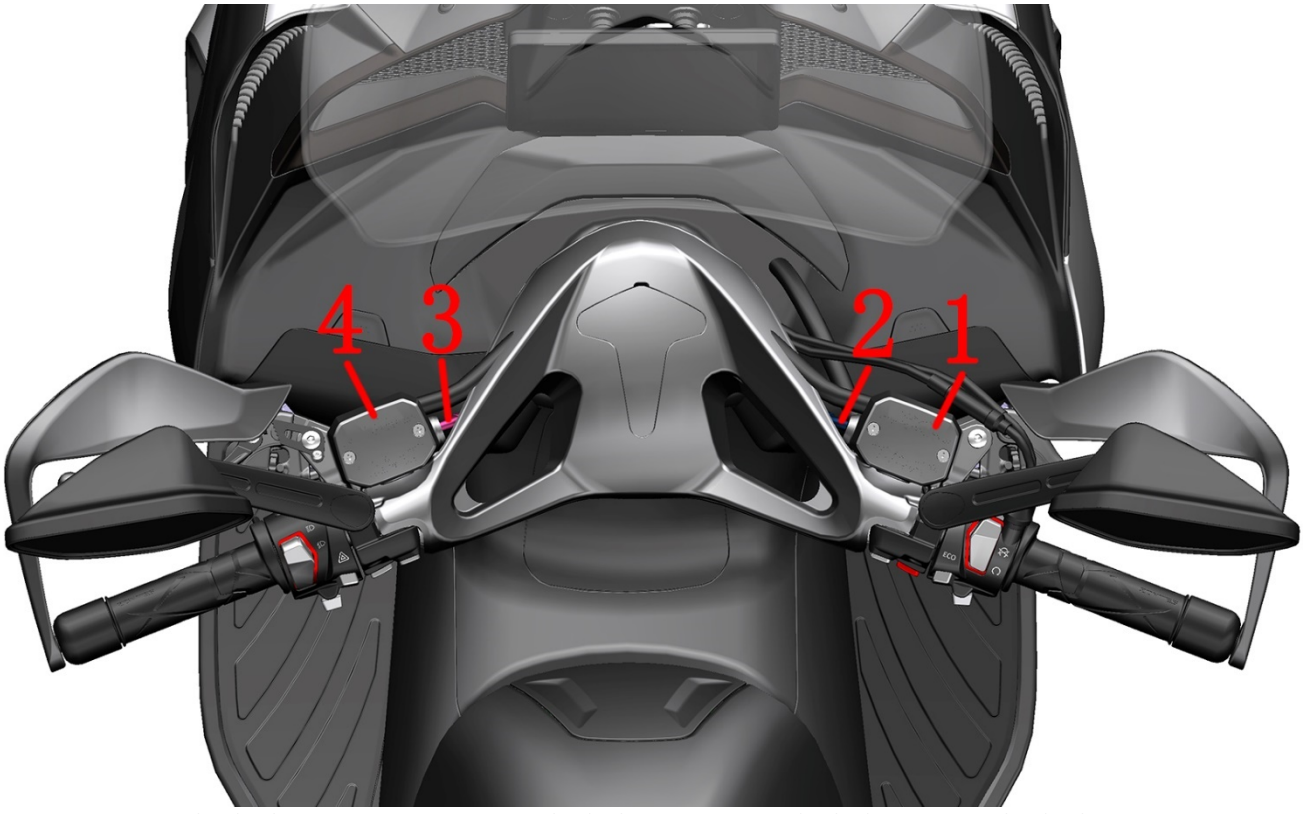
3.Brake upper pump and brake hose

E350-E125-E250



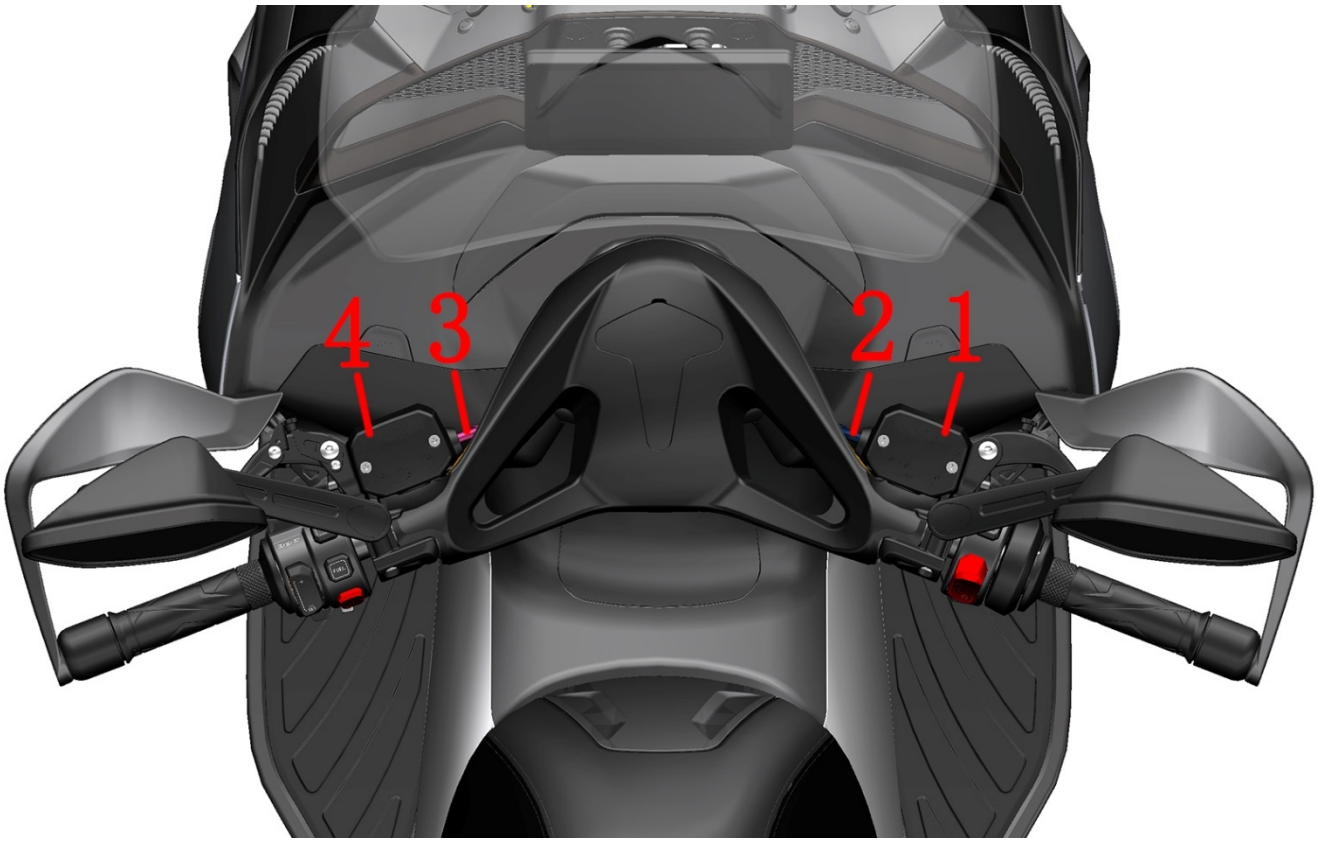
1-Front disc brake main pump 2-FMC-HU brake hose 3-RMC-HU brake hose 4-rear disc brake main pump

E368



1-Front disc brake main pump 2-FMC-HU brake hose 3-RMC-HU brake hose 4-rear disc brake main pump

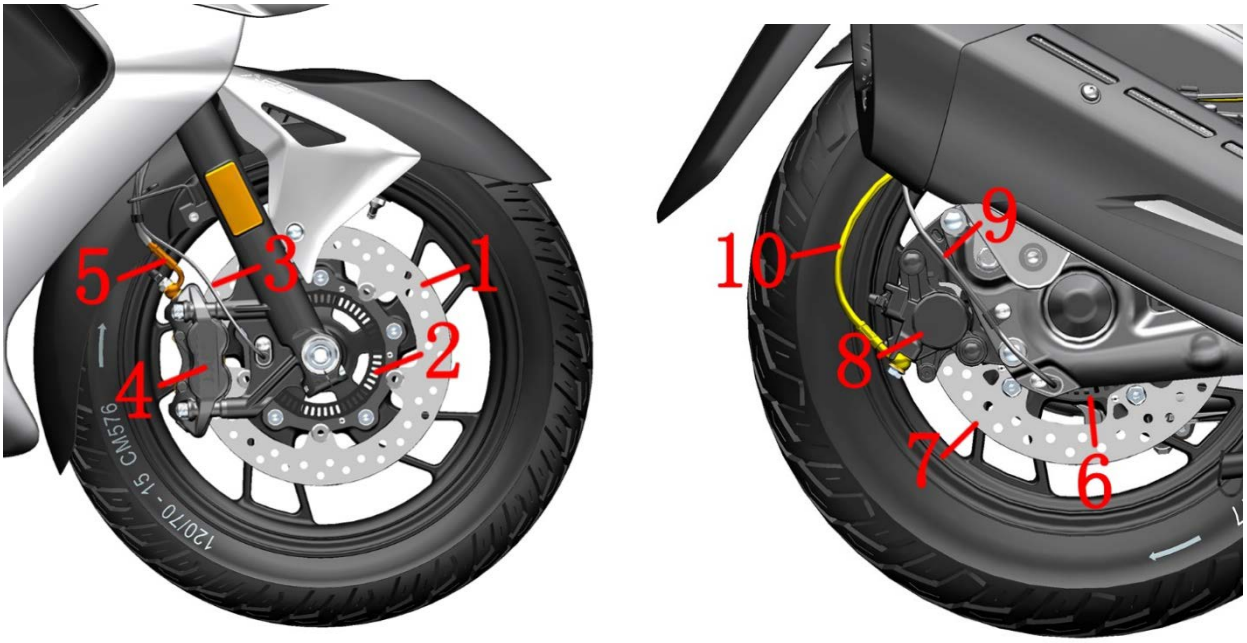
E368(ETC)



1-Front disc brake main pump 2-FMC-HU brake hose 3-RMC-HU brake hose 4-rear disc brake main pump

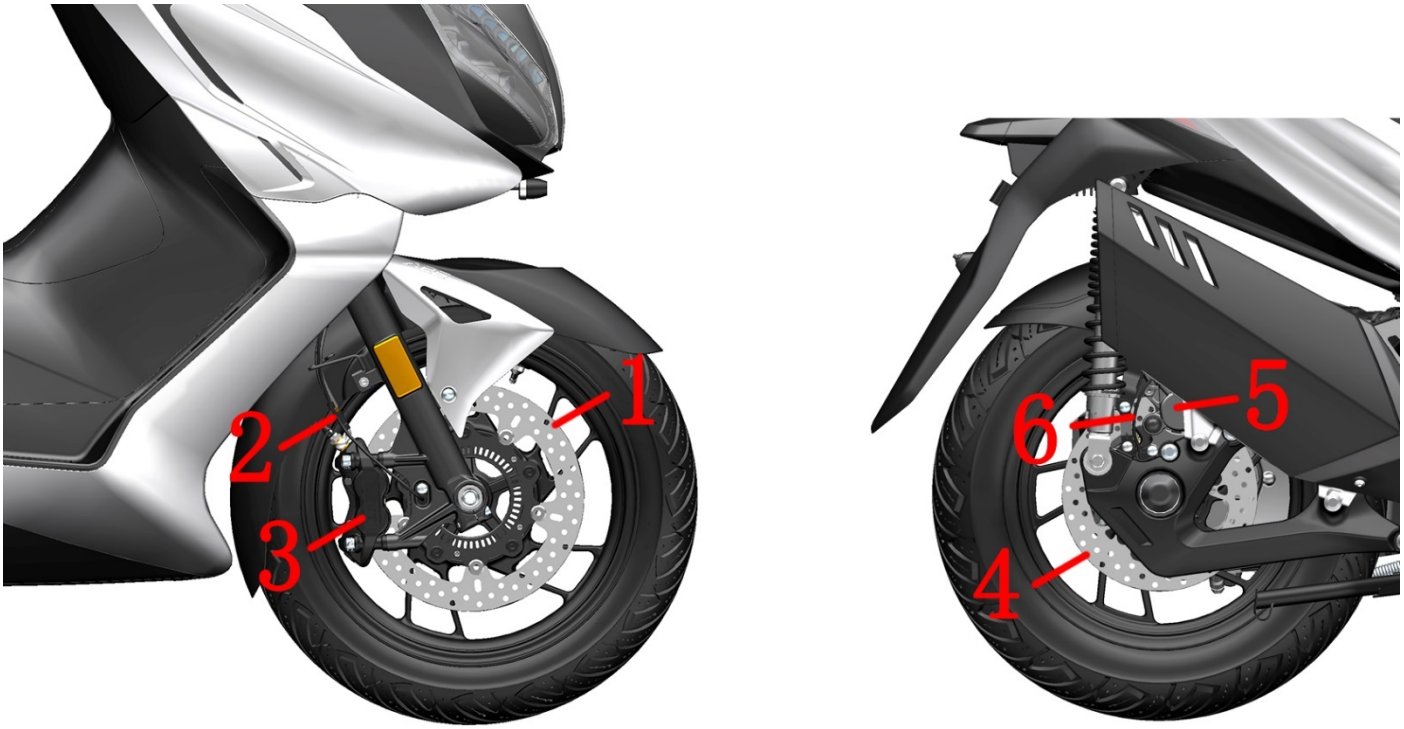
4.Calipers, brake hoses and wheel speed sensors

E350-E125-E250



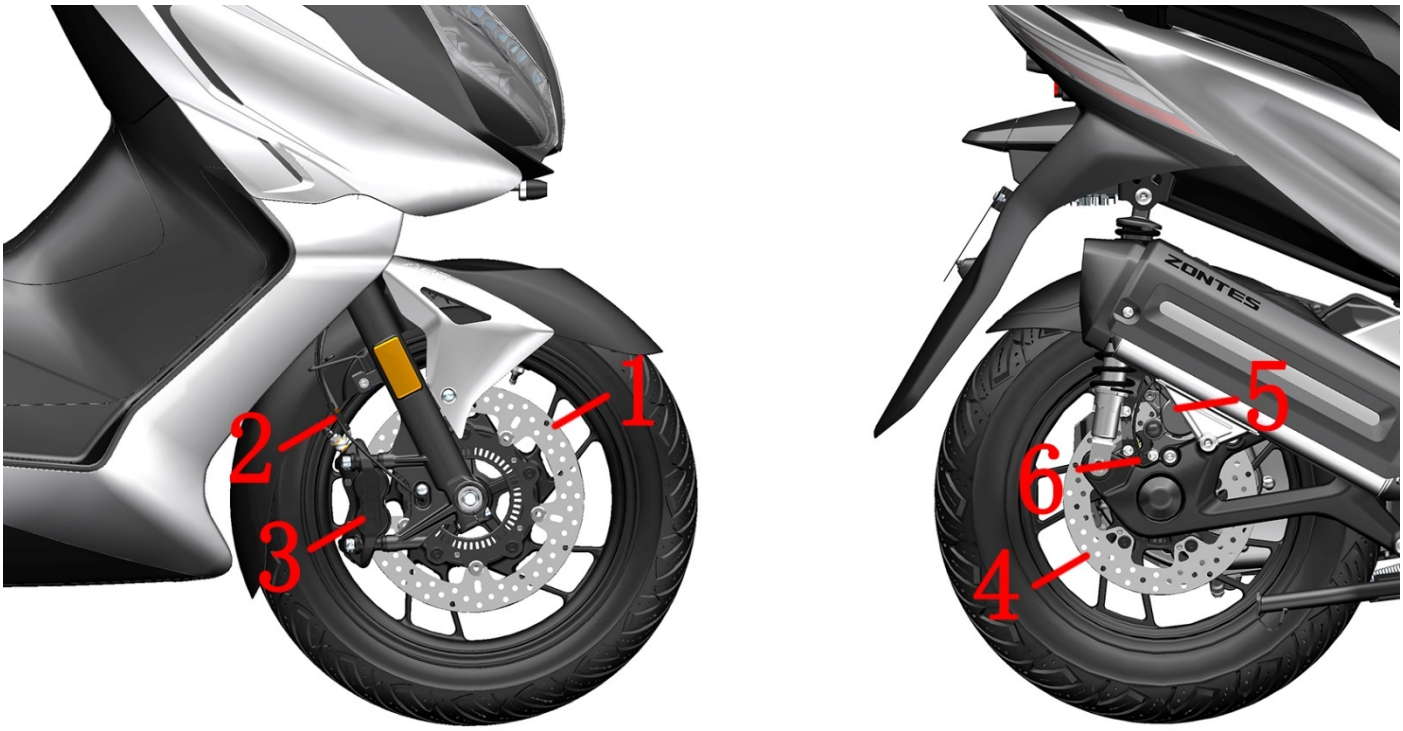
1-brake disc (front) 2- front whell ABS induction ring gear 3-wheel speed sensor (front wheel) 4-front disc brake caliper 5-FC-HU brake hose 6- rear whell ABS induction ring gear 7-brake disc (rear) 8-rear disc brake caliper 9-wheel speed sensor (rear wheel) 10-RC-HU brake hose

E368



1-Front brake disc components 2-Wheel speed sensor（Font Wheel） 3-front disc brake caliper 4-Rear brake disc components 5- Rear disc brake caliper 6- Wheel speed sensor（rear wheel）

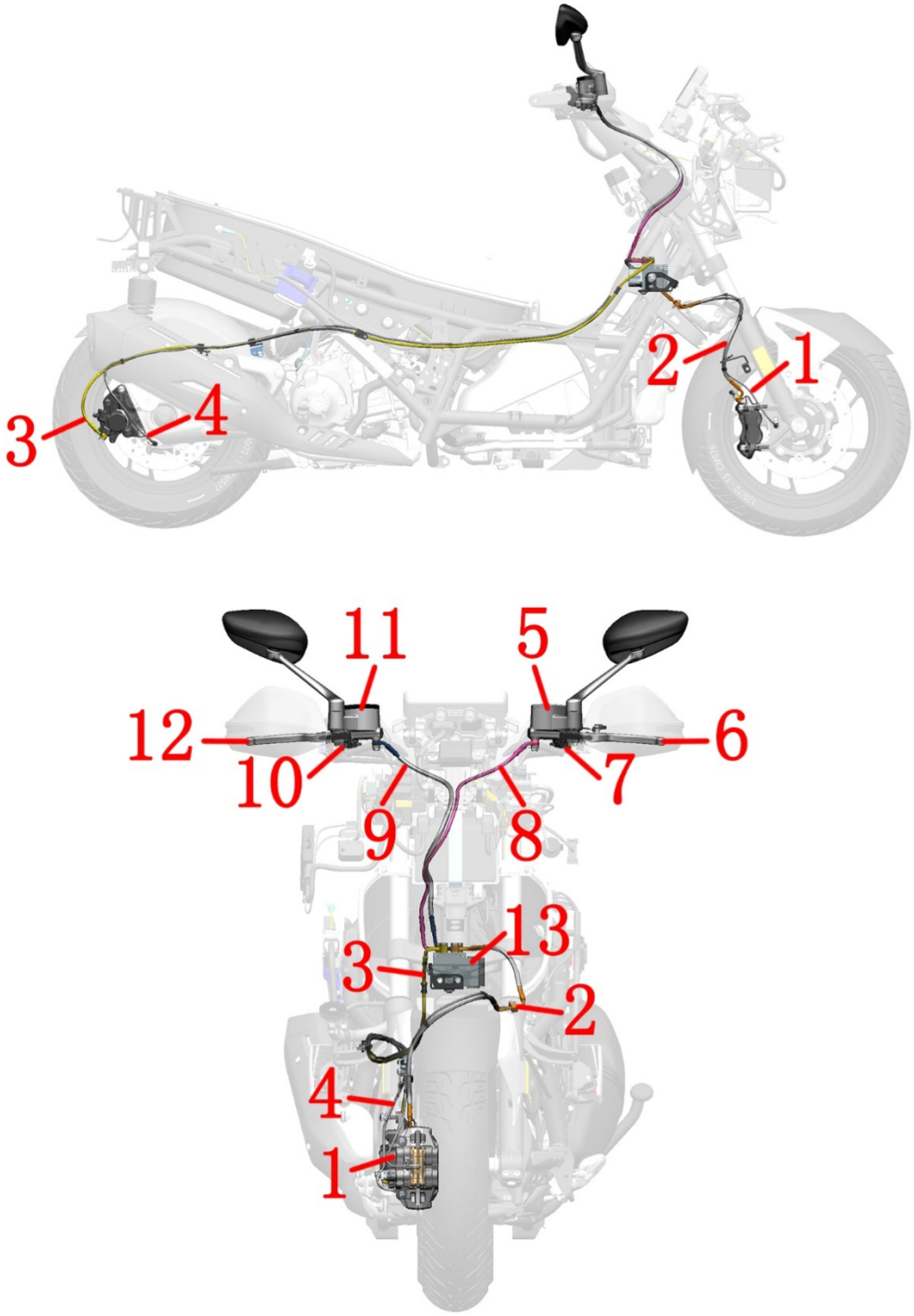
E368(ETC)



1-Front brake disc components 2-Wheel speed sensor（Font Wheel） 3-front disc brake caliper
4-Rear brake disc components 5- Rear disc brake caliper 6- Wheel speed sensor（rear wheel）

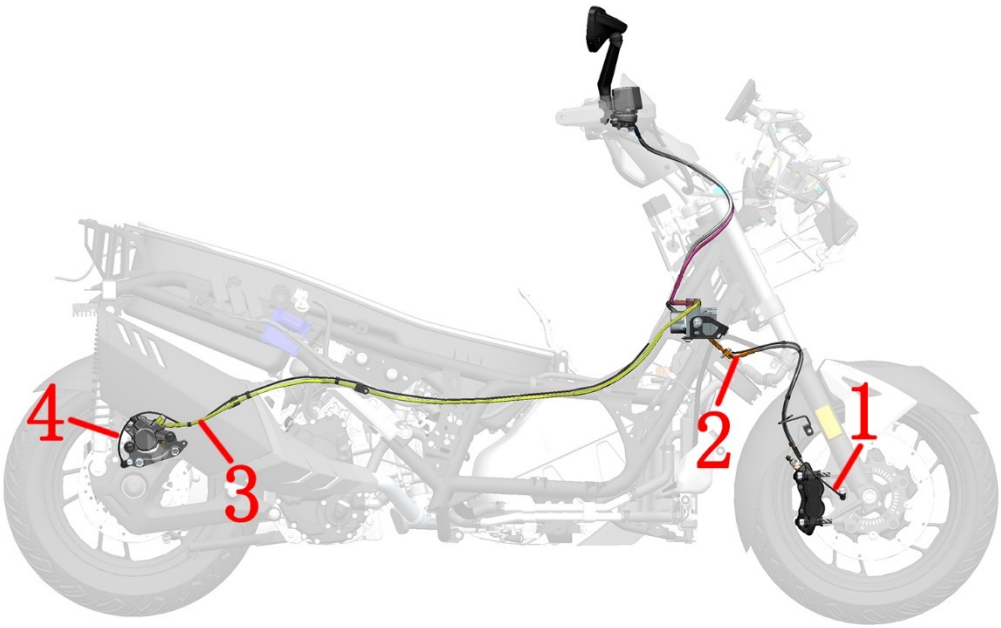
5.Distribution map of brake system accessories

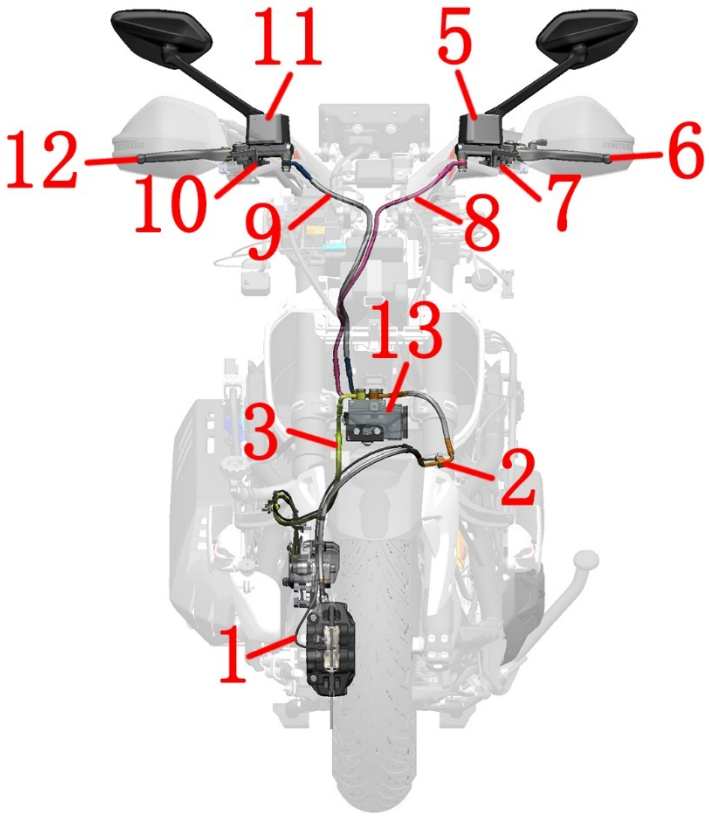
E350-E125-E250



1-Wheel speed sensor (front wheel) 2-FC-HU brake hose 3-RC-HU brake hose 4-Wheel speed sensor (rear wheel) 5- Rear disc brake main pump 6-Rear brake lever 7-Rear brake switch 8- RMC -HU brake hose 9-FMC-HU brake hose 10-Front brake switch 11-Front disc brake main pump 12-Front brake handle 13-Hydraulic control unit

E368



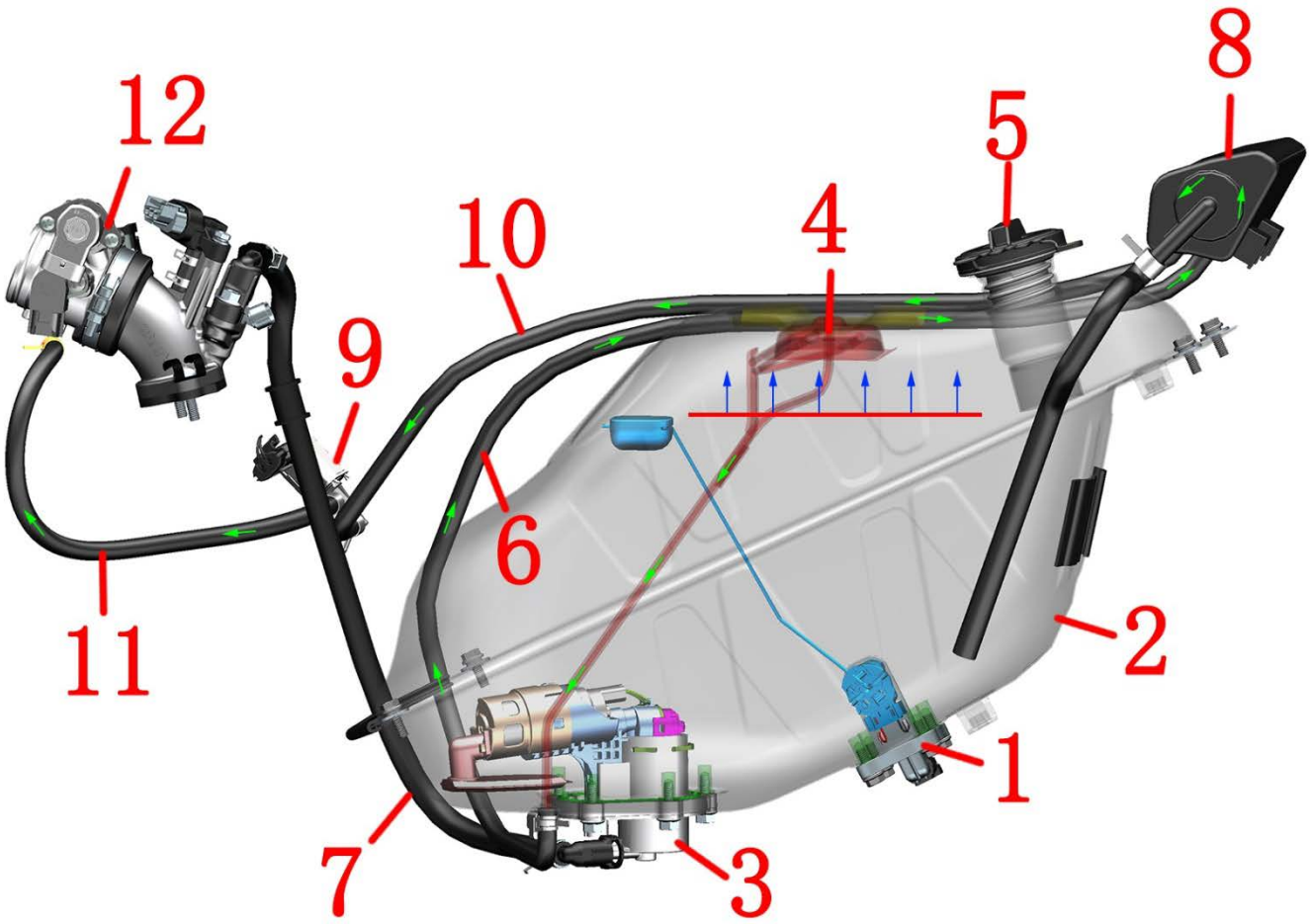


1-Wheel speed sensor (front wheel) 2-FC-HU brake hosepipe 3-RC-HU brake hosepipe 4-Wheel speed sensor (rear wheel)
5-Rear disc brake main pump 6-Rear brake handle 7-Rear brake switch 8-RMC-HU brake hosepipe
9-FMC-HU brake hosepipe 10-Front brake switch 11-Front disc brake main pump
12-Front brake handle 13-Hydraulic control unit

6.Oil supply system

6.1 Fuel evaporation

E350-E125-E250

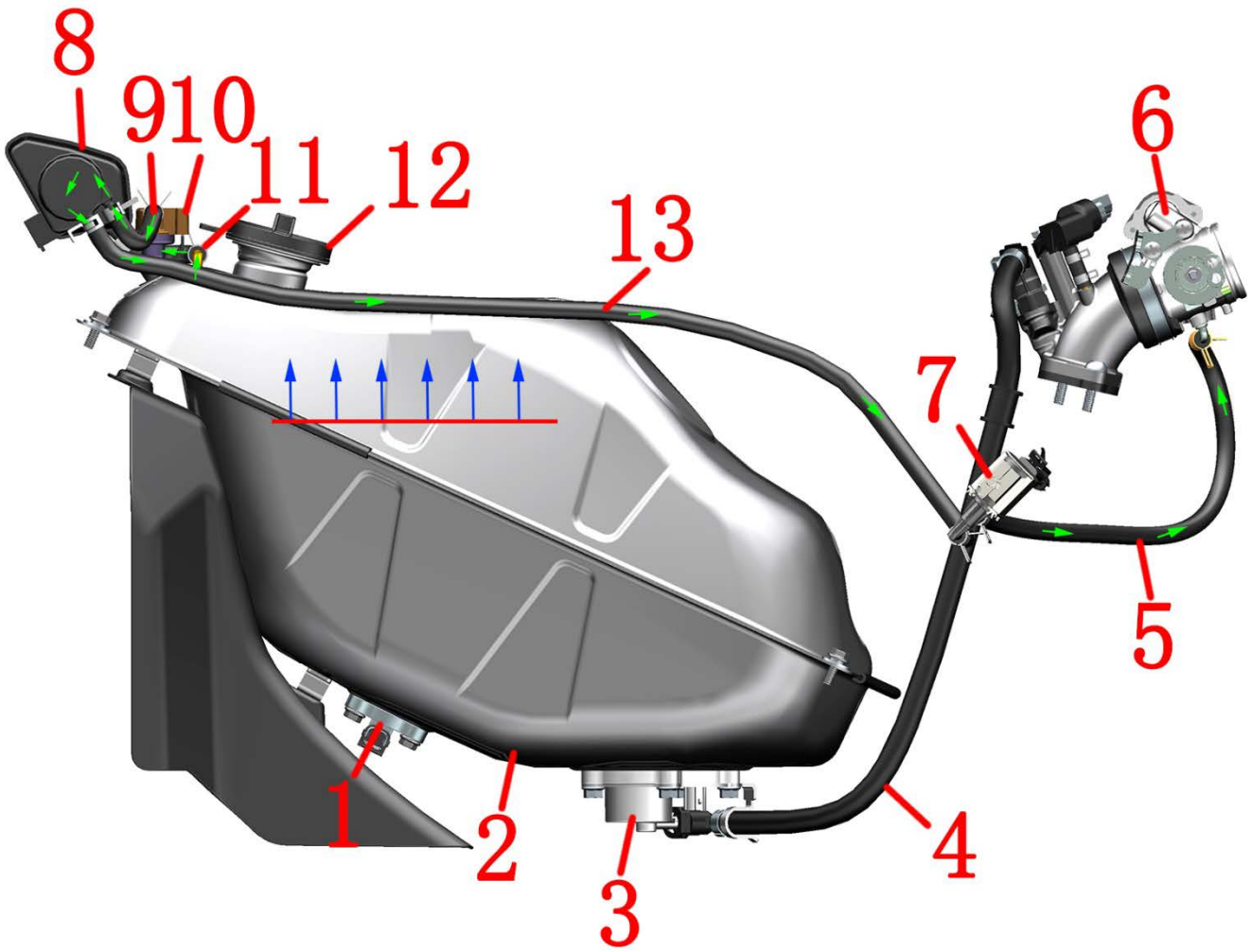


1- Fuel level sensor 2- Fuel tank 3- Fuel pump 4- Oil-air separator (welded inside the fuel tank) 5- Fuel tank cap 6- Adsorption/vent pipe 7-High pressure fuel pipe 8-Carbon tank 9-Carbon tank solenoid valve 10- Solenoid valve intake pipe 11-solenoid valve outlet pipe 12-throttle valve body assembly

Fuel evaporation:

Oil and gas → oil and gas separator (inside the oil tank) → adsorption/vent pipe → solenoid valve intake pipe → solenoid valve outlet pipe → throttle valve body assembly → intake manifold → cylinder

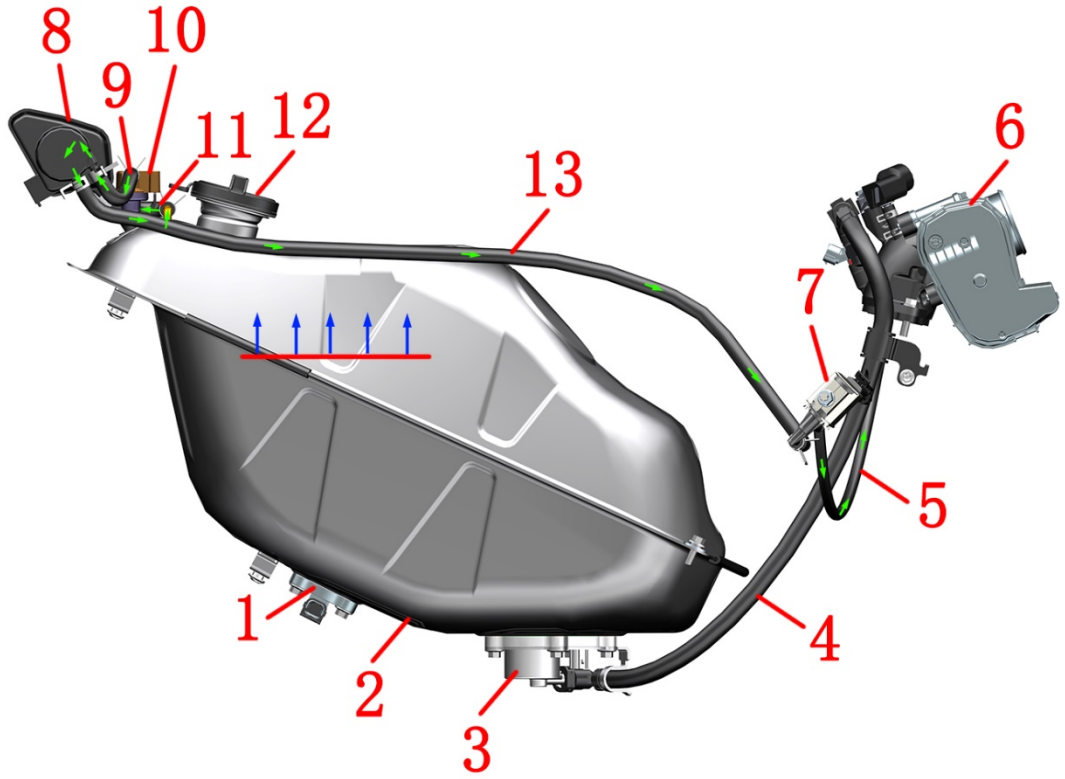
E368



1-Oil level sensor 2-Fuel tank 3-Built-in fuel pump 4-High pressure oil pipe 5-Carbon canister solenoid valve outlet pipe
6-Throttle valve body assembly 7-Canister solenoid valve 8-Carbon tank 9-Carbon canister adsorption tube
10-External oil and gas separator 11- Fuel tank breather pipe 12- Fuel tank cover
13-Carbon canister solenoid valve intake pipe

Fuel evaporation:
Air→Fuel tank breather pipe→External oil and gas separator→carbon canister adsorption tube→Carbon tank→carbon canister solenoid valve intake pipe→carbon canister solenoid valve outlet pipe→Throttle valve body→intake manifold→Cylinder

E368(ETC)

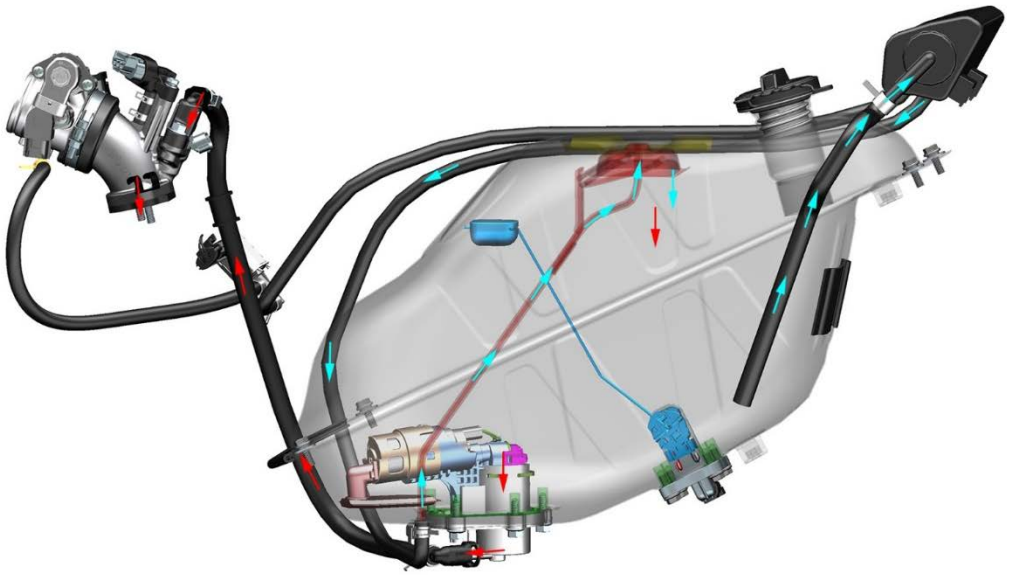


1-Oil level sensor 2-Fuel tank 3-Built-in fuel pump 4-High pressure oil pipe 5-Carbon canister solenoid valve outlet pipe
6-Throttle valve body assembly 7-Canister solenoid valve 8-Carbon tank 9-Carbon canister adsorption tube
10-External oil and gas separator 11- Fuel tank breather pipe 12- Fuel tank cover
13-Carbon canister solenoid valve intake pipe

Fuel evaporation:
Air→Fuel tank breather pipe→External oil and gas separator→carbon canister adsorption tube→Carbon tank→carbon canister solenoid valve intake pipe→carbon canister solenoid valve outlet pipe→Throttle valve body→intake manifold→Cylinder

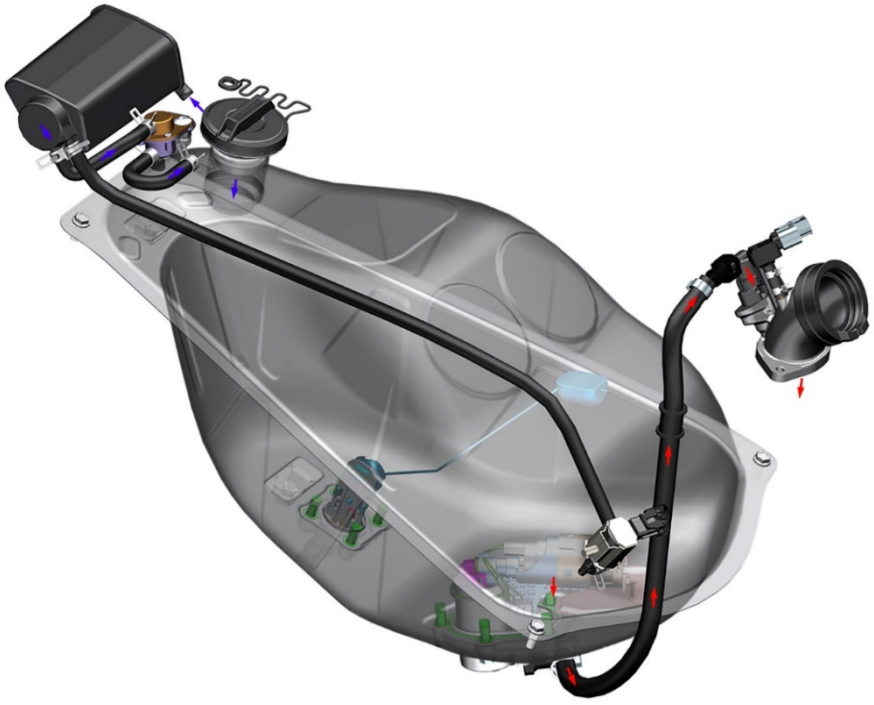
6.2 Fuel supply

E350-E125-E250



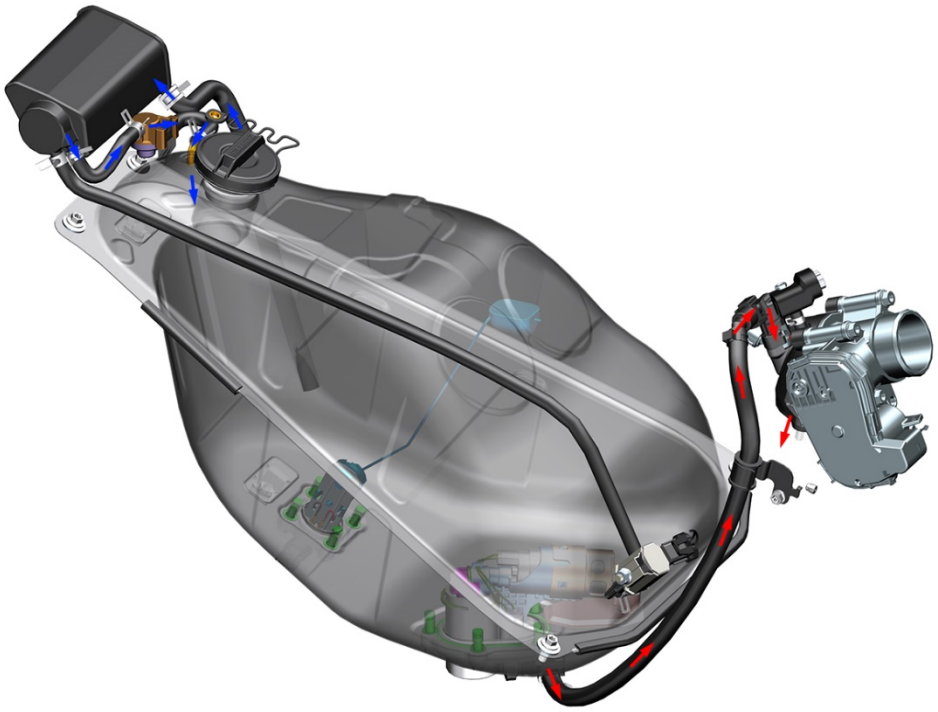
Fuel supply system:
Air→Carbon canister→Adsorption/vent pipe→Oil separator (inside the oil tank)
Fuel → Fuel pump filter screen → Fuel pump → High pressure fuel pipe → Fuel injector → Cylinder

E368



Fuel supply system:
Air → Carbon Canister → Adsorption/Vent Tube → Oil–Gas Separator
Fuel→Fuel pump filter screen→Fuel pump→High pressure fuel pipe→Fuel injector →Cylinder

E368(ETC)

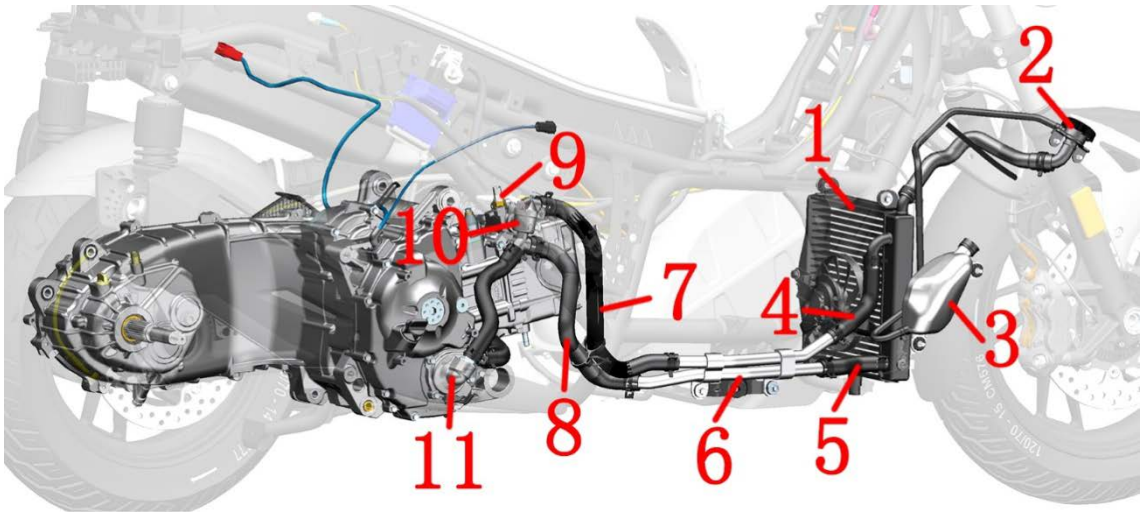


Fuel supply system:
Air→Carbon tank→carbon canister adsorption tube→External oil and gas separator→Fuel tank breather pipe
Fuel→Fuel pump filter screen→Fuel pump→High pressure fuel pipe→Fuel injector →Cylinder

7.Distribution map of cooling system accessories

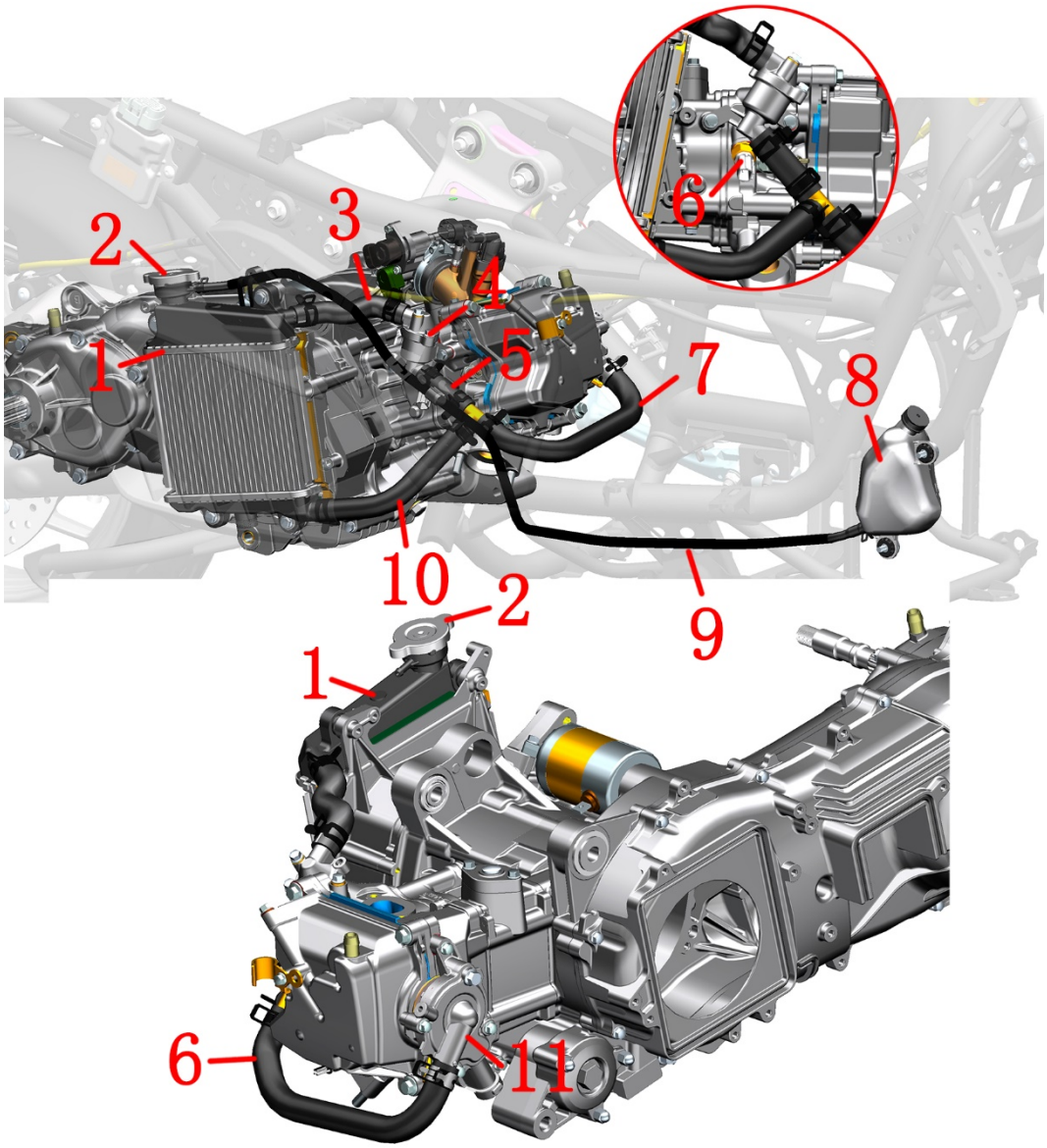
Cooling system

E250-E350



1-Main water tank 2-Water tank filling port 3-Auxiliary water tank 4-Main water tank inlet pipe 5-Main water tank outlet pipe 6-Aluminum water pipe 7-Thermostat outlet pipe 8-Engine inlet pipe 9-Water and oil common sensor 10-Thermostat 11-Water pump cover assembly

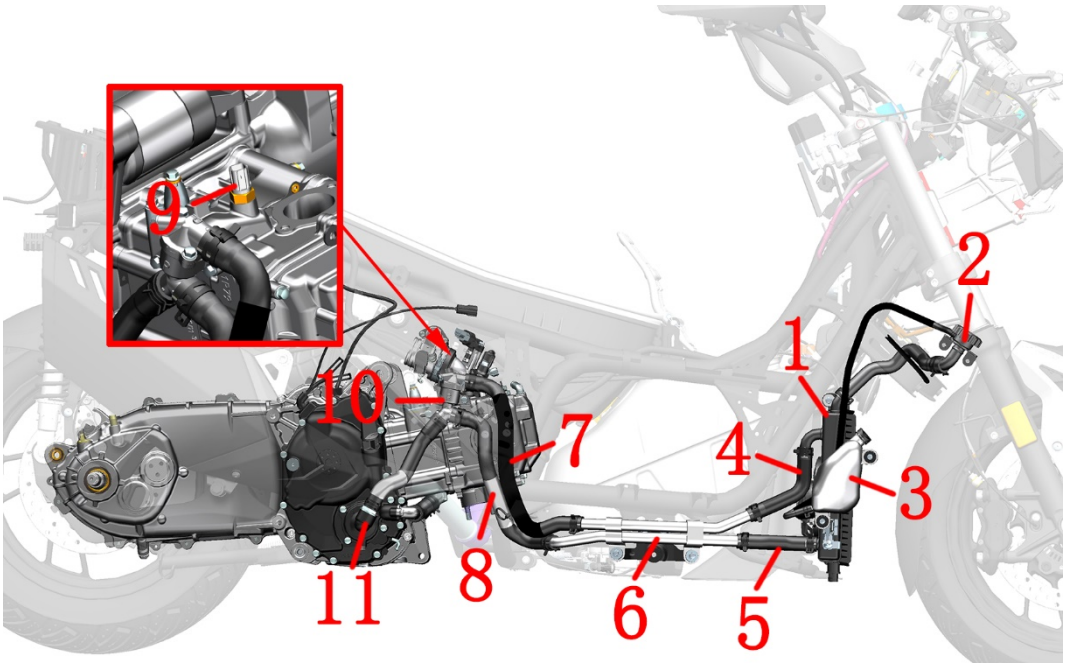
E125



-

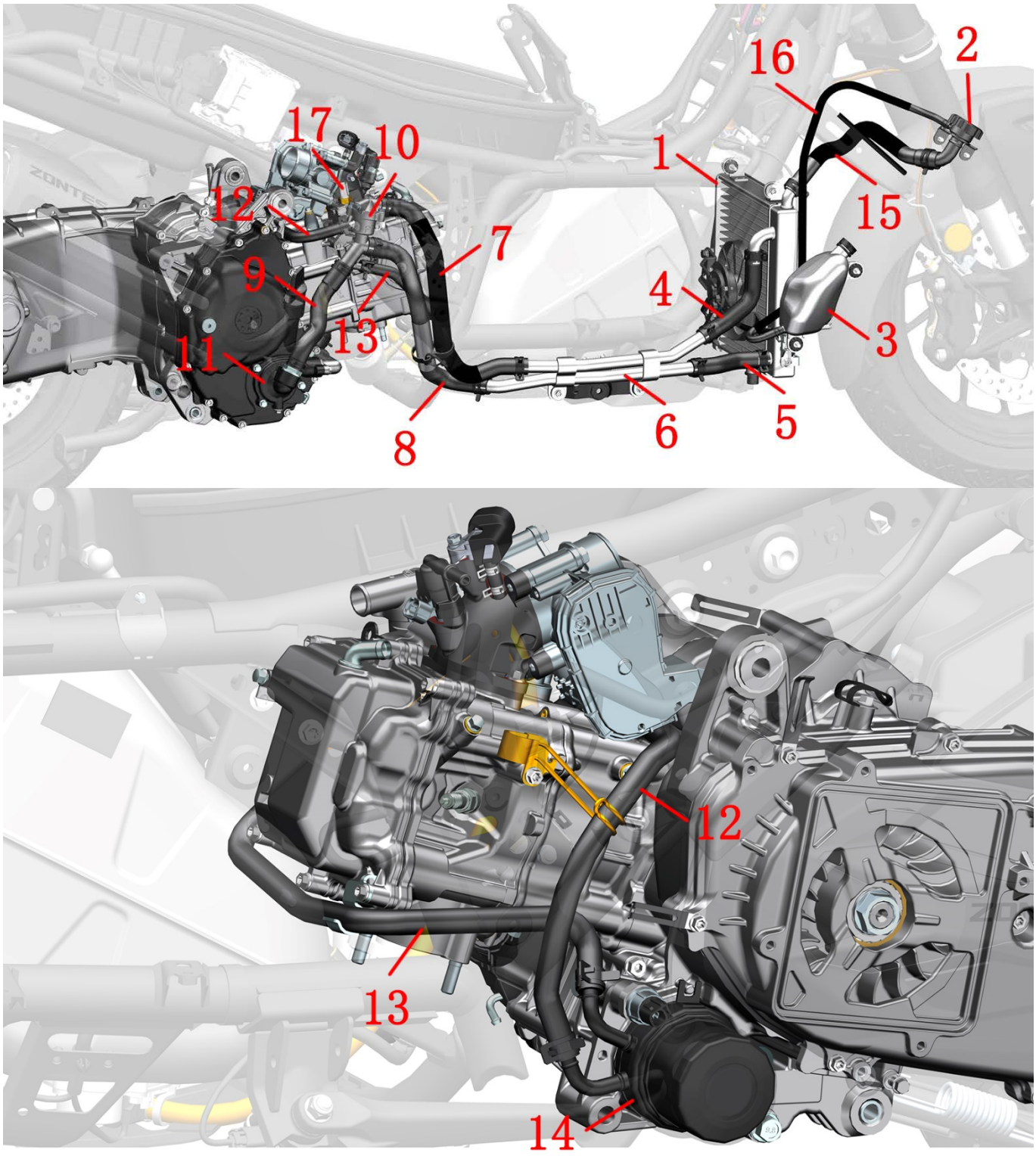
1-Main water tank 2-Water tank filling port 3- Main water tank inlet pipe 4- Thermostat 5- Thermostat outlet pipe 6-Water and oil common sensor 7- Engine inlet pipe 8-Auxiliary water tank 9-Auxiliary water tank connecting water pipe 10- Main water tank outlet pipe 11-Water pump cover assembly

E368



1-Main water tank 2-Water tank filling port 3-Auxiliary water tank 4-Main water tank inlet pipe 5-Main water tank outlet pipe 6-Aluminum water pipe 7-Thermostat outlet pipe 8-Engine inlet pipe 9-Water and oil common sensor 10-Thermostat 11-Water pump cover assembly

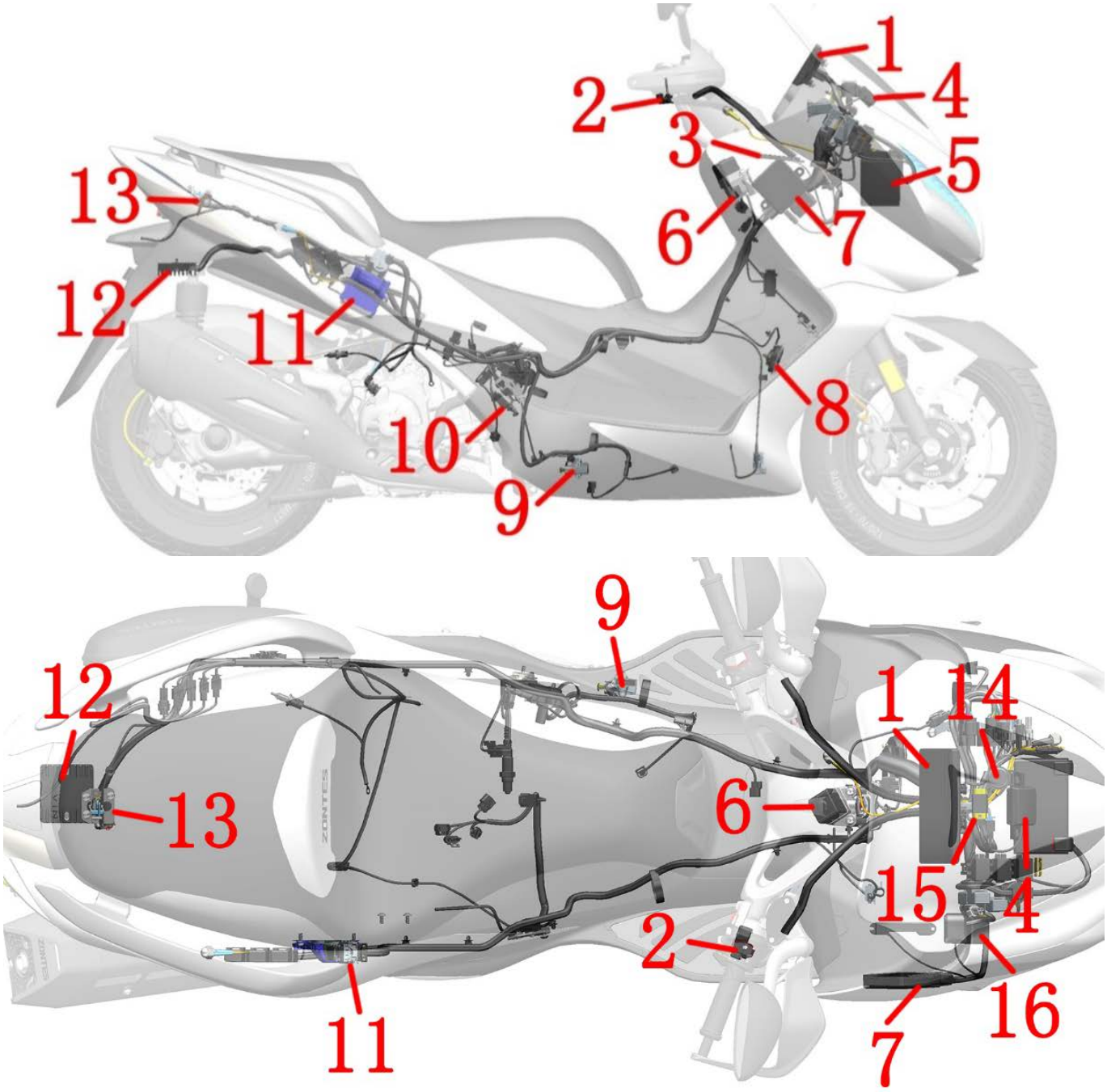
E368（ETC）



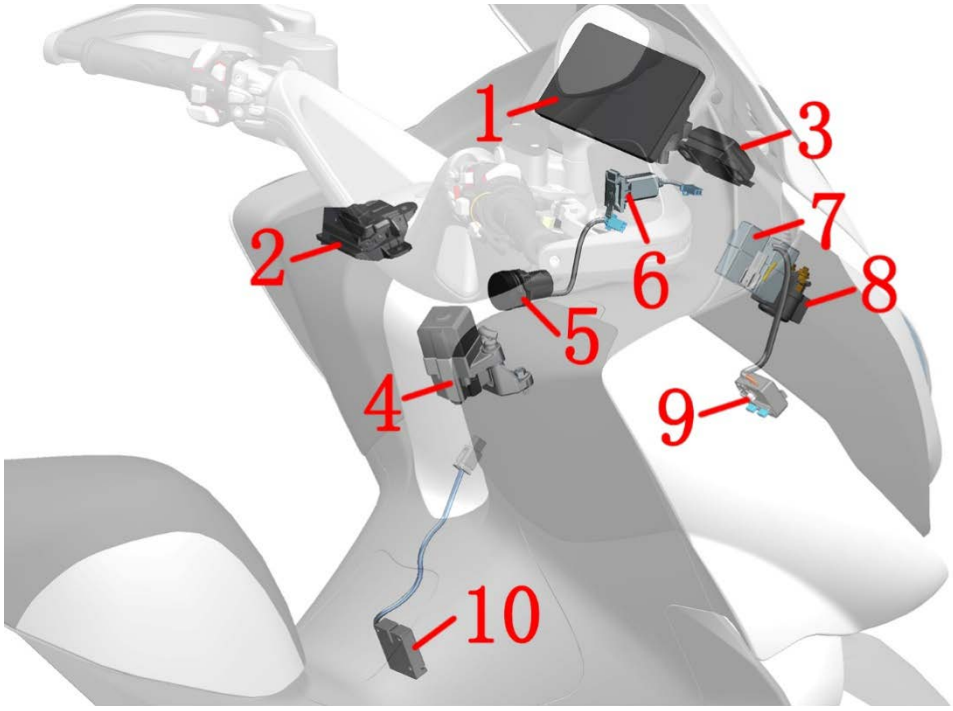
1-Main water tank 2-Water tank filling port 3-Auxiliary water tank 4-Main water tank inlet pipe 5-Main water tank outlet pipe
6-Aluminum water pipe 7-Thermostat outlet pipe 8-Engine inlet pipe 9- water pump cover inlet pipe 10- thermostat
11- Water pump cover 12- Oil Cooler Water Pipe Bracket 13- Oil cooler water outlet Pipe 14- Oil cooler
15- Water Tank Fill Port Connection Pipe16-Connecting water pipe of vice water tank 17- communal sensor of water and oil

8.Electrical device layout

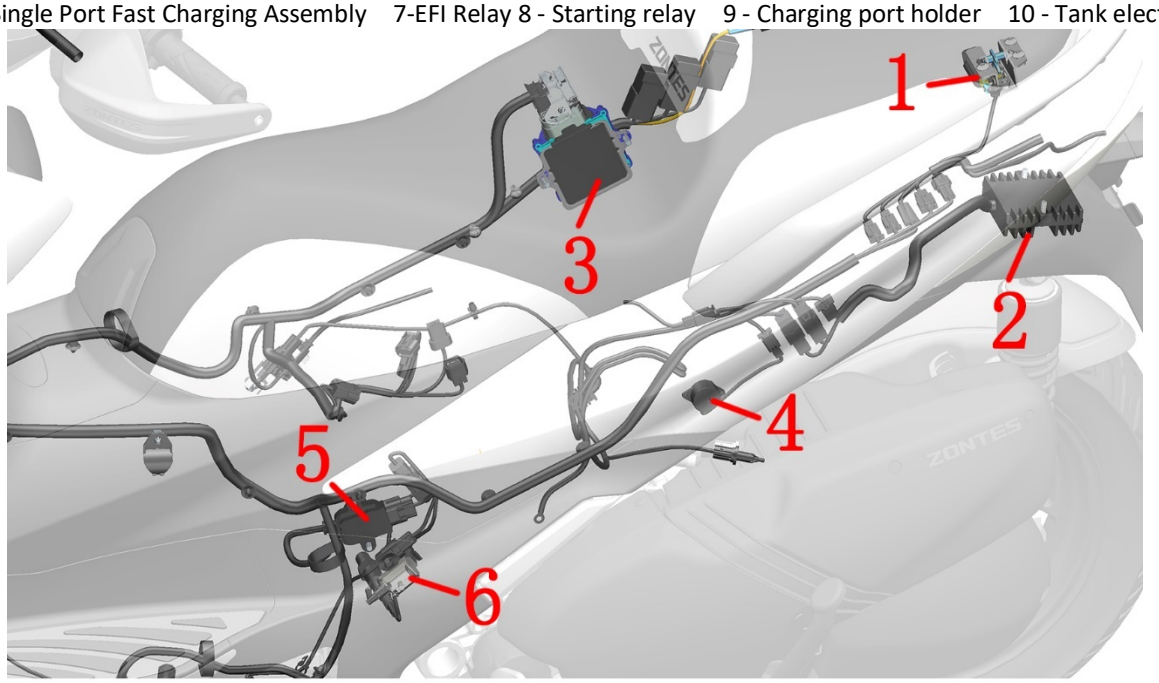
E350



1-TFT Meter 2-Electric Heat Handle bar Switch 3-Non-inductive antenna 4-Windshield motor controller 5-Battery 6-Main lock 7-PKE 8-Horn 9-Side bracket flame-out switch 10-Carbon canister solenoid valve 11-Engine controller (ECU) 12-Rectifier 13-Seat lock 14-Flash 15-Dump switch 16- GPS antenna

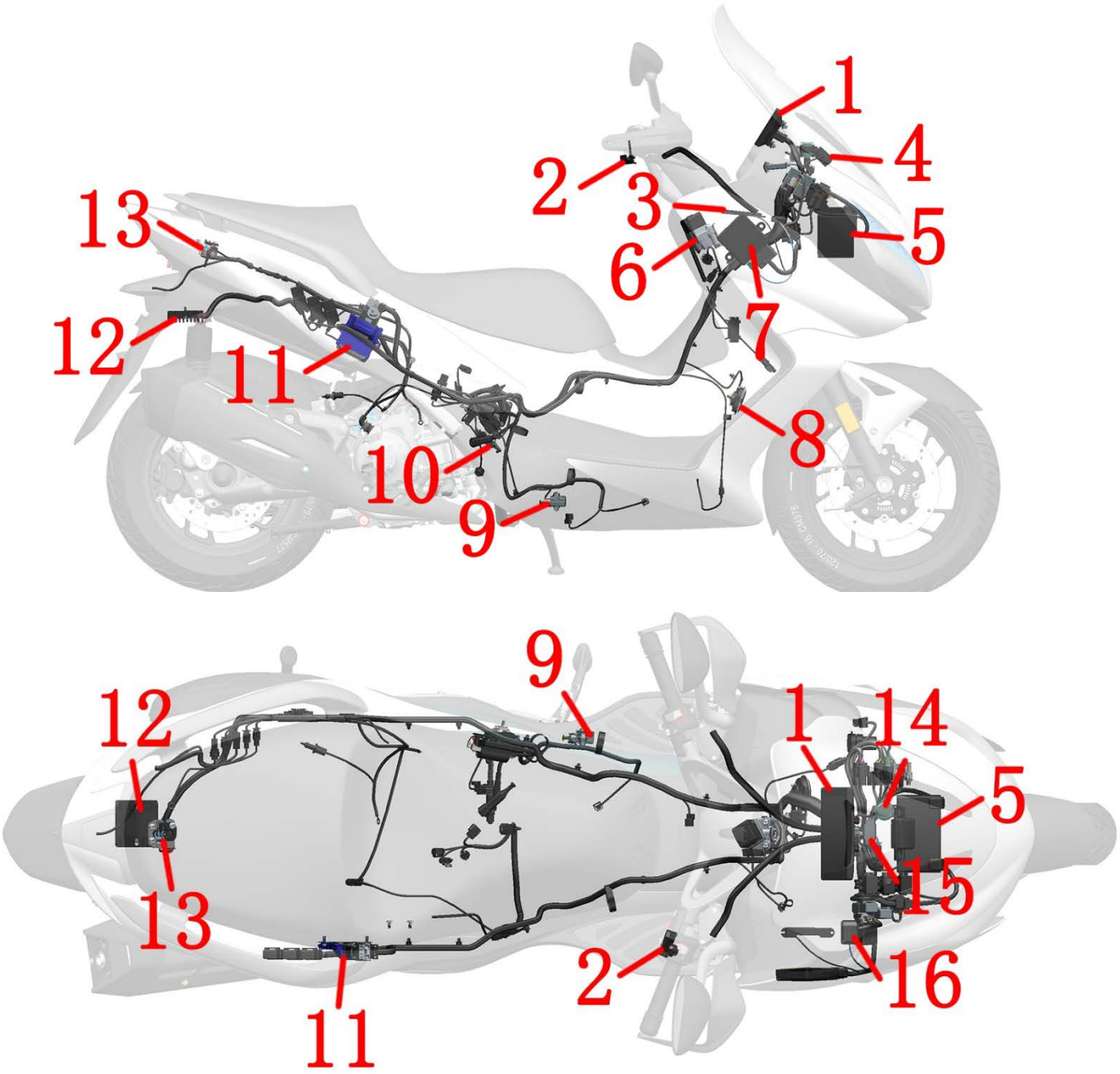


1-TFT Meter 2-Front Left Storage Box Lock 3-Windshield Motor Controller 4-Main lock 5- Double Buckle USB Charging Cable 6-Single Port Fast Charging Assembly 7-EFI Relay 8 - Starting relay 9 - Charging port holder 10 - Tank electronic lock

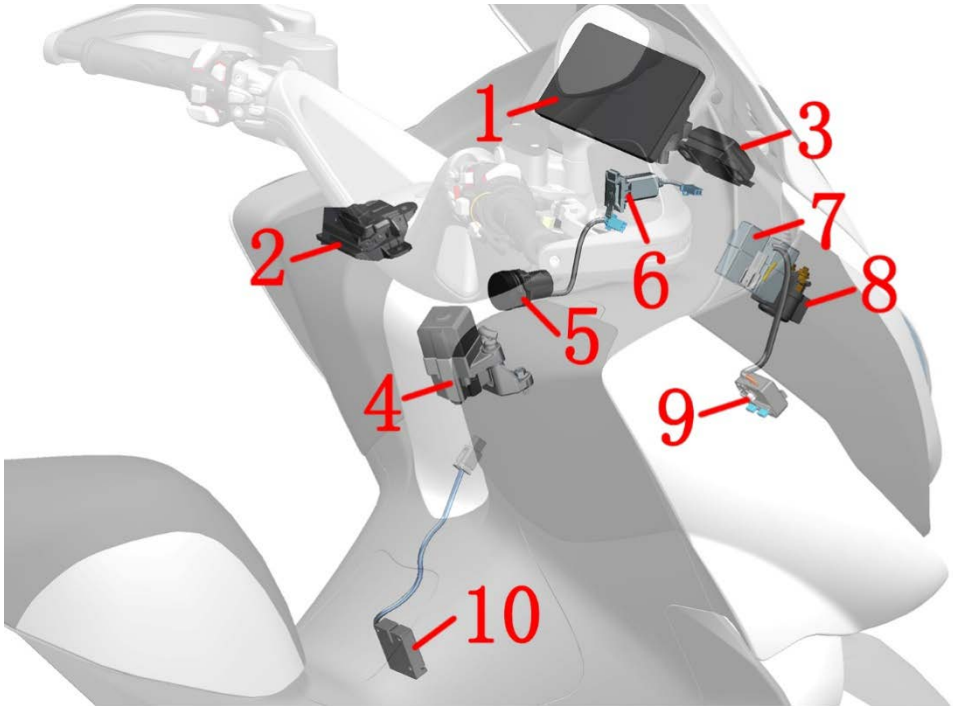


1 - Seat lock 2 - Rectifier 3 - Engine controller (ECU) 4 - Buzzer 5 - Ignition coil body 6 - Carbon canister solenoid valve

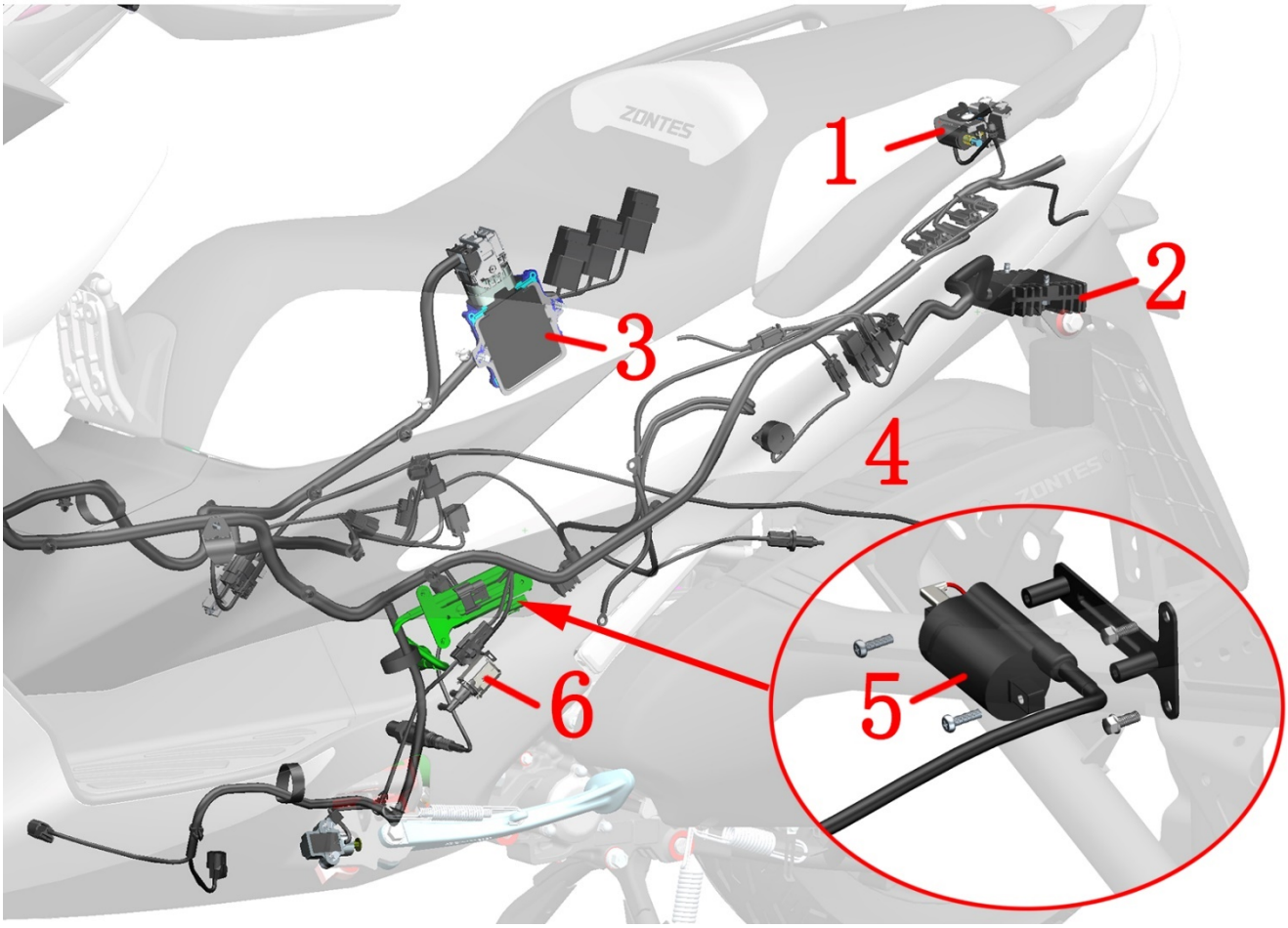
E250



1-TFT Meter 2-Electric Heat Handle bar Switch 3-Non-inductive antenna 4-Windshield motor controller 5-Battery 6-Main lock 7-PKE 8-Horn 9-Side bracket flame-out switch 10-Carbon canister solenoid valve 11-Engine controller (ECU) 12-Rectifier 13-Seat lock 14-Flash 15-Dump switch 16- GPS antenna

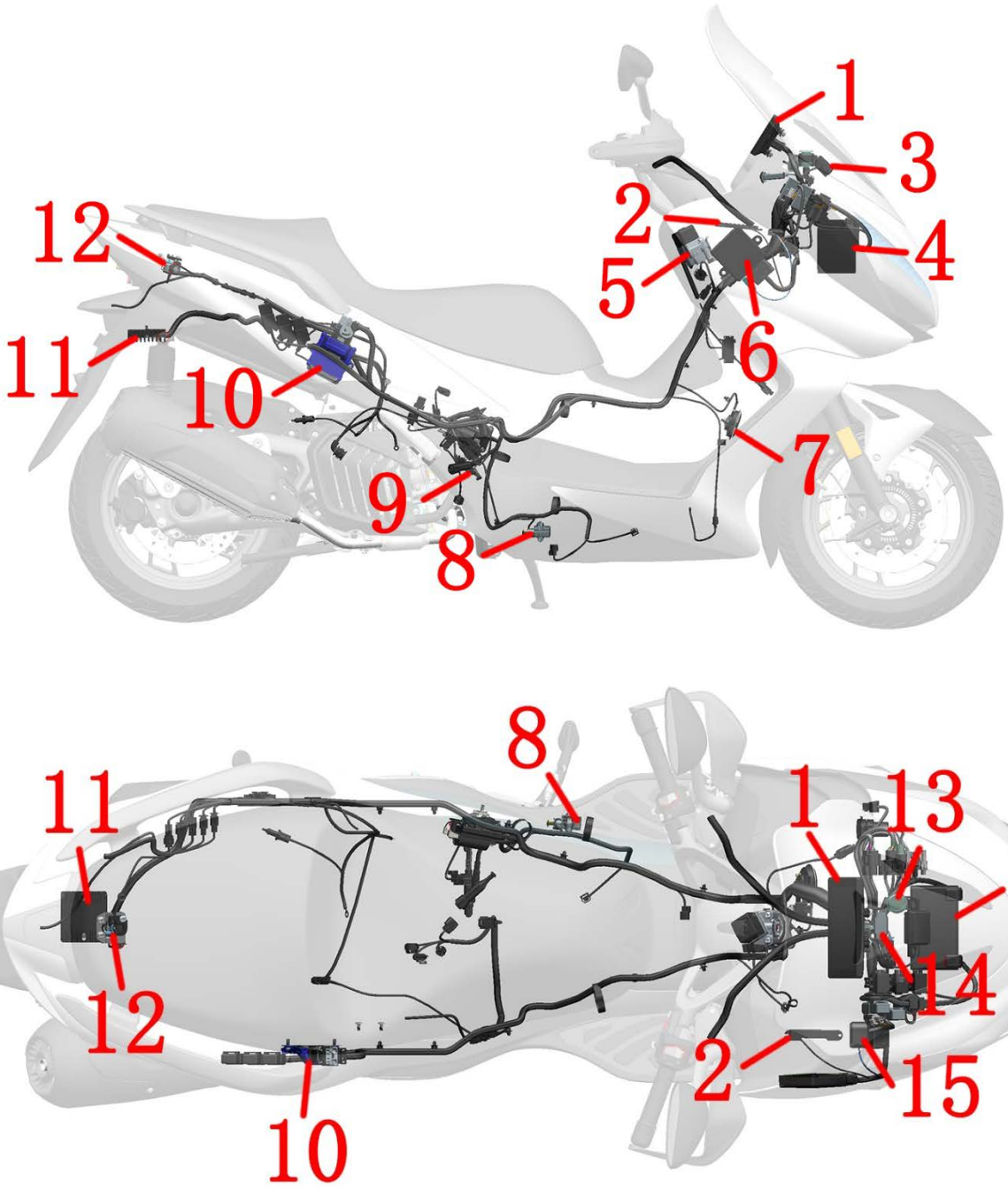


1-TFT Meter 2-Front Left Storage Box Lock 3-Windshield Motor Controller 4-Main lock 5- Double Buckle USB Charging Cable 6-Single Port Fast Charging Assembly 7-EFI Relay 8 - Starting relay 9 - Charging port holder 10 - Tank electronic lock



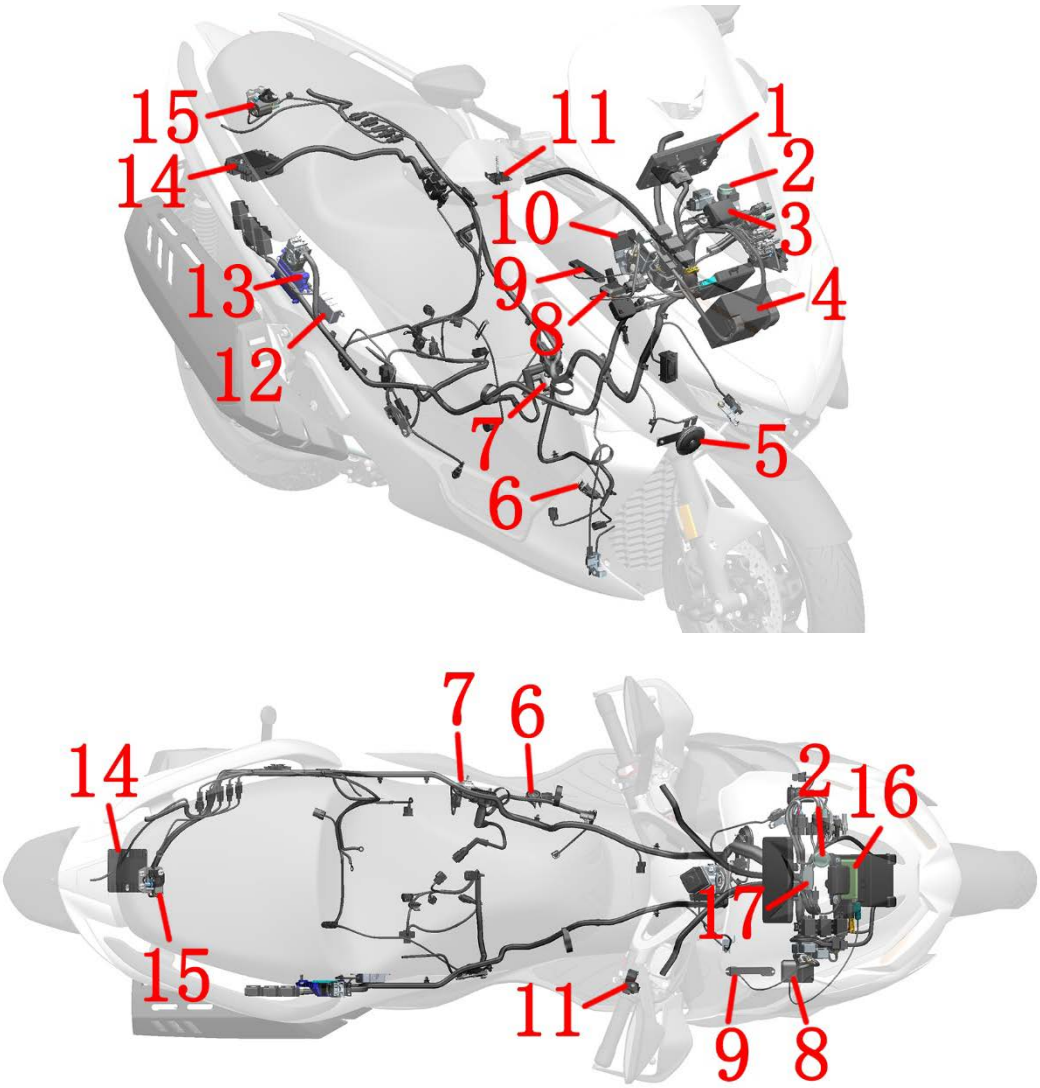
1 - Seat lock 2 - Rectifier 3 - Engine controller (ECU) 4 - Buzzer 5 - electric jet ignition coil 6 - Carbon canister solenoid valve

E125



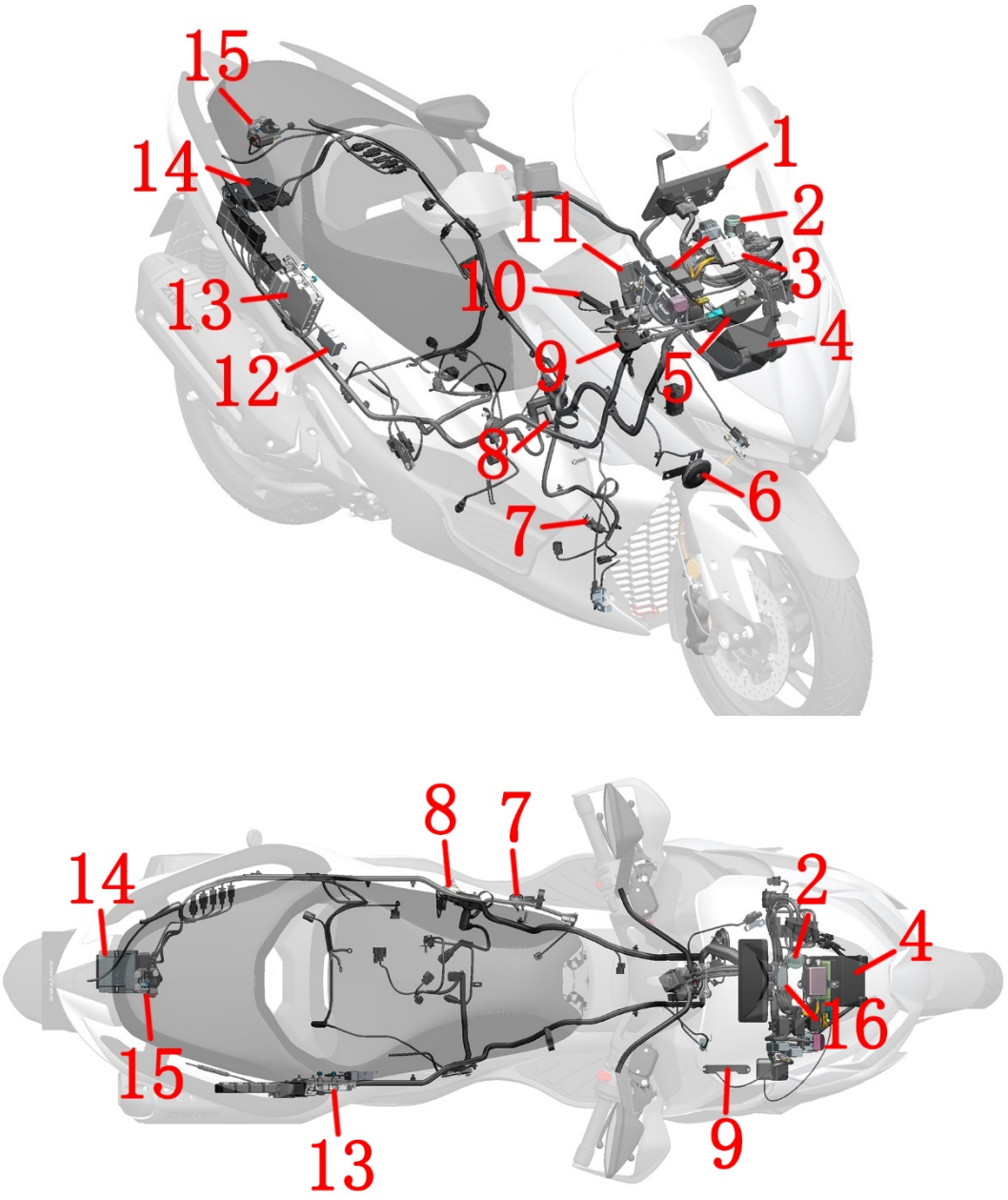
1-TFT Meter 2-Non-inductive antenna 3-Windshield motor controller 4-Battery 5-Main lock 6-PKE 7-Horn
8-Side bracket flame-out switch 9-Carbon canister solenoid valve 10-Engine controller (ECU) 11-Rectifier
12-Seat lock 13-Flash 14-Dump switch 15- GPS antenna

E368

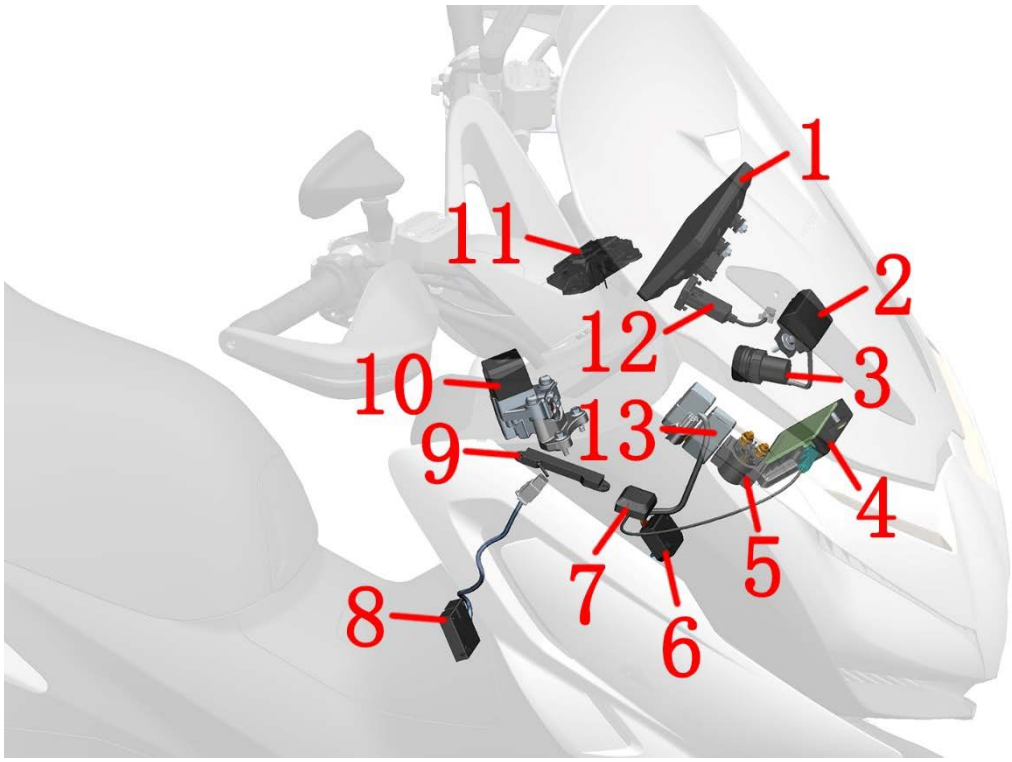


1-TFT instrument 2-Flasher 3-Windshield motor controller 4-Battery 5-Horn 6-Side bracket flame-out switch
7-Carbon canister solenoid valve 8-GPS antenna 9-Non-inductive antenna 10-Main lock
11-Electric Heat Handle bar Switch 12-Tire pressure receiving host 13-Engine controller (ECU)
14-Rectifier 15-Seat lock 16-PKE 17-Dump switch

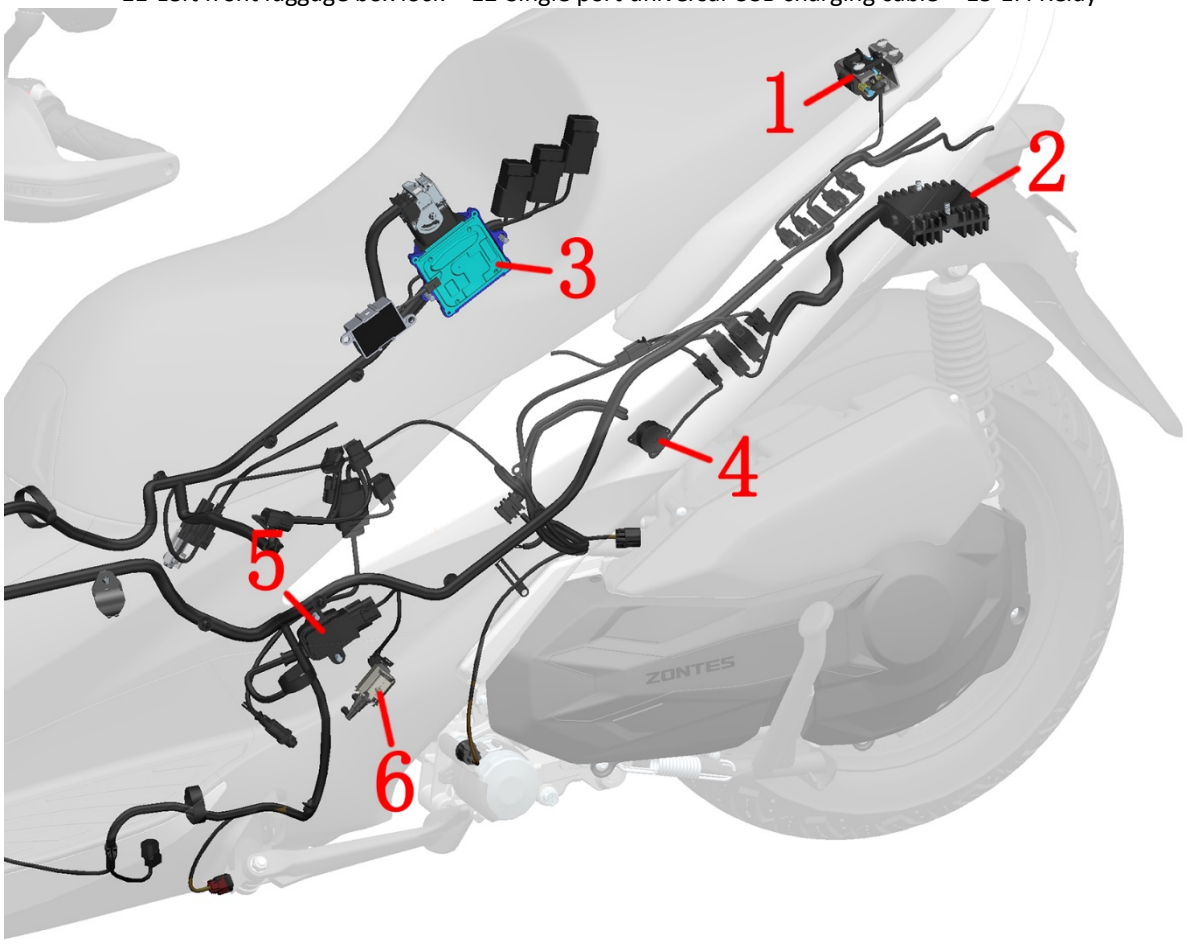
E368(ETC)



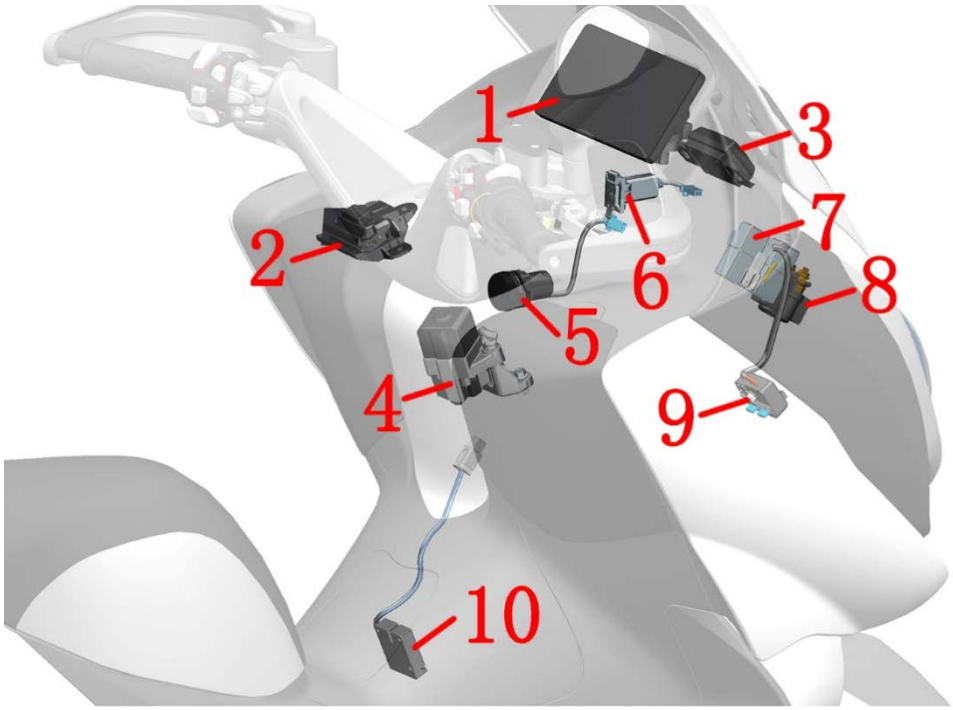
1-TFT instrument 2-Flasher 3- Smart Control Box 4-Battery 5- PKE 6- Horn 7- Side bracket flame-out switch 8-Carbon canister solenoid valve 9-GPS antenna 10- Non-inductive antenna 11-Main lock 12- Tire pressure receiving host 13-Engine controller (ECU)14- Rectifier 15- Seat lock 16- Dump switch



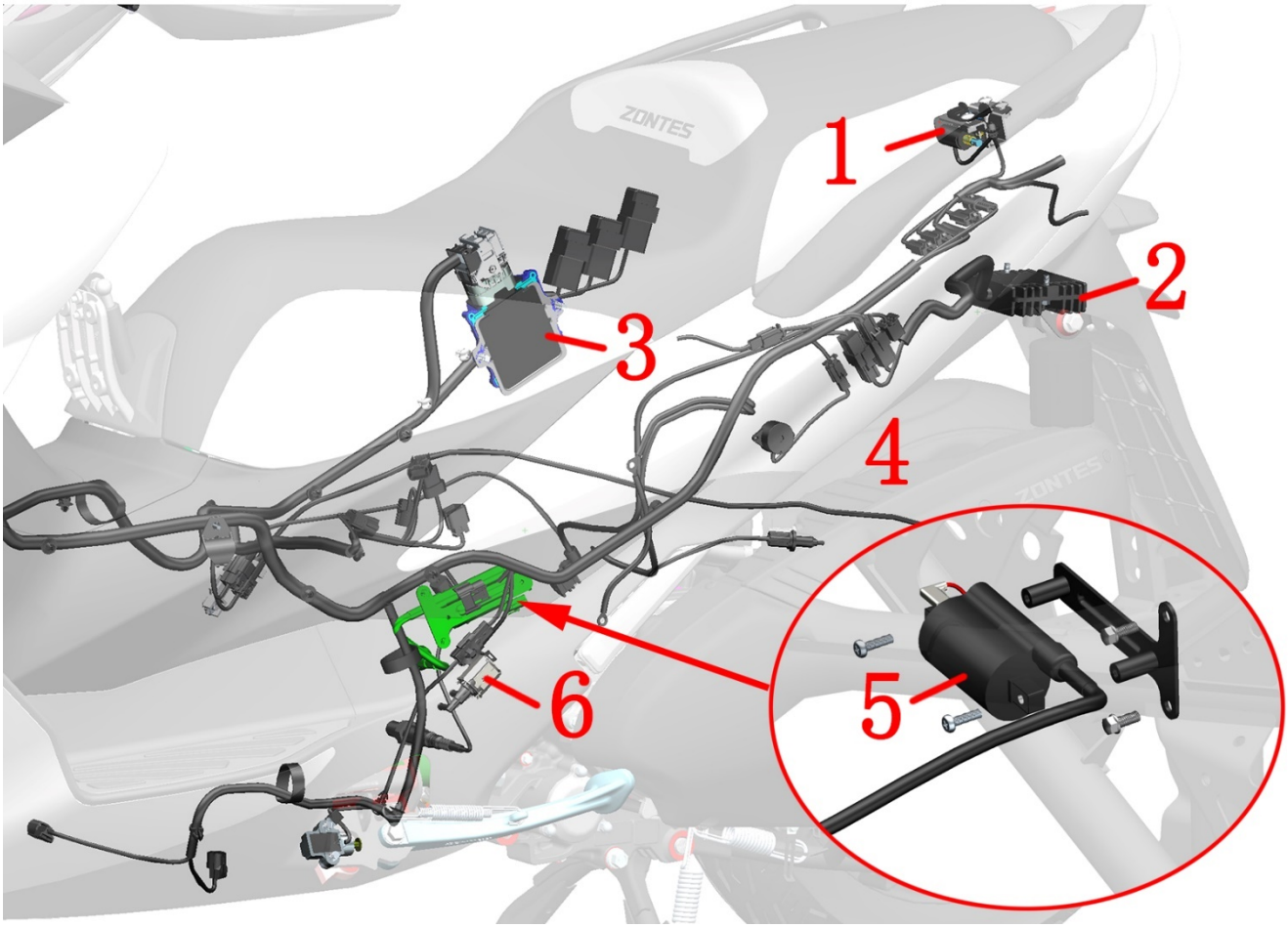
1- TFT instrument 2-Windshield motor controller 3-Dual Port Universal USB Charging Cable 4-PKE 5-Starting relay 6-Charging port 7-GPS antenna 8-Electronic fuel tank lock 9-Non-inductive antenna 10-Main lock 11-Left front luggage box lock 12-Single port universal USB charging cable 13-EFI Relay



1-Seat lock 2-Rectifier 3-Engine controller (ECU) 4 – Buzzer 5-Ignition coil body 6-Carbon canister solenoid valve



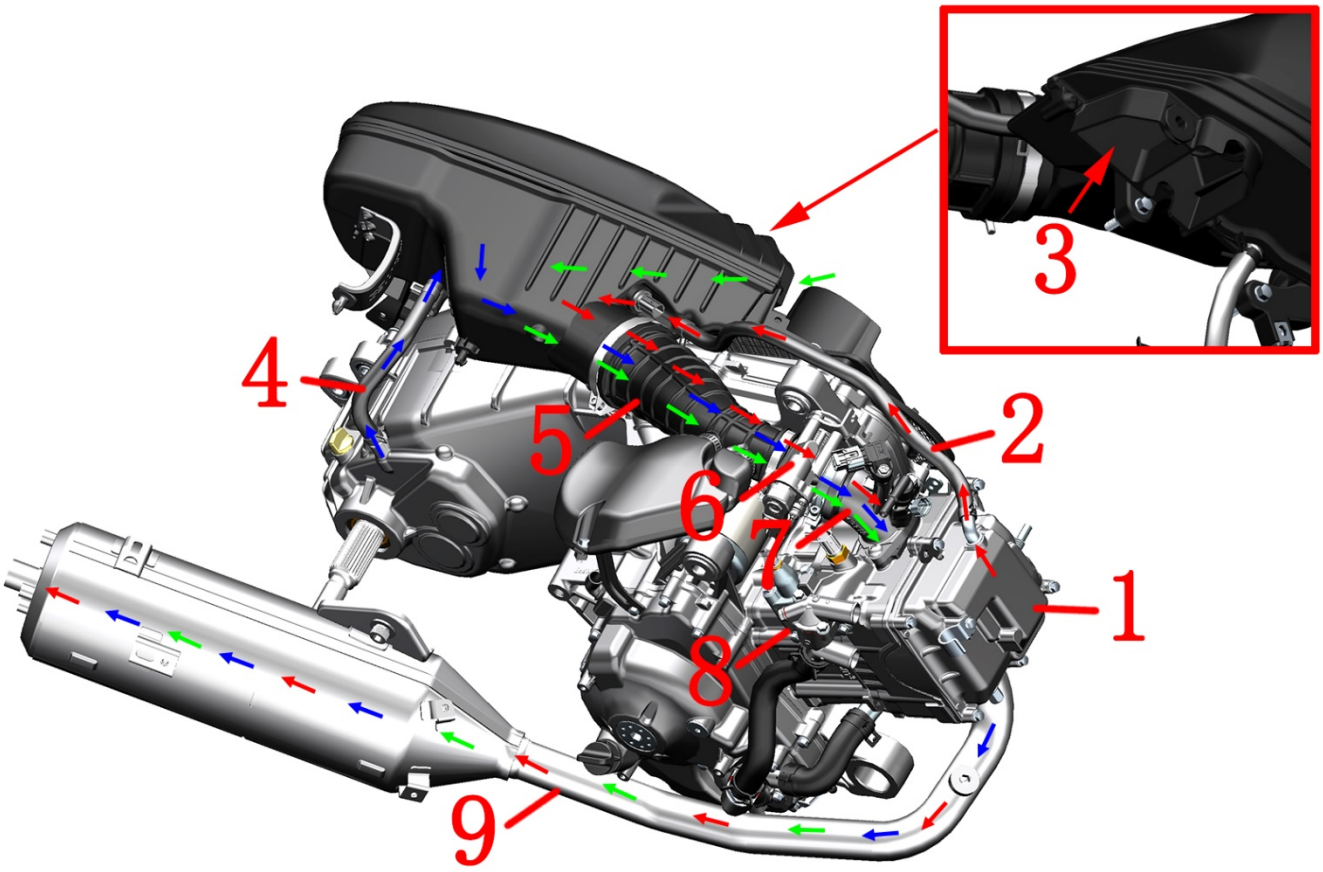
1-TFT Meter 2-Front Left Storage Box Lock 3-Windshield Motor Controller 4-Main lock 5- Double Buckle USB Charging Cable 6-Single Port Fast Charging Assembly 7-EFI Relay 8 - Starting relay 9 - Charging port holder 10 - Tank electronic lock



1 - Seat lock 2 - Rectifier 3 - Engine controller (ECU) 4 - Buzzer 5 - electric jet ignition coil 6 - Carbon canister solenoid valve

9.Intake and exhaust system

E350



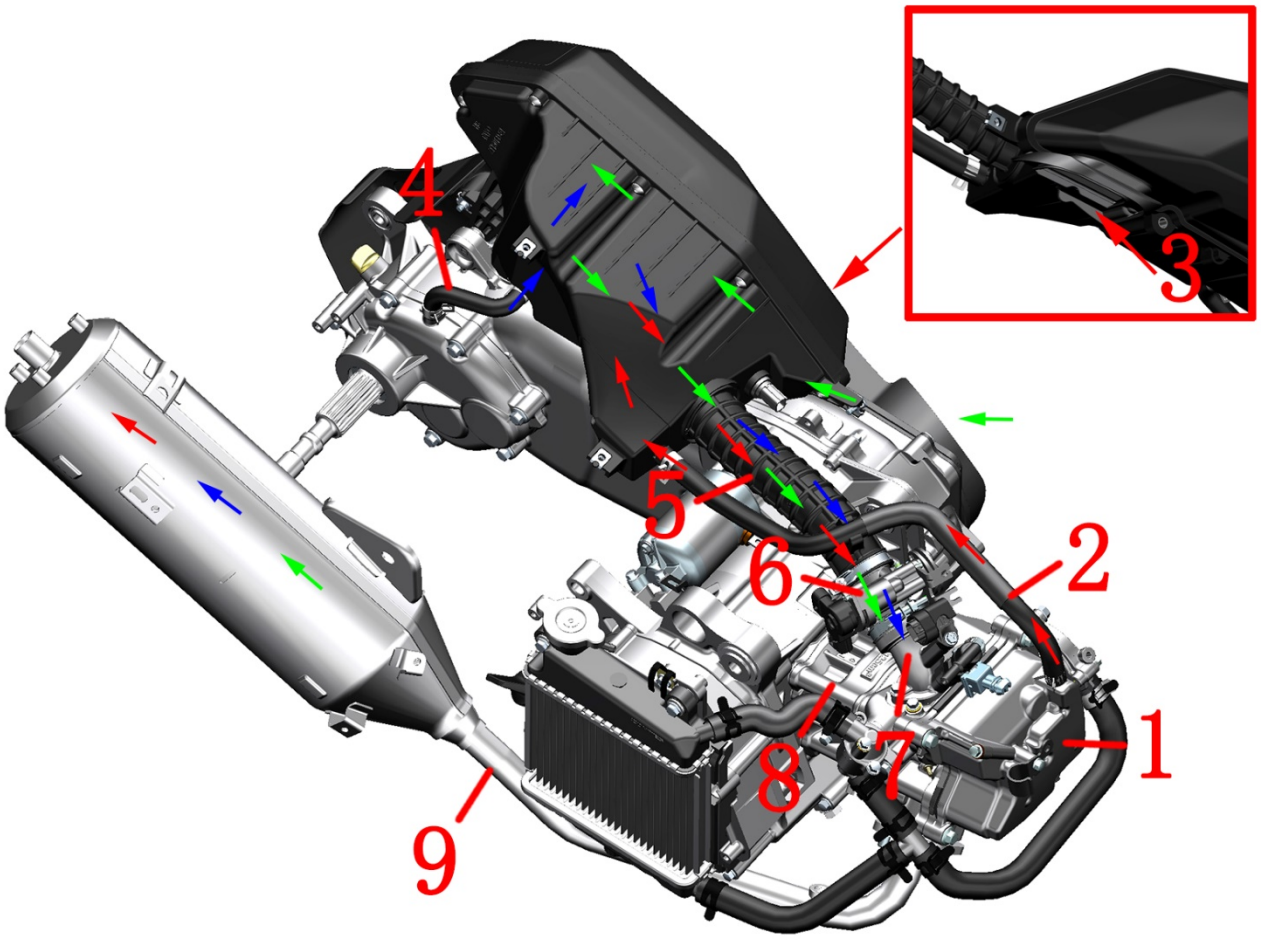
1- Cylinder head 2-Cylinder head exhaust pipe3- Air filter intake inlet 4-Crankshaft Box exhaust pipe5-Air filter outlet pipe6-Throttle valve body assembly 7-Intake manifold8- Cylinder 9- Muffler

Intake system (indicated by the green arrow):
Air → Air filter intake pipe → Air filter element → Air filter outlet pipe → Throttle valve assembly body → Intake manifold → Cylinder → Muffler

Cylinder head exhaust gas control system (red arrow indicates):
Exhaust gas → cylinder head cover → cylinder head exhaust pipe → air filter → air filter outlet pipe → throttle valve body → intake manifold → cylinder → muffler

Gearbox exhaust gas control system (indicated by the blue arrow):
Exhaust gas → gearbox exhaust pipe → air filter outlet pipe → throttle valve body → intake manifold → cylinder → muffle

E125



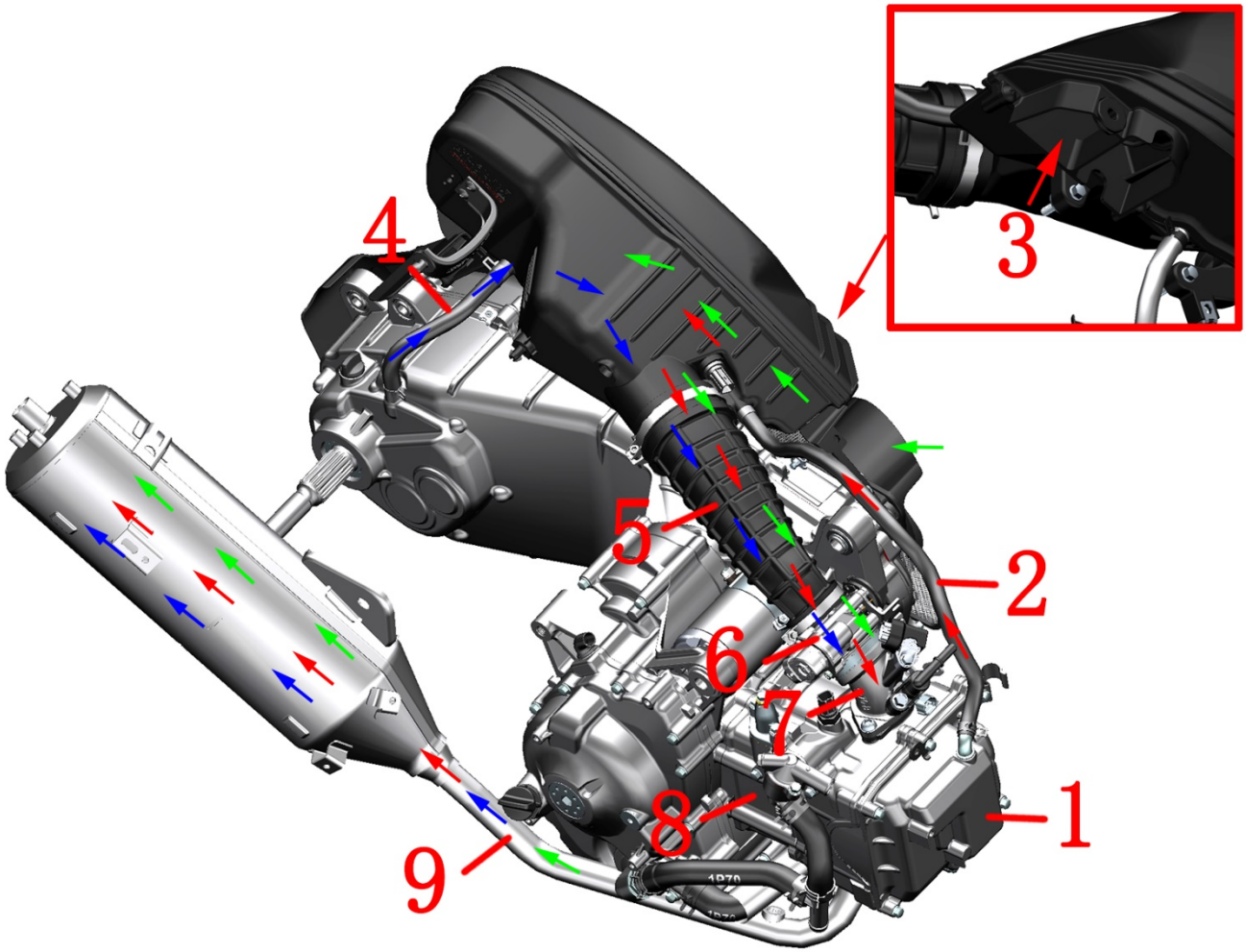
1- Cylinder head 2-Cylinder head exhaust pipe3- Air filter intake inlet 4-Crankshaft Box exhaust pipe5-Air filter outlet pipe6-Throttle valve body assembly 7-Intake manifold8- Cylinder 9- Muffler

Intake system (indicated by the green arrow):
Air → Air filter intake pipe → Air filter element → Air filter outlet pipe → Throttle valve assembly body → Intake manifold → Cylinder → Muffler

Cylinder head exhaust gas control system (red arrow indicates):
Exhaust gas → cylinder head cover → cylinder head exhaust pipe → air filter → air filter outlet pipe → throttle valve body → intake manifold → cylinder → muffler

Gearbox exhaust gas control system (indicated by the blue arrow):
Exhaust gas → gearbox exhaust pipe → air filter outlet pipe → throttle valve body → intake manifold → cylinder → muffle

E250



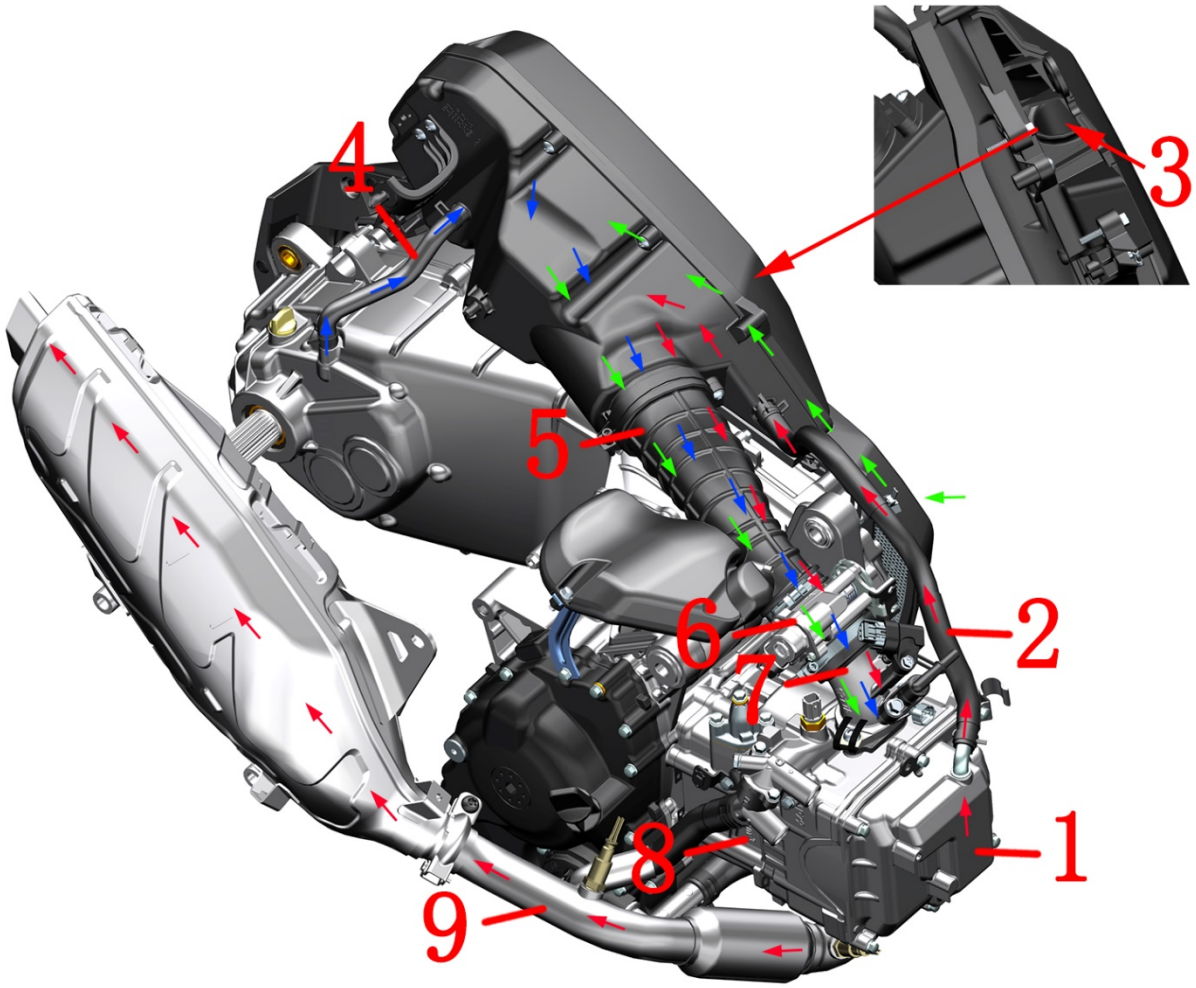
1- Cylinder head 2-Cylinder head exhaust pipe3- Air filter intake inlet 4-Crankshaft Box exhaust pipe5-Air filter outlet pipe6-Throttle valve body assembly 7-Intake manifold8- Cylinder 9- Muffler

Intake system (indicated by the green arrow):
Air → Air filter intake pipe → Air filter element → Air filter outlet pipe → Throttle valve assembly body → Intake manifold → Cylinder → Muffler

Cylinder head exhaust gas control system (red arrow indicates):
Exhaust gas → cylinder head cover → cylinder head exhaust pipe → air filter → air filter outlet pipe → throttle valve body → intake manifold → cylinder → muffler

Gearbox exhaust gas control system (indicated by the blue arrow):
Exhaust gas → gearbox exhaust pipe → air filter outlet pipe → throttle valve body → intake manifold → cylinder → muffle

E368



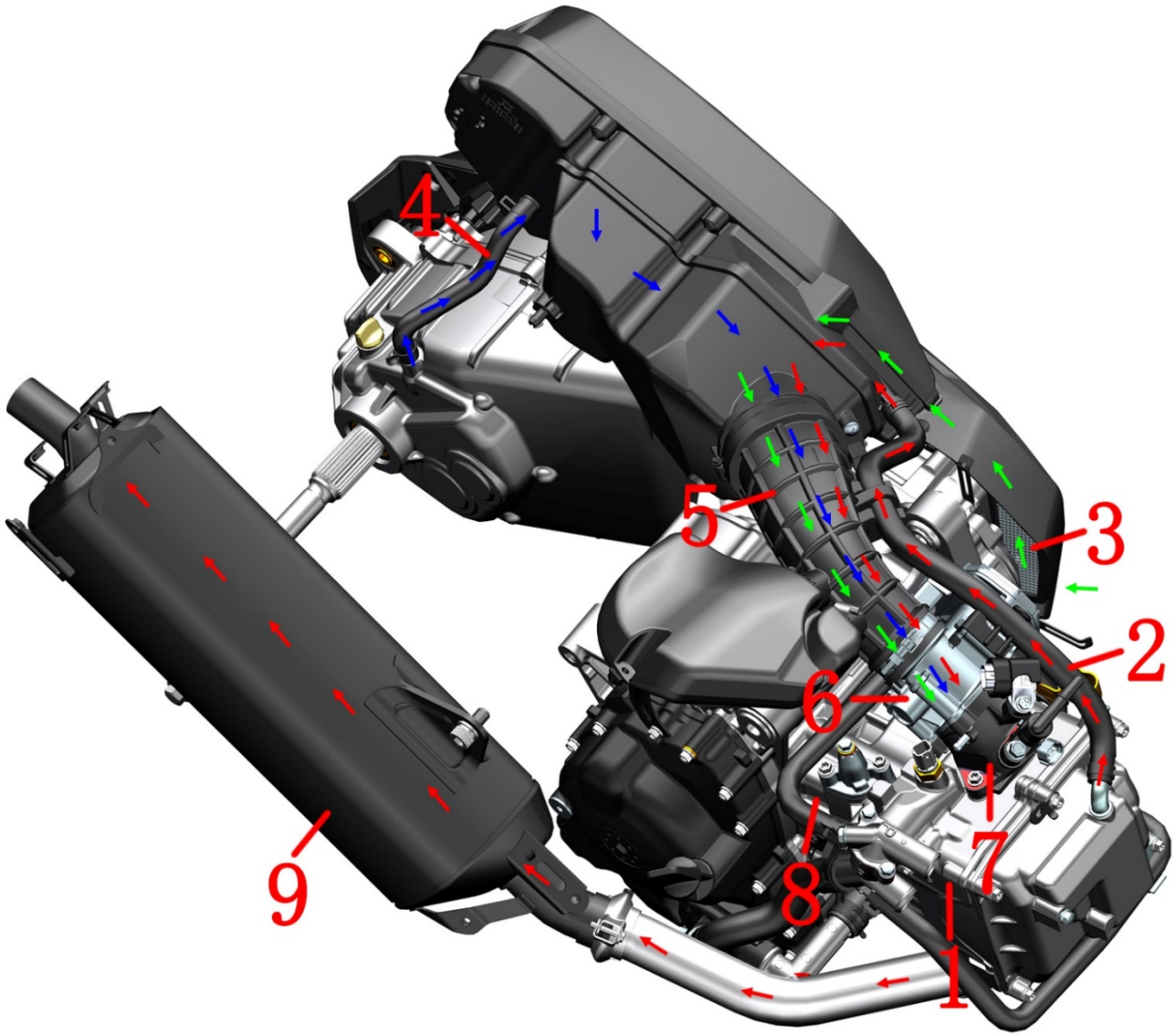
1- Cylinder head 2-Cylinder head exhaust pipe3- Air filter intake inlet 4-Crankshaft Box exhaust pipe5-Air filter outlet pipe6-Throttle valve body assembly 7-Intake manifold8- Cylinder 9- Muffler

Intake system (indicated by the green arrow):
Air → Air filter intake pipe → Air filter element → Air filter outlet pipe → Throttle valve assembly body → Intake manifold → Cylinder → Muffler

Cylinder head exhaust gas control system (red arrow indicates):
Exhaust gas → cylinder head cover → cylinder head exhaust pipe → air filter → air filter outlet pipe → throttle valve body → intake manifold → cylinder → muffler

Gearbox exhaust gas control system (indicated by the blue arrow):
Exhaust gas → gearbox exhaust pipe → air filter outlet pipe → throttle valve body → intake manifold → cylinder → muffle

E368(ETC)



1- Cylinder head 2-Cylinder head exhaust pipe3- Air filter intake inlet 4-Crankshaft Box exhaust pipe5-Air filter outlet pipe6-Throttle valve body assembly 7-Intake manifold8- Cylinder 9- Muffler

Intake system (indicated by the green arrow):
Air → Air filter intake pipe → Air filter element → Air filter outlet pipe → Throttle valve assembly body → Intake manifold → Cylinder → Muffler

Cylinder head exhaust gas control system (red arrow indicates):
Exhaust gas → cylinder head cover → cylinder head exhaust pipe → air filter → air filter outlet pipe → throttle valve body → intake manifold → cylinder → muffler

Gearbox exhaust gas control system (indicated by the blue arrow):
Exhaust gas → gearbox exhaust pipe → air filter outlet pipe → throttle valve body → intake manifold → cylinder → muffle

Tool

			
125-piece tool set	Torque wrench	On-board tools	Claw hammer
			
Pull code	Rubber hammer	Dynamic Balancing Machine	Tire raking machine
			
Oil pan	Measuring cup	Funnel	Taps, dies
			
Micrometer	Depth gauge	Vernier caliper	Feeler gauge

			
Tire pressure gauge	Magnetic base + dial indicator	PT300 electronic spraying and writing diagnostic Speedometer（16PIN）	17#Inner hexagon
			
Hoop clamp	Internal Circlip Pliers	External circlip pliers	Clamp multimeter
			
Multimeter	Dust blow gun	14-sided 65mm cap filter wrench	
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Swell nail description

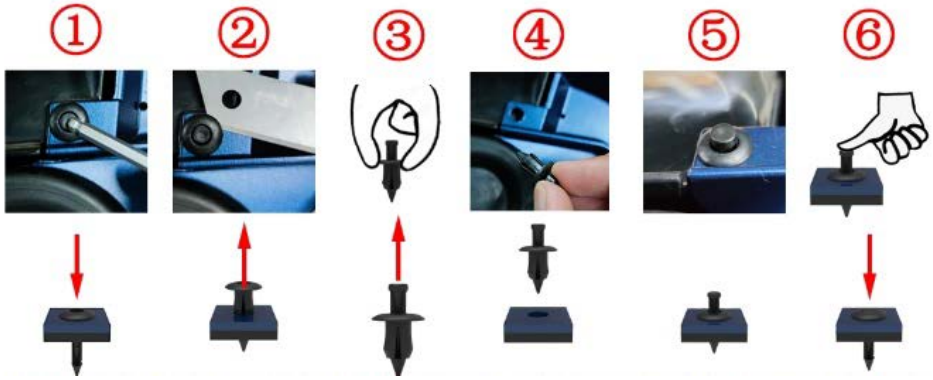


①Press down the center cylinder with 4# inner hexagon or other tools, you can hear a sound or the center cylinder moves axially by 2mm;
②Pry open the gap with a blade, nail or carving knife, etc. and remove it; if space permits, you can reach it Push out from the back;
③Pinch the outer ring with two fingers, and push the center cylinder up to the initial position;
④Pinch the center cylinder with two fingers to install the swell nails to the installation position;
⑤The outer ring is attached to the connected parts; if not attached Check whether it is misaligned;
⑥Press the center cylinder with your fingers or other tools, and you can hear a sound or the top of the center cylinder is almost flush with the top surface of the outer ring, indicating that the assembly is in place.

2.Maintenance

Know Before Service

1. Use good quality tools, or special tools and fixtures designed by our company. The use of inferior tools may cause damage to parts, peeling of plating, improper assembly, etc.
2. The O-rings, paper gaskets, copper gaskets, and component seals used for sealing must be replaced before assembly.
3. Fasteners with torque requirements need to use a torque wrench to check the torque; if the torque is not required, refer to the general torque value recommended by general fasteners.
4. Clean up before assembly; after assembly, check whether the assembly is correct and in place.
5. The motorcycle should be parked balanced and pay attention to safety during disassembly and assembly. Including but not limited to the use of electric tools, hand tools, pneumatic tools, hydraulic tools, and handling. Prevent contact with skin, eyes, burns, electric shocks, etc.
6. The replaced oils, liquids, batteries, etc. must be recycled and handed over to a qualified organization for disposal; it is forbidden to dump them at will to pollute the environment or water sources.
7. Swallowing or inhaling coolant, brake fluid, etc. will cause certain harm to the human body. Any exposed skin such as hands and face should be cleaned thoroughly after each addition. If swallowed by mistake, immediately contact the poison control center or hospital; if inhaled, immediately go to a ventilated environment. If it accidentally splashes into the eyes, immediately rinse the eyes with a large amount of running water and seek medical advice or consultation in time. Keep away from children and pets.
8. If you need to clean or wash the body parts of the motorcycle, you should use neutral car wash fluid or tap water, diesel, kerosene, etc. Acidic or alkaline car wash fluid will cause irreversible corrosion of the surface paint, electroplating surface, and anodized surface of the parts; gasoline will cause premature aging or hardening of sealants, gaskets, and rubber parts, reducing the service life. Non-woven fabrics should be used for wiping with no residue. Ordinary rags may leave cloth scraps or wool, etc., which may affect the assembly or cause other adverse effects.
9. The following is the instructions for disassembly and assembly of swell nails.



①Press the center cylinder with 4# inner hexagon or other tools, you can hear a sound or the center cylinder moves axially by 2mm (0.079 in);
②Pry open the gap with a blade, nail or carving knife, etc. and remove it; if there is space It is allowed to reach to the back to push out;
③Pinch the outer ring with two fingers and push the center cylinder up to the initial position;
④Pinch the center cylinder with two fingers to install the swell nails to the installation position;
⑤The outer ring fits the connected parts; if it does not fit, check for misalignment;
⑥ Press the center cylinder with your fingers or other tools, and you can hear a sound or the top of the center cylinder is almost flush with the top surface of the outer ring, indicating that the assembly is in place.

Only part of the basic requirements for matters needing attention, prevention of accidental injury, etc. can be listed; it is not possible to list all situations in detail. Be vigilant during disassembly and assembly to prevent accidents.

E350/368 Maintenance schedule

I: inspection（Inspect and clean,adjust,lubricate or replace if necessary） **R**:replace **T** :Tighten ★:Comment

Check item	Inspection before driving	km/ mile	Initial 1000/621	Every 4000/2485	Every 8000/4971	Replace regularly	Torque N.m/kgf.m
		Months	Initial 3	Every 15	Every 30		
Cradle buffer glue			Inspection every year or 10,000 kilometers (6214 mile)				
Air filter (filter element)				**I**	**R**		
Engine air inlet filter				**R**			
Bolts and nuts of muffler			**T**		**T**		M8 :22±4/2.2±0.4 M10 :45±5/4.6±0.5
** Spark plug					**I**		
Engine oil	**I**					★Note1	
Oil filter			**R**		**R**		
* Throttle body			**I**		**I**		
* Throttle cable clearance			**I**	**I**			
Idle speed			**I**	**I**			
* Fuel evaporative pollutant control system					**I**		
Radiator				**I**			
* Fuel pipe				**I**	**I**		
V belt					**I**	20,000 kilometers (12427 mile)	
** Braking System			**I**	**I**			
Brake hose				**I**		Check for leaks	
Brake fluid				**I**		Every 2 years	
** Tire and wheel bearing	**I**		**I**	**I**	**I**		
** Steering mechanism bolts and nuts				**T**			First adjust nut 15±2/1.5±0.2;the second adjust nut align the first nut
Steering bearing in Steering mechanism			Every 4000km/2485mile inspection or clean or lubricate				
Front shock absorber					**I**		
Rear shock absorber					**I**		
** Bolts and nuts for body and engine installation			**T**	**T**			M12 :65±5/6.6±0.5 M16 :80±5/8.2±0.5
Coolant	**I**	**I**	**I**			3 years or 30,000 kilometers (18641 mile)	
Gearbox oil			**R**		**R**		
** Valve clearance (cold inspection) In: 0.08～0.12mm (0.003～0.005 in) Row: 0.18～0.22mm (0.007～0.009 in)			20,000 kilometers (12427 mile)				
Active wheel,driven wheel					**I**	★Note2	

*This service is provided by a dealer or a qualified maintenance organization, if the owner has the appropriate tools, service information, and has a certain understanding of machinery, he can implement it by himself.

**For safety reasons, such items should be provided by dealers or qualified maintenance organizations.

★Note1: First maintenance for the first 1000 kilometers (621 mile) or 3 months (whichever comes first), second maintenance for the actual mileage of the instrument when the actual mileage reaches 4000 kilometers (2485 mile), and every 4000 kilometers (2485 mile) or 15 months thereafter (whichever comes first) Perform a regular maintenance.

★Note2 :Active and driven wheel bushings are recommended to be maintained and lubricated every 10000km (6214 mile) with Shell brand Gadus S3 V220 C2 extreme pressure grease or high temperature resistant No.2 grease of the same viscosity to

ensure riding comfort. Transmission system: If it is found th at the driving speed has dropped significantly, it is recommended to maintain and inspect th e CVT transmission system at any time, and replace it in advance if necessary.

DANGER

●The initial maintenance should be carried out strictly in accordance with the above table, otherwise it may cause damage to the motorcycle or other unpredictable failures.
●In order to keep your motorcycle running normally, it is recommended to provide services by a dealer or a qualified maintenance organization. Improper maintenance or maintenance may cause damage to the motorcycle or other unpredictable failures.
The first maintenance should be carried out after the initial 1,000 kilometers (621 miles) or 3 months (whichever comes first), and thereafter, regular maintenance should be performed every 4,000 kilometers (2,485 miles) or 6 months (whichever comes first).
●Replacement of unqualified parts will cause accelerated wear of your motorcycle and shorten its service life.
●Check the brake disc, muffler, spark plug, coolant and other items after cooling down.
●Pay attention to protection when replacing brake fluid and coolant to avoid contact with skin and eyes and cause injury. At the same time, it is necessary to avoid dripping onto the surface of the parts and damaging the paint or surface.

CAUTION

●The waste generated in the maintenance process, such as cleaning agent, waste engine oil, etc., should be properly disposed of, and random dumping is prohibited to avoid environmental pollution.
●The items listed in the needle are used in regular environments. If they are often used in harsh environments, the frequency of maintenance should be increased.
●Steering system, braking system, electronic fuel injection system, shock absorber and wheels are all key components, and it is recommended to be carried out by a qualified maintenance organization.

E368(ETC) Maintenance schedule

I: inspection（Inspect and clean,adjust,lubricate or replace if necessary） **R**:replace **T** :Tighten ★:Comment

Check item	Inspection before driving	km/ mile	Initial 1000/621	Every 6000/3728	Every 12000/7456	Replace regularly（check）	Torque N.m/kgf.m
		Months	Initial 3	Every 15	Every 30		
Cradle buffer glue			I	I	I	Replace every 30,000 kilometers	
Air filter (filter element)				I	R	★Note2	
Engine air inlet filter			I	R	R	Replace every 60,000 kilometers	
Bolts and nuts of muffler			T		T		M8 :22±4/2.2±0.4 M10 :45±5/4.6±0.5
** Spark plug			I	R	I		
Engine oil	I		R	R	R	★Note1	
Oil filter			R		R		
* Throttle body			I		I		
* Throttle cable clearance				I	I	Free angle: ±0.5°	
Idle speed	I					Start check	
* Fuel evaporative pollutant control system					I		
Radiator			I	I	I		
* Fuel pipe				I		Check for leaks	
V belt						20,000 kilometers (12427 mile)	
** Braking System				I			
Brake hose				I		Check for leaks	
Brake fluid			I	I	I	Every 2 years	
** Tire and wheel bearing	I		I	I	I	Check tire pressure and tread wear	
** Steering mechanism bolts and nuts			T	T	T		First adjust nut 15±2/1.5±0.2;the second adjust nut align the first nut
**Steering bearing in Steering mechanism				I	I	Add grease every 15,000 kilometers	
**Front shock absorber	I				I	Check for leaks	
**Rear shock absorber	I				I	Check for leaks	
Internal mechanism of the handlebar lock					I		
** Bolts and nuts for body and engine installation			T	T	T		M12 :65±5/6.6±0.5 M16 :80±5/8.2±0.5
Engine mount			I	I			
Coolant	I		I	I	I	3 years or 30,000 kilometers (18641 mile)	
Gearbox oil			R	R	R		
** Valve clearance (cold inspection) In: 0.08～0.12mm (0.003～0.005 in) Row: 0.18～0.22mm (0.007～0.009 in)			20,000 kilometers (12427 mile)			★Note8	
Active wheel,driven wheel					I	★Note5-6	
Muffler			I	I	I	★Note4	

Air filter oil drain pipe			I	I	I		
** Vehicle fasteners, bolts, and nuts	I		T	T	T		
** Brake pad wear	I		I	I	I		
Fuel level	I						
** Wheel, rear swingarm bushing, and oil seal				I	I	★Note7	
Electronic seat lock, electronic fuel tank lock						Clean and lubricate every 4,000 kilometers	

*This service is provided by a dealer or a qualified maintenance organization, if the owner has the appropriate tools, service information, and has a certain understanding of machinery, he can implement it by himself.

**For safety reasons, such items should be provided by dealers or qualified maintenance organizations.

★Note1: First maintenance for the first 1000 kilometers (621 mile) or 3 months (whichever comes first), second maintenance for the actual mileage of the instrument when the actual mileage reaches 6000 kilometers (3726 mile), and every 6000 kilometers (3726 mile) or 15 months thereafter (whichever comes first) Perform a regular maintenance.

★Note 2: When riding in harsh conditions such as humidity or dust, to ensure vehicle reliability and service life, preventive maintenance should be significantly increased, and regular maintenance intervals should be shortened.

★Note 3: Check, clean, and lubricate every 10,000 km (6,214 miles). For maintenance procedures, refer to the official website's "Handlebar Lock Maintenance Video."

★Note 4: If the motorcycle is hit in reverse or the muffler and heat shield are scratched, first carefully inspect the appearance, mounting points, and whether the muffler buffer rubber is deformed, and whether there is any leakage after the engine idles. Internal abnormal noises or severe external damage usually require replacement. All involved parts such as hangers, brackets, buffer rubbers, and bolts must be replaced before continuing to ride.

★Note 5: ① It is recommended to maintain and lubricate the drive and driven wheel bushings every 10,000 km (6,214 miles) with Shell Gadus S3 V220 C2 extreme pressure grease or an equivalent viscosity high-temperature No. 2 grease to ensure riding comfort. ② Transmission system: If a noticeable drop in riding speed is observed, it is recommended to perform maintenance and inspection on the CVT transmission system promptly, and replace it in advance if necessary.

★Note 6: CVT system failures caused by component quality issues are covered under warranty for 1 year or 6,000 km, whichever comes first. Normal wear of parts during vehicle use is not covered. Phenomena that do not affect mechanical performance, such as noise or vibrations, are not within the warranty scope.

★Note 7: Check the condition of the oil seal lips and add grease if necessary.

★Note 8: Valve clearance (engine cold): Intake: 0.08–0.12 mm, Exhaust: 0.18–0.22 mm.

DANGER

●The initial maintenance should be carried out strictly in accordance with the above table, otherwise it may cause damage to the motorcycle or other unpredictable failures.

●In order to keep your motorcycle running normally, it is recommended to provide services by a dealer or a qualified maintenance organization. Improper maintenance or maintenance may cause damage to the motorcycle or other unpredictable failures.

●Replacement of unqualified parts will cause accelerated wear of your motorcycle and shorten its service life.

●Check the brake disc, muffler, spark plug, coolant and other items after cooling down.

●Pay attention to protection when replacing brake fluid and coolant to avoid contact with skin and eyes and cause injury. At the same time, it is necessary to avoid dripping onto the surface of the parts and damaging the paint or surface.

CAUTION

●The waste generated in the maintenance process, such as cleaning agent, waste engine oil, etc., should be properly disposed of, and random dumping is prohibited to avoid environmental pollution.

●The items listed in the needle are used in regular environments. If they are often used in harsh environments, the frequency of maintenance should be increased.

●Steering system, braking system, electronic fuel injection system, shock absorber and wheels are all key components, and it is recommended to be carried out by a qualified maintenance organization.

E125 Maintenance schedule

I: inspection（Inspect and clean,adjust,lubricate or replace if necessary） **R**:replace **T** :Tighten★:Comment

Check item	Inspection before driving	km/ mile	Initial 1000/621	Every 4000/2485	Every 8000/4971	Replace regularly	Torque N.m/kgf.m
		Months	Initial 3	Every 15	Every 30		
Cradle buffer glue			Inspection every 1 years or 10,000 kilometers (6214 mile)				
Air filter (filter element)			★First				
Engine air inlet filter			★First				
Bolts and nuts of muffler			**T**		**T**		M8 :22±4/2.2±0.4 M10 :45±5/4.6±0.5
** Spark plug					**I**		
Engine oil	**I**		Replace when the service prompt light flashes			★Note1	
Oil filter			**R**		**R**		
* Throttle body			**I**		**I**		
* Throttle cable clearance			**I**	**I**			
Idle speed			**I**	**I**			
* Fuel evaporative pollutant control system					**I**		
Radiator				**I**			
* Fuel pipe				**I**			
V belt					**I**	20,000 kilometers (12427 mile)	
** Braking System			**I**	**I**			
Brake hose				**I**		Check for leaks	
Brake fluid				**I**		Every 2 years	
** Tire and wheel bearing	**I**		**I**	**I**	**I**		
** Steering mechanism bolts and nuts				**T**			First adjust nut 15±2/1.5±0.2;the second adjust nut align the first nut
Steering bearing in Steering mechanism			Every 4000km/2485mile inspection or clean or lubricate				
Front shock absorber					**I**		
Rear shock absorber					**I**		
** Bolts and nuts for body and engine installation			**T**	**T**			M12 :65±5/6.6±0.5 M16 :80±5/8.2±0.5
Coolant	**I**			**I**		3 years or 30,000 kilometers (18641 mile)	
Gearbox oil			**R**		**R**		
** Valve clearance (cold inspection) In: 0.08～0.12mm (0.003～0.005 in) Row: 0.18～0.22mm (0.007～0.009 in)				**I**			
Active and driven wheel					**I**	★Note2	

*This service is provided by a dealer or a qualified maintenance organization, if the owner has the appropriate tools, service information, and has a certain understanding of machinery, he can implement it by himself.

**For safety reasons, such items should be provided by dealers or qualified maintenance organizations.

★First:E125 version:check every 3000 kilometers (1863 mile) and replace every 6000 kilometers (3726 mile).For M125 is 4000 kilometers (2485 mile) and 8000 kilometers (4971).

★Note1: First maintenance for the first 1000 kilometers (621 mile) or 3 months (whichever comes first), second maintenance for the actual mileage of the instrument when the actual mileage reaches 4000 kilometers (2485 mile), and every 4000 kilometers (2485 mile), or 15 months thereafter (whichever comes first) Perform a regular maintenance.

★Note2 :Active and driven wheel bushings are recommended to be maintained and lubricated every 10000km (6214 mile) with Shell brand Gadus S3 V220 C2 extreme pressure grease or high temperature resistant No.2 grease of the same viscosity to ensure riding comfort. Transmission system: If it is found th at the driving speed has dropped significantly, it is recommended to maintain and inspect th e CVT transmission system at any time, and replace it in advance if necessary.

DANGER

●The initial maintenance should be carried out strictly in accordance with the above table, otherwise it may cause damage to the motorcycle or other unpredictable failures.
●In order to keep your motorcycle running normally, it is recommended to provide services by a dealer or a qualified maintenance organization. Improper maintenance or maintenance may cause damage to the motorcycle or other unpredictable failures.
●Replacement of unqualified parts will cause accelerated wear of your motorcycle and shorten its service life.
●Check the brake disc, muffler, spark plug, coolant and other items after cooling down.
●Pay attention to protection when replacing brake fluid and coolant to avoid contact with skin and eyes and cause injury. At the same time, it is necessary to avoid dripping onto the surface of the parts and damaging the paint or surface.

CAUTION

●The waste generated in the maintenance process, such as cleaning agent, waste engine oil, etc., should be properly disposed of, and random dumping is prohibited to avoid environmental pollution.
●The items listed in the needle are used in regular environments. If they are often used in harsh environments, the frequency of maintenance should be increased.
●Steering system, braking system, electronic fuel injection system, shock absorber and wheels are all key components, and it is recommended to be carried out by a qualified maintenance organization.

E250 Maintenance schedule

I: inspection（Inspect and clean,adjust,lubricate or replace if necessary） **R**:replace **T** :Tighten★:Comment

Check item	Inspection before driving	km/ mile Months	Initial 1000/621 Initial 3	Every 4000/2485 Every 15	Every 8000/4971 Every 30	Replace regularly	Torque N.m/kgf.m
Cradle buffer glue			Inspection every 1 years or 10,000 kilometers (6214 mile)				
Air filter (filter element)				**I**	**R**		
Engine air inlet filter				**R**			
Bolts and nuts of muffler			**T**		**T**		M8 :22±4/2.2±0.4 M10 :45±5/4.6±0.5
** Spark plug					**I**		
Engine oil	**I**					★Note1	
Oil filter			**R**		**R**		
* Throttle body			**I**		**I**		
* Throttle cable clearance			**I**	**I**			
Idle speed			**I**	**I**			
* Fuel evaporative pollutant control system					**I**		
Radiator				**I**			
* Fuel pipe				**I**			
V belt					**I**	20,000 kilometers (12427 mile)	
** Braking System			**I**	**I**			
Brake hose				**I**		Check for leaks	
Brake fluid				**I**		Every 2 years	
** Tire and wheel bearing	**I**		**I**	**I**	**I**		
** Steering mechanism bolts and nuts				**T**			First adjust nut 15±2/1.5±0.2;the second adjust nut align the first nut
Steering bearing in Steering mechanism			Every 4000km/2485mile inspection or clean or lubricate				
Front shock absorber					**I**		
Rear shock absorber					**I**		
** Bolts and nuts for body and engine installation			**T**	**T**			M12 :65±5/6.6±0.5 M16 :80±5/8.2±0.5
Coolant	**I**	**I**	**I**			3 years or 30,000 kilometers (18641 mile)	
Gearbox oil			**R**		**R**		
** Valve clearance (cold inspection) In: 0.08～0.12mm (0.003～0.005 in) Row: 0.12～0.16mm (0.005～0.006 in)				**I**			
Active and driven wheel					**I**	★Note2	

*This service is provided by a dealer or a qualified maintenance organization, if the owner has the appropriate tools, service information, and has a certain understanding of machinery, he can implement it by himself.

**For safety reasons, such items should be provided by dealers or qualified maintenance organizations.

★Note1: First maintenance for the first 1000 kilometers (621 mile) or 3 months (whichever comes first), second maintenance for the actual mileage of the instrument when the actual mileage reaches 4000 kilometers (2485 mile), and every 4000 kilometers (2485 mile), or 15 months thereafter (whichever comes first) Perform a regular maintenance.

★Note2 :Active and driven wheel bushings are recommended to be maintained and lubricated every 10000km (6214 mile) with Shell brand Gadus S3 V220 C2 extreme pressure grease or high temperature resistant No.2 grease of the same viscosity to

ensure riding comfort. Transmission system: If it is found th at the driving speed has dropped significantly, it is recommended to maintain and inspect th e CVT transmission system at any time, and replace it in advance if necessary.

DANGER

●The initial maintenance should be carried out strictly in accordance with the above table, otherwise it may cause damage to the motorcycle or other unpredictable failures.
●In order to keep your motorcycle running normally, it is recommended to provide services by a dealer or a qualified maintenance organization. Improper maintenance or maintenance may cause damage to the motorcycle or other unpredictable failures.
●Replacement of unqualified parts will cause accelerated wear of your motorcycle and shorten its service life.
●Check the brake disc, muffler, spark plug, coolant and other items after cooling down.
●Pay attention to protection when replacing brake fluid and coolant to avoid contact with skin and eyes and cause injury. At the same time, it is necessary to avoid dripping onto the surface of the parts and damaging the paint or surface.

CAUTION

●The waste generated in the maintenance process, such as cleaning agent, waste engine oil, etc., should be properly disposed of, and random dumping is prohibited to avoid environmental pollution.
●The items listed in the needle are used in regular environments. If they are often used in harsh environments, the frequency of maintenance should be increased.
●Steering system, braking system, electronic fuel injection system, shock absorber and wheels are all key components, and it is recommended to be carried out by a qualified maintenance organization.

E350 Air filter (filter element), air inlet filter element

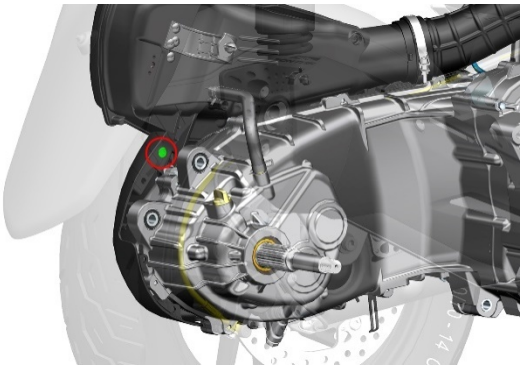
1.Support the motorcycle firmly

Prop up the motorcycle with the main bracket and put down the side brackets, as shown in the figure.

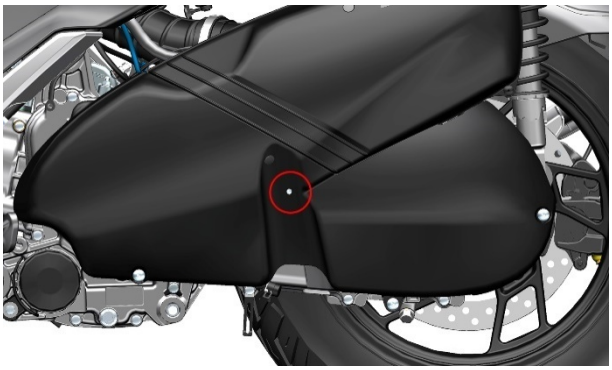


2.Remove the left engine cover

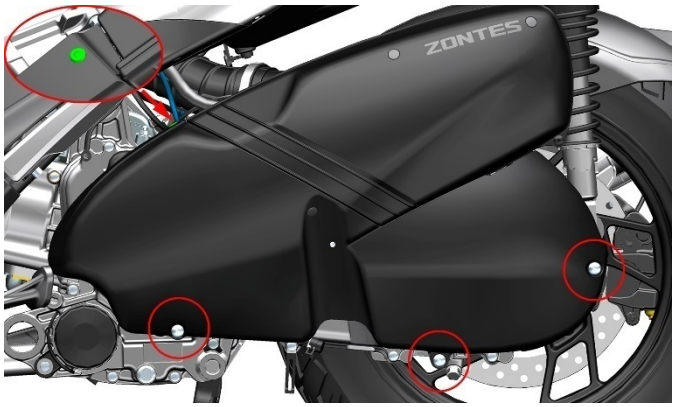
a.Use 4# inner hexagon to remove theswell nailforair filter decorative cover bottom plate.



b.Use 4# inner hexagon or T30 Torx wrench to remove the M6×14 bolt as shown in the figure. The bolt here cannot be removed temporarily, just loosen it completely.



c. Use a #4 inner hexagon or T30 Torx wrench to remove the 3 M6×14 bolts as shown in the figure. Press down the center pin of the expansion nail on the air filter decorative cover with a #4 inner hexagon, then remove the expansion nail. Remove the decorative cover.



3.Remove the air inlet cover

a. Use a cross screwdriver to remove four self tapping screws from the air inlet sponge filter element assembly. Remove the air inlet sponge after removing the front shell. Replace the front housing with a new sponge. Note that the screws should be installed vertically and the torque should not be too large. The sponge filter element at the air inlet shall be replaced every 4000km (2485mile) or 15 months (whichever comes first).



4.Replace the air inlet filter

a. Remove the sponge and replace it with a new filter element. Note that the black side faces the engine and the white side faces outward.

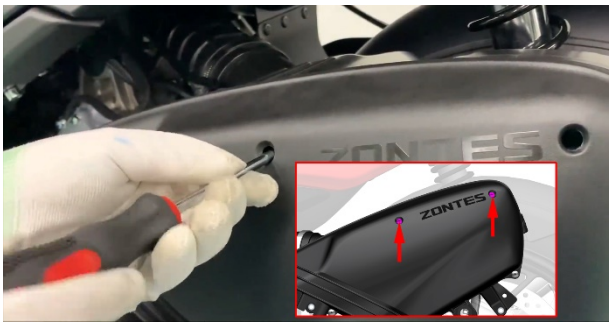


5.Remove the air filter housing

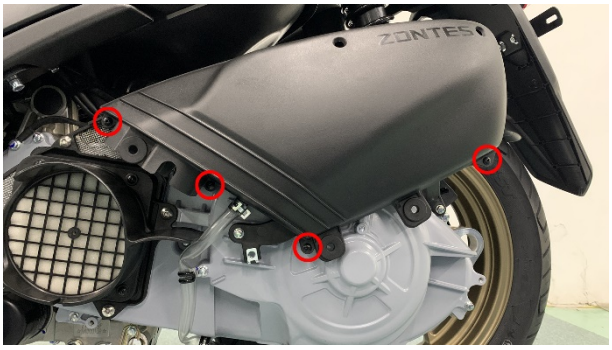
a. Use 4 # hexagonal socket to push 2 pieces of decorative glue into the air filter.



b.Use a Phillips screwdriver to remove the 2 screws.



c.Use a Phillips screwdriver to remove the 4 screws that fix the housing of the air filter.



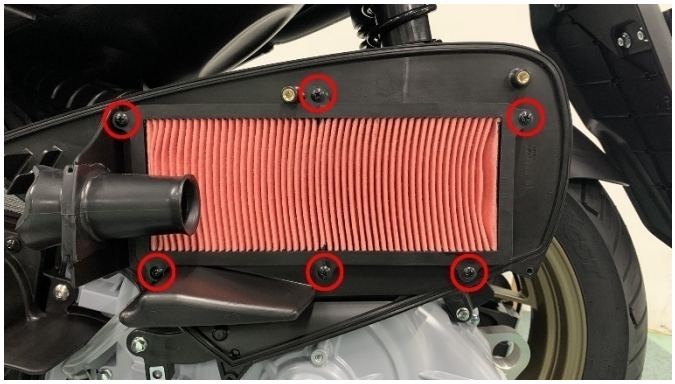
d. Remove the air filter housing.



e. Place the rubber plug and tapping screw properly to avoid loss.

6.Replace Air filter element

a. Use a Phillips screwdriver to remove the 6 screws that fix the filter element that comes with the air filter.



b. Remove the old air filter element. Blow the dust inside the air inlet pipe with a dust blower, and then wipe the inner wall with a clean non-woven cloth.

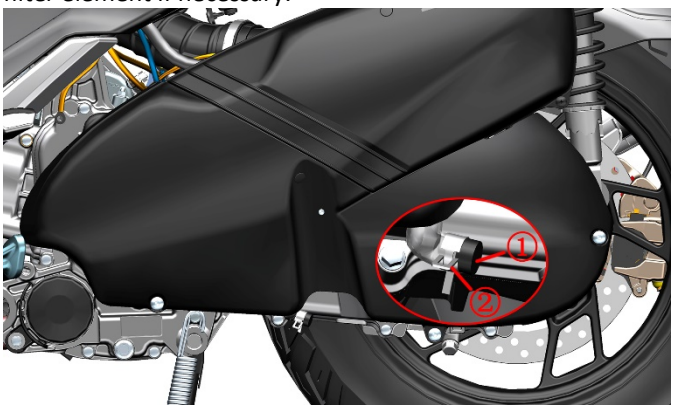


c. Replace the new filter element and sealing strip.

7.Inspection air filter waste oil pipe

After removing the rubber stopper, use a flashlight to light from directly below according to the direction of the arrow, and observe whether the waste oil drain pipe accumulates dirt or water through the rubber plug hole. If there is, remove the waste oil pipe clamp (1) with pliers and pull out the black plug, and put the waste oil or sewage back after draining. Pay

attention to increase the frequency of inspection appropriately when the air humidity is large. If there is excessive dirt in the hose, be sure to check the air filter element for excessive dirt or damage, and replace the air filter element if necessary.



8.Reinstall

a. Refer to the steps of removing the filter housing to install the housing back.

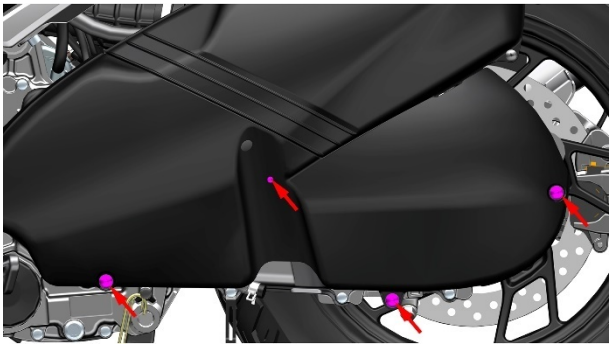
b. Clip M6×14 bolts or hexagon small flange M6×16 internal torx bolt to the inner step hole of the engine left cover, and then use a 4# inner hexagon to penetrate from the outside and hold the bolt



c. Align the left bolt with the mounting hole and tighten it.



d. Use 4# inner hexagon or T30 Torx wrench to install the other 4 M6×14 bolts or Hexagon small flange M6×16 internal torx bolt. Replace the decorative buckle.



DANGER

●The motorcycle must be parked on a flat and stable ground or a lifting platform.

WARNING

●The air filter element shall be checked every 4000km (2485 miles) or 15 months (whichever comes first), and replaced every 8000km (4971 miles) or 30 months (whichever comes first). The sponge filter element at the air inlet shall be replaced every 4000km (2485 miles) or 15 months (whichever comes first).
●The air filter element and the engine air inlet element should be cleaned regularly in accordance with the provisions of the regular maintenance and lubrication table.
●If you often ride in humid or dusty areas, you should check the air filter element more frequently. Be sure to inspect the waste oil pipe of the air filter frequently.
●If the filter element is damaged, it must be replaced, and otherwise the dirt will be directed into the engine and cause damage to the engine.
●Ensure that the filter element is assembled in place.

CAUTION

●If the air filter is clogged with dust, the air intake resistance will increase and the output power will decrease.
●If the filter element of the engine air intake is blocked by dust, the air intake resistance will increase, which will reduce the heat dissipation of the belt and affect the life of the belt.
●If the replacement period is not reached, the surface of the filter element is clean without damage, and you can use a dust blow gun to blow air from the clean side of the filter element to blow away the dust on the surface of the filter element.
●Do not let water enter the air filter when washing the motorcycle.

E125 Air filter (filter element), air inlet filter element

1.Support the motorcycle firmly

Prop up the motorcycle with the main bracket and put down the side brackets, as shown in the figure.



2.Remove the left engine cover

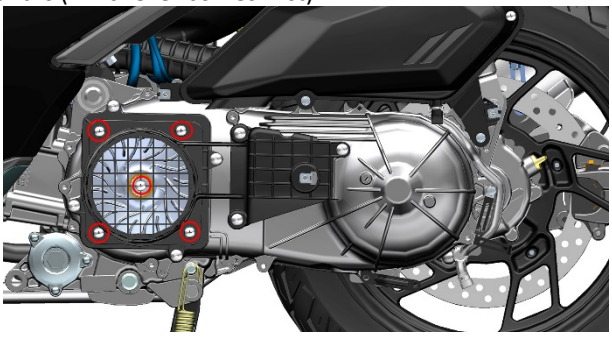
a. Use your fingers to pull out the decorative buckle.

Use 4# inner hexagon to remove the M6×14 bolt as shown in the figure. The bolt here cannot be removed temporarily, just loosen it completely. Use 4# inner hexagon to remove the 4 M6×14 bolts as shown in the figure.



3.Remove the air intake cover

Use a corss screwdriver to remove the 5 self-tapping screws that come with the air inlet sponge filter assembly. Remove the air inlet sponge after removing the front cover. After replacing the new sponge, put the front shell back, pay attention to the screws should be installed vertically and the torque should not be too large. The air inlet sponge filter should be replaced every 6000 kilometers (3728 miles) or 12 months (whichever comes first).



4.Replace the air inlet filter

a. Remove the sponge and replace it with a new filter element. Note that the black side faces the engine and the white side faces outward.



5.Replace Air filter element

a. Use a Phillips screwdriver to remove the bolt.remove the Air filter element cover.



b. Remove the old air filter element. Blow the dust inside the air inlet pipe with a dust blower, and then wipe the inner wall with a clean non-woven cloth.



c. Replace the new filter element and sealing strip.

6. Inspection air filter waste oil pipe

Wipe clean the surface of the waste oil pipe and visually check for liquid. If so, use pliers to remove the waste oil pipe clamp, clean the waste oil pipe, and then reinstall it. Pay attention to increase the frequency of inspection appropriately when the air humidity is high.

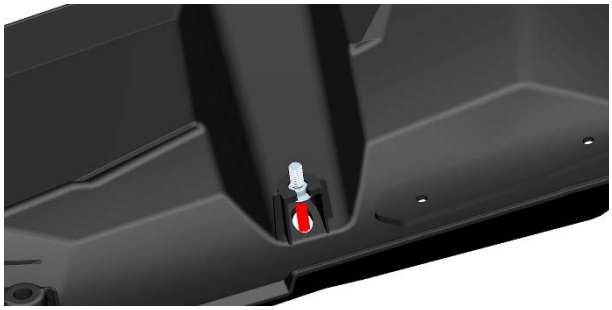


7. Reinstall

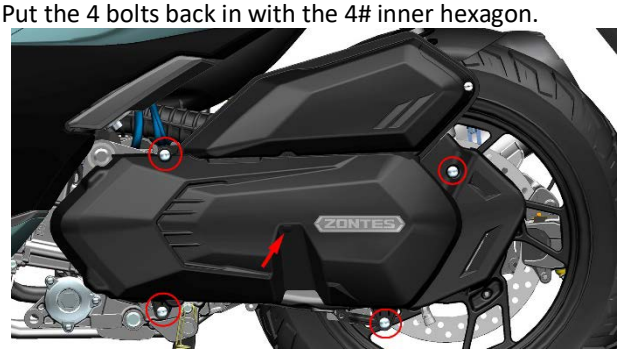
a. Refer to the steps of removing the filter housing to install the housing back.

b. Replace the air inlet baffle and the air inlet cover of the replaced air inlet filter element.

c. Clip M6×14 bolt to the inner step hole of the engine left cover, and then use a 4# inner hexagon to penetrate from the outside and hold the bolt



d. Align the left bolt with the mounting hole and tighten it.Put the 4 bolts back in with the 4# inner hexagon.



DANGER

●The vehicle must be parked on a flat and stable ground or a lifting platform.
●The operation can only be performed after the engine has cooled down completely.

WARNING

●The air filter element is checked every 4000 kilometers or 6 months (whichever comes first), and replaced every 6000 kilometers or 12 months (whichever comes first).
●The air filter element and the engine air inlet element should be cleaned regularly in accordance with the provisions of the regular maintenance and lubrication table.
●If you often ride in humid or dusty areas, you should check the air filter element more frequently. Be sure to inspect the waste oil pipe of the air filter frequently.
●If the filter element is damaged, it must be replaced, otherwise the dirt will be directed into the engine and cause damage to the engine.
●Ensure that the filter element is assembled in place.

CAUTION

●If the air filter is clogged with dust, the air intake resistance will increase and the output power will decrease.
●If the filter element of the engine air intake is blocked by dust, the air intake resistance will increase, which will reduce the heat dissipation of the belt and affect the life of the belt.
●If the replacement period is not reached, the surface of the filter element is clean without damage, and you can use a dust blow gun to blow air from the clean side of the filter element to blow away the dust on the surface of the filter element.
●Do not let water enter the air filter when washing the vehicle.

E250 Air filter (filter element), air inlet filter element

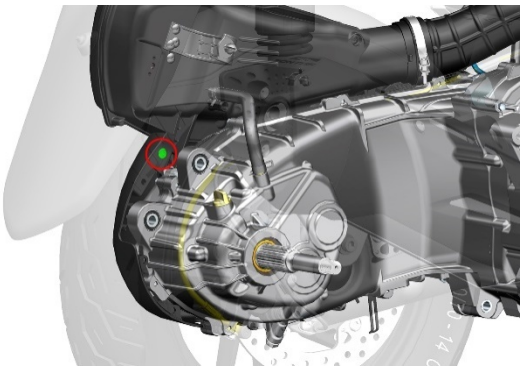
1.Support the motorcycle firmly

Prop up the motorcycle with the main bracket and put down the side brackets, as shown in the figure.

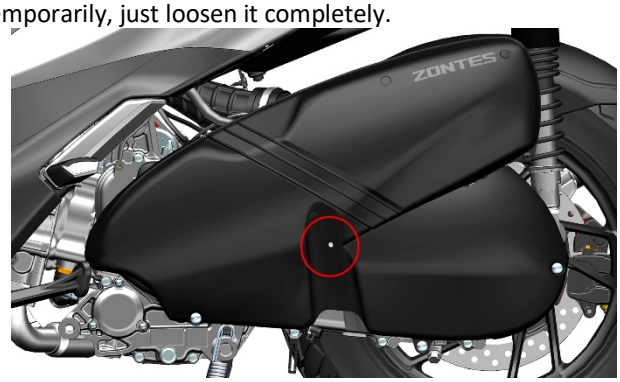


2.Remove the left engine cover

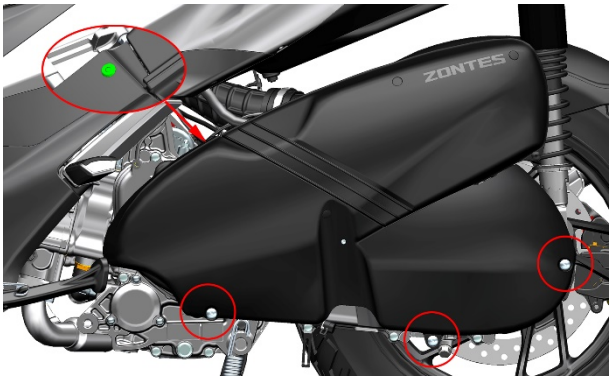
a.Use 4# inner hexagon to remove theswell nailforair filter decorative cover bottom plate.



b.Use 4# inner hexagon to remove the M6×14 bolt as shown in the figure. The bolt here cannot be removed temporarily, just loosen it completely.

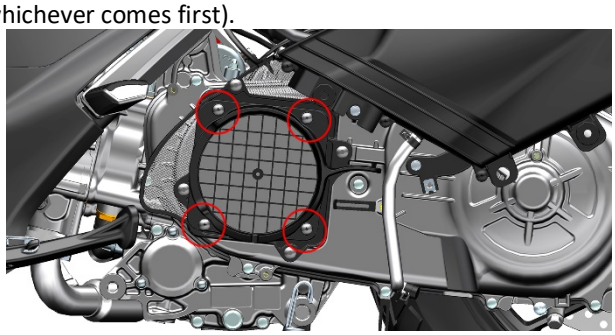


c.Use 4# inner hexagon to remove the 3 M6×14 bolts as shown in the figure.Use 4# inner hexagon to remove theswell nail.



3.Remove the air inlet cover

a. Use a cross screwdriver to remove four self tapping screws from the air inlet sponge filter element assembly. Remove the air inlet sponge after removing the front shell. Replace the front housing with a new sponge. Note that the screws should be installed vertically and the torque should not be too large. The sponge filter element at the air inlet shall be replaced every 4000km (2485mile) or 15 months (whichever comes first).



4.Replace the air inlet filter

a. Remove the sponge and replace it with a new filter element. Note that the black side faces the engine and the white side faces outward.

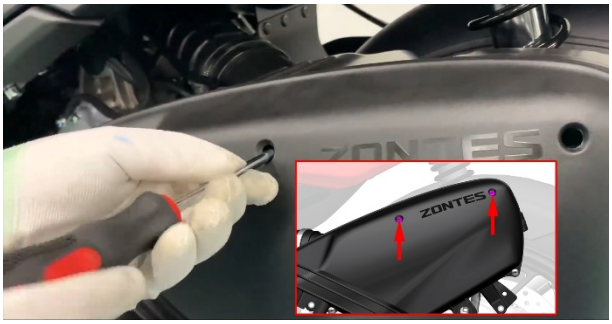


5.Remove the air filter housing

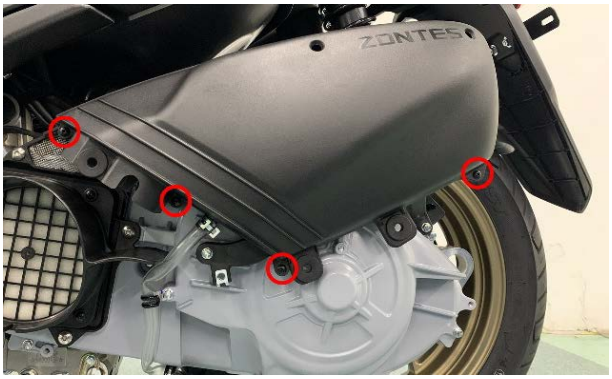
a. Use 4 # hexagonal socket to push 2 pieces of decorative glue into the air filter.



b.Use a Phillips screwdriver to remove the 2 screws.



c.Use a Phillips screwdriver to remove the 4 screws that fix the housing of the air filter.



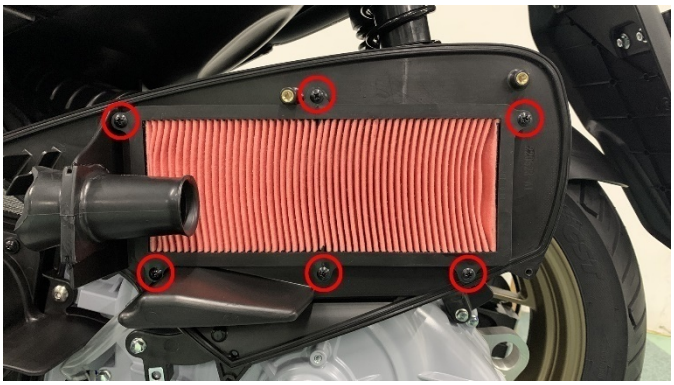
d. Remove the air filter housing.



e. Place the rubber plug and tapping screw properly to avoid loss.

6.Replace Air filter element

a. Use a Phillips screwdriver to remove the 6 screws that fix the filter element that comes with the air filter.



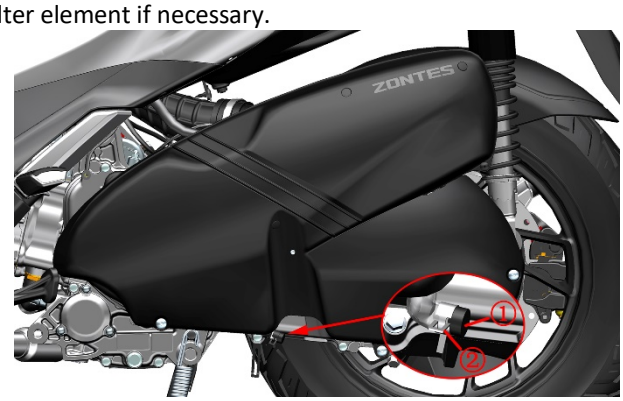
b. Remove the old air filter element. Blow the dust inside the air inlet pipe with a dust blower, and then wipe the inner wall with a clean non-woven cloth.



c. Replace the new filter element and sealing strip.

7.Inspection air filter waste oil pipe

After removing the rubber stopper, use a flashlight to light from directly below according to the direction of the arrow, and observe whether the waste oil drain pipe accumulates dirt or water through the rubber plug hole. If there is, remove the waste oil pipe clamp (1) with pliers and pull out the black plug, and put the waste oil or sewage back after draining. Pay attention to increase the frequency of inspection appropriately when the air humidity is large. If there is excessive dirt in the hose, be sure to check the air filter element for excessive dirt or damage, and replace the air filter element if necessary.



8.Reinstall

a. Refer to the steps of removing the filter housing to install the housing back.

b. Clip M6×14 bolts to the inner step hole of the engine left cover, and then use a 4# inner hexagon to penetrate from the outside and hold the bolt



c. Align the left bolt with the mounting hole and tighten it.



d. Use 4# inner hexagon to install the other 4 M6×14 bolts. Replace the decorative buckle.

E368 Air filter (filter element), air inlet filter element

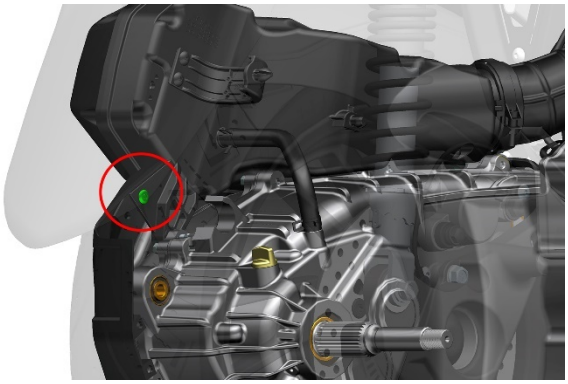
1.Support the motorcycle firmly

Prop up the motorcycle with the main bracket and put down the side brackets, as shown in the figure.

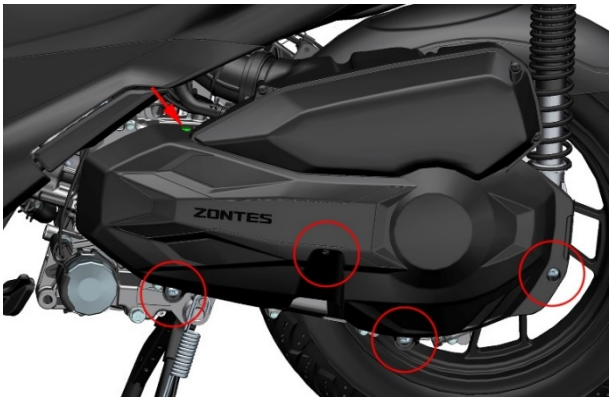


2.Remove the left engine cover

a.Use 4# inner hexagon to remove theswell nailforair filter decorative cover bottom plate.



b. Use a 4# Hex key or T30 torx wrench to remove the 4 M6×14 shoulder bolt or hexagonal small flanges M6×16 torx bolts shown in the figure.

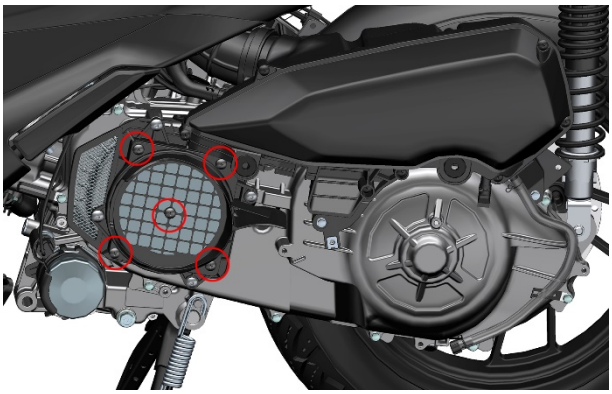


c. Pull out the 2 mushroom buckles on the air filter decoration cover and remove the air filter decoration cover.

3.Remove the air inlet cover

a. Use a cross screwdriver to remove five self tapping screws from the air inlet sponge filter element assembly.

Remove the air inlet sponge after removing the front shell. Replace the front housing with a new sponge. Note that the screws should be installed vertically and the torque should not be too large. The sponge filter element at the air inlet shall be replaced every 4000km (2485mile) or 15 months (whichever comes first).

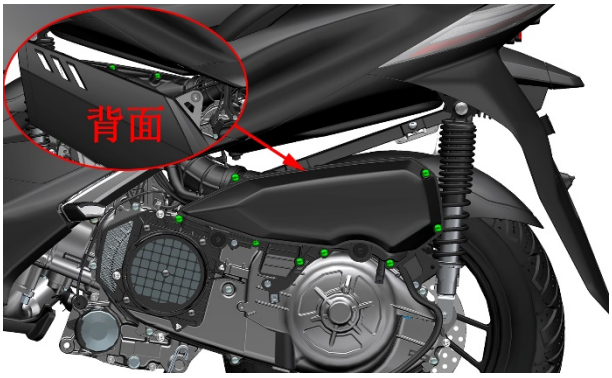


b. Remove the sponge and replace it with a new filter element. Note that the black side faces the engine and the white side faces outward.



4.Remove the air filter housing

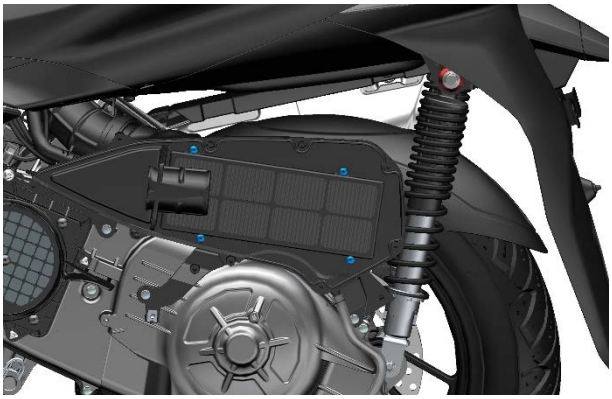
a. Remove 10 self-tapping nails with a Phillips screwdriver.



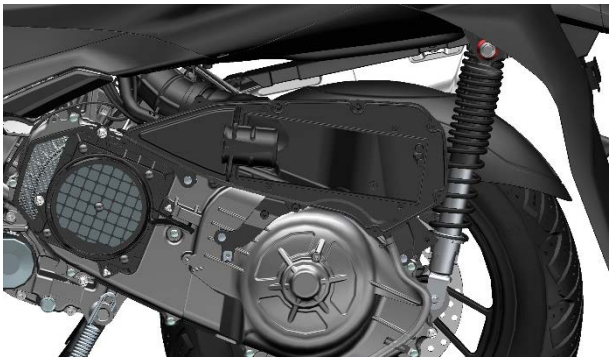
b. Remove the air filter housing.

5.Replace Air filter element

a. Use a Phillips screwdriver to remove the 4 screws that come with the air filter to fix the filter element.



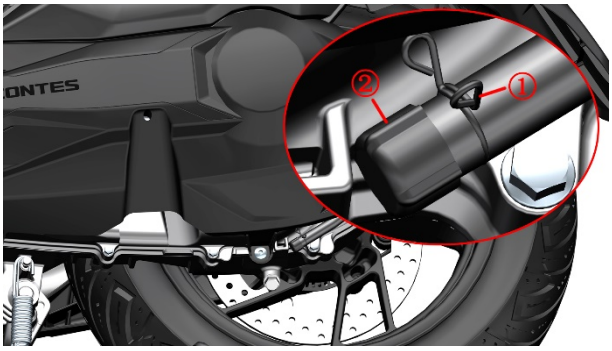
b. Remove the old air filter element. Blow the dust inside the air inlet pipe with a dust blower, and then wipe the inner wall with a clean non-woven cloth.



c. Replace the new filter element and sealing strip.

6.Inspection air filter waste oil pipe

After removing the rubber stopper, use a flashlight to light from directly below according to the direction of the arrow, and observe whether the waste oil drain pipe accumulates dirt or water through the rubber plug hole. If there is, remove the waste oil pipe clamp (1) with pliers and pull out the black plug, and put the waste oil or sewage back after draining. Pay attention to increase the frequency of inspection appropriately when the air humidity is large. If there is excessive dirt in the hose, be sure to check the air filter element for excessive dirt or damage, and replace the air filter element if necessary.



7.Reinstall

a. Refer to the steps of removing the filter housing to install the housing back.

b. Put the torx bolt in the hexagonal small flange M6×16 at the step hole on the inside of the left hood of the engine, and then use the T30 torx wrench to penetrate it from the outside and then resist the bolt.



DANGER

●The motorcycle must be parked on a flat and stable ground or a lifting platform.

WARNING

The air filter element should be checked every 4,000 kilometers (2,485 miles) or 15 months, whichever comes first, and replaced every 8,000 kilometers (4,971 miles) or 30 months, whichever comes first. The intake sponge filter should be replaced every 4,000 kilometers (2,485 miles) or 15 months, whichever comes first.

●The air filter element and the engine air inlet element should be cleaned regularly in accordance with the provisions of the regular maintenance and lubrication table.

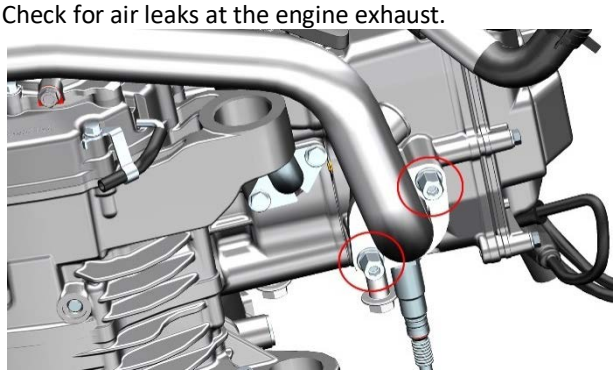
●If you often ride in humid or dusty areas, you should check the air filter element more frequently. Be sure to inspect the waste oil pipe of the air filter frequently.
●If the filter element is damaged, it must be replaced, and otherwise the dirt will be directed into the engine and cause damage to the engine.
●Ensure that the filter element is assembled in place.



●If the air filter is clogged with dust, the air intake resistance will increase and the output power will decrease.
●If the filter element of the engine air intake is blocked by dust, the air intake resistance will increase, which will reduce the heat dissipation of the belt and affect the life of the belt.
●If the replacement period is not reached, the surface of the filter element is clean without damage, and you can use a dust blow gun to blow air from the clean side of the filter element to blow away the dust on the surface of the filter element.
●Do not let water enter the air filter when washing the motorcycle.

Bolts and nuts of muffler

1. Check for air leaks at the engine exhaust.



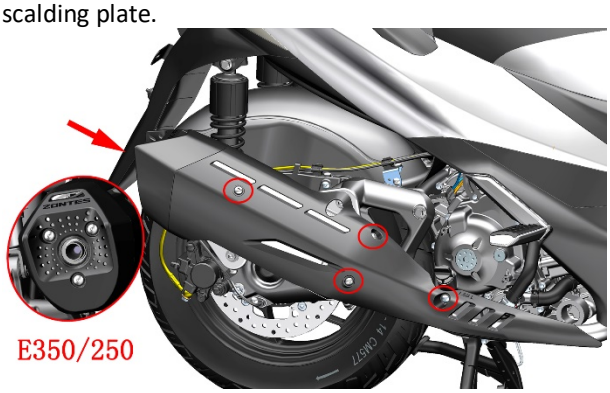
a. If there is a slight air leak, first try to tighten the exhaust port nut with 6# inner hexagon; if the problem is not solved, remove the muffler and replace with a new engine exhaust port gasket.

b. If there is no sign of air leakage, use 6# inner hexagon to check whether the M8 nut at the exhaust port of the engine is loose.

c. Remove the muffler scald plate.

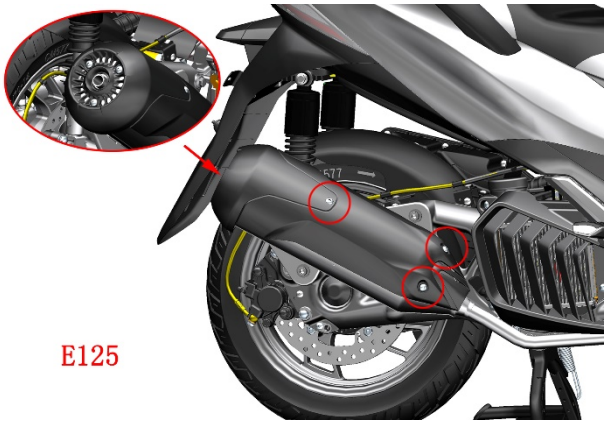
E350/250:

Remove 7 pcs M6× 16 bolts and M6×14 shoulder bolt with 4 # hexagonal socket. Remove the front and rear of the anti scalding plate.



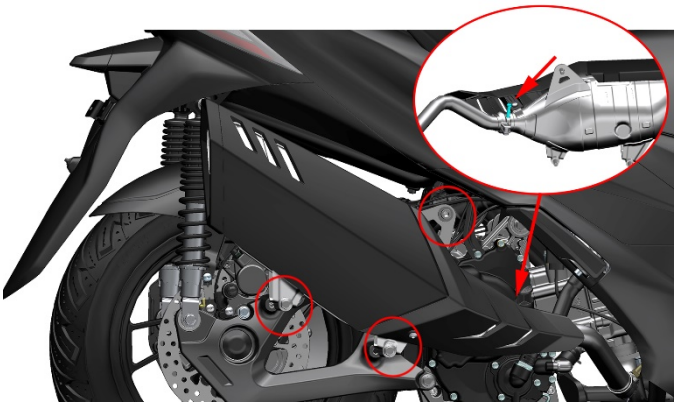
E125:

Remove 7 pcs M6× 16 bolts with 4 # hexagonal socket. Remove the front and rear of the anti scalding plate.



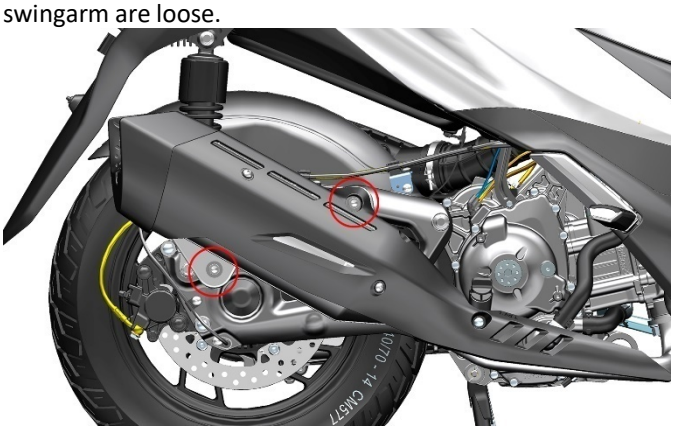
E368:

Use the 8# hexagon to remove the 3 M10 bolts that fix the muffler, and use the 6# hexagon to remove the M8 bolts on the inside, loosen the clamp, and remove the rear section of the muffler and the decorative cover.



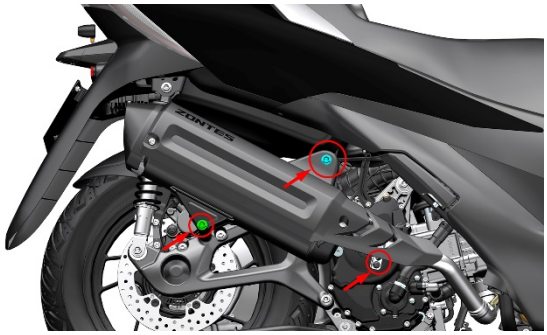
2. Check for nut and bolts at the muffler

Use the 8# inner hexgon socket to inspection whether the 2 pcs bolts at the junction of the rear muffler and the swingarm are loose.



E368（ETC）

Use a #6 Allen key to remove the M8 bolts on the inside. After loosening the clamp, use a #14 socket to remove the two M10 bolts, and you can then remove the rear section of the muffler.



DANGER

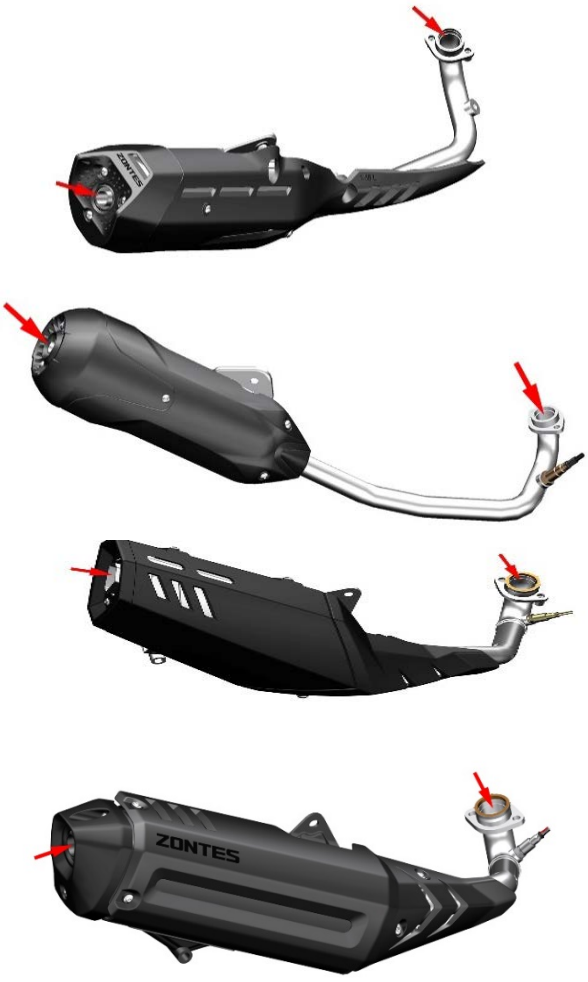
●Do not touch all metal surfaces of the muffler while the engine is running or after riding to prevent burns.
●The motorcycle must be parked on a flat and stable ground or a lifting platform.
●If you need to replace the new exhaust port gasket, you must wait for the muffler to cool down completely before starting operation.

WARNING

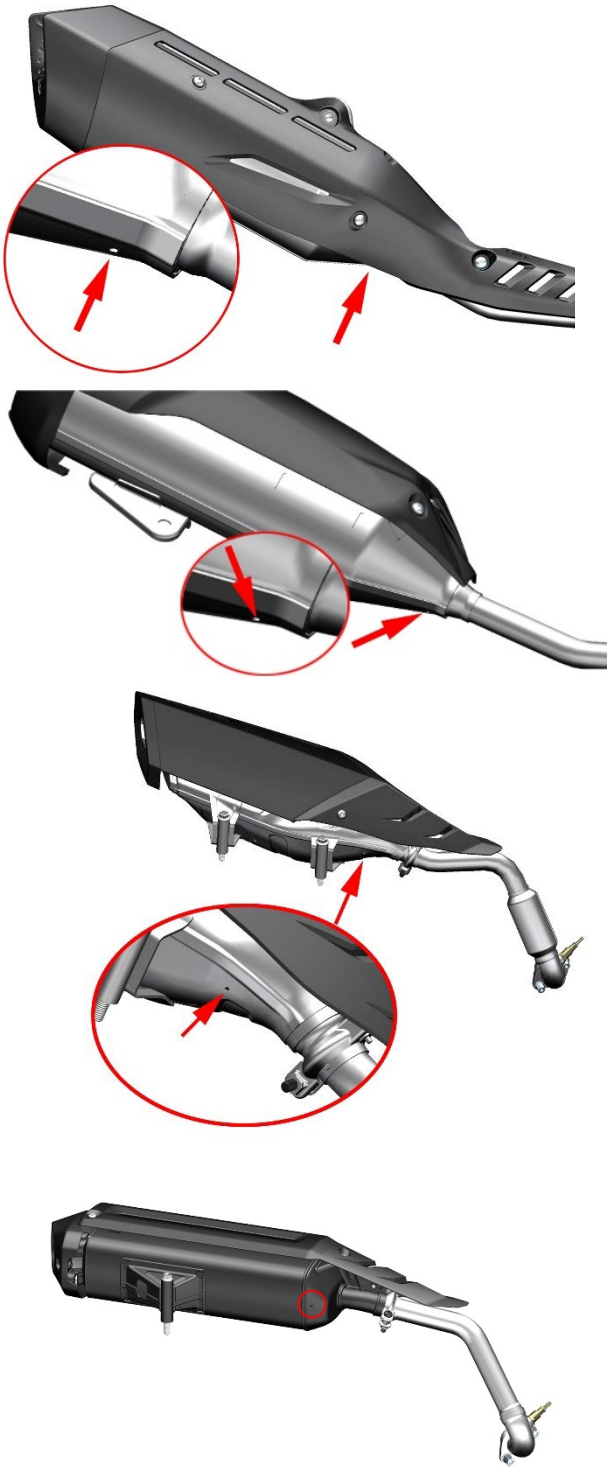
●Do not blast the throttle for a long time on the spot.
●Large load and long-term low-speed driving will damage the engine and muffler.
●It is forbidden to use leaded gasoline to avoid the loss of exhaust gas purification ability due to catalyst failure.

CAUTION

●If you need to remove the muffler for other operations, it is recommended to cover the air inlet and outlet holes of the muffler with textured paper to prevent foreign objects from entering.



●Keep the drain hole at the bottom of the muffler unblocked to prevent condensation water from accumulating in the muffler cavity.



●Clean up the dirt, dirt and other stains on the surface of the muffler in time.

Engine oil

DANGER

●The motorcycle must be parked on a flat and stable ground or a lifting platform.
●Once the engine and muffler have cooled down, the operation can be performed.
●When adding engine oil, prevent the engine oil from dripping onto the surface of the muffler.
●The engine oil should be kept away from children and pets. Short-term contact with engine oil may irritate the skin. Please wear long-sleeved clothes or sleeves and anti-shake gloves before changing the oil. If you accidentally get oil, you need to clean it thoroughly with soapy water.
●Replaced waste engine oil must be collected uniformly and handed over to professional organizations for proper disposal. It is forbidden to dump at will, into trash cans or directly onto the ground, etc.

WARNING

●The engine oil and gear box oil should be replaced according to the periodic table specified in the manual.
●It is necessary to purchase regular and qualified engine oil. Inferior engine oil will aggravate engine wear and, in severe cases, will cause engine failure and shorten service life.
●The amount of oil should meet the requirements, too much or too little may cause engine damage.

CAUTION

●The copper gasket and the combination gasket need to be replaced after disassembly; the O-ring and gasket are recommended to be replaced with new ones.
●O-rings need to be assembled in place to avoid trimming.
●After removing the oil dipstick and the filler nut, it is necessary to prevent foreign matter from falling into the engine.

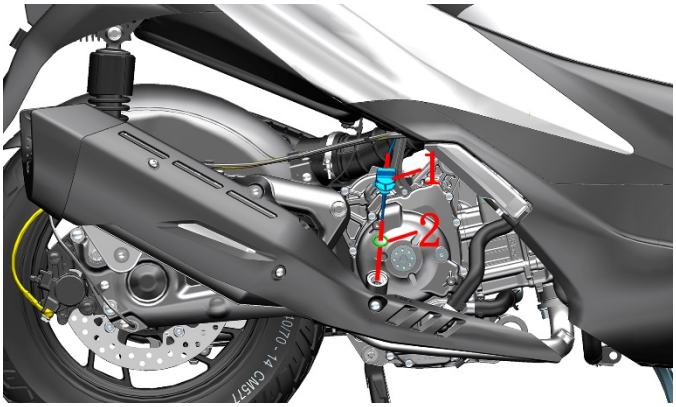
E350

1.Drain the oil

a. Start the motorcycle and turn off the engine for 3-5 minutes after idling for 3-5 minutes. (When the temperature is below 10°C (50°F), the idle running time should be appropriately extended).

b. Use the main bracket to park the motorcycle firmly.

c. Rotate the oil dipstick(1) on the right side of the engine counterclockwise, and remove the oil dipstick(1) and O ring (2) to accelerate the oil flow.



d.After placing an oil pan under the oil drain bolt, use a 14# sleeve to remove the oil drain bolt(3) and the combined seal gasket(4).

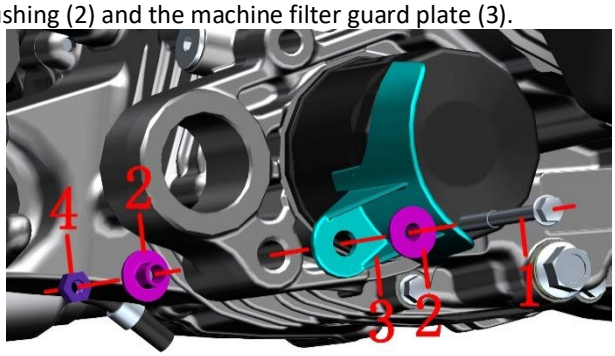


e. Wipe clean the joint surface with a non-woven fabric. Inspect the oil drain bolt(3) whether the joint surface is scratched; if there is any, replace it with a new one, if not, wipe it clean.

f. Replace the new combination gasket(4), and use a 14# sleeve to install the oil drain bolt(3) and combination gasket (4) back to the engine box. Torque: 25N.m (2.6 kgf.m, 18 lbf.ft).

2.Replace fine filter

a. Remove the bolt (1) with the 8# sleeve after fixing the M6 nut (4) with the 10# sleeve, and remove the flange bushing (2) and the machine filter guard plate (3).



b. Place an oil pan under the fine filter cover.Remove the fine filter using a 14-side, 65mm cap filter wrench +1/2" (12.5mm) ratchet wrench counterclockwise. The filter wrench has a Skadden model 97401. Replacement every 1,000 km or 3 months (whichever comes first) and every 8,000 km or 30 months (whichever comes first).



c. Drain the oil inside the fine filter.



d.Use a clean non-woven fabric to wipe off the remaining oil and impurities on the engine.

e. Apply a layer of oil to the new fine filter seal and install it on the engine. Torque: 20 N.m (2 kgf.m, 15 lbf.ft).

Note that the sealing ring cannot be omitted, and the surface of the sealing ring should be checked for damage, hardening and other defects before assembly.



3.Add oil

a. Replace the filter element with a measuring cup with a viscosity of SAE5W-40/10W-40/10W-50. The new API SN grade or higher motorcycle special machine 1.75L (1.85US qt, 1.54 lmp qt, 0.46 US gal, 0.39 lmp gal). If the filter element is not replaced, the measuring cup is filled with 1.55L（1.64US qt,1.36 lmp qt,0.41 US gal,0.34 lmp gal).

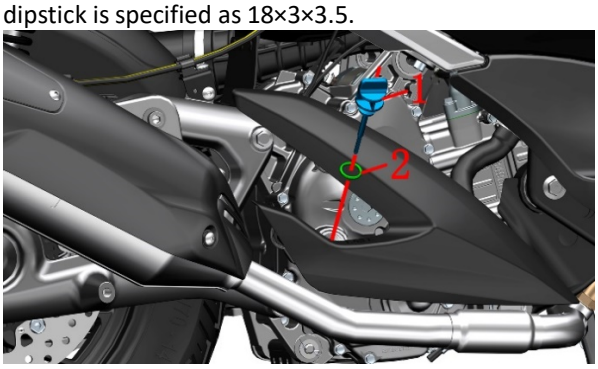
b. Use a funnel + measuring cup to add engine oil to the fuel filler opening on the right crankcase cover of the engine.



c. Wipe clean the fuel filler opening with a non-woven cloth.



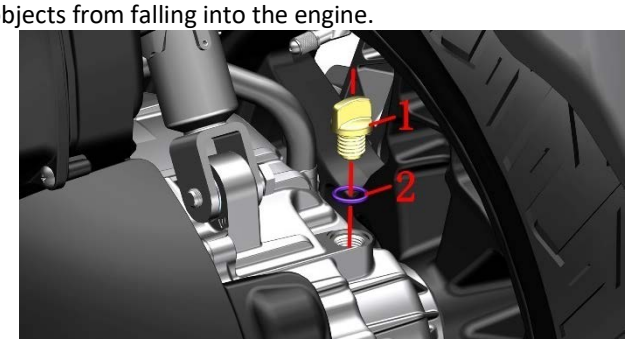
d.inspection O ring(2)Whether there is damage or aging, if not, wipe it clean, if any, replace it. The O-ring used for the oil dipstick is specified as 18×3×3.5.



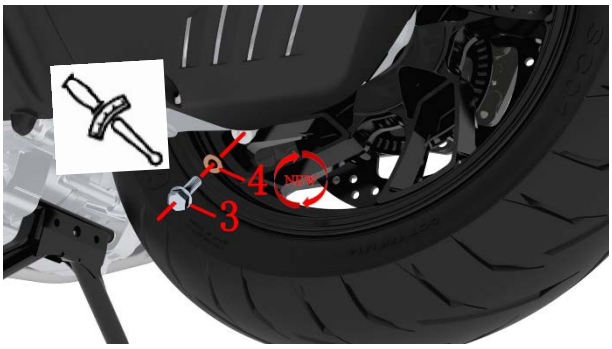
e. Wipe clean the oil dipstick, and turn the oil dipstick(1) and O-ring(2) clockwise by hand to replace the right crankcase cover of the engine.

4.Change gear box oil

a. Rotate the fuel filler nut(1) counterclockwise, and remove the nut(1) and O ring(2). Place the nut (1) on the fuel filler opening without removing it to prevent foreign objects from falling into the engine.



b. Place an oil pan under the rear of the left engine. Use a 14# sleeve to loosen the oil drain bolt(3)counterclockwise.



c. Remove the oil drain bolt(3) and the copper pad(4).

d. After the gear box oil is completely drained, wipe the surface of the drain port with a non-woven cloth.

e. Replace with a new copper pad(4), check whether the joint surface of the oil drain bolt(3) is scratched, if not, wipe it clean and install it in order. Torque: 20 N.m (2 kgf.m, 15 lbf.ft).

f. Fill the measuring cup with 0.2L(0.21US qt, 0.18 lmp qt, 0.05 US gal, 0.04 lmp gal) of oil or gearbox special oil.

g. Check whether the O ring(4) is damaged or aging, wipe it clean if not, and replace it if there is any.

h. Wipe clean the nut(3) and the fuel filler port with a non-woven cloth, first put the O ring(4) into the nut(3), and then turn it clockwise by hand and install it back to the fuel filler port of the gear box.

5. Confirm the oil level

a. After starting the motorcycle and running at idle speed for several minutes, check whether all the disassembled positions are leaking, and if there is any leakage, it needs to be checked.

b. After the engine has been idling for 5 minutes and then turned off for 3 minutes, check whether the oil level meets the standard. If it does not meet the standard, draw it out or add it to the standard.



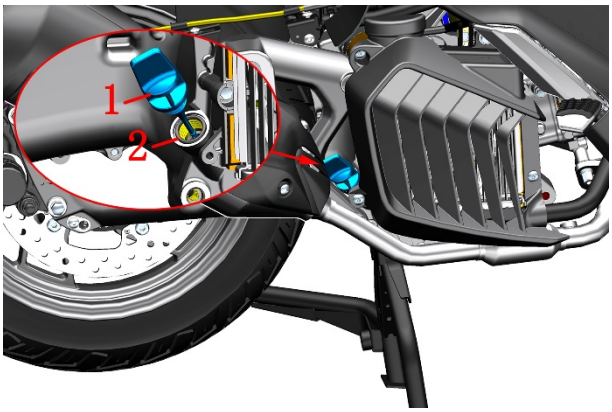
E125

1.Drain the oil

a. Start the motorcycle and turn off the engine for 3-5 minutes after idling for 3-5 minutes.

b. Use the main bracket to park the motorcycle firmly.

c. Rotate the oil dipstick(1) on the right side of the engine counterclockwise, and remove the oil dipstick(1) and O ring (2) to accelerate the oil flow.



d. After placing an oil pan under the oil drain bolt, use a 14# sleeve to remove the oil drain bolt(3) and the combined seal gasket(4). Use a 24# sleeve to remove the strainer cover (5) at the bottom, take off the 34.5×3.5 acrylate rubber O-ring(6), the ϕ25.8×34.2×1.8 strainer spring(7) and the outer diameter ϕ22×21 cap-shaped strainer(8). Drain the oil from the crankcase.



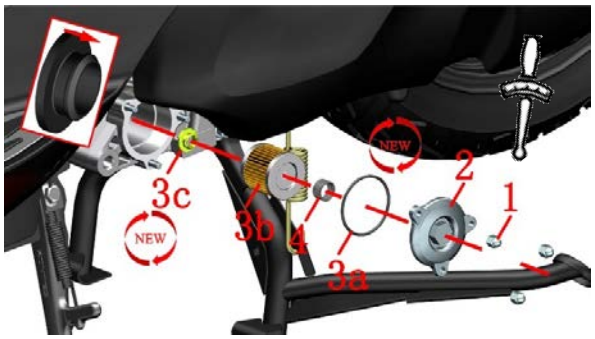
e. Check whether the strainer (8) is damaged, if it is damaged, replace it, if not, clean it up.

f. Wipe clean the joint surface with a non-woven fabric. Inspect the oil drain bolt(3) whether the joint surface is scratched; if there is any, replace it with a new one, if not, wipe it clean.

g. Replace the new combination gasket(4), and use a 14# sleeve to install the oil drain bolt(3) and combination gasket (4) back to the engine box. Torque: 25N.m (2.6 kgf.m, 18 lbf. ft). Replace the new O-ring (6), put the O-ring (6), spring (7) and cap-type fine filter (8) into the fine filter cover (5) in turn, and then put it back to the bottom of the engine with a 24# sleeve.

2.Replace fine filter

a. Place an oil pan under the fine filter cover.



b. Use a 10# sleeve to loosen the 3 nuts(1) at the fine filter cover.

c. Remove the fine filter cover(2) and O ring (3a). Remove the spring(4), the fine filter (oil filter element) (3b) and the gasket (3c) in sequence.

d. Replace the new fine filter (oil filter element) and gasket. The fine filter assembly already contains O ring (3a), fine filter (oil filter element) (3b) and gasket (3c). Replace in order.

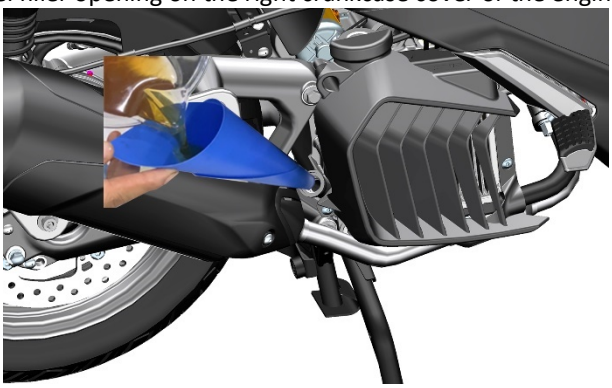
e. Remove the O ring on the fine filter cover and replace it with a new O ring. First put the O ring (3a) into the groove of the fine filter cover(2), and then install it back to the engine box.

f. Screw back the 3 nuts (1), Torque: 12 N.m (1.2 kgf.m, 9 lbf.ft).

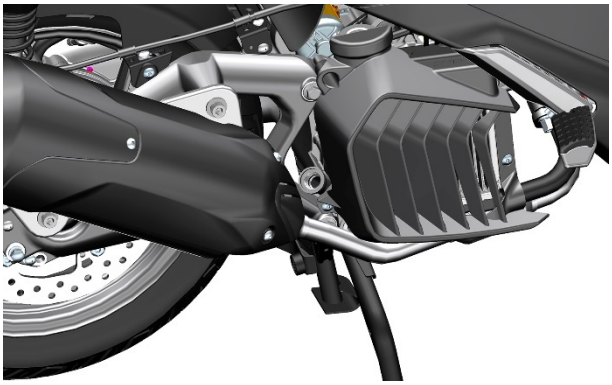
3.Add oil

a. Replace the filter element with a measuring cup with a viscosity of SAE5W-40/10W-40/10W-50. The new API SN grade or higher motorcycle special machine 0.95L (1 US qt, 0.84 lmp qt, 0.25 US gal, 0.21 lmp gal). If the filter element is not replaced, the measuring cup is filled with 0.9L (0.95 US qt, 0.79 lmp qt, 0.24 US gal, 0.2 lmp gal).

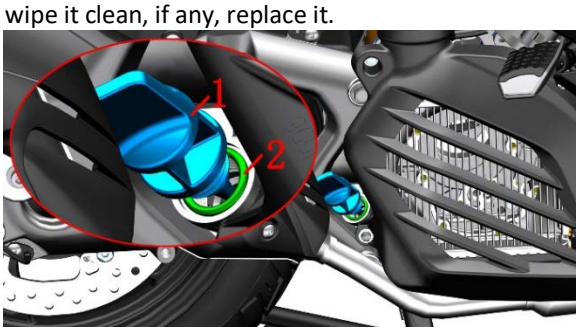
b. Use a funnel + measuring cup to add engine oil to the fuel filler opening on the right crankcase cover of the engine.



c. Wipe clean the fuel filler opening with a non-woven cloth.



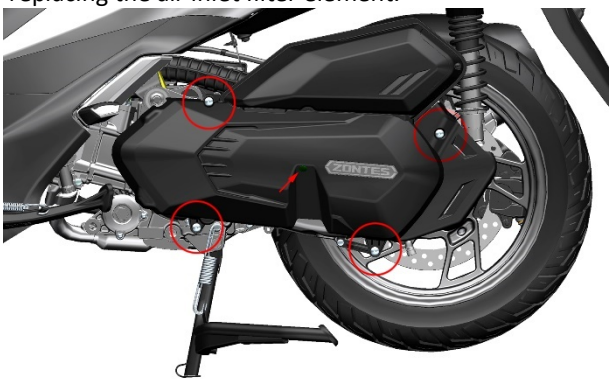
d.inspection O ring(2)Whether there is damage or aging, if not, wipe it clean, if any, replace it.



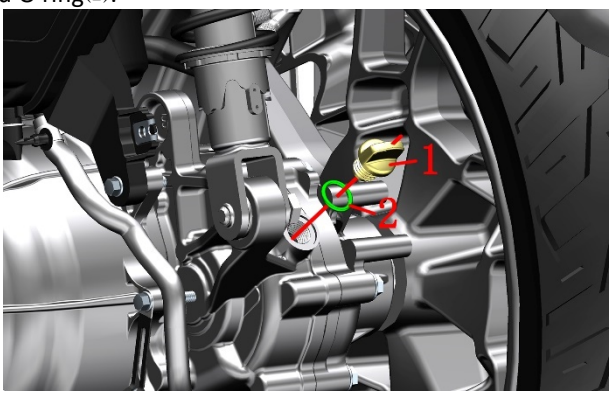
e. Wipe clean the oil dipstick, and turn the oil dipstick(1) and O-ring(2) clockwise by hand to replace the right crankcase cover of the engine.

4.Change gear box oil

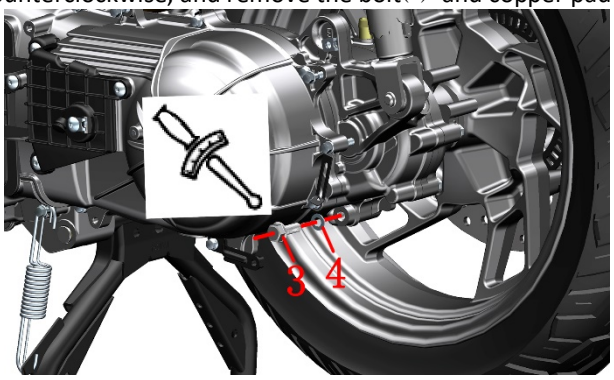
a. Remove the left engine cover by referring to the steps for replacing the air inlet filter element.



b. Place an oil pan under the rear of the left engine. Rotate the fuel filler nut(1) counterclockwise, and remove the nut(1) and O ring(2).



c. Use a 14# sleeve to loosen the oil drain bolt(3) counterclockwise, and remove the bolt(3) and copper pad(4).



d. Remove the oil drain bolt(3) and the copper pad(4).

e. After the gear box oil is completely drained, wipe the surface of the drain port with a non-woven cloth.

f. Replace with a new copper pad(4), check whether the joint surface of the oil drain bolt(3) is scratched, if not, wipe it clean and install it in order. Torque: 20 N.m (2 kgf.m, 15 lbf.ft).

g. Fill the measuring cup with 0.16L of oil or gearbox special oil (0.17US qt, 0.14 lmp qt, 0.04 US gal, 0.04 lmp gal).

h. Check whether the O ring(2) is damaged or aging, wipe it clean if not, and replace it if there is any.

i. Wipe clean the nut(1) and the fuel filler port with a non-woven cloth, first put the O ring(2) into the nut(1), and then turn it clockwise by hand and install it back to the fuel filler port of the gear box.

5.Confirm the oil level

a. After starting the motorcycle and running at idle speed for several minutes, check whether all the disassembled positions are leaking, and if there is any leakage, it needs to be checked.

b. After the engine has been idling for 5 minutes and then turned off for 3 minutes, check whether the oil level meets the standard. If it does not meet the standard, draw it out or add it to the standard.



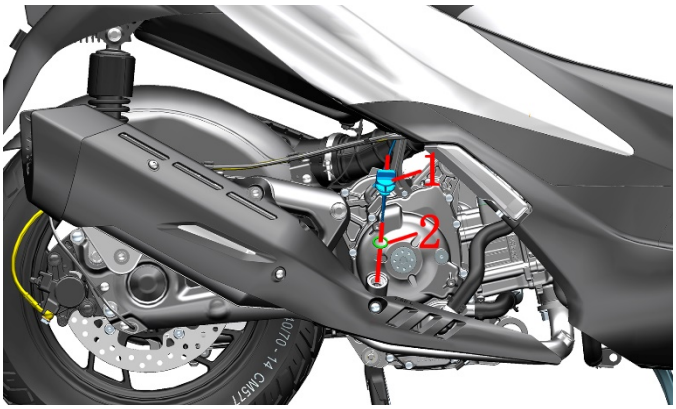
E250

1.Drain the oil

a. Start the motorcycle and turn off the engine for 3-5 minutes after idling for 3-5 minutes.

b. Use the main bracket to park the motorcycle firmly.

c. Rotate the oil dipstick(1) on the right side of the engine counterclockwise, and remove the oil dipstick(1) and O ring (2) to accelerate the oil flow.



d. After placing an oil pan under the oil drain bolt, use a 14# sleeve to remove the oil drain bolt(3) and the combined seal gasket(4).

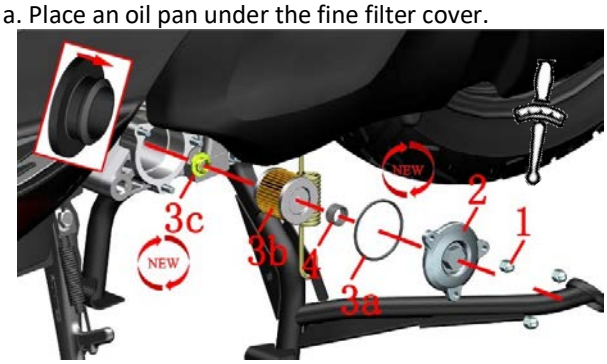


e. Wipe clean the joint surface with a non-woven fabric. Inspect the oil drain bolt(3) whether the joint surface is scratched; if there is any, replace it with a new one, if not, wipe it clean.

f. Replace the new combination gasket(4), and use a 14# sleeve to install the oil drain bolt(3) and combination gasket (4) back to the engine box. Torque: 25N.m (2.6 kgf.m, 18 lbf.ft).

2.Replace fine filter

a. Place an oil pan under the fine filter cover.



b. Use a 10# sleeve to loosen the 3 nuts(1) at the fine filter cover.

c. Remove the fine filter cover(2) and O ring (3a). Remove the spring(4), the fine filter (oil filter element) (3b) and the gasket (3c) in sequence.

d. Replace the new fine filter (oil filter element) and gasket. The fine filter assembly already contains O ring (3a), fine filter (oil filter element) (3b) and gasket (3c). Replace in order.

e. Remove the O ring on the fine filter cover and replace it with a new O ring. First put the O ring (3a) into the groove of the fine filter cover(2), and then install it back to the engine box.

f. Screw back the 3 nuts (1), Torque: 12 N.m (1.2 kgf.m, 9 lbf.ft).

3. Add oil

a. Replace the filter element with a measuring cup with a viscosity of SAE5W-40/10W-40/10W-50. The new API SN grade or higher motorcycle special machine 1.75L (1.85US qt, 1.54 lmp qt, 0.46 US gal, 0.39 lmp gal). If the filter element is not replaced, the measuring cup is filled with 1.55L（1.64US qt,1.36 lmp qt,0.41 US gal,0.34 lmp gal).

b. Use a funnel + measuring cup to add engine oil to the fuel filler opening on the right crankcase cover of the engine.



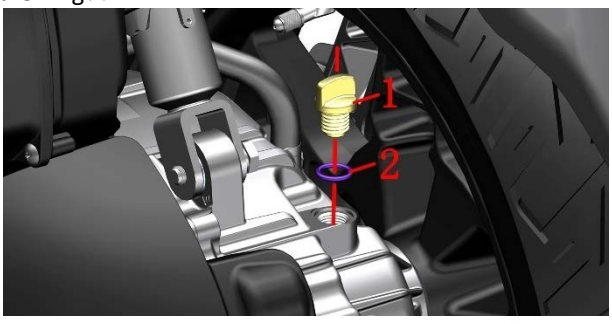
c. Wipe clean the fuel filler opening with a non-woven cloth.



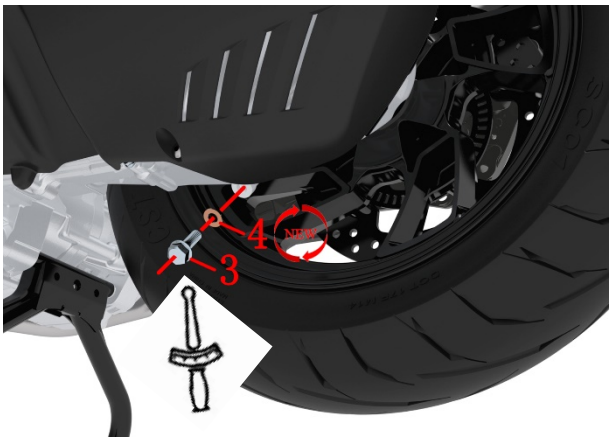
d.inspection O ring(2)Whether there is damage or aging, if not, wipe it clean, if any, replace it.

4.Change gear box oil

a. Place an oil pan under the rear of the left engine. Rotate the fuel filler nut(1) counterclockwise, and remove the nut(1) and O ring(2).



b. Use a 14# sleeve to loosen the oil drain bolt(3) counterclockwise.



c. Remove the oil drain bolt(3) and the copper pad(4).

d. After the gear box oil is completely drained, wipe the surface of the drain port with a non-woven cloth.

e. Replace with a new copper pad(4), check whether the joint surface of the oil drain bolt(3) is scratched, if not, wipe it clean and install it in order. Torque: 20 N.m (2 kgf.m, 15 lbf.ft).

f. Fill the measuring cup with 0.2L(0.21US qt, 0.18 lmp qt, 0.05 US gal, 0.04 lmp gal) of oil or gearbox special oil.

g. Check whether the O ring(4) is damaged or aging, wipe it clean if not, and replace it if there is any.

h. Wipe clean the nut(3) and the fuel filler port with a non-woven cloth, first put the O ring(4) into the nut(3), and then turn it clockwise by hand and install it back to the fuel filler port of the gear box.

5. Confirm the oil level

a. After starting the motorcycle and running at idle speed for several minutes, check whether all the disassembled positions are leaking, and if there is any leakage, it needs to be checked.

b. After the engine has been idling for 5 minutes and then turned off for 3 minutes, check whether the oil level meets the standard. If it does not meet the standard, draw it out or add it to the standard.



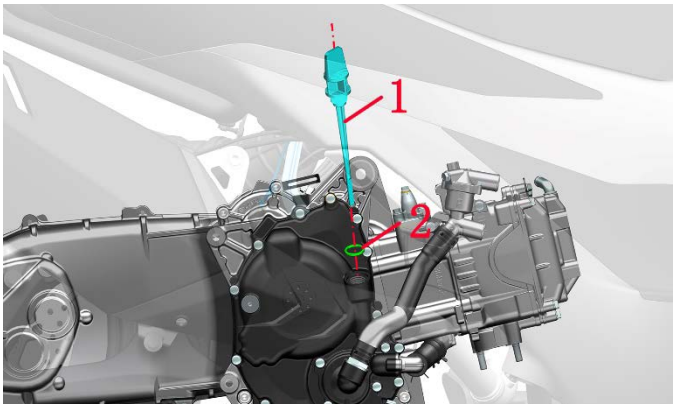
E368

1.Drain the oil

a.Start the motorcycle and turn off the engine for 3-5 minutes after idling for 3-5 minutes. (When the temperature is below 10°C (50°F), the idle running time should be appropriately extended).

b.Use the main bracket to park the motorcycle firmly.

c.Rotate the oil dipstick(1) on the right side of the engine counterclockwise, and remove the oil dipstick(1) and O ring (2) to accelerate the oil flow.



d. After placing an oil pan under the oil drain bolt, use a 14# sleeve to remove the oil drain bolt(3) and the combined seal gasket(4).

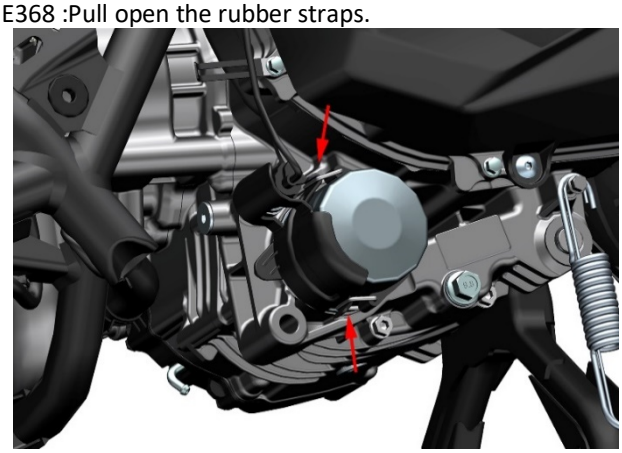


e.Wipe clean the joint surface with a non-woven fabric. Inspect the oil drain bolt(3) whether the joint surface is scratched; if there is any, replace it with a new one, if not, wipe it clean.

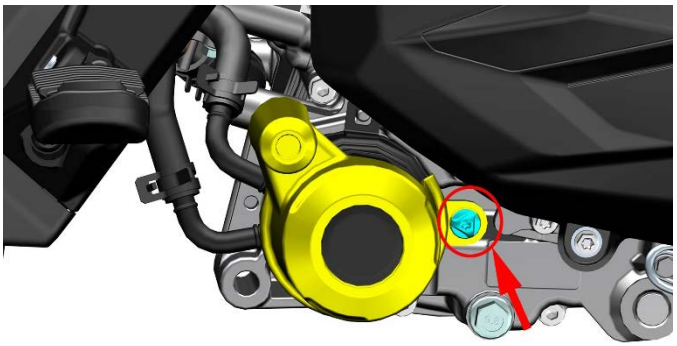
f.Replace the new combination gasket(4), and use a 14# sleeve to install the oil drain bolt(3) and combination gasket (4) back to the engine box. Torque: 25N.m (2.6 kgf.m, 18 lbf.ft).

2.Replace fine filter

a.E368 :Pull open the rubber straps.



E368 (ETC): Use a T25 Torx wrench to remove an M6 shoulder bolt as shown in the diagram to take off the oil filter guard (ETC).



b.Place an oil pan under the fine filter cover.Remove the fine filter using a 14-side, 65mm cap filter wrench +1/2" (12.5mm) ratchet wrench counterclockwise. The filter wrench has a Skadden model 97401. Replacement every 1,000 km or 3 months (whichever comes first) and every 8,000 km or 30 months (whichever comes first).



c. Drain the oil inside the fine filter.



d.Use a clean non-woven fabric to wipe off the remaining oil and impurities on the engine.

e.Apply a layer of oil to the new fine filter seal and install it on the engine. Torque: 20 N.m (2 kgf.m, 15 lbf.ft).

Note that the sealing ring cannot be omitted, and the surface of the sealing ring should be checked for damage, hardening and other defects before assembly.



3.Add oil

a.Replace the filter element with a measuring cup with a viscosity of SAE5W-40/10W-40/10W-50. The new API SN grade or higher motorcycle special machine 1.75L (1.85US qt, 1.54 lmp qt, 0.46 US gal, 0.39 lmp gal). If the filter element is not replaced, the measuring cup is filled with 1.55L（1.64US qt,1.36 lmp qt,0.41 US gal,0.34 lmp gal).

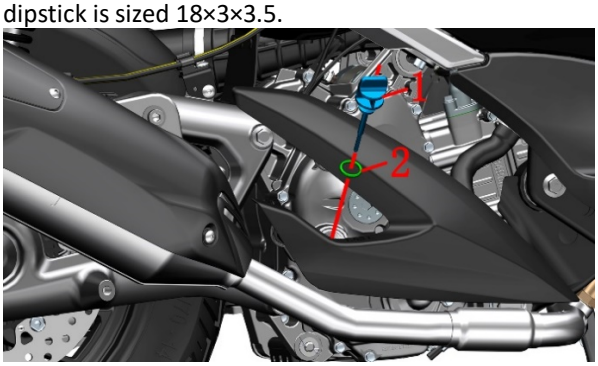
b.Use a funnel + measuring cup to add engine oil to the fuel filler opening on the right crankcase cover of the engine.



c.Wipe clean the fuel filler opening with a non-woven cloth.



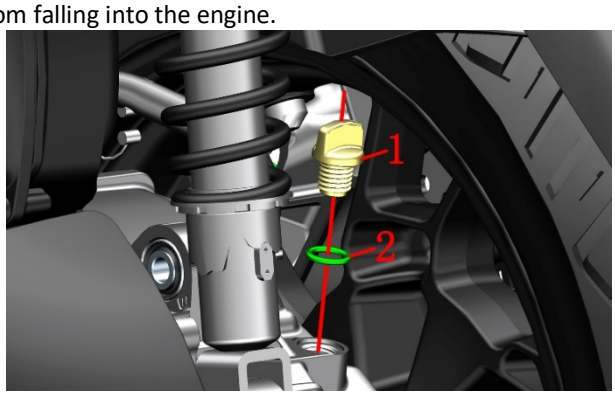
d.Use a clean non-woven fabric to wipe off the remaining oil and impurities on the engine. The O-ring used for the oil dipstick is sized 18×3×3.5.



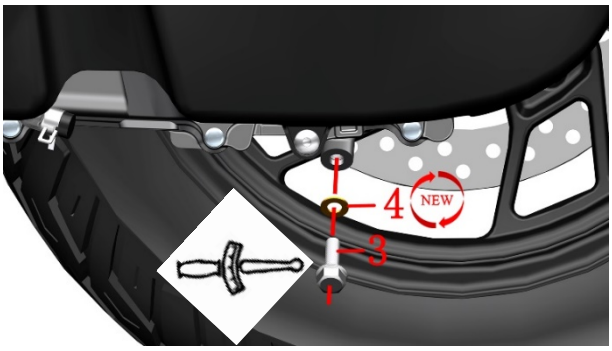
e.Apply a layer of oil to the new fine filter seal and install it on the engine. Torque: 20 N.m (2 kgf.m, 15 lbf.ft).

4.Change gear box oil

a. Rotate the fuel filler nut(1) counterclockwise, and remove the nut(1) and O ring(2). Place the nut (1) on the fuel filler opening without removing it to prevent foreign objects from falling into the engine.



b.Place the oil tray under the rear of the left engine. Loosen the drain bolt (3) counterclockwise.



c.Use a #10 socket for the ETC model, and a #14 socket for other models to remove the M8×25 drain bolt (3) and the 8.3×16×1.5 copper washer (4).

d. After the gear box oil is completely drained, wipe the surface of the drain port with a non-woven cloth.

e. Replace with a new copper pad(4), check whether the joint surface of the oil drain bolt(3) is scratched, if not, wipe it clean and install it in order. Torque: 20 N.m (2 kgf.m, 15 lbf.ft).

f. Fill the measuring cup with 0.2L(0.21US qt, 0.18 lmp qt, 0.05 US gal, 0.04 lmp gal) of oil or gearbox special oil.

g. Check whether the O ring(4) is damaged or aging, wipe it clean if not, and replace it if there is any.

h. Wipe clean the nut(3) and the fuel filler port with a non-woven cloth, first put the O ring(4) into the nut(3), and then turn it clockwise by hand and install it back to the fuel filler port of the gear box.

5.Confirm the oil level

a.After starting the motorcycle and running at idle speed for several minutes, check whether all the disassembled positions are leaking, and if there is any leakage, it needs to be checked.

b.After the engine has been idling for 5 minutes and then turned off for 3 minutes, check whether the oil level meets the standard. If it does not meet the standard, draw it out or add it to the standard.



Throttle valve body

Caution:

●The three-in-one sensor and stepper motor cannot be immersed in any liquid.

●It is forbidden to adjust the idle speed adjustment screw on the valve body.

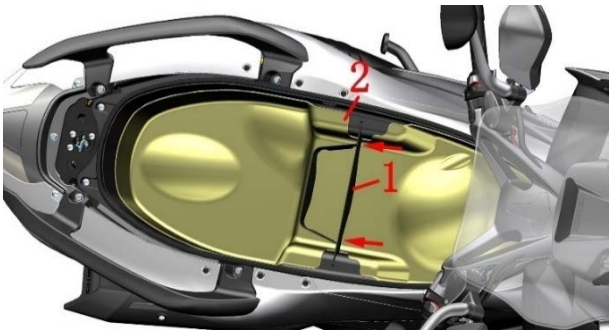
1.Do not dismantle the throttle body to clean up carbon deposits

a.In the process of riding, without affecting safety and complying with traffic laws, appropriately increase the throttle to increase the speed to more than 7000 and continue riding for no less than 2 minutes. High-speed scavenging can effectively remove carbon deposits.

b.Use a regular and qualified fuel cleaner to add in the amount indicated. Frequent use may cause damage to the oil supply line.

2.Remove the stepper motor and clean up carbon deposits

a.Hold both sides of the storage box partition（1）with your hands, remove the partition, and then gradually pull the anti-friction pad from the edge gap of the storage box anti-friction pad（2）. **Note:** Dismantling the storage box alone does not remove the seat.

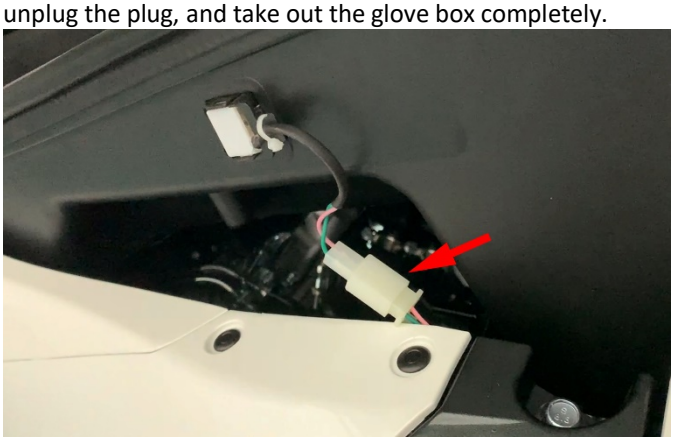


b.Old model: Use 4# inner hexagon to remove the 4 shoulder bolts at the rear and the middle (1), remove the front hexagonal bolt decorative buckle (2) and then remove the bolts (1).

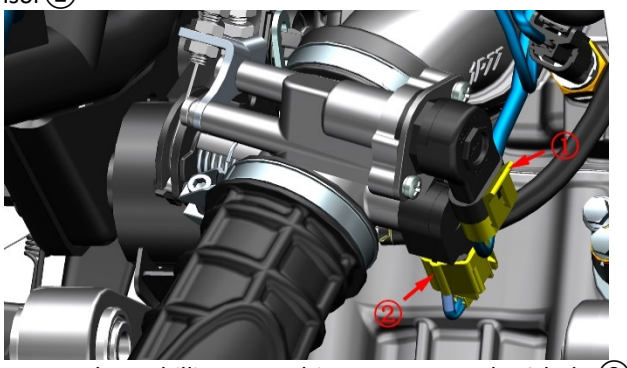
New: Use 4# inner hexagon to remove the 4 shoulder bolts at the rear and the middle（1）, remove the 2 hexagon socket bolt decorative buckle（2）at the front, and then remove the 2 bolts（1）.



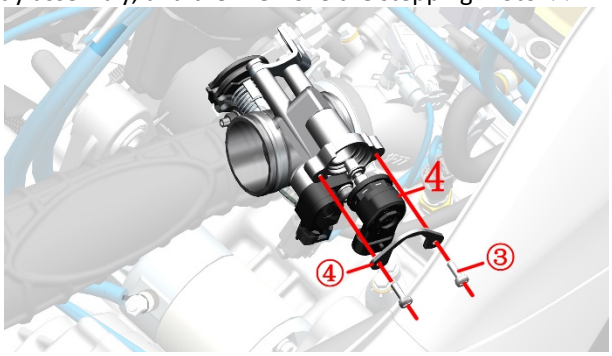
c.Slightly lift the back of the glove box until the harness connector on the left side of the glove box is exposed, unplug the ambient light plug on the left side of the glove box, unplug the plug, and take out the glove box completely.



d.Unplug the plug of the stepping motor① and the sensor②

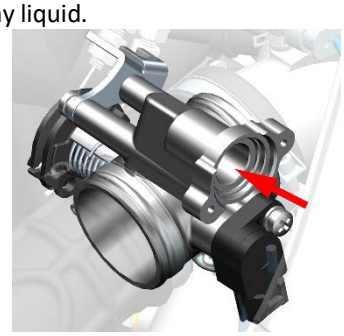


e.Use a short Phillips screwdriver to remove the 2 bolts③ and the anti-off card④ that come with the throttle valve body assembly, and then remove the stepping motor(4).



f.Use throttle cleaner to clean the carbon deposits on the head of the stepper motor. Spray a small amount of cleaning agent into the valve body hole. It is forbidden to soak the stepper motor with any liquid.

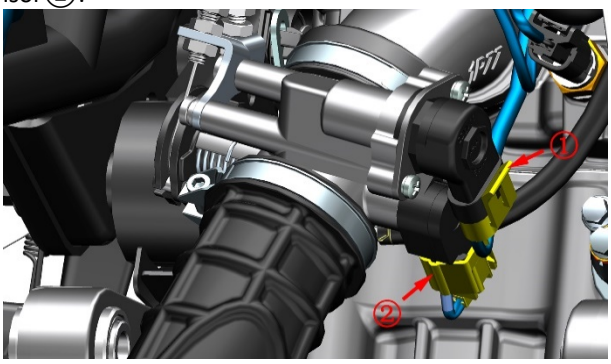




g.Install the stepper motor back to the valve body, paying attention not to miss the sealing ring. Plug the plug back in.

3.Remove the throttle valve body assembly to clean up carbon deposits

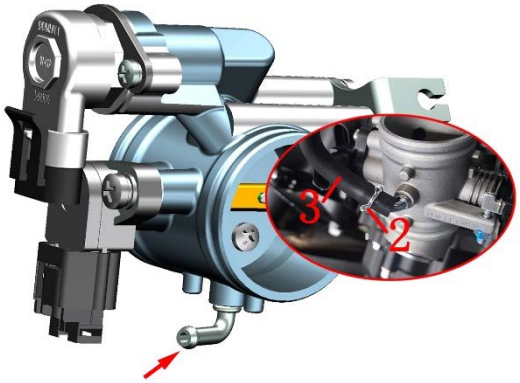
a. Unplug the plugs of the stepping motor① and the sensor②.



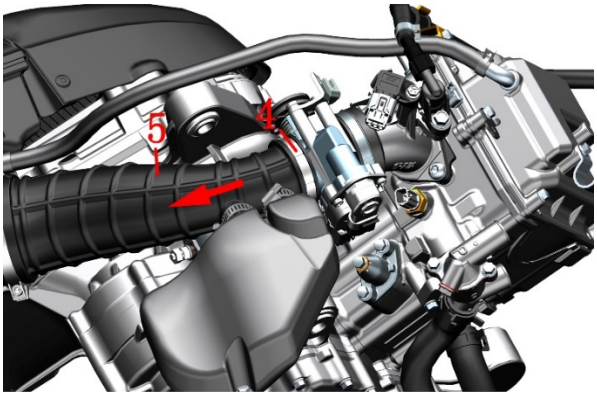
b.Place the small container under the high-pressure oil pipe, press the buckle indicated by③ and pull out the high-pressure oil pipe(1) in the direction of the arrow at the same time. A small amount of fuel will flow out when it is pulled out, and it is forbidden to drip onto the surface of the part.



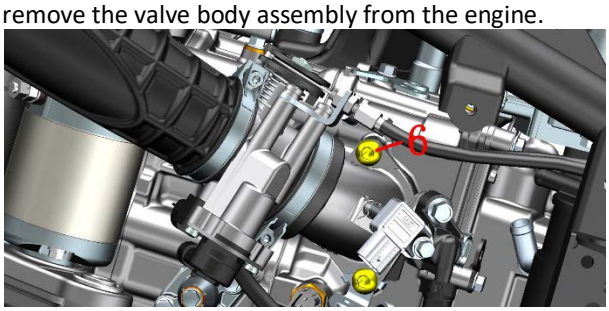
c.Find the circlip at the bottom of the valve body (2) pinch both ends of the circlip with your hands and move it out, and then pull out the desorption tube (3).



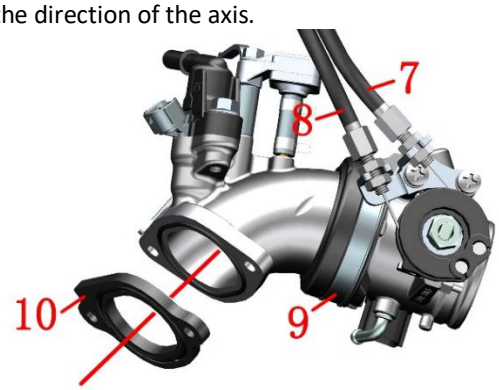
d.Loosen the bolt of the clamp(4) with a 4# inner hexagon and pull out the air filter outlet pipe(5) and clamp(4) in the direction of the arrow to pull out the throttle valve body.



e. Use 5# inner hexagon to remove 2 bolts(6) and then remove the valve body assembly from the engine.



f.Remove the heat insulation pad and O-ring assembly, and remove the O-ring(10). Use a 4# inner hexagon to loosen the clamp(9) and separate the intake manifold from the valve body assembly. Use 2 10# open-end wrenches to loosen the two nuts of the fuel line(8) and then pull them out to remove them from the bracket; take out the cylinder end of the throttle line from the turntable. After the two nuts of the oil return line(7) are loosened, completely loosen the nut at the bottom of the threaded sleeve, and then pull out the bracket in the direction of the axis.



g.Use throttle valve body cleaning agent to clean the carbon deposits on the intake manifold and throttle valve body outlet respectively. It is forbidden to directly soak the throttle valve body assembly and intake manifold assembly with any liquid.

h.After cleaning the heat insulation pad, replace 2 new O-rings(10) and assemble them in place. Wipe clean the contact surface of the intake manifold and the heat insulation pad and the end surface of the heat insulation pad and the engine. Reversely reset all materials in the order of disassembly.

4.Disassemble the sensor

a. If the idling speed is abnormal, it is easy to extinguish and the spark plug and high voltage coil are eliminated, the sensor needs to be removed for investigation. It should not be disassembled under normal circumstances.

b. Refer to the steps for removing carbon deposits without disassembling the throttle valve body, and unplug the plugs of the stepping motor① and the sensor②.

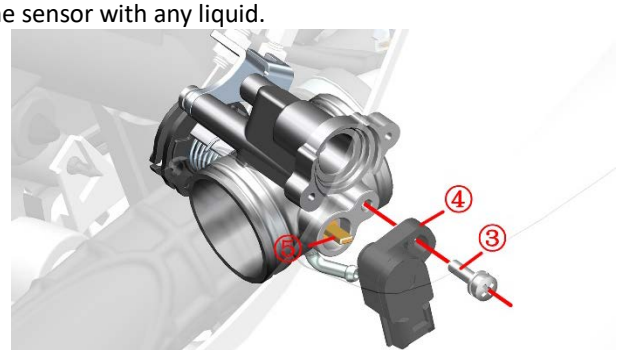
Simple test method: Remove the stepper motor. After turning off the power, take out the stepping motor, do not loosen the cable plug, press the flameout switch at startup without ignition, check whether the motor plug can shrink back and forth, and finally turn off the flameout switch to check whether the plug returns to its original position.

If you need to check whether the stepper motor is abnormal, measure whether the resistance across A and B is 53±5.3Ω. Bolts for fixing stepper motors: GB9074.4 M4×12.





c. Use a short Phillips screwdriver to remove the 2 GB9074.4 M5×16 bolts③ that comes with the throttle valve body assembly, and then remove the the anti-off card④, and then take off the stepper motor.It is forbidden to soak the sensor with any liquid.



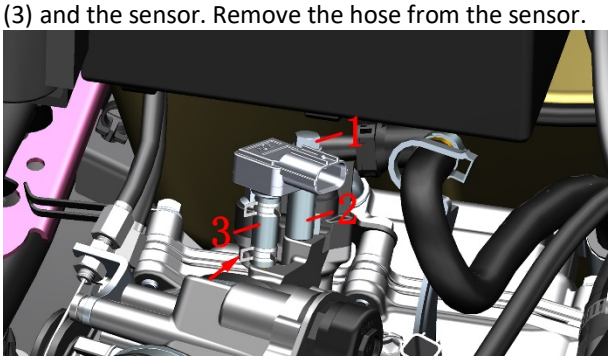
Simple test method: connect the whole vehicle to the diagnostic instrument, press the flameout switch (no need to ignite), turn the throttle handlebar from the initial position to full open, this process to see if the throttle position signal follows the change from 0 to 100.

Position sensor output voltage value idle position: 0.7±0.1V; Full open position: 3.6-3.9V, input voltage DC5V±0.1V. f. Check the external inlet pressure sensor:

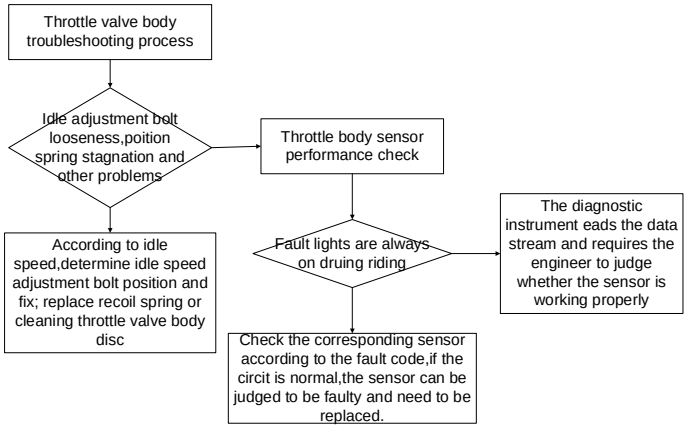
Release the connector and see if the pins are skewed or broken.

d. The vehicle is connected to a diagnostic instrument without ignition, and the engine parameters are checked to see if the pressure parameters are consistent with the local atmospheric pressure.

If you need to remove the intake pressure sensor, grasp the bushing (2) firmly and remove the bolt (1) with the 8# short sleeve. If it is inconvenient to operate, the battery and electrical device box can be removed before proceeding. Clamp the clamp on the bottom with pliers and move it up to the top and remove the inlet pressure sensor from the hose (3) and the sensor. Remove the hose from the sensor.



5. Throttle valve body troubleshooting process



DANGER

●The vehicle must be parked on a flat and stable ground or a lifting platform.

●Once the engine and muffler have cooled down, the operation can be performed.

●When removing the high-pressure fuel pipe, prevent the fuel from dripping onto the surface of the part.

●Smoking, making calls, etc. are prohibited in the workplace.

CAUTION

●Remove the throttle valve body to clean the carbon deposits and operate in a dust-free and dust-free environment to prevent dust from entering the inside of the engine.

●Prevent foreign matter from falling into the engine or air filter.

●If the stepper motor,sensor and heat insulation pad are disassembled, do not miss the sealing ring and make sure that the sealing ring is assembled in place without cutting edges.

●Do not use carburetor cleaner or compressed air to clean the throttle valve body.

●The EFI system needs to be reset after reinstalling the battery.The specific method is as follows:

a. Unlock the vehicle and support the main bracket;

b. Pinch the brake and start the vehicle;

c. Pull the engine speed above 3000 rpm;

d. After releasing the throttle, turn off the flameout switch and lock the car;

e. After waiting for 5 seconds, unlock the vehicle again to complete the reset of the EFI system.

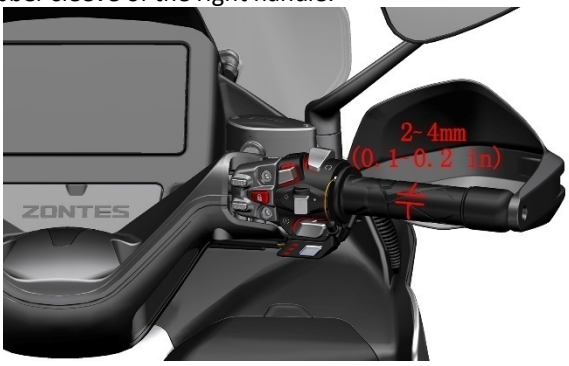
Throttle cable

1.Inspection

a.Check whether the rubber sleeve of the right hand handle and the throttle cable are damaged.

b.Check whether the rubber sleeve of the right hand rotates smoothly and whether it can return automatically.

c.Hold the steering wheel with both hands and turn the right hand to the right while rotating the rubber sleeve of the right handle. Every time you turn a certain steering angle, confirm whether the throttle can be reset normally. If you can't reset it, you need to lubricate the cable or the inside of the right handle; or replace it with a new throttle cable or the rubber sleeve of the right handle.



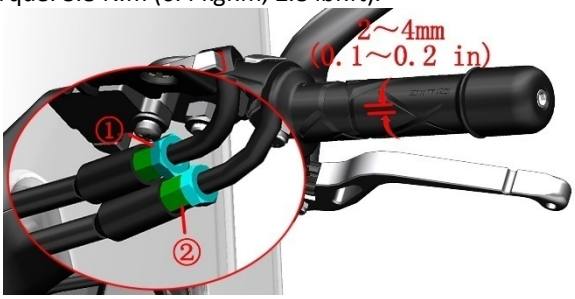
d.After starting the engine, turn the steering handle left and right to ensure that the idling speed does not change during the steering process, and then turn off the engine.

e.Rotate the right hand to check whether the rubber sleeve inspection cable gap is within 2～4mm (0.1～0.2 in)

2.Adjust the throttle cable clearance

E350

a. Fix the adjusting screw② with a 8# open-end wrench, and then use a 10# open-end wrench to loosen the nut① counterclockwise. Rotate the adjustment solenoid② clockwise to reduce the free stroke, counterclockwise to expand; adjust the gap to the specified value. After adjusting the gap, tighten the nut①.
Torque: 3.8 N.m (0.4 kgf.m, 2.8 lbf.ft).

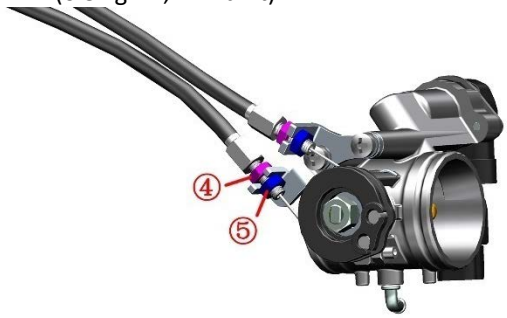


E368

a.Fix the adjusting screw② with a 10# open-end wrench, and then use a 10# open-end wrench to loosen the nut① counterclockwise. Rotate the adjustment solenoid② clockwise to reduce the free stroke, counterclockwise to expand; adjust the gap to the specified value. After adjusting the gap, tighten the nut①.
Torque: 3.8 N.m (0.4 kgf.m, 2.8 lbf.ft).



b.If the above adjustment fails to achieve the desired effect, please refer to the description in "Remove the throttle valve body assembly to clean up carbon deposits" to remove the throttle valve body assembly. Use a 10# open-end wrench to loosen the 2 nuts on the bracket to adjust. Torque: 3.0 N.m (0.3 kgf.m, 2.2 lbf.ft).



c.If the above two adjustments are invalid, replace the throttle cable with a new one.

E368(ETC)

Electronic throttle vehicles do not require adjustment of the free play angle.

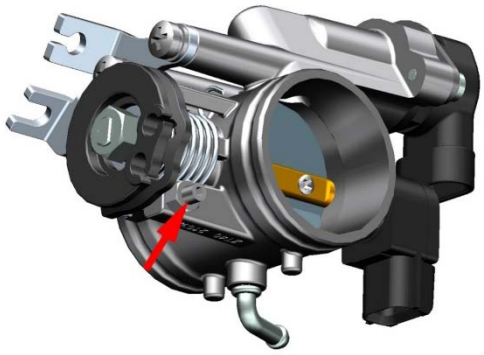
Idle speed

Caution:

●Before checking the idle speed, you should check other engine maintenance items and the condition is normal before proceeding.

●Check the following items before checking the idle speed:
The maintenance indicator light "🔧" should not light up.
The status of the spark plug has been checked.
The air filter element and the air inlet element have been inspected or replaced.
Check the throttle clearance.

●The limit screw on the valve body is not allowed to be adjusted privately.



Check idle speed:

Check the idling speed of the engine when the engine is warm.

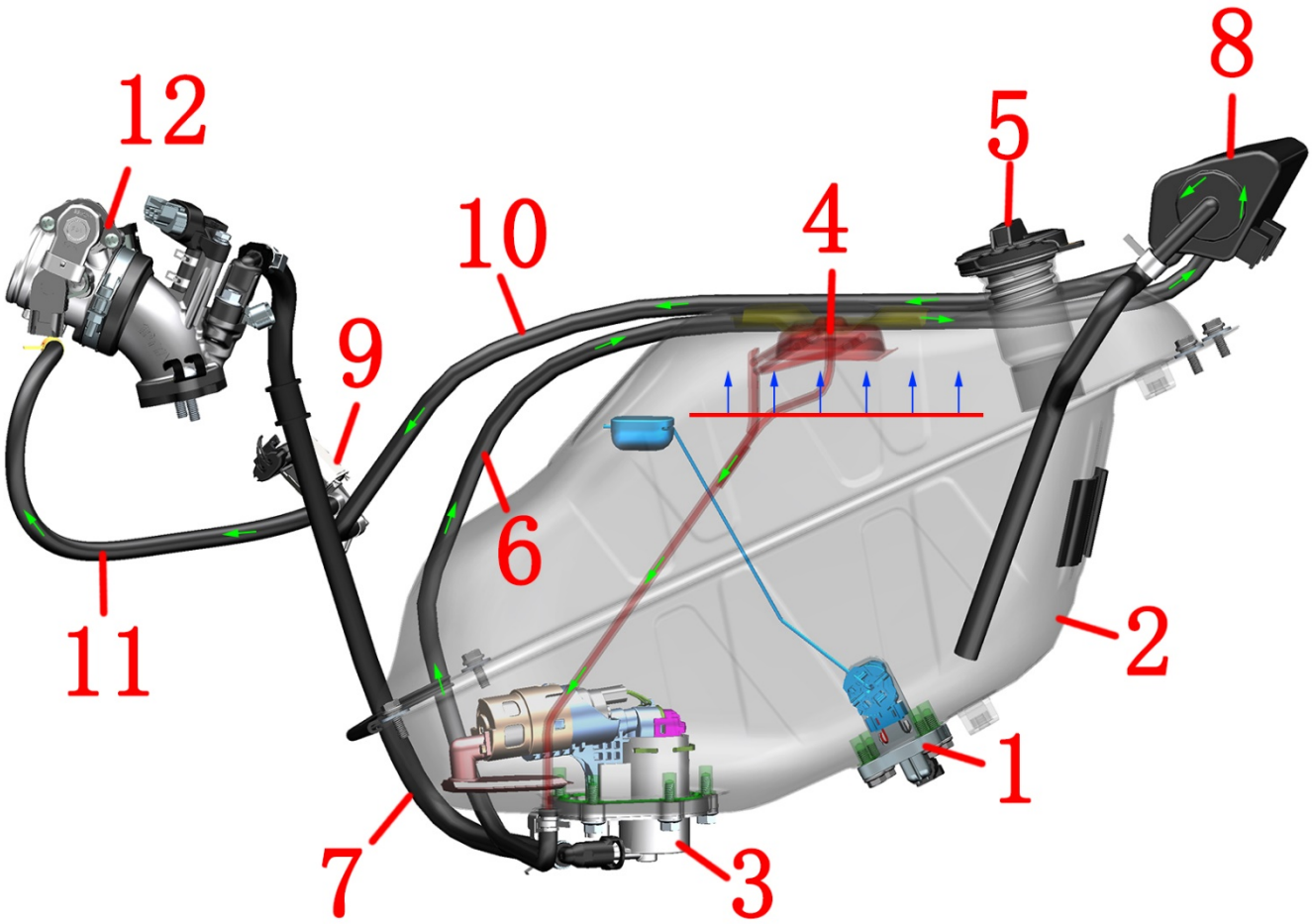
E350 the idle speed range of the engine should be 1500-1700 rpm.

If the idling speed is not within the standard range or the idling speed is stalled, it should be checked and handled by professional service personnel at the designated maintenance point of Shengshi or a qualified maintenance organization.

Abnormal idling or flameout should be checked or repaired according to the troubleshooting procedure in the chapter "Electronic Injection System" of this manual.

Fuel evaporative pollutant control system

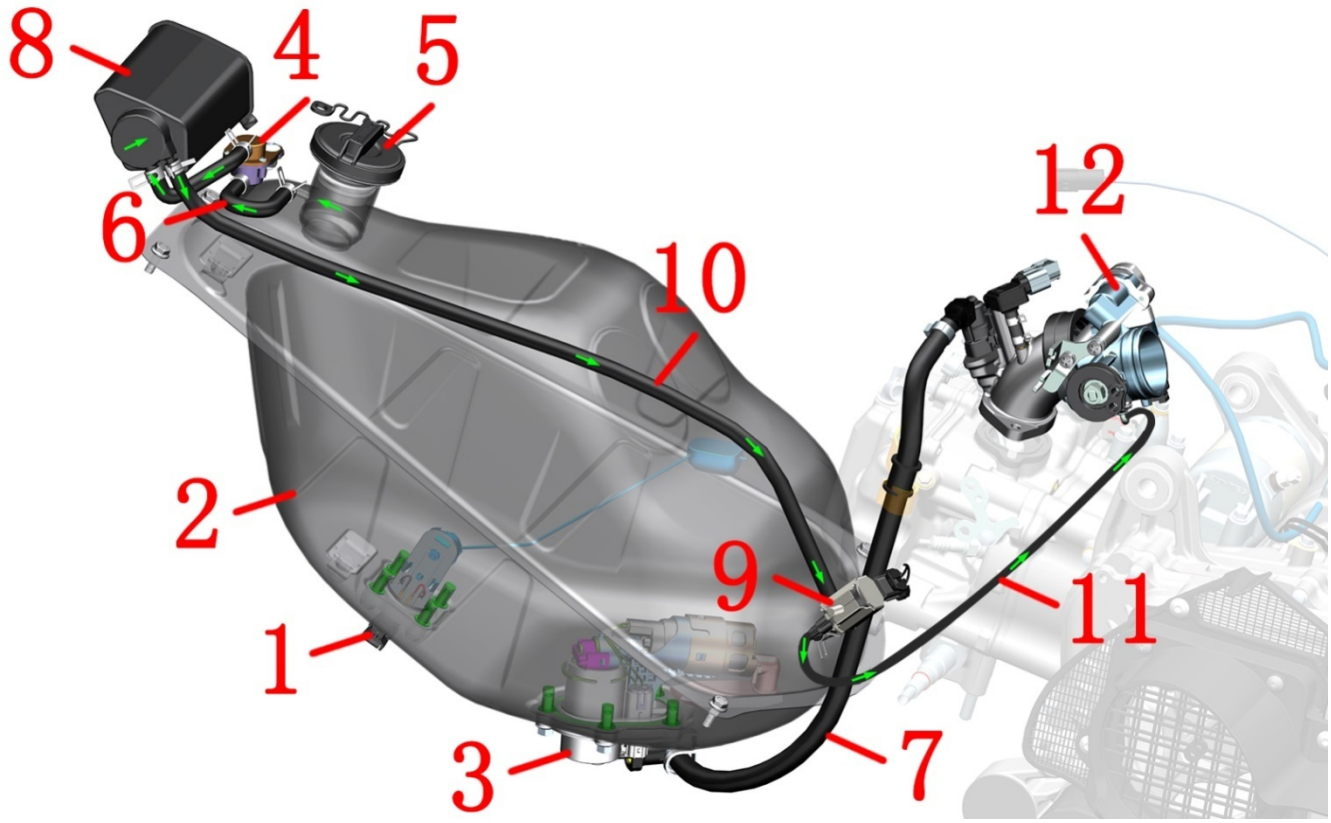
E350-E125-E250



1- Fuel level sensor 2- Fuel tank 3- Fuel pump 4- Oil-air separator (welded inside the fuel tank) 5- Fuel tank cap 6- Adsorption/vent pipe 7-High pressure fuel pipe 8-Carbon tank 9-Carbon tank solenoid valve 10- Solenoid valve intake pipe 11-solenoid valve outlet pipe 12-throttle valve body assembly

Fuel evaporation:
Oil and gas → oil and gas separator (inside the oil tank) → adsorption/vent pipe → solenoid valve intake pipe → solenoid valve outlet pipe → throttle valve body assembly → intake manifold → cylinder
The fuel evaporative pollutant control system can only be checked after the cover is removed.
Check the carbon canister for cracks or damage.
Check the suction/vent pipe for cracks or damage.
Check whether the solenoid valve of the carbon canister is working properly.
Check whether the solenoid valve inlet and outlet pipes are cracked or damaged.
Check whether the hoses are bent, causing the airflow to be unsmooth.

E368

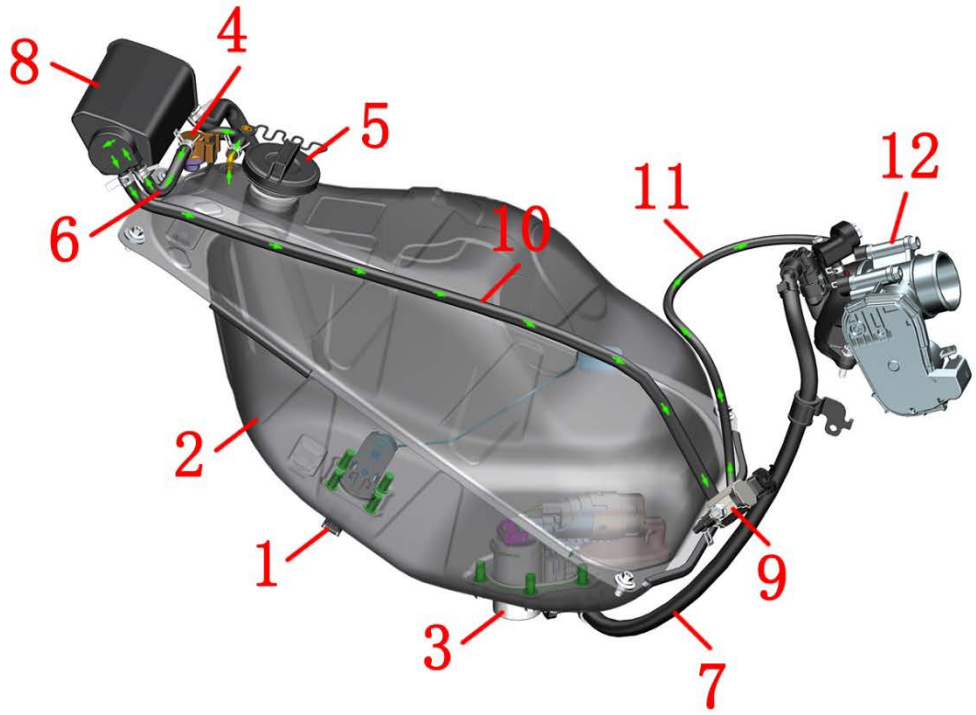


1- Fuel level sensor 2- Fuel tank 3- Fuel pump 4- External oil and gas separator 5- Fuel tank cap 6-Adsorption/vent pipe 7-High pressure fuel pipe 8-Carbon tank 9-Carbon tank solenoid valve 10- Solenoid valve intake pipe
11-solenoid valve outlet pipe 12-throttle valve body assembly

Fuel evaporation:
Air→Fuel tank breather pipe→External oil and gas separator→carbon canister adsorption tube→Carbon tank→carbon canister solenoid valve intake pipe→carbon canister solenoid valve outlet pipe→Throttle valve body→intake manifold→Cylinder

The fuel evaporative pollutant control system can only be checked after the cover is removed.
Check the carbon canister for cracks or damage.
Check the suction/vent pipe for cracks or damage.
Check whether the solenoid valve of the carbon canister is working properly.
Check whether the solenoid valve inlet and outlet pipes are cracked or damaged.
Check whether the hoses are bent, causing the airflow to be unsmooth.

E368(ETC)



1- Fuel level sensor 2- Fuel tank 3- Fuel pump 4- External oil and gas separator 5- Fuel tank cap 6-Adsorption/vent pipe 7-High pressure fuel pipe 8-Carbon tank 9-Carbon tank solenoid valve 10- Solenoid valve intake pipe
11-solenoid valve outlet pipe 12-throttle valve body assembly

Fuel evaporation:
Air→Fuel tank breather pipe→External oil and gas separator→carbon canister adsorption tube→Carbon tank→carbon canister solenoid valve intake pipe→carbon canister solenoid valve outlet pipe→Throttle valve body→intake manifold→Cylinder

The fuel evaporative pollutant control system can only be checked after the cover is removed.
Check the carbon canister for cracks or damage.
Check the suction/vent pipe for cracks or damage.
Check whether the solenoid valve of the carbon canister is working properly.
Check whether the solenoid valve inlet and outlet pipes are cracked or damaged.
Check whether the hoses are bent, causing the airflow to be unsmooth.

Radiator

DANGER

●The motorcycle must be parked on a flat and stable ground or a lifting platform.
●Once the engine and muffler have cooled down, the operation can be performed.
●Swallowing or inhaling the coolant will cause harm to the human body.

CAUTION

●Regularly check the coolant level, and always keep the position not lower than the "L" line.
●It is recommended to replace the coolant every 4 years or 40,000 kilometers (24855 mile).
●Swallowing or inhaling the coolant will cause certain harm to the human body. After each addition of coolant, wash hands, face and any exposed skin thoroughly in time. If swallowed by mistake, immediately contact the poison control center or hospital; if inhaled, immediately go to a ventilated environment. If it accidentally splashes into the eyes, immediately rinse the eyes with a large amount of running water and seek medical advice or consultation in time. Keep away from children and pets.
●The engine coolant must be a model suitable for aluminum radiators, based on ethylene glycol. Use a coolant that is suitable for aluminum radiators, which is a mixture of coolant concentrate and distilled water in a certain proportion. If you need to add water, you can only add distilled water. Other water quality may corrode the engine cooling system or cause more serious consequences.
●It is necessary to select the corresponding antifreeze liquid according to the lowest possible local temperature. The motorcycle added to the factory is Total -35°C (-31F) green antifreeze. M310 the total amount of coolant is 1.44L (1.52 US qt, 1.27 lmp qt, 0.38 US gal, 0.32 lmp gal).
●Coolant may damage the paint surface. Pay attention when adding it. A small amount of splash should be wiped off with a clean soft cloth immediately.

1.Check the coolant

a.Straighten the motorcycle through the right rear gap and use a flashlight to check that the coolant level is between "H" and "L". Pay attention to the ground as flat and level as possible, do not check on slopes. And the engine needs to be in a cold state.



2.E125-E250-E350 add coolant (antifreeze) to the Coolant expansion tank

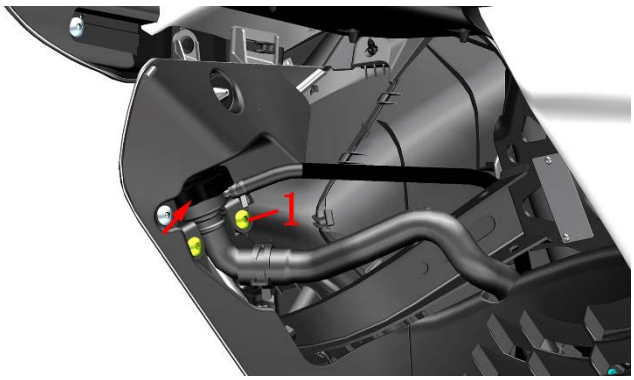
If the water level of the Coolant expansion tank is lower than the "L" line, an appropriate amount of coolant must be added. If there is no coolant in the Coolant expansion tank, check the cooling system for leakage first, and it must be repaired before it can be replenished.

Lift the rubber cover of the auxiliary tank and add an appropriate amount of coolant to it with the help of the funnel. Straighten the motorcycle with a flashlight to see if the liquid level of the auxiliary tank is between "H" and "L". Pay attention to the ground as flat and level as possible, do not check on slopes. And the engine needs to be in a cold state.

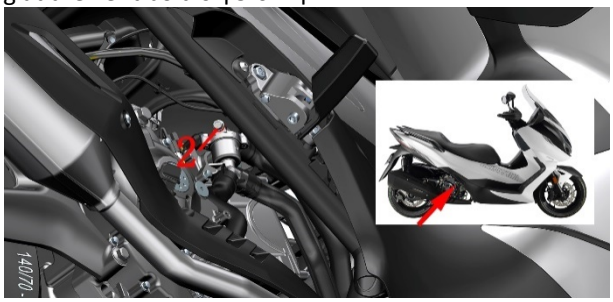
3.Add coolant to the Radiator

3.1 E250/E350

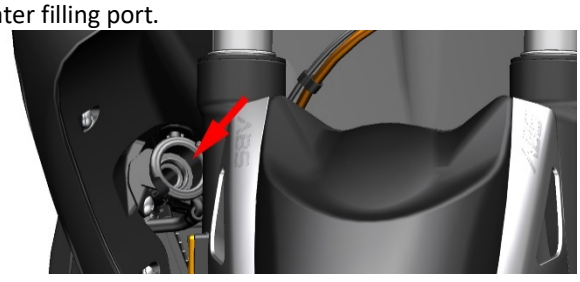
a. Hit the handle bar to the left. Remove the two bolts (1) with the 4# Allen, pull out the water filling port of the water tank, and unscrew the cover of the water filling port counterclockwise to add coolant.



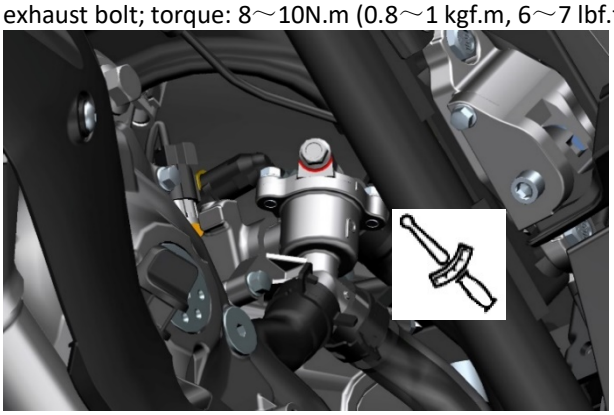
b. Use a 10# sleeve to loosen the thermostat bleed bolt (2) counterclockwise by 4 to 5 turns, do not completely remove it. Note that a small container is required to receive the coolant overflowing from the exhaust bolt. Do not allow the coolant to drip directly onto the surface of the part. The O-ring at the vent bolt is ϕ5.6 × ϕ1.



c. Put on waterproof gloves and add coolant to the water inlet of the Radiator with the help of an extended funnel. Until the position of the vent bolt of the thermostat is stably overflowed with coolant, the coolant level can be seen at the water filling port.

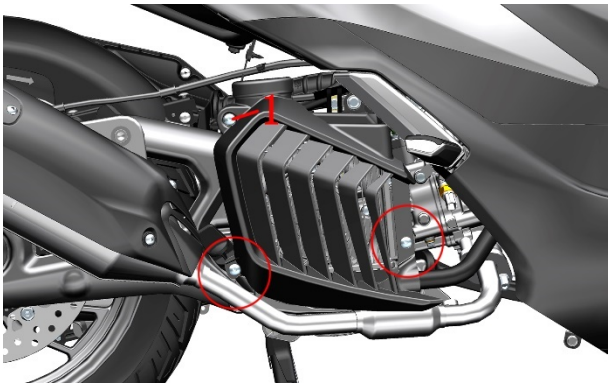


d. Tighten the filler cap of the Radiator. Tighten the exhaust bolt; torque: 8～10N.m (0.8～1 kgf.m, 6～7 lbf.ft).

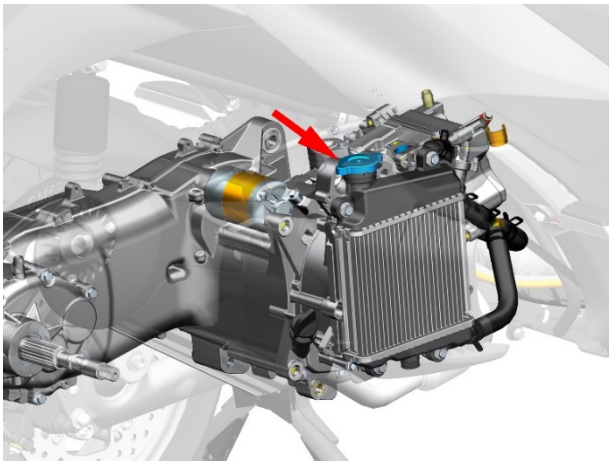


3.2 E125

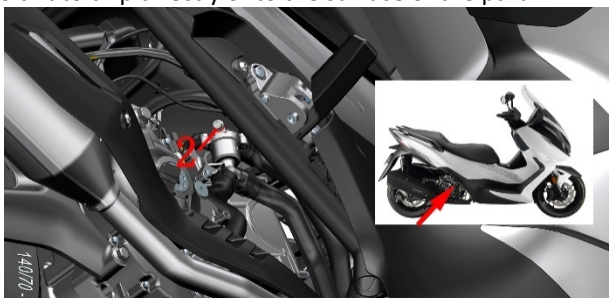
a. Use 4# inner hexagon to remove 3 bolts(1)， remove water tank cover



b. unscrew the cover of the water filling port counterclockwise to add coolant.

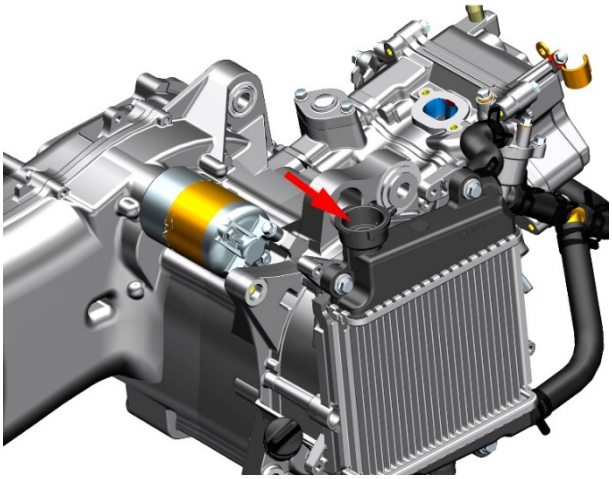


c. Use a 10# sleeve to loosen the thermostat bleed bolt (2) counterclockwise by 4 to 5 turns, do not completely remove it. Note that a small container is required to receive the coolant overflowing from the exhaust bolt. Do not allow the coolant to drip directly onto the surface of the part.

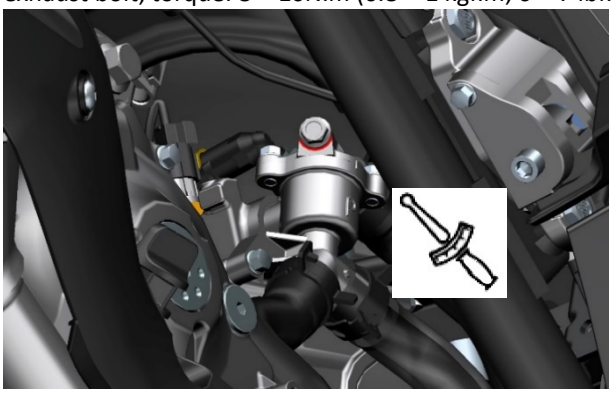


b. Remove the filler cap of the Radiator to accelerate the flow of coolant.

d. Put on waterproof gloves and add coolant to the water inlet of the Radiator with the help of an extended funnel. Until the position of the vent bolt of the thermostat is stably overflowed with coolant, the coolant level can be seen at the water filling port.

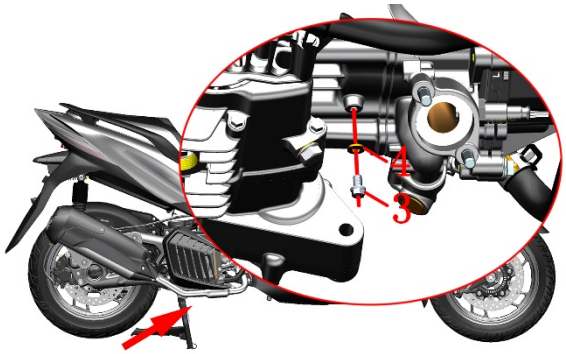


e. Tighten the filler cap of the Radiator. Tighten the exhaust bolt; torque: 8～10N.m (0.8～1 kgf.m, 6～7 lbf.ft).



4.Put coolant

a. Place an oil pan underneath, wear waterproof gloves and use a 10# sleeve to remove the drain bolt(3) and O ring (4).



b. Remove the cap of the main water tank to speed up the flow of coolant.

c. Wipe all the joint surfaces clean with a non-woven cloth. Check whether the bolt(3) joint surfaces are scratched, if

any, replace them with new ones. The O ring(4) needs to be replaced every time it is disassembled.

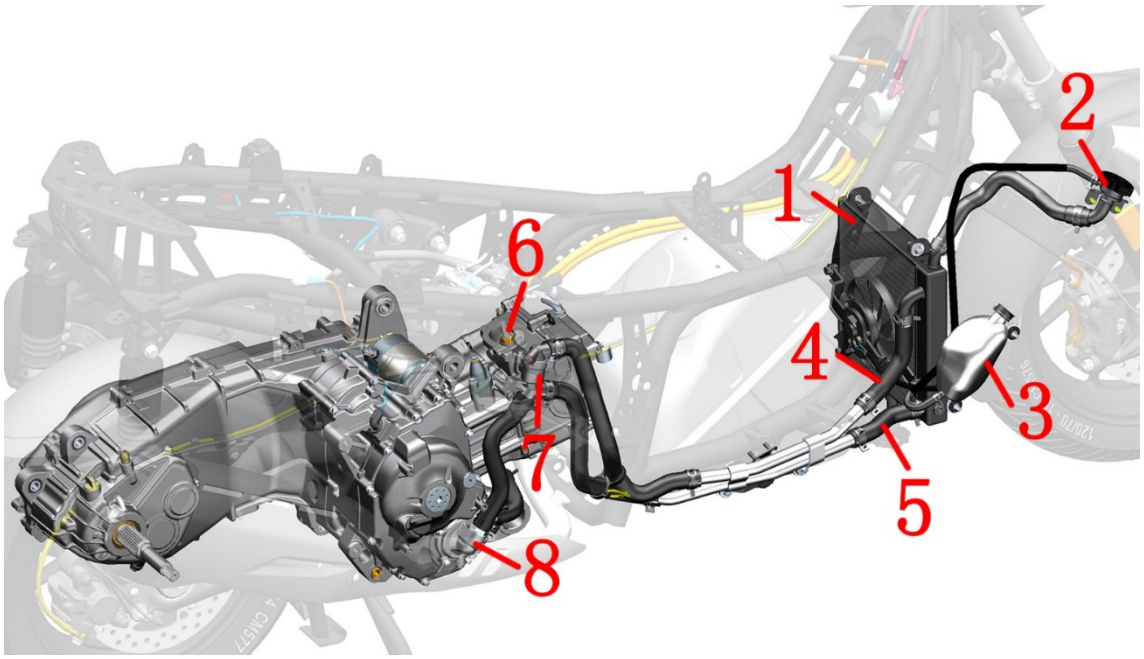
d. Put the new O-ring(4) into the bolt(3) first, taking care not to scratch the O-ring. Torque of bolt(3): 8～10N.m (0.8～1 kgf.m, 6～7 lbf.ft).

5.Check whether the fins of the radiator water tank are deformed or the air duct is blocked

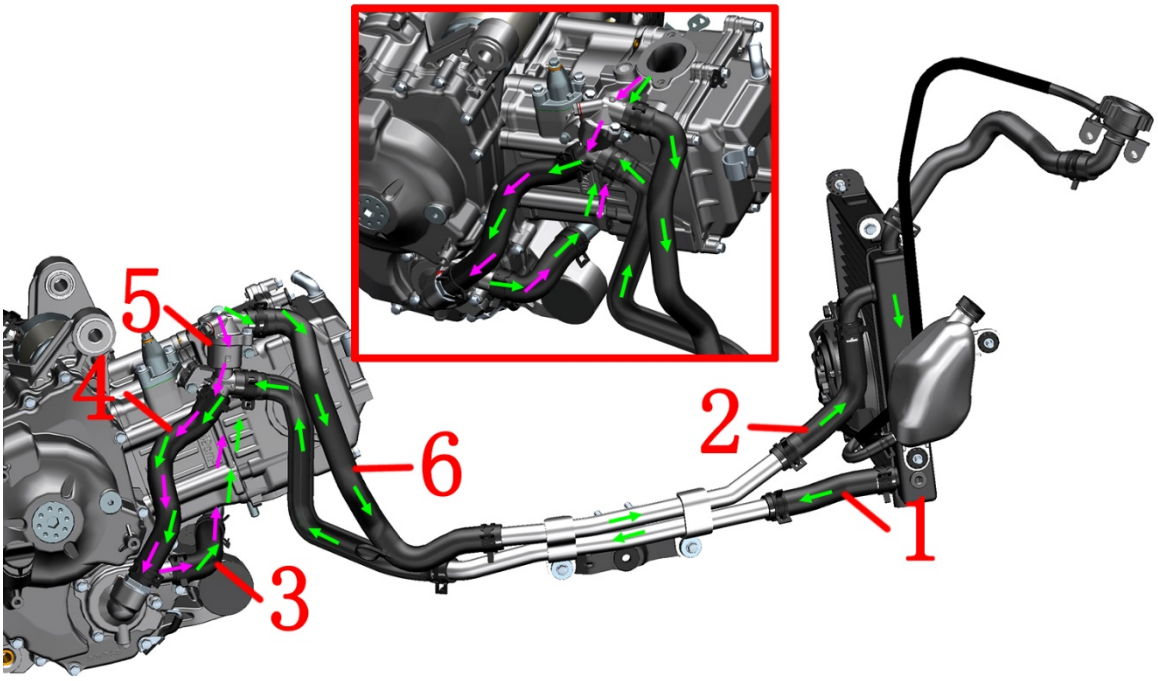
a. Use compressed air or low-pressure water guns, brushes, etc. to remove dirt such as sediment and insects on the surface of the radiator. When using compressed air, be careful not to get too close to the fins. It is forbidden to directly flush the radiator with a high-pressure water gun to avoid fin deformation and blocking the air duct.

6.Check all water pipes for leaks; aging.

6.1 E250-E350-E368



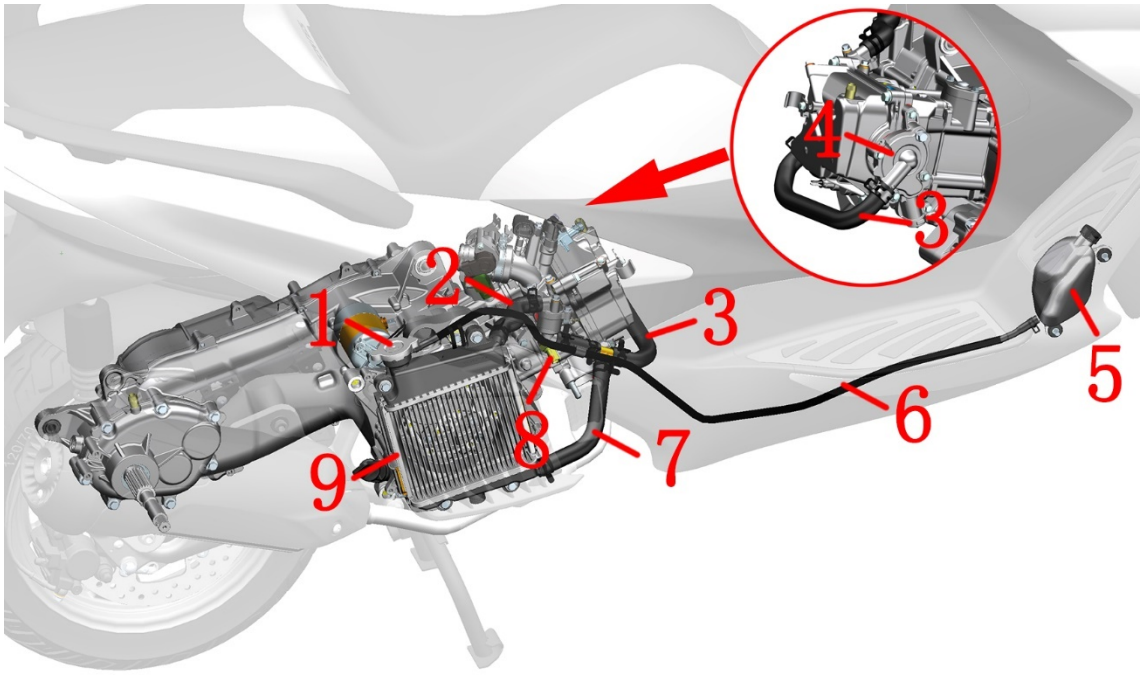
1-Main water tank 2- Water tank filling port 3- Secondary water tank 4- Main water tank water inlet pipe 5- Main water tank water outlet pipe 6-Water and oil shared sensor 7- Thermostat 8- Water pump cover assembly



1- Main water tank outlet pipe 2- Main water tank inlet pipe 3- Water pump cover outlet pipe

4- Water pump cover inlet pipe 5- Thermostat 6- Thermostat outlet pipe

6.2 E125



1- water tank water inlet 2-main water tank inlet pipe 3-engine inlet pipe.4-Water pump cover inlet pipe
5-Secondary water tank 6- auxiliary water tank connection water pipe 7- water tank outlet pipe
8-Water and oil shared sensor 9-Main water tank

Brake hose

Caution:

●This inspection should be completed by a qualified maintenance organization.

●Check the hhose according to the maintenance schedule.

●It is recommended to replace the brake hose every 4 years.

Refer to steps 1 and 2 of checking brake fittings in the brake system, you can use the endoscope with LED to easily check the oil pipe joints of the ABS hydraulic control unit and the main pump, or remove the corresponding cover for inspection.

Brake fluid

Caution:

●This inspection should be completed by a qualified maintenance organization.

●It is strictly forbidden to directly flush the main pump with high-pressure water.

●After disassembly, make sure that all parts are installed correctly.

●It is strictly forbidden to mix in water, dust, impurities and silicic acid or petroleum-based liquids, otherwise it will cause serious damage to the brake system.

●This vehicle uses DOT 4 brake fluid, and it is forbidden to mix it with other brake fluids.

●Wear protective gloves/protective clothing/protective goggles/protective masks.

●Brake fluid must be used in time after opening, seal and moisture-proof measures must be taken when storing; it is recommended not to exceed 1 month. Inferior or damp brake fluid will cause adverse effects on the brake system, and may cause brake failure when the impact is severe.

●The brake fluid should be prevented from dripping on the paint surface of the cover or the surface of the parts. If it is accidentally splashed, it should be rinsed with water immediately.

⚠ DANGER

●If you accidentally swallow the brake fluid, you should contact the poison control center or hospital immediately; if you accidentally get the brake fluid into your eyes, rinse with water and seek medical attention immediately.

●Brake fluid must be kept away from children and pets.

●The vehicle must be parked on a flat and stable ground or a lifting platform.

1.Add brake fluid to the main pumps of the front and rear disc brakes

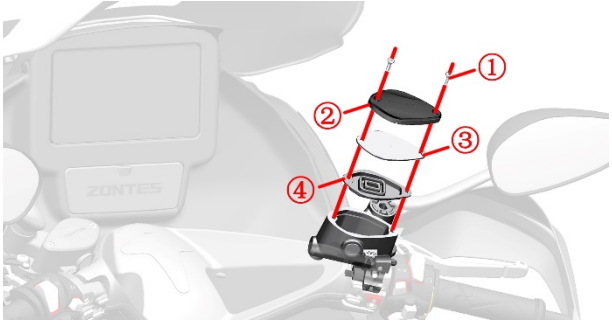
a. Adding brake fluid to the main pump of a disc brake is taken as an example for description. The steps for refilling the rear brake main pump are the same.

b. Place the vehicle horizontally.

c. Wrap around the main pump with oil-resistant plastic film to prevent the brake fluid from dripping onto the surface of the parts and damaging the paint layer.



d. After wearing waterproof gloves, use a Phillips screwdriver to remove the bolt①, and remove the upper cover②, the cover③, and the sealing rubber gasket④.



e. Use the brake fluid water content tester to measure the water content, if it is more than 2%, all brake fluid needs to be replaced; if it is less than or equal to 2%, add newly opened DOT 4 brake fluid to the transparent observation window of the front disc brake main pump 3/4 places. It is recommended that the water content should be less than 1.5%. Total 0.23L（0.24 US qt,0.2 lmp qt,0.06 US gal ,0.05 lmp gal）TOTAL HBF 4 (DOT 4) brake fluid is added to this vehicle from the factory.



The above picture shows the brake fluid water content tester. The picture comes from the Internet and the copyright belongs to the author of the original picture. Do not use it for other purposes.

f. Reassembly can only be done after the foreign objects have been cleaned up.

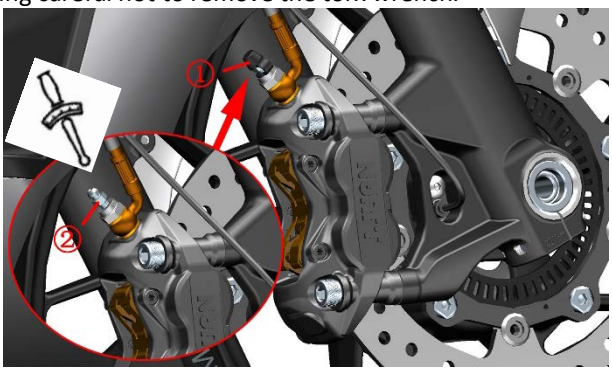
2.Replace the brake fluid

Refer to the steps of adding brake fluid. If the measured water content is greater than 2%, the brake fluid needs to be replaced. E350 this inspection should be done every 4000 kilometers (2485 mile) or every 15 months. It is recommended to replace the brake fluid every 2 years. If the brake fluid is not replaced for a long time, flocs will form to block the oil pipe, the oil hole of the main pump of the disc brake or the piston will become stuck, which will cause the braking effect to deteriorate or fail, which will affect driving safety.

2.1 Replace the front brake brake fluid

a. Wrap around the front brake main pump with oil-resistant plastic film, as shown in the previous section.

b. Pull out the rubber cap of the vent nozzle①, and put on 8# torx wrench. Use a 6mm (0.23 in) hose to fit the vent②, being careful not to remove the torx wrench.



c. Put the other end of the hose into the oil pot.

d. Remove the upper cover of the front brake main pump referring to the previous step of adding brake fluid.

e. Rotate the 8# torx wrench with the right hand counterclockwise to loosen the air nozzle, and with the left hand, slowly and uniformly squeeze the front brake handle to the end and keep it still. Lock the vent nozzle clockwise and slowly loosen the handle. Pay close attention to the liquid level of the front brake main pump. When it is too low, add it in time to prevent air bubbles from entering the brake hose. Repeat the previous steps until the transparent and clean light yellow brake fluid comes out.



f. Observe whether the liquid level of the main pump is at 3/4 of the transparent inspection, if it is not necessary to add or withdraw or discharge with a syringe.

g. After the brake fluid is replaced, unplug the 6mm (0.23 in) hose; use a torque wrench to tighten the bleed nozzle to the standard torque: 10N.m (1 kgf.m, 7 lbf.ft). Then put the rubber cap on the air nozzle.

h. Reinstall the upper cover of the main pump.

i. Repeatedly pinch and hold the brake handle to check whether the brake returns to normal hydraulic resistance.

⚠WARNING

●The discharged brake fluid needs to be properly disposed of, and it is forbidden to continue to use it. It is forbidden to dump at will to pollute the environment; or put it at will, etc. It should be handed over to a qualified recycling unit for proper disposal.

●The steps of discharging brake fluid must be strictly performed without confusion; avoid air bubbles from entering the brake pipeline.

●When pinching the brake handle, it must be slow and uniform to avoid air bubbles from entering the brake pipeline.

●The vent nozzle must be locked in place before the brake handle can be released. Half-locking is forbidden; and do not use excessive force.

2.2 Replace the rear brake fluid

Refer to the steps for replacing the front brake brake fluid to replace the rear one.

3.Brake system exhaust

If the hand feel soft when the brake handle is squeezed and the braking performance is significantly reduced, first check whether the brake fluid level of the main pump is lower than the "LOW" line and whether the brake system is leaking. If the problem still exists after excluding the above two items, you can try the exhaust operation. The exhaust operation is similar to the previous operation of replacing the brake fluid. When replacing the brake fluid, a clean and transparent light yellow brake fluid must flow steadily, while the exhaust operation will flow out foamy brake fluid.

After exhausting, check whether the brake fluid level of the main pump meets the standard.

⚠WARNING

●The discharged brake fluid needs to be properly disposed of, and it is forbidden to continue to use it. It is forbidden to dump at will to pollute the environment; or put it at will, etc. It should be handed over to a qualified recycling unit for proper disposal.

● Pay close attention to the liquid level in the main pump during operation, and replenish it in time to prevent air from entering the brake hose.

Tire

⚠DANGER

●Check the tire condition and tire pressure before driving.

●When the tire is worn to the limit or there are cracks or wounds on the surface, it should be replaced in time.

●Pay special attention to driving safety when using new tires. New tires that have not run in well may slip and cause the motorcycle to lose control.

●Avoid sudden acceleration, sharp turns, emergency braking, etc. within 150 kilometers (93mile) after replacing the new tire.

●When replacing tires, you should replace standard tires. Use of non-standard tires may cause problems.

●It is not recommended to use external repair to repair the tire, the tire needs to be removed for internal repair.

Temporary emergency can use external compensation, but the motorcycle should be driven at a lower speed, and internal compensation should be made to the maintenance organization as soon as possible. If the sidewall is bumped, punctured, scratched, or if the tread is damaged and the hole is large, it should be replaced directly. Rebalance should be done after Tyre repair.

WARNING

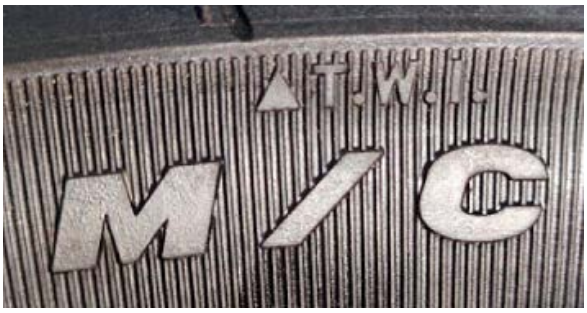
●Check the tire pressure regularly. The standard pressure under normal temperature is 240 kPa (2.5 kgf/cm², 35 PSI) for the front wheels and 260 kPa (2.7 kgf/cm², 37.7 PSI) for the rear wheels. The maximum tire pressure when cold must not exceed 300 kPa (3.1 kgf/cm², 44 PSI).
●When the tire pressure is found to drop, check whether the tire has nails or small holes; whether there is a collision on the side of the rim that causes deformation or cracks.
●Be careful to avoid the position of the valve when removing the tire with the tyre raking machine. Pay attention to protect the contact part of the rim and the bead, if it is scratched, it may cause air leakage.
●The tire pressure is too high, which reduces the contact area with the ground. It is also more likely to cause a puncture in the summer.Too low will cause difficult steering, accelerate wear and increase engine load and increase fuel consumption.
●Frequent exposure to the sun can cause tire cracks and aging. It is recommended to park the motorcycle in a dust-proof, sun-proof, and ventilated place; or cover it with a car jacket to protect the body parts and the tires better. If you do not drive for a long time, you should support the motorcycle firmly and let the tires hang in the air to avoid deformation caused by long-term load on the ground contact.
●Because the tire self-refilling may block the air hole of the tire pressure monitoring sensor, causing difficulty in inflation or failure of the tire pressure monitoring, it should not be used.

1.Check the tires

a. Park the motorcycle on a flat and stable ground or a lifting platform, and put down the main support.



b. Support the front wheel with suitable tools, let the front tire hang in the air, and then rotate the tire to carefully check for abnormalities, such as partial wear, studs, cracks, etc. Clean up the pebbles or other foreign objects embedded in the tread pattern. Check whether the tread and sidewall have worn to the mark. If they are close to or have worn to the mark, replace with a new tire of the same specification in time. Use a tire pressure gauge to measure the tire pressure when the tire is cold, and add or deflate to the standard pressure.



b. The height of the wear mark on the tread protrusion is 1.6mm (0.06 in). The triangle (△T.W.I.) mark on the sidewall indicates the location of the wear bar. If the wear reaches the mark point, it means that it has been worn to the limit. If you continue to drive, there will be a safety hazard. You must replace with new tires of the same specification.

c. The inspection of the rear tires is the same as that of the front tires and will not be repeated here.

2.Replace tires

a. Replace the front tire

The front wheel assembly can be removed by referring to the description of the steps for disassembling the front wheel assembly in the "Front Fork Assembly" of this manual. Use a tyre picker to remove the tire. When disassembling, pay attention to avoiding the valve position. Do not use a crowbar to pry the tire at the valve position to avoid damage to the tire pressure sensor. Before pressing the tire, install it according to the direction of rotation indicated by the sidewall, and aim the light point with the yellow mark at the position of the valve. After replacing a new tire or repairing a tire, the dynamic balance needs to be re-balanced to prevent the front wheel from shaking due to unbalance and affecting the driving experience



Front fork

Caution:

●Every 8000km (4971 mile), check whether the front fork is leaking or deformed, and whether the shock absorption and rebound are normal.
●Before riding each time, check whether there is leakage in the front shock absorber and whether the fasteners are loose to ensure driving safety.
● Bolt torque at the hollow shaft of the front wheel of the shock-absorbing bottom cylinder: 20N.m (2.0 kgf.m, 15 lbf. ft).
●When replacing hydraulic oil, use kerosene or diesel to thoroughly clean all parts. Use a graduated cylinder to measure 10W hydraulic oil is poured in one time, avoid mixing different hydraulic oils. E350 and E250 measure 386±2ml(13.05±0.07 US oz,13.58±0.07 lmp oz, 23.55±0.12 cu-in). E368 measure 411±2ml(13.89±0.07 US oz,14.46±0.07 lmp oz, 25.07±0.12 cu-in). E125 is 412±2ml(13.93±0.07 US oz,14.5±0.07 lmp oz, 25.13±0.1 cu-in).
●After traveling on dusty or muddy roads, you should clean up the foreign matter on the front fork tube (exposed

chrome-plated cylinder) in time to avoid scratching the dust seal or oil seal and causing leakage; wipe it clean with a soft cloth.

●Do not use a high-pressure water gun to directly flush against the dust seal at close range.

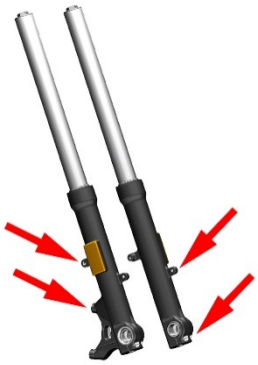
●The motorcycle should be parked in a ventilated and dry environment without driving for a long time. A dark and humid environment can easily cause the front fork tube to rust and make other parts of the motorcycle rust. Coastal areas should have more frequent pre-maintenance damping than inland areas. After wiping clean, spray a small amount of anti-rust oil to prevent rust.

1.Check the appearance

a. After parking the motorcycle firmly, let the front wheel hang in the air, and turn the direction knob to observe whether the front shock absorber is leaking; whether there are scratches, pits, rust, etc. on the surface of the front fork tube. Shallow scratches, small pits, and slight rust can be smoothed with fine sandpaper of about 2000 mesh. Wipe clean the dust or foreign objects in the dust-proof seal. If there has a dust cover, it should be moved away before inspection.



b. Check whether the bottom tube is painted off; whether the installation points of the front fender, the front wheel hollow shaft and the front brake caliper are broken or cracked. Check if there is any leakage at the bottom of the bottom cylinder.



c. If there is a large amount of hydraulic oil attached to the front fork tube, wipe it clean and observe after riding. If there is no oil stain or slight oil stain, it is the hydraulic oil accumulated during the assembly of the dust seal, and it can be judged that the oil seal is not leaking. If there is a small amount of oil stains or sludge mixture, remove the dust seal and wipe clean the front fork tube and oil seal surface, first compress the front shock absorber and then wipe clean and then press; repeat the above operation 10 times. Observe whether there is still on the front fork tube. If there is, the front shock absorber leaking oil needs to be replaced with the dust seal and oil seal. If not, it is a normal phenomenon that a small amount of hydraulic oil has accumulated during assembly.

d. Check whether there is any leakage at the bottom of the bottom cylinder with the help of a mirror or mobile phone lens. If there is a slight leakage, first check whether the bolts are loose. The bolt torque here is 20～26N.m (2～2.7 kgf.m, 15～19 lbf). ft). If there is still leakage after tightening, the gasket should be replaced.



2.Check the shock absorption performance

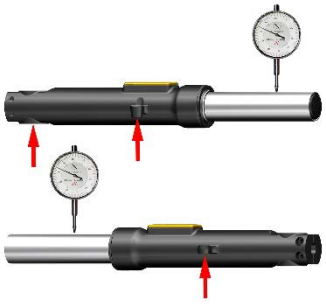
Pinch the front brake handle and press down forcefully. After releasing it, it should be able to compress smoothly and then return to normal. Repeat the operation several times to check. If there is a block, the shock absorber needs to be removed for investigation. If there is a collision with the front wheel or a high-speed bump, check whether the shock absorber is deformed. Check the shock absorption performance according to the maintenance schedule. It is necessary to prevent the motorcycle from turning over during operation.

3.Remove the front shock absorption

Remove the front shock absorber according to the steps of removing the front shock absorber in the "Front Fork Assembly" of this manual.

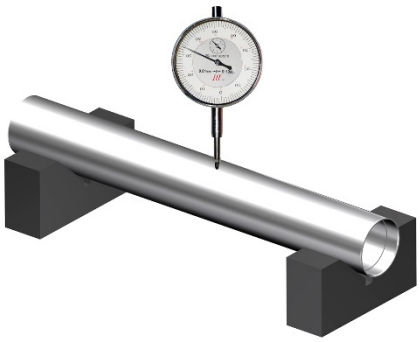
4.Correct the front fork tube

If the front wheel of the motorcycle passes a hurdle at a high speed or after a collision, check whether the front fork tube is deformed. Take the left shock absorption as an example. Use the end face of the front axle of the shock absorber bottom tube and the end face of the front fender mounting point to fix the shock absorber; or remove the front fork tube. Use a dial indicator to detect the amount of deformation in the axial direction of the front fork tube, and rotate the front fork tube to measure different positions.



For slight deformation of less than 0.2mm (0.008 in), the front fork tube can be supported by a V-shaped iron block, and soft rubber, rubber, copper, etc. should be placed on the

contact surface to prevent the front fork tube from being scratched. Use the press slowly and slightly, straighten the pressure and small stroke several times, and measure while straightening. The radial run out after correction should be less than 0.05mm (0.002 in). If the original bending deformation part is out of round after correction, it should be replaced. If the deformation is too large, the shock absorption should be replaced.



5.Troubleshooting

a. There is obvious impact noise when driving on uneven roads or emergency braking. The following items need to be checked:

Whether the spring of the shock absorber is broken or the elasticity drops;

Whether the hydraulic oil is insufficient or enters the air;

Whether there is too much hydraulic oil;

Whether the spring is axially bent and rubs against the front fork tube.

b. The following items should be checked for excellent shock absorption:

Whether there is too much hydraulic oil;

Whether the front fork tube is bent or deformed;

Has the spring been modified?

c. If the shock absorption is too soft, check the following items:

Whether the hydraulic oil with low viscosity is changed;

Whether the spring force drops;

Is there too little hydraulic oil.

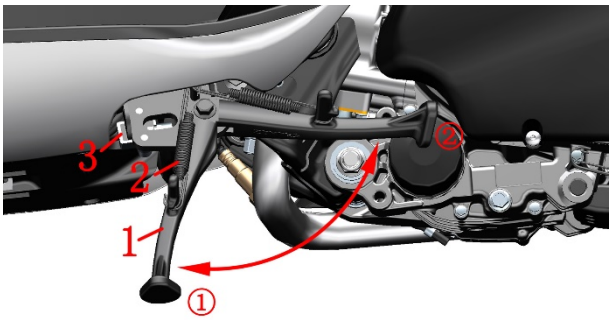
E350-E125- E250 Side bracket

Caution:

●Park the vehicle on a flat and stable ground or a lifting platform, and put down the main support.

●When disassembling and installing the spring, it is necessary to prevent the spring from flying off suddenly and causing personal injury.

1.Check



1. Side bracket 2. Side bracket spring
3. Side bracket flameout switch
①Parking position②Driving position

a. Check whether the side bracket spring is damaged and whether the elastic force is normal.

b. Check whether the side bracket rotates normally. Turning to the angle shown in Figure 1 should be able to automatically turn to the parking space under the spring force; when the angle in Figure 2 is turned to the parking space automatically. If necessary, remove the side bracket for lubrication.



c. Check whether the flameout switch function is normal.

The vehicle should not be started when the side bracket is lowered (parking position); the vehicle cannot be started when the side bracket is retracted (driving position) without pinching the front or rear brake handle; After starting the vehicle, put down the side brackets, and the flame should be automatically turned off, otherwise it is necessary to troubleshoot the flameout switch or brake switch failure.

d. Check whether the side bracket mounting plate is deformed or cracked.

2.Lubrication

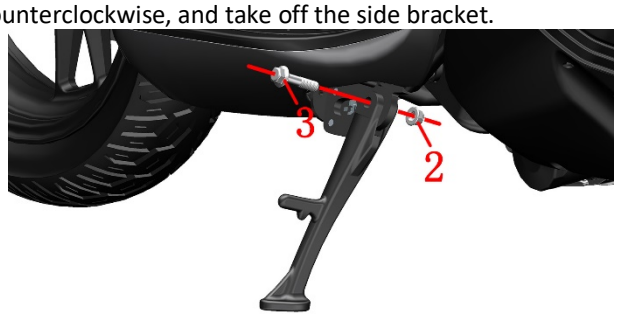
a. Put away the side bracket so that the spring is in the shortest position for easy disassembly.

b. The thick steel wire can be rolled into a circle and put into the spring(1) pull hook. Pay attention to ensure that the steel wire cannot loose or fall apart during the pulling process.

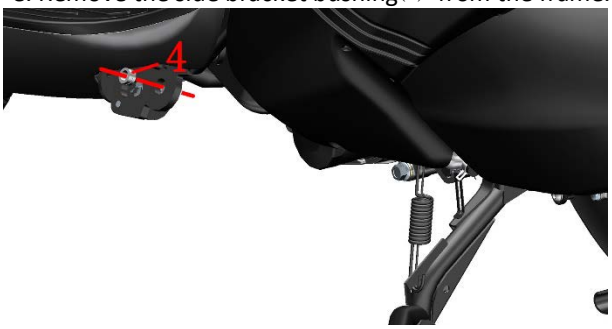


c. Grasp the side bracket with one hand, and pull it in the direction of the arrow with the other hand to remove the spring.

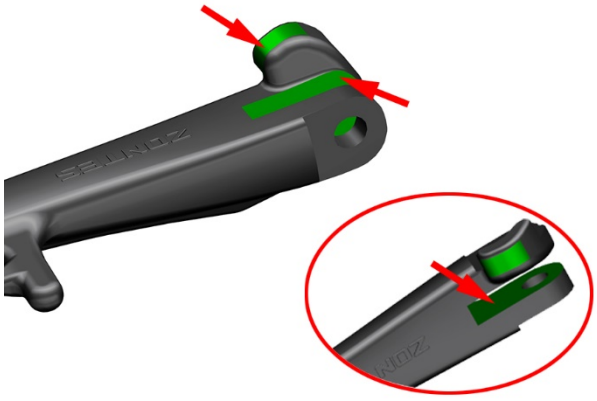
d. Put down the side bracket, and use a 14# sleeve or torx wrench to remove the nut(2) counterclockwise. After holding the side bracket firmly, use a 14# sleeve to remove the bolt(3) counterclockwise, and take off the side bracket.



e. Remove the side bracket bushing(4) from the frame.



f. Use diesel or kerosene, or a clean cloth to wipe off the remaining grease. Apply a proper amount of grease to the two installation planes inside the side bracket and the surface that matches the flameout switch, and try not to apply it to the threaded holes.



E368 /E368(ETC) Side bracket

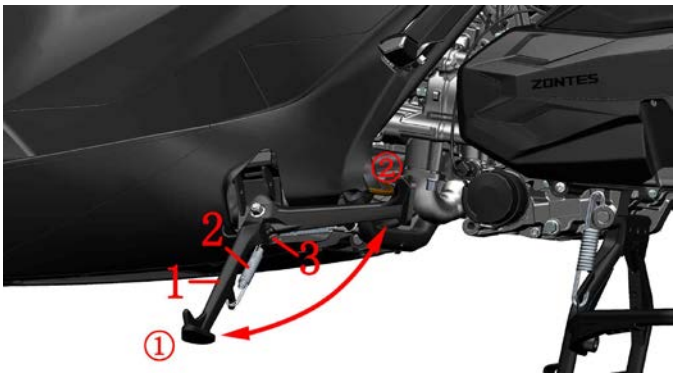
Caution:

●Park the vehicle on a flat and stable ground or a lifting platform, and put down the main support.

●When disassembling and installing the spring, it is necessary to prevent the spring from flying off suddenly and causing personal injury.

1.Check

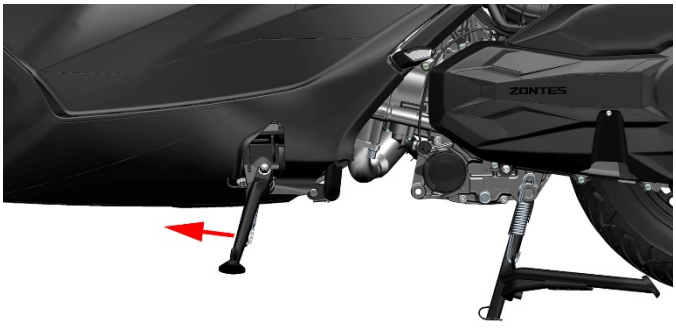
h

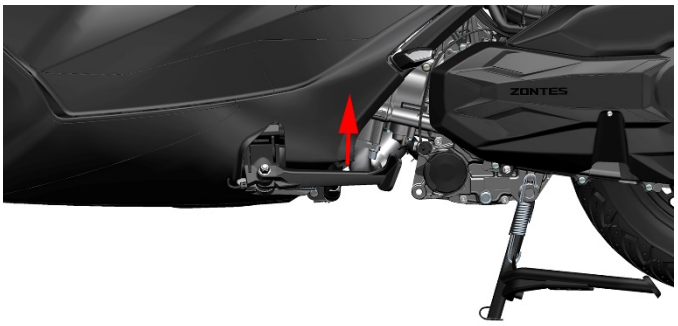


1. Side bracket 2. Side bracket spring
3. Side bracket flameout switch
①Parking position②Driving position

a.Check whether the side bracket spring is damaged and whether the elastic force is normal.

b.Check whether the side bracket rotates normally. Turning to the angle shown in Figure 1 should be able to automatically turn to the parking space under the spring force; when the angle in Figure 2 is turned to the parking space automatically. If necessary, remove the side bracket for lubrication.





c.Check whether the flameout switch function is normal.

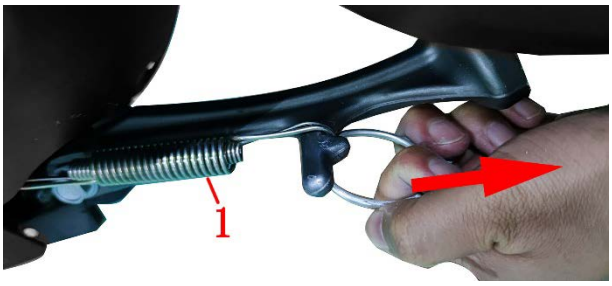
The vehicle should not be started when the side bracket is lowered (parking position); the vehicle cannot be started when the side bracket is retracted (driving position) without pinching the front or rear brake handle; After starting the vehicle, put down the side brackets, and the flame should be automatically turned off, otherwise it is necessary to troubleshoot the flameout switch or brake switch failure.

d. Check whether the side bracket mounting plate is deformed or cracked.

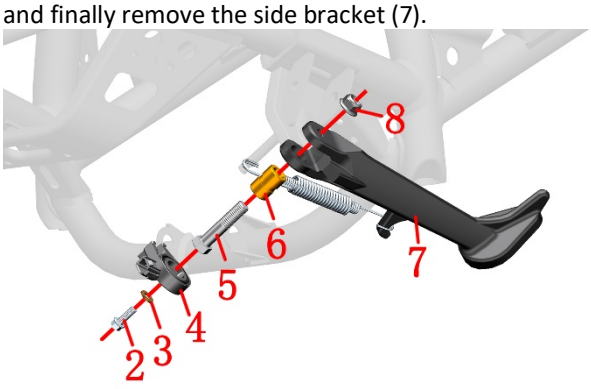
2.Lubrication

a.Put away the side bracket so that the spring is in the shortest position for easy disassembly.

b.The thick steel wire can be rolled into a circle and put into the spring(1) pull hook. Pay attention to ensure that the steel wire cannot loose or fall apart during the pulling process.



c. se the 8# sleeve counterclockwise to remove the bolt (2) on the inside of the side bracket, remove the copper gasket (3) and the side bracket flame-out switch. Remove the nut (8) with a 14# socket or torx wrench, then remove the bolt (5) with a 14# socket or torx wrench, take out the bushing (6), and finally remove the side bracket (7).



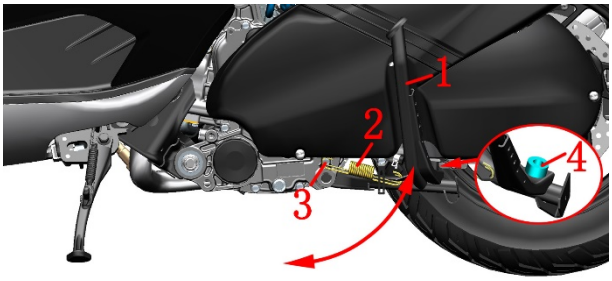
Main bracket

Caution:

●Park the vehicle on a flat and stable ground or a lifting platform, and put down the side brackets.

●When disassembling and installing the spring, it is necessary to prevent the spring from flying off suddenly and causing personal injury.

1.Check



1.Main support 2. Main support spring 3. Main support return spring post 4. Cushioning glue

a.Right the vehicle, step on the effort-saving lever of the main support with your foot, and check whether the spring force is normal. The main support should be able to quickly return to the driving position under the elastic force of the spring itself.

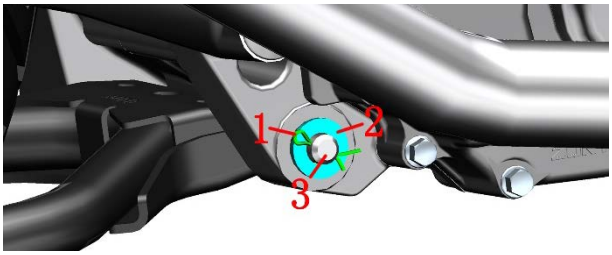
b.Check whether the buffer glue is aging or not.

c.Check whether the return spring post of the main support is deformed.

d.Check whether the main bracket has obvious deformation and whether the welding part is cracked.

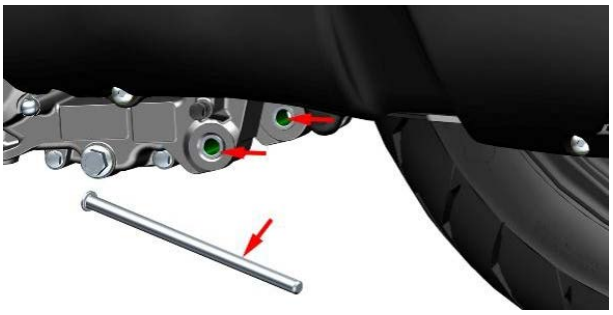
2.Lubrication

a. Keep the main bracket in the retracted position, on right side, use pliers to remove the split pin(1) in the direction of the arrow, and remove the gasket(2). Knock out the main support shaft (3) from right to left. Pay attention to the protection measures at the spring of the main support to prevent the spring of the main support from suddenly loosening and flying out and causing personal injury. It can be covered by a hard object, or the spring can be tied up with a rope or thin iron wire.



b. Remove the spring from the main support.

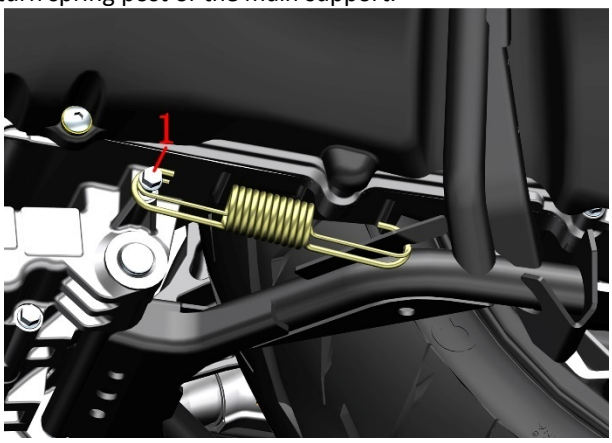
c. Apply a proper amount of grease to the end face, inner hole of the engine box bushing and the surface of the main support shaft.



3.Install the main bracket

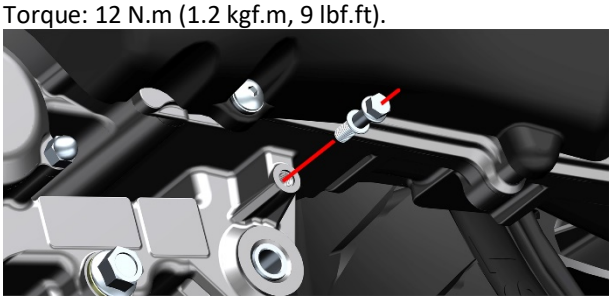
After aligning the main bracket with the mounting holes, insert the main bracket shaft from the left. After inserting the gasket, Insert the split pin, then bend the split pin on both feet to prevent them from falling off.

Hang the main support spring on the main support first, and then use a Phillips screwdriver to hang the spring on the return spring post of the main support.



4.Replace the return spring post of the main support

After removing the main bracket referring to the previous steps, use an 8# sleeve to remove the main bracket return spring column counterclockwise. It is recommended to apply a proper amount of thread fastening glue before assembly. Torque: 12 N.m (1.2 kgf.m, 9 lbf.ft).



3.EFI system

Know Before Service

Caution:

1. The structure and working principle of the EFI system are relatively complicated, and it is necessary to have a certain understanding of the working principle and structural characteristics of each EFI system before checking and troubleshooting. The content of this chapter requires certain maintenance experience. It is recommended to check or repair with a qualified maintenance organization.
2. Please keep the fuel in the fuel tank at least 3L (3.17 US qt, 2.64 lmp qt, 0.79 US gal, 0.66 lmp gal), otherwise it will affect the normal operation of the EFI system. Instrument oil level display 1 grid or less need to be replenished fuel as soon as possible.
3. When the motorcycle is parked for more than 3 hours, the motorcycle should be energized before the first start. Turn on the flameout switch " " and wait for the fuel pump to complete the fuel pressure before starting the motorcycle.
4. If you fail to start several times, the cylinder may have been flooded. You need to turn the throttle to the end and press the start button for 3 seconds to execute the cylinder cleaning procedure.
5. If the battery low voltage warning symbol flashes, charge the battery in time; too low voltage may cause the EFI components to fail to work normally, fail to start or start difficult, insufficient power, etc.
6. The EFI system needs to be reset when the battery is reinstalled, the power is suddenly cut off during driving, the idling speed is abnormal, and the insurance is re-plugged. The specific method is as follows:
   a. Unlock the motorcycle and support the main bracket;
   b. Pinch the brake and start the motorcycle;
   c. Pull the engine speed above 3000 rpm;
   d. After releasing the throttle, turn off the flameout switch and lock the car;
   e. After waiting for 5 seconds, unlock the motorcycle again to complete the reset of the EFI system.
7. Pay attention to the following when checking or troubleshooting EFI system failures:
   a. After power-on, the parts connected to the 12V power supply should not be removed at will to avoid the self-inductance of the coil in the electrical appliance and cause the instantaneous voltage to damage the ECU or sensor.
   b. Do not blindly disassemble and inspect when failure occurs. Check the electrical control part after confirming that the mechanical part is normal.
   c. During the fault diagnosis, give priority to using the diagnostic Speedometer to read the fault code or determine the fault code according to the flashing frequency of the fault indicator, and conduct targeted inspections.
   d. Pay attention to check whether the EFI components are oxidized and whether the connection is reliable

   Tools :

PT300EFI flashing diagnostic Speedometer（16PIN）	Multimeter
	

8. The driving conditions and maintenance conditions of each motorcycle are different, so it is impossible to list all the fault phenomena and troubleshooting procedures one by one. Only some of the more common faults can be listed. Maintenance personnel themselves also need to have certain professional knowledge and experience accumulation process.

WARNING

●Do not turn on the flameout switch for a new car or a motorcycle that is about to run out of fuel. Be sure to replenish enough fuel before turning it on, otherwise the fuel pump will be damaged if it runs dry without fuel.

●Do not insert or unplug the plugs of various parts at will, and it is forbidden to clean the plugs directly with water. After plugging and unplugging, be sure to check whether it is plugged back correctly.

Error code

Caution:

●Unlock the motorcycle and turn on the flameout switch. When it is not started, the EFI fault light is always on as normal. If it is not on, the motorcycle cannot be started.

●After starting the motorcycle, if the fault light is on and the EFI failure is reported, it means that the EFI system is abnormal.

●When the EFI system reports a failure, continuing to drive the motorcycle may cause damage. Please contact a qualified maintenance organization or our special maintenance point for troubleshooting in time.

1.Read the fault code through the meter

When the engine is running, if the EFI failure indicator light "  " is on, it indicates that there is a fault in the EFI component that needs to be rectified.

a. Turn the throttle to the maximum before energizing the whole motorcycle, and keep it in the fully open position, then turn on the electric door lock and flameout switch. The system detects a fault and the fault light will start to flash.

b. The fault code has 4 digits. Read the fault code according to the number of flashes. For example: P0201 flashes in the following way: continuous flashing 10 times-intermittent 1 second-continuous flashing 2 times-intermittent 1 second-continuous flashing 10 times-intermittent 1 second- Flashes once in a row.

c. If there is more than one fault, the next fault code will flash after the fault light is off for 4 seconds. Therefore, after the fault light is off during the flashing process, waiting for more than 5 seconds and still no longer lights up, it means that the fault code has been flashed.

d. If you need to observe the blinking code again, you need to turn off the flameout switch first, then turn it on again, and keep the throttle fully open.

2.Read the fault code through the diagnostic tool

Open the left storage box cover.Pull out the OBD plug, connect the diagnostic tool to read the fault code.Different batches of OBD plugs may have different colors, including black and white, with the same functions. If the OBD plug has a protective cover, remove it first.

3.Error code

code	illustrate	code	illustrate
P0030	O2 Sensor Heater Contr. Circ.(Bank(1)Sensor 1)open	P0131	O2 Sensor Circuit Low Voltage Bank 1 Sensor 1
P0031	O2 Sensor Heater Contr. Circ.(Bank(1)Sensor 1) Low	P0132	O2 Sensor Circuit High Voltage Bank 1 Sensor 1
P0032	O2 Sensor Heater Contr. Circ.(Bank(1)Sensor 1) High	P0133	The Bank 1 O2 sensor slow response to both rich and lean mixtures
P0036	Rear O2 sensor heater control circuit open	P0134	Bank 1 O2 sensor signal open circuit
P0037	The voltage of the rear O2 sensor heater control circuit low	P0136	Rear O2 sensor signal open circuit
P0038	The voltage of the rear O2 sensor heater control circuit high	P0137	Rear O2 sensor signal wire shorted to ground
P0053	The front O2 sensor heater on Bank 1 has an unreasonable resistance	P0138	The rear O2 sensor signal wire shorted to the power supply
P0054	The rear O2 sensor's heater resistance is unreasonable	P0201	Injector Circuit/Open – Cylinder 1
P0105	Intake pressure sensor 1 signal has no change	P0222	The voltage in the signal circuit of the electronic throttle position sensor 2 low
P0106	Intake pressure sensor over upper limit fault	P0223	The voltage in the signal circuit of the electronic throttle position sensor 2 high
	Intake pressure sensor below lower limit fault	P0261	Cylinder 1 injector control circuit voltage low
P0107	Manifold Absolute Pressure/Barometric Pressure Circuit Low	P0262	Cylinder 2 injector control circuit voltage high
P0108	Manifold Absolute Pressure/Barometric Pressure Circuit High	P0301	Misfire Fault
P0111	Intake Air Temperature Sensor 1 Circuit Range/Performance	P0322	Speed sensor signal lost fault
P0112	Intake Air Temperature Sensor 1 Circuit Low	P0351	Cylinder 1 ignition coil control open circuit
P0113	Intake Air Temperature Sensor 1 Circuit High	P0420	Aging of the O2 storage capacity of the three-way catalytic converter
P0114	Intake air temperature stuck fault	P0444	The charcoal canister control valve open circuit
P0116	Engine coolant temperature exceeds the reasonable threshold limit	P0458	The voltage in the charcoal canister control valve circuit low
P0117	Engine Coolant Temperature Sensor 1 Circuit Low	P0459	The voltage in the charcoal canister control valve circuit high
P0118	Engine Coolant Temperature Sensor 1 Circuit High	P0480	Cooling fan control open circuit
P0119	Engine temperature reasonableness fault	P0501	Vehicle Speed Sensor “A” Range/Performance
P0121	The signal from the electronic throttle position sensor 12 abnormal	P0563	System Voltage High
P0122	The signal circuit voltage of electronic throttle position sensor 1 low	P0571	Brake Switch "A" Circuit
P0123	The signal circuit voltage of electronic throttle position sensor 1 high	P060D	Internal Control Module Accelerator Pedal Position Performance
P0130	O2 Sensor Circuit Bank 1 Sensor 1	P061A	Internal Control Module Torque Performance
P061C	Internal Control Module Engine RPM Performance	P1565	Throttle mechanical lower stop point malfunctioned again on its own
P0627	Fuel pump relay control circuit malfunction	P1568	Return spring check for major faults
P0628	Fuel pump relay control circuit malfunction	P1573	Monitoring error response failure

P0629	The oil pump relay control circuit voltage high	P1574	Errorpin is activated and monitoring communication is normal
P0651	The 5V power supply module 2 has malfunctioned	P1579	The electronic throttle self-learning conditions are not met
P0691	Fan control circuit voltage low	P2106	Electronic throttle drive stage fault (short circuit)
P0692	Fan control circuit voltage high		Electronic throttle drive stage failure (overheating or overcurrent)
P06B8	Error occurred while reading NVM block		Electronic throttle drive stage fault (unreasonable)
	Error occurred while writing NVM block		Electronic throttle control drive stage fault (open circuit)
P1527	Function Monitoring: Monitoring of ICO From Level1	P2122	The signal voltage of electronic throttle pedal position sensor 1 low
P1528	Function Monitoring: Monitoring of ICO From Level2	P2123	The signal voltage of electronic throttle pedal position sensor 1 high
P1530	AD converter zero test monitoring failure	P2127	The signal voltage of electronic throttle pedal position sensor 2 low
	Causing an electronic control unit (ECU) failure that leads to irreversible cut-off of fuel injection (ICO).	P2128	The signal voltage of electronic throttle pedal position sensor 2 high
P1531	AD converter given voltage test monitoring failure	P2138	Throttle/Pedal Position Sensor/Switch “D”/“E” Voltage Correlation
P1545	DVE position deviation fault	P2232	The signal wire of the rear O2 sensor is coupled to the heating wire
	Throttle body PID adjustment maximum fault	P2270	Bank 1 rear O2 sensor aging - signal consistently rich
	Throttle body PID adjustment minimum fault	P2271	Bank 1 rear O2 sensor aging - signal consistently too lean
P1559	Throttle valve limp mode position self-learning fault	P2300	Cylinder 1 ignition coil control circuit voltage low
	Electronic throttle lower limit position initialization self-learning fault	P2301	Cylinder 1 ignition coil control circuit voltage high
P1564	The system voltage does not meet the self-learning conditions of the electronic throttle.	U0073	CAN1 Busoff Fault

4.Clear fault code

After troubleshooting the EFI, it needs to be cleared manually or through a diagnostic tool.

4.1 Manually clear

a. Unlock the motorcycle

b. Turn off the flame switch to " ";

c. Start the motorcycle, refuel in neutral gear to more than 4000 rpm and hold for 10 seconds;

d. Release the throttle, turn the flameout switch to " ", and be careful not to power off the whole motorcycle, and wait for more than 10 seconds;

e. After repeating the above three steps for 4 times, the fault light goes out.

4.2 Use the diagnostic tool to clear

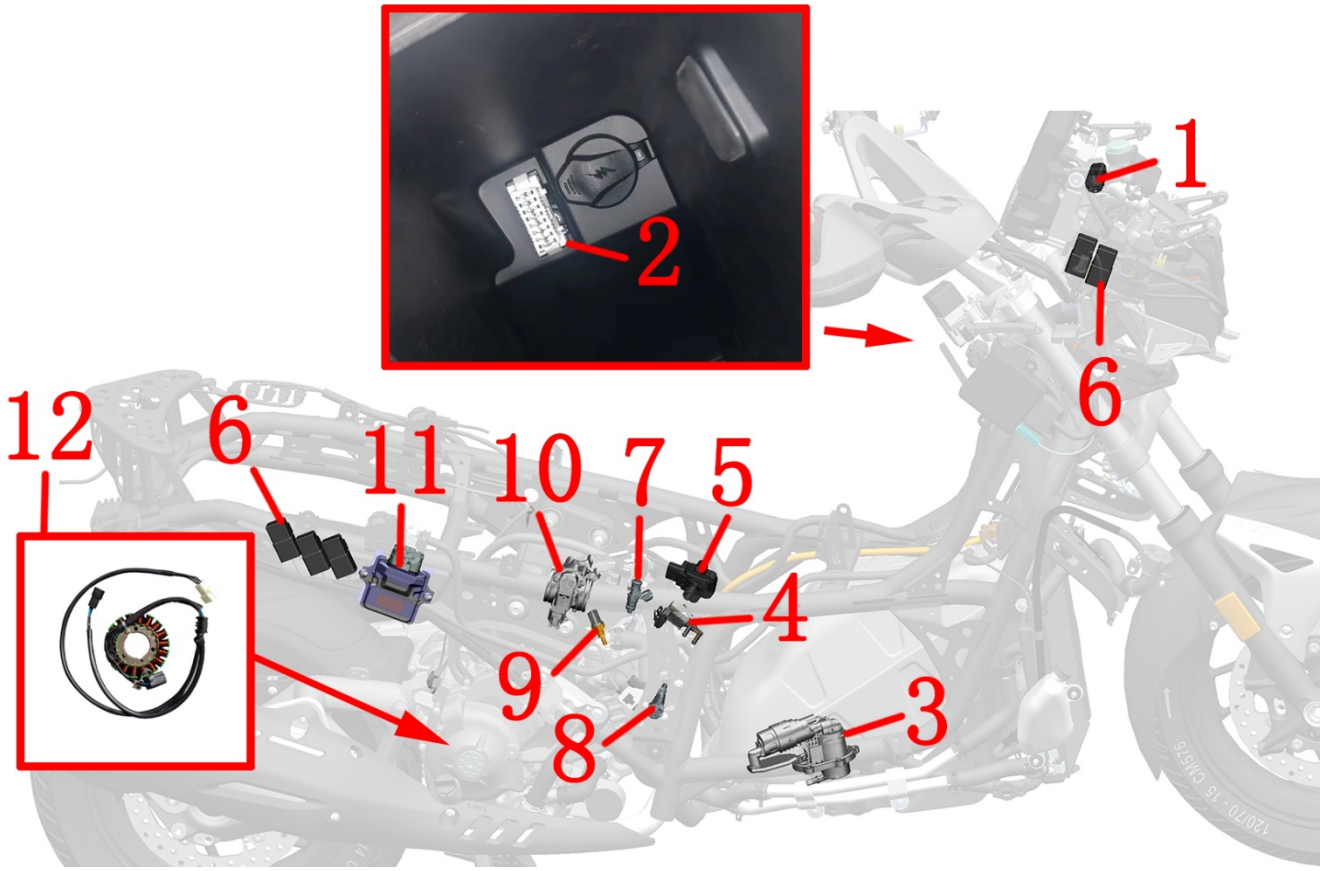
The steps of different brands or models may be different, so please refer to the description of the diagnostic Speedometer manual to clear the fault code.

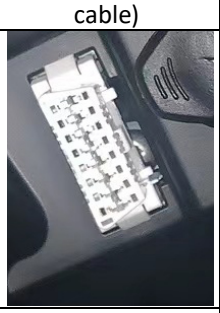
CAUTION

●When the engine is running, the fault light does not turn on, and the fault light flashes after the engine is turned off, it is a historical fault, which will not affect the performance and life of the whole motorcycle, and will automatically disappear later.

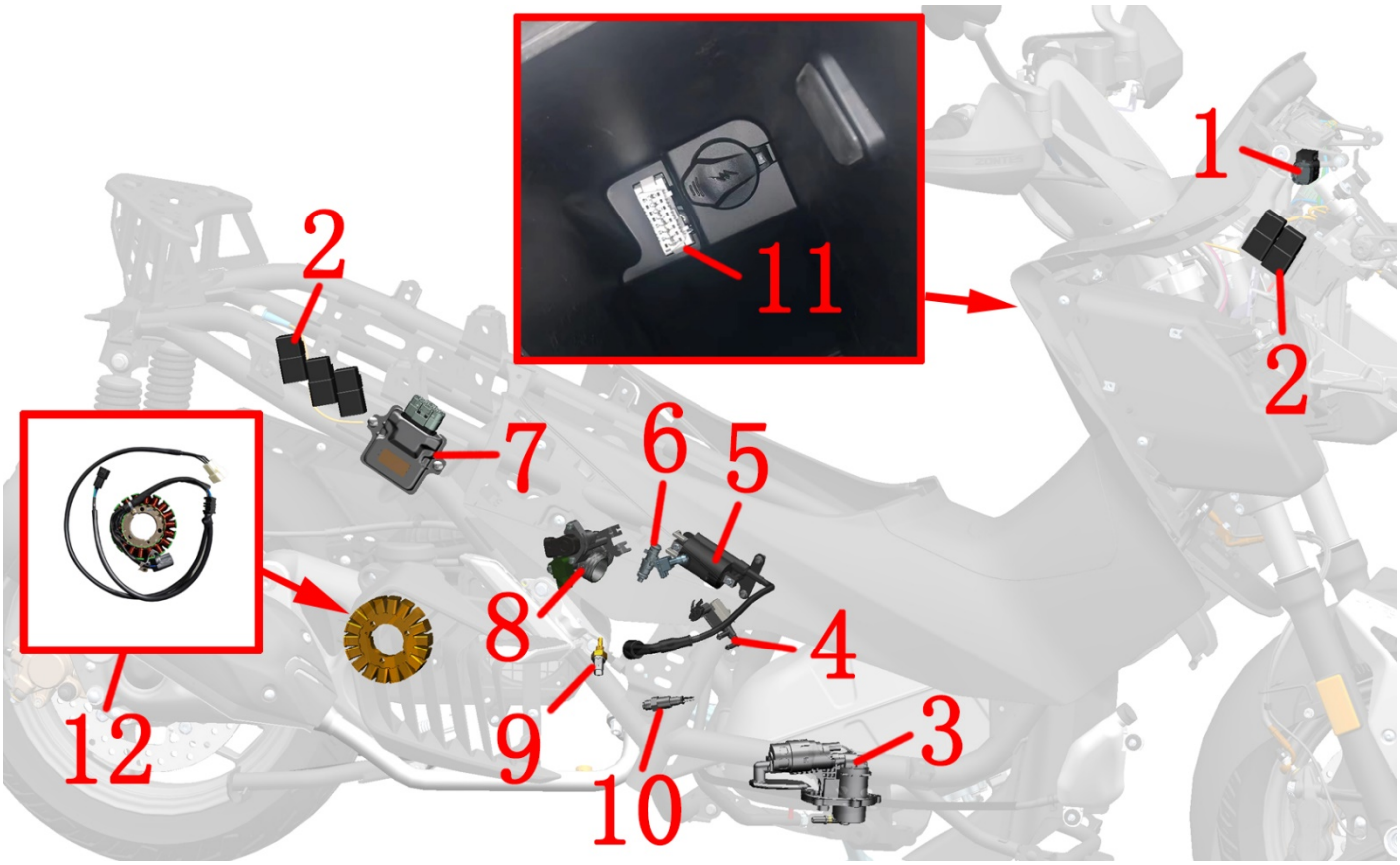
EFI parts layout

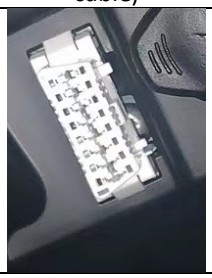
E350/E368

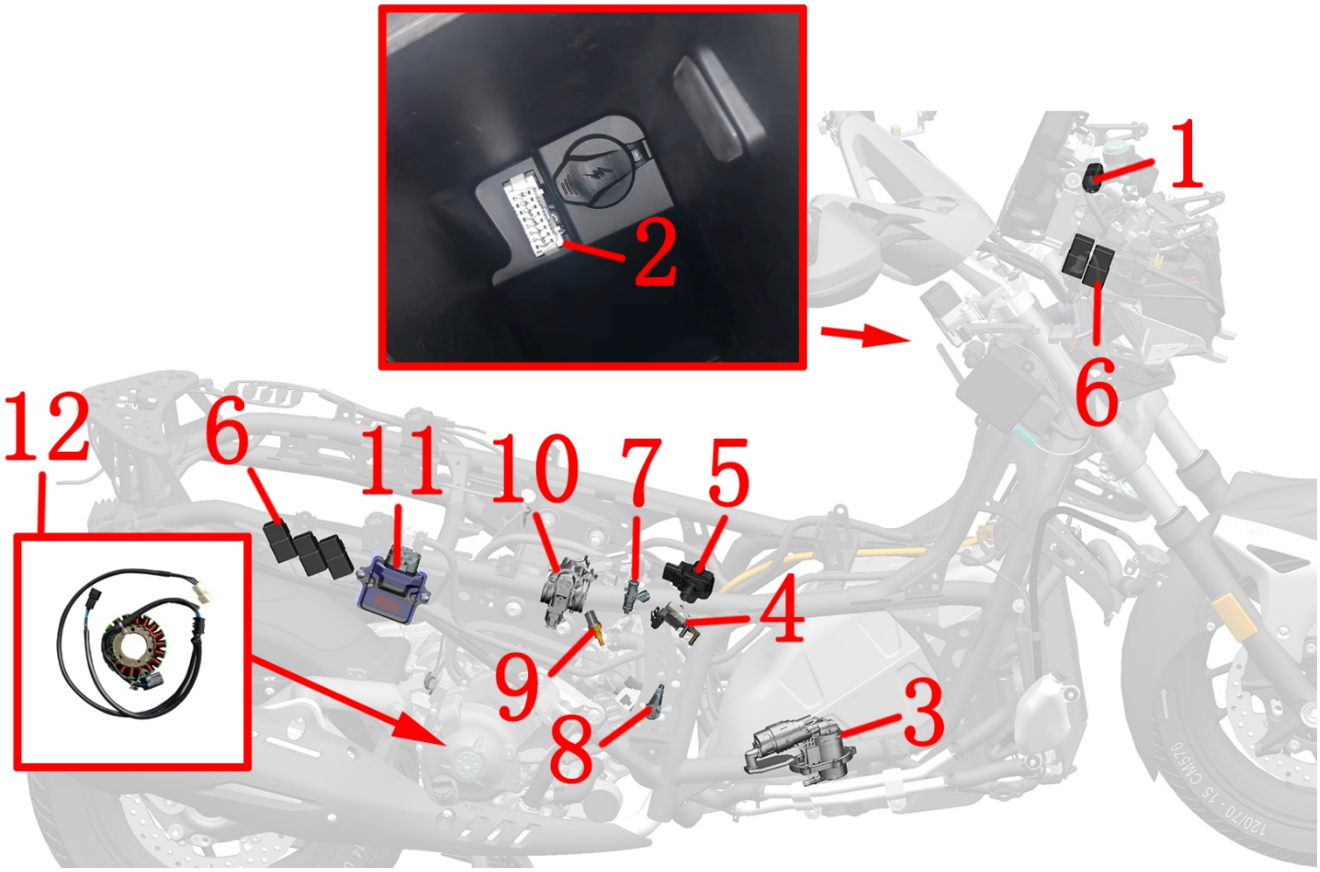


1	2	3	4	5	6
Dump switch	OBD diagnostic interface (main cable)	Fuel pump	Carbon canister solenoid valve	Ignition coil body	EFI relay
					
7	8	9	10	11	12
Fuel injector	Oxygen Sensor	Water and oil shared sensor	Throttle Body Assembly	ECU	Crankshaft position sensor
					

E125/E250



1	2	3	4	5	6
Dump switch	OBD diagnostic interface (main cable)	Fuel pum p	Carbon canister solenoid valve	Ignition coil body	EFI relay
					
7	8	9	10	11	12
Fuel injector	Oxygen Sensor	Water and oil shared sensor	Throttle Body Assembly	ECU	Crankshaft position sensor
					



1	2	3	4	5	6
Dump switch	OBD diagnostic interface (main cable)	Fuel pump	Carbon canister solenoid valve	Ignition coil body	EFI relay
					
7	8	9	10	11	12
Fuel injector	Oxygen Sensor	Water and oil shared sensor	Throttle Body Assembly	ECU	Crankshaft position sensor
					

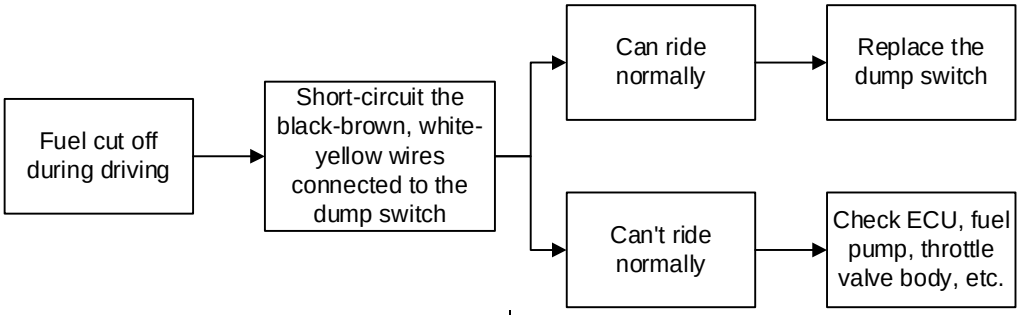
Fault diagnosis and elimination of EFI parts

Caution:

●Once the EFI components are disassembled, the EFI system needs to be reset. For details, see the service information in this chapter.

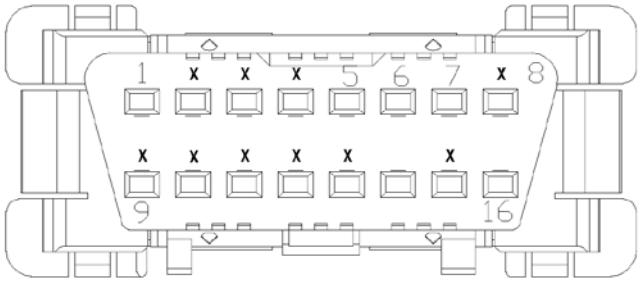
●Fuel pumps, three-in-one sensors, stepping motors, ECUs, etc. are precision parts, such as unauthorized disassembly may cause damage, and it is not within the scope of the three guarantees for human reasons.
●After disassembling the throttle valve body, apply lint-free cloth or textured paper to seal the air filter outlet and intake manifold to prevent foreign matter from entering.

1.Dump switch



2.OBD port

The main cable has its own OBD interface, and the location is shown in the previous section to read the fault code through the diagnostic Speedometer. Use the diagnostic tool through the diagnostic interface to read historical fault codes, current fault codes, clear fault codes and read ECU status.



The picture above shows the cable end connector

No.	1	5	6	7	14	16
Color	Blue/yellow	green	yellow/white	brown/white	green/black	Red

3.Fuel pump

Caution:

●The fuel pump is a precision component that needs to be assembled in a dust-free workshop and requires rigorous testing, so it is forbidden to disassemble it by yourself.
●The engine of this vehicle is designed with a high compression ratio. It is recommended to add 95# and above unleaded gasoline for a long time. In order to extend the service life of the vehicle, please be sure to go to a regular gas station to refuel.
●It is forbidden to run the fuel pump in dry state or in water, otherwise its service life will be shortened, and it will be directly damaged in severe cases. The positive and negative wires of the fuel pump cannot be connected in reverse. It is forbidden to disassemble the fuel inlet filter, which may cause foreign matter to enter the fuel pump or block the fuel injector.
●The disassembly of the fuel pump or high-pressure fuel pipe should be carried out in a well-ventilated, dust-free or dust-less environment; dangerous operations such as fireworks or mobile phones should be strictly prohibited in the disassembly site.

When it is difficult to start the engine or start without dust; the engine is not working well, the operation is unstable, etc.; the fuel injector does not inject fuel; the engine is running weak and the acceleration performance is deteriorated. It is necessary to check whether the fuel pump is abnormal.

Refer to the steps of "Maintenance-Fuel Pipe-Replacement of High-pressure Fuel Pipe" in this manual to remove the surrounding bottom plate and high-pressure fuel pipe. Refer to the section "Maintenance-Fuel Pipe-Fuel Pump" to measure fuel pressure with a fuel pressure gauge, or use a simple test method to test whether the fuel pump is normal.



If the fuel pump needs to be removed from the vehicle, the fuel pump can be used to drain the fuel in the fuel tank. After lifting the vehicle, press the plug buckle as shown in the figure to pull out the cable. Remove 5 bolts from the bottom with a 10# sleeve, and then remove the fuel pump after removing the high-pressure fuel pipe bracket.





When reassembling, you need to pre-tighten diagonally and then tighten the 5 bolts. Otherwise, the uneven

compression of the seal rubber ring of the fuel pump may cause leakage and cause safety hazards.

4.Carbon canister solenoid valve

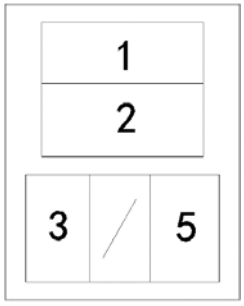
When the engine performance is poor; the idle speed is poor; the air-fuel ratio is incorrect, the carbon canister solenoid valve should be checked.

Use a multimeter to measure the resistance between the two inserts of the canister solenoid valve plug should be 35±2Ω, otherwise it can be judged that the solenoid valve is faulty.



5.EFI relay

There are one PVC sheaths at the right side of the veliche near the ECU, there are 4 relays. One PVC sheaths at the left rear of the frame, there are 2 relays.





Cable end Relay

3 and 5 are normally closed contacts, which can be tested with a multimeter buzzer. 1 and 2 are normally open contacts. Otherwise, it can be judged as a relay failure.

The following cable end colors are for reference, subject to the actual conditions of the motorcycle. The line colors of different batches may be different, and the functions are the same.

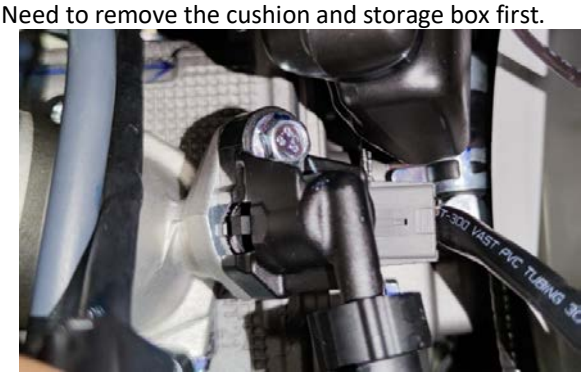
Cable end wire color :

Wire no. Relay	1	2	3	5
light	Red	Blue/white	Black and white	White
Start assist	green	Green red	Black/white	Red green
Oil pump	White/black	Red/black	White/black	Green/yellow
Main relay	Red	White/black	Black/white	Orange black
Front motor	green	light green	black	white
Rear motor	green	Light green	black	white
Cooling fan	green	green/white	black	green/blue
Rear trunk start	green	Light green	white	black/white

6.Fuel injector

When the engine is unstable and weak, and the power performance is poor, check whether the injector is normal.

Need to remove the cushion and storage box first.



Can be judged by the following methods :

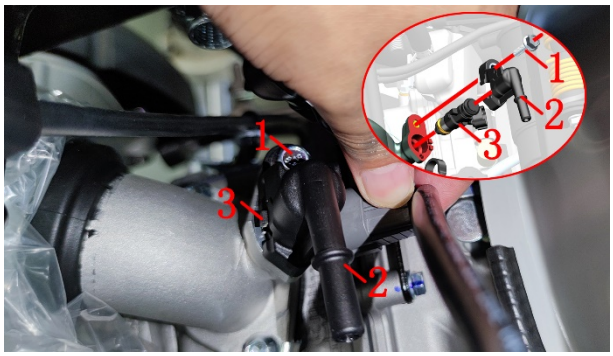
a. Park the vehicle firmly, start the engine, and let the engine run at idle speed. Use the auscultation needle or stethoscope to listen to the working sound of the cylinder. You should be able to hear the rhythmic working sound of the injector. If the sound is clear and even, it works normally. If the sound is low or cannot be heard, the injector needs to be removed for troubleshooting. Or the engine stalls when the injector plug is unplugged, indicating that the injector is normal.



b. Pull out the plug after pressing the anti-trip lock. Using a multimeter to measure the static coil resistance should be 12±0.6Ω, otherwise the injector must be replaced if it fails.



If you need to replace the fuel injector, wait until the engine and muffler have cooled down. After placing the oil container at the bottom, refer to the steps for removing the high-pressure oil pipe to pull out the high-pressure oil pipe at the end of the fuel pump to discharge the remaining fuel. Use a 10# sleeve to remove the bolt(1), remove the injector holder(2), and then take off the injector(3).


1
2
3
1
3
2

7.Throttle valve body

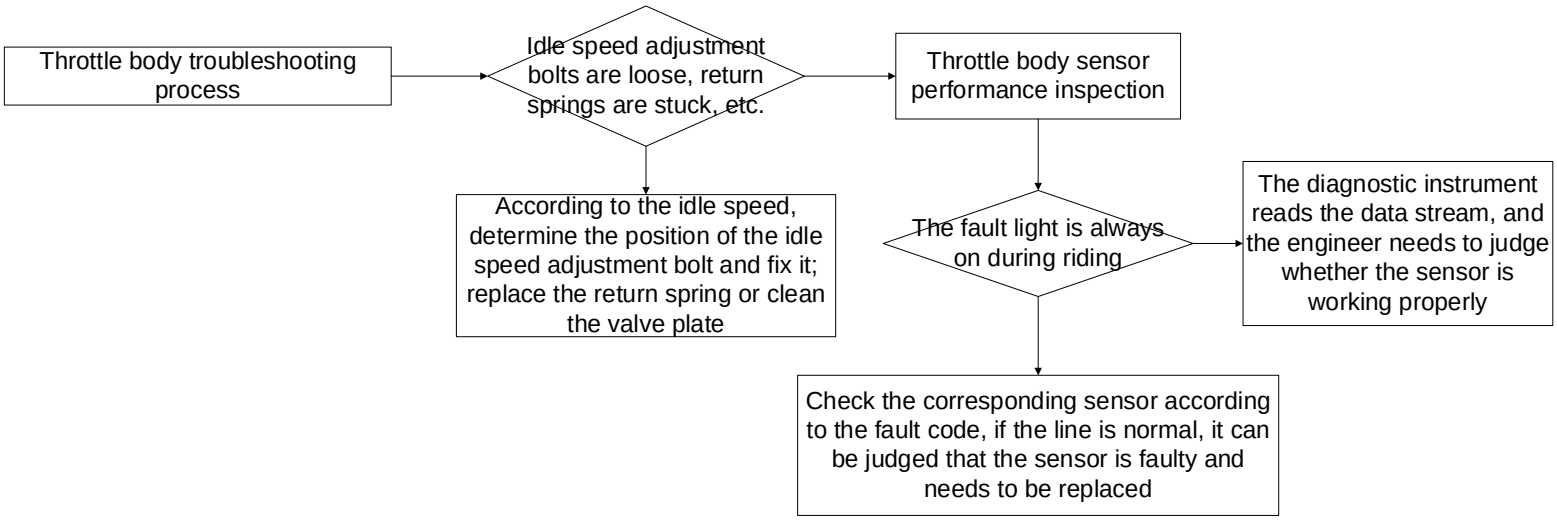
7.1 Common failure phenomena

1.The engine is easy to stall when the motorcycle is running, and it is difficult to start, especially cold starting.
2.Idle speed is unstable or no idle speed, and there is intermittent jitter when accelerating.
3.Insufficient power, poor acceleration performance and unstable operation.

7.2 Disassembly

Please refer to the description in "Maintenance-Throttle Valve Body" in this manual for detailed steps of disassembling and assembling the throttle body, three-in-one sensor and stepper motor.

7.3Troubleshooting process



7.4 Sensor



For the removal, installation, and testing of the throttle body position sensor and the external intake air pressure sensor, refer to the previous section on the throttle body.

Air Intake Temperature Sensor

Remove the temperature sensor from the air filter, place it in an ambient temperature environment (20–30°C), and use a multimeter to check whether the resistance between the two pins is between 2726 and 1770 Ω.

8.Water and oil shared sensor



When the engine is difficult to start, the idling speed is unstable, the engine performance is poor, and the engine is easy to stall, check whether the sensor is abnormal. The fault code can be read through the diagnostic Speedometer to confirm whether the water and oil shared sensor is faulty.

First, remove the storage box by referring to the steps for dismantling the storage box. Refer to the steps for removing the throttle valve body to remove the throttle valve body to facilitate the removal of the water and oil shared sensor. located on the right side of the intake manifold. First pinch the top of the plug, press down the anti-dropping card, and then unplug the plug.

The normal temperature resistance value of the two pins of a multimeter is 1.5～4.0kΩ.

Due to limited space, it is recommended to use a 72-tooth 17# ratchet wrench to remove the water and oil shared sensor counterclockwise, and remove the 9×2 EPDM rubber O-ring. New O-rings need to be replaced during reassembly to avoid leakage.



Standard torque :13±1.5N.m (1.3±0.2 kgf.m,10±1 lbf.ft)

9.Oxygen Sensor

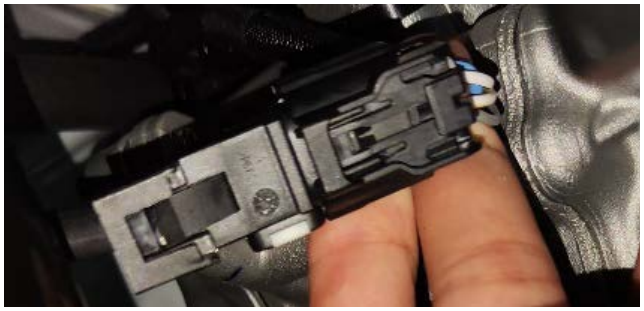
⚠WARNING

●The oxygen sensor must be removed after the engine and muffler have cooled down completely.

When there is poor engine performance, unstable idle speed, high fuel consumption, and incorrect air-fuel ratio, check the oxygen sensor. The fault code can be read through the diagnostic Speedometer to confirm whether the oxygen sensor is faulty.

9.1 Check

Find and pull out the oxygen sensor connector at the front elbow of the muffler.



Use a multimeter to measure the resistance of the heating element of the two wires to 9±2kΩ; E350 model can measure the current should be less than or equal to 2.1A. Otherwise, it can be judged that the oxygen sensor is faulty. The ceramic inside the oxygen sensor is hard and brittle. It is forbidden to knock with hard objects or blow with strong gas, otherwise it is easy to cause damage.

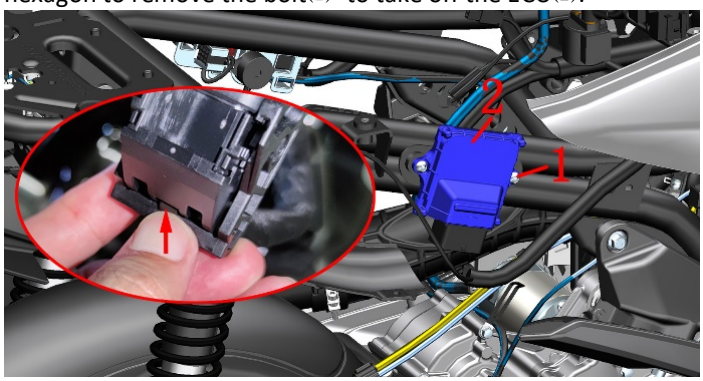
Or remove the oxygen sensor and observe the color of the top part of the head, which is normally light gray. If it is white, it means that the silicon poisoning has been damaged and needs to be replaced, if it is black, it means that there is carbon deposits that can be cleaned up and continue to use; if it is brown, it means that the silicon poisoning needs to be replaced.

10.ECU

When the engine cannot be started and the performance is poor, check whether the ECU is normal. Because the ECU is more complicated and difficult to judge, the elimination method can generally be used to remove the ECU from a normal motorcycle of the same model and replace it with a faulty motorcycle.

Refer to the steps of "Removal of rear skirt assembly" and remove the right tail skirt to expose the ECU.

The index finger and middle finger are respectively located under the lever. While pressing the buckle with the thumb, turn the index finger and middle finger to the thumb direction to pull out the ECU plug. Use 5# inner hexagon to remove the bolt(1) to take off the ECU(2).

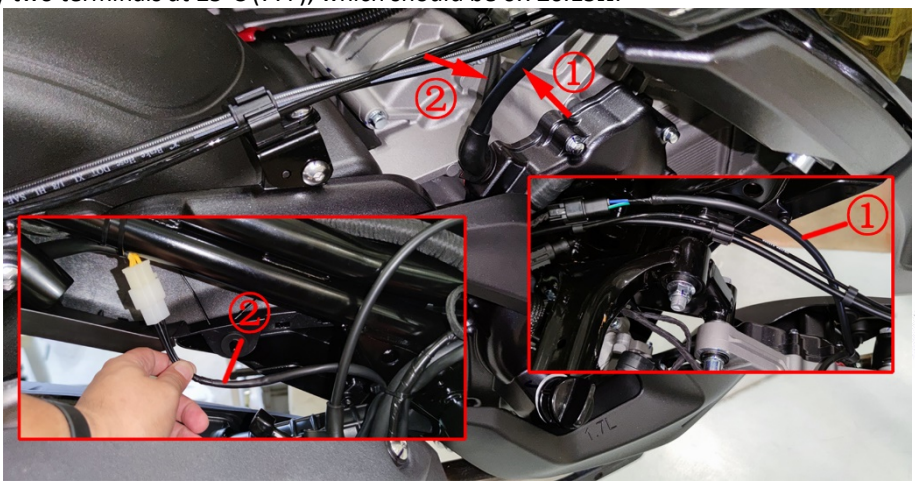


11.Crankshaft position sensor

When the engine starts without dust or is difficult to start; poor acceleration and unstable idling; when the engine is stalled intermittently, it is necessary to check whether the crankshaft position sensor is normal.

The crankshaft position sensor is installed on the right crankcase cover and integrated with the magneto stator. Locate the sensor plug on the right side of the motorcycle, press the head anti-trip lock and pull it out. Use a multimeter to measure the resistance of the crankshaft position sensor① at 25°C (77F), it should be 150±20Ω, otherwise it should be replaced.

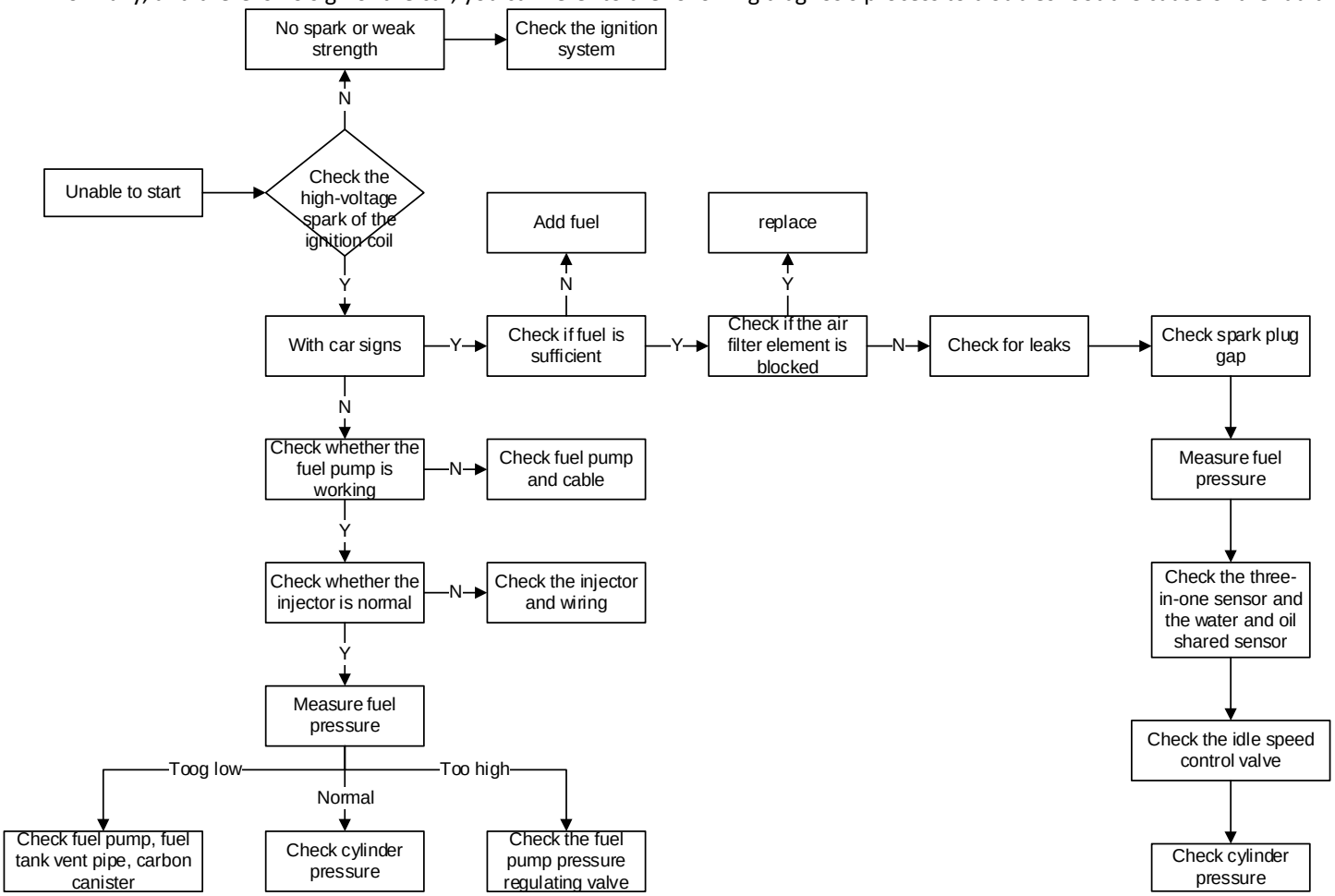
In addition, the three-hole plug of the stator② of the magneto uses a multimeter to measure the phase-to-phase resistance of any two terminals at 25°C (77F), which should be 0.7±0.15Ω.





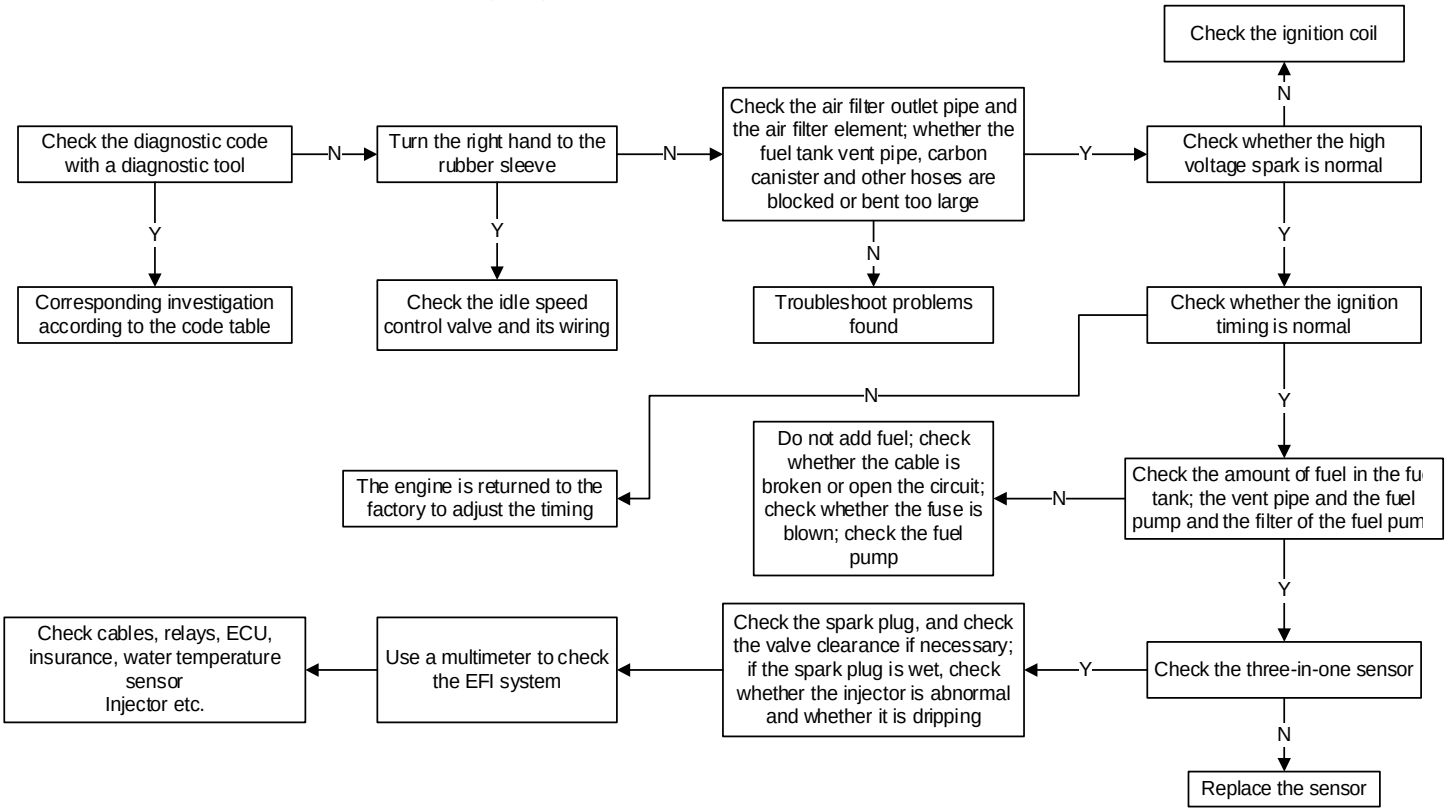
The engine cannot start and there is no sign of fault diagnosis process

When the start button is pressed and the starter motor can drive the engine to run normally, but the engine does not work normally, and there is no sign of the car, you can refer to the following diagnosis process to troubleshoot the cause of the fault.



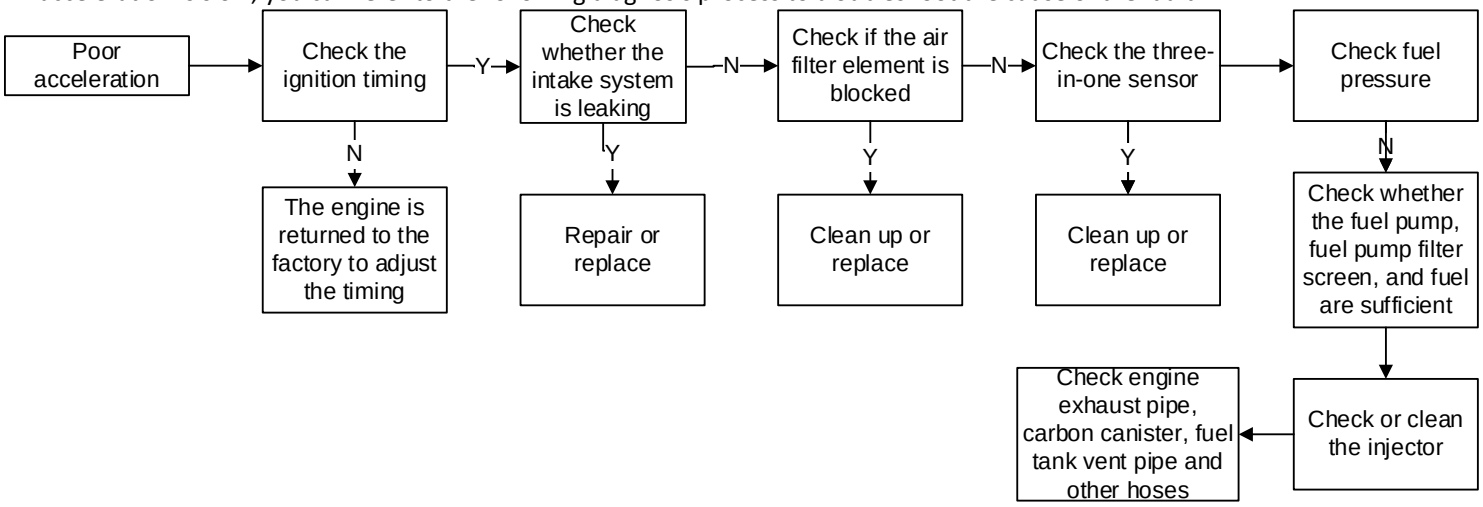
The engine cannot be started and there is a car symptom fault diagnosis process

When the start button is pressed, the starter motor can drive the engine to run normally. When there are signs of a car but cannot start, you can refer to the following diagnosis process to troubleshoot the cause of the fault.



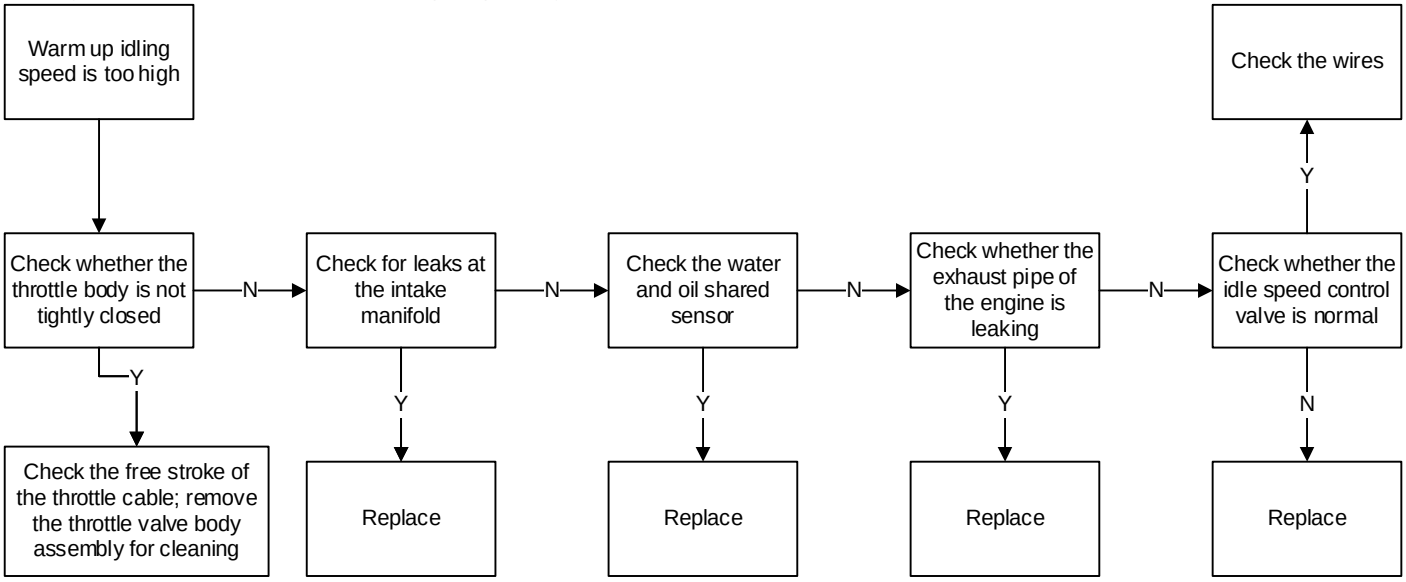
Poor acceleration

Rotate the rubber sleeve with the right hand. The engine speed cannot increase immediately, and there is hysteresis, and the acceleration is slow; you can refer to the following diagnosis process to troubleshoot the cause of the fault.

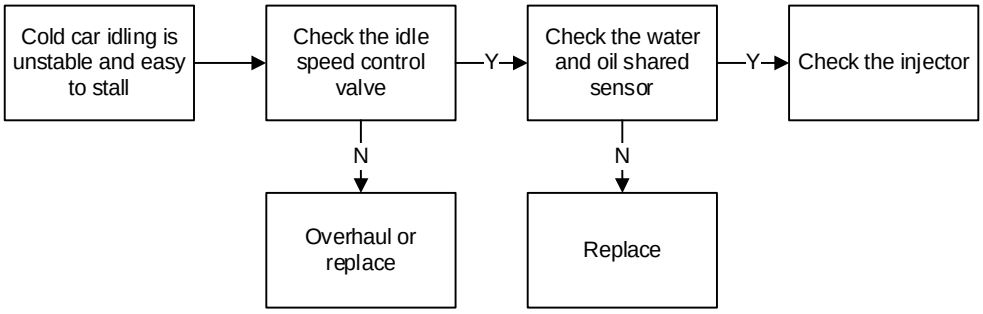


High idling speed of hot car

When a cold car occurs, it can run at a normal fast idling speed. After a hot car, the idling speed does not fall back to 1500-1700 rpm. You can refer to the following diagnosis process to troubleshoot the cause of the fault.

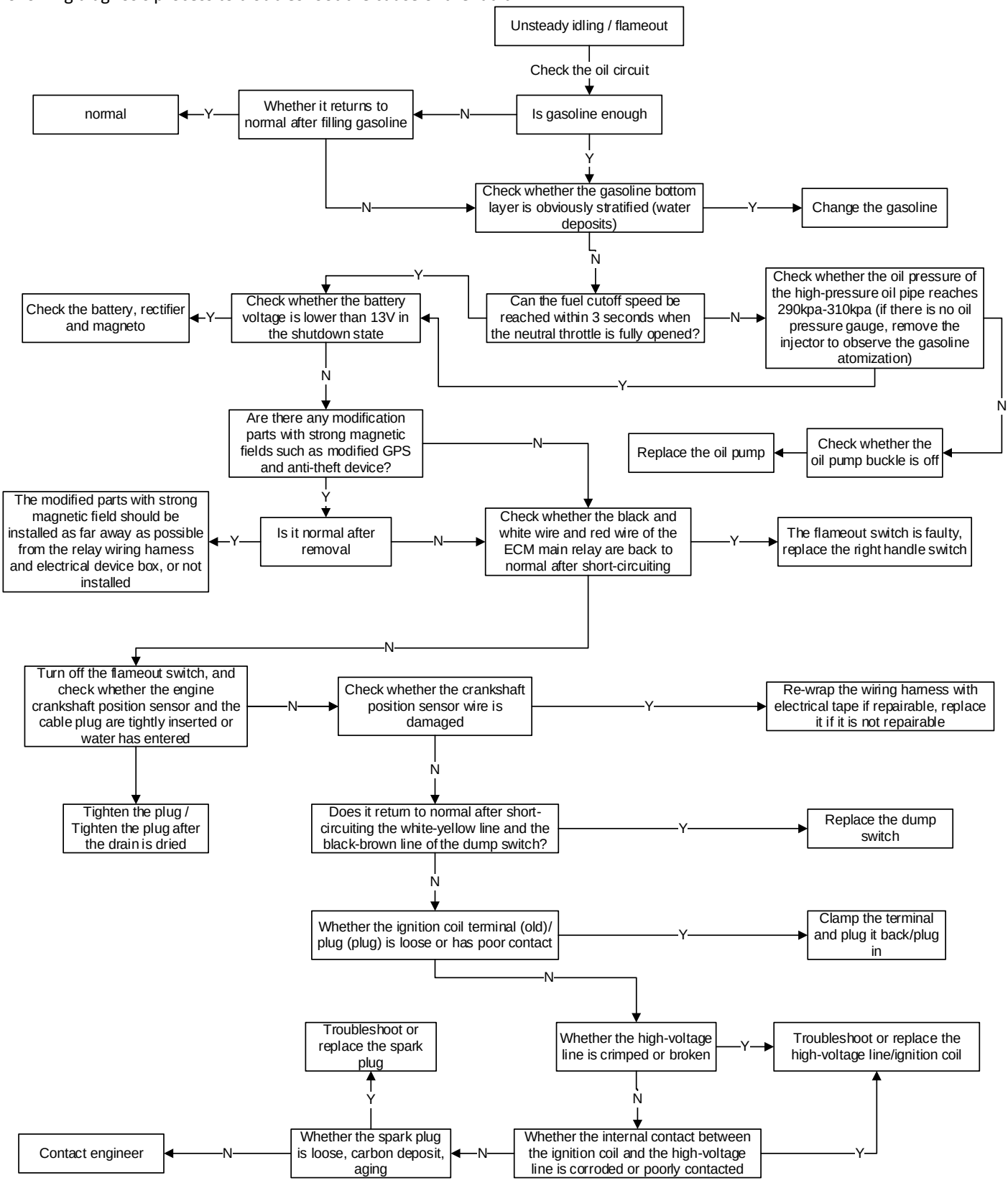


Unsteady idle speed of cooling car



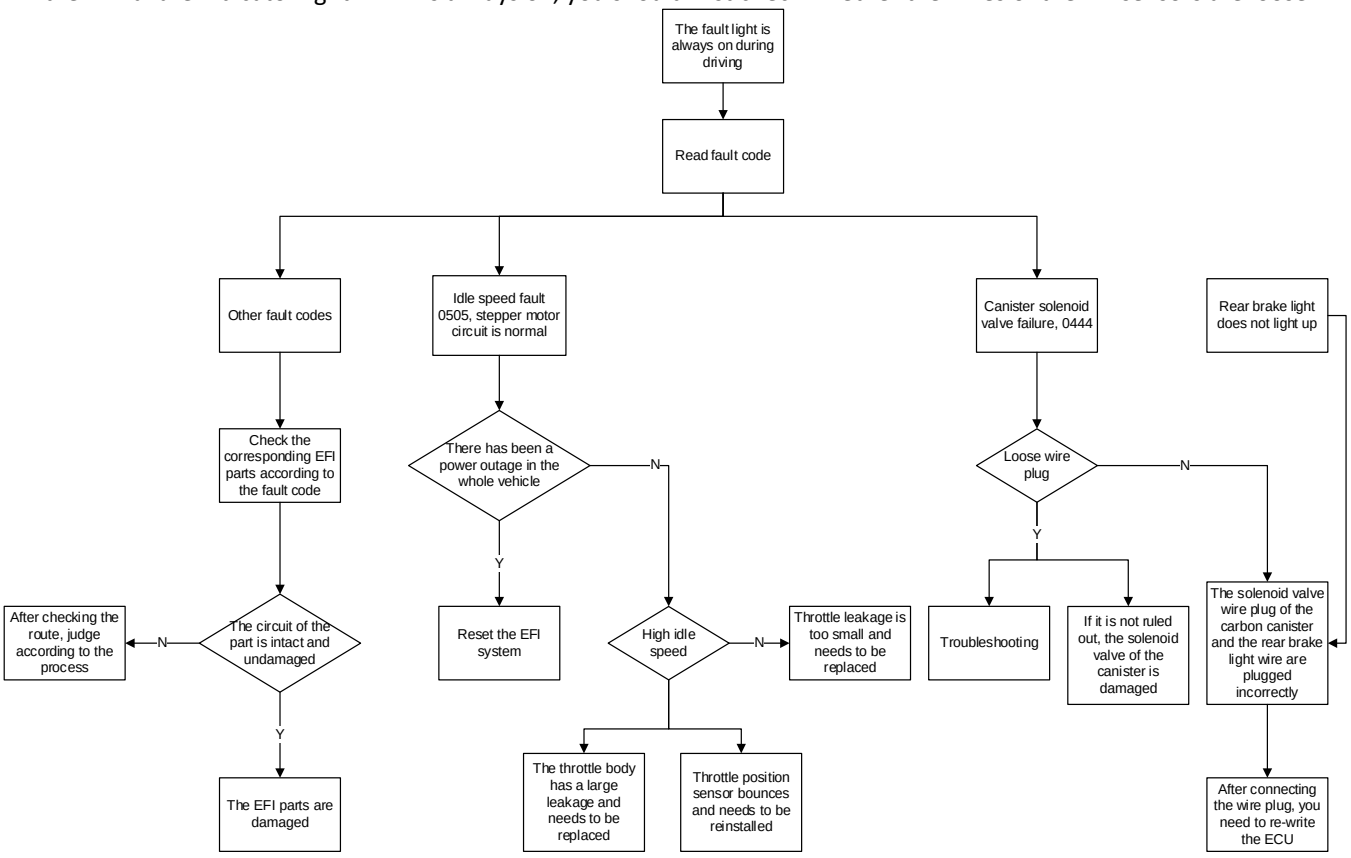
Unsteady idling, easy to cutoff

The engine is running at an unstable idling speed, easy to stall, and can return to normal after a warm car. You can refer to the following diagnosis process to troubleshoot the cause of the fault.

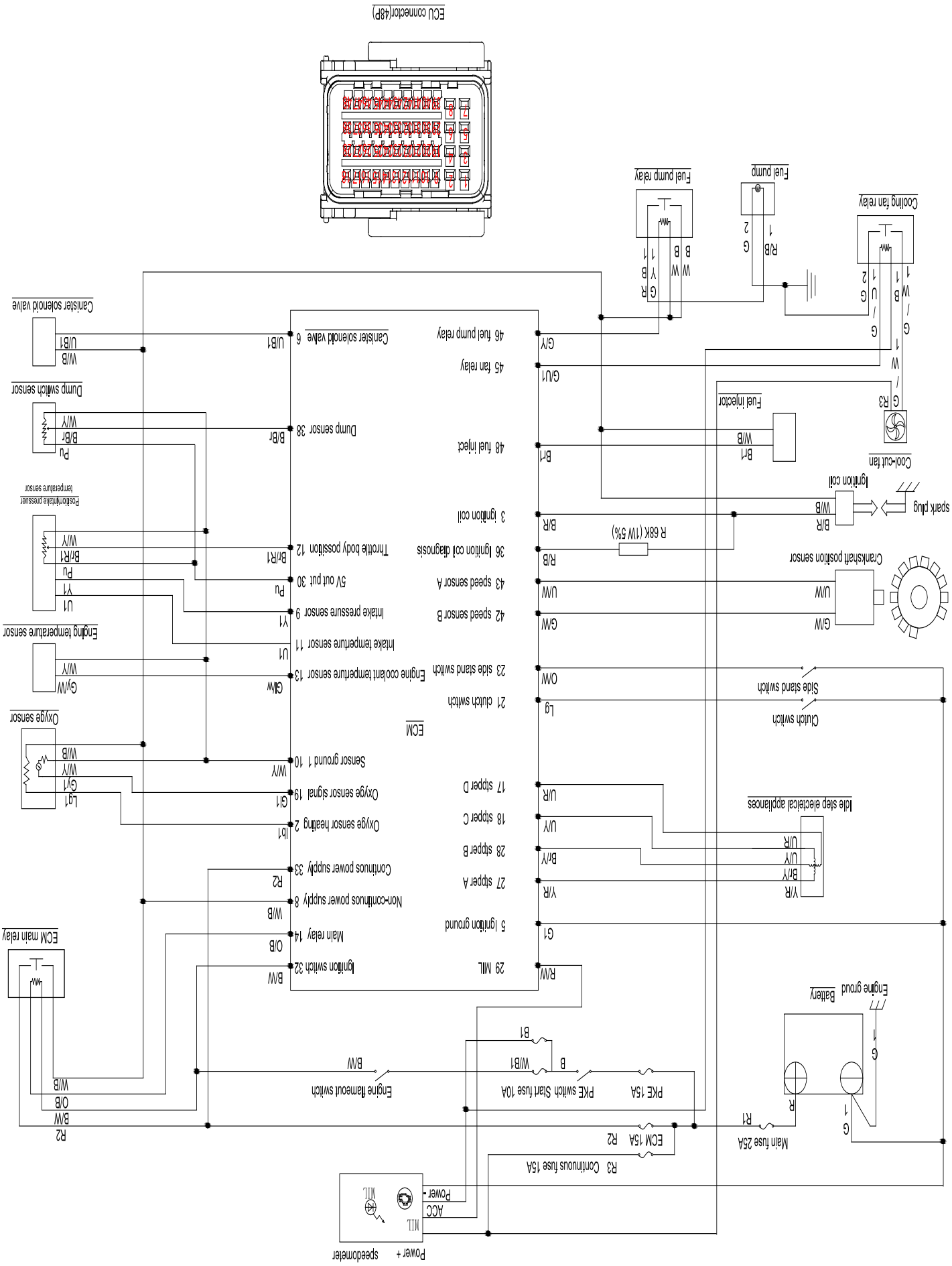


Analysis flow chart of EFI failure indicator light always on

If the EFI failure indicator light "" is always on, you should first check whether the wires of the EFI sensors are loose.



Electrical schematic diagram of EFI system



4.Ignition system

Know Before Service

1. The content of this chapter requires certain maintenance experience. It is recommended to check or repair with a qualified maintenance organization.
2. Do not disassemble the parts connected to the 12V power supply at will after power-on, to avoid the self-inductance of the coil in the electrical appliance, which may damage the ECU or sensor due to the instantaneous voltage.
3. Use spark plugs with correct calorific value. Spark plugs with improper calorific value may damage the engine.
4. Ignition system failures include poor plug connection and corrosion of wiring terminals. These two items should be checked first.
5. Since the ECU is factory preset, the ignition timing cannot be adjusted. If you need to adjust the ignition timing, you can only return to the factory for repair.
6. Ensure that the battery has sufficient power. If the power is insufficient, it may result in a slow start speed or weak spark intensity of the spark plug or no spark.

Tool :

Multimeter


7. The driving conditions and maintenance conditions of each motorcycle are different, so it is impossible to list all the fault phenomena and troubleshooting procedures one by one. Only some of the more common faults can be listed. Maintenance personnel themselves also need to have certain professional knowledge and experience accumulation process.
8. See the section "Spark plug" in the chapter "Maintenance" of this manual for details of spark plug disassembly and inspection. Before disassembling the spark plug, clean up the surrounding debris and dust with a dust blower. After disassembly, the spark plug port must be blocked to prevent foreign matter from falling into the engine.

⚠WARNING

●Do not plug and unplug the plugs of various parts at will, and it is forbidden to clean the plugs directly with water. After plugging and unplugging, be sure to check whether it is plugged back correctly.

Troubleshooting

Check the following items before diagnosing the ignition system

a. Check whether the spark plug is abnormal;

b. Check whether the ignition coil high-voltage cap or plug is loose;

c. Check whether water enters the high pressure cap;

d. If there is no spark, find the ignition coil of the same model to confirm that there is no fault and install it on the faulty motorcycle to test whether there is spark;

e. Check to unlock the motorcycle, turn the flameout switch to " ", and measure whether the "initial voltage" of the ignition primary coil is consistent with the battery voltage when the engine is not started.

Spark plug without spark

1. Improper spark plug gap

If the gap is too small, the electrode has a "flame suppression" effect to inhibit flame generation, and the spark intensity is weak; if the gap is too large, the ignition voltage will cause no spark. E350 adjust to the standard 0.8-0.9mm (0.031-0.035 in),



2. A layer of oil film is attached to the surface of the spark plug electrode

Engine oil or gasoline flees into the combustion chamber and adheres to the surface of the electrode, causing the electrode to short-circuit and cause no sparks. Engine oil is generally introduced from the gap between the piston and the cylinder wall and valve guide. Check whether the gap is normal. If it is abnormal, replace the corresponding parts. The accumulated gasoline may be caused by the mixture being too thick when the cold engine is started, and it can be cleaned before trying to ignite.

3. The spark plug skirt is damaged

The high-voltage current breaks down and leaks from the damaged part of the skirt, and the spark plug needs to be replaced.

4. The electrode has carbon deposits, and the center electrode leaks electricity to the surroundings without discharging to the electrode

Excessive accumulation of carbon or oil on the electrode causes a short circuit; and may cause the insulator to burn out. Clean up carbon deposits or replace spark plugs.

5. Electrode damage

The center electrode is damaged by the electric spark or the chemical corrosion of the burning gas for a long time, and it needs to be replaced.

6. Reduced spark plug insulation

Reduced insulation performance will weaken the ignition voltage, resulting in weakened or no sparks; need to be replaced

7. Short circuit of ignition coil high voltage wire

Ignition coil needs to be replaced

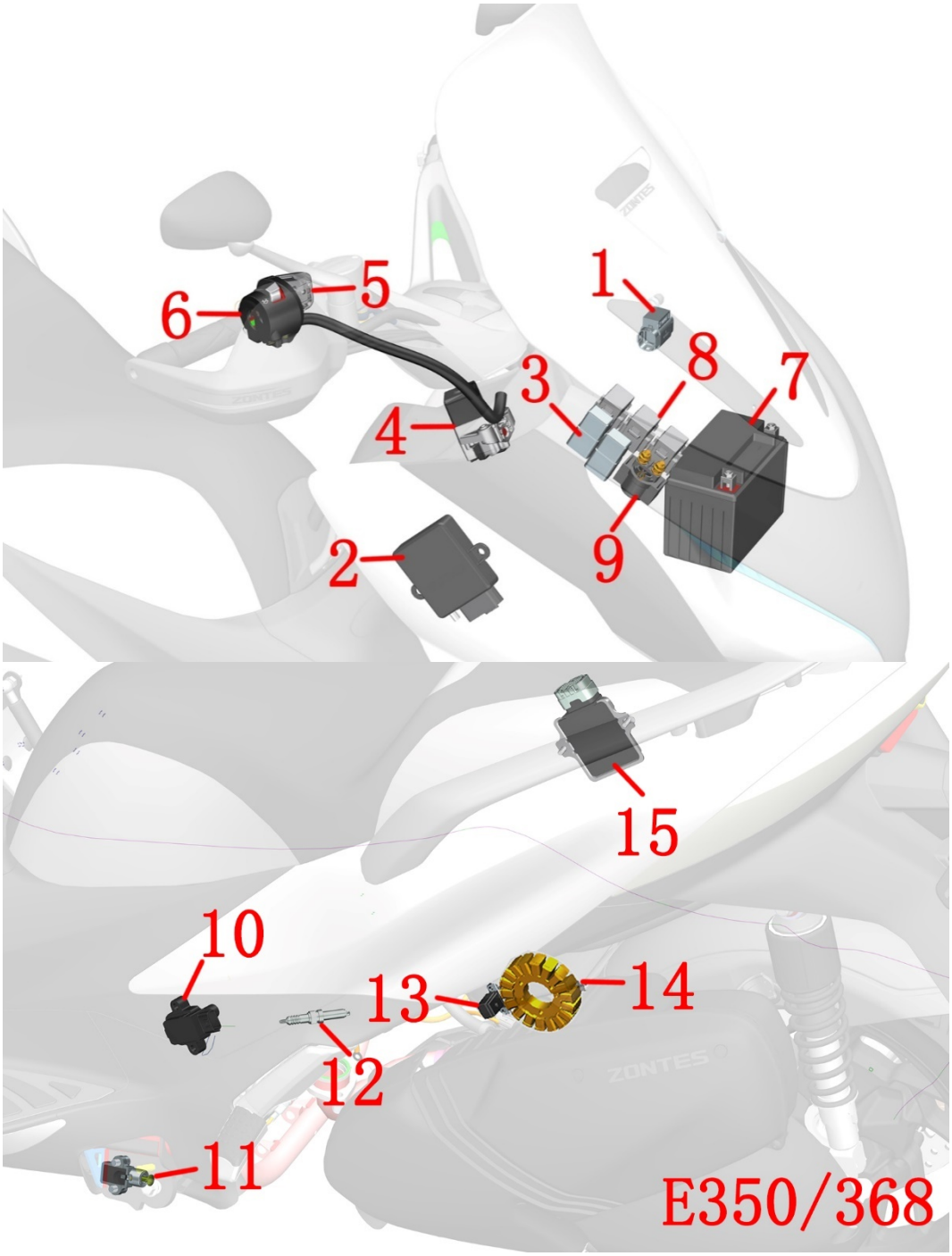
8. Insufficient battery power

If the battery is insufficient, the spark strength is weak or there is no spark. Use the charger provided with the car to charge. Or charge for long-distance riding.

9. ECU failure

After the above reasons are eliminated, the ECU that has been removed from the same model motorcycle can be replaced with a faulty motorcycle to judge.

E350/E368 Ignition system layout



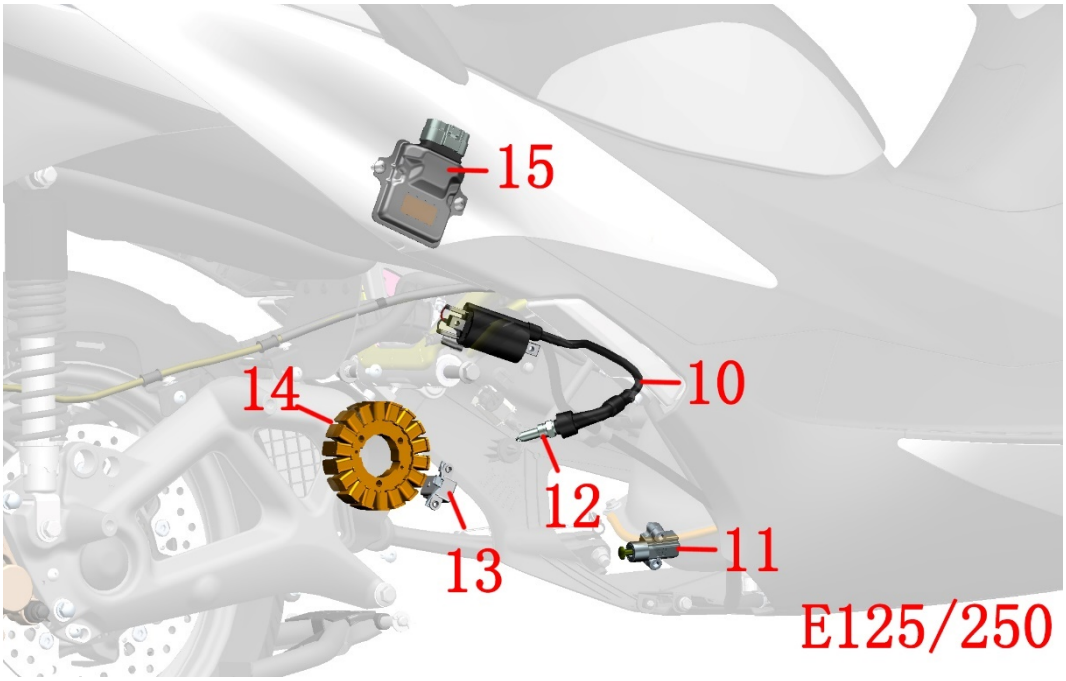
1 - Dump switch 2 - PKE 3 – relay 4 - main lock 5 - right handle bar auxiliary switch 6 - right handle bar switch 7 - battery 8 - fuse box 9 - start relay 10 - ignition coil 11 - side bracket flameout switch 12 - spark plug 13 - crankshaft position sensor 14 - magneto stator 15 – ECU

Remark :

●The fuse box comes with the main wiring harness and has a total of three. For detailed diagrams, see the section on fuel injection relays in the chapter 'Fuel Injection System' of this manual, under 'Fuel Injection Component Fault Diagnosis and Troubleshooting.'

●The magnetoelectric motor stator and the crankshaft position sensor are integrated into a single component and cannot be replaced separately. For troubleshooting the crankshaft position sensor, please refer to the crankshaft position sensor section in the 'Diagnosis and Troubleshooting of Fuel Injection Components' chapter of this manual's 'Fuel Injection System' section.

E125/E250 Ignition system layout



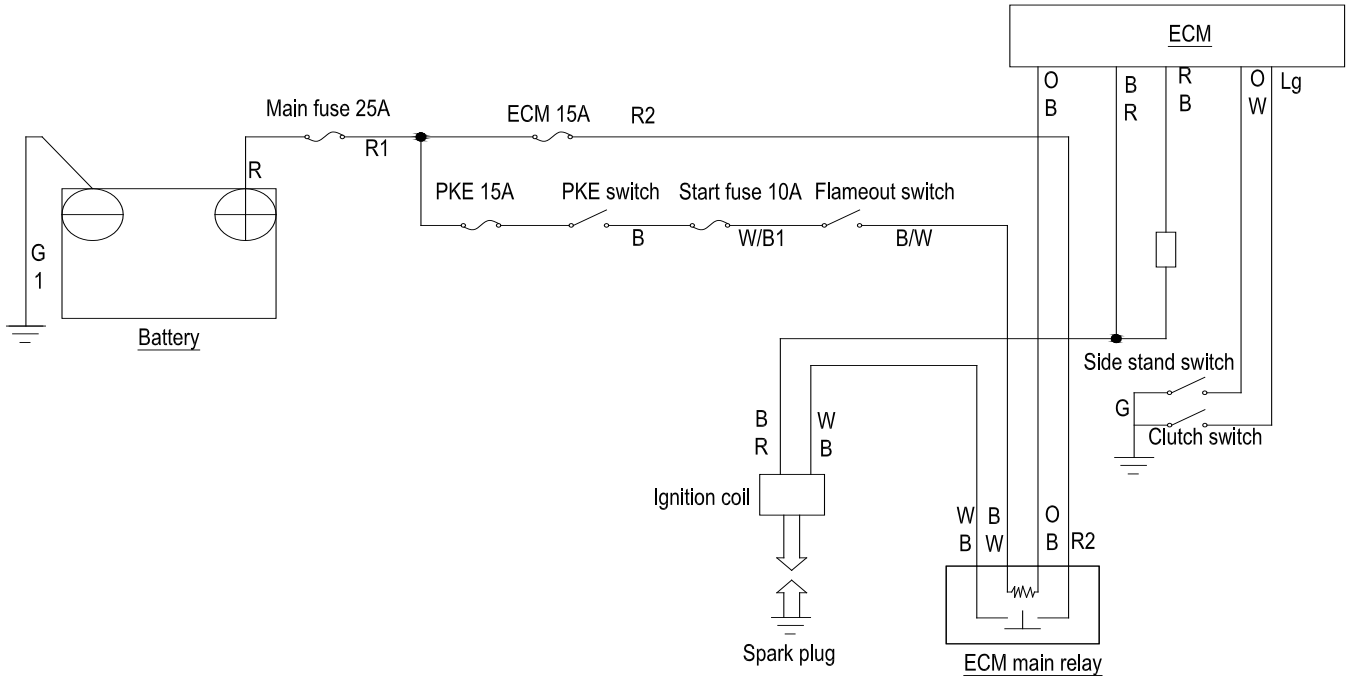
1 - Dump switch 2 - PKE 3 – relay 4 - main lock 5 - right handle bar auxiliary switch 6 - right handle bar switch 7 - battery 8 - fuse box 9 - start relay 10 - ignition coil 11 - side bracket flameout switch 12 - spark plug 13 - crankshaft position sensor 14 - magneto stator 15 - ECU

Caution:

●The fuse box comes with the main wiring harness and there are 3 in total. For detailed illustrations, please refer to the EFI relay section in the "Electronic Injection System" chapter of this manual.

●The magneto stator and crankshaft position sensor are integrated in one part and cannot be replaced separately. For details about the troubleshooting of the crankshaft position sensor, please refer to the section "Crankshaft Position Sensor" in the "Electronic Injection System" chapter of this manual.

Electrical schematic diagram of ignition system



Ignition system inspection

Caution:

●If there is no spark in the spark plug, check all the cable connections for looseness or poor contact before checking the ignition system.

●Use a high-precision digital multimeter.

For details of the ignition coil test method, please refer to the section "Ignition Coil" in the "Electronic Injection System" chapter of this manual.

Pull out the high-pressure cap, find a spark plug of the same model that is confirmed to be normal, and install it on the high-pressure cap close to the cylinder head cover to do an ignition test to confirm whether the ignition coil is faulty.

Refer to the crankshaft position sensor section in the "Electronic Injection System" chapter of the "Electronic Injection System" chapter of this manual to check whether it is abnormal.

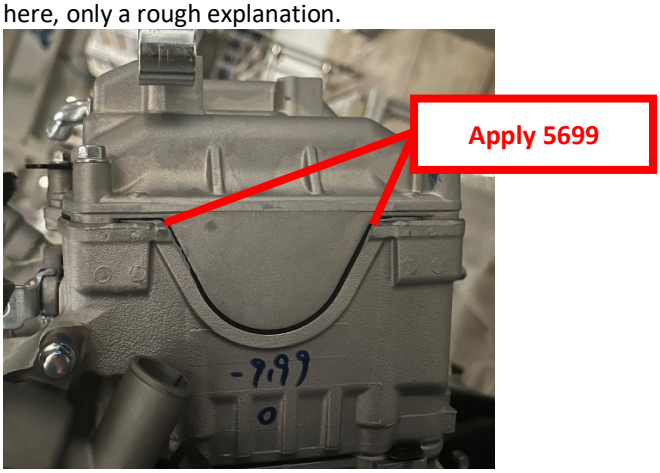
Ignition timing

Caution:

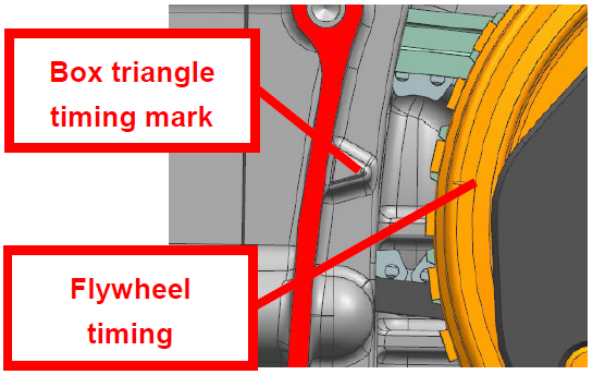
●The ignition timing is preset in the ECU before leaving the factory and cannot be adjusted. If adjustment is required, the engine can only be returned to the factory for repair.

●If the right crankcase cover and cylinder head cover of the engine are removed to check the timing, the crankcase cover gasket must be replaced; it is recommended that the cylinder head cover gasket is also replaced and the sealant should be applied to the position shown in the figure.

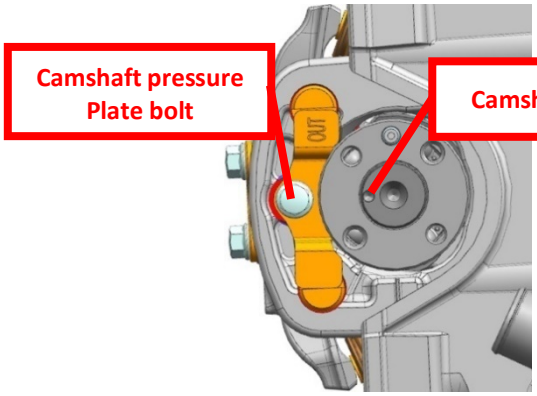
●Because professional tools and equipment are required to assemble, detailed step-by-step instructions are not given here, only a rough explanation.



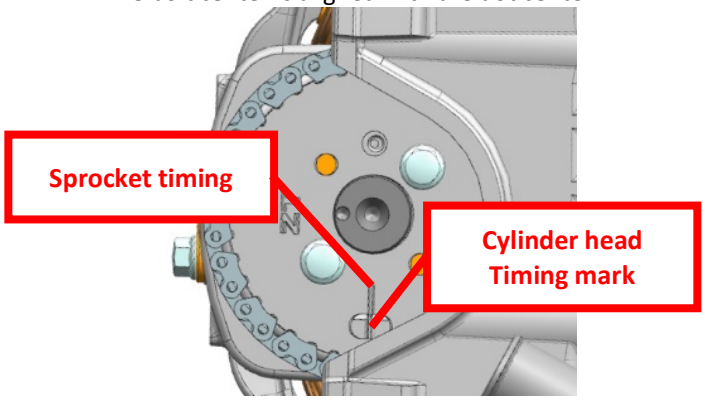
Check



The triangle is aligned with the flywheel timing mark



The bolt center is aligned with the dot center

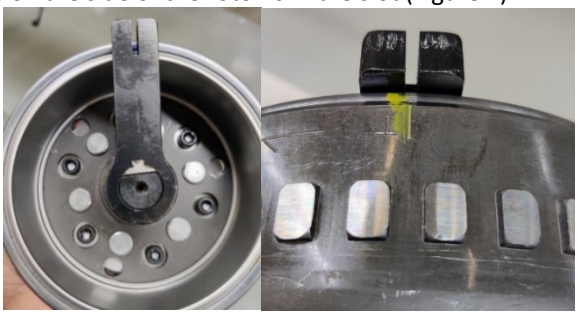


The timing of the sprocket is aligned with the timing of the cylinder head

Flywheel Checking Fixture :



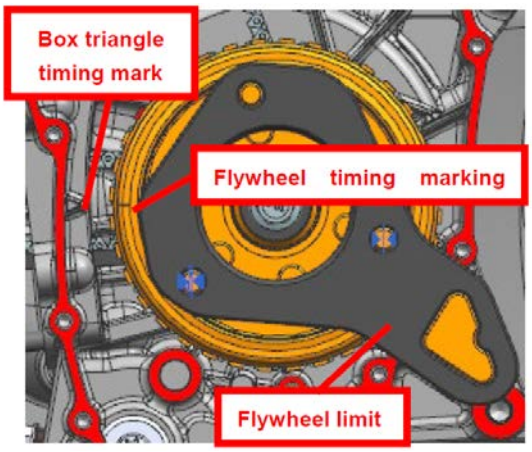
Remove the rotor from the engine, install the flywheel gauge as shown in Figure 1, and check whether the marking line on the side of the rotor is in the slot (Figure 2).



Installation:

a. Align the keyway of the flywheel with the half-circle key and install the flywheel in place, put in ϕ10.3×ϕ28×4 washer, M10×1.25×45 hexagon flange bolts, screw in the threads manually, tighten the timing chain, and turn the flywheel clockwise , Align the line immediately after the "T" mark on the flywheel with the triangle mark on the box body, install the flywheel limit tool, tighten the bolts with a wind gun, and correct with a fixed torsion, and mark with an oil-based pen. Torque: 75±7N.m (7.7±0.7 kgf.m, 55±5 lbf.ft).

After the fixed-torque correction of the flywheel bolt is completed, turn counterclockwise to start the large tooth. If the rotation is flexible, the assembly is qualified. If it can't rotate or can rotate in both directions, the flywheel should be removed and reassembled and the unidirectional device should be checked. Pull the starting big tooth upwards, the axial clearance is about 0.7mm (0.028in), it is qualified.



b. Tighten the timing chain, check again and align the line immediately after the "T" mark on the flywheel with the triangle mark on the box.

c. Rotate the camshaft to align the dots with the camshaft pressing plate bolts, insert the timing driven sprocket into the timing chain and assemble it on the camshaft, and at the same time, the timing of the timing driven sprocket is aligned with the timing of the cylinder head Degree mark.

d. Apply thread glue to the M6×16 bolts. After pre-tightening by the air screw, tighten it with the air screw, and finally correct it with a fixed torque wrench. Torque: 12±1.5 Nm (1.2±0.2 kgf.m, 9±1 lbf.ft) . And mark it with a marker.

e. Remove the flywheel limit tool and put it back to its original position.

f. Restore the disassembled engine parts.

g. Use the whole machine leak detection equipment to detect whether there is a leak.

h. Reinstall the rear shock absorber of the engine rear wheel back on the motorcycle.

Ignition coils

For details on the disassembly and test methods of the ignition coil, please refer to the section "Ignition Coil" in the "Electronic Injection System" chapter of this manual.

5.Starting system

Know Before Service

1. If current flows through the starter motor when the engine is not started, it can be judged that the starter motor is damaged and needs to be replaced.
2. Before servicing the starter motor, turn on the engine stop switch to "" to prevent the misoperation from causing the starter motor to start suddenly and cause personal injury.
3. When the power is insufficient, the engine may not be able to start quickly, or the ignition current cannot be provided.
4. You can check or repair the startup system by referring to the steps in the troubleshooting process.

WARNING

●When the engine cannot be started, do not press the electric start button frequently. Frequent operation can cause overheating or damage to the starter motor, flooding, battery feed, etc.

Troubleshooting

Caution:

●Ensure that the battery is fully charged and in good condition.

●Check whether the main fuse (25A) and ECM fuse (15A) are blown. If the fuse is replaced with a new one and it is blown out, you need to troubleshoot the line first.

●The starting motor should work under the following conditions:

a. Unlock the motorcycle;

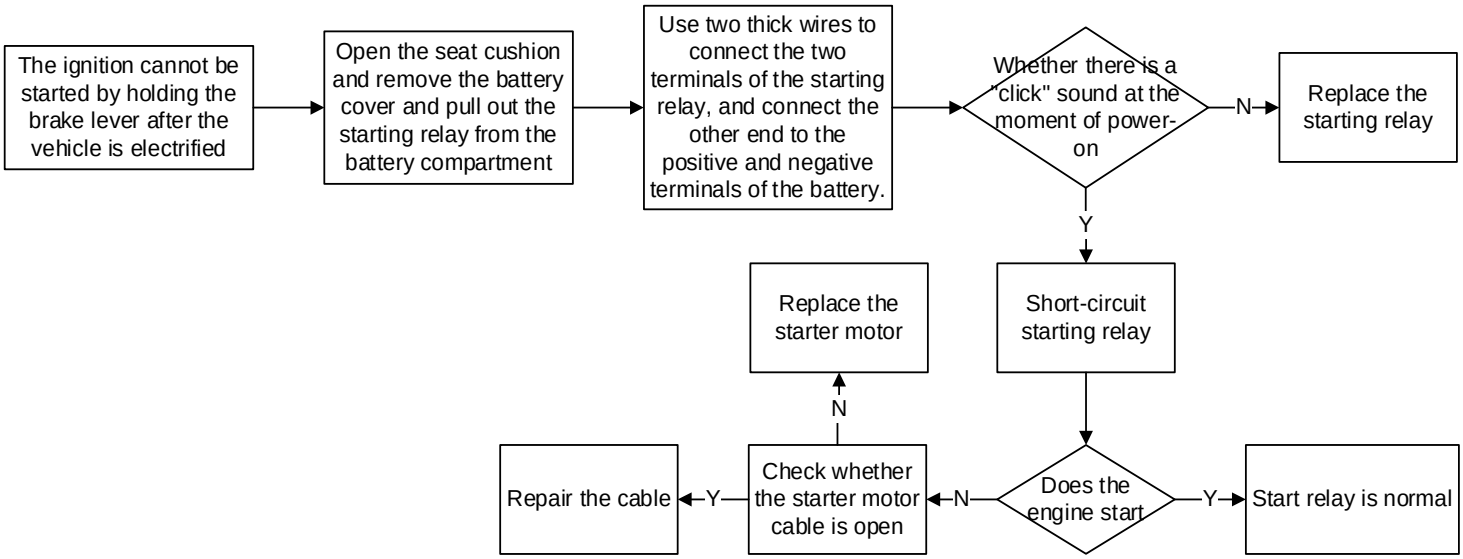
b. Retract the side bracket;

c. Turn the engine flameout switch to "";

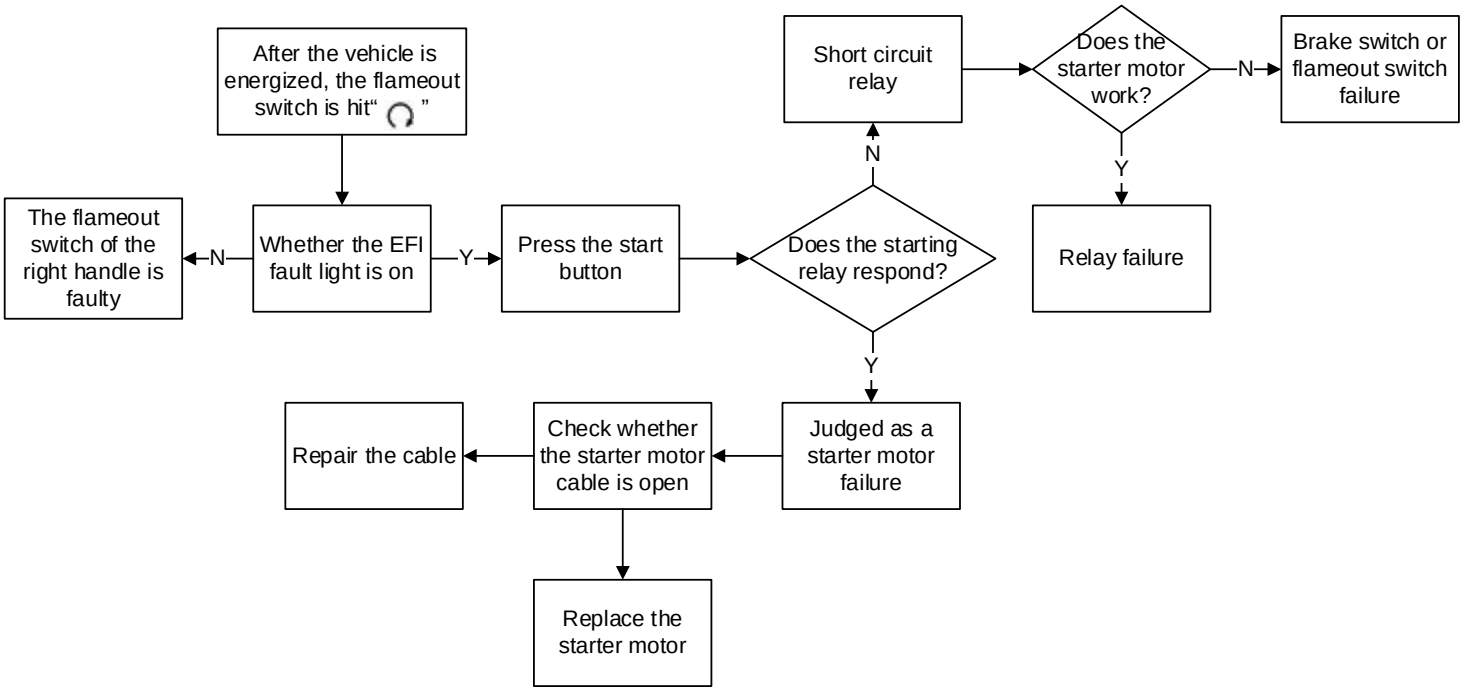
d. Press the start button.

Starter motor does not run troubleshooting process :

1.Starting relay



2.Starter motor



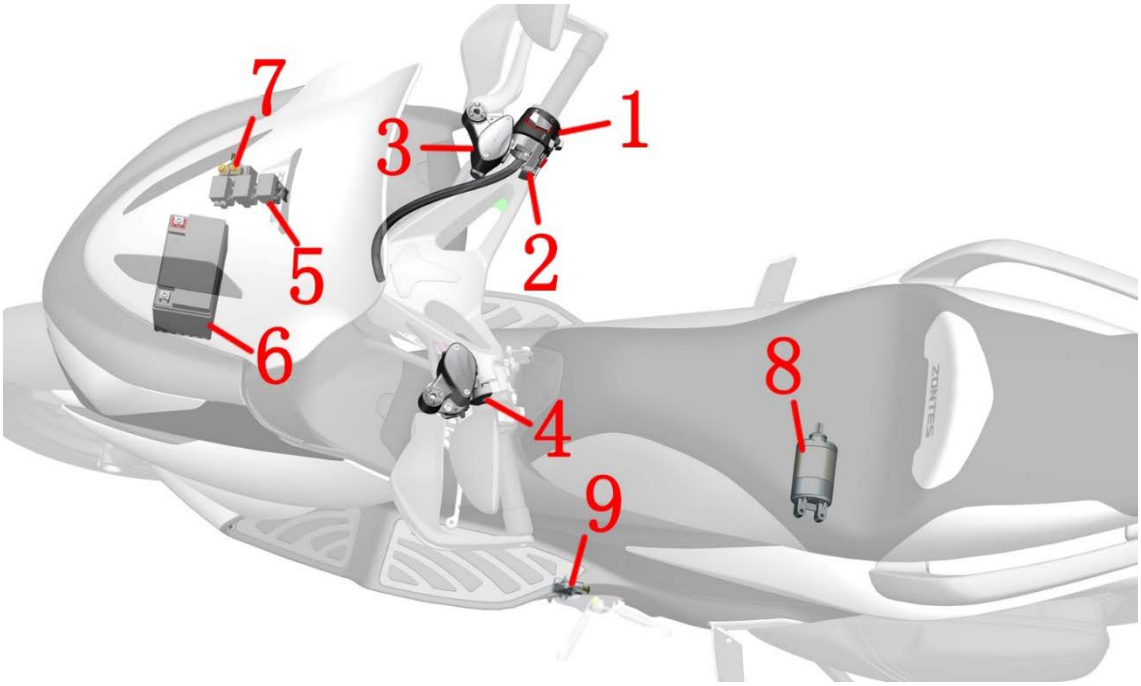
3.The starter motor runs slowly

Check whether the battery power is insufficient;
Check whether the battery cable connector is in poor contact;
Check whether the starter motor cable is in poor contact;
Check whether the starter motor is abnormal.

4.The starter motor is working normally, but the engine cannot be started

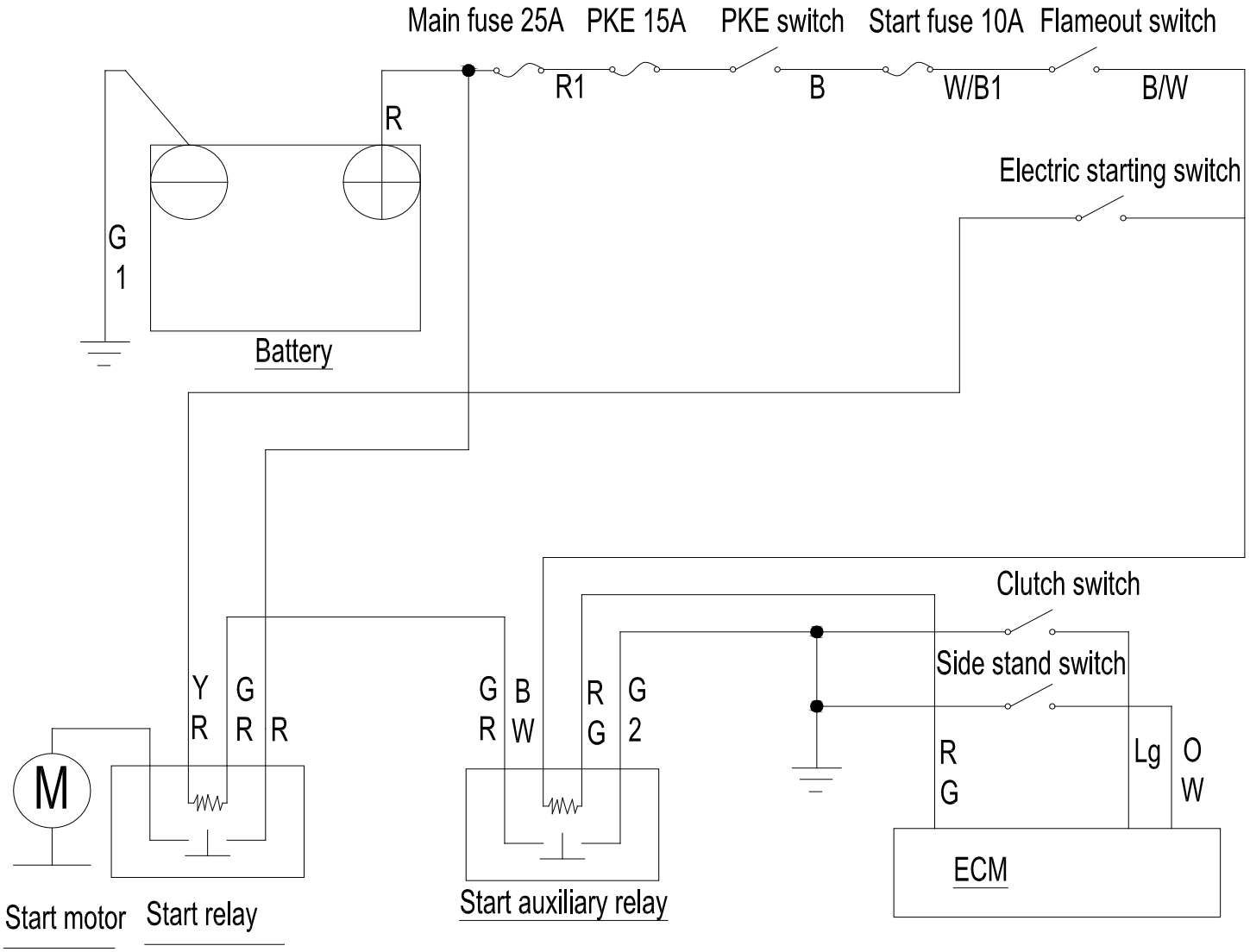
Check whether the starter gear train is faulty;
Check the ignition system for malfunctions.

Ignition system layout



1-Right-handle switch (stop switch, start button) 2-Right-handle secondary switch (to unlock the motorcycle) 3-Front disc brake main pump (front brake switch) 4-Rear disc brake main pump (rear brake switch) 5-Fuse box 6-Battery 7-Starting relay 8-Starting motor 9-Side bracket flameout switch

Starting system electrical schematic diagram



Starter motor

Caution:

●If the starter motor is removed for maintenance, replace the O-ring with a new one and apply a proper amount of engine oil.

●Our company only sells starter motor assemblies, not O-rings and motor parts separately. The O-ring has an inner diameter of ϕ25mm (0.98in) and a wire diameter of 3mm (0.12in).

1.Remove the starter motor

a. Refer to the steps of removing the rear storage box to remove the rear storage box. For the removal steps, refer to the stepping motor removal and cleaning carbon deposits in the section of the throttle valve body in the "Maintenance" chapter.

b. Untie the cable ties and clip.



c. Loosen the clamp bolt shown in the figure with a 4# inner hexagon counterclockwise, and pull the air filter outlet pipe toward the rear wheel to pull out the throttle valve body.



d. Pull the air outlet pipe to the right side of the motorcycle to expose the two M6×30 bolts that fix the starter motor, and remove them with an 8# sleeve. After removing the bolts, remove the starter motor from the engine in the direction indicated by the big arrow.



e. When reassembling, make sure not to omit the O ring that comes with the starter motor, and align the teeth of the electric starter reduction gear. Note that the O-ring needs to be correctly assembled into the box, as it will cause leakage if cut edges occur. Torque of the two bolts for fixing the starter motor: 12±1.5 N.m (1.2±0.2 kgf.m, 9±1 lbf.ft). And mark with a marker.



2.Disassemble the starter motor

Caution:

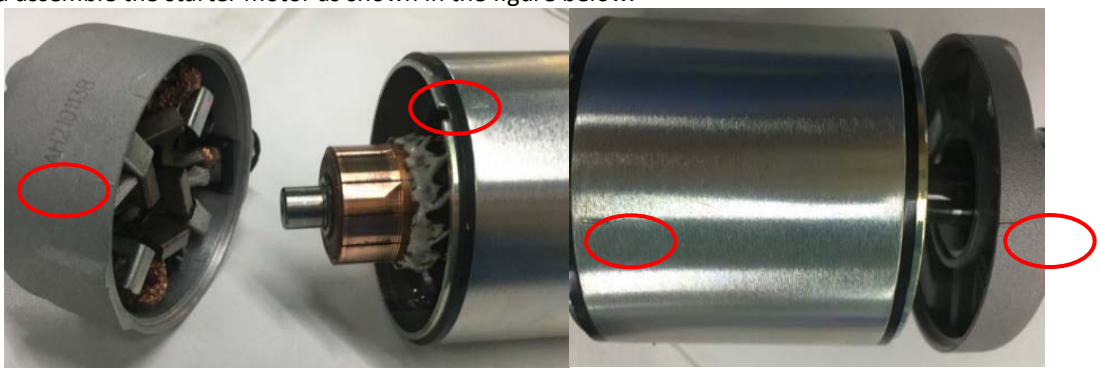
●If the magnet tile pulls the electric pole towards the motor housing, the coil may be damaged.

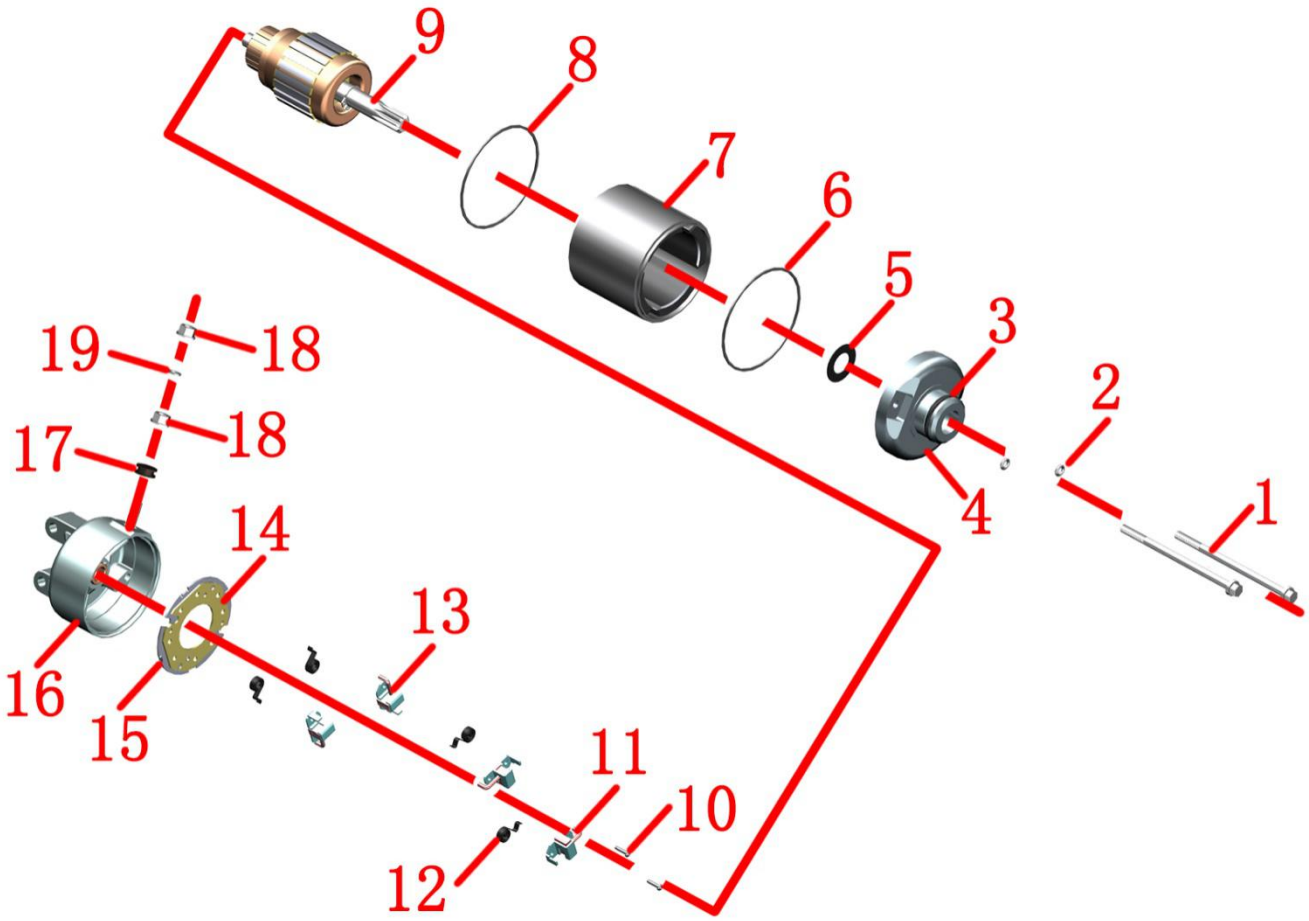
●When installing the electric motor from the slot of the starter motor housing to the housing, make the commutator bar face the rear side;

●When installing the back cover of the starter motor, please align the marking line with the index line;

●When installing the front cover of the starter motor, pay attention to prevent damage to the oil seal lip of the electric drive shaft, and align the marking line of the front cover with the index line on the motor housing.

Disassemble and assemble the starter motor as shown in the figure below.





1-M6×90 bolt×2 2-O ring×2 3-O ring 4-starter motor front cover 5-gasket 6-rectangular sealing ring 7-starter motor outer shell 8-rectangular sealing ring 9-electric pole 10-screw ×2 11-Negative brush×2 12-Volute spring×4 13-Positive brush×2 14-Brush frame 15-Brush holder insulation gasket 16-Starter motor back cover 17-Insulation gasket 18-Nut×2 19- Gasket

Examination

Starter motor front cover :

Check whether the oil seal of the front cover is worn and damaged;

Also check whether the outer ring fits tightly with the front cover.



Motor back cover :

Check whether the bushing of the back cover is worn or damaged;

Check whether the brush is damaged, measure the length of the brush, and use the limit11.5mm（0.45in）.

Check the connectivity of the back cover as follows :

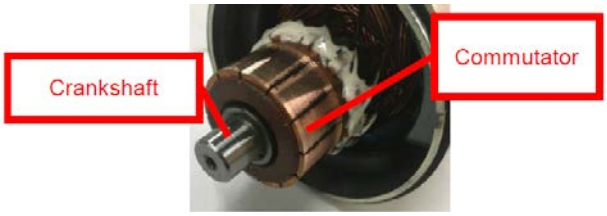
The positive brush is connected to the end of the cable; the cable end is not connected to the back cover; the negative brush is connected to the back cover.



Denki :

Clean the metal scraps on the electric screw, and check whether the commutator bar is discolored;

Check that there should be a gap between the commutator and the crankshaft.



Check the starting relay

1.Operation check

a. Remove the seat and rear storage box first, find the starting relay connector on the right inner side of the frame, and untie the tie.



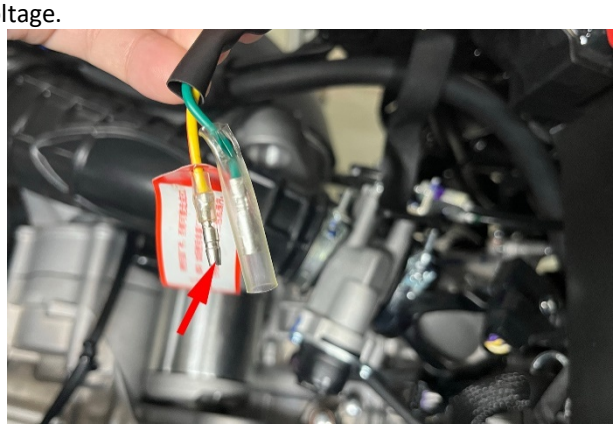
b. Unlock the motorcycle, turn the engine shutoff switch to "", retract the side bracket, pinch the brake handle and press the start button. You should hear the sound of the start relay picking up, otherwise you should check the start circuit.

2.Check the relay coil

2.1 Input line

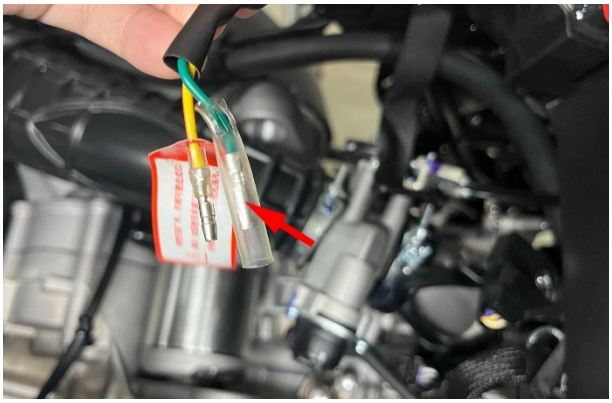
Adjust the multimeter to the DC voltage 20V file (if it is an automatic range multimeter, adjust it to the DC voltage file). Insert the red test lead into the rubber sleeve of the yellow/red wire and stick it tightly to the terminal.

Unlock the motorcycle, turn the engine off switch to "", and the black test lead can select any bolt connected to the frame nearby. When the brake handle is pressed and the start button is pressed, the voltage measured between the yellow/red wire and the ground wire should be the battery voltage.



2.2 Ground wire

The motorcycle is powered off and locked. Set the multimeter to the buzzer position, connect one test lead to the green/red wire, and one to any bolt connected to the frame. It should be conductive when the start button is pressed.

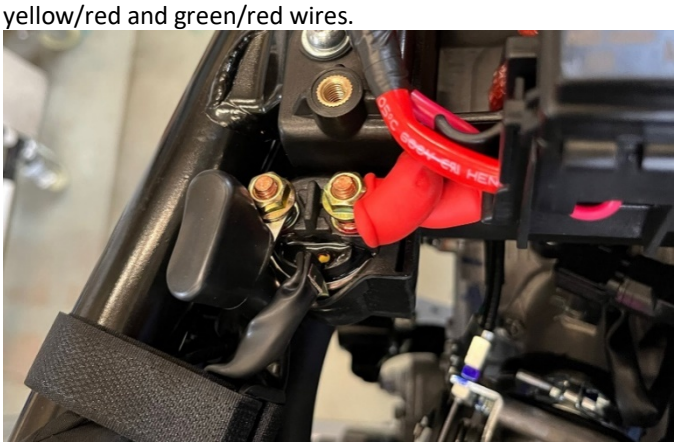


3.Check the starting relay

Use a thicker wire to directly connect the 12V battery to the relay. Use the buzzer file of the multimeter to measure the green/red and yellow-red wires, which should be conductive, and should be disconnected after disconnecting the battery.

4.Disassembly and assembly of the starting relay

Open the black protective cap of the starting relay and use a 10# sleeve to remove the self-contained M6 nut, take out the wire and screw it back to the nut to prevent loss; use the same method to remove the other end. Unplug the yellow/red and green/red wires.



When reinstalling, the yellow/red and green/red wires of the relay correspond to the color of the main cable, and the nuts are not distinguished. Be sure to close the protective cap after tightening the nut.

6.Fuel supply system

Know Before Service

1. Bending or twisting the control cable will affect the smooth operation, and may cause a short circuit or open circuit, causing the motorcycle to lose control.
2. The operation should be carried out in an open and ventilated place. All activities that may cause sparks, such as smoking, calling on mobile phones, etc., are prohibited on the job site.
3. Before operation, release the pressure of the high-pressure fuel pipe. The method is as follows: unplug the fuel pump, start the engine and run at idling speed until the engine stops. Turn off the engine， Turn off to "", turn off the power and lock the bike.
4. Do not fully open the throttle valve body manually after removing the throttle cable, which may cause abnormal idling.
5. After removing the throttle valve body, apply masking paper or a clean non-woven fabric to block the air inlet to prevent foreign matter from falling into the engine.
6. Do not damage or operate the throttle valve body, which may cause abnormal throttle operation.
7. After removing the throttle valve body, prevent dust or foreign matter from entering the throttle hole or air passage. If necessary, it can be cleaned with dry compressed air.
8. It is forbidden to loosen or tighten the bolts or nuts that have been marked with a marker on the throttle, which may cause abnormal throttle opening and closing and idle speed control.
9. Cannot use carburetor cleaning agent.
10. Throttle valve body parts not specified in this manual shall not be disassembled.

CAUTION

●After reinstalling the battery or EFI components, reset the EFI system. For specific operations, please refer to the precautions in the driver's manual or the throttle valve body chapter of this manual.

Examination

1.Fuel pressure test

Refer to the fuel pump section in the "Maintenance" chapter for the test method.

2.Fuel pump inspection

Unlock the motorcycle, turn the engine stop switch to " ", you should be able to hear the sound of the fuel pump running. If you don't hear the fuel pump running sound, turn off the engine and turn off the power first.

Refer to the steps in the "Maintenance" chapter to replace the high-pressure oil pipe first to remove the surrounding bottom plate. Refer to the previous fuel tank removal steps to unplug the fuel pump.

Use a multimeter to measure the voltage of the fuel pump plug cable end, unlock the motorcycle, and when the engine stop switch is turned to " ", the fuel pump will accumulate pressure for about 5 seconds, during which time the battery voltage should be able to be measured.

If the battery voltage can still be measured without starting the engine after the pressure accumulation is completed, check whether the fuel pump relay is normal. If the relay is normal, the fuel pump needs to be replaced if it is abnormal.

3.Oil level sensor

Use the resistance file of a multimeter to measure the resistance. The lowest position (empty oil): 287～313Ω, the highest position (full oil): 27～79Ω.

Pull the float connecting rod, there should be no jamming phenomenon and good contact of the contacts during the rotation process.

Check the appearance of the float, and there should be no damage.

7.Cooling system

Know Before Service

1. Please refer to the radiator section of the "Maintenance" chapter of this manual for the corresponding precautions for the coolant (antifreeze).
2. Check the cooling water pipe; check the height of the cooling liquid, adding and discharging the cooling liquid have been described in detail in the radiator section of the "Maintenance" chapter, and this chapter will not be repeated.

Tool:

			
Hoop clamp	Multimeter	Air source with adjustable air pressure	Homemade cover*

*It can be blocked with a soft rubber plug, or folded in half with a hose and tied up with a rope or wire as a plug for the small pipe to test the sealing of the water tank filling port. You can find a water pipe with an inner diameter of 16mm to cut off a section, and use a suitable air pipe joint and clamp to assemble it firmly at the other end to test the air tightness of the water tank filling port, the main water tank, and the small water tank.

WARNING

●When the engine is not completely cooled, opening the water tank cover may cause the coolant to spray out and cause burns. The water tank cover must be opened after the water tank and engine have cooled down.

Troubleshooting

1.The engine temperature is too high:

a. The coolant temperature of the meter is abnormal or the water temperature sensor is abnormal;
b. The thermostat is abnormal;
c. Insufficient coolant;
d. The radiator, water pipe, and water tank are blocked;
e. There is air entering the cooling system;
f. The cooling fan is faulty;
g. Cooling fan relay failure (see the EFI relay section in the "Electronic Fuel Injection System" chapter).

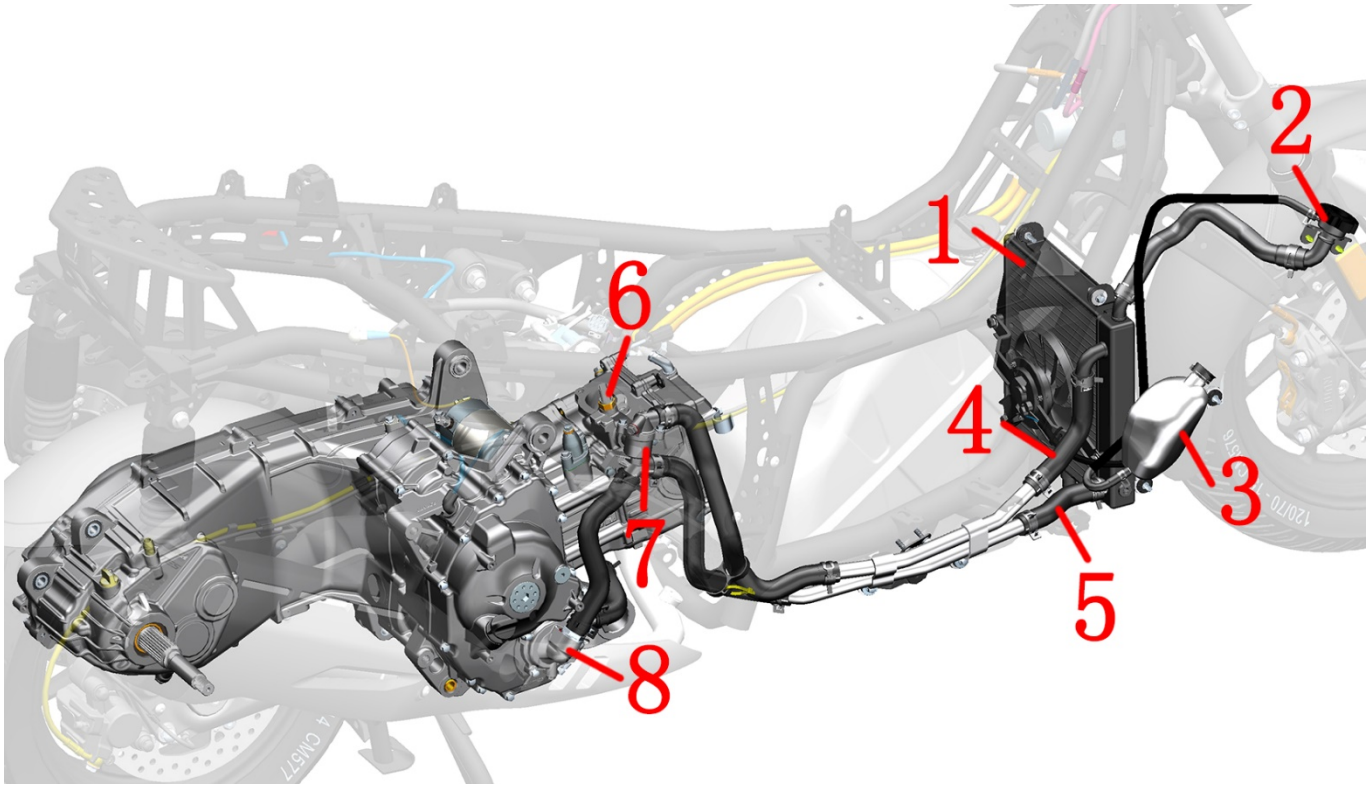
2.The engine temperature is too low:

a. The coolant temperature of the meter is abnormal or the water temperature sensor is abnormal;
b. The thermostat is abnormal;
c. The cooling fan relay is faulty (see the EFI relay section in the "Electronic Fuel Injection System" chapter).

3.Coolant leakage

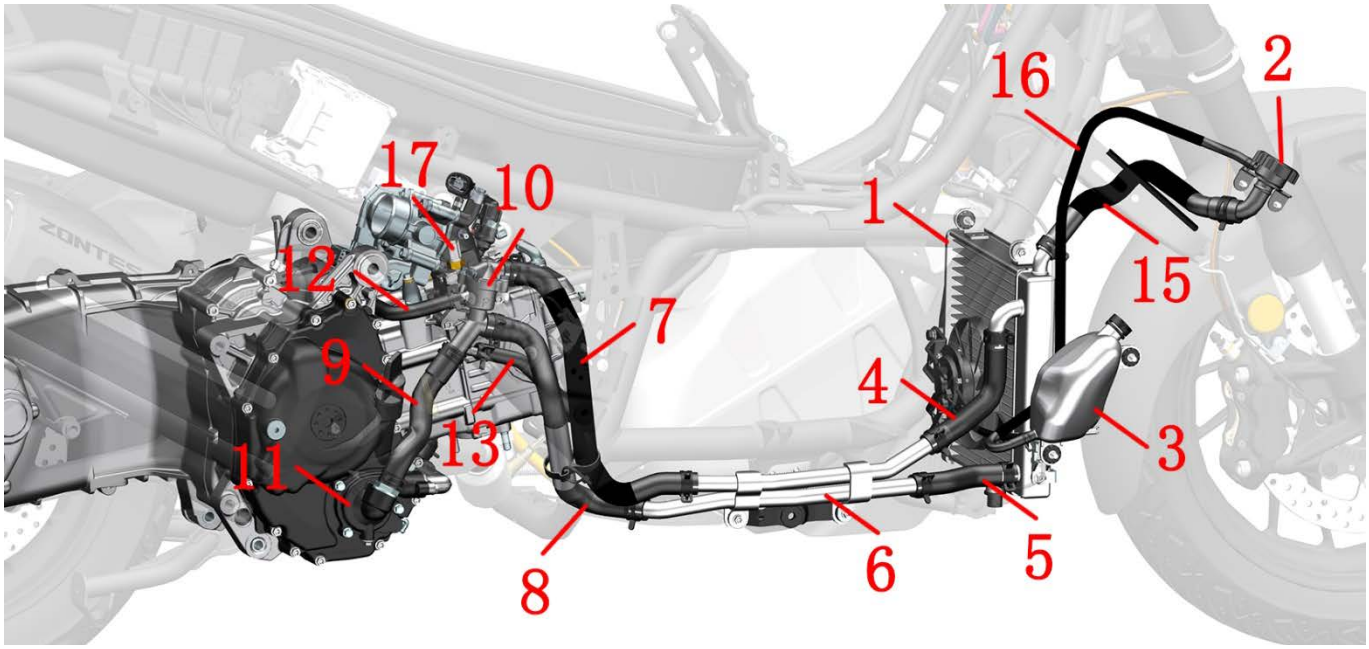
a.Water pump seal failure;
b.O-ring is damaged or aging failure;
c.The radiator cover is damaged;
d.The gasket is damaged or aging failure;
e.Water pipe rupture;
f.The radiator is damaged.

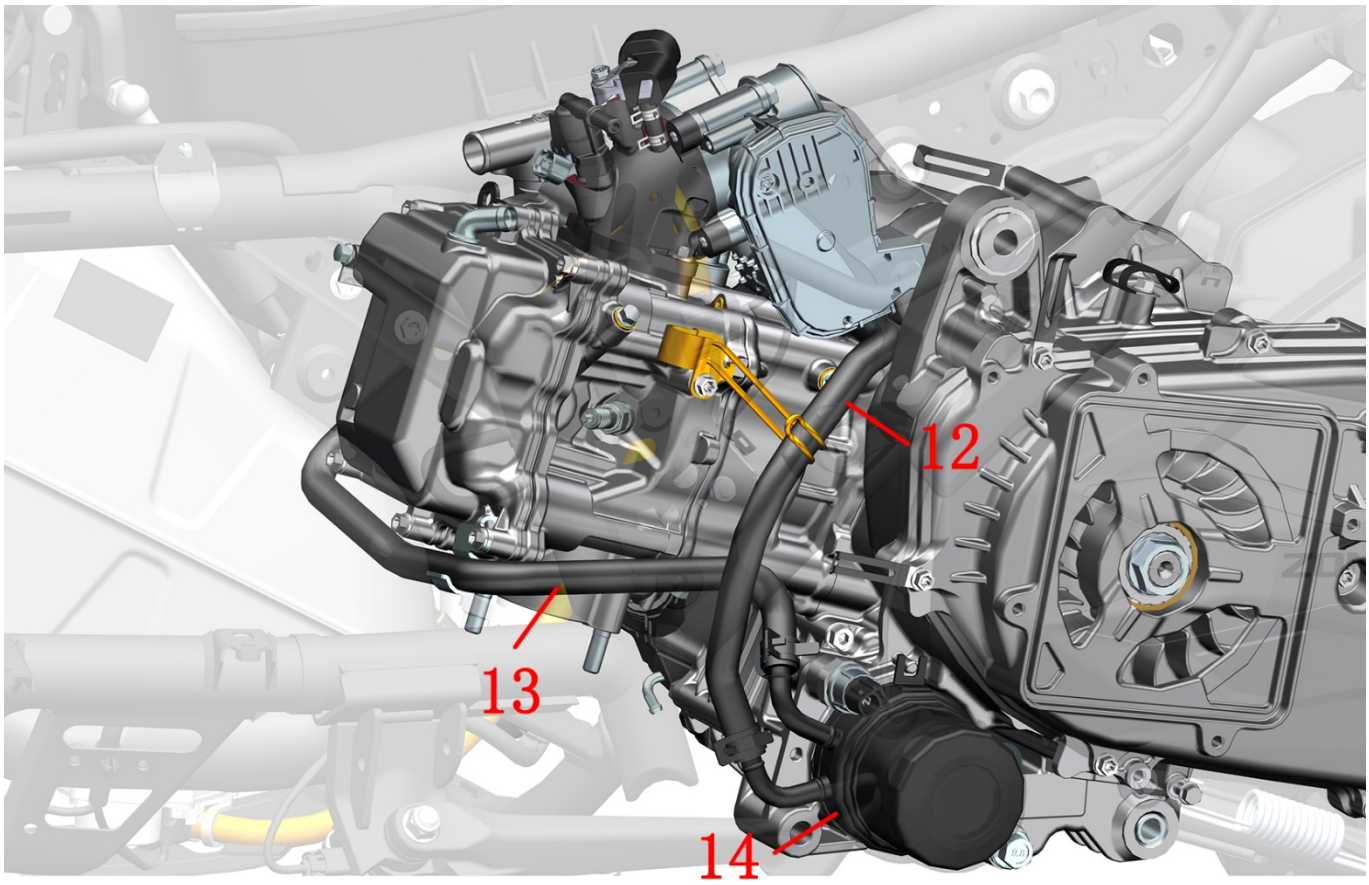
E350/E250/E368 Coolant system distribution map



1 - Main water tank 2 - Water tank filler 3 - Auxiliary water tank 4 - Water inlet pipe of main water tank 5 - Water outlet pipe of main water tank 6 - Water oil shared sensor 7 - Thermostat 8 - Water pump cover assembly

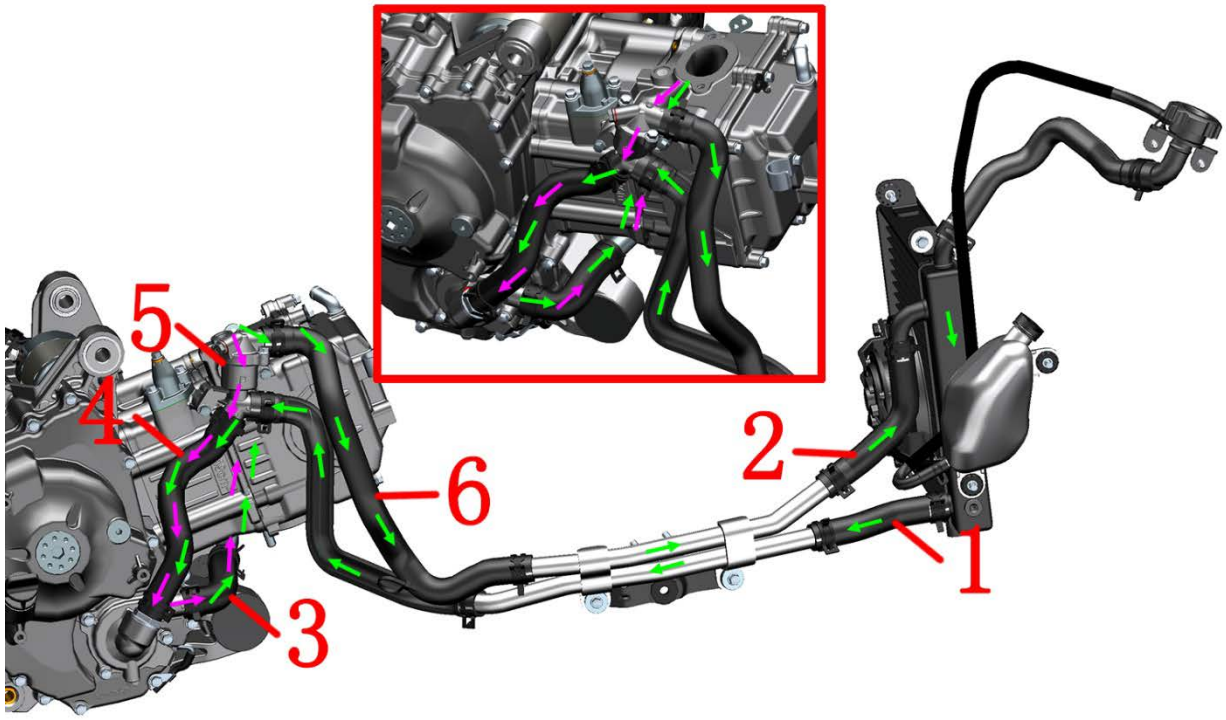
E368（ETC）Coolant system distribution map





1- Main water tank 2- Water tank filler 3- Auxiliary water tank 4- Water inlet pipe of main water tank 5- Water outlet pipe of main water tank 6- Aluminum water pipe 7-thermostat outlet pipe 8-engine inlet pipe
9- Water pump cover inlet pipe 10- Thermostat 11- Water pump cover assembly 12- Oil cooler inlet pipe 13- Oil cooler outlet pipe 14- Oil cooler 15- Radiator filler neck connecting pipe 16- Auxiliary radiator connecting hose 17- Water-oil shared sensor

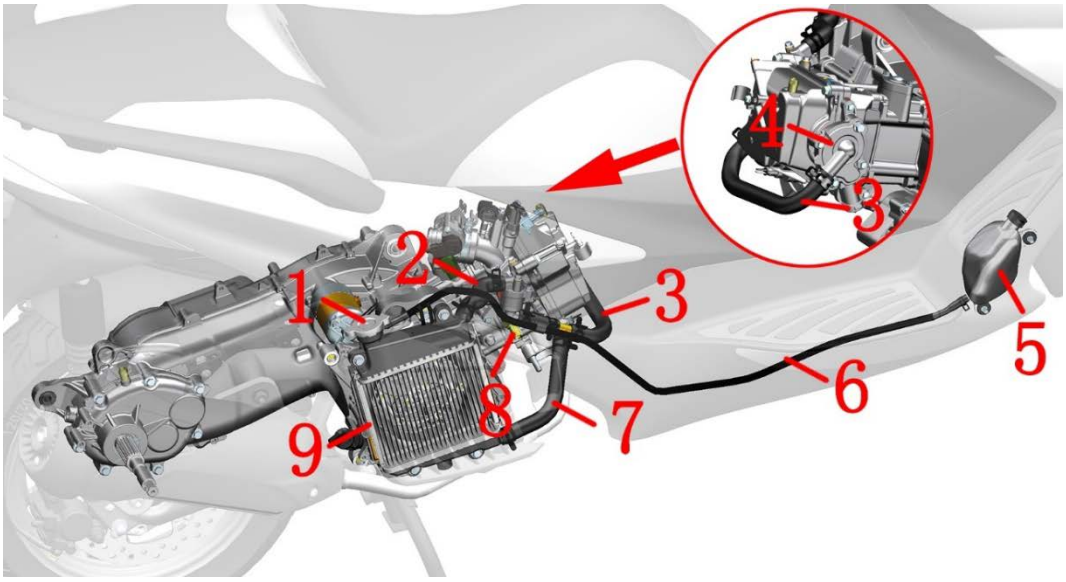
E350/E250/E368 Coolant flow diagram



1 - Water inlet pipe 2 - Water outlet pipe of main water tank 3 - Water inlet pipe of main water tank 4 - Connecting pipe of auxiliary water tank 5 - Water inlet pipe of cylinder 6 - Water inlet pipe of water pump cover

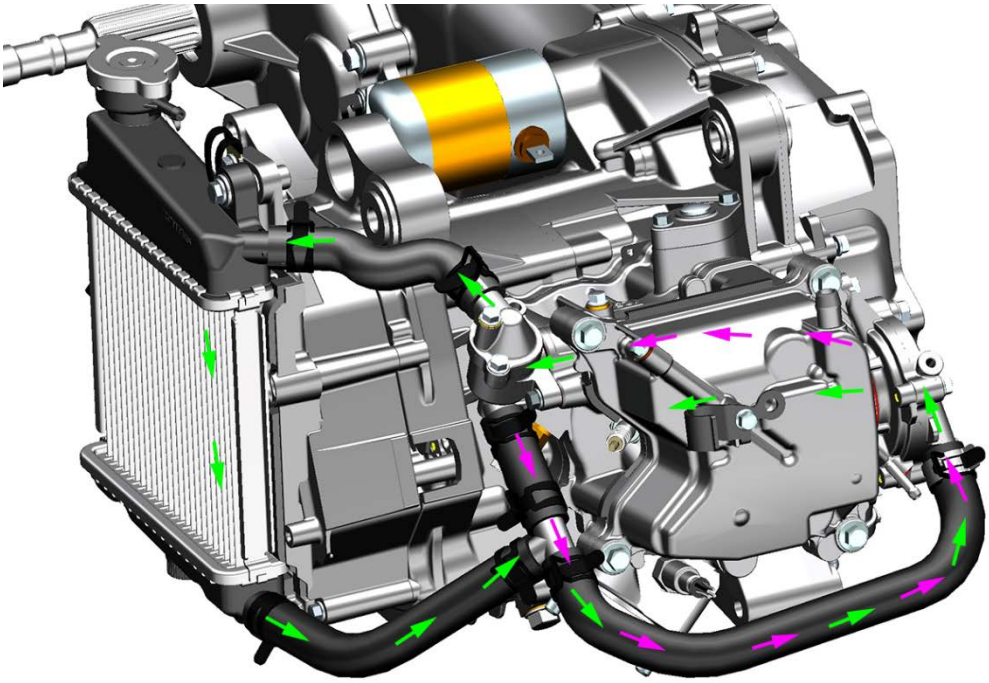
Cooling system:
Small loop (indicated by the purple arrow):
Water pump → cylinder inlet pipe → cylinder → thermostat → small circulation outlet pipe → water pump cover inlet pipe
Big loop (indicated by the green arrow):
Water pump → cylinder inlet pipe → cylinder → thermostat → small water tank inlet pipe → small water tank → small water tank outlet pipe → main water tank inlet pipe → main water tank → main water tank outlet pipe → engine water inlet pipe → water pump cover inlet pipe

E125 Coolant system distribution map



1- water tank water inlet 2-main water tank inlet pipe 3-engine inlet pipe.4-Water pump cover inlet pipe
5-Secondary water tank 6- auxiliary water tank connection water pipe 7- water tank outlet pipe
8-Water and oil shared sensor 9-Main water tank

E125 Coolant flow diagram



Cooling system:
Small loop (indicated by the purple arrow):
Water pump → cylinder → thermostat →thermostat outlet pipe→engine inlet pipe→Water pump
Big loop (indicated by the green arrow):
Water pump → cylinder → thermostat→water tank inlet pipe→radiator sub-assembly→water tank outlet pipe→engine inlet pipe→Water pump

Cooling system disassembly

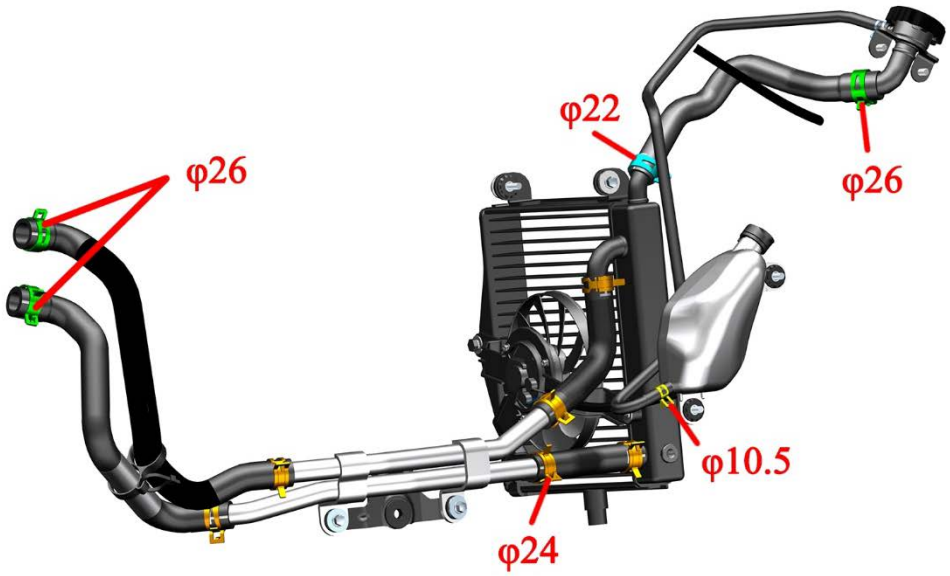
Caution:

●Before disassembling, please refer to the steps of discharging the cooling liquid in the cooling system section of the "Maintenance" chapter to drain all the cooling liquid first.

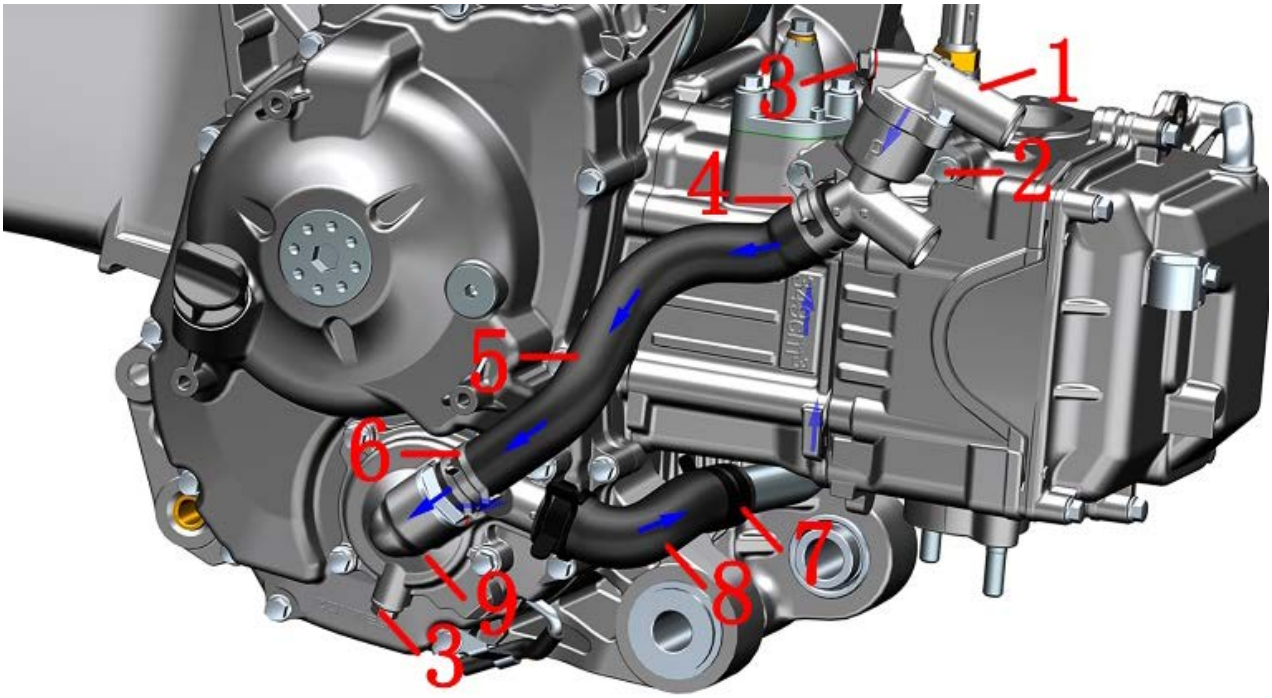
●Wear protective measures such as waterproof gloves and protective glasses during disassembly, and prevent the coolant from contacting the skin.

●The disassembly operation must be performed after the engine, radiator, and muffler are completely cooled.

E368/E350/E250 Coolant system hoop/clamp distribution map

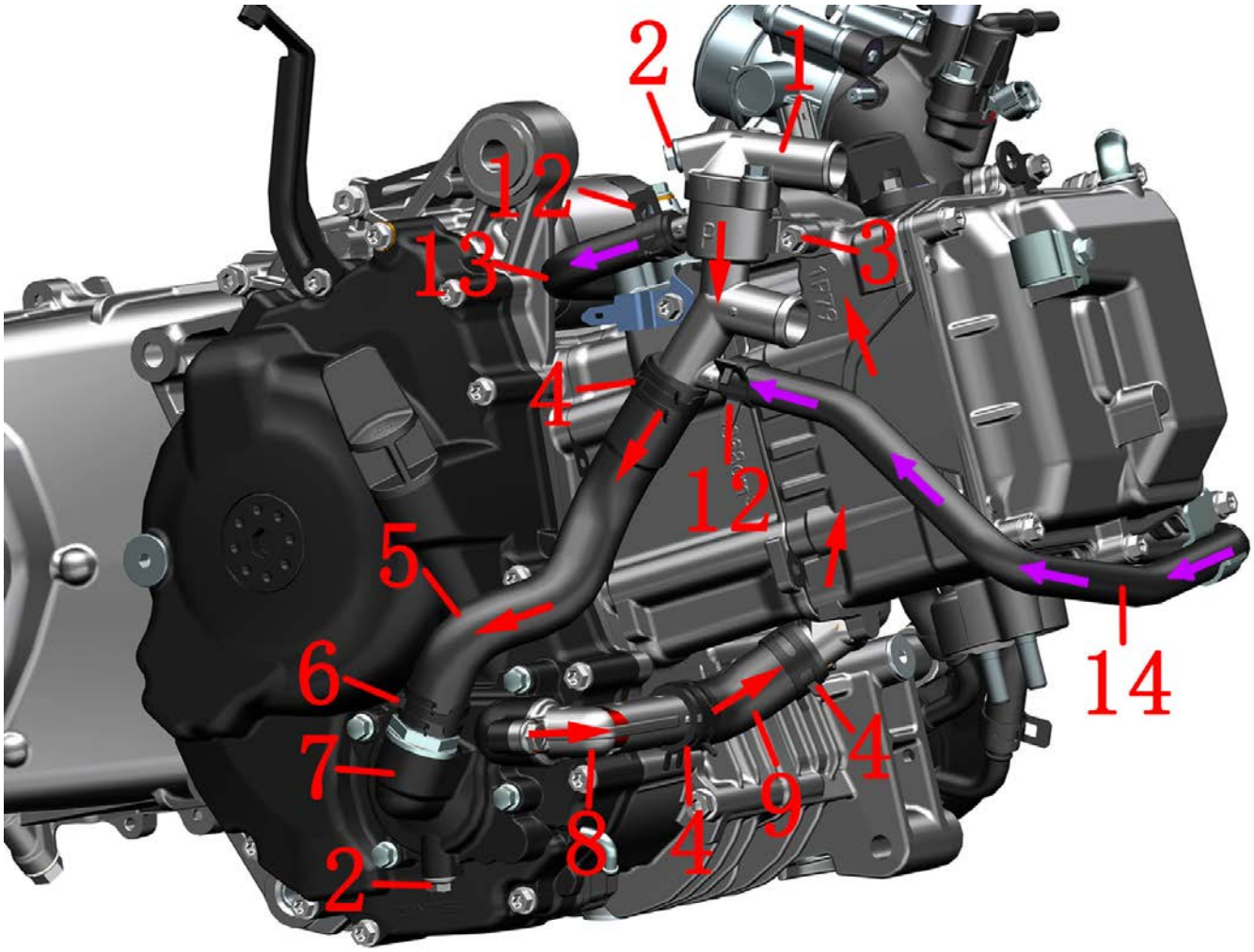


E368/E350/E250 Thermostat assembly and small loop



1-Thermostat assembly 2-M6 × 22 Bolt * 2 3-M6 × 12 bolts * 2 4-water pipe hoop（ϕ 25) 5 - Water pump cover inlet pipe 6 - Water pipe hoop（ϕ 24) 7-Water pipe hoop（ϕ 26) * 2　8-Water pump cover outlet pipe 9-Water pump cover assembly

368E（ETC）：

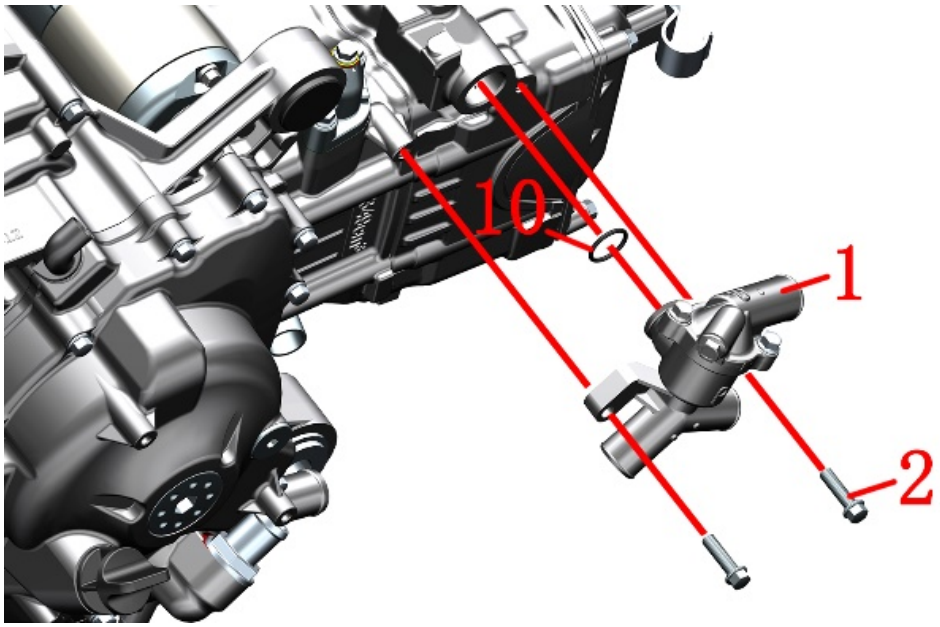


1-Thermostat assembly 2-M6 × 22 Bolt * 2 3-M6 × 12 bolts * 2 4-water pipe hoop(ϕ 25) 5 - Water pump cover inlet pipe 6-Water pipe hoop 7-Water pump cover assembly 8-Water pump cover outlet pipe joint 9-Water pump cover outlet pipe 10-Water pipe hoop(ϕ16)*4 11-Oil Cooler Water Inlet Pipe 12- Oil Cooler Water Outlet Pipe

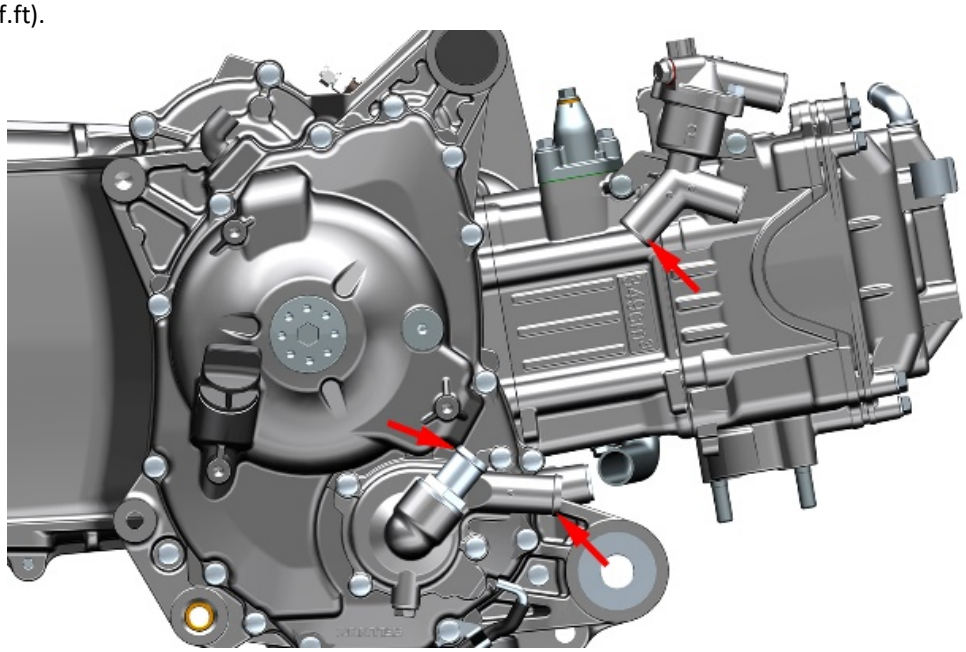
Caution: The bolt (3) at the thermostat is an exhaust bolt, and the bolt at the water pump cover is a bolt for c ooling liquid. There are O-rings of ϕ5.6×ϕ1 at both locations, which need to be replaced once they are disassembled.

a. Use the hoop pliers to remove the hoop⑷hoop⑹and hoop⑺, and separate the water pipes⑸,⑻. Remove the hoop from the water pipe.

b. Use an 8# sleeve to remove 2 bolts⑵, take off the thermostat assembly, and remove the O ring⑽ from the thermostat assembly. Once disassembled, O ring⑽ needs to be replaced.



Before reassembly, the joint surface should be cleaned. Note that the O-ring cannot be missing and must be correctly assembled in place. The hoop should be clamped inside the boss to prevent loosening. Bolt(2) Torque: 12±1.5 N.m (1.2±0.2 kgf.m, 9±1 lbf.ft).



Cooling system accessories

Caution:

●Special ventilation tooling (gas pressure reducing valve, air gun, sealing tube) is required for testing.

●After the soaking inspection is completed, the water stains should be wiped clean in time, or use a dust blower to blow dry. If the main water tank and the small water tank are blown dry by blowing dust loose, the wind pressure should not be too large and should be far away from the radiating fins to avoid damage or deformation of the radiating fins.

●Except the gas pressure is specified when doing the air tightness test, the compressed air of 160kPa (1.63 Kgf/cm2, 23.2 psi) shall be introduced, and the parts shall be immersed in water and left for 10s without bubbles. If there are bubbles, the air leaks and needs to be replaced.

●The heat dissipation fins are allowed to have a small amount of lodging deformation. If the lodging area is too large, it will affect the heat dissipation effect, and it is recommended to replace it. A small amount of deformation can be corrected with a small flat-blade screwdriver.

●It is forbidden to use high-pressure water gun or high-pressure air to directly flush or blow the heat sinks of the main water tank and the small water tank.

●Before further testing, check the appearance for signs of leakage. If there is a slight leakage, try to repair it, otherwise it should be replaced.

1.Main water tank

Check whether the Seat rubber is aging and cracked.

Check whether the fan and the mesh cover are firmly assembled, and the rotating fan blades should be free of stagnation. Check whether the buffer rubber is aged and cracked. Check whether the fan cable is damaged

The fan plug is positive in blue and negative in black. Find the battery with sufficient power, connect the wires according to the positive and negative poles, and check whether the fan draws air backward

Compressed air with lower air pressure can be blown from the back to the water tank from a long distance to clean up foreign objects on the surface. Or use a low-pressure water gun to spray the radiating fins from a long distance to clean up foreign objects on the surface.

2.Attention to the water tank filling port

Caution:

●Special ventilation tooling (gas pressure reducing valve, air gun, sealing tube) is required for testing.

●After the soaking inspection is completed, the water stains should be wiped clean in time.



2.1 Overall tightness inspection

Seal the small pipe and ventilate to the large pipe for air tightness inspection. The gas with a pressure of 160kPa (1.63Kgf/cm2, 23.2 psi) is introduced to ensure that there is no air leakage at the nozzle, and the water inlet is put into the water for 10s to observe whether there are bubbles.

2.2 Pressure relief valve inspection

Introduce 100kPa (1.02Kgf/cm2, 14.5 psi) compressed air into the large pipe, put the water inlet into the water for 10s, and the small pipe should be free of bubbles. When the compressed air is raised to 110kPa (1.12Kgf/cm2, 16 psi), bubbles should appear.

3.Auxiliary water tank



First check whether the rubber cover is aging and cracked, if any, replace it. If the appearance is good, then check the air tightness.

Seal the two small water outlets and open the black plastic cover of the water tank for air tightness inspection.

Continue to seal the small water outlet, fill the auxiliary tank with water and turn the auxiliary tank upside down, and observe whether the rubber cover of the water tank seeps. If there is seepage, it is unqualified. Pour out the water after checking the tightness, remove the plug and let the auxiliary water tank dry naturally or blow it dry with a dust blower.

4.Water and oil shared sensor

For details on sensor detection and disassembly methods, please refer to the section "Electronic Injection System" chapter EFI Parts Fault Diagnosis and Elimination.

5.Thermostat

5.1 Inspection

Check the appearance for damage and leakage.

Simple test method (test on the whole motorcycle):



After the cold car is started, immediately open the water filler cap. If there is no fluctuation in the liquid level, the thermostat is normal, otherwise it is abnormal. Check that when the water temperature is lower than 70°C (158 F), the thermostat should be in a closed state. When the temperature is higher than the initial opening temperature, the expansion valve of the expansion cylinder will gradually open, and the circulating coolant in the radiator will begin to flow.

After the temperature rises, check the inlet pipe of the small water tank. You should be able to clearly feel the signs of water flow or the temperature of the pipe wall, otherwise the pump or waterway will be blocked.

When the temperature reaches 80°C (176 F), the heating rate slows down, and the thermostat works normally. If the water temperature has been rising rapidly, when the internal pressure reaches a certain level, the sudden overflow of boiling water indicates that the valve is stuck.

If it is stuck or closed loosely, it can be removed and cleaned or repaired first, otherwise it should be replaced.

5.2 Failure phenomenon



When the water temperature gauge indicates high, the engine temperature is overheated, but the coolant temperature in the water tank is not high, it is not hot when touching the radiator by hand, and the small water tank fan rotates normally. It indicates that the big circulation is blocked or blocked, which can be preliminarily judged as abnormal thermostat.

There are generally two cases of abnormal thermostat:

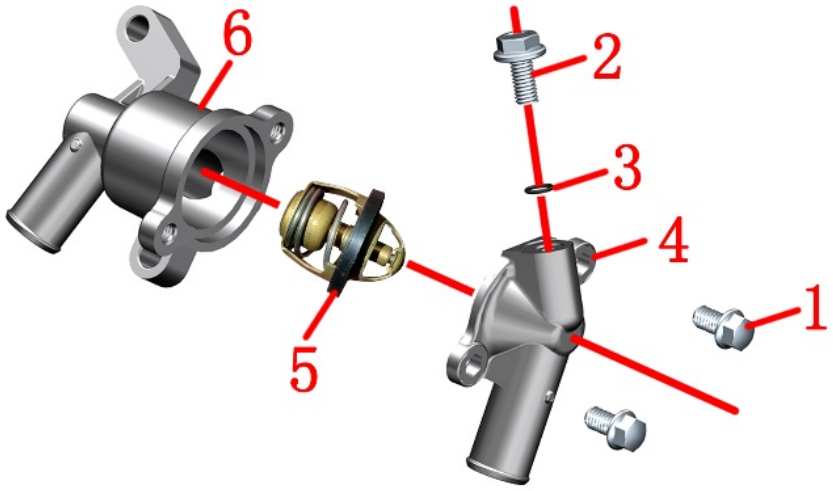
a. The main valve is closed for a long time, and the coolant is circulated in a small circulation route regardless of the water temperature, which causes the engine to overheat.

b. The main valve is in the open state for a long time, and the phenomenon is that the water temperature rises slowly when starting, especially in winter, the slow rise of the coolant temperature makes the engine not work at the normal temperature, and the engine temperature is too low.

5.3 Disassembly

Checking method of thermostat assembly:

Seal the two ports, pass in compressed air of 181 kPa (1.85 Kgf/cm2, 26.3 psi) from the other port, put it in the water and let it stand to see if there are bubbles, if there is leakage.



1-M6×10 bolt*2 2-M6×12 bolt 3-ϕ5.6×ϕ1O ring 4-thermostat upper shell 5-thermostat core 6-thermostat lower shell

5.4 Thermostat core inspection

Check the opening temperature, full opening temperature and lift of the main valve in the thermostatic heating equipment with adjustable temperature. If one of them does not meet the specified value, it should be replaced. Or use a thermometer, water, heater, and container to test.

The initial opening temperature of the thermostat is 80～84℃ (176～183 F), and the core moving 0.1mm (0.004 in) can be regarded as the initial opening. The full opening temperature is 95°C (203 F), and the core movement is greater than 3.5mm (0.14 in).

The simple test method is to put the core body into a high temperature resistant container, pour it into boiling water and soak for a period of time, take out the core body with pliers, and observe whether the valve can be fully opened. Until all closed.

The joint surface should be cleaned before rematching, and no O-ring should be installed.



E350/E250

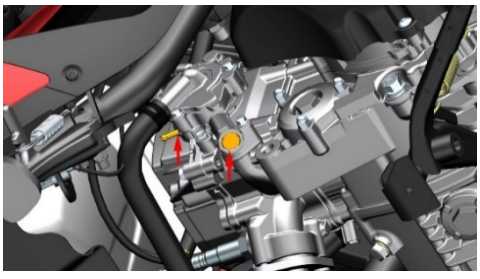
6.Water pipe

Check whether there are cracks, bulges and other defects on the surface of each water pipe. Block one end of the water pipe, ventilate the other end and put the water pipe into the nozzle to check if there is any air bubbles, if any, replace it.

7.Check the water pump cover assembly

Check the two points indicated by the arrows for leakage. The bolts are for cooling liquid bolts. If there is leakage, remove the bolts and replace the O-ring. If there is leakage at the leaking pipe of the right crankcase cover, you can try to remove the leaking pipe (because the sealant is applied before press-fitting, it is difficult to pull out), clean it up, reapply the sealant and reinstall it; or directly replace the right crankshaft Box cover assembly.

A small amount of coolant leaking from the leaking pipe is normal. If the engine is running continuously, it is abnormal. The water pump cover needs to be disassembled to check whether the seal has failed.



E125

8.Braking system

Know Before Service

1.The content of this chapter requires certain maintenance experience. It is recommended to check or repair with a qualified maintenance organization.
2.Frequent inhalation of the dust generated by the brake pads, regardless of the composition, may have a certain impact on health. Avoid breathing dust particles.
3.Do not use a blow gun or brush to clean the brake assembly, but a vacuum cleaner.
4.Avoid dripping the brake fluid on the paint surface of the cover or the surface of the parts. If it is accidentally splashed, it needs to be rinsed with water immediately.
5.When disassembling the front disc brake main pump and the rear disc brake main pump, make sure that the brake fluid in the oil cup is in a horizontal position. Do not turn it upside down to prevent air from entering, which will affect the braking effect. In severe cases, it may cause the brake to fail and cause personal injury.
6.The steps for replacing brake fluid and exhausting air are the same. For detailed steps, see the section on brake fluid in the "Maintenance" chapter.
7.When the brake pads or brake discs have oil stains, the braking force will be reduced. The contaminated brake pads should be replaced, and the oil stains on the brake discs can be removed with a good-quality degreasing cleaner.
8.After removing the oil cup cover of the main pump, prevent dust and water from entering.
9.If you need to add brake fluid after maintaining the brake system, you must use the newly opened DOT4 brake fluid. Do not mix with other brake fluids.
10.Switch to unplug the ABS hydraulic control unit when the motorcycle is powered on. Excessive voltage may damage the hydraulic control unit. The entire motorcycle must be powered off before maintenance.
11.The hydraulic control unit is a precision part, and it is forbidden to disassemble it by non-professionals.

DANGER

●If you accidentally swallow the brake fluid, you should contact the poison control center or hospital immediately; if you accidentally get the brake fluid into your eyes, rinse with water and seek medical attention immediately.
●Brake fluid must be kept away from children and pets.
●The motorcycle must be parked on a flat and stable ground or a lifting platform.

WARNING

●Wear protective gloves/protective clothing/protective goggles/protective masks to maintain the brake system.
●It is strictly forbidden to directly flush the main pump with high-pressure water.

Trouble shooting

Soft feeling from brake lever

a.The brake system oil circuit enters the air
b.Brake fluid leakage
c.The brake pads or brake discs have oil stains
d.Wear of brake caliper or disc drive main pump piston seal ring
e.Brake pads or brake discs are worn
f.The disc brake caliper is oily
g.The main pump of the disc brake is oily
h.The disc brake caliper does not slide flexibly
i.Insufficient brake fluid
j.The brake oil circuit is not unblocked
k.Brake disc is twisted and deformed
l.Wear and stickiness of disc brake caliper piston
m.The piston of the disc brake main pump is worn and sticky

Hard feeling from brake lever

a.The brake oil circuit is blocked
b.The piston of the disc brake caliper is worn and sticky
c.The piston of the disc brake main pump is worn and sticky
d.The disc brake calipers cannot slide normally
e.Wear of brake caliper or disc drive main pump piston seal

Disassemble the disc brake main pump and calipers

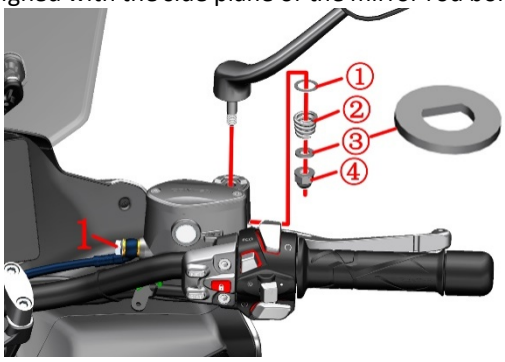
Caution:

●The protective measures and brake fluid hazards have been explained before, so I won't repeat them here.
●The two copper pads at the brake hoses of the disassembled calipers and the main pump must be replaced to avoid leakage. The surface of the disc brake oil pipe bolt and the copper pad can be reused if there is no scratch.
●Disassembling the main pump and calipers requires high hands-on ability, and it is recommended to be carried out by professional personnel or maintenance organizations. The replaced brake fluid should be recycled by a professional unit and properly disposed of.
●The operator is responsible for the consequences caused by manual disassembly or improper assembly, and is not within the scope of the three guarantees.
●Operate in a dry, dust-less or dust-free environment.

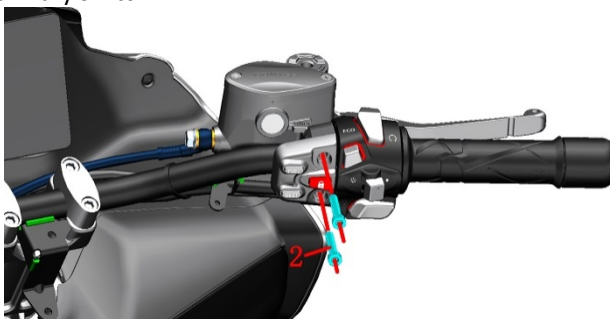
E350/E125/E250 Disassemble the front disc brake main pump

a.Remove the cover according to the steps in the removal direction in the "Front Fork Assembly" of this manual.
b.Use a 12# sleeve to loosen the disc brake oil pipe bolt (1), pay attention to loosen it and then tighten it slightly

without leakage, otherwise it will be more difficult to loosen this bolt later. Grasp the mirror rod of the right rear view mirror, use a 13# sleeve to remove the nut④, remove the small washer③, spring②, and large washer①, and take off the rear view mirror. When reassembling, make sure that the small washer③ is aligned with the side plane of the mirror rod bolt.



c. After grasping the front brake main pump, remove the 2 bolts (2) with a 5# inner hexagon, and remove the right auxiliary switch.



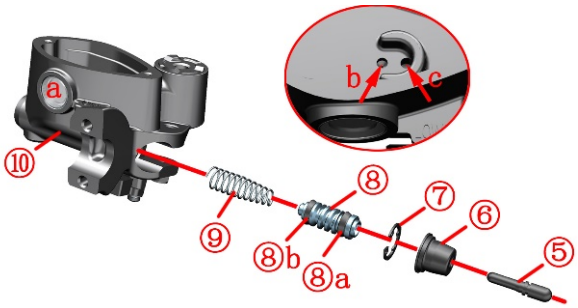
d. Tilt the front brake main pump so that the bolt(1) faces upward, wear waterproof gloves and use a 12# sleeve to remove the bolt(1), remove the copper pad(3), remove the FMC-HU oil pipe, and remove the brake fluid in the main pump. Pour out. Bolt(1) Standard torque: 32N.m (3.3kgf.m, 24 lbf.ft).



e. Refer to the steps of adding brake fluid to remove the upper cover; refer to the steps of removing the brake switch and brake handle to remove.

f. Disassemble the front disc brake main pump

“a”. is the oil window assembly that cannot be disassembled unless necessary; “b” is the ϕ0.5 oil hole; “c” is the ϕ3 pressure relief oil hole.



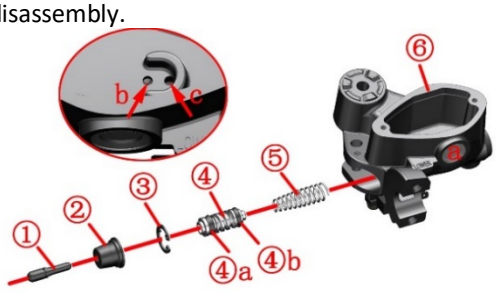
⑤ Piston push rod ⑥ dust cap ⑦ retainer ring ⑧ piston assembly (⑧ a outer seal ring ⑧ b inner seal ring) ⑨ spring ⑩ main pump housing

Diesel or kerosene can be used to clean the brake fluid to facilitate the next step of decomposition. If the oil hole is blocked, use a dust blower or a small needle tool to clear it. After decomposition, use a soft lint-free brush to clean up all parts. It is not recommended to use a dust blower for drying. The air compressor with poor drying or filtering effect may blow dust, moisture or other debris into the main pump housing that has been cleaned through the blower; high vacuum can be used Vacuum cleaner. Before assembling the piston assembly and spring, apply a small amount of DOT4 brake fluid, and do not apply other lubricating materials such as lubricating oil, grease or anti-rust oil.

g. Apply an appropriate amount of high-vacuum silicone grease to the outer end of the handle bolt and piston assembly according to the previous requirements for lubricating the movable part of the handle. Refer to the disassembly steps to reinstall, and follow the previous steps to add the newly opened brake fluid and perform the exhaust operation. Note that the copper pad (3) needs to be replaced with a new one to prevent leakage. After the assembly is completed, it is necessary to confirm that the brake has been restored before driving the motorcycle.

E350/E125/E250 Disassemble the rear disc brake main pump

The rear disc brake main pump and the front disc brake main pump are mirrored and symmetrical. Please refer to the steps for disassembling the front disc brake main pump for disassembly.



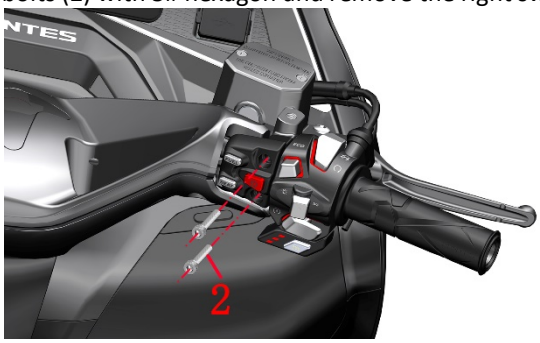
E368 Disassembly of Front Disc Brake Master Cylinder

a.Remove it according to the steps for removing the steering handle in this manual "Fork Assembly".

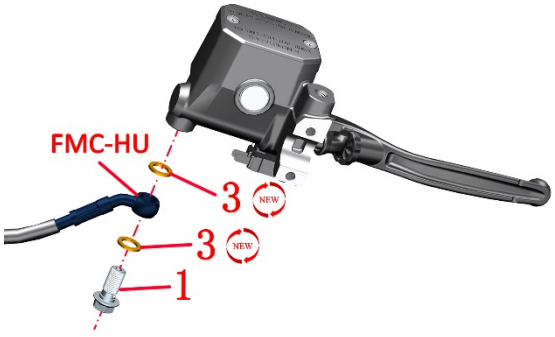
b.First use the 12# sleeve to loosen the disc brake oil pipe bolt (1), pay attention to loosen it and then tighten it slightly without leakage, otherwise it will be more difficult to loosen the bolt in the future. the rubber plug of (1) rearview mirror with a flathead screwdriver, grasp the mirror rod of the right rearview mirror, and then remove the bolt (2) with 6# hexagon corner, and then remove the rearview mirror, pay attention to the ϕ8 elastic pad (3).



c.After grasping the front brake main pump, remove the 2 bolts (2) with 5# hexagon and remove the right switch.



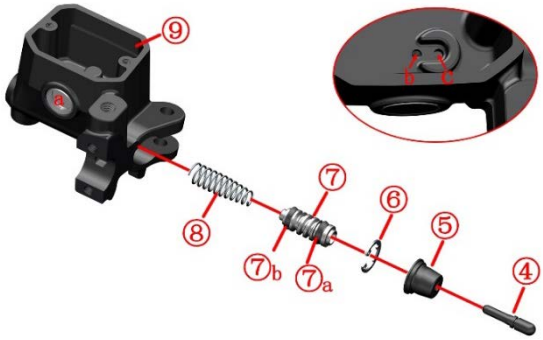
d.Tilt the front brake main cylinder so that the bolt (1) is facing up, remove the bolt (1) with a 12# sleeve after wearing waterproof gloves, remove the copper pad (3) and remove the FMC-HU oil pipe, and pour out the brake fluid in the main cylinder. Bolt (1) Standard torque: 32N.m (3.3 kgf.m, 24 lbf.ft).



e.Remove the upper cover according to the steps of adding brake fluid, and remove the brake switch and brake handle according to the steps of removing the brake switch and brake handle.

f.Disassemble the front disc brake main pump.

The oil window assembly (a) should not be disassembled unless absolutely necessary; b denotes a ϕ0.5 oil hole; c denotes a ϕ3 pressure relief oil hole.



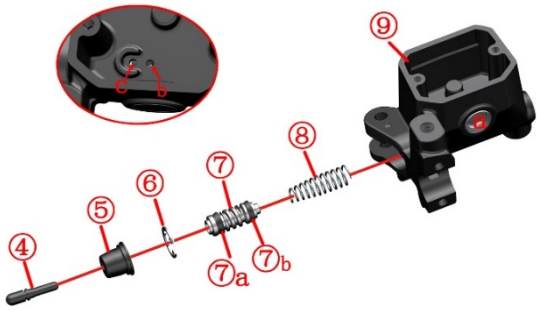
④Piston pushrods ⑤Dust cap ⑥Retaining rings ⑦Piston assembly（⑦a Outer seal ⑦b Inner seals） ⑧spring ⑨Main pump housing

The brake fluid can be cleaned with diesel or kerosene for further decomposition. If the oil hole is blocked, you can use a dust blow gun or a small needle-like tool to dredge it. After disassembly, use a soft-bristled brush that does not shed to clean all parts. It is not recommended to use a blow gun to dry, as an air compressor with poor drying or poor filtration effect may blow dust, water vapor or other debris into the main pump housing that has been cleaned through the blow gun; A vacuum cleaner with a high vacuum level can be used. Piston assemblies and springs can be fitted with a small amount of DOT4 brake fluid and should not be coated with other lubricating materials such as oil, grease or anti-rust oil.

g.Refer to the requirements of the front lubrication handle moving parts, apply an appropriate amount of high-vacuum silicone grease to the outer end of the handle bolt and piston assembly. Replace it according to the removal procedure, and follow the previous steps to add the newly opened brake fluid and perform the exhaust operation. Note that the copper pad (3) needs to be replaced with new parts to prevent leakage. After assembly, it is necessary to confirm that the brakes have been restored before driving the vehicle.

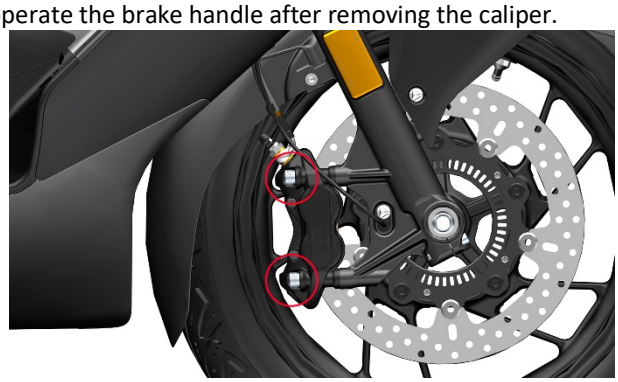
E368 Disassemble the rear disc brake main pump

The rear disc brake main pump and the front disc brake main pump are mirror symmetrical, and can be disassembled according to the steps of disassembling the front disc brake main pump.

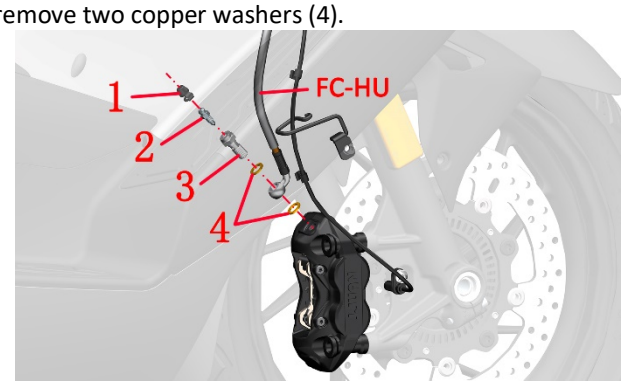


Disassemble the front disc brake caliper

a. Use 14 # to loosen the oil pipe bolt without leakage. Remove 2 M10 pieces with 8 # hexagonal socket × one point five × 60 bolts (red circle). The standard torque of the bolts is 45~50N. m (4.6~5.1 kgf. m, 33~37 lbf. ft). Do not operate the brake handle after removing the caliper.

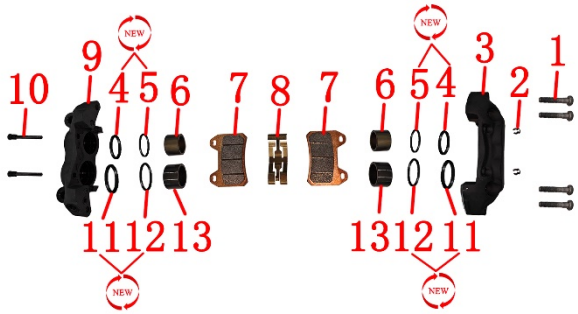


b. Place the oil drain pan under the front disc brake caliper. First remove the screw rubber cap (1), wear waterproof gloves, and then remove the bolt (2) with 8 # box wrench, remove the bolt (3) with 14 # box wrench, and remove two copper washers (4).



c. Remove the brake pads according to the steps of removing the brake pads

d. Front disc brake caliper disassembly



1- Bolt 2- Circlip 3- Inner side caliper housing 4-ϕ30 oil seal 5-ϕ30 dust seal 6-ϕ30 piston 7- Disc brake pad 8- brake spring 9- Out side caliper housing 10-Pin 11-ϕ34 oil seal 12-ϕ34 dust seal 13-ϕ34 piston

A dust blow gun can be used to blow in compressed air from the oil pipe bolts to blow out the piston. Pay attention to placing towels or other soft materials on the piston to prevent damage caused by collision between the piston and the caliper mounting plate; and the dust blow gun should be kept away from the caliper body. If the distance is too close, the piston may suddenly fly out and cause damage. Check the piston and caliper cylinder for scratches, damage, pits, etc. Check whether the pin is deformed.

Caution:

●Apply silicone grease to the surfaces of the two pins indicated by the arrows.

●The oil seal and dust seal should be replaced with new ones after disassembly. DOT4 brake fluid should be applied to the oil seal and piston, and silicon grease should be applied to the outer ring of the dust seal.

●Apply thread fastening glue to the thread of the caliper pin, torque: 22N.m (2.2kgf.m, 16 lbf.ft).

●The torque of the air release nozzle: 7～9N.m (0.7～0.9kgf.m, 5～7 lbf.ft).

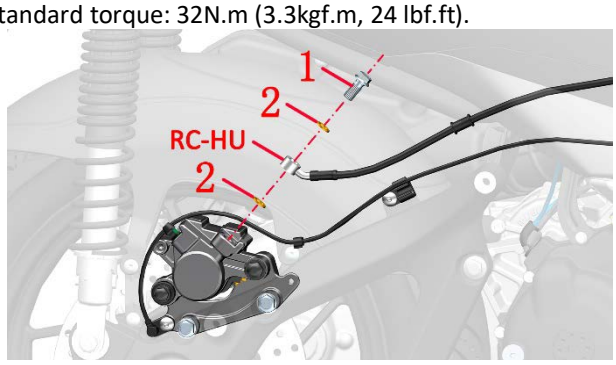
●The open end of the piston should face the caliper mounting plate, and do not install it backwards.

●If there is slight rust on the surface of the piston, it can be polished off with 2000 mesh fine sandpaper.

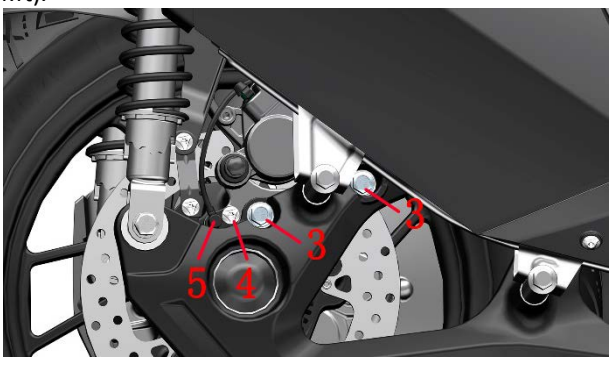
e. Refer to the disassembly procedure to restore all parts and add new DOT4 brake fluid according to the procedure of replacing the front disc brake brake fluid. Only after confirming that the brake is restored can the motorcycle be driven.

Disassemble the rear disc brake caliper

a. Place an oil pan at the bottom of the caliper, wear waterproof gloves and loosen the bolt(1) with a 12# sleeve, remove the copper pad(2), and remove the RC-HU oil pipe. Refer to the steps for adding brake fluid to the main pump of the rear disc brake. Remove the upper cover of the main pump to accelerate the discharge of the brake fluid. Bolt(1) Standard torque: 32N.m (3.3kgf.m, 24 lbf.ft).



b. Remove the bolt (3) with a 14# sleeve, remove the bolt (4) with a torx wrench, and take out the wheel speed sensor (5). Standard torque of bolt (3): 24 N.m (2.4 kgf.m, 18 lbf.ft).



c. Refer to the procedure for replacing the brake pads to remove the brake pads first.

d. Disassemble the rear disc brake caliper

Refer to the previous steps to disassemble the front disc brake caliper piston to remove the rear disc brake caliper piston. Check the piston and caliper cylinder for scratches, damage, pits, etc. Check whether the pin is deformed. The points that should be paid attention to during cleaning and assembly are detailed in the previous description, and will not be repeated here.

Caution:

●Apply silicone grease to the surface of the pin and bush indicated by the arrow.

●The oil seal and dust seal should be replaced with new ones after disassembly. DOT4 brake fluid should be applied to the oil seal and piston, and silicon grease should be applied to the outer ring of the dust seal.

●Apply thread fastening glue to the thread of the caliper pin, torque: 27N.m (2.8kgf.m, 20 lbf.ft).

●The torque of the air release nozzle: 7～9N.m (0.7～0.9kgf.m, 5～7 lbf.ft).

●The open end of the piston should face the caliper mounting plate, and do not install it backwards.

●If there is slight rust on the surface of the piston, it can be polished off with 2000 mesh fine sandpaper.Brake hose and wheel speed sensor

Check the gap between the wheel speed sensor and the induction ring gear

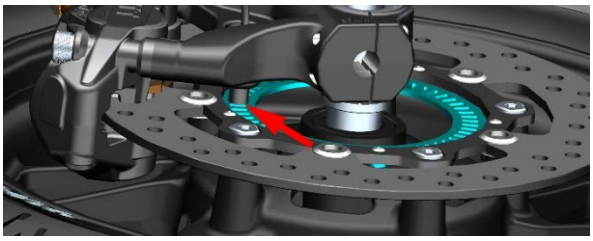
Caution:

●The motorcycle needs to be parked on a stable lifting platform or on a level and level ground.

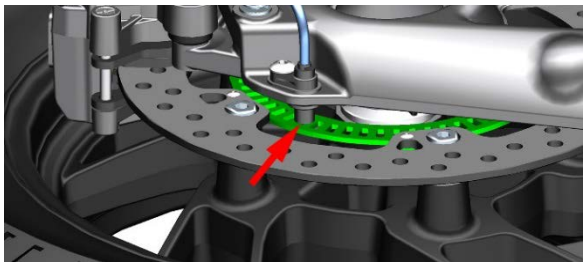
Put down the main bracket to park the motorcycle firmly and let the rear wheels hang in the air.

Use a feeler gauge to check whether the gap between the wheel speed sensor and the ABS induction ring gear is 0.4-1.2mm (0.02-0.05in).

If the gap is not within the specified range, check whether the wheel speed sensor is damaged and whether the ABS induction ring gear is loose. The front wheel needs to check whether the position of the sensor installed on the front disc brake caliper mounting plate is deformed, and the rear wheel is to check whether the mounting position on the rear rocker arm is deformed and whether the rear wheel nut is loose.

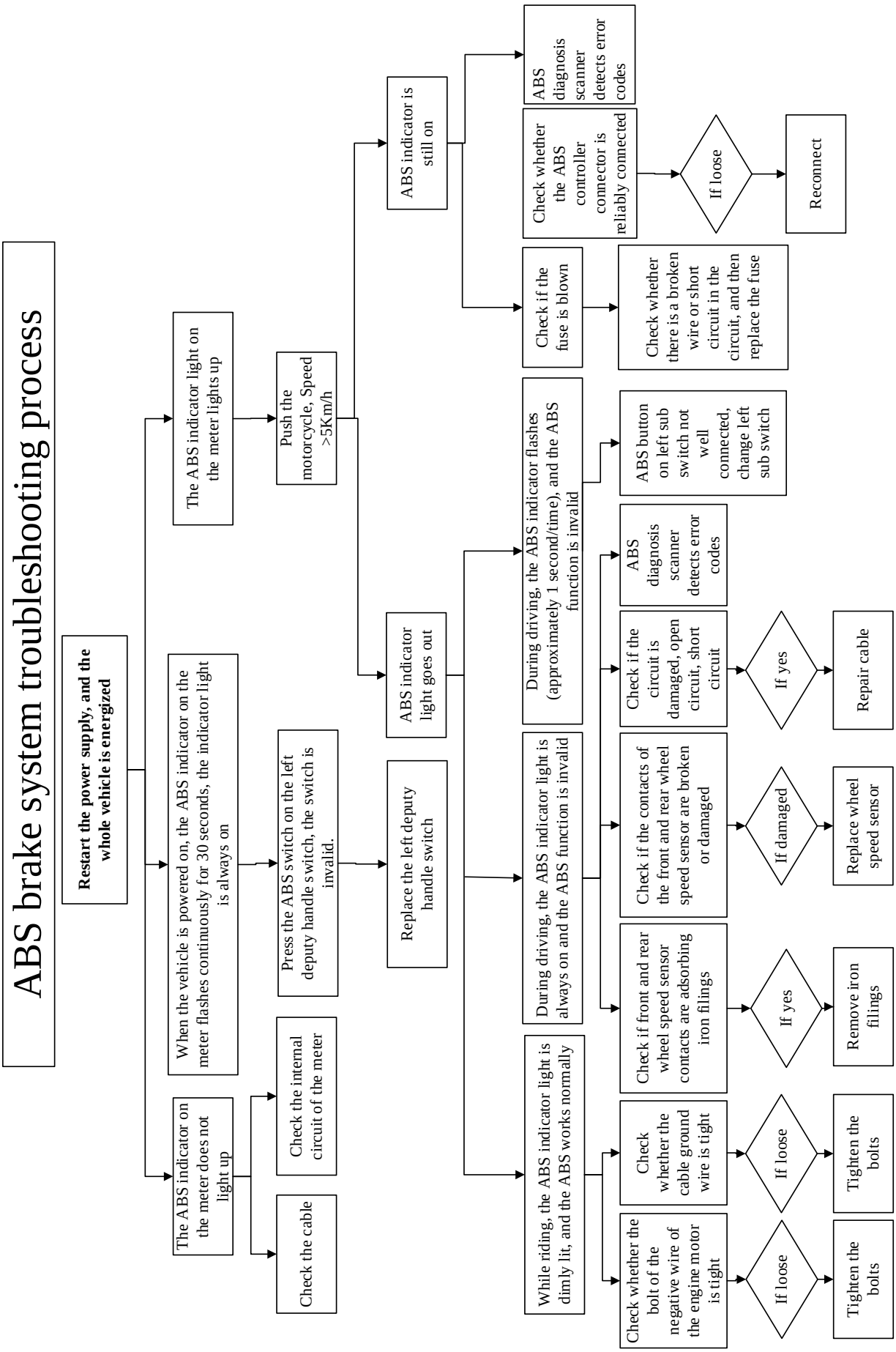


Front wheel

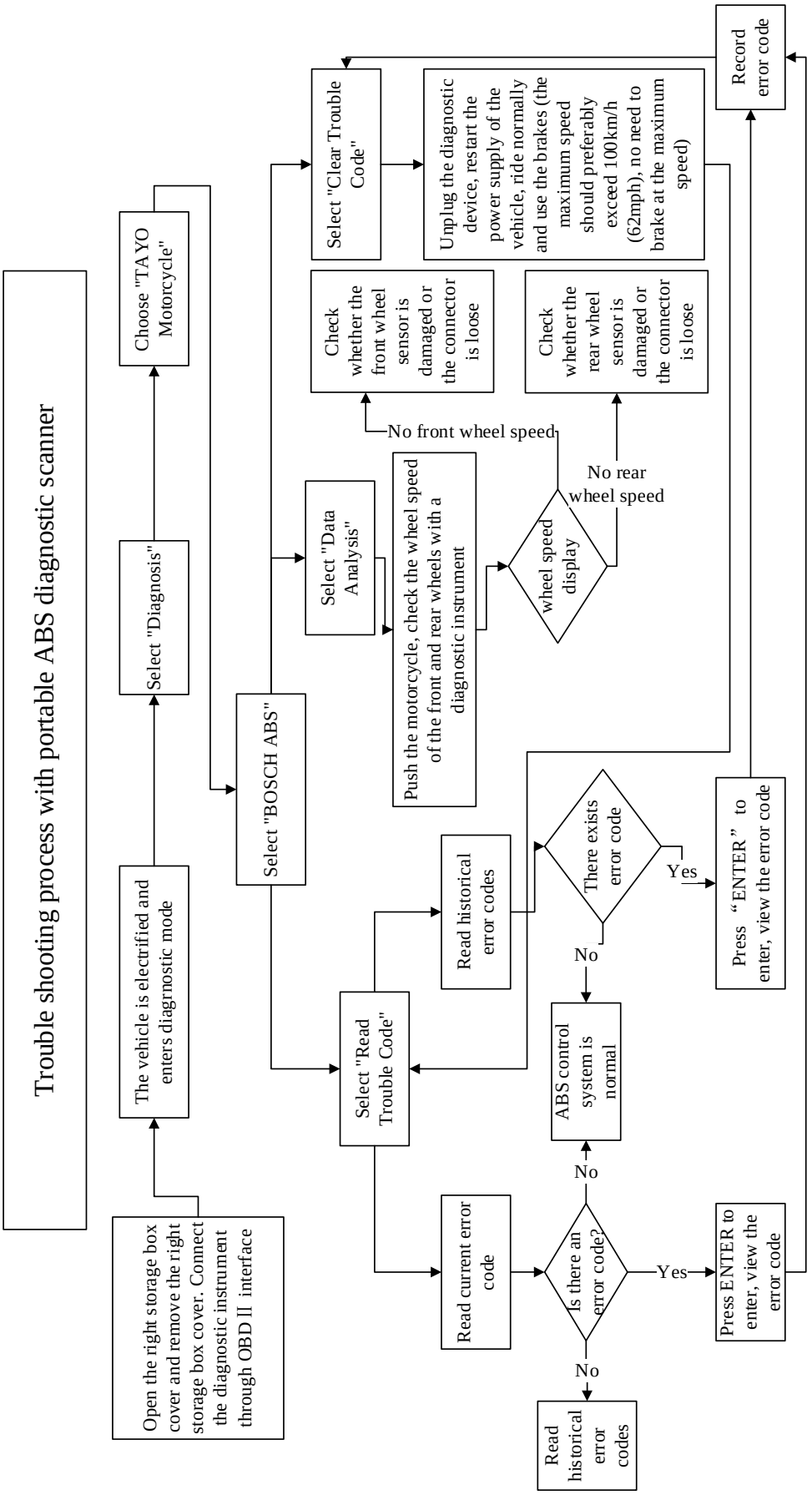


Rear wheel

ABS troubleshooting



Troubleshooting process with portable ABS diagnostic scanner



Error Code	Explanation
5043H	Front wheel speed sensor disconnected/ground short circuit/power supply short circuit
5042H	Front wheel speed sensor failure---unstable signal
5045H	Rear wheel speed sensor disconnected/ground short circuit/power supply short circuit
5044H	The rear wheel speed sensor is faulty---the signal is unstable
5025H	There is a deviation in front and rear wheel speeds
5052H	Power supply failure (low voltage)
5053H	Power supply failure
5223	EEPROM is out of range

Error Code	Explanation
5017H	Front wheel inlet valve (EV valve) failure
5018H	Front wheel drain valve (AV valve) failure
5013H	Rear wheel inlet valve (EV valve) failure
5014H	Rear wheel drain valve (AV valve) failure
5035H	Motor failure
5019H	Valve relay failure (relay that guarantees fail-safety)
5055H	ECU failure
5122H	EEPROM read failure

9.Battery/charging system

Know Before Service

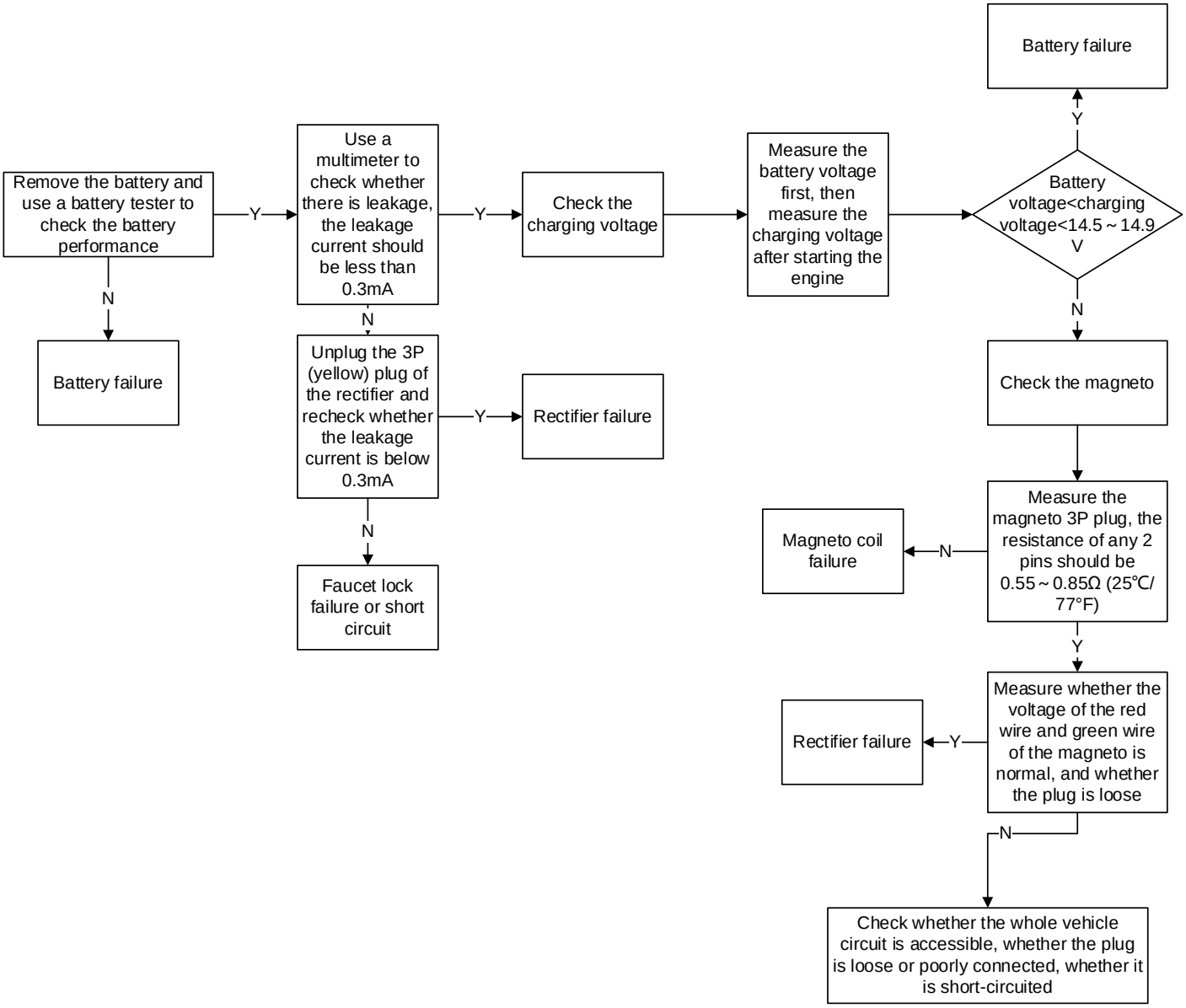
1. It is necessary to properly dispose of discarded batteries to avoid pollution to the environment. It is recommended that waste batteries be returned to a professional recycling agency for recycling.
2. It is forbidden to use chargers that have not passed the inspection to charge the battery.
3. The EFI system needs to be reset when the battery is reinstalled, the power is suddenly cut off during driving, the idling speed is abnormal, and the insurance is re-plugged. The specific method is as follows:
   a. Unlock the motorcycle and support the main bracket;
   b. Pinch the brake and start the motorcycle;
   c. Pull the engine speed above 3000 rpm;
   d. After releasing the throttle, turn off the flameout switch and lock the car;
   e. After waiting for 5 seconds, unlock the motorcycle again to complete the reset of the EFI system.
4. The motorcycle should be powered off before disassembling the battery.
5. Before troubleshooting the charging system, check whether the battery is in normal use and maintenance. Check with the owner whether you often use high-power electrical appliances, or do not drive a motorcycle for a long time, or turn on the lights for a long time without starting the motorcycle.



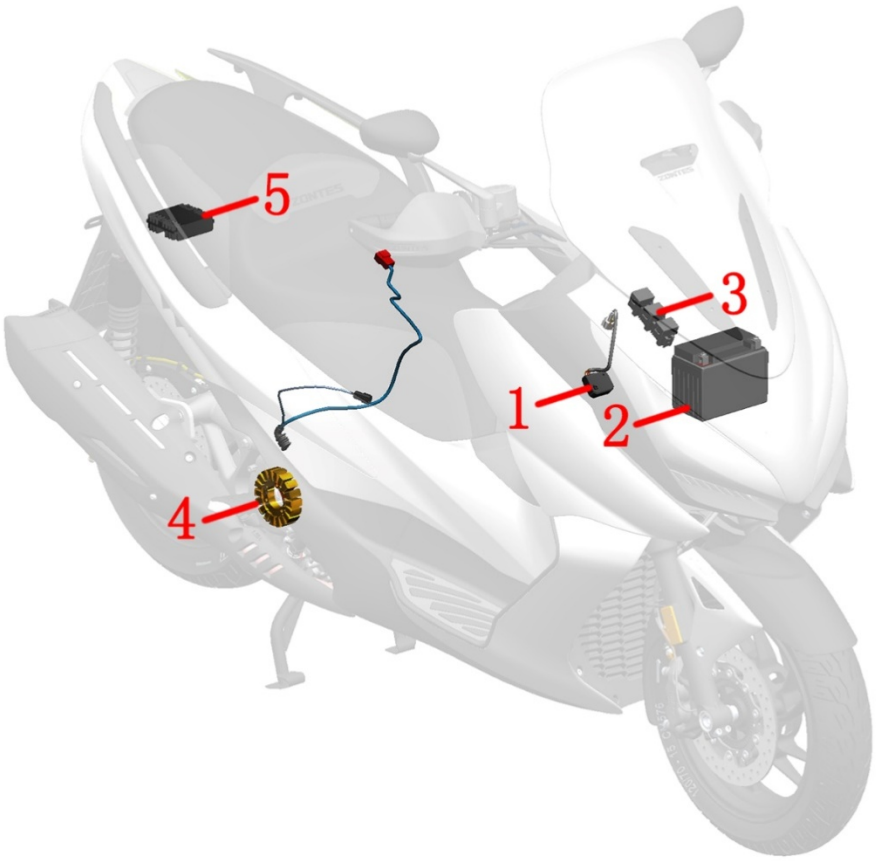
●When the engine cannot be started, do not press the electric start button frequently. Frequent operation can cause overheating or damage to the starter motor, flooding of the tank, and battery feed.
●When the motorcycle is energized, connecting or unplugging the plug may cause damage to some electrical components.
●Overcharge or undercharge, or long-term discharge may cause damage to the battery.

Troubleshooting

Battery damage or attenuation troubleshooting process

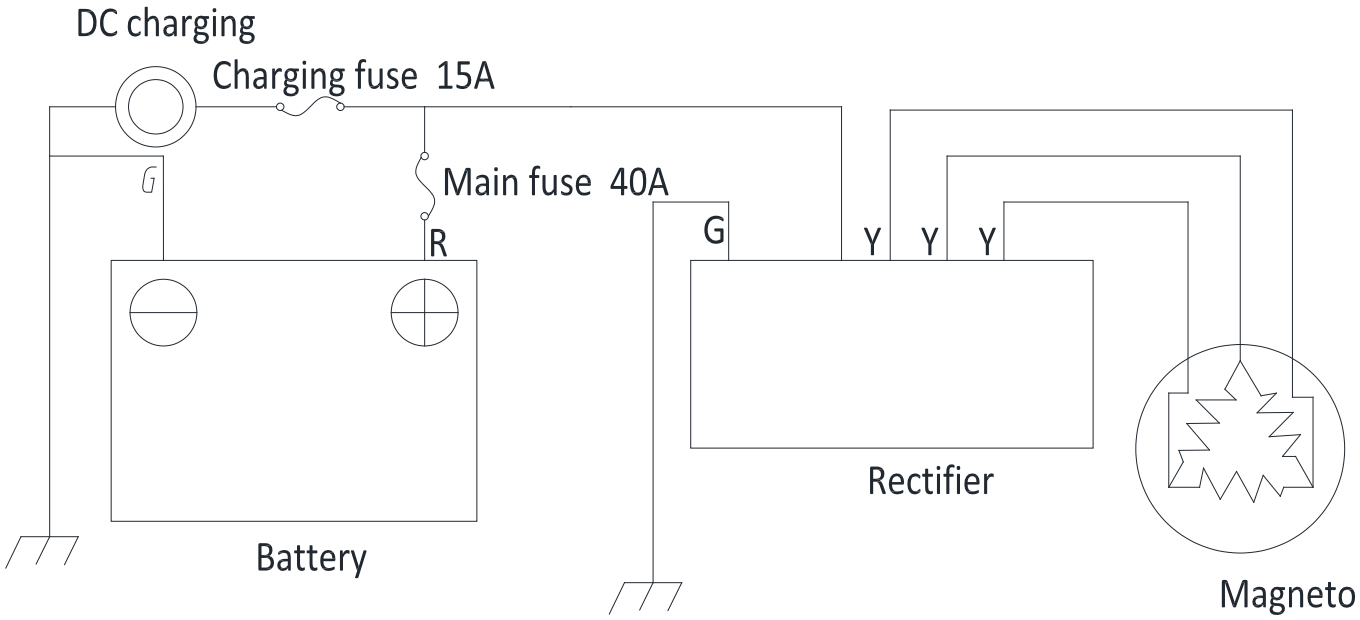


Charging system layout diagram



1-Charging port (PKE) 2-Main fuse (25A) 3-Battery 4-Magnetic motor 5-Rectifier

Electrical schematic diagram



Letter	G	R	Y
Chinese	绿	红	黄
English	Green	Red	Yellow

Battery disassembly

1.Disassembly

Caution:

●The whole motorcycle must be powered off before disassembling the battery.

●The negative pole must be removed first, and then the positive pole. The opposite is true when installing.

●The positive and negative electrode protective caps must be covered when reinstalling.

●After removing the battery, reset the meter time and reset the EFI system.

2.Check

Open theSeat , remove the battery cover and remove the protective caps of the positive and negative electrodes, and use a multimeter to measure the battery voltage. Note that the motorcycle should be turned off before measuring the voltage.



Voltage	Full voltage	13.1～13.3V
	Charging voltage required for unloaded car	≤12.8V
	Charging voltage required for loading	≤12V

Caution:

●The battery that has just been charged should be placed for about 30 minutes before measuring. The voltage of the battery that has just been charged will fluctuate.

3.Charging

If the battery cannot be started due to insufficient power, it can be charged with the charger provided with the car. Open the right storage box cover and remove the cover to see the DC charging port that comes with PKE. The battery can be charged after unplugging the PKE fuse. For specific steps, please refer to the section "Checking the battery voltage" in the chapter "Inspection of sound, light, and electrical devices" in the chapter "Maintenance", or the instructions delivered with the car.

Charging system check

1.Leakage test

a. Turn off the motorcycle and cut off the power supply, and remove the negative wire of the battery.

b. Adjust the multimeter to the current position. Connect the black test lead to the negative terminal of the battery and the red test lead to the removed negative wire. Pay attention to first adjust the current to the high gear, and then gradually reduce to the appropriate gear.

c. Measure whether the leakage current is below 0.3mA. If it exceeds the standard value, check whether the circuit has a short circuit.

2.Check the charging voltage

Caution:

●Before testing, make sure the battery is in good condition.

●Do not disconnects the battery or any electrical devices before the whole motorcycle is powered off.

a. First warm up the engine to normal operating temperature, and then turn off the engine.

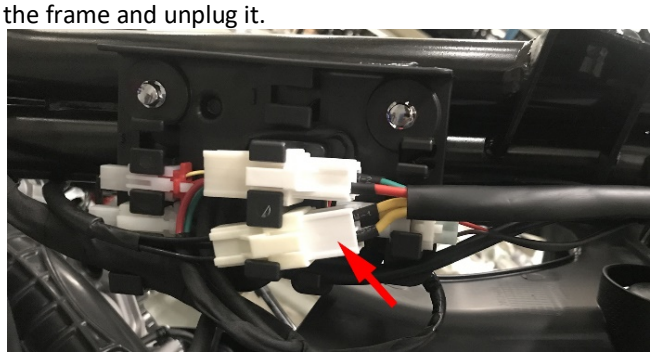
b. Connect the red test lead of the multimeter to the positive electrode of the battery and the black test lead to the negative electrode directly. Adjust the multimeter to the 20V DC voltage range. Turn on the high beam of the headlights and start the engine. Measure the charging voltage when the engine speed is 5000 rpm.

standard:

Battery voltage<Charging voltage<15.5V

3.Inspection of magneto stator charging coil

a. Remove the storage box, find the yellow 3P plug of the rectifier above the frame tube on the left side of the rear of the frame and unplug it.



b. Check whether the plug is loose or corroded.

c. Use the resistance profile of a multimeter to measure the resistance of any two wires of the black 3P plug. The standard is 0.55～0.85Ω (25℃/77°F).

d. After unplugging the yellow 3P plug, measure the red positive wire and green negative wire with a multimeter, and the battery voltage should be measured. Use the buzzer file of the multimeter to check whether the green negative wire and the ground wire (the ground wire can be found in any stud directly connected to the frame) are always conducting.

10.Front fork assembly

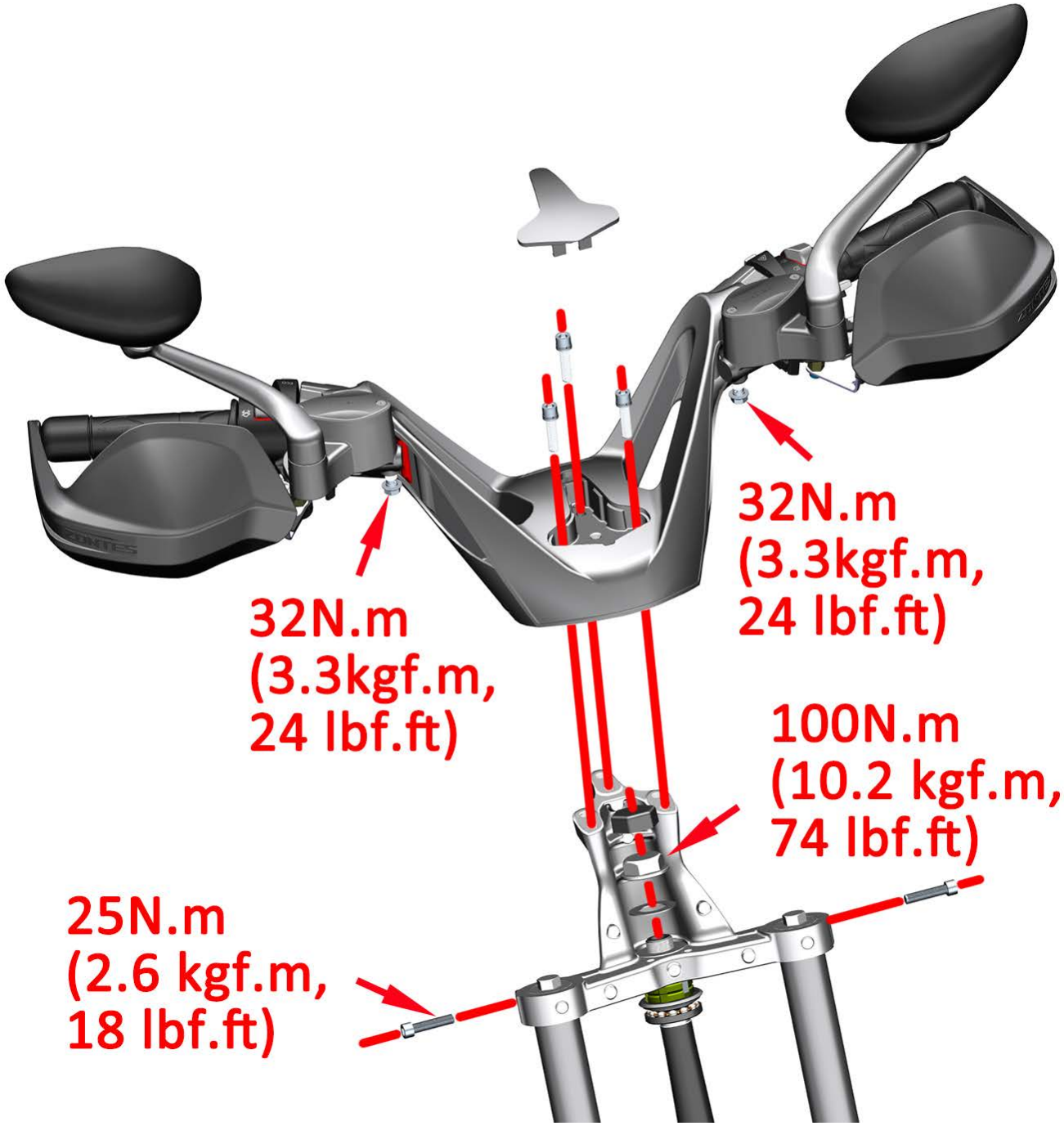
Know Before Service

1. Use good quality tools, or special tools and fixtures designed by our company. The use of inferior tools may cause damage to parts, peeling of plating, improper assembly, etc.
2. The O-rings, paper gaskets, copper gaskets, and component seals used for sealing must be replaced before assembly.
3. Fasteners with torque requirements need to use a torque wrench to check the torque; if the torque is not required, refer to the general torque value recommended by general fasteners.
4. Clean up before assembly; after assembly, check whether the assembly is correct and in place.
5. The motorcycle should be parked in a balanced manner and pay attention to safety during disassembly and assembly. Including but not limited to the use of electric tools, hand tools, pneumatic tools, hydraulic tools, handling; prevent contact with skin, eyes, burns, etc.
6. The replaced oils, liquids, batteries, etc. must be recycled and handed over to a qualified organization for disposal; it is forbidden to dump them at will to pollute the environment or water sources.
7. Swallowing or inhaling coolant, brake fluid, etc. will cause certain harm to the human body. Any exposed skin such as hands and face should be cleaned thoroughly after each addition. If swallowed by mistake, immediately contact the poison control center or hospital; if inhaled, immediately go to a ventilated environment. If it accidentally splashes into the eyes, immediately rinse the eyes with a large amount of running water and seek medical advice or consultation in time. Keep away from children and pets.
8. When replacing the front wheels, jacks or similar devices are needed to support the entire motorcycle.
9. Contaminated disc brake discs and disc brake pads will reduce the braking effect. Please replace with new disc brake discs and clean the contaminated brake discs.
10. When the front wheel is removed, please do not operate the brake handle.
11. After the front wheel is installed, please press the brake handle repeatedly until the brake restores the braking effect.

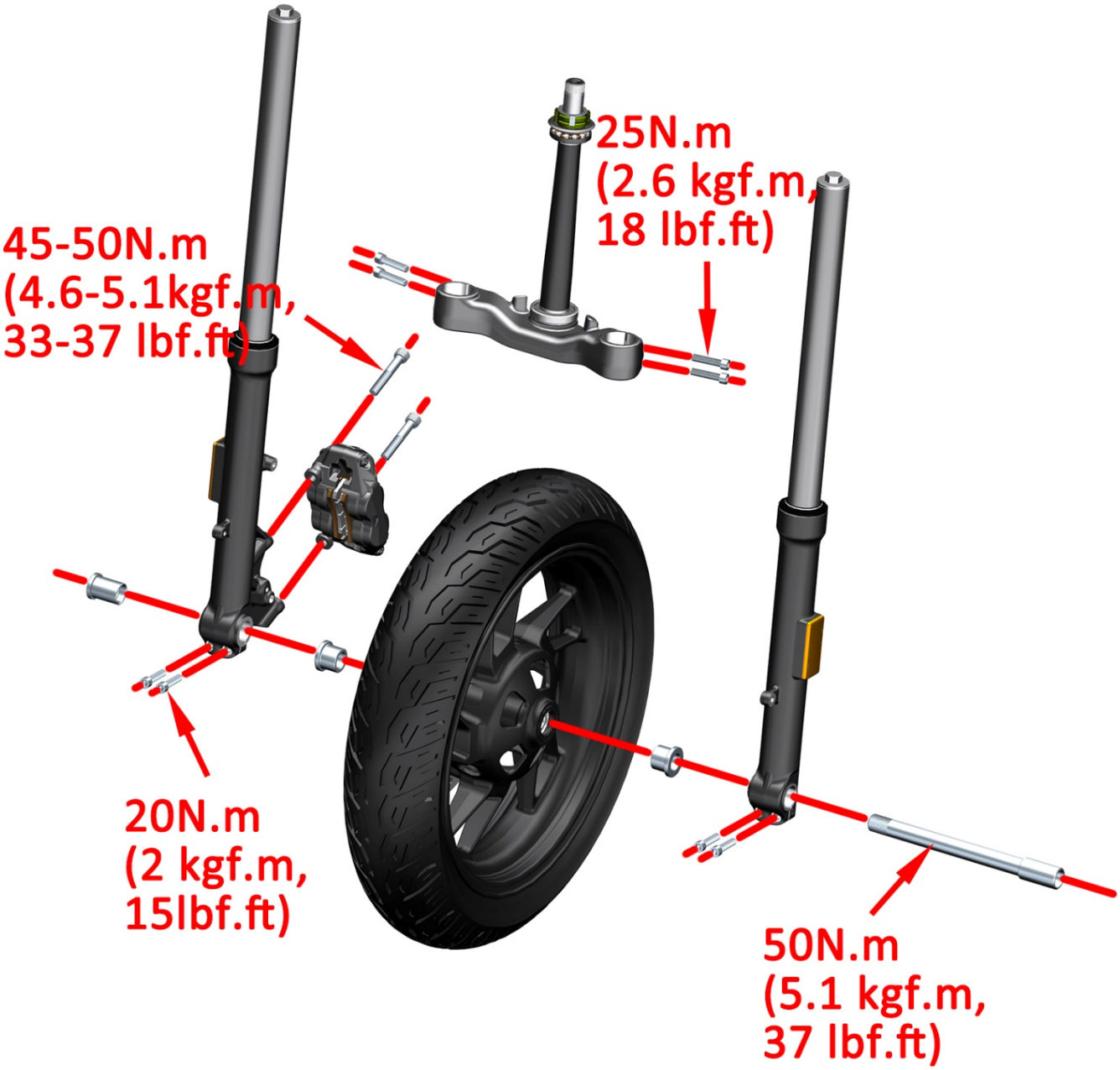
Only part of the basic requirements for matters needing attention, prevention of accidental injury, etc. can be listed; it is not possible to list all situations in detail. Be vigilant during disassembly and assembly to prevent accidents.

Exploded view of front fork components:

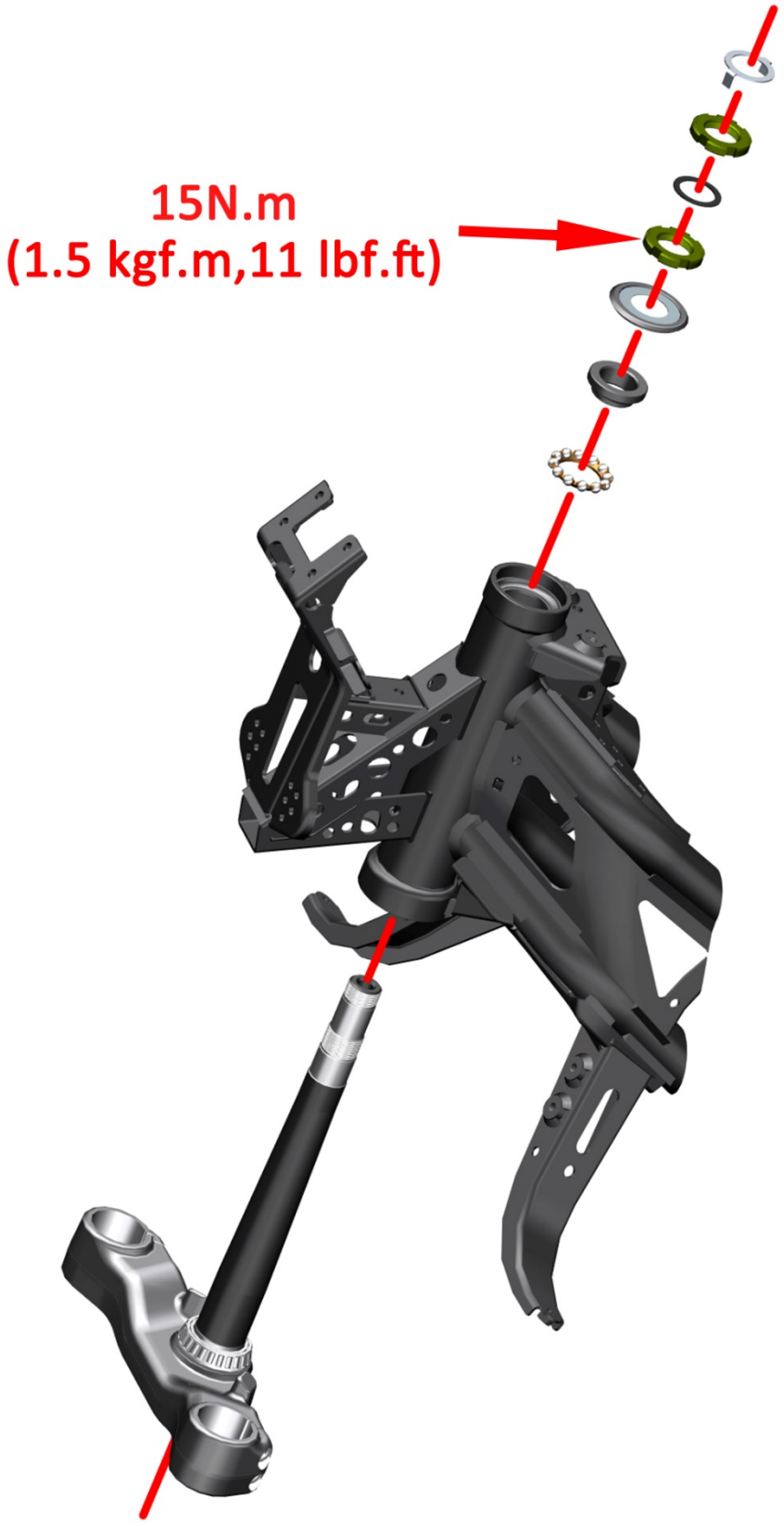
Directional exploded view



Front fork exploded view

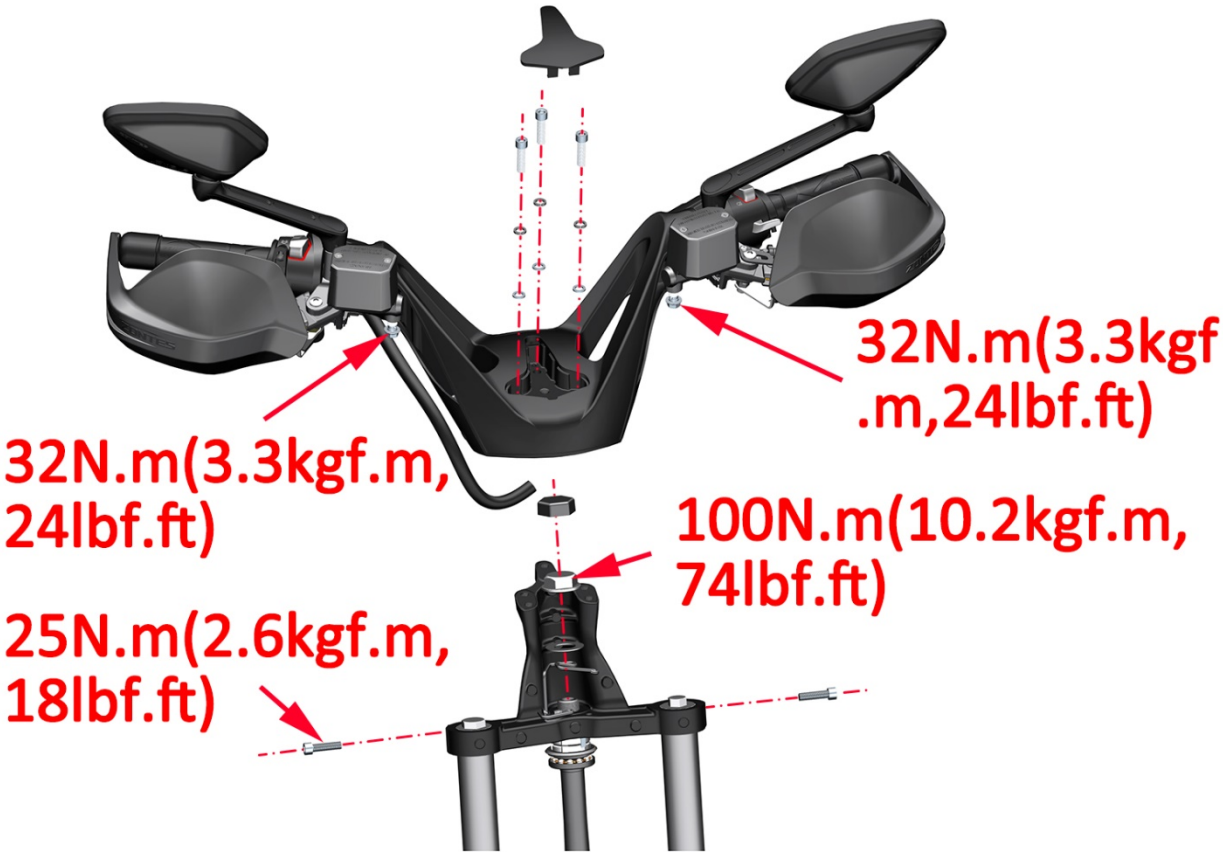


Exploded view of lower link board

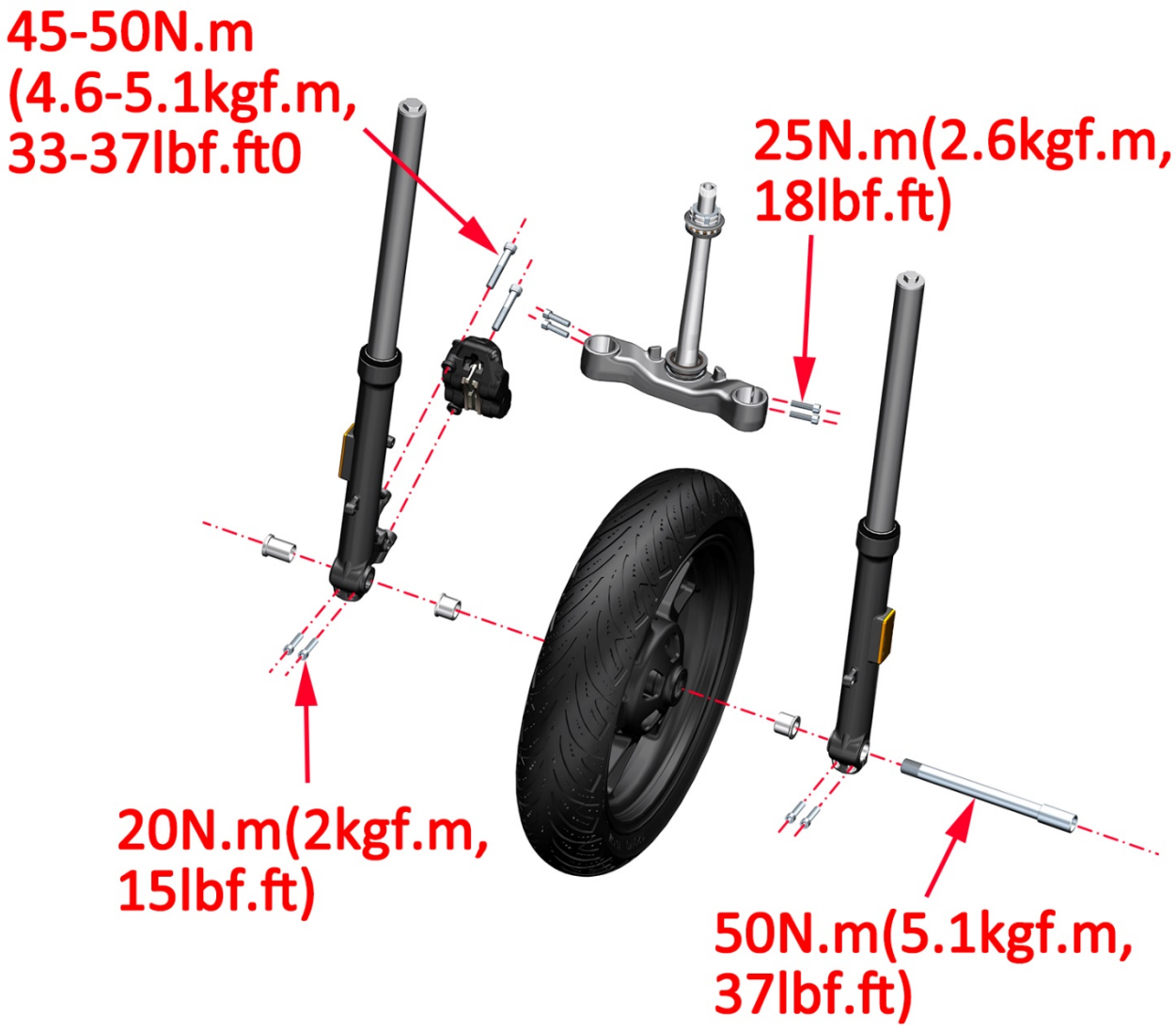


E368 Exploded view of front fork components:

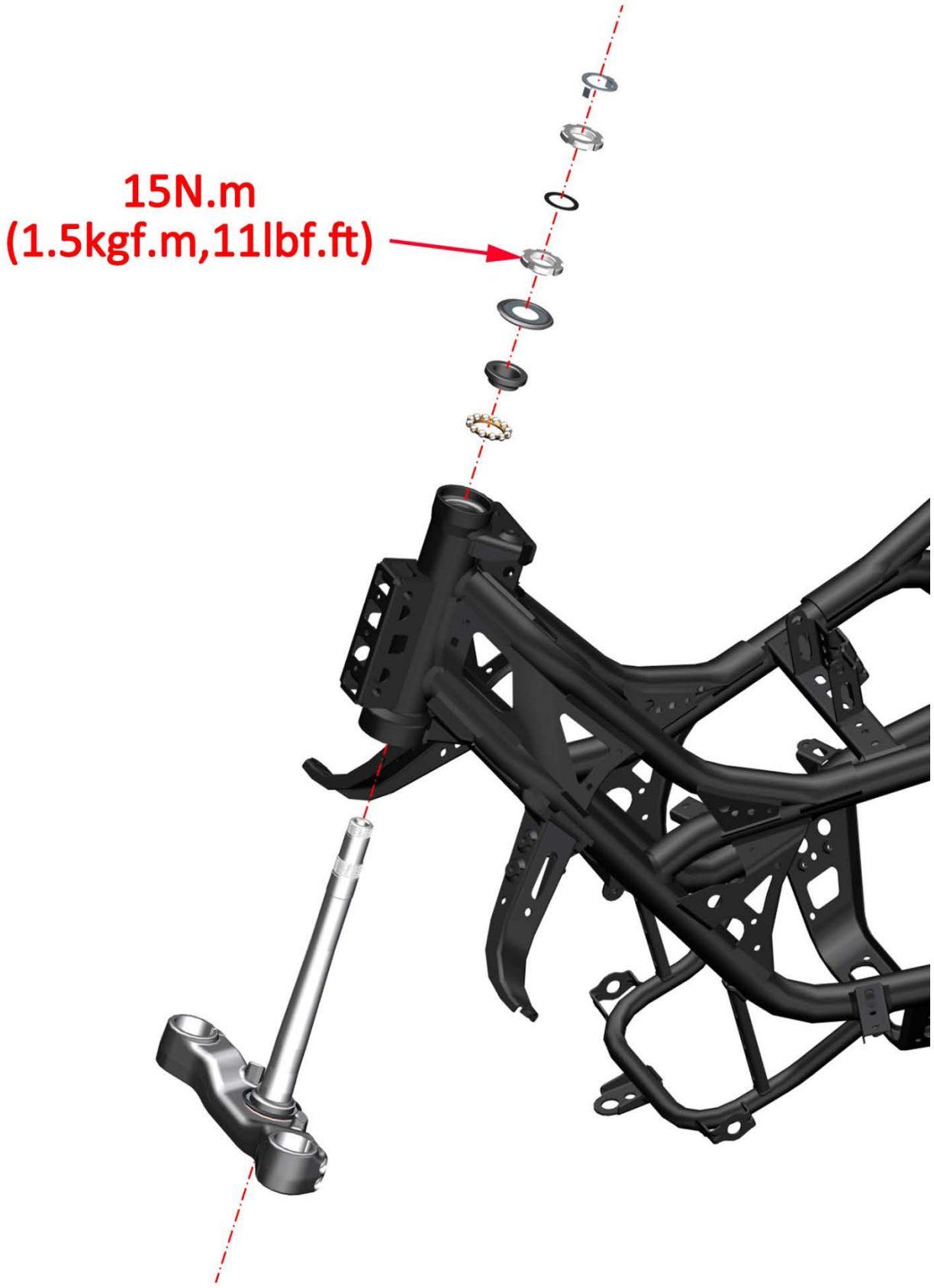
Directional exploded view



Front fork exploded view



Exploded view of lower link board



E350/E250/E250 Change the direction of the handle

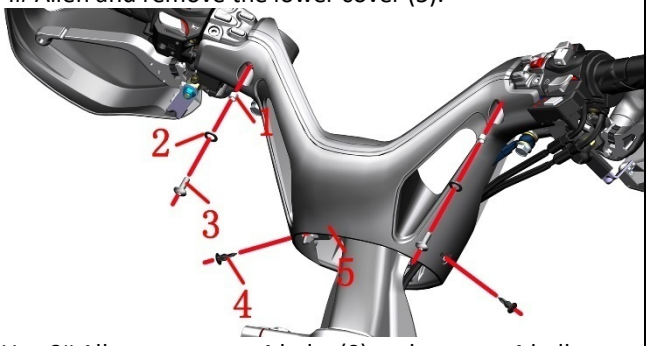
Caution:

●When removing the disc brake oil cup, it must be vertically upward to prevent air from entering the brake pipeline.

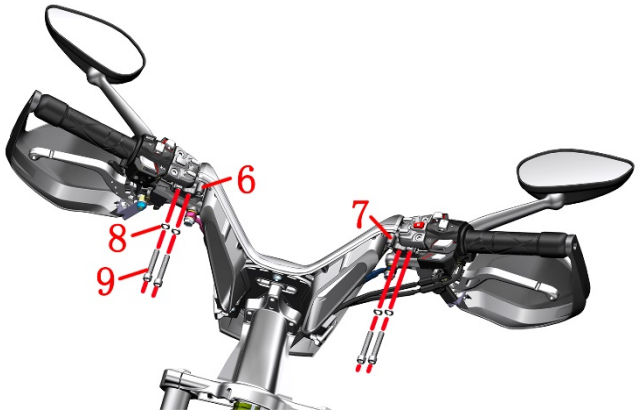
●When disassembling and assembling the handle switch, pay attention to adjusting the internal wiring harness of the switch to avoid damage to the wire skin caused by the shell or bolt column.

1.Disassemble the handle bar cover

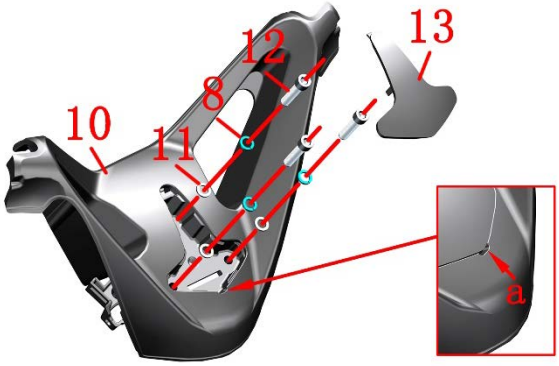
a.Use the 4# Allen to remove 2 bolts (3), remove 2 seating glues (2) and 2 bushings (1). Remove 2 expansion nails (4) with 4# Allen and remove the lower cover (5).



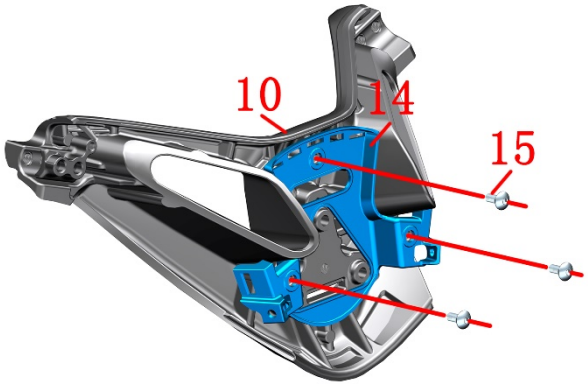
b. Use 6# Allen to remove 4 bolts (9) and remove 4 bullet pads (8). Remove the left handle bar briquette (6) and the right handle bar briquette (7). Wrap the left and right handle bars and switch assemblies in bubble bags to prevent scratching the covering.



c. Pry the upper cover (13) with a batch of words at arrow A and remove it. Remove 3 M8×35 bolts (12) with 6# Allen, and remove 3 bullet pads (8) and 3 flat pads (11). Pull down the cable and remove the orientation handle bar.

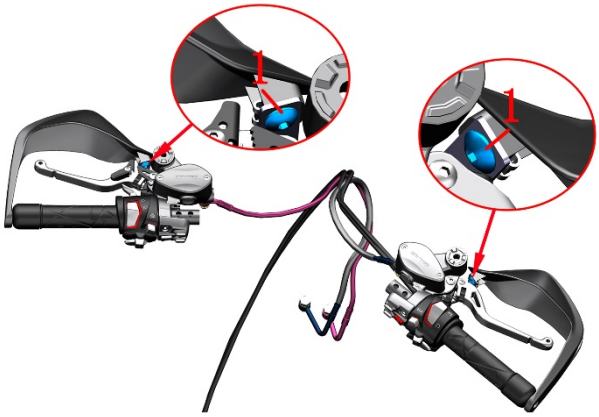


d. Remove 3 shaft shoulder bolts (15) with 4# Allen and remove the lower hood mounting plate (14).



2.Disassemble the handle bar assembly

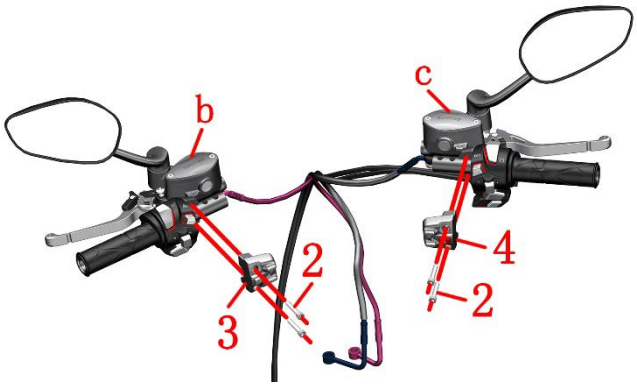
a.Remove the 2 M6×12 bolts (1) from the handguard bracket using the #4# Allen.



b. Use the 5# Allen to loosen the balance block bolt A 5-8 turns, and remove the left and right hand guards and the balance block assembly.

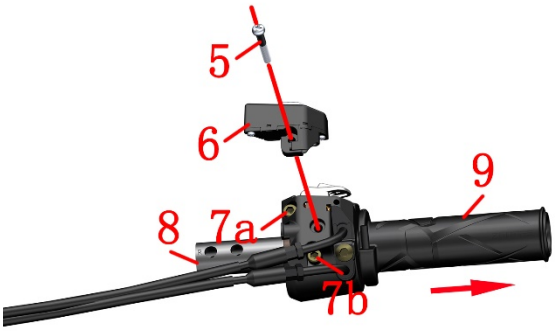


c. Remove 4 M6×30 bolts (2) with 5# Allen, remove the left deputy handle switch (3), rear disc brake main pump assembly b, right deputy handle switch (4), front disc brake main pump assembly c.

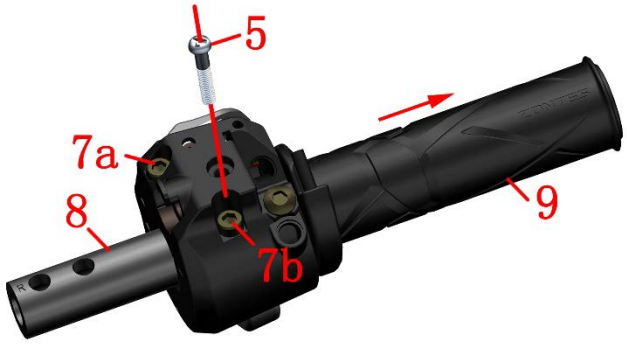


d.250/350E:Remove the bolt (5) and the switch (6) using the cross lot. Use the 5# Allen to remove the bolts (7a) and (7b) under the right handle bar switch, and open the upper and lower parts of the right handle bar switch. Remove the

right handle bar (8) and the right heated handle bar (9) separately.



125E: Remove the bolt (5) using the cross lot. Use the 5# Allen to remove the bolts (7a) and (7b) under the right handle bar switch, and open the upper and lower parts of the right handle bar switch. Remove the right handle bar (8) and the right heated handle bar (9) separately.



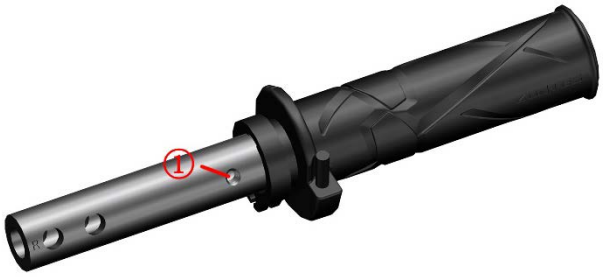
e. Use the 5# Allen to remove the bolts(11b) and (11c)below the left hand handle switch,and then use a cross screwdriver to remove the bilts(11a).Separate the upper and lower parts of the left hand handle switch,and forcefully separate the left hand handle⑿and the left heating handle ⑽to remove them.



3.Installation handle bar to put the component

a. Glue 4 handle bar strips on the inner wall of the left heating handle bar, and then load the left heating handle bar into the left handle bar; the inner wall of the right heating handle bar does not need to stick the handle bar strip, and can be loaded directly. Be careful not to remove the throttle cable on the right heating handle bar. Follow the disassembly steps to replace the left and right hand guards and balance block assemblies, and tighten the balance block bolt A 5-8 times with 5# Allen.

b. When installing the left hand handle switch, it is necessary to align the bolt (11a) with the positioning hole (1) on the directional handle, and then tighten it with a cross batch. When installing the right-hand handle bar, align the mounting hole of the heating switch (6) with the positioning hole (1) on the directional handle, and then tighten the bolt (5) with a cross batch. Use the 5# Allen to tighten the bolts (11b), (11c), (7a), and (7b) that hold the left and right handle switches in turn.



c. When installing the secondary handle bar switch, it is necessary to align the joint surface of the counter-handle bar switch and the main pump of the disc brake with the triangle mark on the handle bar switch, and then use 5# hexagon to tighten 4 M6×30 bolts.



q

4.Install the handle bar cover

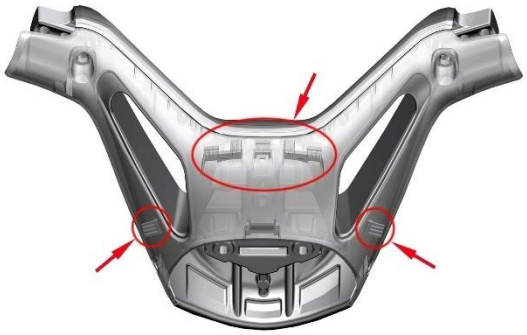
a. Reinstall the lower cover mounting plate back into the new orientation.

b. Secure all wiring harnesses on the left and right sides back to the assembly.

c. Align the mounting hole with the mounting hole position of the upper plate and pre-tighten the 3 bolts. After preloading, use 6# hexagon to tighten to 20-25N.m.

d. Preload the left and right handle components and briquettes back to the directional handle, and use 6# Allen to tighten to 20-25N.m. (When it is inconvenient to assemble the handle bar assembly, the secondary handle bar switch can be removed; When putting it back, pay attention to the direction handle and do not crimp. 〉

e. To prevent scratching the covering, cover the bubble bag to the panel of the storage box. Pull the front side of the hood slightly firmly and attach. Hide all the wiring harnesses on the left and right sides in the lower cover of the directional handle. (Note: do not crimp) Press the lower hood snap back in the direction indicated by the arrow. Remove the bubble bag.



f. Replace the left and right expansion nails. Use the 4# Allen to replace the 2 bolts on the left and right sides. (Check whether the direction is crimped)

g. Replace the upper cover in the direction of replacement.

WARNING

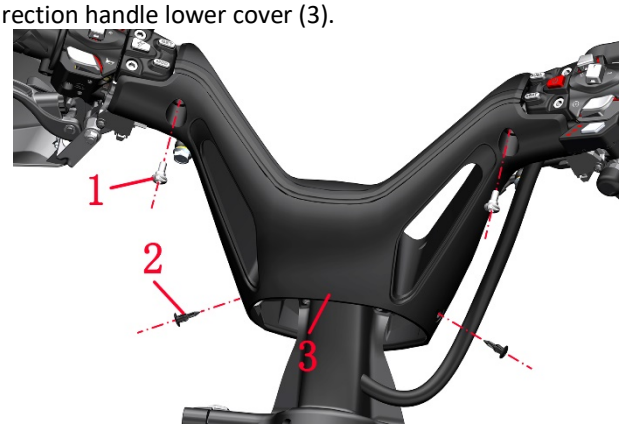
●Attention should be paid when disassembling the direction handle cover to prevent damage to the buckle.
●After installation, check whether the throttle cable is assembled in place and whether the return position is flexible.
●Self-tapping screws need to be installed vertically and the torque cannot be too large.
●After installation, check the switch buttons of the left and right handle switches and the left and right auxiliary handle switches to check whether they can be used normally, and check whether there is a pressure line.

E368 Change the direction of the handle

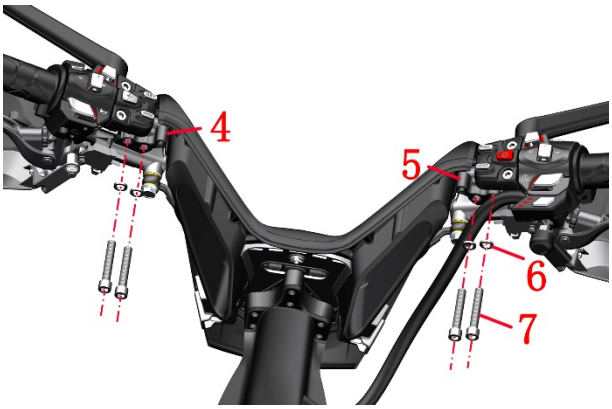
Caution:
●When removing the disc brake oil cup, it must be vertically upward to prevent air from entering the brake pipeline.
●When disassembling and assembling the handle switch, pay attention to adjusting the internal wiring harness of the switch to avoid damage to the wire skin caused by the shell or bolt column.

1.Disassemble the handle bar cover

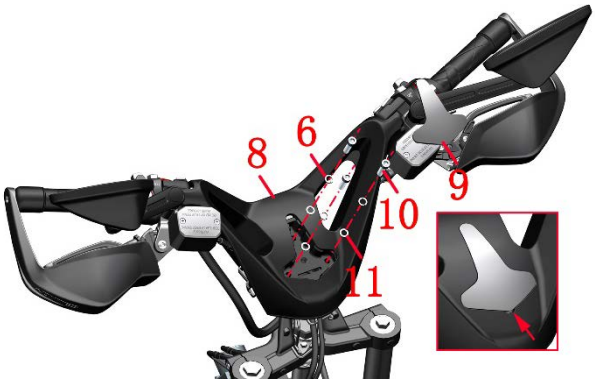
a. Use 4# hexagon to remove 2 shoulder bolts (1). Remove the 2 expansion nails (2) with a cross batch, and remove the direction handle lower cover (3).



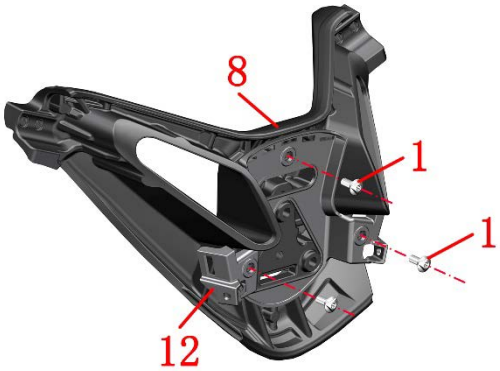
b. Use 6# Allen to remove 4 bolts (7) and remove 4 bullet pads (6). Remove the left handle bar briquette (4) and the right handle bar briquette (5). Wrap the left and right handle bars and switch assemblies in bubble bags to prevent scratching the covering.



c. Pry the upper cover (9) with a batch of words at arrow A and remove it. Remove 3 M8×30 bolts (10) with 6# Allen, and remove 3 bullet pads (6) and 3 flat pads (11). Pull down the cable and remove the orientation handle bar.

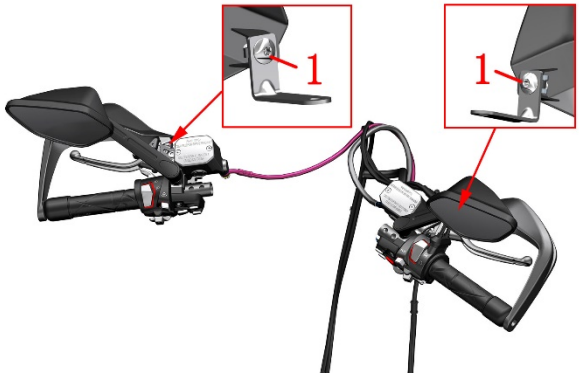


d. Remove 3 shaft shoulder bolts (1) with 4# Allen and remove the lower hood mounting plate (12).

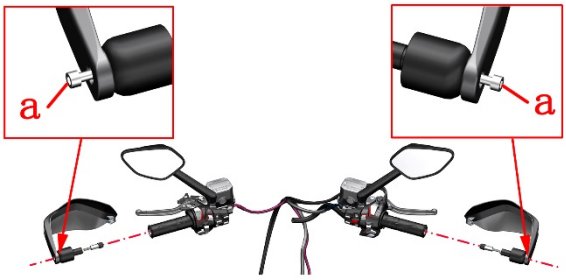


2. Disassemble the handle bar assembly

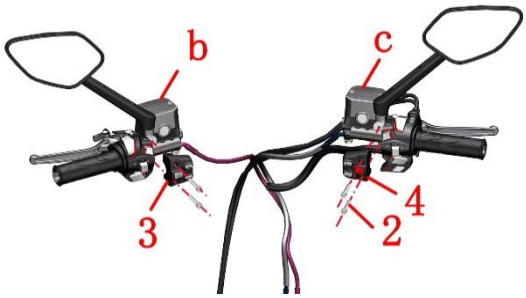
a.Remove the 2 M6×12 bolts (1) from the handguard bracket using the #4# Allen.



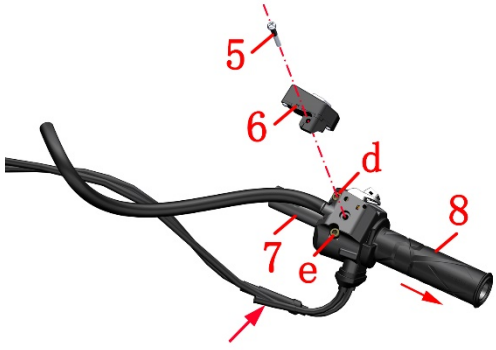
b. Use the 5# Allen to loosen the balance block bolt A 5-8 turns, and remove the left and right hand guards and the balance block assembly.



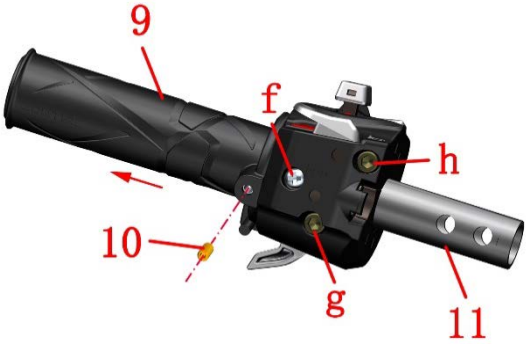
c. Remove 4 M6×30 bolts (2) with 5# Allen, remove the left deputy handle switch (3), rear disc brake main pump assembly b, right deputy handle switch (4), front disc brake main pump assembly c.



d. Remove the bolt (5) using the cross lot. Use the 5# Allen to remove the bolts (7a) and (7b) under the right handle bar switch, and open the upper and lower parts of the right handle bar switch. Remove the right handle bar (8) and the right heated handle bar (9) separately.

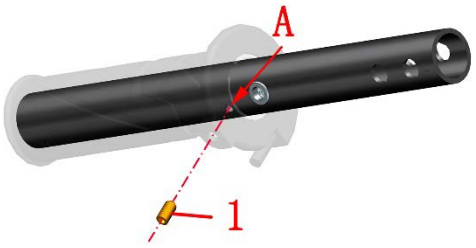


e. Use the 2.5# Allen to remove the setting screw ⑩under the left handle rubber⑨, Use the 5# Allen to remove the bolts(g) and (h)below the left hand handle switch,and then use a cross screwdriver to remove the bilts(f).Separate the upper and lower parts of the left hand handle switch,and forcefully separate the left hand handle ⑨ and the left heating handle ⑪ to remove them.

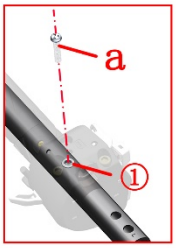


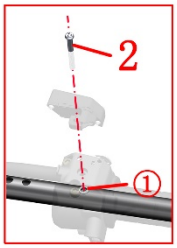
3.Installation handle bar to put the component

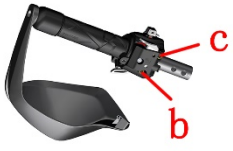
a. Glue 4 handle bar strips on the inner wall of the left heating handle bar, and then load the left heating handle bar into the left handle bar; the inner wall of the right heating handle bar does not need to stick the handle bar strip, and can be loaded directly. Be careful not to remove the throttle cable on the right heating handle bar. Follow the disassembly steps to replace the left and right hand guards and balance block assemblies, and tighten the balance block bolt 5-8 times with 5# Allen.



b. When installing the left hand handle switch, it is necessary to align the bolt (a) with the positioning hole ① on the directional handle, and then tighten it with a cross batch. When installing the right-hand handle bar, align the mounting hole of the heating switch with the positioning hole ① on the directional handle, and then tighten the bolt ⑵ with a cross batch. Use the 5# Allen to tighten the bolts (b), (c), (e), and (f) that hold the left and right handle switches in turn.









c. When installing the secondary handle bar switch, it is necessary to align the joint surface of the counter-handle bar switch and the main pump of the disc brake with the triangle mark on the handle bar switch, and then use 5# hexagon to tighten 4 M6×30 bolts.



4.Install the handle bar cover

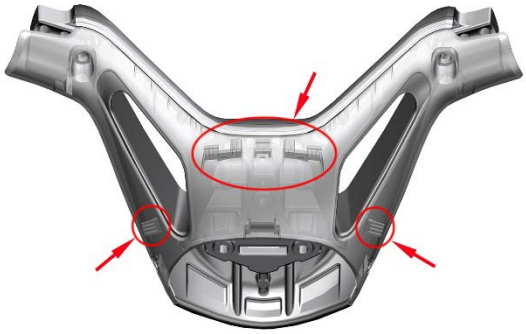
a. Reinstall the lower cover mounting plate back into the new orientation.

b. Secure all wiring harnesses on the left and right sides back to the assembly.

c. Align the mounting hole with the mounting hole position of the upper plate and pre-tighten the 3 bolts. After preloading, use 6# hexagon to tighten to 20-25N.m.

d. Preload the left and right handle components and briquettes back to the directional handle, and use 6# Allen to tighten to 20-25N.m. (When it is inconvenient to assemble the handle bar assembly, the secondary handle bar switch can be removed; When putting it back, pay attention to the direction handle and do not crimp. 〉

e. To prevent scratching the covering, cover the bubble bag to the panel of the storage box. Pull the front side of the hood slightly firmly and attach. Hide all the wiring harnesses on the left and right sides in the lower cover of the directional handle. (Note: do not crimp) Press the lower hood snap back in the direction indicated by the arrow. Remove the bubble bag.



f. Replace the left and right expansion nails. Use the 4# Allen to replace the 2 bolts on the left and right sides. (Check whether the direction is crimped)

g. Replace the upper cover in the direction of replacement.

WARNING

●Attention should be paid when disassembling the direction handle cover to prevent damage to the buckle.
●After installation, check whether the throttle cable is assembled in place and whether the return position is flexible.
●Self-tapping screws need to be installed vertically and the torque cannot be too large.
●After installation, check the switch buttons of the left and right handle switches and the left and right auxiliary handle switches to check whether they can be used normally, and check whether there is a pressure line.

E368 (ETC) replace direction handlebar

Caution :

●When removing the disc brake oil cup, make sure to keep it vertical and facing up to prevent air from entering the brake line.

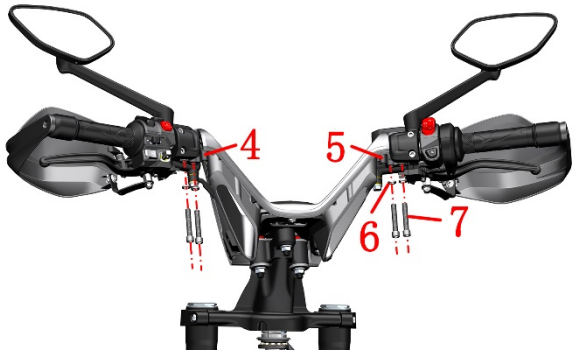
●When disassembling and assembling the handle switch, be careful to adjust the internal wiring of the switch to avoid the casing or bolt posts pinching and damaging the wire insulation.

1.Remove the handlebar cover

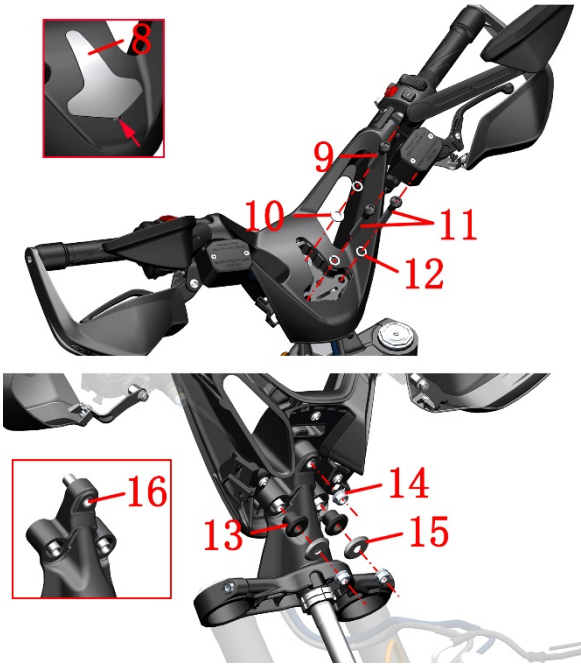
a. Use a T25 Torx wrench to remove the 2 shoulder bolts (1). Use a Phillips screwdriver to remove the 2 expansion rivets (2) and take off the lower handlebar cover (3).



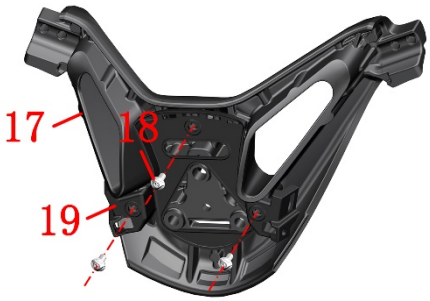
b. Use a #6 Allen wrench to remove the 4 bolts (7) and take off the 4 spring washers (6). Remove the left handle clamp (4) and the right handle clamp (5). Wrap the left and right handle assemblies in bubble wrap to prevent scratching the covered parts.



c. Pry open the upper cover of the steering handle (8) at the arrow with a flathead screwdriver. Use a T50 slotted Torx wrench to remove one M10×1.25×60–45 bolt (9) and two M10×1.25×75–55 bolts (11), and remove three spring washers (12) and one flat washer (10). Remove three M10×1.25 nuts (14), two washers (15), two rubber buffers (13), and three bushings (16). Remove the steering handle assembly.

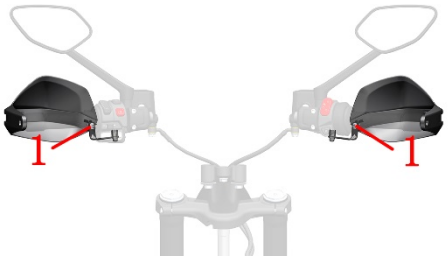


d.Use a T25 hexagon socket wrench to remove the three shaft shoulder bolts (18), and take off the handlebar (17) and the lower handlebar cover mounting plate (19).

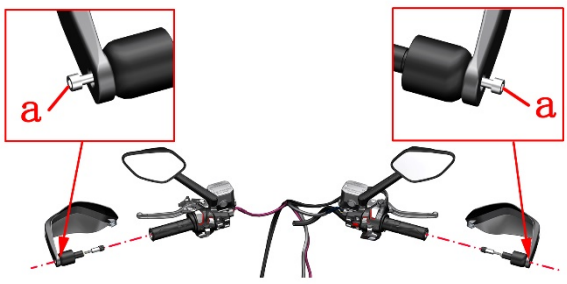


2.Disassemble the directional components

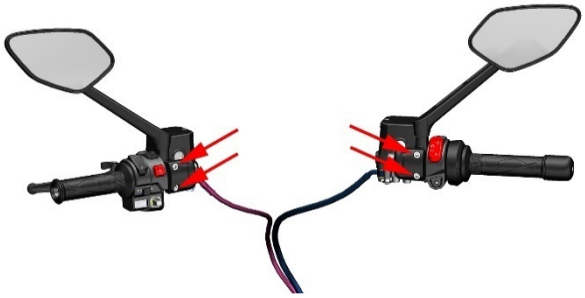
a.Use a T25 hex torx wrench to remove the 2 bolts (1)



b.Use a #5 Allen wrench to loosen the balance block bolt a by 5-8 turns, then remove the left and right hand guards and the balance block assembly.



c.Use a #5 Allen wrench to remove the four M6×30 bolts, then take off the left handlebar half cover and rear disc brake master cylinder, and the right handlebar half cover and front disc brake master cylinder.



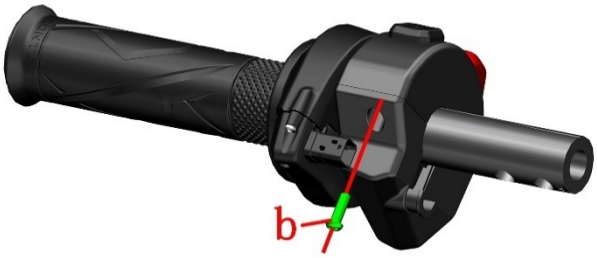
d.Use a Phillips screwdriver to remove the three M4×12 screws b on the left handle switch, then remove the M5×25 limit screw c on the left handle switch. Separate the upper and lower parts of the left handle switch. After pulling off the rubber sleeve, use a Phillips screwdriver to remove the M4×30 limit screw and spring washer.



e.After removing the rubber sleeve, use a Phillips screwdriver to remove the M4×30 stop screw and spring washer.

f.Press the two clips indicated by the arrows, remove the fixing clamp, and then pull out the plug of the right handle rubber cover. Use a Phillips screwdriver to remove the M4×12 screw b on the right handle switch, and then separate the upper and lower parts of the right handle switch.





g.Use a Phillips screwdriver to remove two ST2.6×9.5 self-tapping screws (d), one M4×30 screw (e), and a spring washer. Remove the right-hand handle switch. Note: The screws and self-tapping screws are small, so handle them carefully to avoid losing them.



3.Install the handlebar assembly

a.The handlebar rubber sleeve is secured with an M4×30 bolt to position it, aligning it with the indentation on the disc brake master cylinder lever. Reinstall the left and right handguard covers and the balance block assembly according to the disassembly steps, and use a #5 hex key to tighten the balance block bolt a 5-8 turns.



4、Install the handlebar cover

a. Simply reinstall the steering handle lower cover mounting plate onto the new steering handle by following the disassembly steps in reverse.

b. Secure all the wiring harnesses on both the left and right sides back onto the steering column assembly.

c. Align the installation holes of the directional handle with the installation holes of the upper link plate, then pre-tighten the three bolts. After pre-tightening, use a No. 6 Allen wrench to tighten to 20-25 N·m.

d. Install the left and right handlebar assemblies and the clamp onto the handlebar, and tighten with a #6 Allen key to 20-25 N·m. (If it is inconvenient to assemble the handlebar assembly, the handlebar half-cover can be removed. When reinstalling, make sure it is fitted closely to the handlebar.)

e. To prevent scratching the cover parts, you can cover them with a bubble bag up to the storage box panel. After slightly pulling open the front side of the lower steering column cover, install it. Hide all the wiring harnesses on the left and right sides inside the lower steering column cover. (Note: Do not pinch the wires.) As shown by the arrow, press the clips of the lower steering column cover back into place. Remove the bubble bag.

f. Reinstall the left and right expansion bolts. Use a #4 hex key to reinstall the two bolts on the left and right sides. (Check if the direction lever is pressing on the wire)

g. Reinstall the top cover of the handlebar.

WARNING

●When assembling or disassembling the handlebar cover, pay attention to the force applied to prevent damaging the clasps.

●After installation, check whether the throttle cable is properly installed and whether it moves back freely.

●After installation, check the buttons on the left and right handlebar switches to see if they work properly, and check for any pinched wires.

Replace the front wheel

Caution:

●Be careful not to damage the ABS coil when disassembling.

●After removing the front wheel, do not press the brake handle.

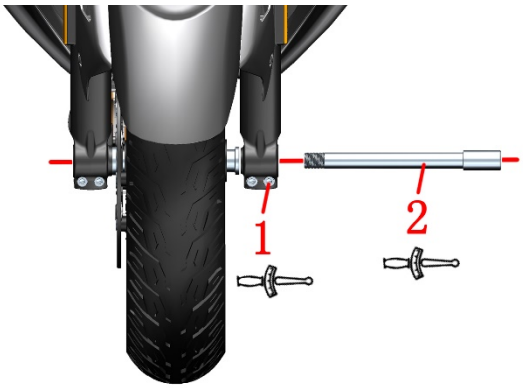
●The motorcycle must be parked on a flat and stable ground or a lifting platform.

●It is forbidden to use a high-pressure water gun to flush against the oil seal at close range.

1.Remove the front wheel assembly

a. Lay down the main support, and then use a jack or a suitable device to support the whole motorcycle to keep the front wheels off the ground.

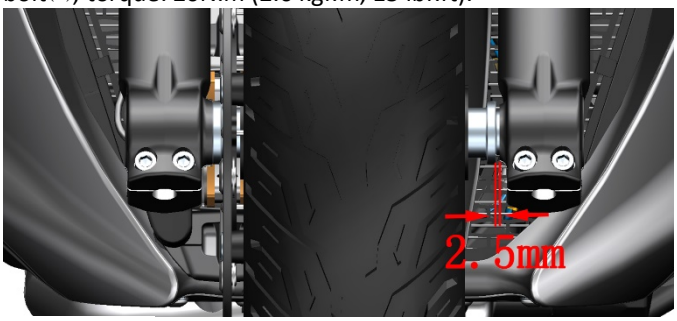
b. Use 6# inner hexagon to loosen the two M8×35 bolts at the front left shock absorber (1), then use 17# inner hexagon to remove the front wheel shaft (2), and remove the front wheel and 2 bushings.45～50N.m(4.6～5.1kgf.m，33～37 lbf.ft)



2.Install the front wheel assembly

a. Separate the two brake pads in the brake caliper with a single-size batch. If the resistance is too large and the two brake pads cannot be separated, please refer to the method of "Adding Brake Fluid" to remove the upper cover of the disc brake oil cup and then separate it. 2 brake pads.

b. Put the front wheel in the middle of the front shock absorber, shake the front wheel left and right to make the disc brake disc snap into the middle of the brake pad, align the shaft hole, insert the front wheel shaft(2), tighten the front wheel shaft with 17# inner hexagon, torque: 50N. m (5.1 kgf.m, 37 lbf.ft), after the front wheel axle is tightened, there is a gap of about 2.5mm between the left side bushing of the front wheel and the shock absorber; use 6# inner hexagon to tighten the two front left shock absorbers M8×35 bolt(1), torque: 20N.m (2.0 kgf.m, 15 lbf.ft).



DANGER

●After the front wheel is installed, please press the brake handle repeatedly until the brake restores the braking effect.

●Contaminated disc brake discs and disc brake pads will reduce the braking effect. Please replace with new disc brake discs and clean the contaminated brake discs.

WARNING

●After each front wheel replacement, you must go to a professional organization for dynamic balance testing.

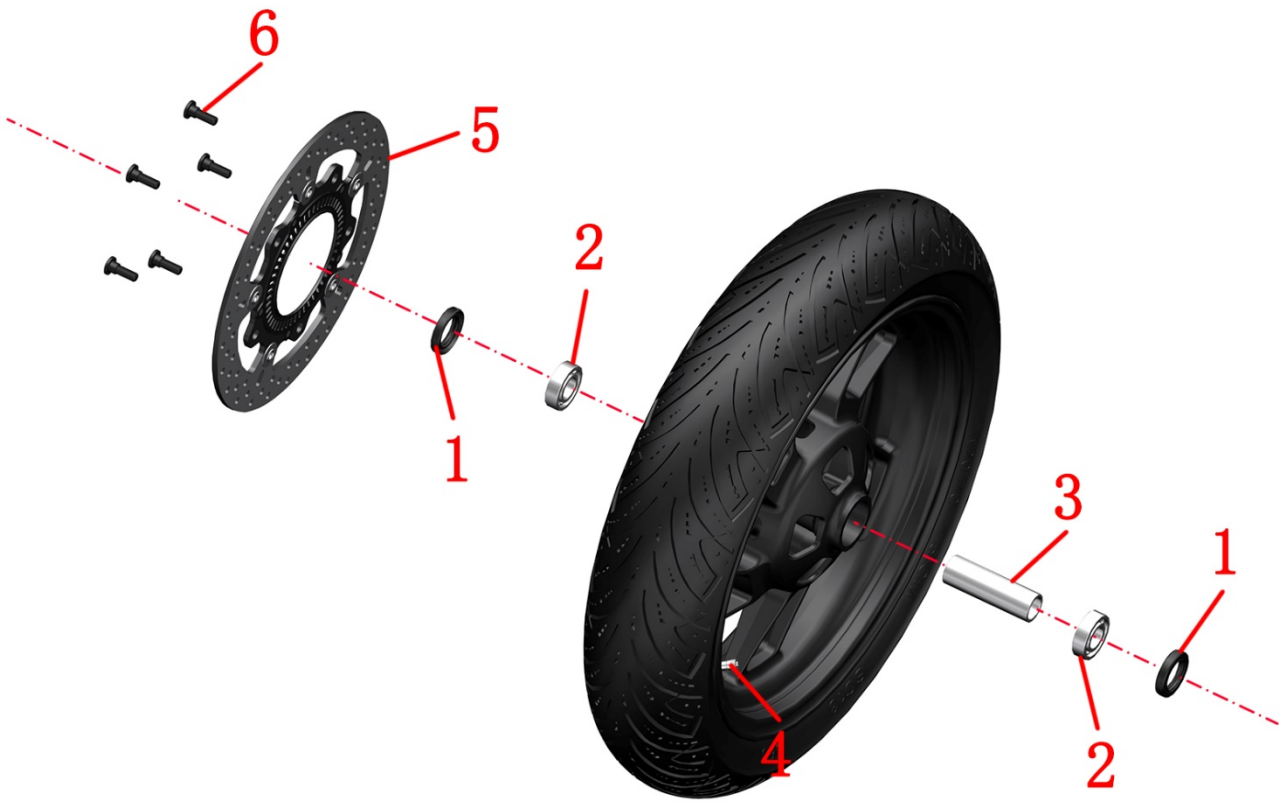
●Because the tire self-refilling may block the air hole of the tire pressure monitoring sensor, causing difficulty in inflation or failure of the tire pressure monitoring, it should not be used.

E350 Front Wheel Assembly Figure:



NO.	Part name	QTY	Caution
1	Oil seal TC ϕ28×ϕ42×7	2	
2	GB276 bearing 6004-2RS-C3	2	ϕ20×ϕ42×12
3	Sleeve	1	
4	Tire pressure sensor	1	Bend toward the left.
5	ABSsensor gear（56T）	1	
6	265×5.0front brake disc	1	
7	Non-standard bolt M8×25	5	25 N.m(2.5 kgf.m，18 lbf.ft)
8	GB12615 ϕ3.2×9 rivet (stainless steel)	5	

E368 Front Wheel Assembly Figure:



No.	Name	Quantity	Remarks
1	oil seal TC ϕ28×ϕ42×7	2	
2	GB276 Deep groove ball bearing 6004—2RS—C3	2	ϕ20×ϕ42×12
3	spacer sleeve	1	
4	Tire Pressure Sensor	1	Pay attention to the orientation during installation; the elbow should face left.
5	276×5.0 Brake disc assembly	1	
6	Non-standard plow bolt M8×25	5	25 N.m(2.5 kgf.m，18 lbf.ft)　T45 Torx Hex Wrench

Inspection and maintenance of front wheel assembly ：

Caution:

●This inspection should be completed by a qualified maintenance organization.

●Do not press the brake handle after the front wheel is disassembled

●Be careful not to damage the ABS coil when disassembling.

●The motorcycle must be parked on a flat and stable ground or a lifting platform

●It is forbidden to use a high-pressure water gun to flush against the oil seal at close range.

1.Disc brake

1.1 The service life of the disc brake disc

Under normal circumstances, the replacement mileage of the brake disc is about 40,000 kilometers. The replacement mileage is not absolute. It needs to be determined according to the owner's travel habits (whether you like sudden braking), road conditions, maintenance intervals and other factors, but if the following three conditions are reached If any of them, they must be replaced.

a. Use a vernier caliper to measure the thickness of the disc brake disc less than 4.mm (0.16 in).

b. Hang the front wheel in the air, observe from the front that the disc brake disc swings when the front wheel rotates, and the disc brake disc deformation is detected.

c. Touch the surface of the disc brake disc with your hands to detect obvious pits, visually inspect for deep scratches and grooves.

1.2 Disc brake Replacement method

a. Refer to "Replace the front wheel" Remove the front wheel assembly.

b. Use 6# hex socket to remove 5 M8×25 bolts and remove the damaged disc brake disc.

c. After reinstalling the new disc brake disc, use 6# inner hexagon to tighten 5 M8×25 bolts. Torque: 25N.m (2.5 kgf.m, 18 lbf.ft).

d. Reinstall the front wheel assembly.

2.Front wheel oil seals and bearings

2.1 Service life of front wheel oil seals and bearings

Under normal circumstances, the bearings and oil seals in the front axles need to be inspected within 50,000 kilometers, but the bearings and oil seals in the front axles need to be inspected according to the actual conditions of the motorcycle’s driving conditions and the size of the load. Into the oil seal and bearing, the fine dust in the water will accelerate the wear between the bearing and the oil seal. At the same time, the mixed friction of water and grease becomes an emulsion and loses the original lubricating effect. This also shortens the service life between the oil seal and the bearing. When the following conditions occur, the front wheel oil seals and bearings should be checked in advance

a. Abnormal front wheel noise when riding.

b. When the direction bar shakes left and right when riding.

2.2 Replacement method of front wheel oil seal and bearing

a. Remove the front wheel assembly by referring to "Replace the front wheel".

b. Use a flat-headed batch to lift out the oil seals on the left and right sides of the front wheel, check whether the oil seals are damaged or deformed, check whether the outer ring of the bearing fits tightly with the rim, and if there is no abnormality, turn the inner ring of the bearing by hand to check whether the bearing rotates smoothly and if there is a jam. If it is astringent or abnormal sound, the front wheel bearing and oil seal need to be replaced.

c. The replacement of the front wheel oil seals and bearings must be completed by a professional maintenance organization.

d. If there is no problem in the inspection, apply an appropriate amount of lubricating grease on the front wheel bearing, and then press-fit the oil seal to the original position with a suitable size iron rod and rubber hammer.

e. Reinstall the front wheel assembly.

3.Front wheel rims and tires

3.1 The service life of the front wheel rim and tire

Generally speaking, rims do not have the limit of service life and kilometers, but if the following situations occur, the rims must be replaced.

a. The rim is deformed or warped.

b. Cracks or breaks in the rim

Under normal conditions, the front tires can be used for about 20,000 kilometers. Normal conditions mean that the road conditions are not bad and there is no tyre puncture. Because the tires are made of rubber, there will be aging. Generally, the tires need to be replaced in about 4 years. If you don't change it, you need to check frequently to check the tire aging and whether there are cracks in the tire. If the following conditions occur, the tires must be replaced.

a. The tire has been repaired many times.

b. When the tire tread wear reaches the limit position of the design.

c. There are many aging cracks in the tire.

3.2 How to replace the front wheel rim and tire

a. Refer to "Replace the front wheel" to remove the front wheel assembly.

b. Take the removed front wheel assembly to a professional organization and use a tyre raking machine to take out the tires.

c. Use a lifter to assemble new rims or new tires. And the front tire pressure is charged to the standard value. E350 front tire pressure: 240kPa (34.8 PSI),

d. Put the assembled front wheel assembly back on the motorcycle.

3.3 Dynamic balance

The wheel is a whole composed of tires and rims. Due to manufacturing reasons, the mass distribution of each part of the wheel may not be very uniform. When the wheel rotates at a high speed, it will form a dynamic imbalance state, causing wheel jitter during driving. The direction of the shaking phenomenon, in order to avoid this phenomenon or eliminate the phenomenon that has occurred, it is necessary to make the wheel in a dynamic situation by increasing the counterweight method to make the wheel correct the balance of each edge part, this correction process Is what we call dynamic balance.

The dynamic balance particles of the wheels can ensure that the wheels are more stable when rotating, reduce vibration and shaking, improve the stability and comfort of the motorcycle, and are conducive to safe driving.

a. Please go to a professionally qualified organization to test the dynamic balance after each replacement of the front and rear wheels.

b. The balance weight must be attached to the designated plane (red area) of the rim.



Change the front Shock absorber

Note:

● Do not press the brake lever after the front wheel is removed.

● Be careful not to damage the ABS coil when disassembling.

● When disassembling the front clay board, be careful not to scratch the shock absorber or the front clay board.

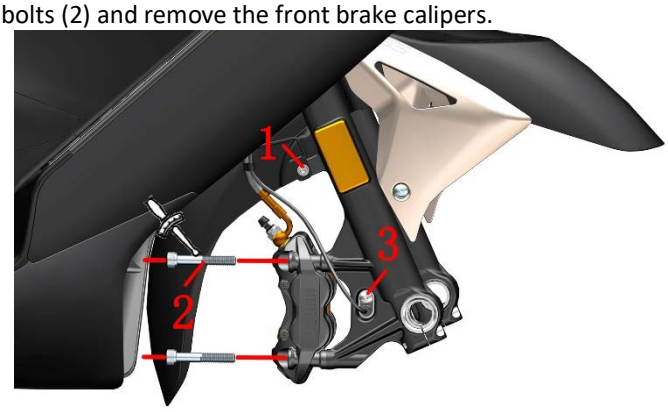
●When removing shock absorption, remove the two bolts that fix the same shock absorber, remove one side of shock absorption, and then remove the other side.

1.Remove the front wheel and front mudplate assembly

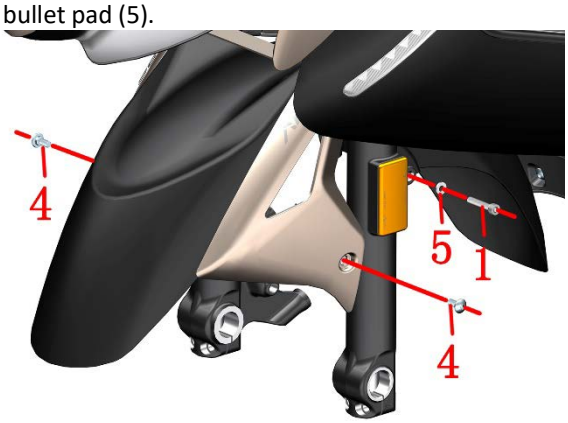
Remove the front wheel and front mudplate assembly

a. Remove the front wheel by referring to "Replacing the Front Wheel".

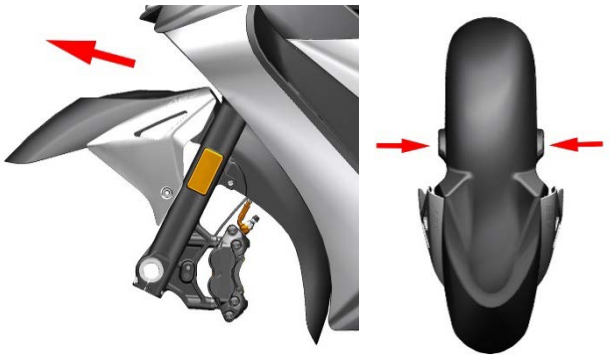
b. Remove 1 M6×30 bolt (1) using the 5# Allen and remove the pipe clamp and gasket. Remove 1 M6×12 bolt (3) using the 4# Allen. Use the 8# Allen to remove the 2 M10×1.5×60 bolts (2) and remove the front brake calipers.



c. Use the 4# Allen to remove the 2 M6×14 shaft shoulder bolts (4) on the left and right sides of the front clay plate; Then use the 5# Allen to remove 1 M6×30 bolt (1) and remove the bullet pad (5).



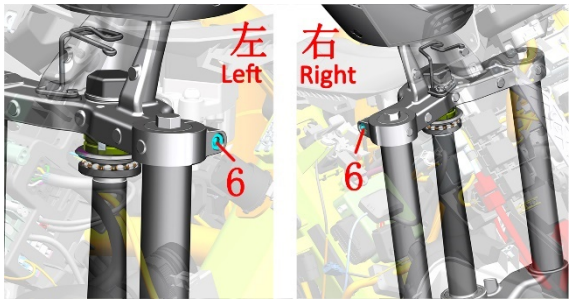
d. First press the sides of the front mud plate according to the small arrow, press the bulge at the arrow of the front mud plate inward, and then move the front mud plate up to the appropriate part and then withdraw it in the direction of the large arrow.



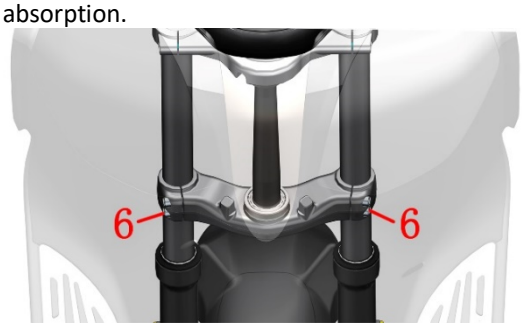
2.Remove the left and right front shock absorbers

a. Open the front storage box and remove the rubber plug of the reserved hole for the shock absorption before removing the storage box.

b. Hit the direction handle to the far left and use the 6# Allen to remove the bolt (6) of M8×35. In the same way, remove the bolt by hitting the steering bar to the far right (6). Pry open the gaps on the upper coupling with a batch of words.



c. Use 6# hexagon to remove the 4 bolts (6) of M8×35, pry open the gap on the lower coupling with a batch of words, and remove the left front shock absorption and right front shock absorption.



3.Reinstall compinents such sa shock absorbers,front mudboards,and front wheels

a.Use a screwdriver to pry open the gap on the lower connecting plate,insert the corresponding shock absorber,install the shock absorber in place,and then remove the screwdriver.



b. Use a batch to pry open a gap on the upper plate, put in the corresponding shock absorber, install the shock absorption in place, and remove the next word batch. Screw in the bolt (6) of M8×35 and tighten using the 6# Allen. Torque: 25N.m (2.6 kgf.m, 18 lbf.ft).



c. Install the bolts (6) of the two M8×35 lower plates and use the same method to load another shock absorber.

d. Take the front wheel and install the bushing, align the mounting hole between the 2 shock absorbers, penetrate the front wheel axle, and use 17# Allen to tighten the front wheel axle, torque: 50N.m (5.1 kgf.m, 37 lbf.ft). If one of the shock absorbers is not installed in place, the front axle will not be tightened or penetrate the right shock absorber, and the shock absorber that is not installed in place will need to be removed again and installed in place.

e. After installing the front wheel, use the 6# Allen to tighten the two M8×35 bolts in the lower part of the right front shock absorber, torque: 20N.m (2.0 kgf.m, 15 lbf.ft).

f. First use a batch to separate the 2 brake pads inside the brake caliper, if the resistance is very large and the 2 brake pads cannot be sep arated, you can refer to the method of "Add Brake Fluid" to remove the upper cover of the disc brake oil cup and then separate the 2 brake pads, and then install the gap between the 2 brake pads in the disc brake caliper to the brake disc on the front wheel. Then use 8# hexagon to tighten 2 M10 bolts (2), torque: 45~50N.m (4.6~5.1 kgf.m, 33~37 lbf.ft).

g. Press the position held when disassembling the front mud plate, pass through the appropriate position in the middle of the shock absorption, and after installing it in the corresponding position, use the 4# Allen to replace the 2 M6×14 axle shoulder bolts (4). Then use the 5# Allen to replace the 2 M6×30 bolts (1), note: the left M6×30 bolt (1) needs to have a seat (5).

DANGER

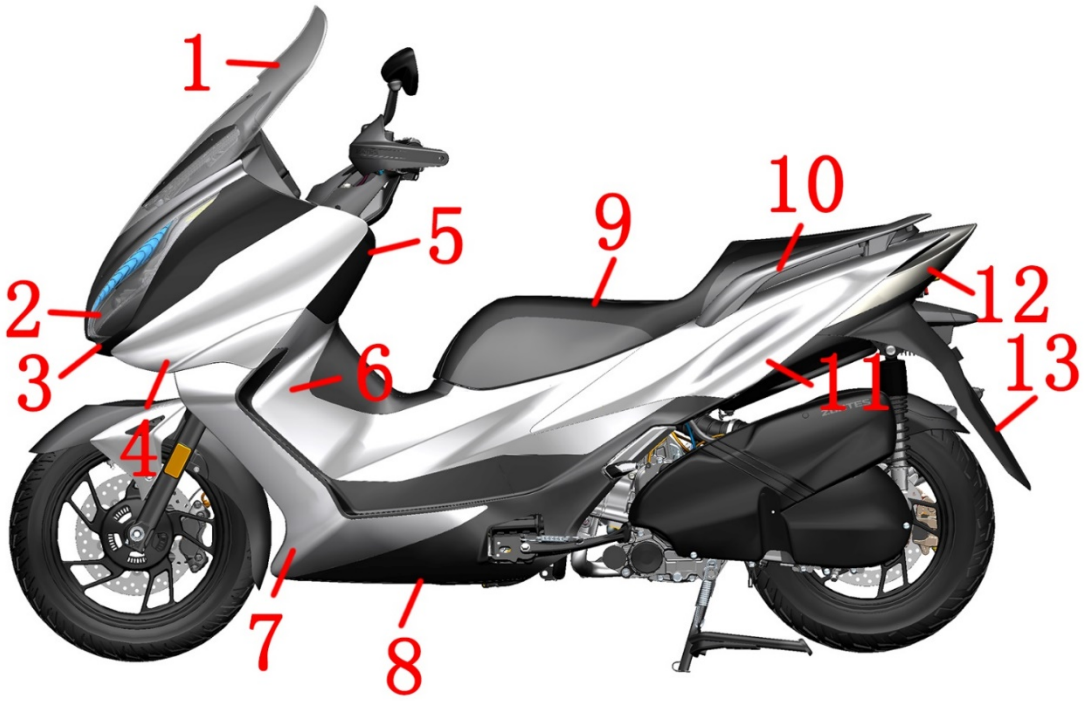
●The motorcycle must be parked on a flat ground or lift platform.

●After the front wheel is installed, press the brake lever repeatedly until the brake resumes the braking function.

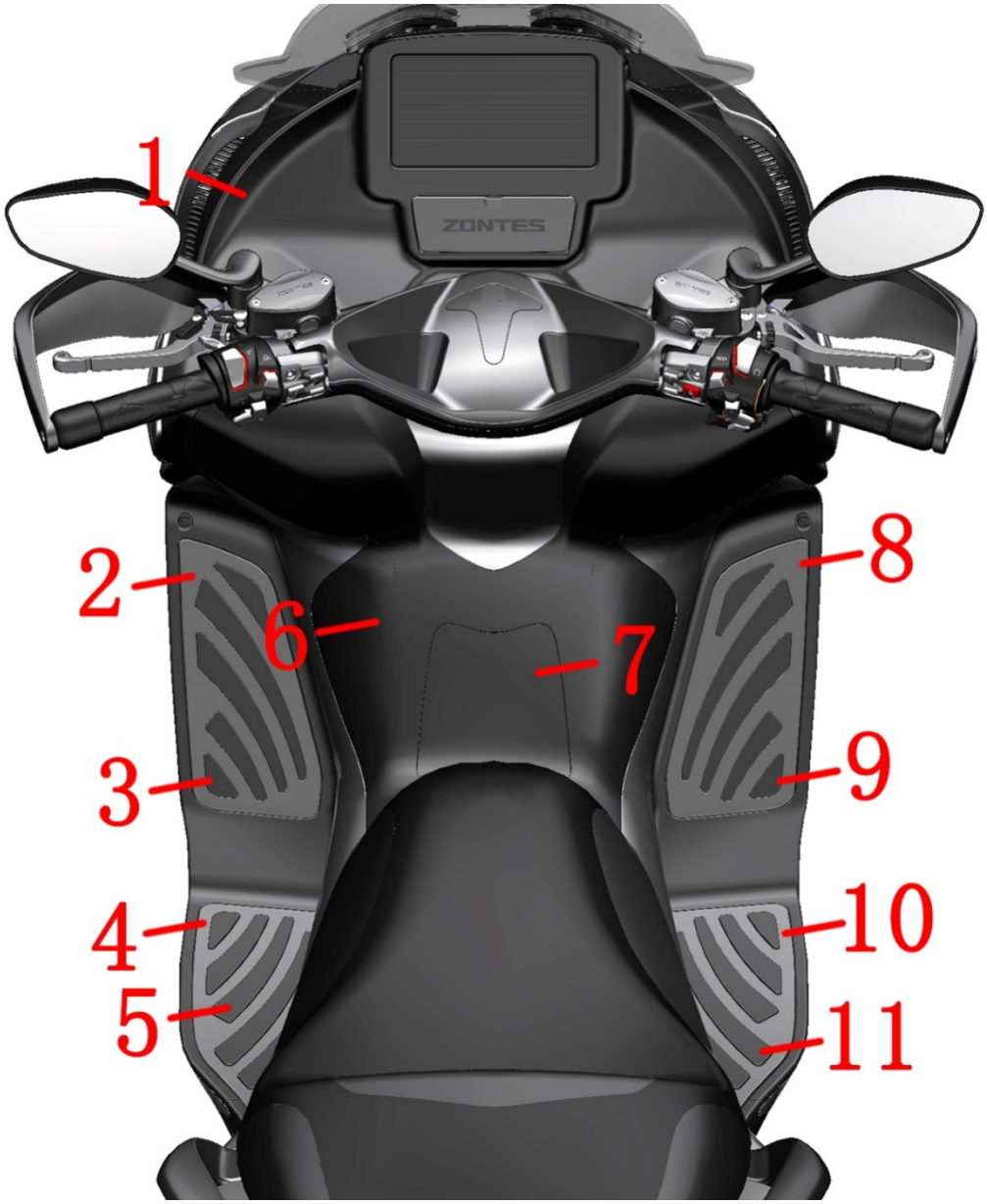
11.Disassembly and assembly of coverings



1. Windshield 2. Headlights 3. Lower part of the hood 4. Right panel of the hood 5. Front right panel 6. Right side cover 7. Right pedal decorative cover 8. Lower deflector right 9. Seat 10. Right rear armrest 11. Right part of tail skirt 12. Rear tail light 13. Rear fender



1. Windshield 2. Headlights 3. Lower part of the hood 4. Left plate of the hood 5. Front left panel 6. Left side cover 7. Left pedal decorative cover 8. Lower fairing left 9. Seat 10. Left rear armrest 11. Left part of the tail skirt 12. Rear tail light 13. Rear fenders



1. Instrument panel 2. Front left pedal rubber pad pressure plate 3. Front left pedal rubber pad 4. Rear left pedal rubber pad pressure plate 5. Rear left pedal rubber pad 6. Fuel tank decorative cover 7. Fuel tank cover 8. Front right pedal rubber pad pressure plate 9. Front right pedal rubber pad 10. Rear right pedal rubber pad pressure plate
11. Rear right pedal rubber pad

Notice:

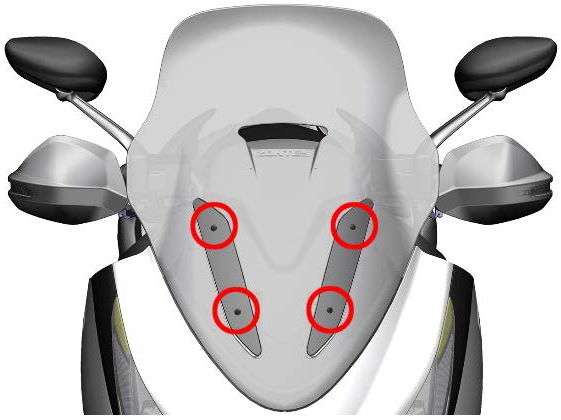
●When disassembling, please pay attention to controlling the size of the force, so as not to break the buckle.

●When removing the covers, please remove them in strict order, and do not disassemble the covers forcibly, so as to prevent irreparable damage to the corresponding covers.

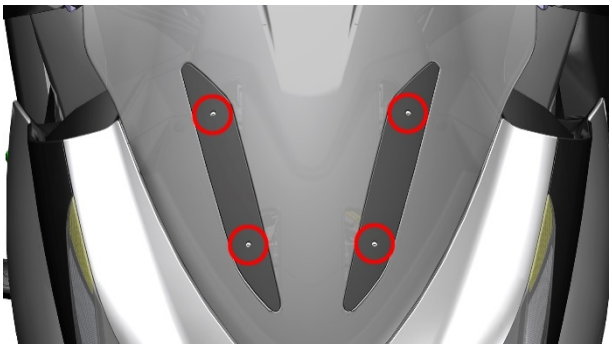
●When unplugging the plug, please control the strength and disassembly method. Do not unplug the plug forcibly to prevent damage to the plug, which will lead to poor contact of the harness connector and affect the functions of each part.

Removal of the windshield

a. Take off the 4 decorative buckles on the windshield.



b. Use the 4# inner hexagon to loosen the 4 M6×14 shoulder bolts on the left and right decorative covers of the windshield.



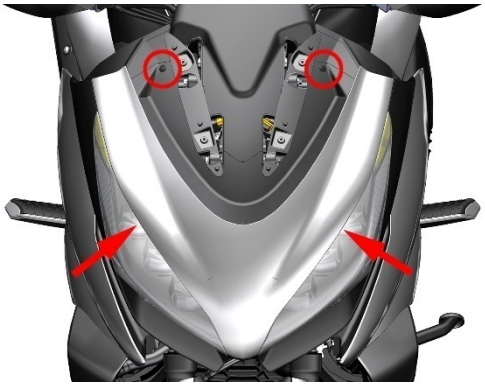
c. Take out the left and right decorative covers of the windshield, windshield, and windshield bracket rubber pad in sequence.



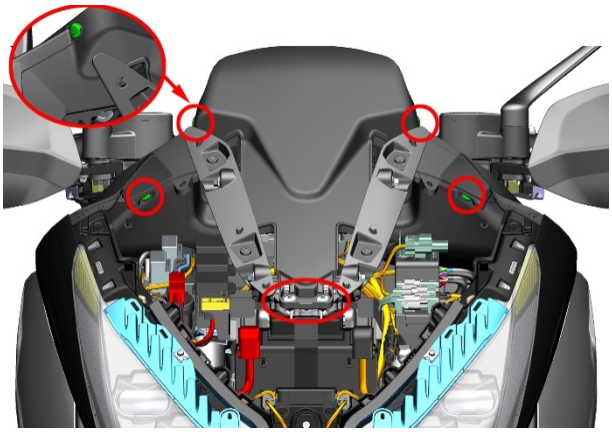
Removal of the upper part of the hood and the windshield liner

E350 Removal of the upper part of the hood and the windshield liner

a. Use a 4# inner hexagon to press down the central cylindrical pins of the two expansion nails, then remove the expansion nails, carefully pull the buckle at the point indicated by the arrow by hand, and remove the upper part of the hood.



b. Lower the windshield to a low position, use 4# inner hexagon to remove the 2 front bolts, the 2 expansion bolts on the left and right sides of the rear, and the 2 left and right expansion nails on the inner side, and remove the rear of the windshield liner.



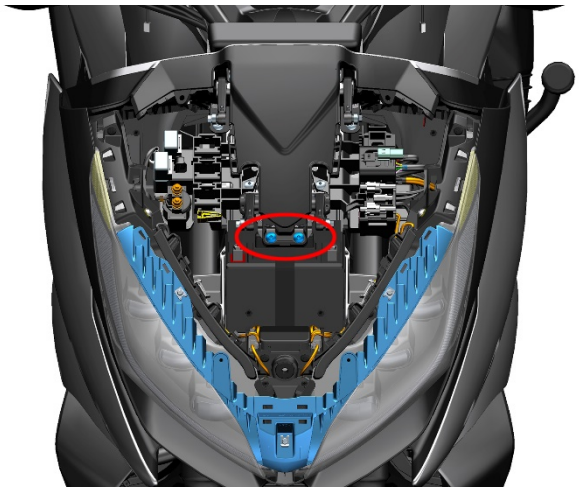
E350 Removal of the upper part of the hood and the windshield liner(Thailand)

a. Use a 4# inner hexagon to press down the central cylindrical pins of the two expansion nails, then remove the expansion nails, carefully pull the buckle at the point indicated by the arrow by hand, and remove the upper part of the hood.



b. Lower the windshield to a low position, use 4# inner hexagon to remove the 2 front bolts, the 2 expansion bolts on the left and right sides of the rear, and the 2 left and right

expansion nails on the inner side, and remove the rear of the windshield liner.



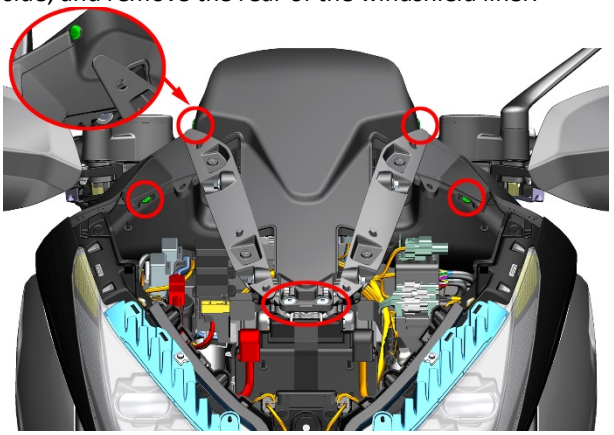
E368 Removal of the upper part of the hood and the windshield liner

The following steps are the same for 368/368 (ETC). The 368 (ETC) can only use a T25 Torx wrench; other displacement models use a #4 Allen wrench. Here, the E350 is used as an example.

a. Use a 4# inner hexagon to press down the central cylindrical pins of the two expansion nails, then remove the expansion nails, carefully pull the buckle at the point indicated by the arrow by hand, and remove the upper part of the hood.



b. Lower the windshield to a low position, use 4# inner hexagon to remove the 2 front bolts, the 2 expansion bolts on the left and right sides of the rear, and the 2 left and right expansion nails on the inner side, and remove the rear of the windshield liner.



Head side panel removal

The E368/E368 (ETC) installation points are the same as the E350. The E368 (ETC) can only use a T25 Torx wrench; other displacement models use a #4 hex key. The differences are only in appearance, with the E350E used as an example here.

a. Use a 4# inner hexagon to remove one M6×14 shoulder bolt on the inner side of the left side plate.



b. Start the motorcycle, open the left glove box, and use a 4# inner hexagon to remove one M6×14 shoulder bolt and one expansion nail as shown in the picture



c. Gently pat the left head side panel forward with your hand to remove it, and use the same method to remove the right side panel.

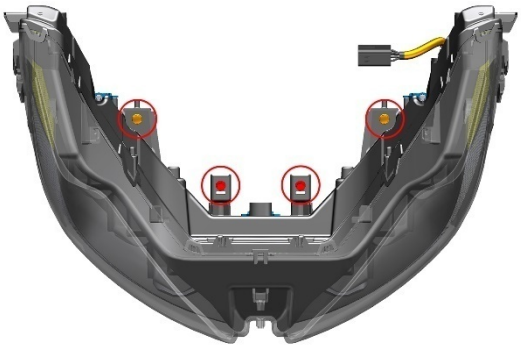


Removal of the headlight assembly

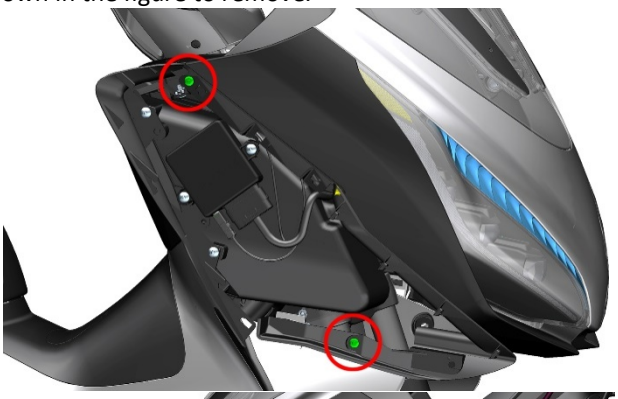
The following steps are the same for 350/368/368 (ETC). Here, E350 is used as an example.

a. Referring to the previous steps, remove the windshield, windshield liner and head side panels.

b. Use a 10# sleeve to remove the 4 bolts as shown in the picture.



c. Use the 4 expansion nails on the left and right sides as shown in the figure to remove.





d. Unplug the cable connector at the head cable cover, but not the handle switch connector.



e. Remove the headlight assembly



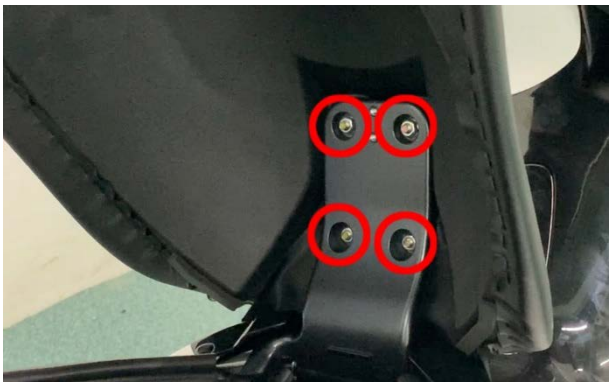
Seat removal

The following steps are the same for 350/368/368 (ETC). Here, E350 is used as an example.

a. First press the power button of the motorcycle, then press the seat lock switch of the motorcycle to open the seat lock, then press and hold the power button for 2 seconds to turn off the motorcycle.



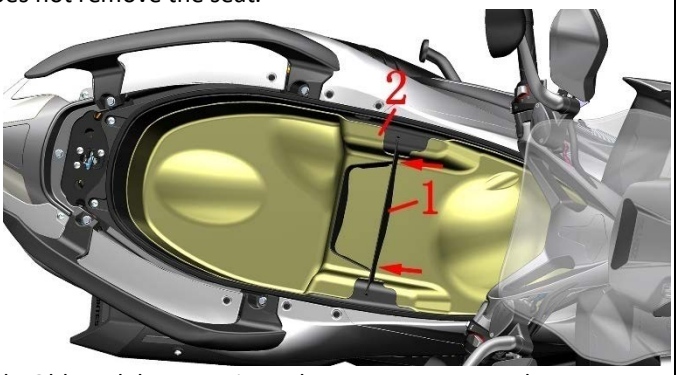
b. Use a 10# sleeve to remove the 4 M6 nuts that the seat is fixed on the seat installation plate, grasp the seat with both hands and pull out the seat obliquely upwards according to the angle of the studs. Note: When the angle is wrong and the seat cannot be pulled out, do not use brute force to forcibly pull the seat out to prevent damage to the thread on the seat installation stud.



Removal of the glove box

The following steps are the same for the 350/368/368 (ETC), with the 368 (ETC) only using a T25 Torx wrench; other displacement models use a #4 Allen wrench. Here, the E350 is used as an example.

a. Hold both sides of the storage box partition (1) with your hands, remove the partition, and then gradually pull the anti-friction pad from the edge gap of the storage box anti-friction pad (2). **Note:** Dismantling the storage box alone does not remove the seat.

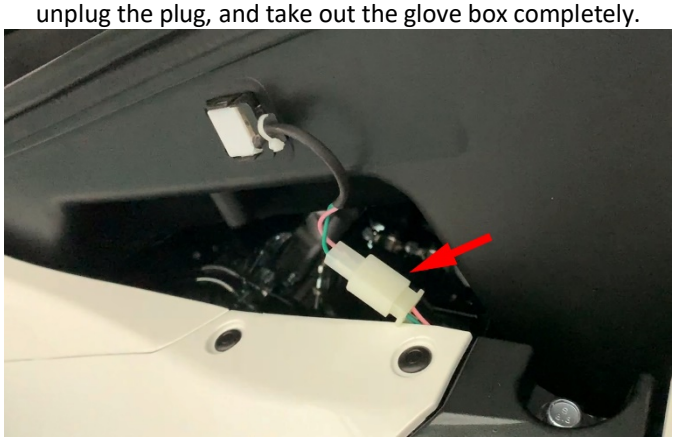


b. Old model: Use 4# inner hexagon to remove the 4 shoulder bolts at the rear and the middle (1), remove the front hexagonal bolt decorative buckle (2) and then remove the bolts (1).

New: Use 4# inner hexagon to remove the 4 shoulder bolts at the rear and the middle (1), remove the 2 hexagon socket bolt decorative buckle (2) at the front, and then remove the 2 bolts (1).



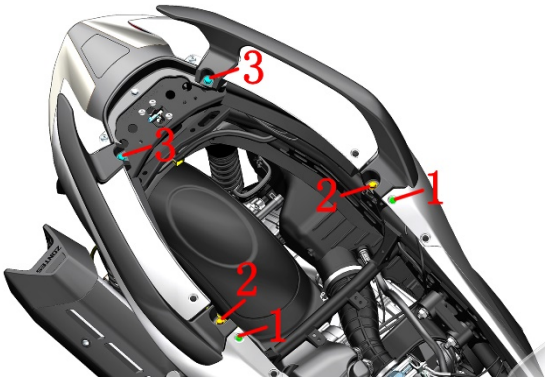
c. Slightly lift the back of the glove box until the harness connector on the left side of the glove box is exposed, unplug the ambient light plug on the left side of the glove box, unplug the plug, and take out the glove box completely.



Removal of left and right rear armrests

The following steps are the same for the 350/368/368 (ETC), with the 368 (ETC) only using a T25 Torx wrench; other displacement models use a #4 Allen wrench. Here, the E350 is used as an example.

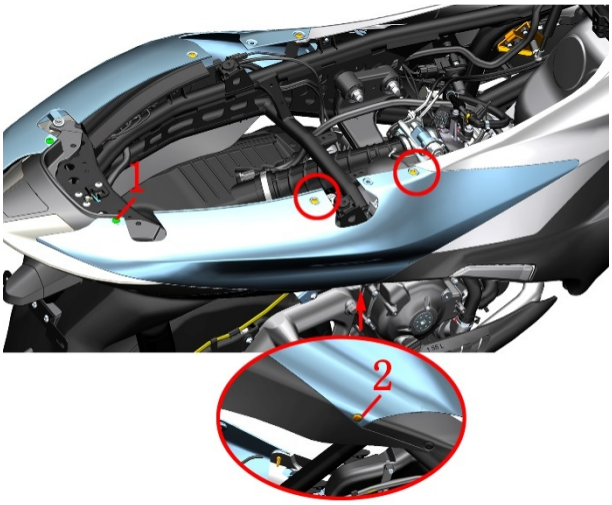
a. Use a 4# inner hexagon to remove the expansion nails connecting the front side of the left and right rear armrests with the tail skirt (1), use a 12# sleeve to remove the 2 M8×30 bolts (2) that fix the front side of the rear armrest (2), and the rear two M8× 35 bolts (3), remove the rear armrest.



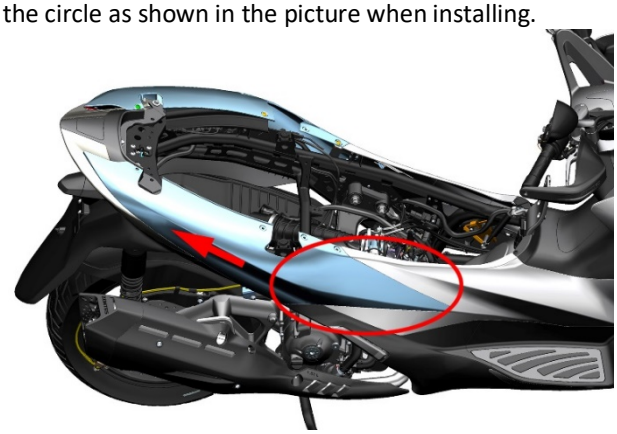
Removal of rear skirt assembly

The following steps are the same for the 350/368/368 (ETC), with the 368 (ETC) only using a T25 Torx wrench; other displacement models use a #4 Allen wrench. Here, the E350 is used as an example.

a. Use a 4# sleeve to remove the bolts on the rear side of the right tail skirt, press down and remove the 2 expansion nails above and the 1 expansion nail below.



b. Gently tap the tail skirt back with your hand to remove the right rear tail skirt assembly. Pay attention to the buckle in the circle as shown in the picture when installing.



c. Disassemble and assemble the left and right rear skirt components in the same way.

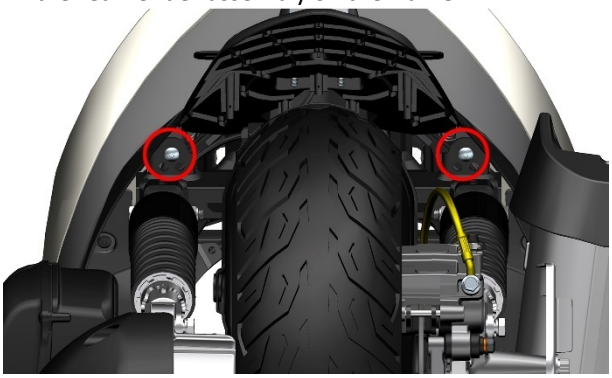
Removal of tail light rear fender assembly

The following steps are the same for the 350/368/368 (ETC), with the 368 (ETC) only using a T25 Torx wrench; other displacement models use a #4 Allen wrench. Here, the E350 is used as an example.

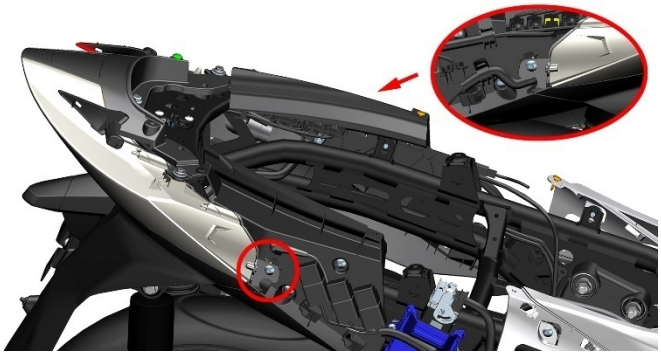
a. Use 4# inner hexagon to remove 3 hexagon inner self-tapping screws. 2 expansion nails, remove the rear fender liner.



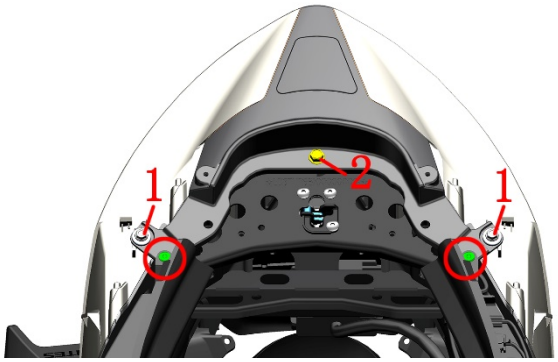
b. Use 4# inner hexagon to remove the 2 M6×14 bolts that fix the rear fender assembly on the frame.



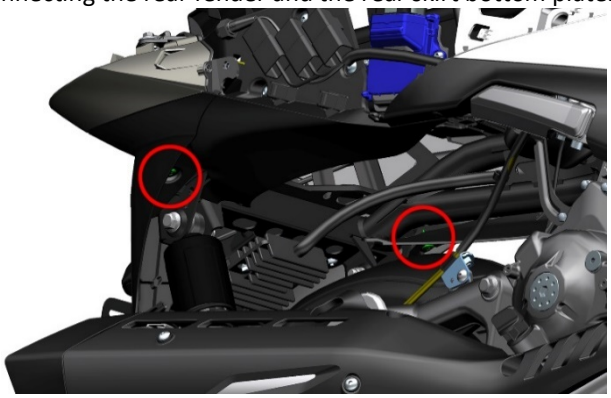
c. Use a 4# inner hexagon to remove the two M6×14 bolts on the left and right sides of the motorcycle that fix the taillights.



d. Buckle down the two expansion nails as shown in the picture, use a 10# sleeve to remove the two M6×16 bolts on the left and right sides of the fixed taillight(1), and use a 10# sleeve to remove one M8× bolt that fixes the rear light 30 bolts (2).



e. Remove the 2 expansion nails on the left and right sides connecting the rear fender and the rear skirt bottom plate.



f. Unplug the wire harness connector on the left side of the rear of the motorcycle, arrange the wire harness and remove

the rear fender assembly of the taillight.





Removal of front left and right storage box covers

The following steps are the same for the 350/368/368 (ETC), with the 368 (ETC) only using a T25 Torx wrench; other displacement models use a #4 Allen wrench. Here, the E350 is used as an example.

a. Press the power button to turn it on, press the lock button of the storage box, open the left storage box cover, and the right storage box cover can be opened directly by pressing the lock button of the storage box.



b. Use 4# inner hexagon to remove 2 pieces of M6×14, then you can take off the panel assembly of the storage box, and use the same method to disassemble the left and right sides



Removal of the decorative cover of the instrument panel panel

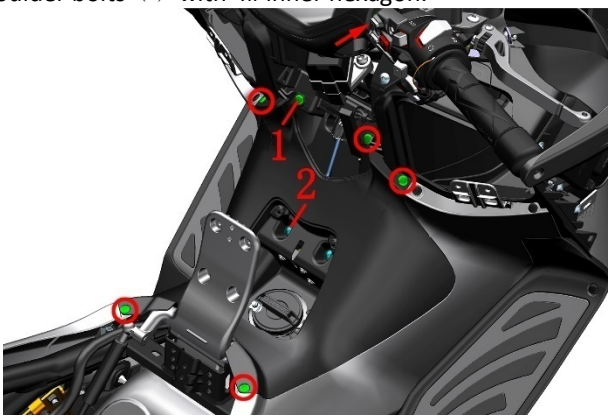
a. Open the left and right front box covers, remove the 2 expansion nails as shown in the picture, pull out the decorative cover of the instrument panel in the direction of the arrow, pull out the PKE antenna pasted on the decorative cover with Velcro, and take off the decorative cover.



Removal of fuel tank trim cover

The following steps are the same for the 350/368/368 (ETC), with the 368 (ETC) only using a T25 Torx wrench; other displacement models use a #4 Allen wrench. Here, the E350 is used as an example.

a. Remove 6 expansion screws (1), remove 2 M6×14 shoulder bolts (2) with 4# inner hexagon.

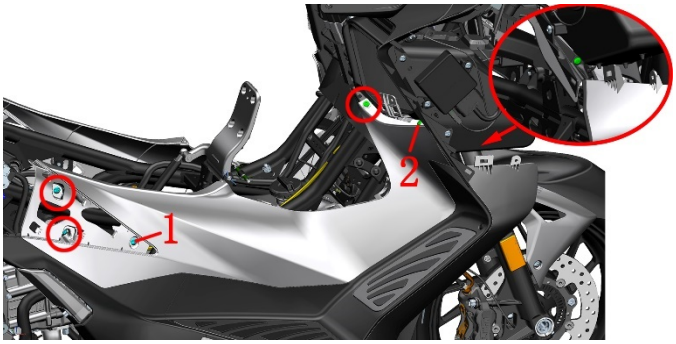


b. Unplug the fuel tank lock connector and take off the fuel tank trim cover assembly.



Removal of fuel tank side cover

The following steps are the same for the 350/368/368 (ETC), with the 368 (ETC) only using a T25 Torx wrench; other displacement models use a #4 Allen wrench. Here, the E350 is used as an example.



a. To remove the left and right side covers of the fuel tank, first remove the head assembly and tail skirt assembly.

b. Use 4# inner hexagon to remove 3 bolts (1) and 3 expansion nails (2).

c. Pull out all the buckles along the edge from the back of the side cover to remove the side cover of the fuel tank. Remove the left and right side covers in the same way.

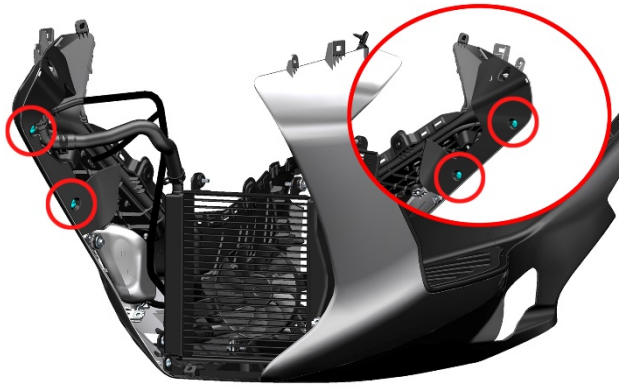
Big pedal assembly removal

The following steps are the same for the 350/368/368 (ETC), with the 368 (ETC) only using a T25 Torx wrench; other displacement models use a #4 Allen wrench. Here, the E350 is used as an example.

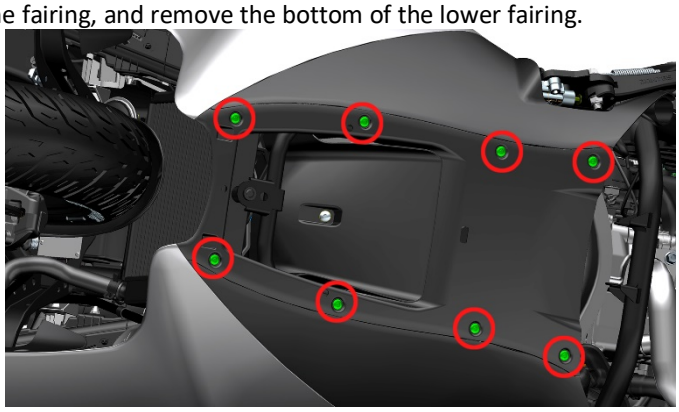
a. Use 4# inner hexagon to remove 4 bolts on both sides (1), and 2 expansion nails (2) on the bottom plate, and remove the middle part of the lower fairing.



b. Use a 4# inner hexagon to remove 2 bolts on the left and right sides, pull off the lining plate of the right decorative cover and the water tank filling port, and remove the lining plate on the left side.



c. Press and pull out the 8 expansion nails at the bottom of the fairing, and remove the bottom of the lower fairing.

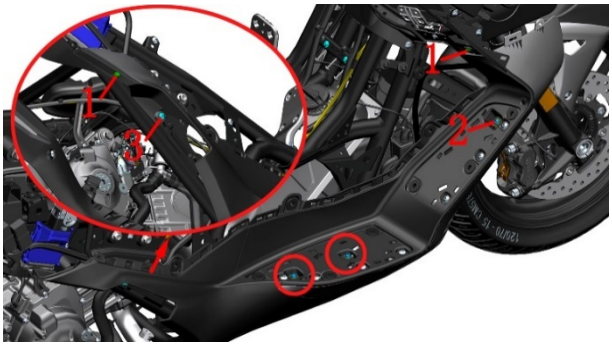


d. Lift out the pedal rubber pad and the pedal rubber pad pressure plate using a one-word batch, press and pull up the pedal rubber pad and the pedal rubber pad pressure plate until the pedal rubber pad and the rear pedal rubber pad pressure plate are taken out. Disassemble the left and right sides in the same way.

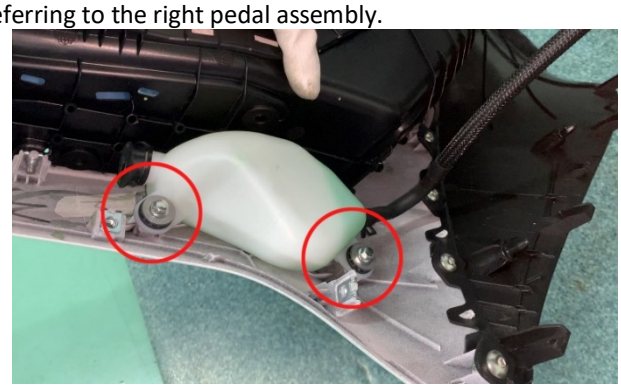
Note: When using a flat batch pry, you can use non-woven cloth and other tools to wrap the flat batch to prevent scratching the paint surface.



e. Remove 3 M6×16 bolts (2) with 5# inner hexagon, remove 1 M6×14 bolt (3) on the rear side with 4# inner hexagon, and remove 1 expansion nail at the front and rear (1).



f. Pull apart the right pedal assembly, and use an 8# sleeve to remove the auxiliary water tank. Place the auxiliary water tank well, the left pedal assembly can be removed by referring to the right pedal assembly.

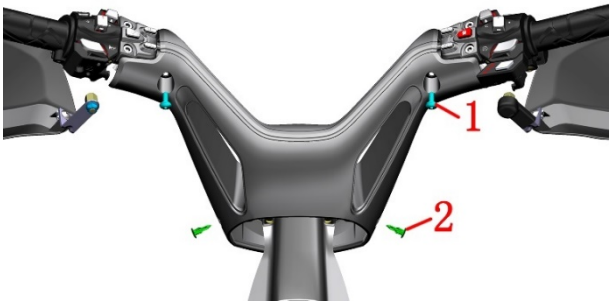


Removal of front storage box panel

The following steps are the same for the 350/368/368 (ETC), with the 368 (ETC) only using a T25 Torx wrench; other displacement models use a #4 Allen wrench. Here, the E350 is used as an example.

a. The front storage box assembly needs to remove the head cover first.

b. Use a 4# inner hexagon to remove the 2 bolts (1) and 2 expansion nails (2) of the lower cover that fix the direction.



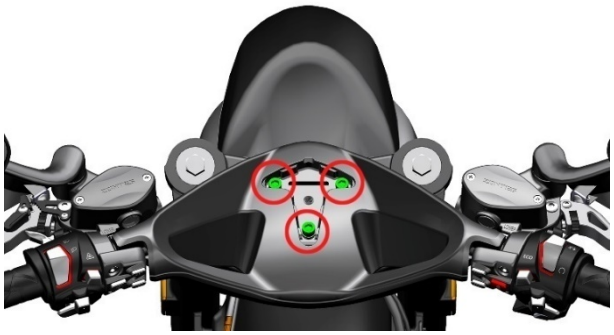
c. Use 6# inner hexagon to remove the left and right handles and switch components.



d. Wrap the handle assembly with a bubble bag to prevent the cover from being scratched. Use a one-word batch to cover the non-woven fabric, and remove the upper cover in the direction.



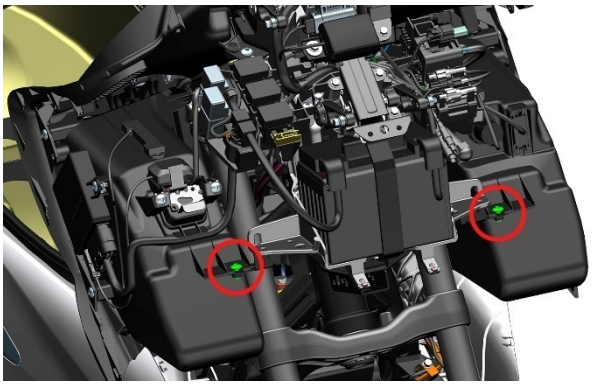
e. Remove 3 bolts with 6# inner hexagon, and take off the spring washers and flat washers.



f. Pull out the cable fixed on the steering handle. Remove the steering handle.



g. Use the 4# inner hexagon to remove the bolts on the left and right storage box brackets.

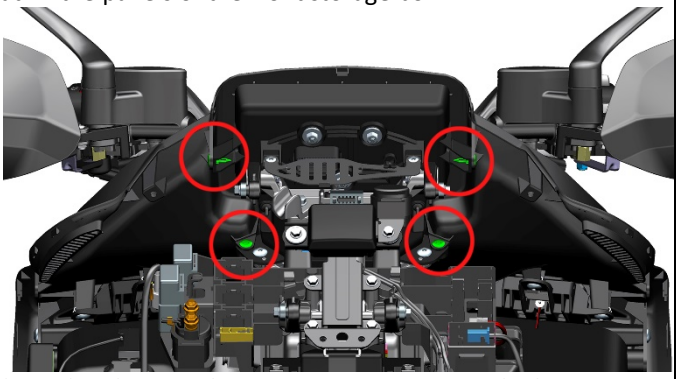


h. Unplug all the wire harnesses on the PKE and tidy up the wire harnesses



i.Open the buckle and remove the OBD diagnostic connector

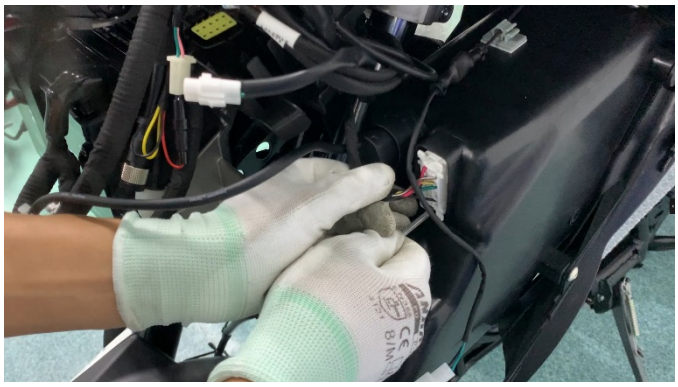
k. Remove the 4 expansion nails on the left and right sides that fix the panels of the front storage box.



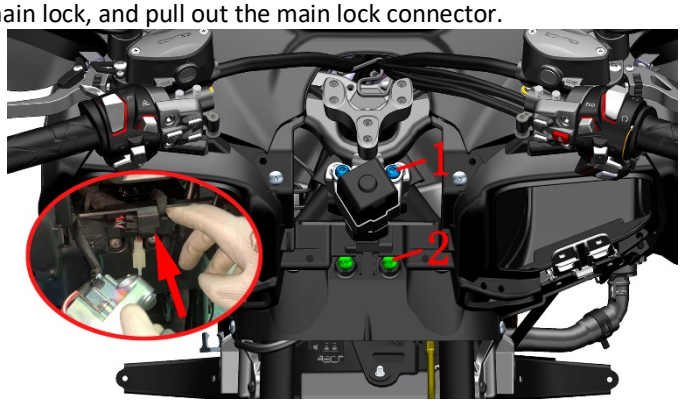
l. Unplug the USB charging port connector and take it out from the ticket box



m. Unplug the charging port connector



j. Use 4# inner hexagon to remove 2 M6×14 bolts (2), use 6# inner hexagon to remove 2 M6×25 bolts (1) to fix the main lock, and pull out the main lock connector.





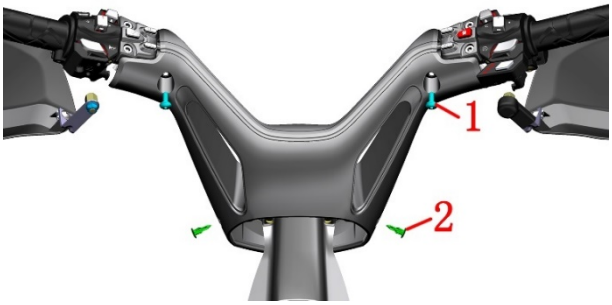
n. Pass the handle assembly through the front storage box panel, and remove the front storage box panel assembly.



Removal of front storage box panel(Thailand)

a. The front storage box assembly needs to remove the head cover first.

b. Use a 4# inner hexagon to remove the 2 bolts（1）and 2 expansion nails（2）of the lower cover that fix the direction.



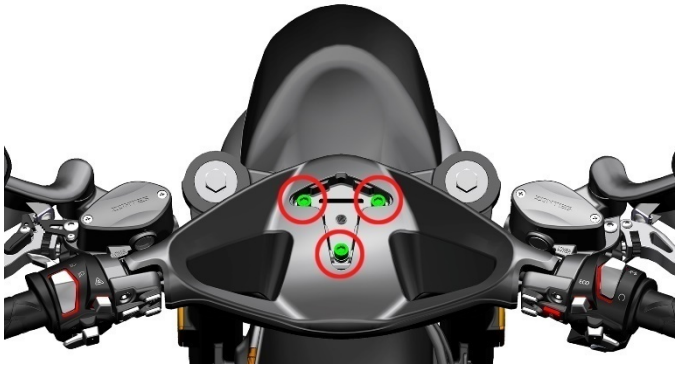
c. Use 6# inner hexagon to remove the left and right handles and switch components.



d. Wrap the handle assembly with a bubble bag to prevent the cover from being scratched. Use a one-word batch to cover the non-woven fabric, and remove the upper cover in the direction.



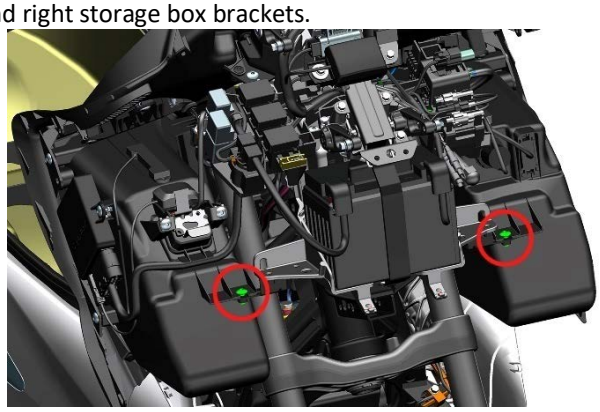
e. Remove 3 bolts with 6# inner hexagon, and take off the spring washers and flat washers.



f. Pull out the cable fixed on the steering handle. Remove the steering handle.



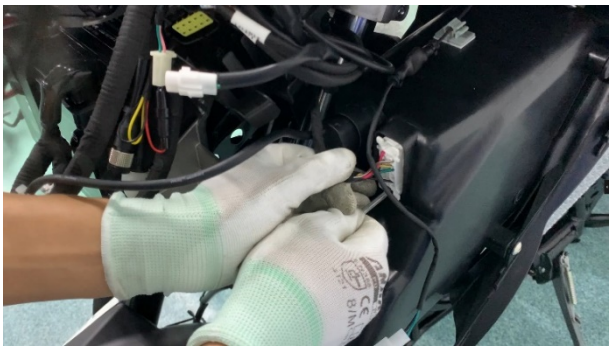
g. Use the 4# inner hexagon to remove the bolts on the left and right storage box brackets.



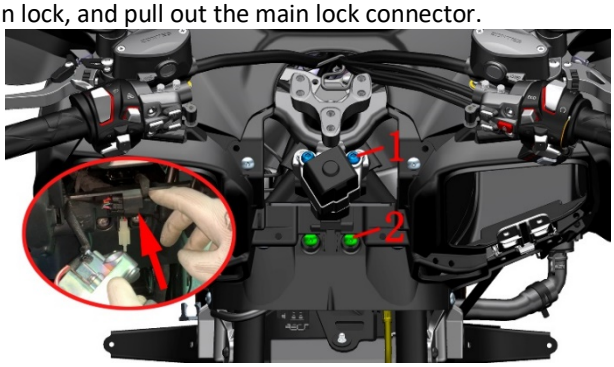
h. Unplug all the wire harnesses on the PKE and tidy up the wire harnesses



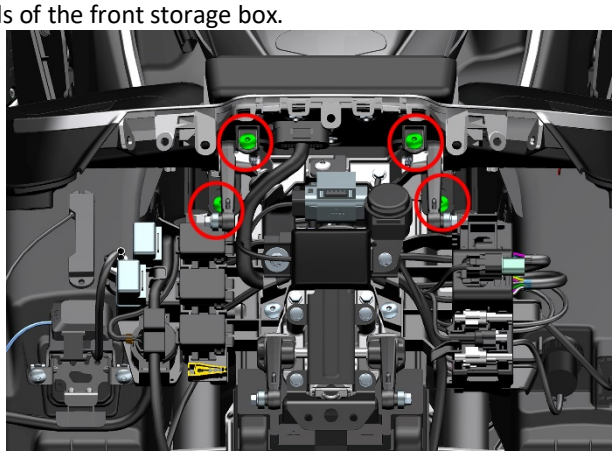
i.Open the buckle and remove the OBD diagnostic connector



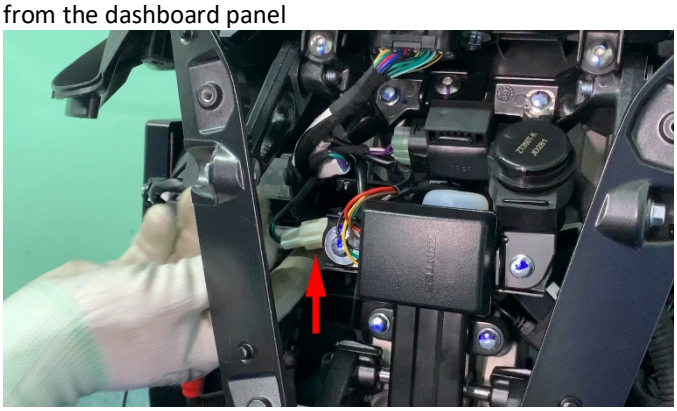
j. Use 4# inner hexagon to remove 2 M6×14 bolts (2), use 6# inner hexagon to remove 2 M6×25 bolts (1) to fix the main lock, and pull out the main lock connector.



k. Remove the 4 bolts on the left and right sides that fix the panels of the front storage box.



l. Unplug the USB charging port connector and take it out from the dashboard panel



m. Unplug the charging port connector



n. Pass the handle assembly through the front storage box panel, and remove the front storage box panel assembly.

