Contents

3.1 Maintenance

3.1.1 Maintenance interval chart

Operations	Maintenance item	First maintenance (6 months or 5,000km)		Routine maintenance		Maintenance interval
		REV	EV	REV	EV	
Must be replaced	Oil (range extender lubricating oil)	●		●		Replace every 1 year or 10,000 km (mileage of range extender)
	Oil filter	●		●		Replace every 1 year or 10,000 km (mileage of range extender)
	Air filter element			●		Replace every 1 year or 20,000 km (mileage of range extender)
	Canister air filter			●		Replace every 2 years or 40,000 km (mileage of range extender)
	Coolant			●	●	Replace every 4 years or 80,000 km
	Brake Fluid			●	●	Replace every 3 years or 40,000 km
	Spark plug			●		Replace every 30,000 km (mileage of range extender)
	Drive motor gear lubricant (including reducer)			●	●	Replace every 4 years or 80,000 km
	Generator lubricating oil			●	●	Replace every 4 years or 80,000 km
	A/C filter element			●	●	Replace every 1 years or 20,000 km
Check fluid level or add coolant (fluid level needs to be between MAX and MIN)	Coolant (fluid level needs to be between MAX and MIN)	●	●	●	●	Regular maintenance inspection
	Brake fluid (fluid level needs to be between MAX and MIN)	●	●	●	●	Regular maintenance inspection
Inspect, adjust or replace	Wear of front brake pad (eccentric wear, thickness of single pad should be greater than 2mm)	●	●	●	●	Regular maintenance inspection
	Wear of rear brake pad (eccentric wear, thickness of single pad should be greater than 2mm)	●	●	●	●	Regular maintenance inspection
	Tension and wear condition of accessory belt (normal tension, wear)			●		Replace every 6 years or 100,000 km (mileage of range extender)
Check	Whether the engine and transmission are subjected to leakage	●		●		Regular maintenance inspection
	Ignition coil (aging, damage)	●		●		Regular maintenance inspection
	Fuel pipe and joint (aging of fuel pipe, crack or damage of joint)	●		●		Regular maintenance inspection
	Whether the wiper and wiper blade are normal, and whether the windshield washer fluid level is normal	●	●	●	●	Regular maintenance inspection
	Cooling system hoses and joints (leakage, etc.)	●	●	●	●	Regular maintenance inspection
	Whether the cooling effect of A/C is normal	●	●	●	●	Regular maintenance inspection

Check	Steering mechanism and transmission shaft dust cover (damage or oil leakage)	●	●	●	●	Regular maintenance inspection
	Triangular arm and connecting rod ball joint (damage or oil leakage)	●	●	●	●	Regular maintenance inspection
	Condition of front and rear shock absorbers (oil leakage)	●	●	●	●	Regular maintenance inspection
	Air spring dust cover (damage)	●	●	●	●	Regular maintenance inspection
	Exhaust pipe and underbody (scratches, damage)	●		●		Regular maintenance inspection
	Whether the free clearance, stroke and return of each pedal are normal	●	●	●	●	Regular maintenance inspection
	Whether the parking brake condition is normal	●	●	●	●	Regular maintenance inspection
	Vehicle wheel alignment (conduct tire rotation/dynamic balance if necessary)	●	●	●	●	Regular maintenance inspection
	Whether the tire condition and air pressure are normal	●	●	●	●	Regular maintenance inspection
	Battery status (whether the voltage and capacity are within the normal range)	●	●	●	●	Regular maintenance inspection
	Whether the lights and horns are normal	●	●	●	●	Regular maintenance inspection
	Inspection of A/C pipeline, harness (for aging, damage)	●	●	●	●	Regular maintenance inspection
	Three-phase high-voltage harness connector (aging, cracks or damage)	●	●	●	●	Regular maintenance inspection
	High-voltage harness and high-voltage connector (damage, cracking interference, etc.)	●	●	●	●	Regular maintenance inspection
	Drive motor and high voltage battery cooling system pipeline (for damage, cracks, etc.)	●	●	●	●	Regular maintenance inspection
	High voltage battery, motor, charger, engine compartment high-voltage box (damage, cracks, etc.)	●	●	●	●	Regular maintenance inspection
	Charging socket (clean, free of foreign objects and liquids)	●	●	●	●	Regular maintenance inspection
	Reading and clearing of vehicle DTCs	●	●	●	●	Regular maintenance inspection
	Inspection of retrofitting or modification (please make records if any)	●	●	●	●	Regular maintenance inspection

Cleaning	Air filter element	●		●		Regular maintenance inspection
	A/C filter element	●	●	●	●	Regular maintenance inspection
Check and clean if necessary	Throttle	●		●		Regular maintenance inspection

Regular maintenance is very important to ensure the performance of the vehicle, reduce the cost of use, and prolong the service life of the vehicle. VOYAH strongly recommends that users regularly complete the regular maintenance of the vehicle at the authorized service center of VOYAH in accordance with the requirements of this manual.

Under normal driving conditions, VOYAH recommends users to conduct a comprehensive inspection and maintenance of the vehicle at the authorized service center of VOYAH according to the maintenance interval of 1 year or 10,000 kilometers (whichever comes first) for EVs, 1 year for REVs, or 10,000 kilometers for the range extender.

For vehicles that are often used under harsh driving conditions, the maintenance frequency should be increased. For details, please contact VOYAH and its service center:

- Driving in a high dust environment.
- Driving in severe cold (below 0°C) or high temperature (above 40°C).
- Driving in wet conditions or wading frequently.
- Driving on roads with salty or corrosive materials.
- Frequent braking or driving in mountainous areas.
- Engaged in operational activities, or often used for special purposes such as high-load use.
- Engage in racing or competitive activities.
- Retrofitting or modification not authorized by VOYAH.

3.1.2 Precautions for maintenance

1. Preparations for maintenance items

(a) Operators should wear safety shoes, gloves, goggles, etc.

(b) Ensure that the site is clean and well-ventilated with tools and instruments placed in order and the fire extinguishers provided.

(c) Check the safety conditions of instruments and equipment for operation, such as lifter, jack etc.

(d) Check the safe driving conditions to ensure smooth maintenance.

2. Precautions during maintenance

(a) Before driving the vehicle into the lifter rack, ensure that enough clearance between the bottom and two sides of the vehicle and the lifter rack is available for avoidance of scratches.

(b) Before lifting the vehicle, ensure that the vehicle weight does not exceed the nominal load capacity of the lifter.

(c) Always select the correct lifting point during lifting.

(d) During lifting, always pay attention to the lifting situation of the vehicle to prevent the lifting from being uneven and causing a collision.

(e) The operator must observe all safety regulations and operation rules during maintenance.

(f) Always replace parts with original accessories provided or approved by the authorized service center of VOYAH to ensure the safety and performance of the vehicle.

(g) Check the operation of the horns and turn signal lamps.

(h) Check the operation of the front and rear wipers and washers, and the washer fluid level.

(i) Check the operation of the door lock.

(j) Check whether the functions of the interior and exterior rearview mirrors are normal.

(k) Check the clarity of vehicle license plates.

(l) Check the coolant level.

(m) Check the operation of the steering gear.

(n) Check brake pedal travel and brake fluid level.

(o) Check tire pressure and wear.

(p) Check whether the engine hood locking mechanism works properly.

3. Post-maintenance precautions

(a) Upon completion of maintenance, it is required to determine necessity of test run inspection based on maintenance items, especially inspection on the electric drive system, brake system and passenger protection system.

(b) The vehicle can be delivered to the customer only when DTCs stored in the ECU have been eliminated.

4. Planned items

(a) The planned maintenance interval and the maintenance interval of each component depends on the odometer and time interval, whichever comes first; see the maintenance interval chart for specific intervals.

(b) Pay special attention on some parts during maintenance. In case of aging or damage of a hose, please replace it immediately (aging of the rubber hose will occur as time goes on, thus causing ballooning, interference or cracks).

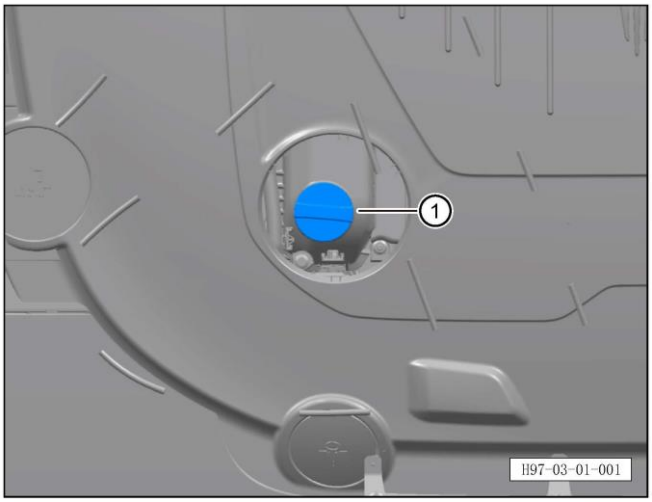
3.1.3 Oil specification and filling volume

Item	Type	Specification (specified by manufacturer)	Consumption
Fuel	/	92# and above	56L
Coolant	Coolant (REV)	Coolant -35℃	6.5L (range extender)
			12.5L (battery system)
	Coolant (battery system of REV version)		21L
Range extender lubricating oil	Range extender lubrication system	SN Grade 5W-30 Fully Synthetic Lubricant	4L
Gear lubricant	Drive motor gear lubricant (including reducer)	ETF-EMC Electromechanical Coupling Lubricant	3L (single motor)
			6L (dual motor), filled separately
	Generator lubricating oil	ATF T6	1.1L
Windscreen washer fluid reservoir	Windscreen cleaning system	Choose the washer fluid of corresponding antifreeze level according to the actual local temperature	3.7L
A/C Refrigerant	A/C cooling system	R134a	0.67Kg (EV)
			0.62Kg (REV)
Brake Fluid	Brake System	Motor vehicle brake fluid	0.75L

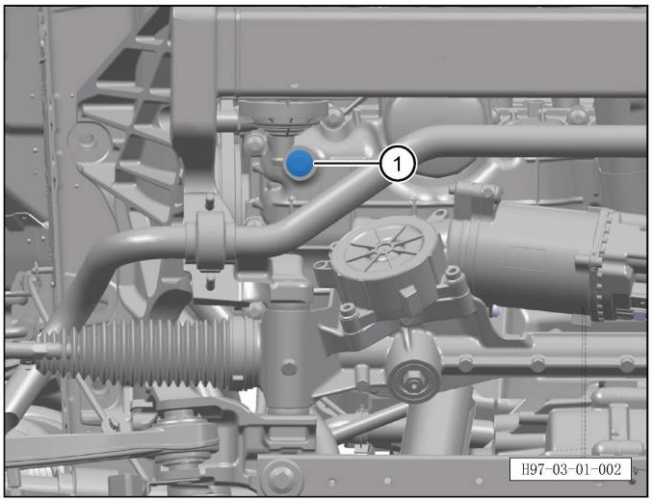
3.1.4 Vehicle maintenance inspection

3.1.4.1 Replacement of engine oil and oil filter

1. Turn off all electrical appliances and the start switch.



a. Unscrew the engine oil filler cap①.



b. Lift the vehicle, unscrew the drain plug①, and collect the engine oil with a graduated container.

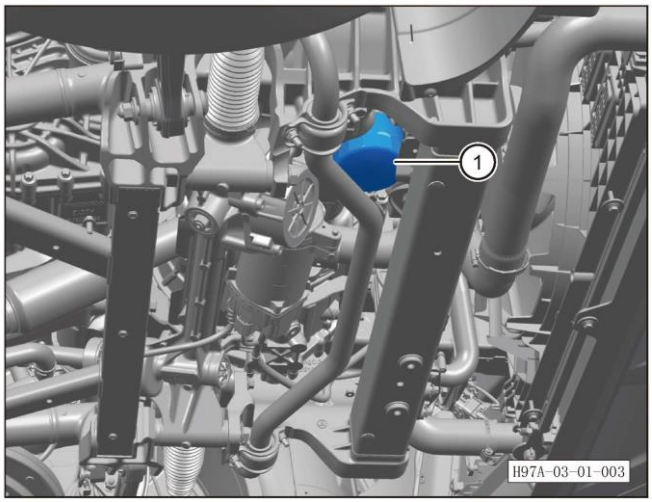
c. Every time the lubricating oil is replaced, the seal ring inside the drain plug must be replaced at the same time.

d. Tighten the drain plug ① with the specified torque.

Tightening torque of drain plug: 30±3Nm.

CAUTION:

- Dispose of the drained oil according to regulations!
- The removed drain plug must be cleaned before replacing the new internal seal ring.
- If the thread of the drain plug is damaged, replace the drain plug and seal ring.
- Excessive tightening torque may cause leakage of the drain plug or even damage to the oil sump.



2. Remove the oil filter

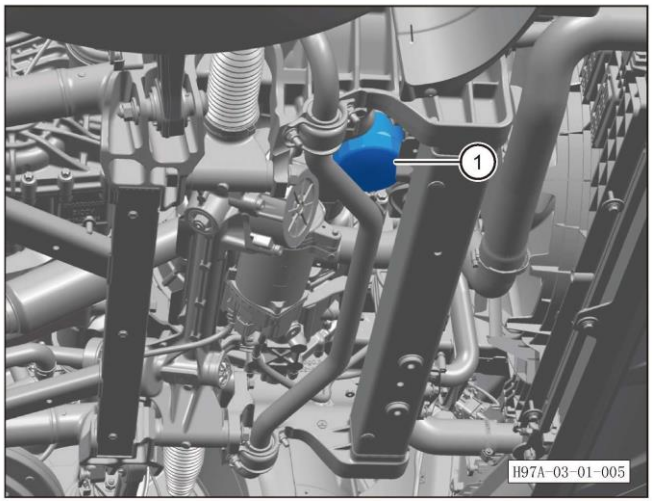
a. Remove the engine oil filter ① using the oil filter removal & refitting tool.

3. The oil filter refitting procedure is performed in reverse order, while observing the following considerations:

a. Replace the oil filter with a new one and clean the contact surfaces of the oil filter.

b. Lubricate the seal rings of the new filter with an appropriate amount of clean oil.

Torque of filter: 23±2Nm.



c. Tighten the engine oil filter ① using the oil filter removal & refitting tool.

4. Fill oil

a. Fill an appropriate amount of oil as required.

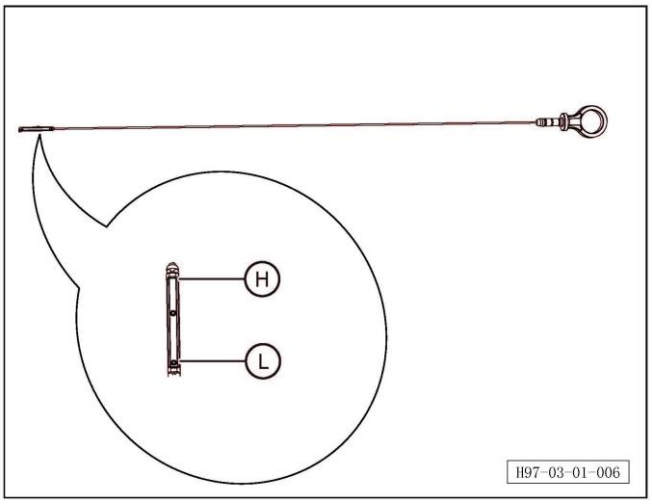
Oil specification: quality grade of API SN.

Oil viscosity: viscosity grade of SAE 5W-30.

The maintenance filling volume for replacement of the filter: 4L (check the oil dipstick scale).

b. When the engine is running and the normal temperature is reached, check that there is no oil leakage from the oil filter and drain bolt.

c. Leave the vehicle on a flat ground, turn off the start switch, wait for three minutes to allow the oil to flow to the oil sump, pull out the dipstick, wipe it with a clean rag and reinsert the dipstick to the bottom.



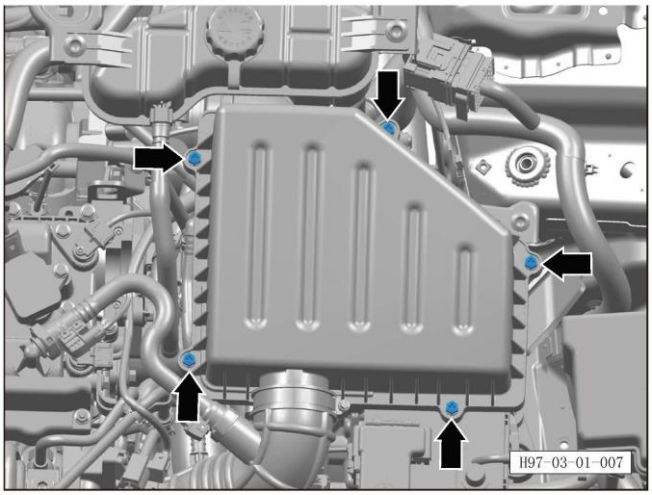
d. Pull out the dipstick again, and the oil level should be between the upper mark H and the lower mark L.

3.1.4.2 Replacement of air filter

Removal procedure

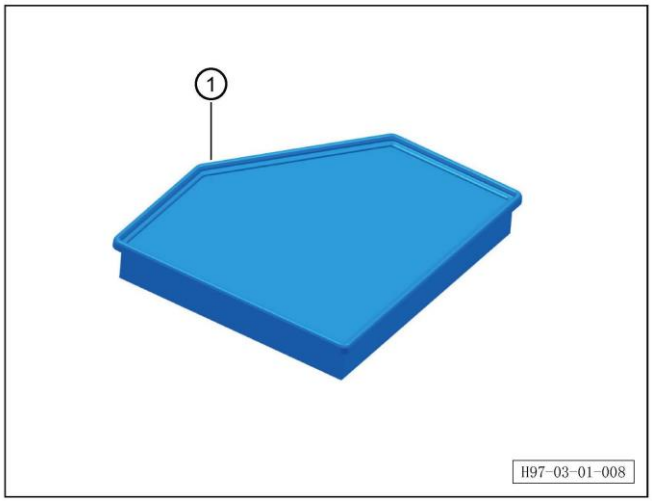
1. Turn off all electrical appliances and the start switch.

2. Replace the air filter element.



a. Unscrew the 5 fixing screws of the air filter. Tightening torque of screw: 3Nm.

b. Turn over the air filter upper housing ①.



c. Take out the air filter element ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

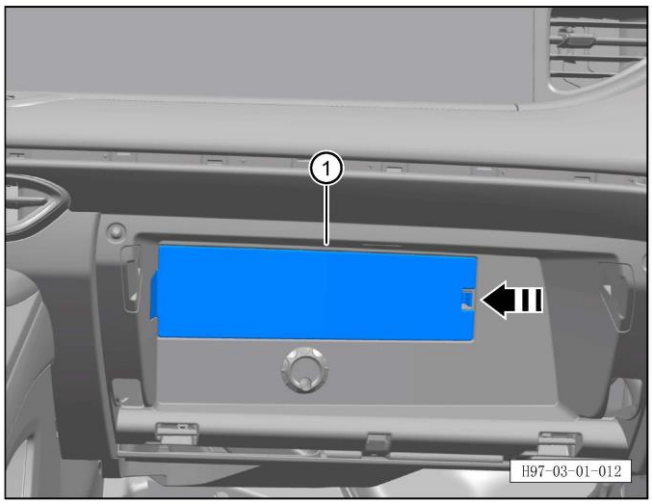
- If the air filter element is to be replaced, please use the original air filter element.

- Please clean the debris in the air filter housing.

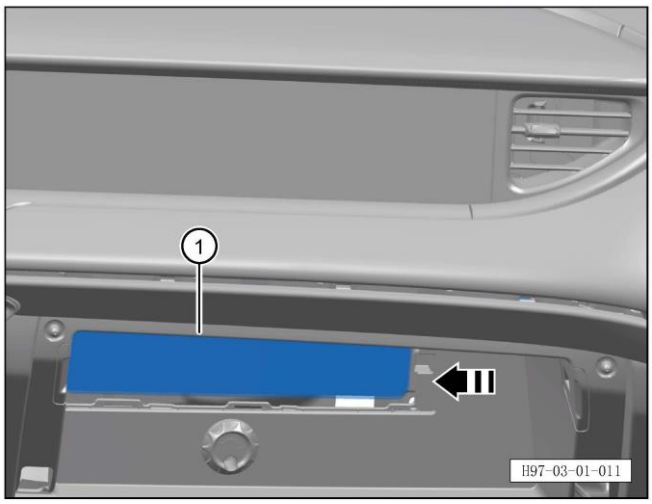
3.1.4.3 Replacement of A/C filter

Removal procedure

1. Replace the A/C filter



a. Press the A/C filter cover fixing clip in the direction as indicated by the arrow, and take out the A/C filter cover ①.



b. Take out the A/C filter ①.

Refitting procedure

The refitting procedure is performed in reverse order.

3.1.4.4 Replacement of brake fluid

NOTE:

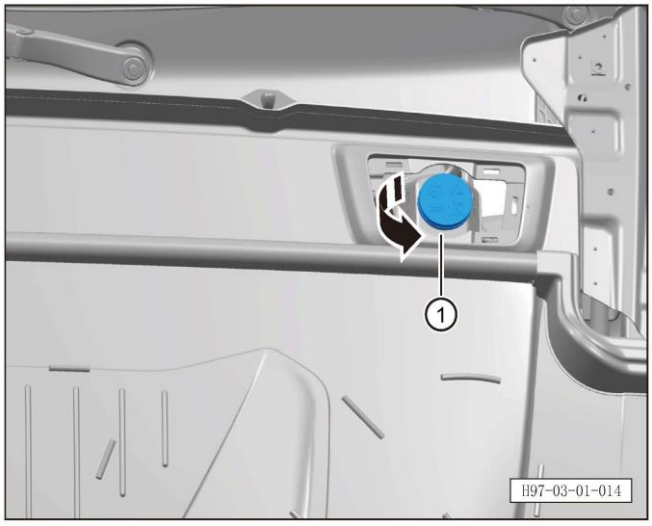
- When replacing the brake fluid, the brake fluid approved by the Company must be used.

- Do not mix brake fluid with other mineral oils, which can damage the seals of the brake system.

- Brake fluid is toxic and corrosive, so never spill it onto the body paint.

- Brake fluid is highly hygroscopic and will absorb moisture from the surrounding environment and must be kept tightly sealed.

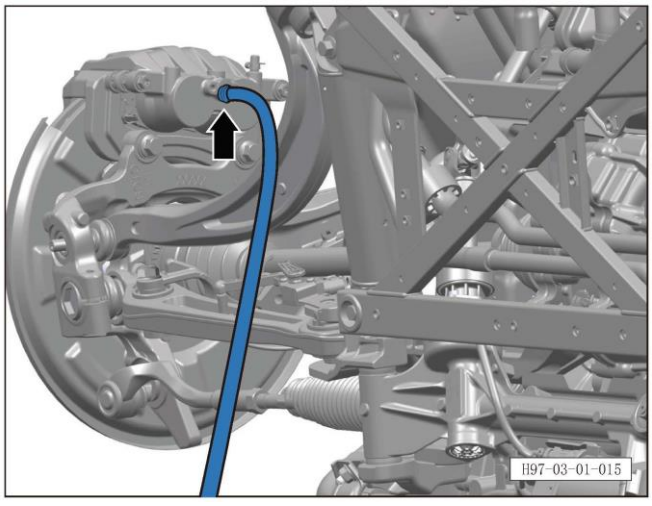
1. Replace the brake fluid



a. Unscrew the brake fluid reservoir cover ① in the direction as indicated by the arrow.

b. Pump out the brake fluid from the brake fluid reservoir.

c. Add new brake fluid to the brake fluid reservoir.

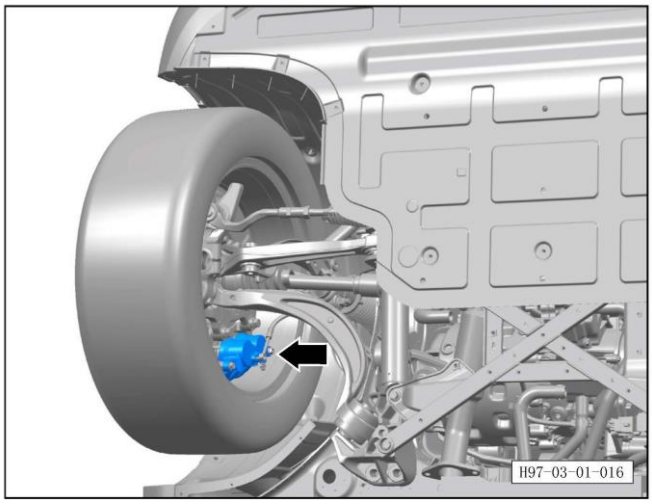


d. Have the brake fluid replaced by two technicians.

e. Lift the vehicle.

f. Remove the seal covers of the brake caliper bleed bolts and install the collection container.

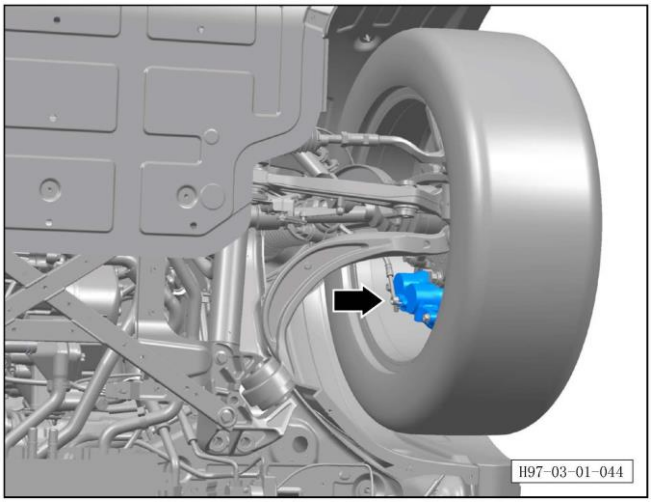
g. Loosen the bleed bolts of the brake calipers, with one mechanic depressing the brake pedal in the vehicle and another mechanic below loosening/tightening the bleed bolts. Tightening torque of bolt: 12±1Nm.



h. Replace the brake fluid for the right front brake wheel cylinder until the brake fluid is renewed.

CAUTION:

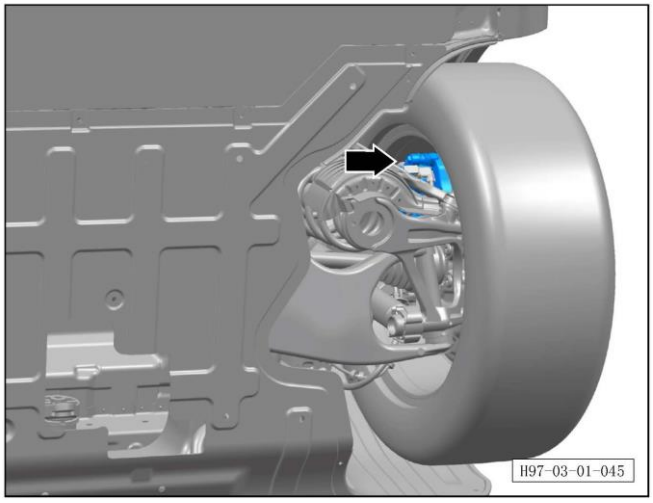
- When replacing the brake fluid, note that the newly added brake fluid in the reservoir must not be lower than the "MIN" line.



i. Replace the brake fluid for the left front brake wheel cylinder until the brake fluid is renewed.

CAUTION:

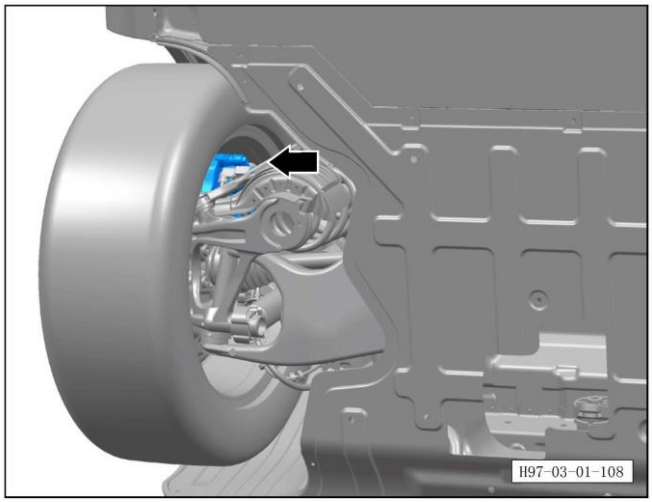
- When replacing the brake fluid, note that the newly added brake fluid in the reservoir must not be lower than the "MIN" line.



j. Replace the brake fluid for the right rear brake wheel cylinder until the brake fluid is renewed.

CAUTION:

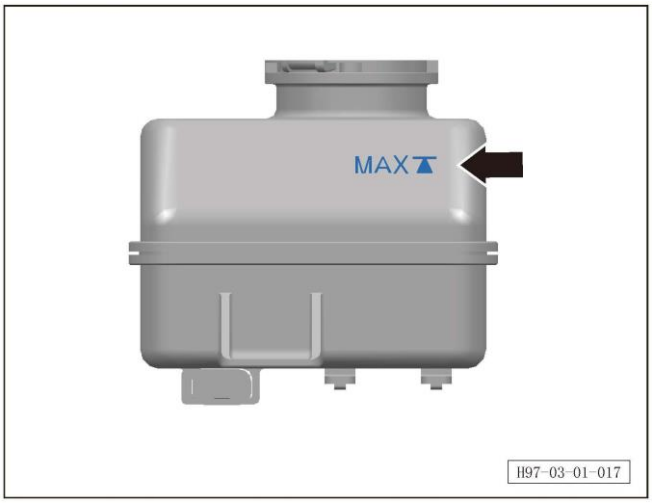
- When replacing the brake fluid, note that the newly added brake fluid in the reservoir must not be lower than the "MIN" line.



k. Replace the brake fluid for the left rear brake wheel cylinder until the brake fluid is renewed.

CAUTION:

- When replacing the brake fluid, note that the newly added brake fluid in the reservoir must not be lower than the "MIN" line.



l. Add brake fluid to the level indicated by the arrow on the “MAX” mark of the reservoir.

3.1.4.5 Replacement of spark plugs

Removal procedure

CAUTION:

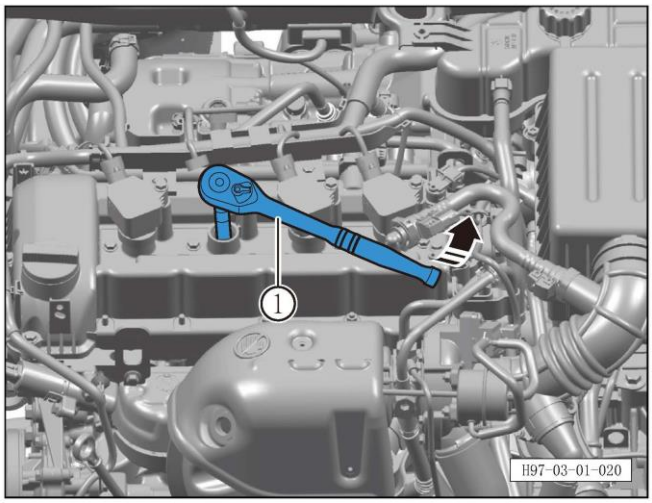
- Do not remove the spark plug when the engine is hot to avoid damage to the spark plug threaded hole on the cylinder head.

1. Turn off all electrical appliances and the start switch.

2. Disconnect the battery negative terminal.

3. Remove the ignition coil. See 4.5.10.2 Removal and refitting of ignition coil

4. Remove the spark plug.

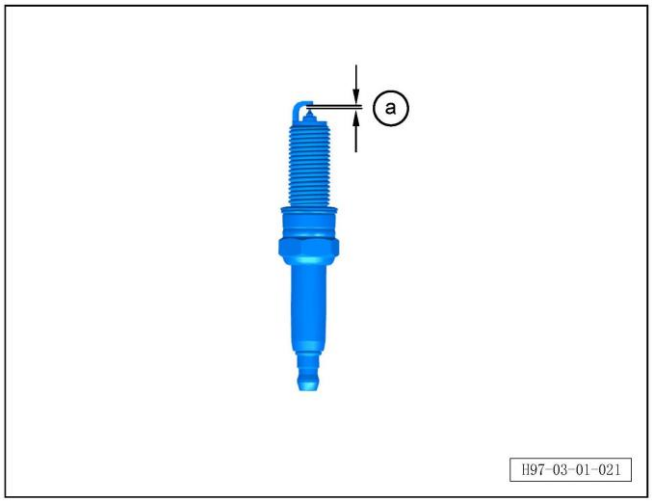


a. Unscrew the spark plug in the direction as indicated by the arrow using the spark plug removal tool ①.

Tightening torque: 25±2Nm.

Refitting procedure

The refitting procedure is performed in reverse order.



CAUTION:

- When refitting the spark plug, check that the spark plug is of the correct type.

- Check the spark plug for oil and carbon deposits at the position indicated by the arrow, and clean if necessary.

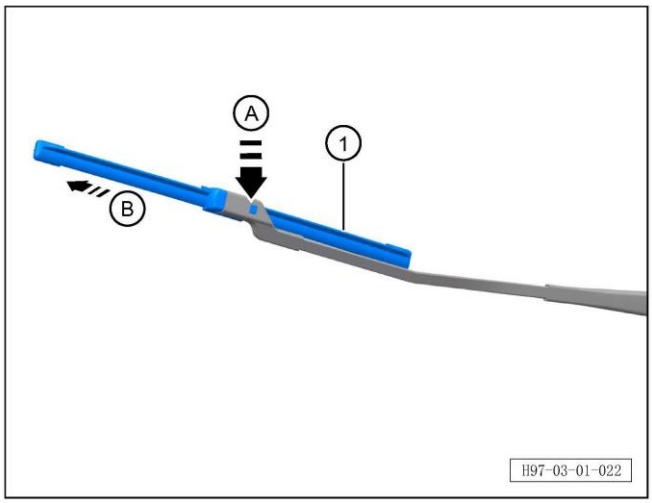
- Check the electrode clearance a of the spark plug.

The standard value of a is: 0.7 ~ 0.8mm.

3.1.4.6 Replacement of wiper blade

Removal procedure

1. Replace the wiper blade.



a. Power off the vehicle, move the wiper combination switch to the MIST gear and hold it for 3 seconds to enter the wiper maintenance mode.

b. Press the wiper blade fixing clip A, and take out the wiper blade ① in the B direction.

c. Replace the wiper blade with a new one.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- After the vehicle is powered on again, the wipers will automatically reset and exit the maintenance mode.

- After the refitting is complete, power on the vehicle, turn on the wiper spray mode, check whether the wiper is running normally, make sure the wiper is refitted in place, and turn off the wiper switch.

3.1.4.7 Replacement of drive motor and high voltage battery coolant (REV)

Discharge procedure

NOTE:

- Before discharge of coolant, wait for the coolant to cool completely.

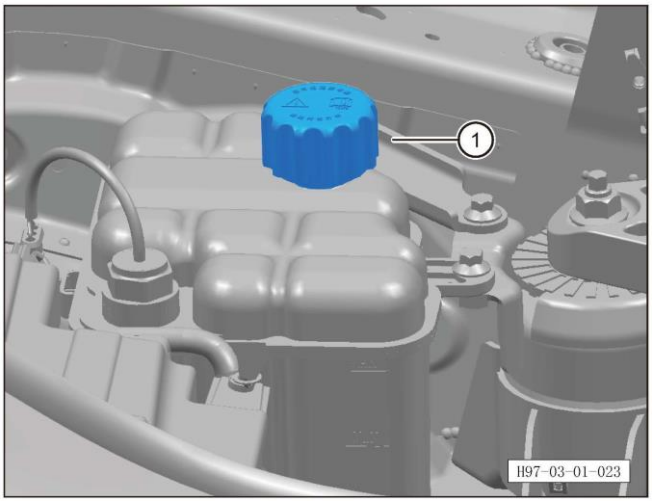
- Opening the auxiliary reservoir cap may cause hot steam to escape. Please take protective measures to avoid injury to the eyes and burn the skin. Before opening the auxiliary reservoir cap, cover it with a rag, and then carefully unscrew it.

1. Turn off all electrical appliances and the start switch.

2. Disconnect the battery negative terminal.

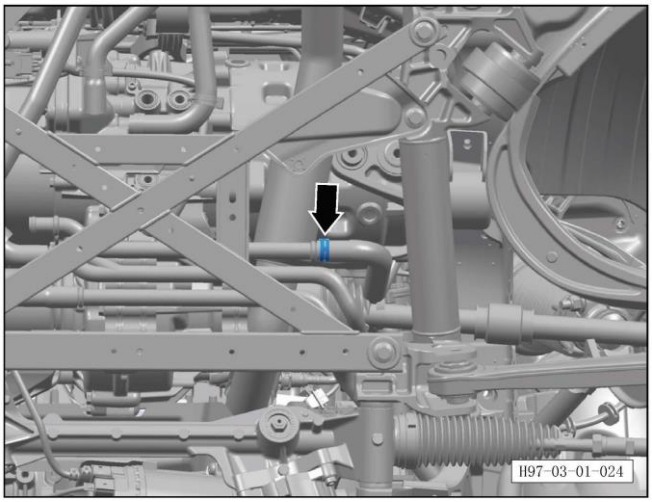
3. Replace the drive motor and high voltage battery coolant.

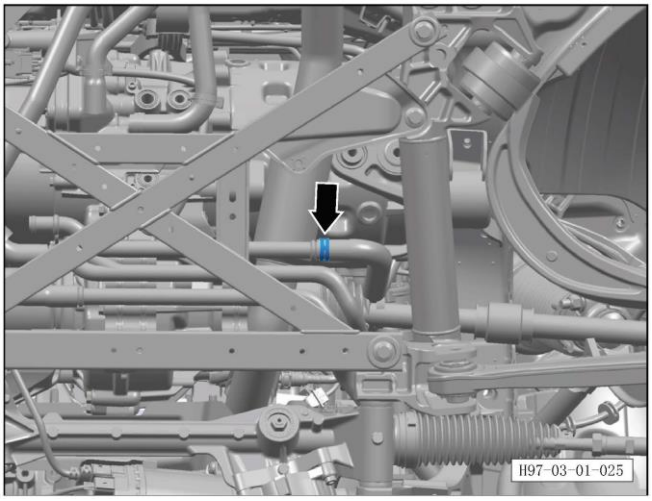
a. Unscrew the auxiliary reservoir cap①.



b. Place the coolant collection container on the bottom of the vehicle.

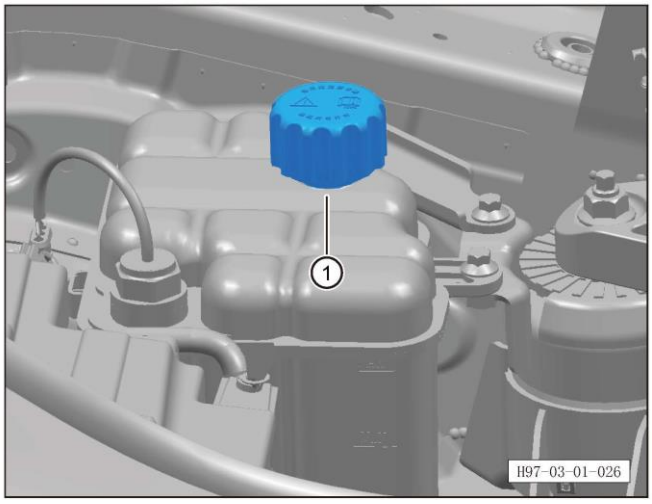
c. Loosen the fixing clamp of the water pipe connecting the auxiliary reservoir and the electric water pump, and disconnect the water pipe to discharge the coolant.





Filling:

a. Refit the water pipe connecting the auxiliary reservoir and the electric water pump, and refit the fixing clamp.



b. Slowly add coolant to the MAX mark on the top of the auxiliary reservoir.

c. Install the auxiliary reservoir cap ①.

NOTE:

- Do not dilute the coolant arbitrarily.

- Coolant cannot be reused, mixed or replaced with that of different colors.

- Coolant: the lowest temperature can reach -35℃, filling volume: 12.5L.

- Coolant protects against frost, corrosion damage and scaling, as well as raising the boiling point, so it must be filled according to the standard.

- The use of phosphates and nitrates as corrosion inhibitors in coolants is prohibited.

- Use coolant with high boiling point in southern tropical climates.

- In the cold north, it is necessary to ensure that the antifreeze temperature is as low as about -25°C (as low as about -35°C in some places).

- Under standard atmospheric pressure (101kPa), the boiling point of the coolant is not lower than 107°C and the freezing point is not higher than -35°C.

- Coolant recovery must be handled in accordance with relevant national regulations.

3.1.4.8 Replacement of drive motor and high voltage battery coolant (EV)

Discharge procedure

NOTE:

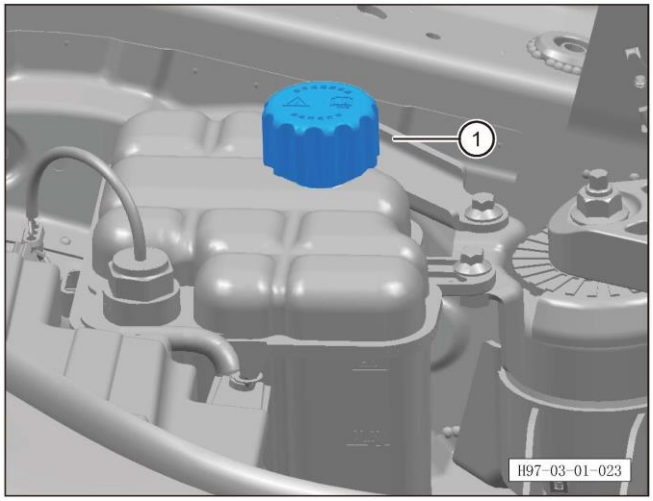
- Before discharge of coolant, wait for the coolant to cool completely.

- Opening the auxiliary reservoir cap may cause hot steam to escape. Please take protective measures to avoid injury to the eyes and burn the skin. Before opening the auxiliary reservoir cap, cover it with a rag, and then carefully unscrew it.

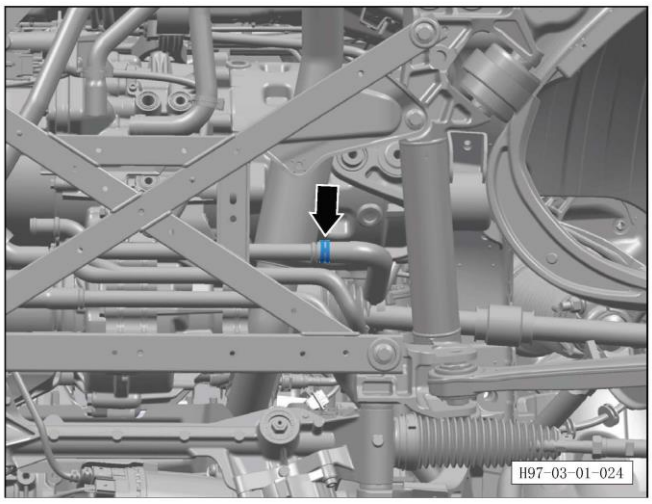
1. Turn off all electrical appliances and the start switch.

2. Disconnect the battery negative terminal.

3. Replace the drive motor and high voltage battery coolant.

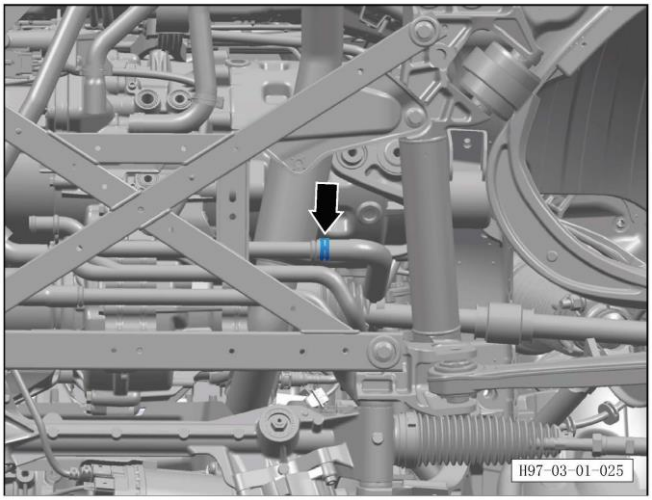


a. Unscrew the auxiliary reservoir cap①.



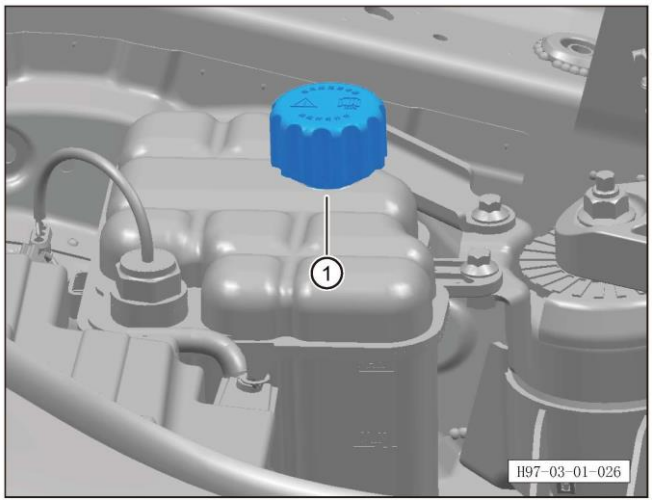
b. Place the coolant collection container on the bottom of the vehicle.

c. Loosen the fixing clamp of the water pipe connecting the auxiliary reservoir and the electric water pump, and disconnect the water pipe to discharge the coolant.



Filling:

a. Refit the water pipe connecting the auxiliary reservoir and the electric water pump, and refit the fixing clamp.



b. Slowly add coolant to the MAX mark on the top of the auxiliary reservoir.

c. Install the auxiliary reservoir cap ①.

NOTE:

- Do not dilute the coolant arbitrarily.

- Coolant cannot be reused, mixed or replaced with that of different colors.

- Coolant: the lowest temperature can reach -35℃, filling volume: 12.5L.

- Coolant protects against frost, corrosion damage and scaling, as well as raising the boiling point, so it must be filled according to the standard.

- The use of phosphates and nitrates as corrosion inhibitors in coolants is prohibited.

- Use coolant with high boiling point in southern tropical climates.

- In the cold north, it is necessary to ensure that the antifreeze temperature is as low as about -25°C (as low as about -35°C in some places).

- Under standard atmospheric pressure (101kPa), the boiling point of the coolant is not lower than 107°C and the freezing point is not higher than -35°C.

- Coolant recovery must be handled in accordance with relevant national regulations.

3.1.4.9 Replacement of engine coolant

Discharge procedure

NOTE:

- Before discharge of coolant, wait for the coolant to cool completely.

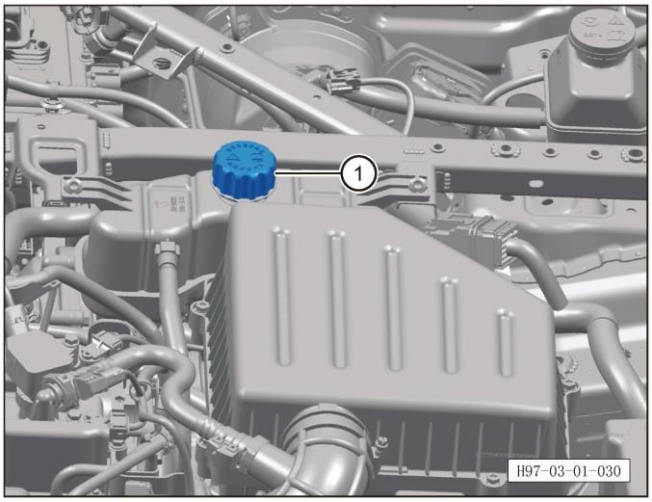
- Opening the reservoir cap may cause hot steam to escape. Please take protective measures to avoid injury to the eyes and scald the skin. Before opening the reservoir cap, cover it with a rag, and then carefully unscrew it.

1. Turn off all electrical appliances and the start switch.

2. Disconnect the battery negative terminal.

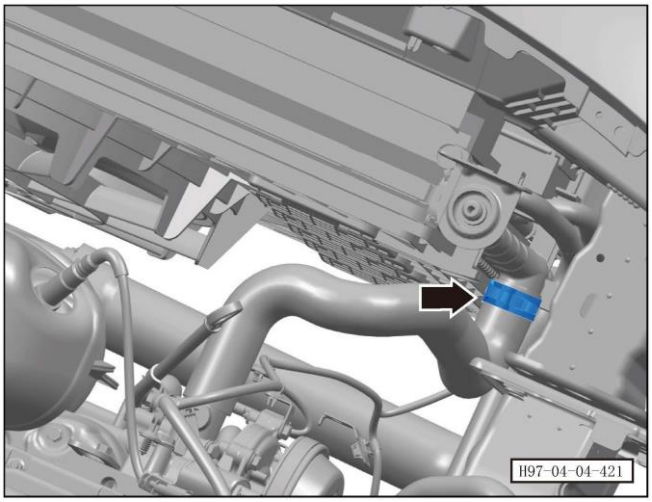
3. Replace the engine coolant.

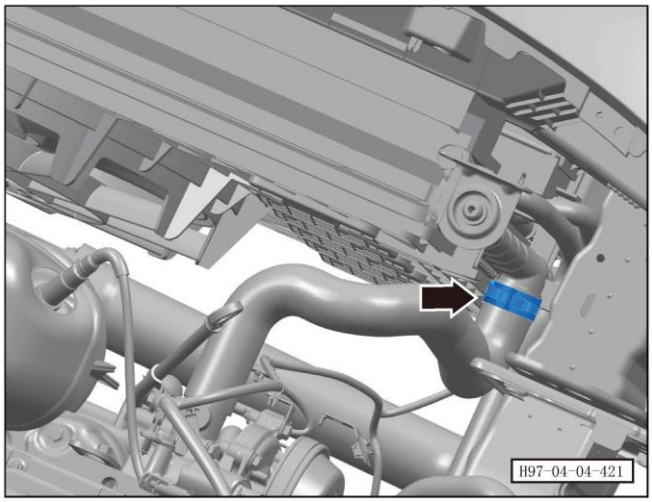
a. Unscrew the reservoir cap①.



b. Place the coolant collection container on the bottom of the vehicle.

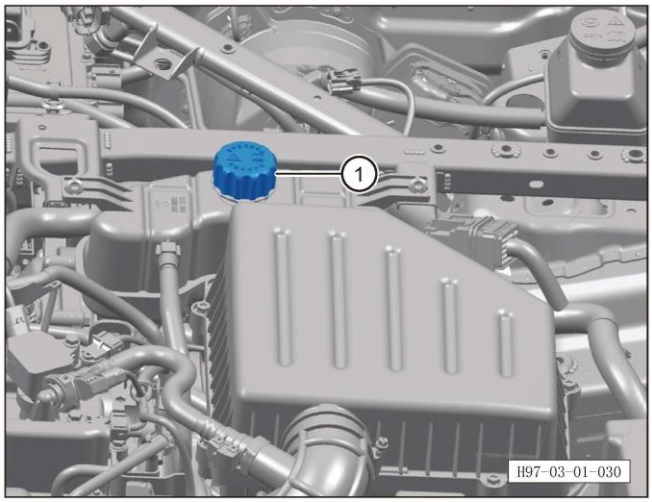
c. Loosen the clamp connecting the radiator outlet pipe to the radiator, disconnect the water pipe, and drain the coolant.





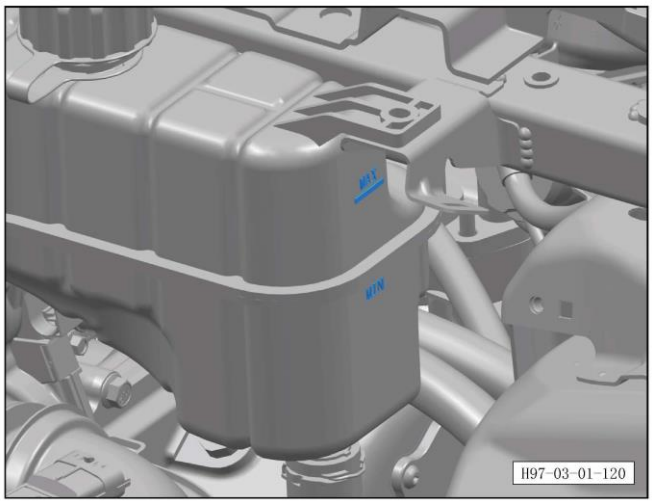
Filling

a. Refit the radiator outlet pipe and the fixing clamp.



b. Slowly add coolant to the upper mark MAX on the reservoir.

c. Refit the reservoir cap ①.



d. Power on the vehicle, connect the vehicle scan tool, control the electric water pump to open through the diagnostic test system, and discharge the air in the system.

e. Check whether the coolant reaches the upper mark MAX on the upper part of the reservoir ①, and add coolant if necessary.

NOTE:

- Do not dilute the coolant arbitrarily.

- Coolant cannot be reused, mixed or replaced with that of different colors.

- Coolant: the lowest temperature can reach -35℃, filling volume: 6.5L.

- Coolant protects against frost, corrosion damage and scaling, as well as raising the boiling point, so it must be filled according to the standard.

- The use of phosphates and nitrates as corrosion inhibitors in coolants is prohibited.

- Use coolant with high boiling point in southern tropical climates.

- In the cold north, it is necessary to ensure that the antifreeze temperature is as low as about -25°C (as low as about -35°C in some places).

- Under standard atmospheric pressure (101kPa), the boiling point of the coolant is not lower than 107°C and the freezing point is not higher than -35°C.

- Coolant recovery must be handled in accordance with relevant national regulations.

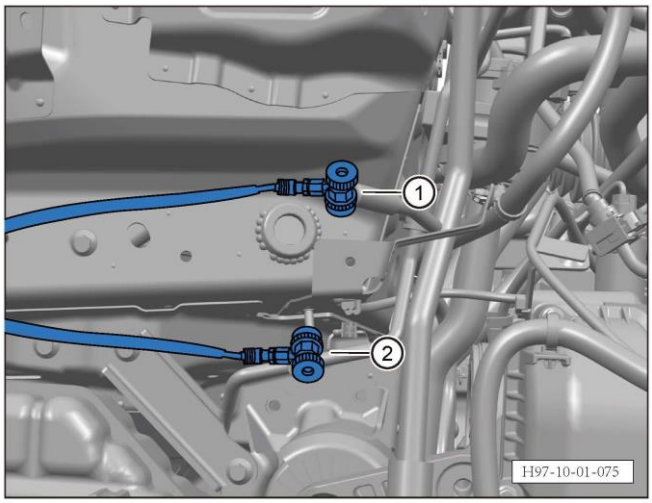
3.1.4.10 Replacement of A/C refrigerant

Replacement procedure

1. Turn off all electrical appliances and the start switch.

2. Disconnect the battery negative terminal.

3. Replace the A/C refrigerant.



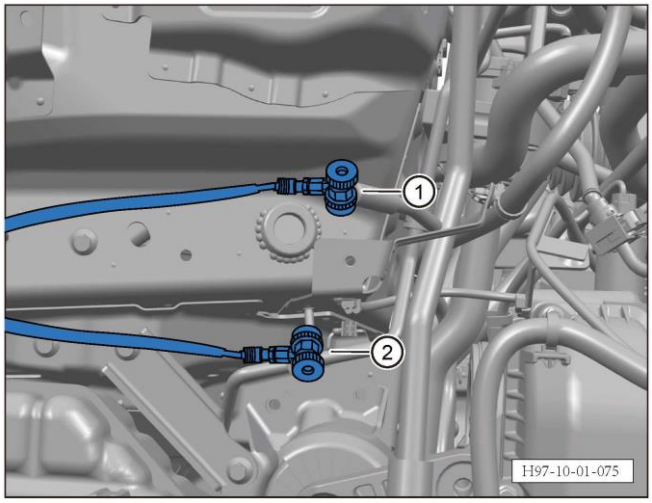
a. Connect the high and low pressure lines of the cooling circuit.

b. Turn on the low pressure valve switch ① and high pressure valve switch ② of the equipment.

c. Select the "Refrigerant Recovery" option of the equipment, start the equipment, and start the recovery.

d. Check the pressure value of low-pressure gauge of the equipment. When the pressure reaches -34kPa vacuum, turn off the equipment and stop the recovery.

4. Vacuumize the A/C system.



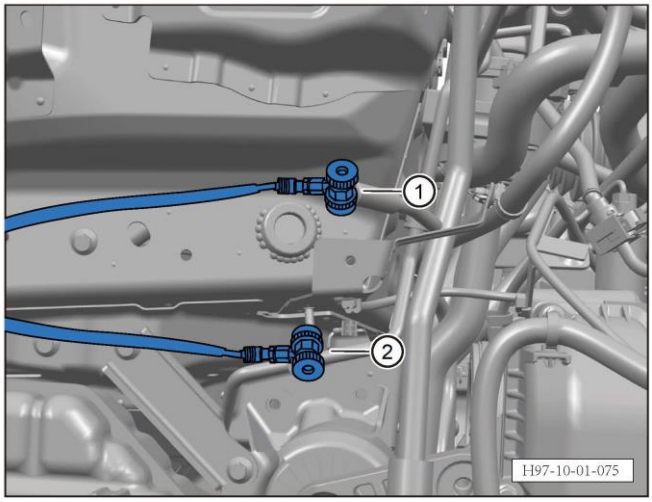
a. Connect the high and low pressure lines of the cooling circuit.

b. Turn on the low-pressure valve switch ① and the high-pressure valve switch ② of the equipment, select the option "Vacuumize", and set the time to 15 minutes. Start the equipment to vacuumize, and when the time reaches the set value, the equipment will automatically stop working.

c. Turn off the high pressure valve switch ② of the equipment and check the pressure value of the low-pressure gauge.

d. If the pressure value reaches the set value and does not rise again, it can be confirmed that there is no leakage in the cooling circuit, and the compressor lubricating oil and refrigerant can be added.

e. If the pressure value rises, check the cooling circuit for leaks.



5. Fill A/C refrigerant.

a. Select the "Refrigerant Make-up" option of the equipment to adjust the filling volume.

b. Turn on the low pressure valve switch ①, turn off the high pressure valve switch ②, and start the equipment for filling.

c. Observe the display of equipment. When the filling volume has reached the set value, the equipment screen will show that filling is complete.

d. Close the valve and the filling is complete. Please fill the refrigerant according to the following standards.

Type of refrigerant	Filling volume of refrigerant
R134a	670g (EV)
R134a	620g (REV)

If the equipment shows that the filling speed is too slow, please refer to the following filling methods:

– Disconnect the high pressure connector of the cooling circuit and connect only the low pressure side.

– Close the high and low pressure valves of the equipment.

– Put the car in parking gear, start the car, turn on the A/C and set it to low temperature mode.

– Turn on the low pressure valve switch of the equipment, and the refrigerant will be filled into the refrigeration pipeline from the low pressure side.

– Disconnect the low pressure connector when the pressure gauge shows that the standard low pressure value is reached.

– Refrigerant filling is complete.

3.1.4.11 Replacement of front drive motor assembly lubricating oil

CAUTON:

- Please observe the disposal regulations!

- Gaskets for filler bolts and drain bolts must not be reused.

- Determine the oil filling volume according to the filling volume requirement.

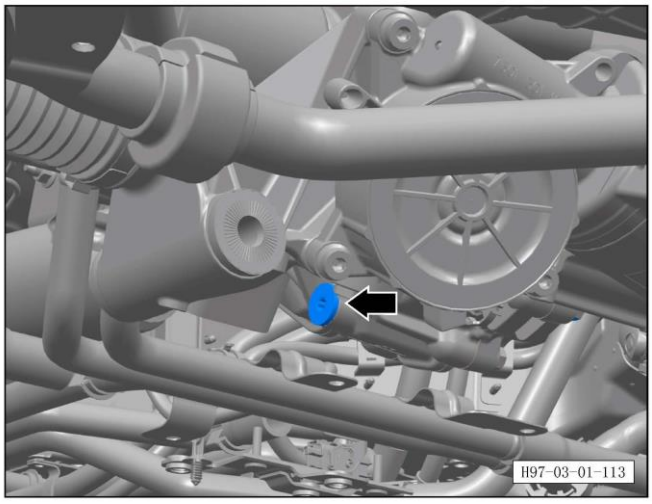
- When replacing the front drive motor assembly lubricating oil, use the specified oil.

Discharge

1. Turn off all electrical appliances and turn off the start switch.

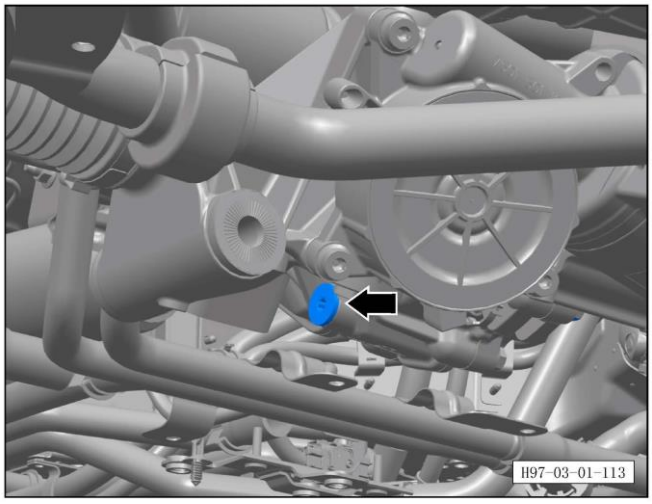
2. Disconnect the battery negative terminal.

3. Discharge the front drive motor assembly lubricating oil.



a. Unscrew the drain bolts of the front drive motor assembly, and collect the front drive motor assembly lubricating oil with a graduated container.

Tightening torque of drain bolt: 30±3Nm.



b. Refit and tighten the drain bolt and new seal ring assembly.

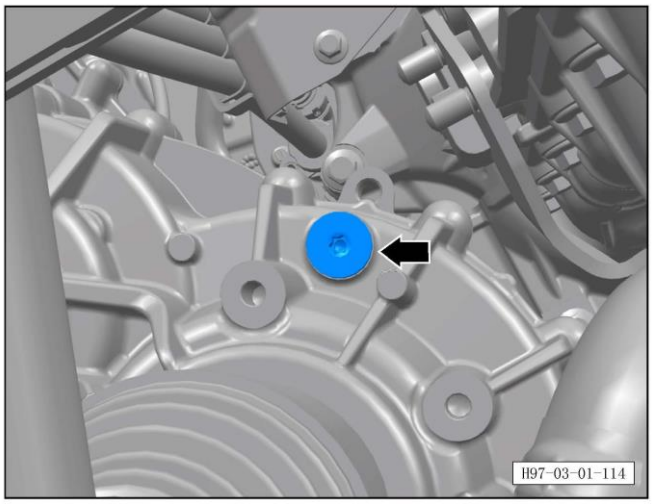
- Tightening torque of drain bolt: 30±3Nm

Filling

1. Fill the front drive motor assembly lubricating oil.

2. Specification of front drive motor assembly lubricating oil: electromechanical coupling lubricating oil

3. Filling volume (total): 3L

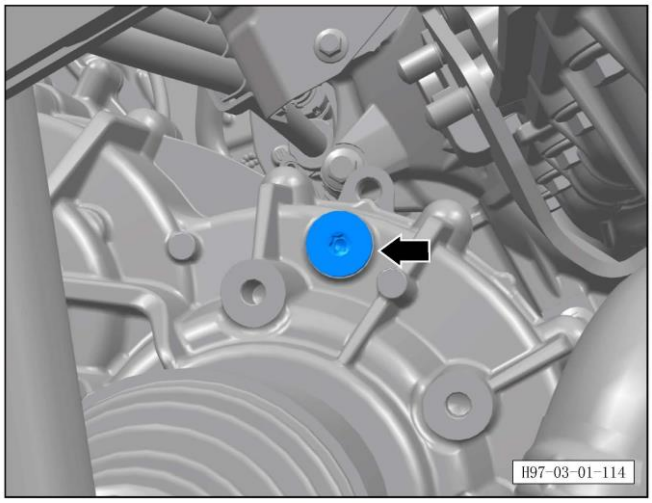


a. Clean the dust and impurities on the surface of the drain bolt.

b. Unscrew the drain bolt and seal ring assembly.

Tightening torque of filler bolt: 30±3Nm

c. Insert the lubricating oil filling equipment into the filler of the front drive motor assembly, and fill the front drive motor assembly lubricating oil.



d. After filling, install the drain bolt and new seal ring assembly.

- Tightening torque of filler bolt: 30±3Nm.

CAUTON:

- The internal structure of the front drive motor assembly has high requirements on the cleanliness of the oil. If the oil is mixed with impurities, dust, etc., once it is filled into the front drive motor assembly, it is easy to cause the vehicle to fail and unable to move.

- Due to the characteristics of the model design, when filling the front drive motor assembly lubricating oil, it is necessary to use the lubricating oil filling equipment for filling.

- Insufficient or excessive filling of the front drive motor assembly lubricating oil will affect the function of the front drive motor assembly.

3.1.4.12 Replacement of rear drive motor assembly lubricating oil

CAUTON:

- Please observe the disposal regulations!

- Gaskets for filler bolts and drain bolts must not be reused.

- Determine the oil filling volume according to the filling volume requirements.

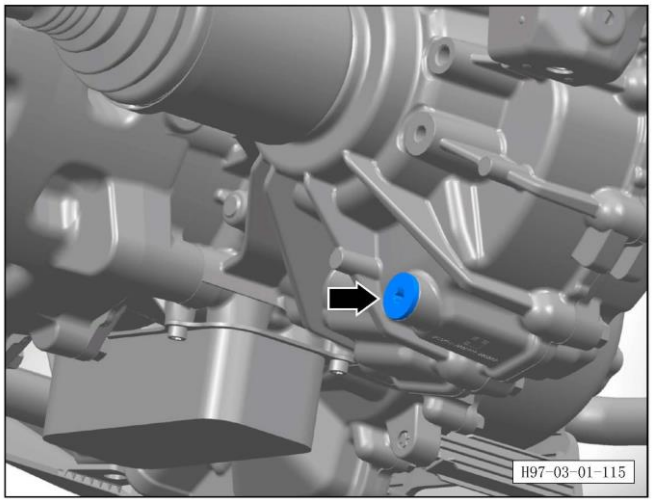
- When replacing the rear drive motor assembly lubricating oil, use the specified oil.

Discharge

1. Turn off all electrical appliances and turn off the start switch.

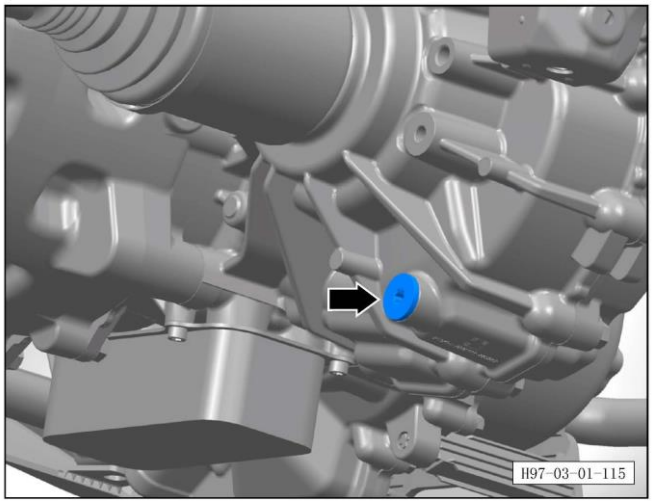
2. Disconnect the battery negative terminal

3. Discharge the rear drive motor assembly lubricating oil.



a. Unscrew the drain bolts of the rear drive motor assembly, and collect the rear drive motor assembly lubricating oil with a graduated container.

Tightening torque of drain bolt: 30±3Nm.



b. Refit and tighten the drain bolt and new seal ring assembly.

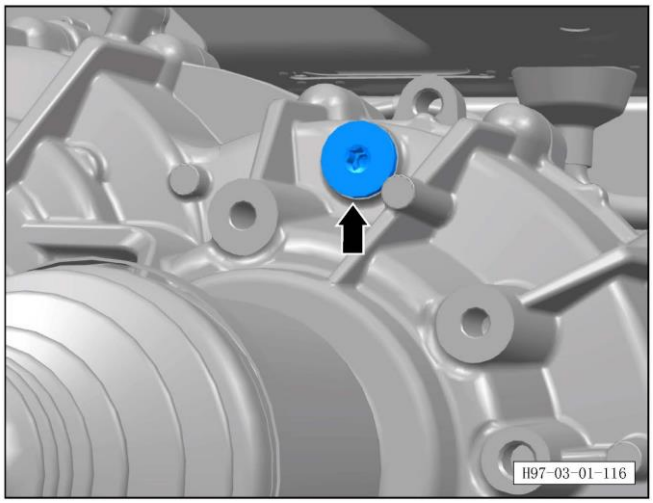
- Tightening torque of drain bolt: 30±3Nm

Filling

1. Fill the rear drive motor assembly lubricating oil.

2. Specification of rear drive motor assembly lubricating oil: Electromechanical coupling lubricant

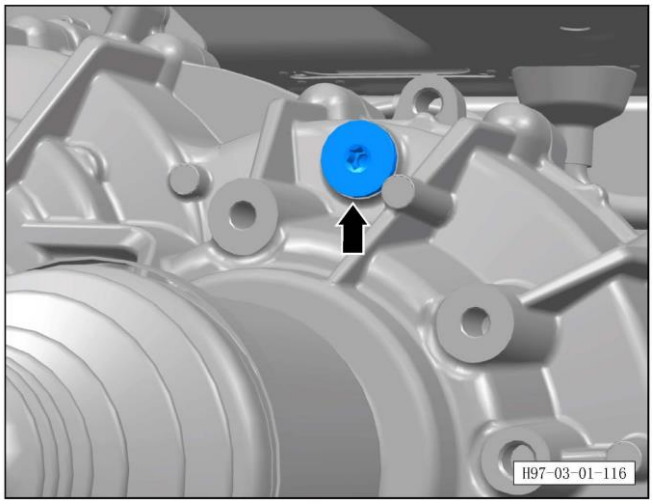
3. Filling volume (total): 3L



a. Clean the dust and impurities on the surface of the drain bolt.

b. Unscrew the drain bolt and seal ring assembly. Tightening torque of filler bolt: 30±3Nm

c. Insert the lubricating oil filling equipment into the filler of the rear drive motor assembly, and fill the rear drive motor assembly lubricating oil.



d. After filling, install the drain bolt and new seal ring assembly.

- Tightening torque of filler bolt: 30±3Nm.

- The internal structure of the rear drive motor assembly has high requirements on the cleanliness of the oil. If the oil is mixed with impurities, dust, etc., once it is filled into the rear drive motor assembly, it is easy to cause the vehicle to fail and unable to move.

- Due to the characteristics of the vehicle design, when filling the rear drive motor assembly lubricating oil, it is necessary to use the lubricating oil filling equipment for filling.

- Insufficient or excessive filling of the rear drive motor assembly lubricating oil will affect the function of the rear drive motor assembly.

3.1.4.13 Replacement of generator lubricating oil

CAUTON:

- Please observe the disposal regulations!

- Gaskets for filler bolts and drain bolts must not be reused.

- Determine the oil filling volume according to the filling volume requirements.

- When replacing the generator lubricating oil, use the specified lubricating oil.

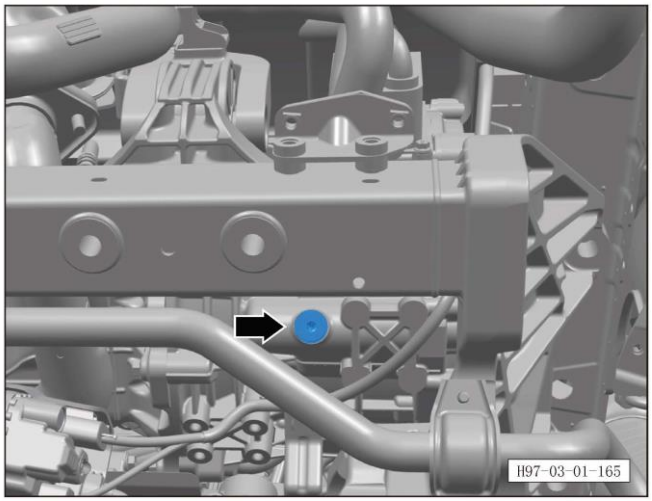
Discharge

1. Turn off all electrical appliances and turn off the start switch.

2. Disconnect the battery negative terminal.

3. Remove the front lower protective plate.

4. Replace the generator lubricating oil.



a. Unscrew the drain bolt of the generator assembly, and collect the generator lubricating oil with a graduated container.

b. Refit and tighten the drain bolt and new seal ring assembly.

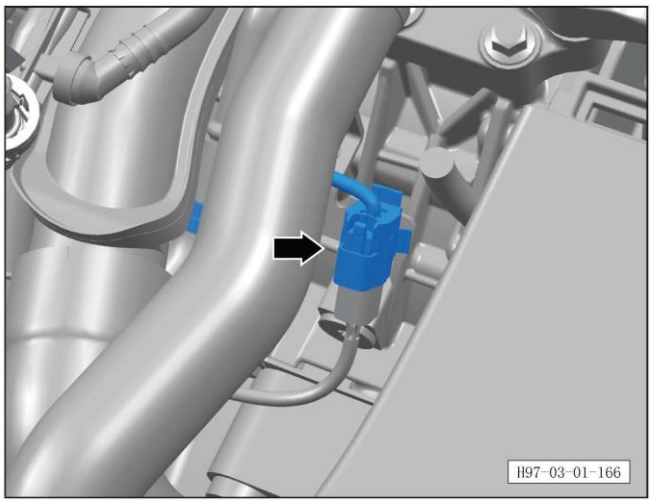
- Tightening torque of drain bolt: 30±3Nm

Filling

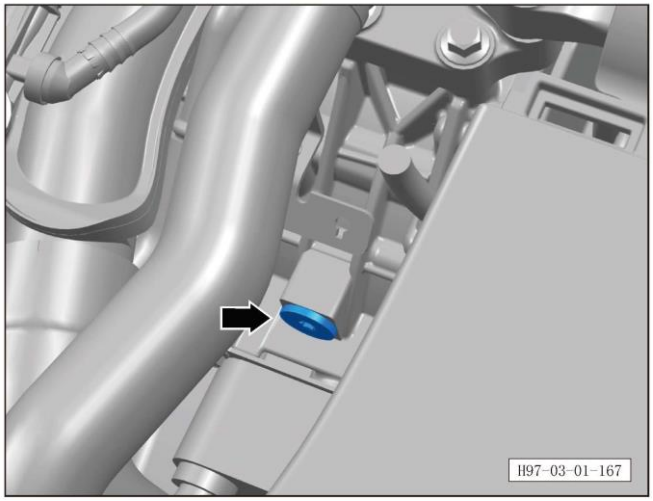
1. Fill the generator lubricating oil.

2. Specification of generator lubricating oil: ATF T6.

3. Filling volume (total): 1.1L.



a. Disconnect the harness connector.



b. Unscrew the drain bolt and seal ring assembly.

c. Insert the lubricating oil filling equipment into the filler of the generator assembly and fill the generator lubricating oil.

d. After filling, install the drain bolt and new seal ring assembly.

- Tightening torque of filler bolt: 30±3Nm.

CAUTION:

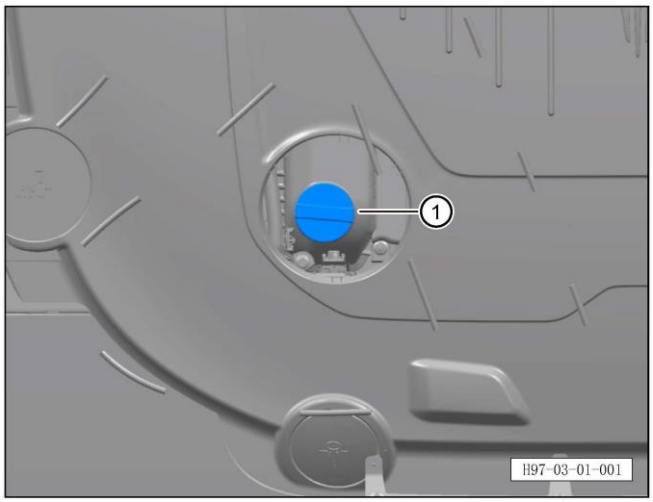
- The internal structure of the generator assembly has high requirements on the cleanliness of the oil. If the oil is mixed with impurities, dust, etc., once it is filled into the assembly, it will easily lead to internal failure of the generator.

- Fill generator oil of the specified specification as required.

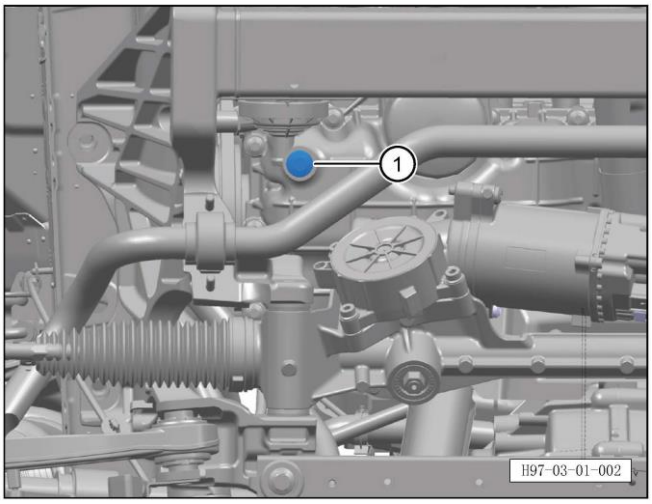
- Do not mix old and new oil.

3.1.4.14 Replacement of engine oil and oil filter (Facelift)

1. Turn off all electrical appliances and the start switch.



a. Unscrew the engine oil filler cap①.



b. Lift the vehicle, unscrew the drain plug①, and collect the engine oil with a graduated container.

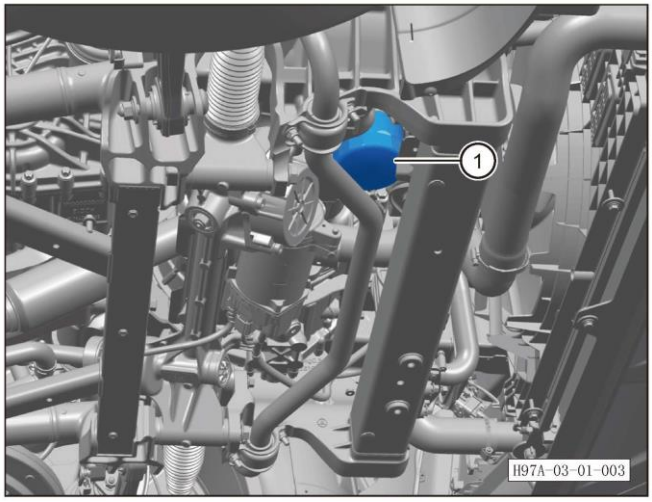
c. Every time the lubricating oil is replaced, the seal ring inside the drain plug must be replaced at the same time.

d. Tighten the drain plug ① with the specified torque.

Tightening torque of drain plug: 30±3Nm.

CAUTION:

- Dispose of the drained oil according to regulations!
- The removed drain plug must be cleaned before replacing the new internal seal ring.
- If the thread of the drain plug is damaged, replace the drain plug and seal ring.
- Excessive tightening torque may cause leakage of the drain plug or even damage to the oil sump.



2. Remove the oil filter

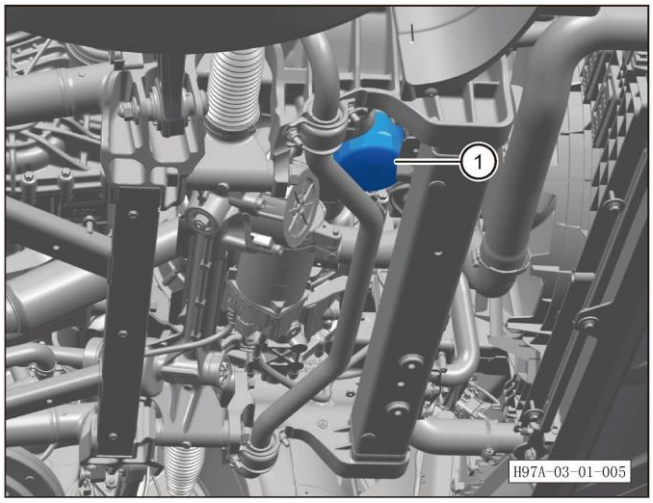
a. Remove the engine oil filter ① using the oil filter removal & refitting tool.

3. The oil filter refitting procedure is performed in reverse order, while observing the following considerations:

a. Replace the oil filter with a new one and clean the contact surfaces of the oil filter.

b. Lubricate the seal rings of the new filter with an appropriate amount of clean oil.

Torque of filter: 23±2Nm.



c. Tighten the engine oil filter ① using the oil filter removal & refitting tool.

4. Fill oil

a. Fill an appropriate amount of oil as required.

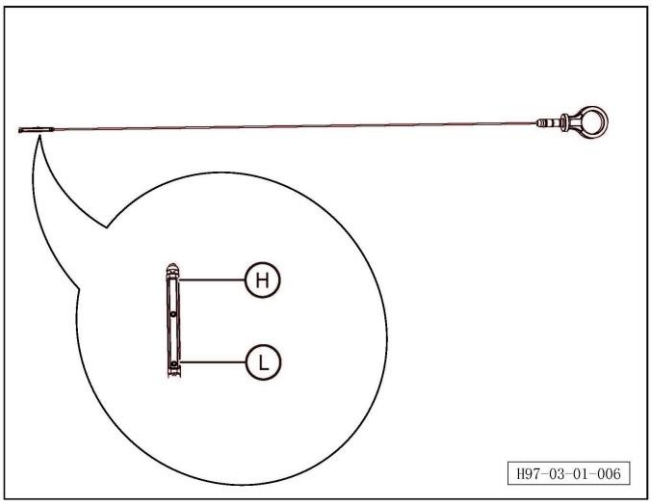
Oil specification: quality grade of API SN.

Oil viscosity: viscosity grade of SAE 5W-30.

The maintenance filling volume for replacement of the filter: 4L (check the oil dipstick scale).

b. When the engine is running and the normal temperature is reached, check that there is no oil leakage from the oil filter and drain bolt.

c. Leave the vehicle on a flat ground, turn off the start switch, wait for three minutes to allow the oil to flow to the oil sump, pull out the dipstick, wipe it with a clean rag and reinsert the dipstick to the bottom.



d. Pull out the dipstick again, and the oil level should be between the upper mark H and the lower mark L.

3.1.4.15 Replacement of brake fluid (Facelift)

NOTE:

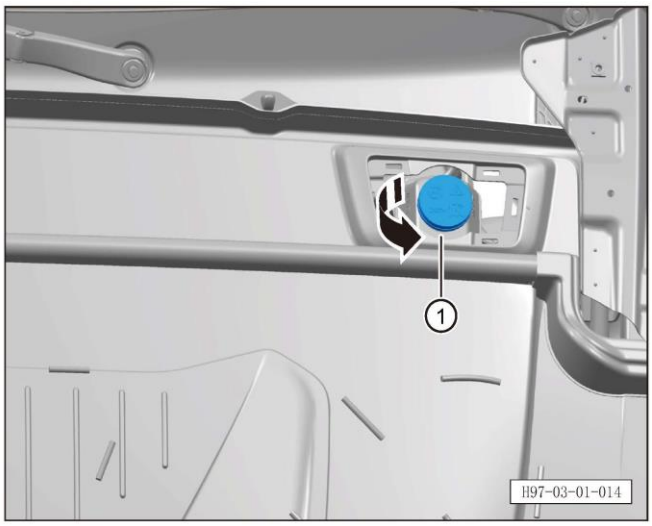
- When replacing the brake fluid, the brake fluid approved by the Company must be used.

- Do not mix brake fluid with other mineral oils, which can damage the seals of the brake system.

- Brake fluid is toxic and corrosive, so never spill it onto the body paint.

- Brake fluid is highly hygroscopic and will absorb moisture from the surrounding environment and must be kept tightly sealed.

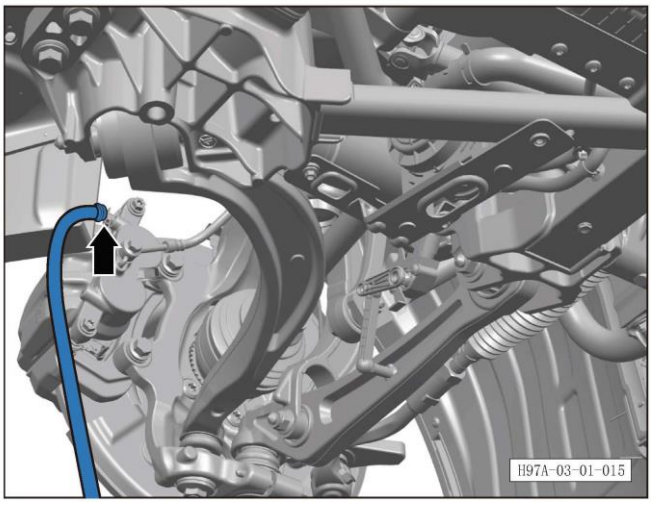
1. Replace the brake fluid



a. Unscrew the brake fluid reservoir cover ① in the direction as indicated by the arrow.

b. Pump out the brake fluid from the brake fluid reservoir.

c. Add new brake fluid to the brake fluid reservoir.



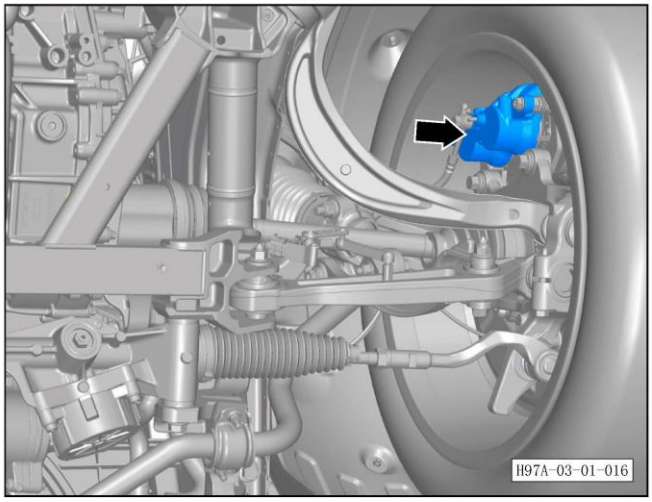
d. Have the brake fluid replaced by two technicians.

e. Lift the vehicle.

f. Remove the seal covers of the brake caliper bleed bolts and install the collection container.

g. Loosen the bleed bolts of the brake calipers, with one mechanic depressing the brake pedal in the vehicle and another mechanic below loosening/tightening the bleed bolts.

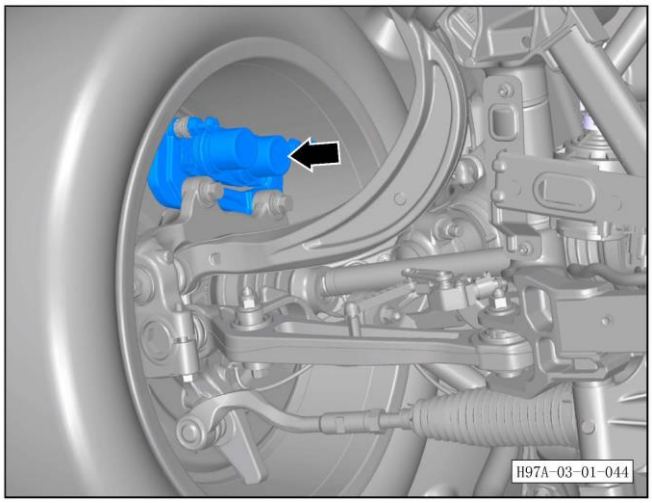
Tightening torque of bolt: 12±1Nm.



h. Replace the brake fluid for the right front brake wheel cylinder until the brake fluid is renewed.

CAUTION:

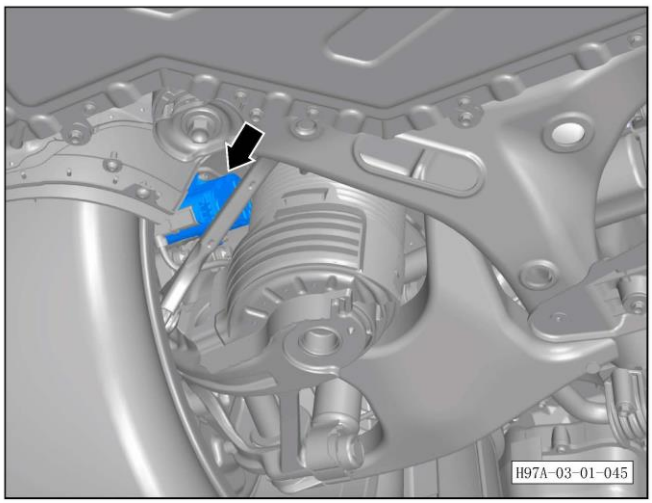
- When replacing the brake fluid, note that the newly added brake fluid in the reservoir must not be lower than the "MIN" line.



i. Replace the brake fluid for the left front brake wheel cylinder until the brake fluid is renewed.

CAUTION:

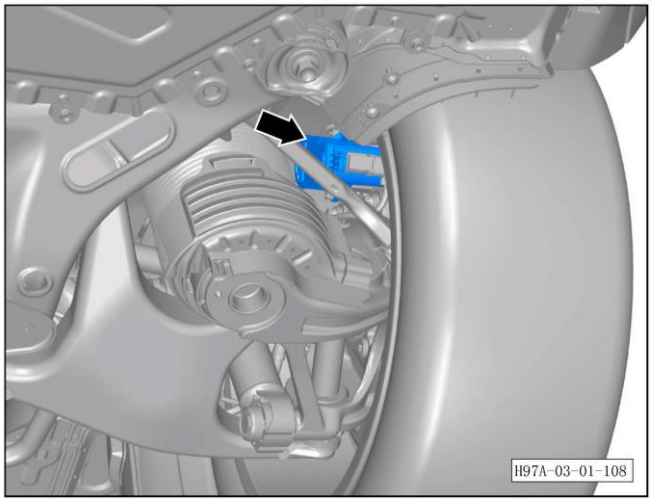
- When replacing the brake fluid, note that the newly added brake fluid in the reservoir must not be lower than the "MIN" line.



j. Replace the brake fluid for the right rear brake wheel cylinder until the brake fluid is renewed.

CAUTION:

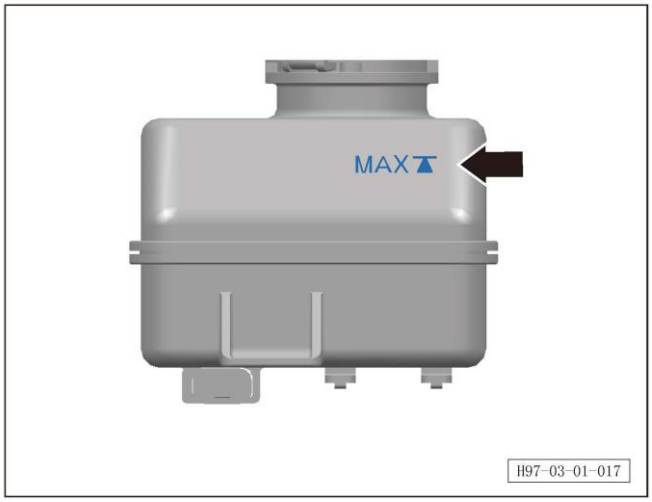
- When replacing the brake fluid, note that the newly added brake fluid in the reservoir must not be lower than the "MIN" line.



k. Replace the brake fluid for the left rear brake wheel cylinder until the brake fluid is renewed.

CAUTION:

- When replacing the brake fluid, note that the newly added brake fluid in the reservoir must not be lower than the "MIN" line.



l. Add brake fluid to the level indicated by the arrow on the “MAX” mark of the reservoir.

3.1.4.16 Replacement of drive motor and high voltage battery coolant (REV Facelift)

Discharge procedure

Note:

- Before discharge of coolant, wait for the coolant to cool completely.

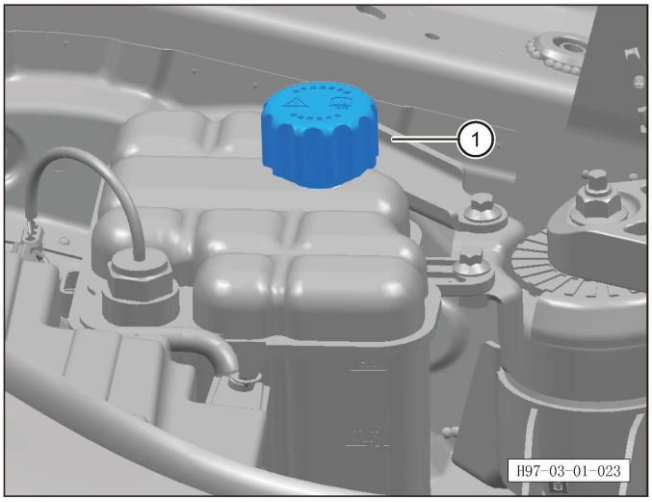
- Opening the auxiliary reservoir cap may cause hot steam to escape. Please take protective measures to avoid injury to the eyes and burn the skin. Before opening the auxiliary reservoir cap, cover it with a rag, and then carefully unscrew it.

1. Turn off all electrical appliances and the start switch.

2. Disconnect the battery negative terminal.

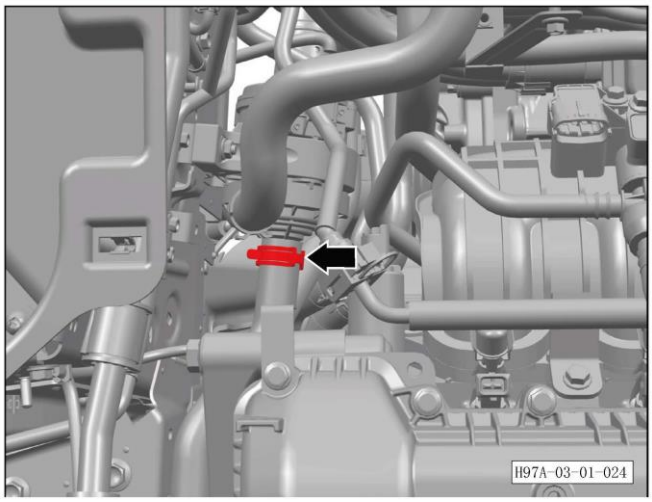
3. Replace the drive motor and high voltage battery coolant.

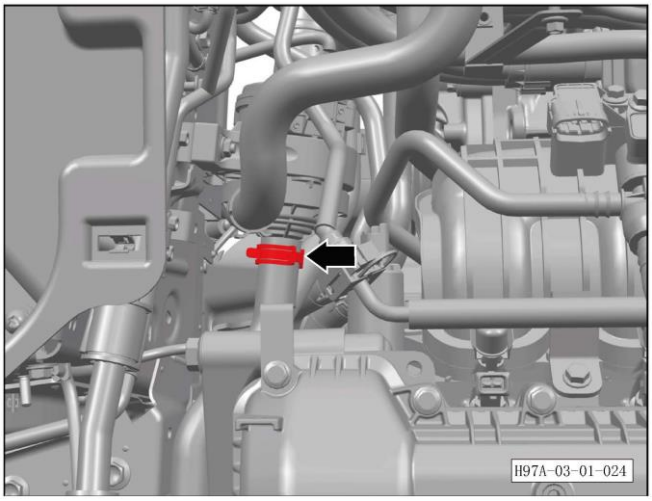
a. Unscrew the auxiliary reservoir cap①.



b. Place the coolant collection container on the bottom of the vehicle.

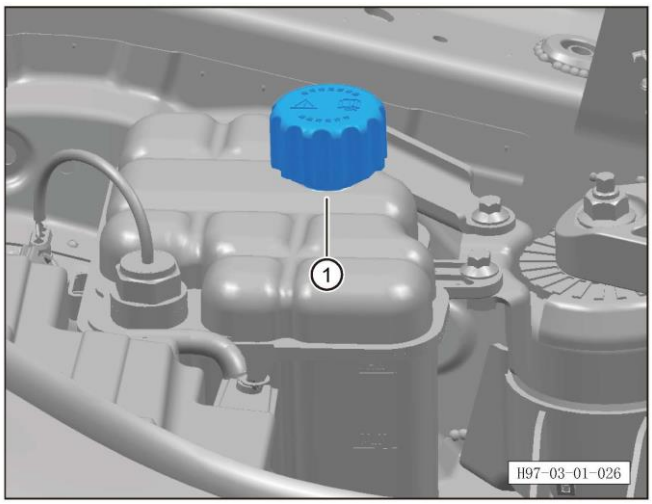
c. Loosen the fixing clamp of the water pipe connecting the auxiliary reservoir and the electric water pump, and disconnect the water pipe to discharge the coolant.





Filling:

a. Refit the water pipe connecting the auxiliary reservoir and the electric water pump, and refit the fixing clamp.



b. Slowly add coolant to the MAX mark on the top of the auxiliary reservoir.

c. Install the auxiliary reservoir cap ①.

Note:

- Do not dilute the coolant arbitrarily.

- Coolant cannot be reused, mixed or replaced with that of different colors.

- Coolant: the lowest temperature can reach -35℃, filling volume: 12.5L.

- Coolant protects against frost, corrosion damage and scaling, as well as raising the boiling point, so it must be filled according to the standard.

- The use of phosphates and nitrates as corrosion inhibitors in coolants is prohibited.

- Use coolant with high boiling point in southern tropical climates.

- In the cold north, it is necessary to ensure that the antifreeze temperature is as low as about -25°C (as low as about -35°C in some places).

- Under standard atmospheric pressure (101kPa), the boiling point of the coolant is not lower than 107°C and the freezing point is not higher than -35°C.

- Coolant recovery must be handled in accordance with relevant national regulations.

3.1.4.17 Replacement of drive motor and high voltage battery coolant (EV Facelift)

Discharge procedure

Note:

- Before discharge of coolant, wait for the coolant to cool completely.

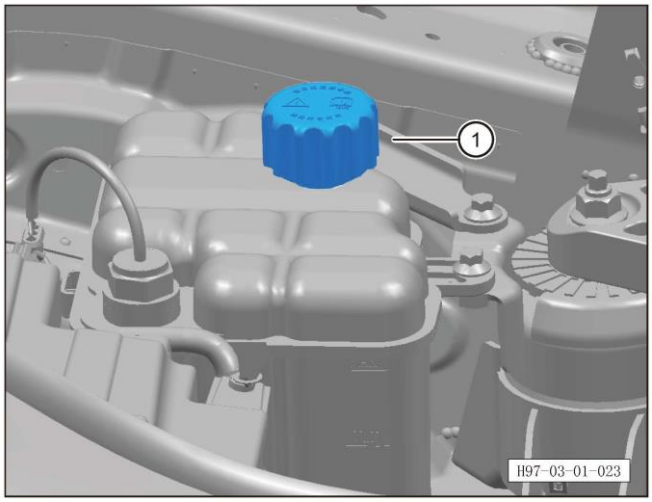
- Opening the auxiliary reservoir cap may cause hot steam to escape. Please take protective measures to avoid injury to the eyes and burn the skin. Before opening the auxiliary reservoir cap, cover it with a rag, and then carefully unscrew it.

1. Turn off all electrical appliances and the start switch.

2. Disconnect the battery negative terminal.

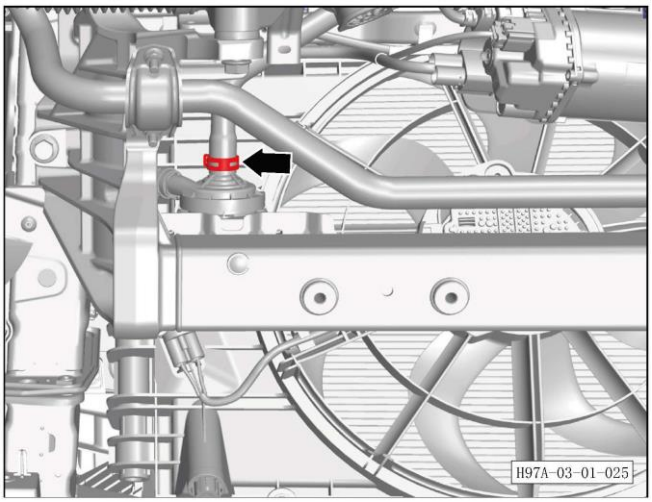
3. Replace the drive motor and high voltage battery coolant.

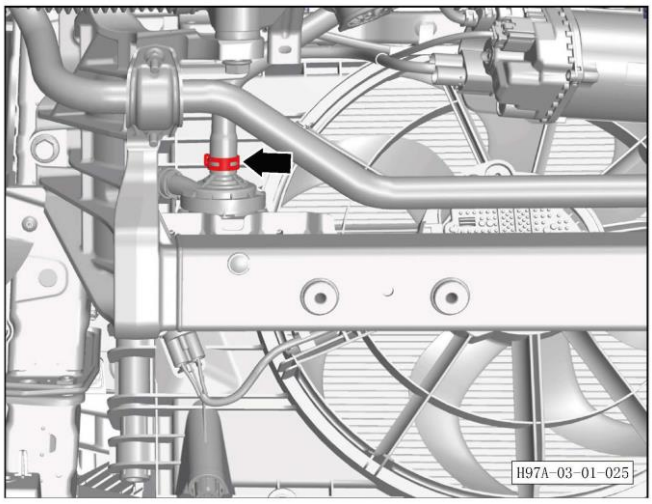
a. Unscrew the auxiliary reservoir cap①.



b. Place the coolant collection container on the bottom of the vehicle.

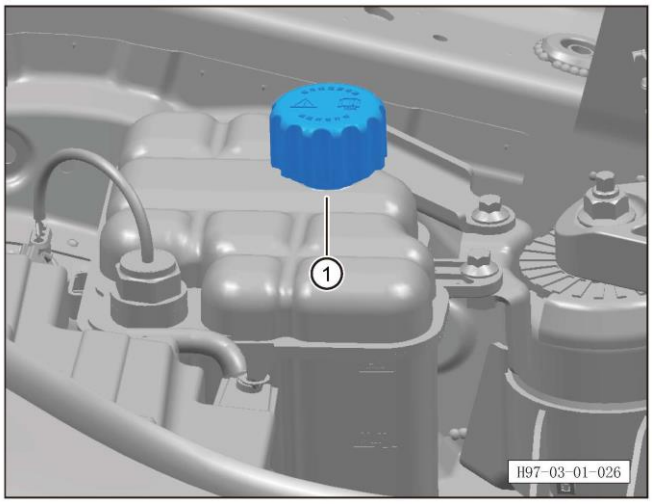
c. Loosen the fixing clamp of the water pipe connecting the auxiliary reservoir and the electric water pump, and disconnect the water pipe to discharge the coolant.





Filling:

a. Refit the water pipe connecting the auxiliary reservoir and the electric water pump, and refit the fixing clamp.



b. Slowly add coolant to the MAX mark on the top of the auxiliary reservoir.

c. Install the auxiliary reservoir cap ①.

Note:

- Do not dilute the coolant arbitrarily.
- Coolant cannot be reused, mixed or replaced with that of different colors.
- Coolant: the lowest temperature can reach -35℃, filling volume: 12.5L.
- Coolant protects against frost, corrosion damage and scaling, as well as raising the boiling point, so it must be filled according to the standard.
- The use of phosphates and nitrates as corrosion inhibitors in coolants is prohibited.
- Use coolant with high boiling point in southern tropical climates.
- In the cold north, it is necessary to ensure that the antifreeze temperature is as low as about -25°C (as low as about -35°C in some places).
- Under standard atmospheric pressure (101kPa), the boiling point of the coolant is not lower than 107°C and the freezing point is not higher than -35°C.
- Coolant recovery must be handled in accordance with relevant national regulations.

3.1.4.18 Replacement of front drive motor assembly lubricating oil (Facelift)

CAUTON:

- Please observe the disposal regulations!

- Gaskets for filler bolts and drain bolts must not be reused.

- Determine the oil filling volume according to the filling volume requirements.

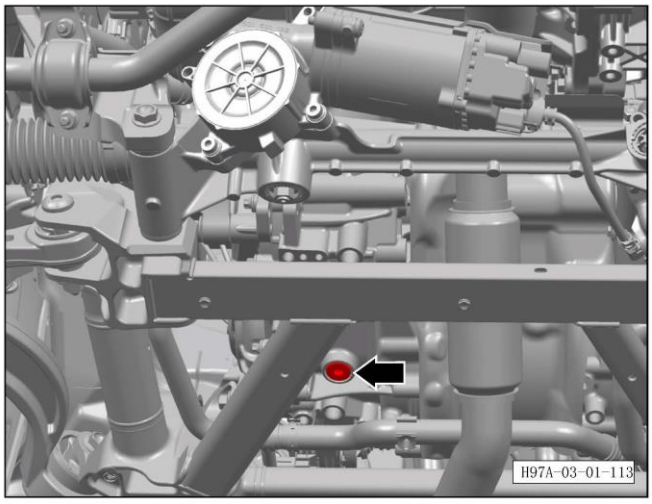
- When replacing the front drive motor assembly lubricating oil, use the specified oil.

Discharge

1. Turn off all electrical appliances and turn off the start switch.

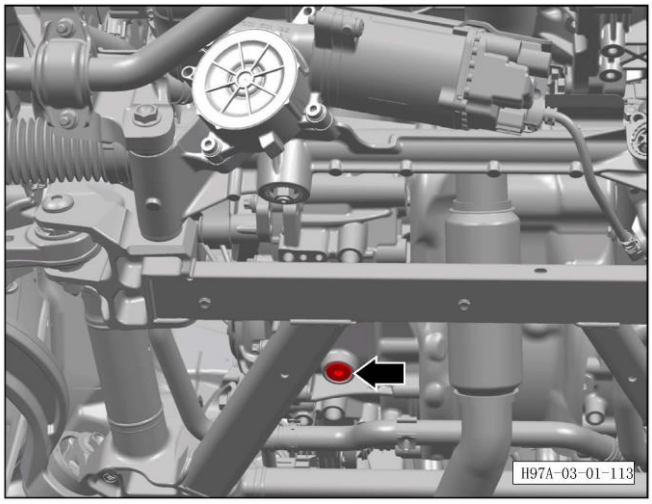
2. Disconnect the battery negative terminal.

3. Discharge the front drive motor assembly lubricating oil.



a. Unscrew the drain bolts of the front drive motor assembly, and collect the front drive motor assembly lubricating oil with a graduated container.

Tightening torque of drain bolt: 30±3Nm.



b. Refit and tighten the drain bolt and new seal ring assembly.

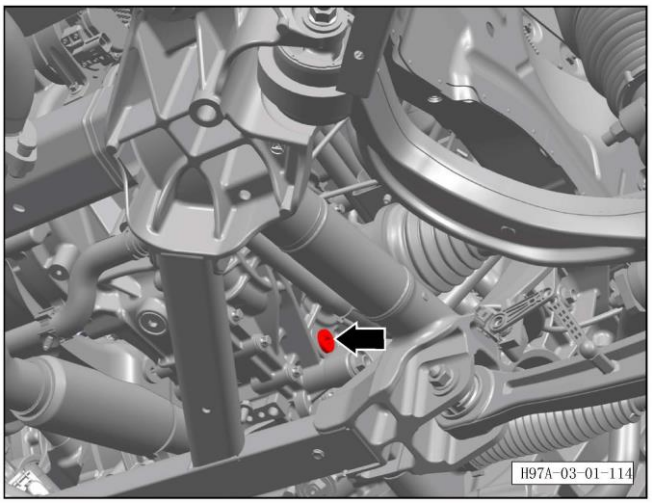
- Tightening torque of drain bolt: 30±3Nm

Filling

1. Fill the front drive motor assembly lubricating oil.

2. Specification of front drive motor assembly lubricating oil: electromechanical coupling lubricating oil

3. Filling volume (total): 3L

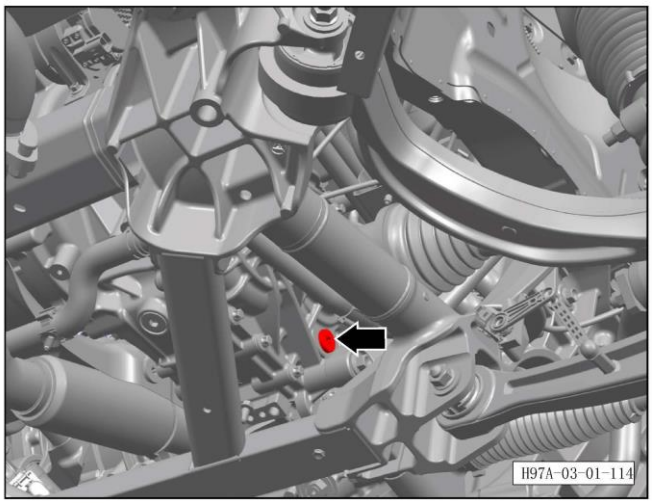


a. Clean the dust and impurities on the surface of the drain bolt.

b. Unscrew the drain bolt and seal ring assembly.

Tightening torque of filler bolt: 30±3Nm

c. Insert the lubricating oil filling equipment into the filler of the front drive motor assembly, and fill the front drive motor assembly lubricating oil.



d. After filling, install the drain bolt and new seal ring assembly.

- Tightening torque of filler bolt: 30±3Nm.

CAUTON:

- The internal structure of the front drive motor assembly has high requirements on the cleanliness of the oil. If the oil is mixed with impurities, dust, etc., once it is filled into the front drive motor assembly, it is easy to cause the vehicle to fail and unable to move.

- Due to the characteristics of the model design, when filling the front drive motor assembly lubricating oil, it is necessary to use the lubricating oil filling equipment for filling.

- Insufficient or excessive filling of the front drive motor assembly lubricating oil will affect the function of the front drive motor assembly.

3.1.4.19 Replacement of rear drive motor assembly lubricating oil (Facelift)

CAUTON:

- Please observe the disposal regulations!

- Gaskets for filler bolts and drain bolts must not be reused.

- Determine the oil filling volume according to the filling volume requirements.

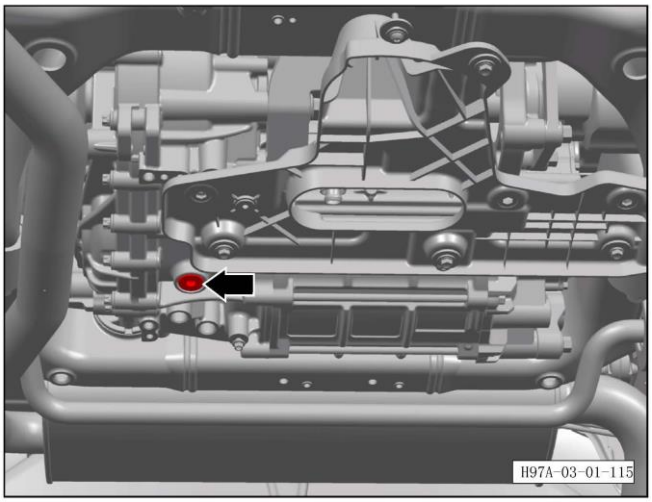
- When replacing the rear drive motor assembly lubricating oil, use the specified oil.

Discharge

1. Turn off all electrical appliances and turn off the start switch.

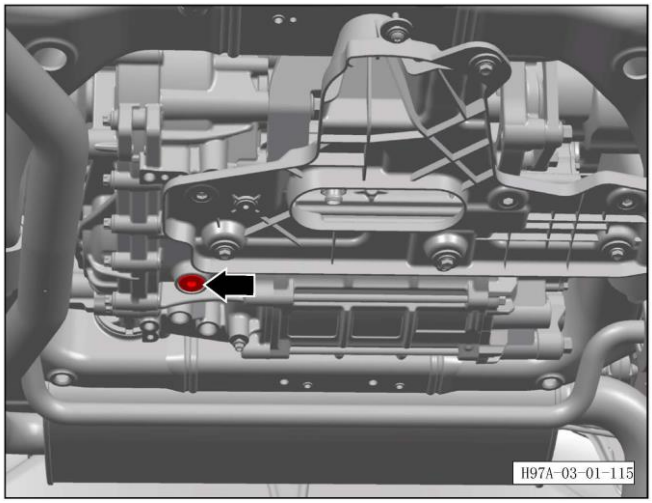
2. Disconnect the battery negative terminal

3. Discharge the rear drive motor assembly lubricating oil.



a. Unscrew the drain bolts of the rear drive motor assembly, and collect the rear drive motor assembly lubricating oil with a graduated container.

Tightening torque of drain bolt: 30±3Nm.



b. Refit and tighten the drain bolt and new seal ring assembly.

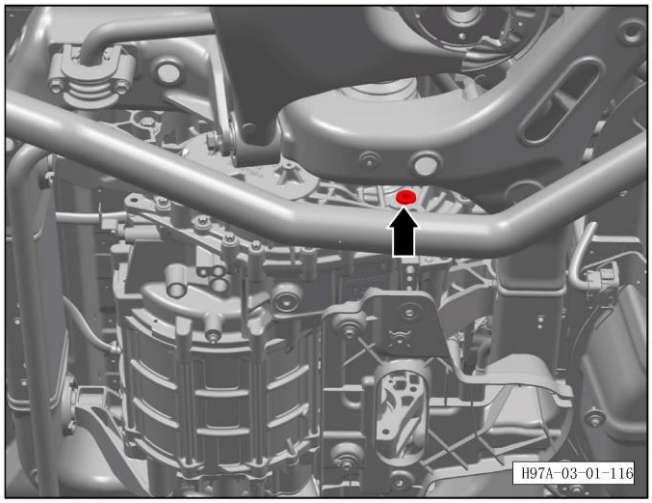
- Tightening torque of drain bolt: 30±3Nm

Filling

1. Fill the rear drive motor assembly lubricating oil.

2. Specification of rear drive motor assembly lubricating oil: Electromechanical coupling lubricant

3. Filling volume (total): 3L

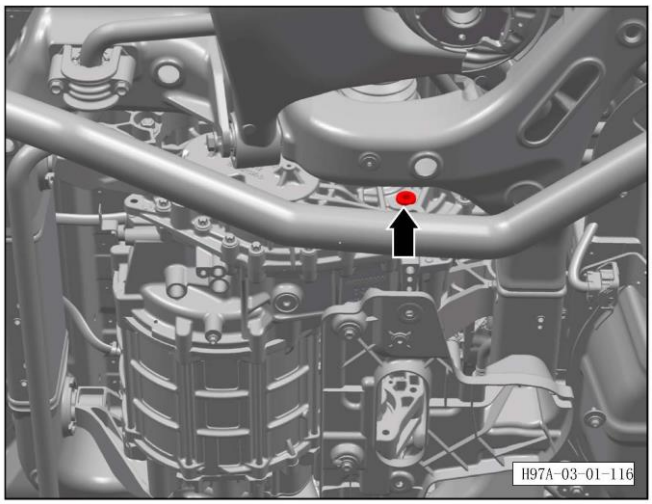


a. Clean the dust and impurities on the surface of the drain bolt.

b. Unscrew the drain bolt and seal ring assembly.

Tightening torque of filler bolt: 30±3Nm

c. Insert the lubricating oil filling equipment into the filler of the rear drive motor assembly, and fill the rear drive motor assembly lubricating oil.



d. After filling, install the drain bolt and new seal ring assembly.

- Tightening torque of filler bolt: 30±3Nm.

- The internal structure of the rear drive motor assembly has high requirements on the cleanliness of the oil. If the oil is mixed with impurities, dust, etc., once it is filled into the rear drive motor assembly, it is easy to cause the vehicle to fail and unable to move.

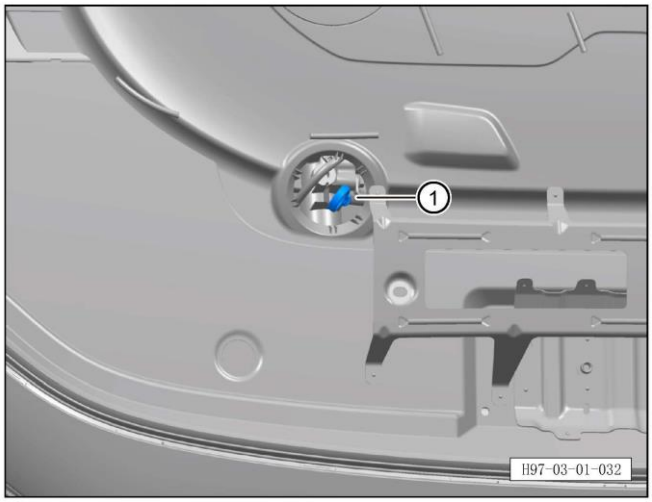
- Due to the characteristics of the vehicle design, when filling the rear drive motor assembly lubricating oil, it is necessary to use the lubricating oil filling equipment for filling.

- Insufficient or excessive filling of the rear drive motor assembly lubricating oil will affect the function of the rear drive motor assembly.

3.1.5 Vehicle oil inspection

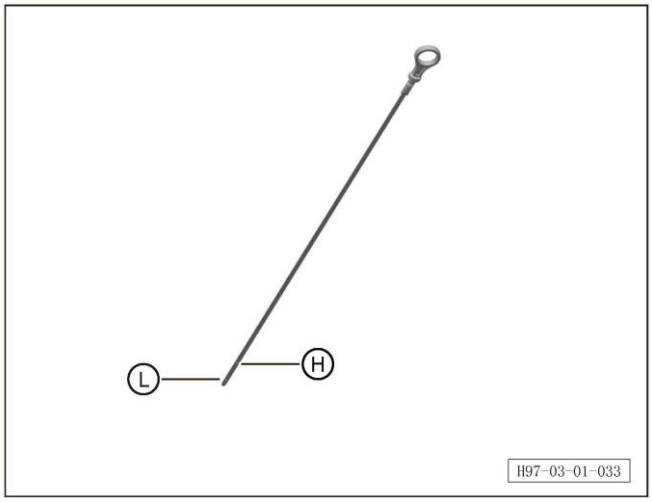
3.1.5.1 Inspection of engine oil

1. Check the engine oil



a. Park the vehicle on level ground, turn off the start switch for 5 minutes, and wait for all the oil to flow back into the oil sump.

b. Unplug the oil dipstick ①, wipe it with a clean rag, and reinsert it to the limit position.



c. Pull out the dipstick again and read the fluid level.

– Between points H and L: normal oil level, no need to add oil.

– Above point H: discharge oil to normal oil level.

– Below point L: add oil to normal oil level.

Note:

- Oil specification: viscosity class of SAE 5W-30.

- Quality grade of API SN.

- Maintenance filling volume for replacement of oil filter: 4L.

CAUTION:

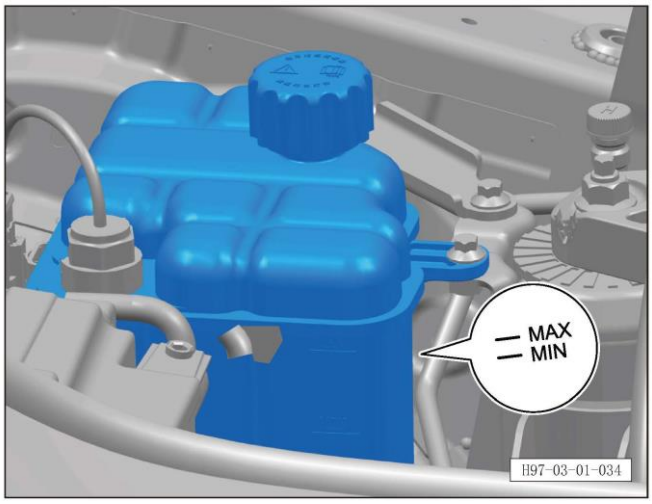
- Be careful not to splash oil on a hot engine, as it may catch fire!

- Different types of oils cannot be mixed.

- There is a risk of damage to the range extender engine if the oil level is above point H.

3.1.5.2 Inspection of drive motor and high voltage battery coolant (REV)

1. Check the coolant level



a. Check the coolant level in the reservoir while the drive motor and high voltage battery are in normal conditions.

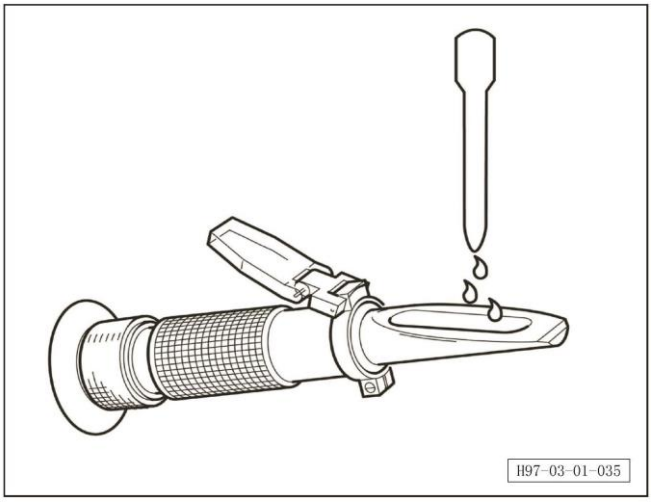
b. The coolant level should be between the MAX and MIN marks.

c. If the coolant level is too low, coolant must be added.

Note:

- Total coolant: 12.5L.

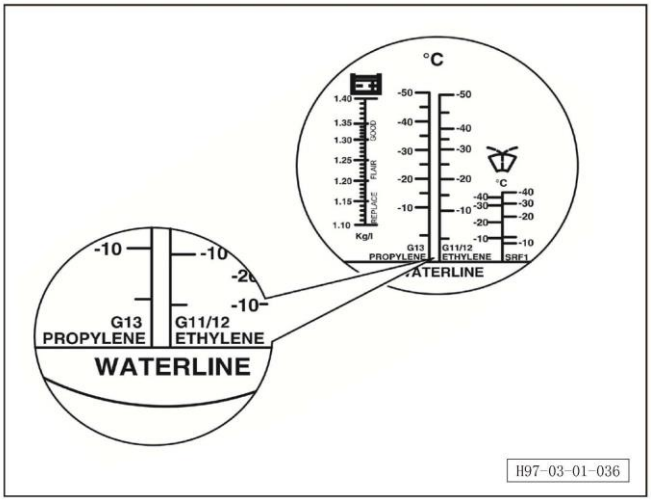
2. Check the freezing point of coolant



a. Use a pipette to drop the coolant on the glass of the refractometer and observe the freezing point value of coolant.

Note:

- Please read the relevant values of the detection on the light-dark dividing line. In order to better distinguish the light-dark dividing line, you can use a pipette to drop a drop of water on the glass of the refractometer, which allows you to clearly identify the light-dark dividing line through the "water line".



b. Read the freezing point value of coolant

Note:

- It must be ensured that the freezing point value of coolant is below -35°C (or the freezing point value varies depending on the region and climate).

- When the freezing point of coolant does not meet the specified value, the coolant should be replaced.

CAUTION:

- When the cooling system is hot, do not open the filler cap of the reservoir, otherwise the hot steam or boiling coolant will splash out of the reservoir and cause harm to the human body.

- Coolant is toxic, so keep the container tightly sealed and store it out of the reach of children. Seek medical advice immediately if ingestion occurs.

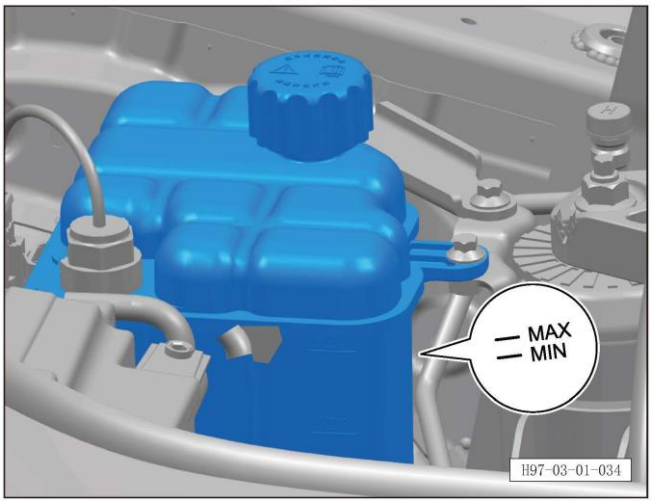
- Prevent coolant from coming into contact with skin or eyes. If it happens, rinse immediately with plenty of water.

- Do not add preservatives to the coolant, as this may not be suitable for the coolant or the engine compartment. Do not mix with other coolants. The freezing point of the coolant selected for the vehicle should be 10-15°C lower than the local minimum temperature.

- Corrosive coolant can damage the paint finish. If the coolant overflows during filling, immediately absorb it with an absorbent cloth and wash it with vehicle cleaner and water.

3.1.5.3 Inspection of drive motor and high voltage battery coolant (EV)

1. Check the coolant level



a. Check the coolant level in the reservoir while the drive motor and high voltage battery are in normal conditions.

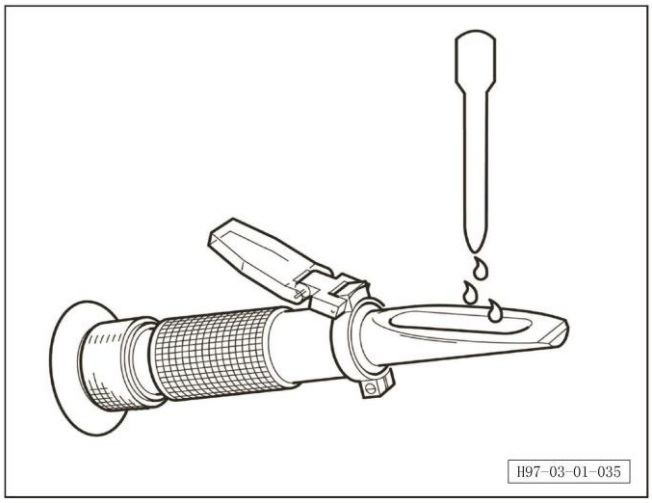
b. The coolant level should be between the MAX and MIN marks.

c. If the coolant level is too low, coolant must be added.

Note:

- Total coolant: 21L.

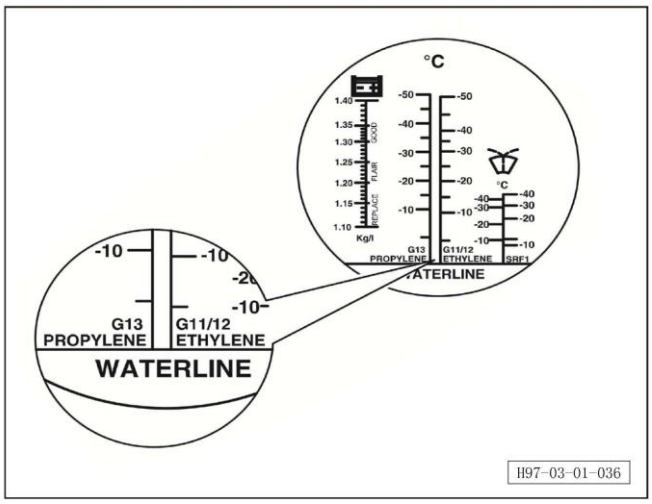
2. Check the freezing point of coolant



a. Use a pipette to drop the coolant on the glass of the refractometer and observe the freezing point value of coolant.

Note:

- Please read the relevant values of the detection on the light-dark dividing line. In order to better distinguish the light-dark dividing line, you can use a pipette to drop a drop of water on the glass of the refractometer, which allows you to clearly identify the light-dark dividing line through the "water line".



b. Read the freezing point value of coolant

Note:

- It must be ensured that the freezing point value of coolant is below -35°C (or the freezing point value varies depending on the region and climate).

- When the freezing point of coolant does not meet the specified value, the coolant should be replaced.

CAUTION:

- When the cooling system is hot, do not open the filler cap of the reservoir, otherwise the hot steam or boiling coolant will splash out of the reservoir and cause harm to the human body.

- Coolant is toxic, so keep the container tightly sealed and store it out of the reach of children. Seek medical advice immediately if ingestion occurs.

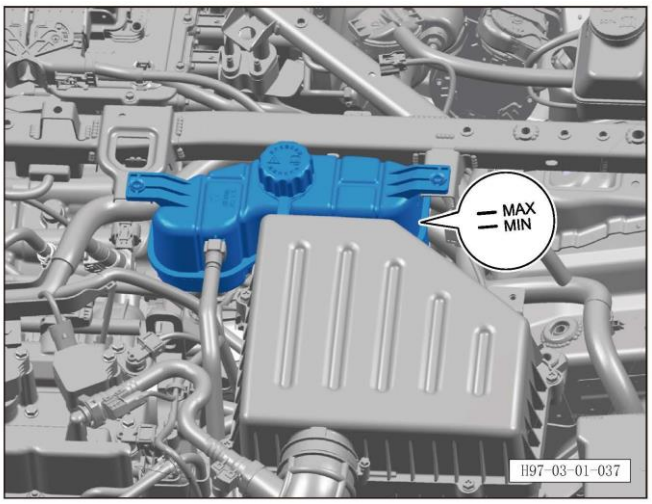
- Prevent coolant from coming into contact with skin or eyes. If it happens, rinse immediately with plenty of water.

- Do not add preservatives to the coolant, as this may not be suitable for the coolant or the engine compartment. Do not mix with other coolants. The freezing point of the coolant selected for the vehicle should be 10-15°C lower than the local minimum temperature.

- Corrosive coolant can damage the paint finish. If the coolant overflows during filling, immediately absorb it with an absorbent cloth and wash it with vehicle cleaner and water.

3.1.5.4 Inspection of engine coolant

1. Check the coolant level.



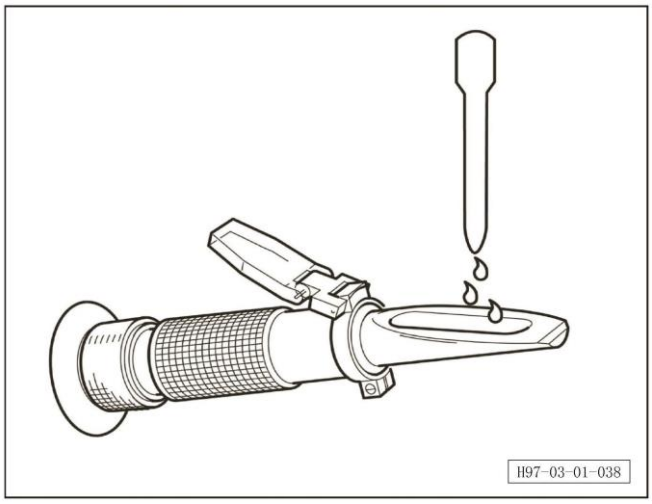
a. Check the coolant level in the reservoir while the engine is in normal conditions.

b. The coolant level should be between the MAX and MIN marks.

c. If the coolant level is too low, coolant must be added.

Note:

- Total coolant: 6.5L.

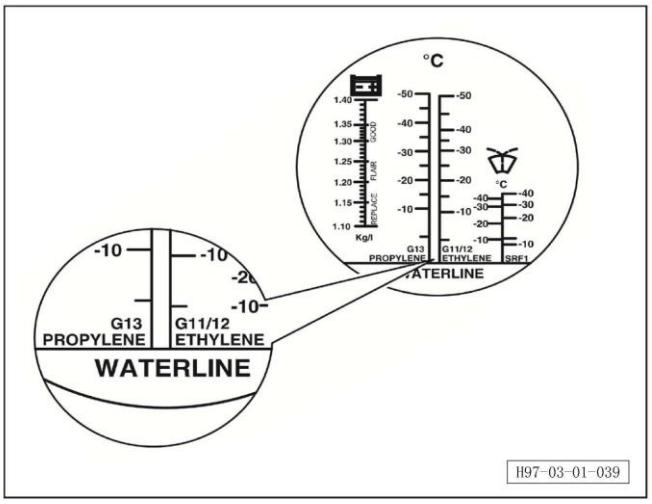


2. Check the freezing point of coolant.

a. Use a pipette to drop the coolant on the glass of the refractometer and observe the freezing point value of coolant.

Note:

- Please read the relevant values of the detection on the light-dark dividing line. In order to better distinguish the light-dark dividing line, you can use a pipette to drop a drop of water on the glass of the refractometer, which allows you to clearly identify the light-dark dividing line through the "water line".



b. Read the freezing point value of coolant.

Note:

- It must be ensured that the freezing point value of coolant is below -35°C (or the freezing point value varies depending on the region and climate).

- When the freezing point of coolant does not meet the specified value, the coolant should be replaced.

CAUTION:

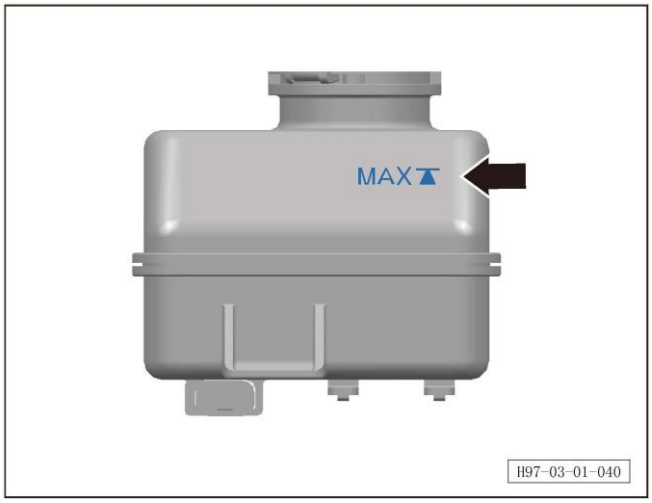
- When the cooling system is hot, do not open the filler cap of the reservoir, otherwise the hot steam or boiling coolant will splash out of the reservoir and cause harm to the human body.

- Coolant is toxic, so keep the container tightly sealed and store it out of the reach of children. Seek medical advice immediately if ingestion occurs.

- Prevent coolant from coming into contact with skin or eyes. If it happens, rinse immediately with plenty of water.

- Do not add preservatives to the coolant, as this may not be suitable for the coolant or the engine compartment. Do not mix with other coolants. The freezing point of the coolant selected for the vehicle should be 10-15°C lower than the local minimum temperature.

- Corrosive coolant can damage the paint finish. If the coolant overflows during filling, immediately absorb it with an absorbent cloth and wash it with vehicle cleaner and water.



3.1.5.5 Inspection of brake fluid

Note:

- Brake fluid approved by the Company must be used.

- Do not mix brake fluid with mineral oils (oil, gasoline, and cleaning agents), as mineral oils can damage brake seals and glands.

- Brake fluid is corrosive, so never spill it onto the body paint.

1. Check the brake fluid level

a. The brake fluid level should be between the MAX and MIN marks.

CAUTION:

- Avoid brake fluid from flowing out of the reservoir, and do not add brake fluid above the MAX mark.

2. Check the brake fluid level during routine maintenance. Whether to add brake fluid must be determined according to the wear of the brake pads.

a. Recommended brake fluid level when the wear of brake pad approaches the limit.

– When the fluid level is at the minimum mark or slightly above the MIN mark, there is no need to replenish the brake fluid.

b. Recommended brake fluid level when the brake pads are new or far from the pad wear limit:

– The brake fluid should be between the MIN mark and the MAX mark.

c. Specification of brake fluid: Brake fluid for motor vehicles.

Total filling volume: 0.75L.

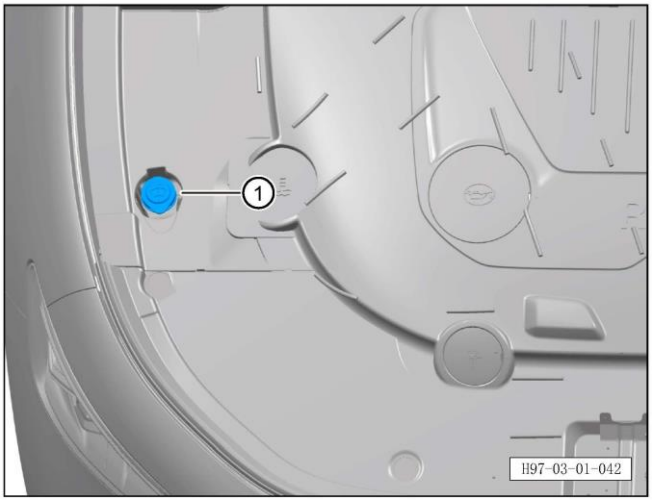
CAUTION:

- During the actual use of the vehicle, the fluid level in the brake fluid reservoir may drop slightly due to wear of the brake pads, and brake fluid needs to be filled in this case.

- If the fluid level has dropped below the MIN mark, it is necessary to check for leaks before adding brake fluid.

CAUTION:

- Brake fluid is corrosive and can damage the paint finish. If the brake fluid overflows during filling, immediately absorb it with an absorbent cloth and wash it with vehicle cleaner and water. Use only new brake fluid from a sealed container (brake fluid is hygroscopic, and brake fluid in an opened container or brake fluid previously drained from the system has absorbed moisture from the air, which can adversely affect braking performance). Brake fluid is toxic, so keep the container tightly sealed and out of the reach of children. Seek medical advice immediately if ingestion occurs. Prevent brake fluid from coming into contact with skin or eyes. If it occurs, rinse immediately with plenty of water. Never drive the vehicle if the brake fluid level is below the minimum mark in the reservoir. If the customer reports that the brake pedal travel has increased unexpectedly or there is a noticeable drop in the brake fluid level, please check for brake fluid leakage. Pay attention to disposal regulations.



3.1.5.6 Inspection of windshield washer fluid

1. Check the washer fluid level and fill accordingly.

a. The washer fluid is a consumable liquid, so please check it regularly (two weeks or one month). If found insufficient, please add washer fluid.

b. Open the filler cap ①, and fill the washer fluid to the visible area below the filler. Do not overfill.

– Total filling volume of washer fluid: 3.7L.

CAUTION:

- Washer fluid prevents nozzles, reservoirs and connecting hoses from freezing.

- Washer fluid of the corresponding antifreeze level can be selected according to the actual local temperature.

- Add washer fluid also in warm seasons, as its powerful cleaning power removes wax and oil residues from windshields.

- It must be ensured that the windshield washer does not freeze at a minimum of about -25°C (approximately -35°C in some harsh climates).

3.1.6 Maintenance inspection of body parts and electrical appliances

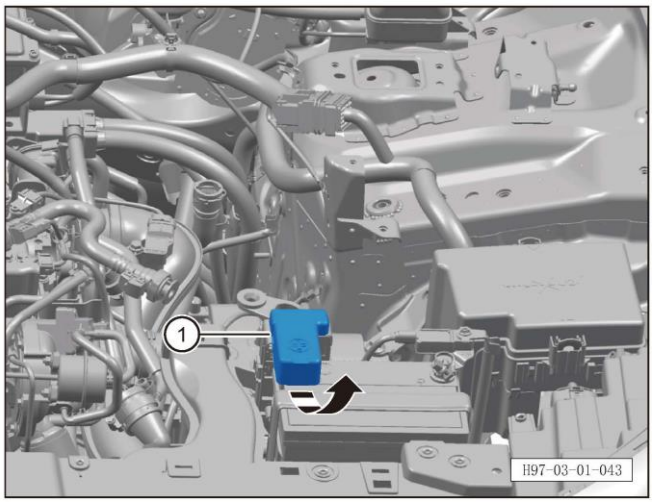
3.1.6.1 Maintenance inspection of battery

Inspection procedure

Note:

- Turn off all electrical appliances and the start switch before inspection.

1. Follow the steps below.



a. Open the battery positive terminal cover ① in the direction as indicated by the arrow.

b. Shake the positive and negative terminals of the battery left and right to check whether they are firmly fixed.

2. If the battery positive terminal is not fixed.

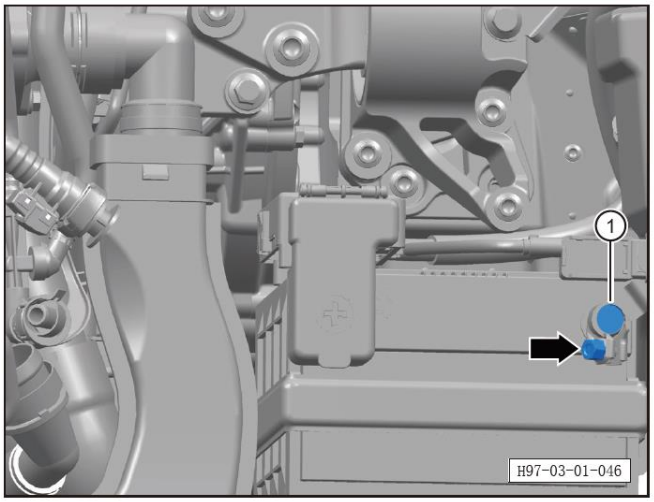
a. Unscrew the fixing nut of the battery negative terminal and disconnect the terminal.

b. Refit the battery positive terminal and tighten the fixing nut.

c. Refit the battery negative terminal and tighten the fixing nut.

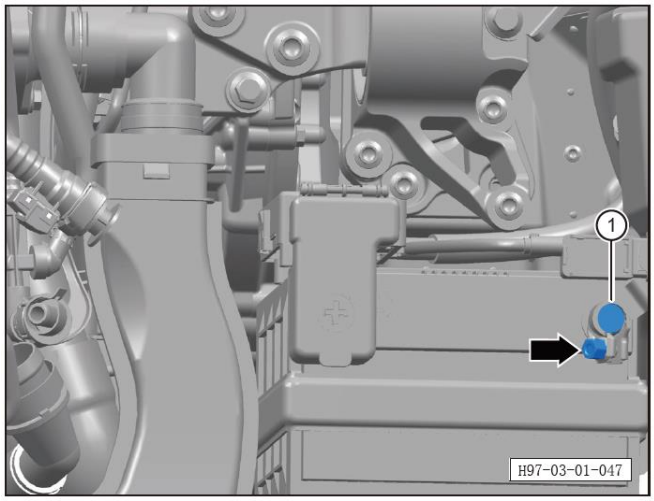
Tightening torque of nut: 15±2Nm.

3. If the battery negative terminal is not fixed.



a. Refit the battery negative terminal ① and tighten the fixing nut.

Tightening torque of nut: 15±2Nm.



4. If the vehicle is parked for a long time, disconnect the battery negative terminal.

The method of disconnecting the battery negative terminal is as follows:

a. Unscrew the fixing nut, disconnect the battery negative terminal, and move it to one side to prevent it from being touched again.

Tightening torque of nut: 15±2Nm.

5. Visually inspect the battery.

- Before performing a full inspection, visually check the outside conditions, connection of the battery and if it is fixed.

CAUTION:

- If the battery is not properly fixed, it may be damaged. Vibration damage will shorten the service life of the battery and pose a danger of explosion, and may damage the battery case. Check whether the battery is securely installed, and if necessary, tighten the fixing bolts with the specified tightening torque.

- Check whether the battery case is damaged. The damage to the case will cause acid to flow out, and the escaping battery acid will cause serious damage to the vehicle. In this case, the vehicle parts in contact with the electrolyte should be treated promptly with electrolyte thinner or soap.

- Check whether the battery terminals are damaged. If so, it will be unable to guarantee that the battery terminals are in good contact. When connecting the battery terminals, please refer to the corresponding vehicle maintenance manual. If the battery terminals are not properly plugged in and tightened, the wiring may catch fire and, as a result, cause significant electrical malfunction, preventing the safe operation of the vehicle.

6. Check the static voltage of the battery.

Note:

- Within the scope of the specified repair and maintenance work, only the static voltage of the battery of the parked and stocked vehicles can be measured to measure the battery conditions. By measuring the static voltage, it is possible to know if the battery of the parked and stock vehicles should be recharged.

- The battery has neither been charged nor discharged for at least two days.

- Use the "battery tester" to check the battery voltage and capacity.

Measurement results	Operations
Good battery	The battery can continue to be used
Good - to be charged	The battery can continue to be used after being fully charged
Test after charging	Retest after the battery is fully charged
Replace the battery	It is possible that the battery cable is not connected properly. Test the battery again after completing the troubleshooting.
Bad cell - to be replaced	The battery must be replaced immediately

3.1.6.2 High voltage removal

Note:

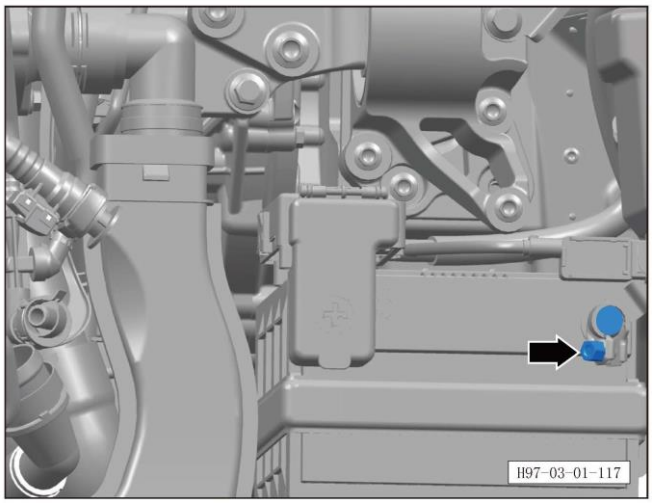
- Before starting the power-off procedure, it is necessary to set the vehicle into trailer mode, while paying attention to sliding prevention.

Power-off procedure

CAUTION:

- Do not charge during high voltage power off.

1. High voltage removal.

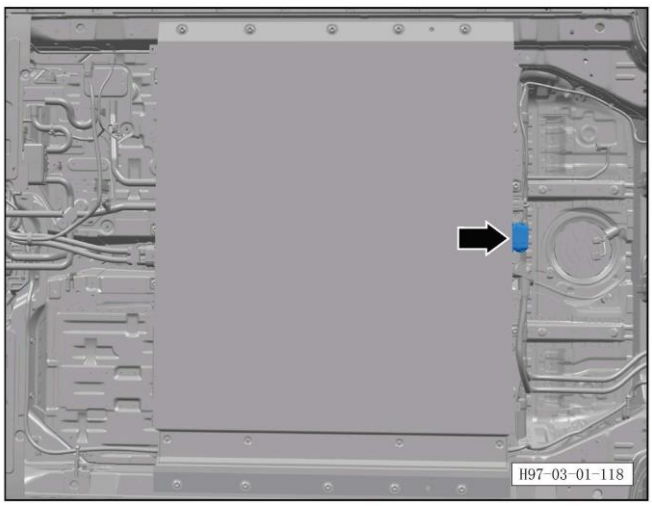


a. Turn off the start switch and disconnect the battery negative terminal.

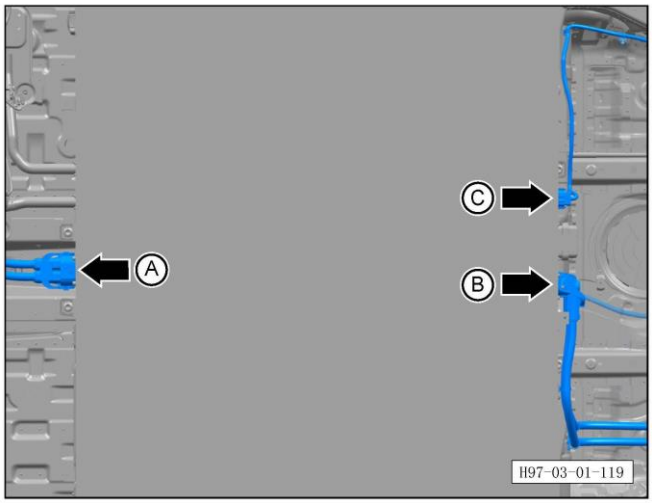
CAUTION:

- Wear high-voltage protective equipment.

- After disconnecting the battery negative terminal, wait 3 minutes before proceeding.



b. Lift the vehicle and turn off the manual service switch.



c. Disconnect the front high voltage harness A, rear high voltage harness B, and connector C of the body harness.

WARNING:

- De-energize high-voltage systems only by professionals (high-voltage electricians).

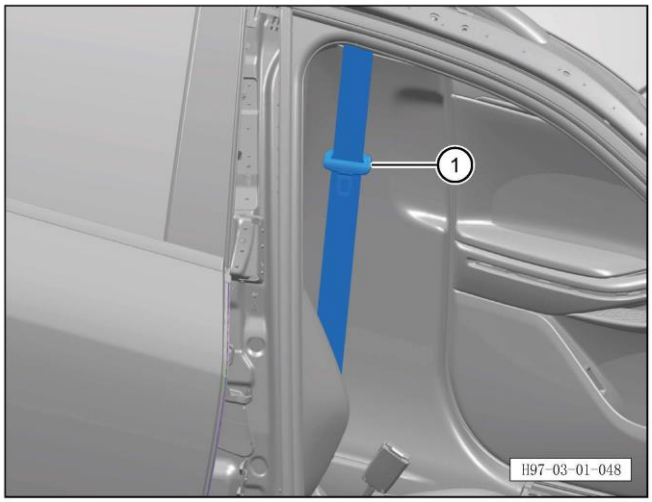
- Disconnect the high voltage cable for 10 minutes before starting work.

d. After disconnecting the high-voltage cable for 10 minutes, measure the high-voltage components with a multimeter, and proceed to the next step only when the voltage is less than 36V. For high-voltage insulation testing, an insulation multimeter can be used to directly measure the resistance value of the high-voltage cable of high-voltage component and the body, of which the standard value is greater than 1.5MΩ.

3.1.6.3 Maintenance inspection of seat belt

Inspection procedure

1. Check the seat belt.

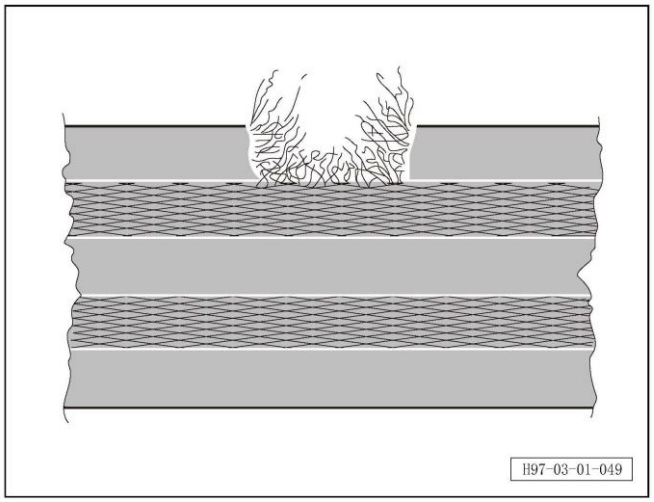


a. Pull the seat belt ① completely out of the seat belt automatic retractor.

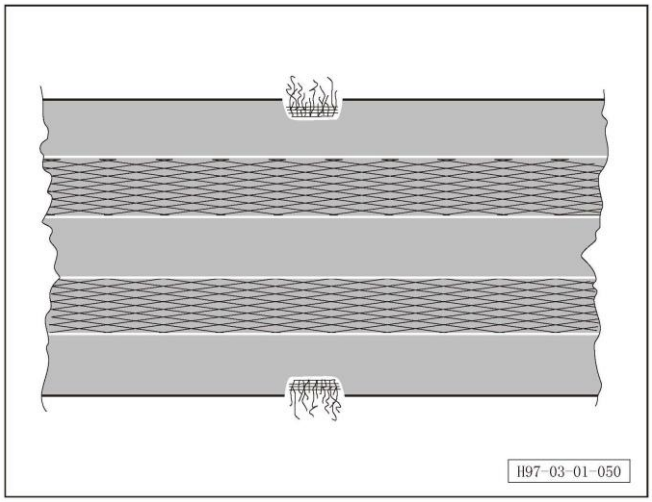
b. Check whether the seat belt is dirty and wash it with neutral soap if necessary.

CAUTION:

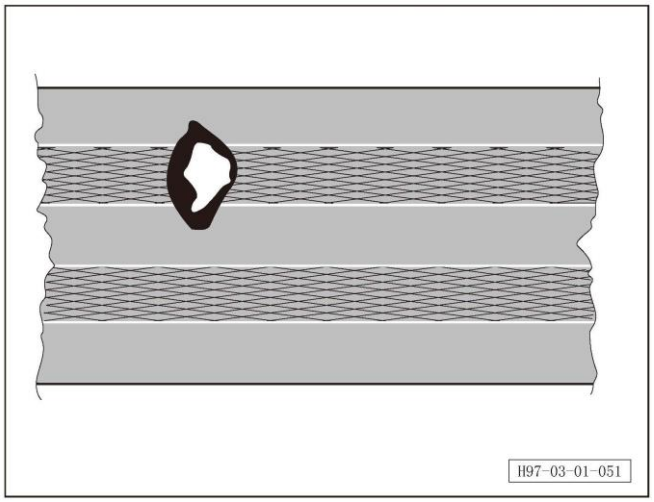
- In case of damage, the seat belt and seat belt buckle assembly should be replaced as a whole.



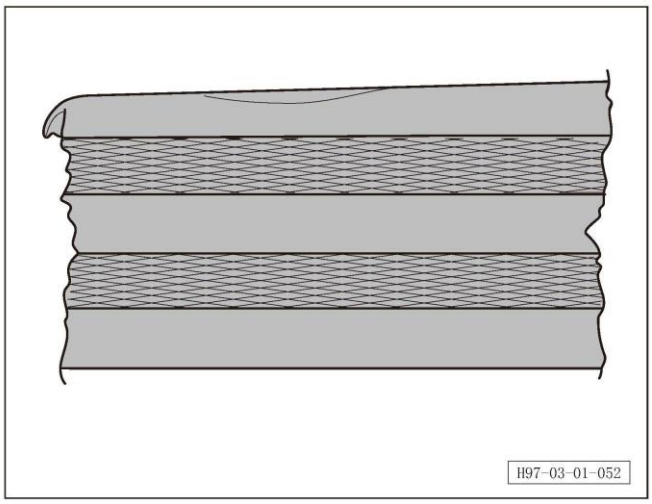
c. The seat belt must be replaced when it is broken, torn or scratched.



d. The seat belt must be replaced when the fabric loop on the edge is torn.



e. The seat belt must be replaced when it is scorched by cigarettes, etc.



f. The seat belt must be replaced when one side of the seat belt is deformed or the edge of the seat belt is wavy.

2. Check the automatic retractor (locking function).

- The seat belt automatic retractor is provided with double locking function.

- The first locking function is triggered when the seat belt is pulled out quickly from the automatic seat belt retractor (belt pull acceleration).

Check:

Pull the seat belt forcefully and quickly from the automatic seat belt retractor.

- If no locking function is provided, replace the seat belt and seat belt buckle assembly as a whole.

- If a fault occurs when the seat belt is pulled out or retracted, first check whether the position of the seat belt automatic retractor has changed.

- The second locking function is triggered by changing the movement of the car (car-related locking function). At the same time, the car must be driven on a flat road.

- Fasten the seat belt, accelerate the car to 20km/h, and then apply the full brake using the foot brake.

CAUTION:

- If the seat belt is not locked by the locking mechanism during braking, the seat belt and seat belt buckle assembly must be replaced as a whole.

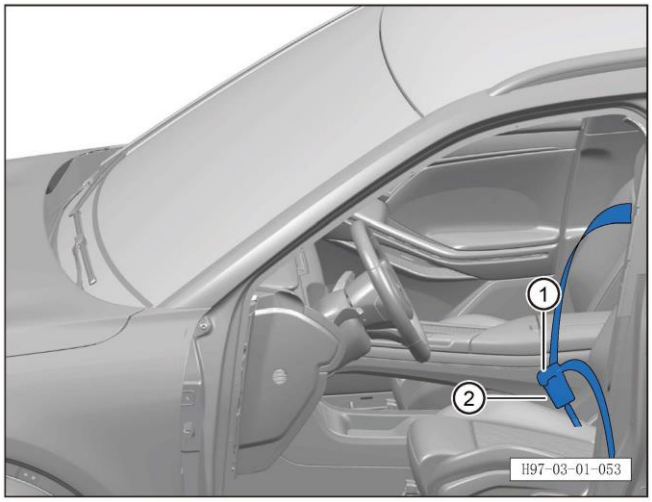
3. Visually inspect the seat belt buckle assembly.

- Inspect the seat belt buckle assembly for cracks or splits.

CAUTION:

- In case of damage, the seat belt and seat belt buckle assembly should be replaced as a whole.

3. Check the function of seat belt buckle assembly

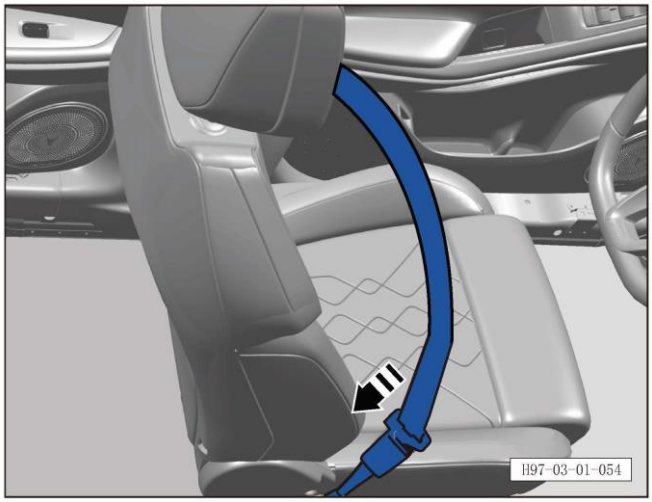


a. Locking device: check.

Push the lock tongue ① into the seat belt buckle assembly ② until a click sound is heard. Repeat the operation 5 times and pull the seat belt firmly to check whether the locking mechanism is engaged.

CAUTION:

- During more than 5 inspections, the entire seat belt and seat belt buckle assembly must be replaced even if the lock tongue is not locked in the seat belt buckle assembly only once.



b. Unlocking device: check.

- Press the button on the seat belt buckle assembly in the direction as indicated by the arrow to release the seat belt.

- When the seat belt is loose, the lock tongue must be able to automatically eject from the seat belt buckle assembly.

Note:

- If it is determined that these parts are damaged, the seat belt and seat belt buckle assembly as well as the fixing point bolts must be replaced as a whole.

- For damage not caused by a traffic accident, such as wear, only the corresponding damaged parts must be replaced.

CAUTION:

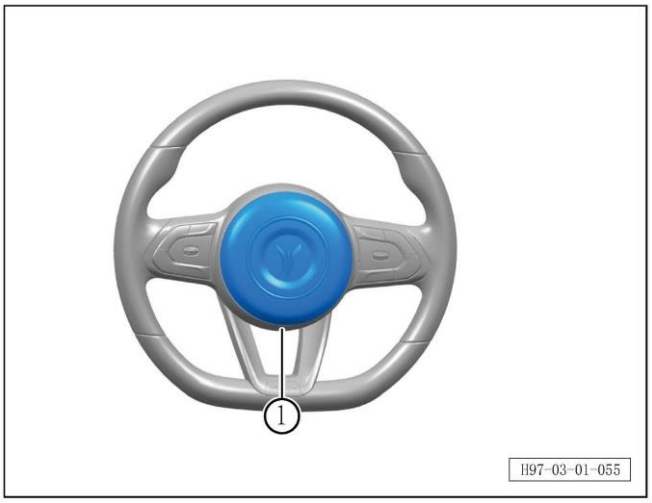
- Never use lubricant on the buttons of the seat belt buckle assembly to eliminate noise or dryness when operating the seat belt.

- For safety reasons, the driving test must be carried out on an unoccupied road section to avoid danger to other vehicles or pedestrians.

3.1.6.4 Maintenance inspection of airbag

Inspection procedure

1. Driver airbag.

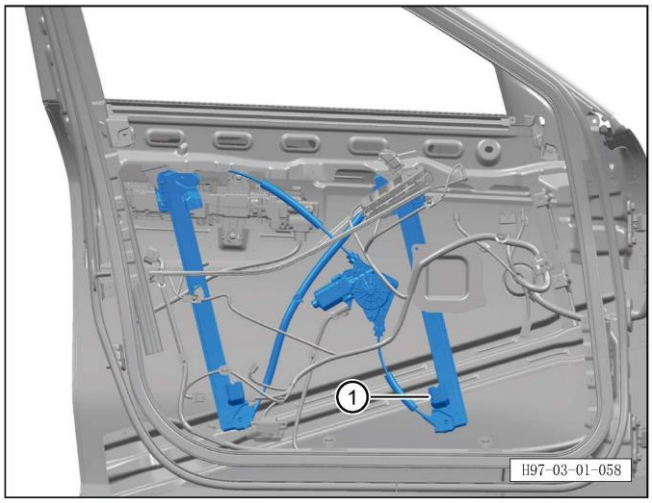


a. The airbag identification marking is the letters "AIRBAG" on the steering wheel cover.

b. Visually inspect the plastic casing ① for damage, and replace if necessary.

3.1.6.5 Inspection of door window and sunroof

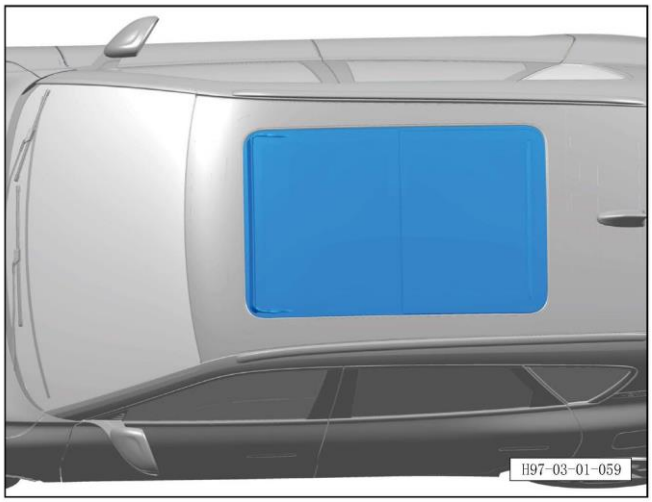
1. Check the front and rear door windows.



a. Check whether there are abnormal sounds when opening and closing the front and rear door windows. If any, remove the foreign objects and lubricate, and replace the door window regulator ① if necessary.

b. Check if the anti-pitch function of the door window is normal.

2. Check the sliding sunroof.



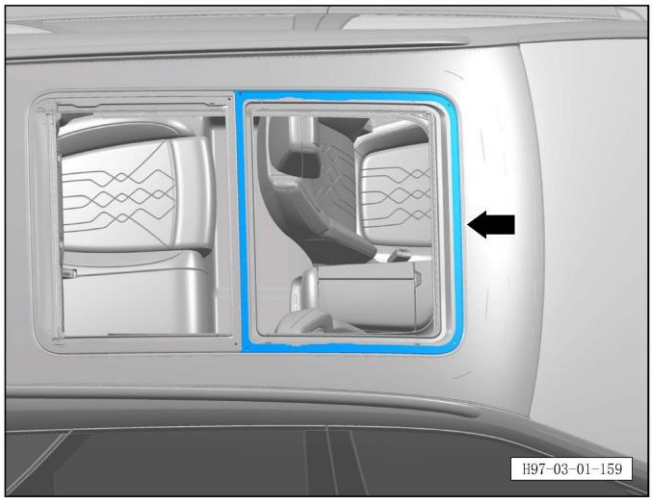
a. Visually inspect the sliding sunroof for sealing and corrosion damage.

b. Check the function of sliding sunroof.

c. Clean the guide rail ① of the sliding sunroof and lubricate the guide rail with grease if necessary.

d. Check the working condition of the sunroof and pay attention to possible friction residues.

3. Check and maintain the sunroof drain.

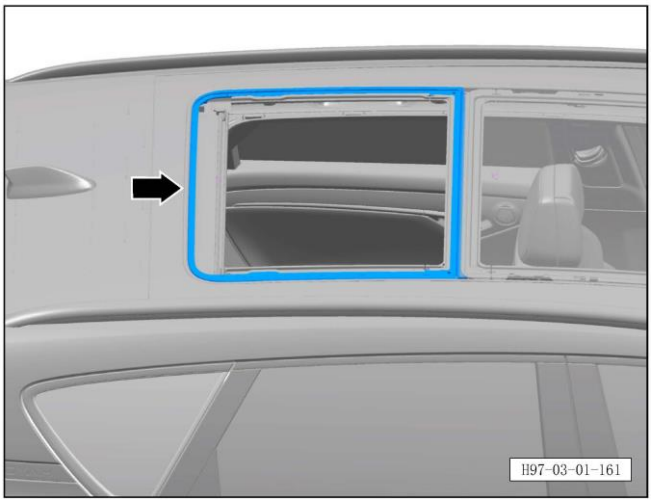


1) Check and maintain the sunroof front drain.

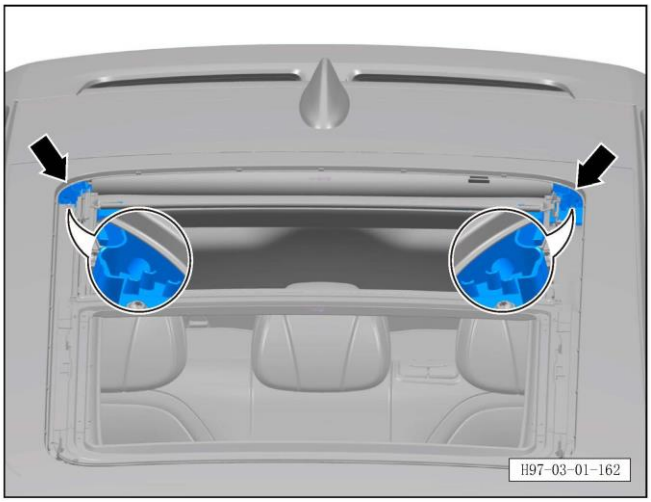
a. Open the sunroof to the fully open position and disengage the sunroof seal.

b. Clean the debris at the sunroof front drain hole and sunroof rail, and check whether the drain hole is blocked.

2) Check and maintain the sunroof rear drain.



a. Open the sunroof to the fully open position and disengage the sunroof seal.



b. Clean the debris at the sunroof rear drain hole and sunroof rail, and check whether the drain hole is blocked.

CAUTION:

- The sunroof may leak if left unmaintained for a long time. It is recommended to clean the strip once a year and the drain every two years.

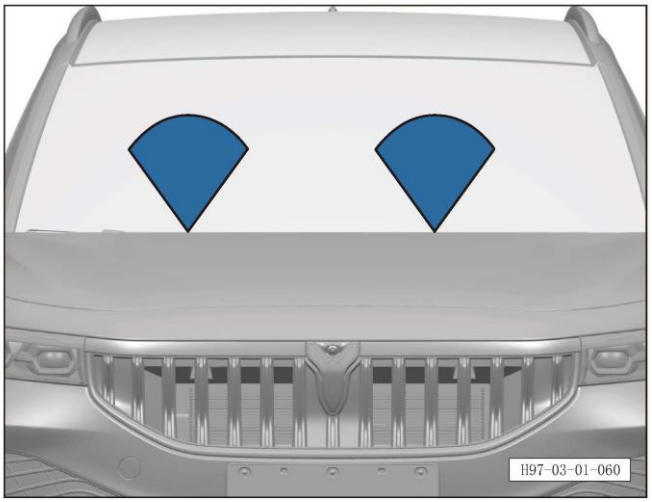
3.1.6.6 Inspection and adjustment of windshield cleaning direction

CAUTION:

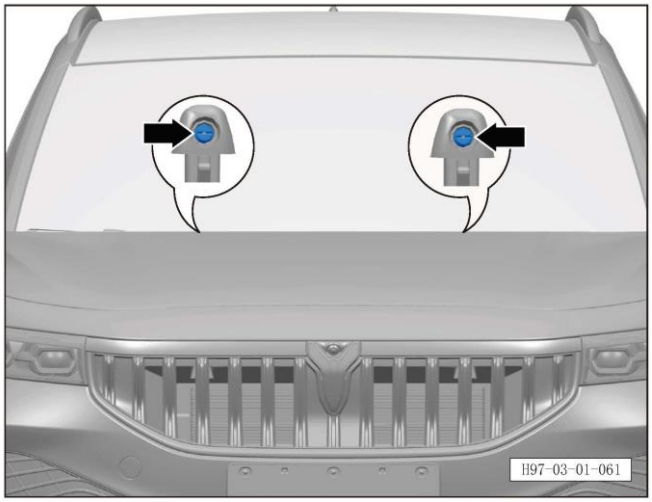
- If there are impurities in the nozzle causing the injection area to become uneven, remove the nozzle and flush with water in the opposite direction of the spray from the nozzle Then purge in the opposite direction of the spray from the nozzle using compressed air.

- When purging the nozzle, carefully remove the inner rubber seal ring to prevent it from being lost and causing water leakage.

1. Check windshield wiper/cleaner.



a. Turn on the wiper water spray function and check whether the two wipers have washer fluid sprayed.

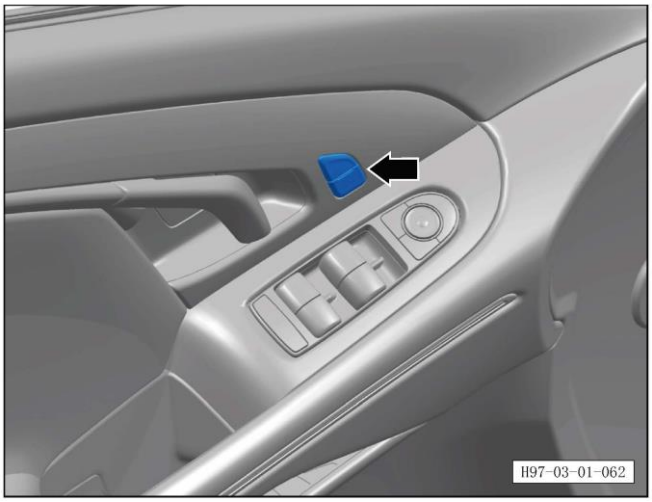


b. If there is no washer fluid sprayed from the wiper, check whether there is washer fluid.

c. If there is no washer fluid sprayed from a wiper, check whether the pipeline is installed in place and whether the pipeline is blocked.

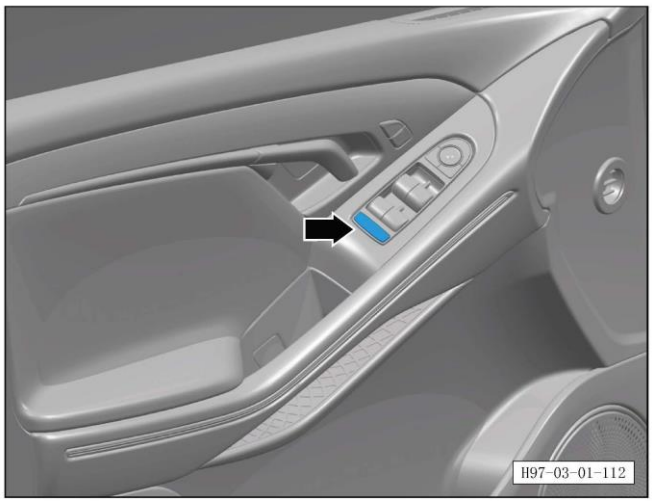
3.1.6.7 Maintenance inspection of door locks, safety buttons, child locks

1. Check the central lock.



a. Check whether the central lock buttons work properly when the vehicle is stationary.

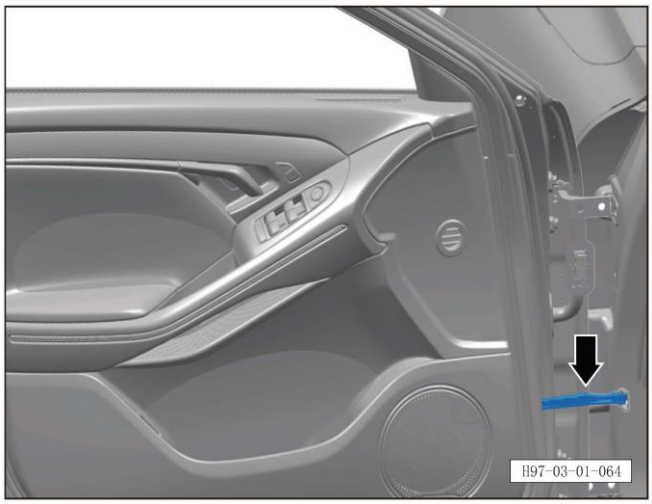
2. Check door locks and child locks.



a. Check whether the door locks and child locks work properly when the vehicle is stationary.

3.1.6.8 Inspection of door stoppers, door locks, hinges

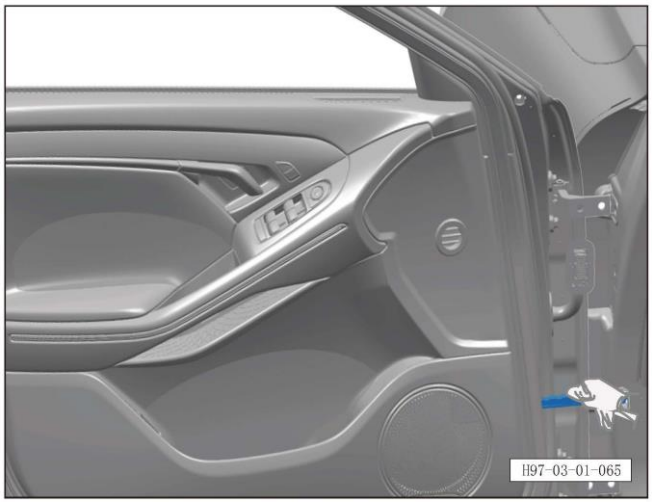
1. Check the door stoppers.



a. Open and close the door repeatedly to check whether the door stopper makes abnormal sound.

2. Lubricate the door stopper.

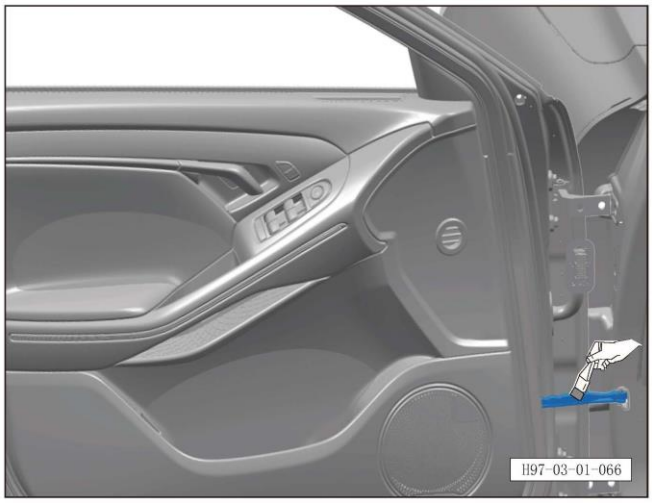
a. Open the door to the maximum.



b. Use a soft cotton cloth to remove dirt from the surface of the black pull rod of the stopper.

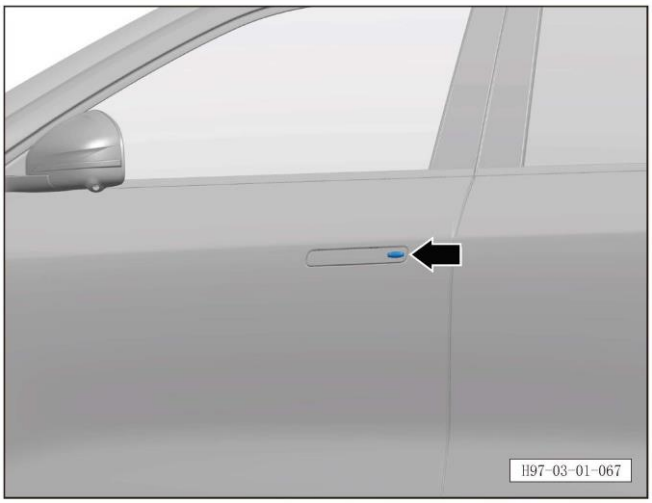
CAUTION:

- It is strictly forbidden to use oil, reducer oil and other greases not specified by the manufacturer to lubricate the door stopper.



c. Use a small brush to apply the specified grease to the upper and lower sides of the sliding surface of the stopper.

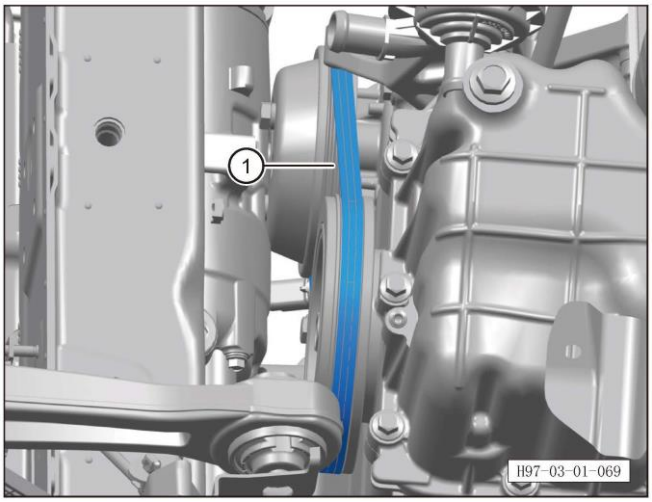
3. Check the lock cylinder.



a. Pull the door handle.

b. Insert the car key into the door lock, then turn the key left and right, and the lock cylinder should be able to rotate smoothly.

3.1.6.9 Maintenance inspection of water pump belt



1. Check the water pump belt.

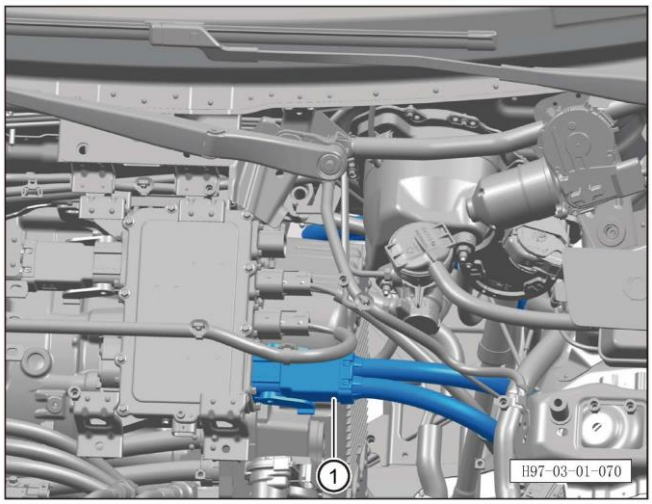
Check the water pump belt ① for the following conditions:

- Base cracks (center fracture, section fracture).
- Delamination (skin, stiffeners).
- Base rupture.
- Spread of stiffeners.
- Wear of tooth surface (blunted material, spread of tooth surface, hardened tooth surface, surface cracks).
- Traces of engine oil and grease.

CAUTION:

- If the above conditions are found on the pump belt during inspection, the water pump belt must be replaced to avoid failure.

3.1.6.10 Inspection of battery high-voltage harness



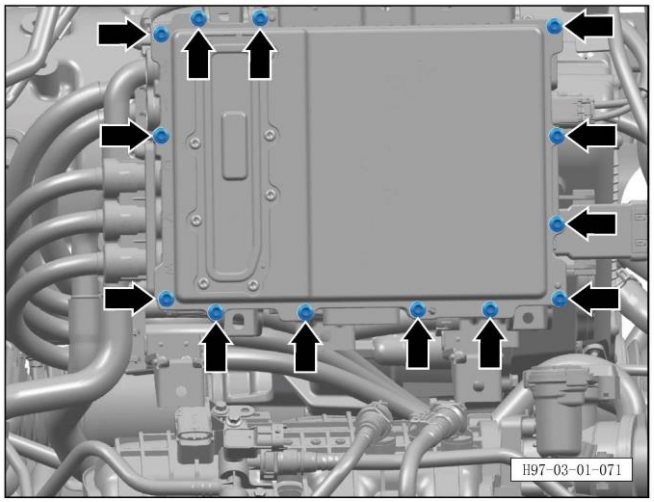
a. Check whether the battery high-voltage harness ① is firmly installed.

b. Check whether the insulation adhesive on the surface of the battery high-voltage harness ① is worn or aged.

CAUTION:

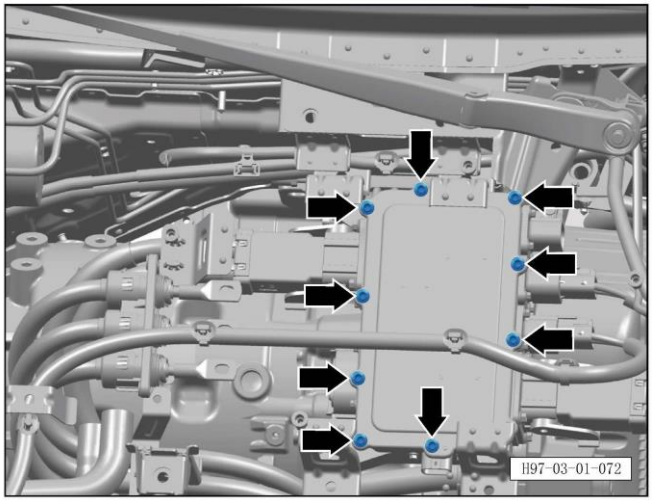
- Eliminate all faults found during inspection.

3.1.6.11 Inspection of bolted connections between the integrated MCU and the front compartment high-voltage box



a. Check whether the 13 fixing bolts of the integrated MCU are secure.

Tightening torque of bolt: 22±2Nm.



b. Check whether the 9 fixing bolts of the engine compartment high-voltage box are firm.

Tightening torque of bolt: 20±3Nm.

CAUTION:

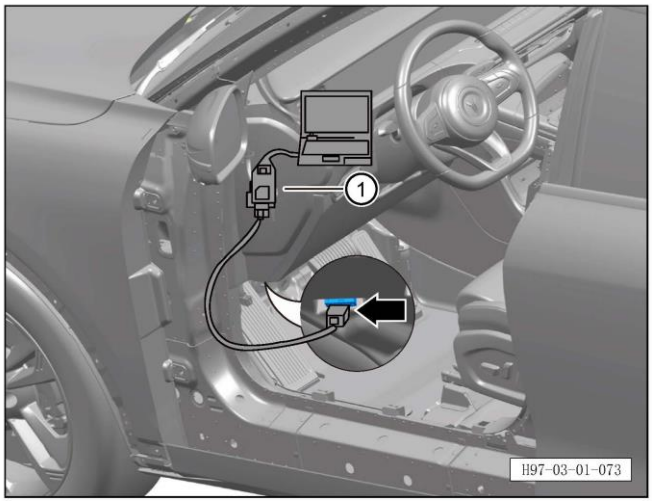
- Eliminate all faults found during inspection.

3.1.6.12 Self diagnosis: inspection of DTC

Note:

- The inspection equipment must always be installed on the rear seat during a test run.

- During the test run, the inspection equipment should be operated by another technician.



a. Connect the vehicle scan tool.

b. Power on the vehicle, and follow the prompts of the scan tool ① to check the fault information.

c. If a DTC is displayed, troubleshooting is required.

d. Eliminate the fault and clear the historical fault information.

e. Turn off the start switch and wait 1 minute.

f. Power on the vehicle again, and re-read the fault information to ensure that there is currently no DTC and the fault has been completely eliminated.

3.1.7.13 Reading and uploading of data being monitored by OBD

1. Check whether the scan tool is of the latest version. If not, please upgrade the software in the networked state.

2. Check that the vehicle battery is fully charged and with stable voltage (the battery cannot be powered off during the whole process).

3. Ensure that the diagnostic computer has sufficient power (powering off, standby, sleep, etc. are not allowed during the whole process).

4. During the whole refresh process, ensure that the diagnostic computer is connected reliably with the OBD of the vehicle and the USB interface of the computer.

5. During the entire refresh process, make sure that the diagnostic computer is connected to the Internet for data uploading.

3.1.6.14 High voltage removal (Facelift)

Note:

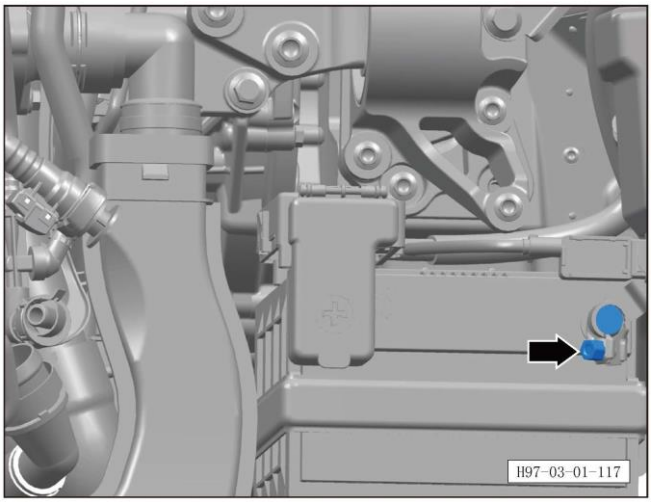
- Before starting the power-off procedure, it is necessary to set the vehicle into trailer mode, while paying attention to sliding prevention.

Power-off procedure

CAUTION:

- Do not charge during high voltage power off.

1. High voltage removal.

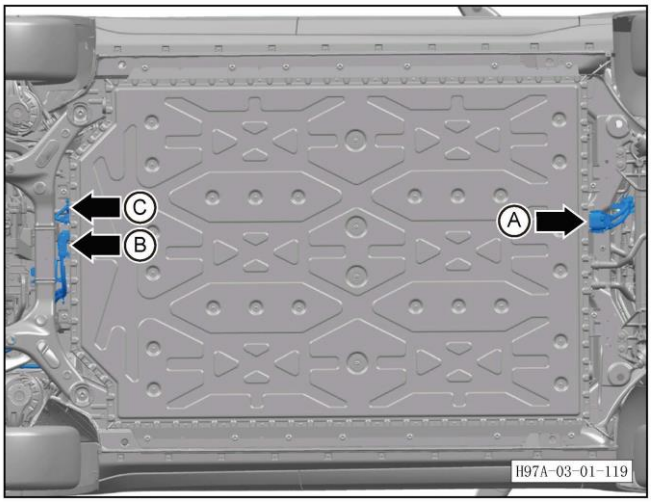


a. Turn off the start switch and disconnect the battery negative terminal.

CAUTION:

- Wear high-voltage protective equipment.

- After disconnecting the battery negative terminal, wait 3 minutes before proceeding.



b. Disconnect the front high-voltage harness A, rear high-voltage harness B, and body harness connector C.

WARNING:

- De-energize high-voltage systems only by professionals (high-voltage electricians).

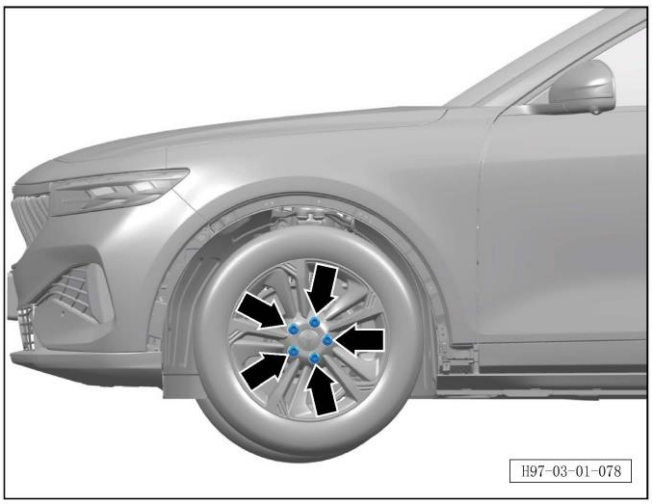
- Disconnect the high voltage cable for 10 minutes before starting work.

c. After disconnecting the high-voltage cable for 10 minutes, measure the high-voltage components with a multimeter, and proceed to the next step only when the voltage is less than 36V. For high-voltage insulation testing, an insulation multimeter can be used to directly measure the resistance value of the high-voltage cable of high-voltage component and the body, of which the standard value is greater than 1.5MΩ.

3.1.7 Maintenance inspection of chassis

3.1.7.1 Maintenance inspection of wheel fixing bolts

1. Check the wheel fixing bolts.



a. Check whether the 5 bolts of the wheel are missing or damaged.

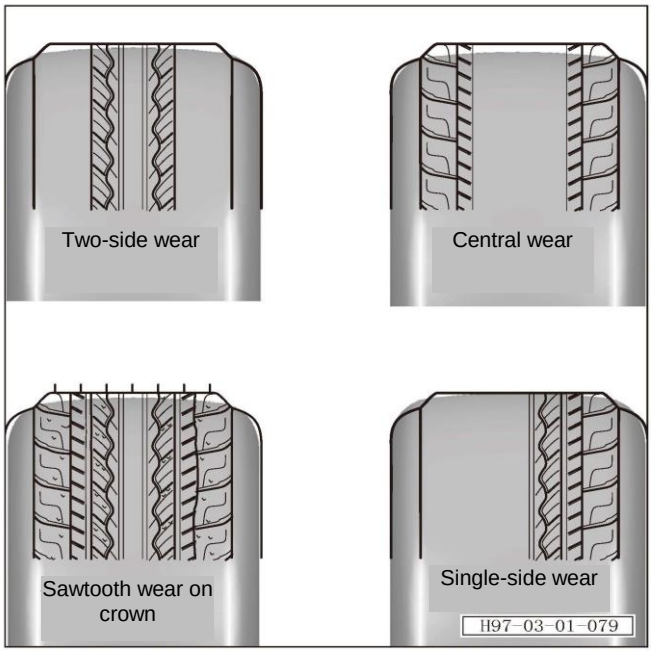
b. Tighten the wheel bolts in a diagonal cross manner.

Tightening torque of bolt: 135±21Nm.

3.1.7.2 Maintenance inspection of tires

1. Lift the vehicle.

2. Check the tires.



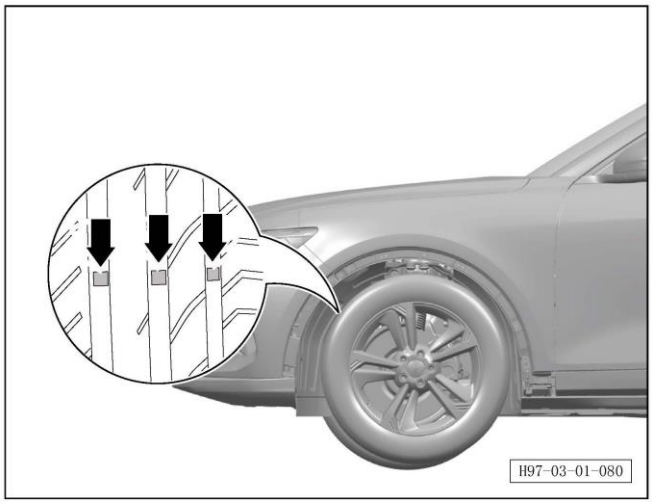
a. Check tires for abnormal wear.

b. Check the tire tread for damage and foreign objects.

c. If it is found that the tire tread is subjected to two-side wear or central wear, it is necessary to adjust the tire pressure.

d. If it is found that the tire tread is subjected to single-side wear or sawtooth wear, it is necessary to check the front wheel toe-in and wheel camber, and adjust if necessary. See 6.5.9.3 Four-wheel alignment operation steps

Tire specification	Front wheel	Rear wheels
255/50R19	240kPa	240kPa
255/45R20	250kPa	250kPa



CAUTION:

- When it is found that the tire has reached the wear limit or is damaged and affects safe driving, the customer must be informed and it is recommended to replace the tire.

1. Check the tire rolling surface and sidewall for damage and foreign objects, and check whether the tire sidewall is loose and porous, has cuts or is punctured by foreign objects.

2. Check the tread depth of the tire to ensure that the depth of the tread groove is higher than the thickness of the wear mark, and the sidewall triangle wear mark as shown by the arrow in the figure is not worn out.

3.1.7.3 Tire rotation

CAUTION:

- If uneven tire wear is evident, the cause of the wear should be ruled out. In case of tire rotation, it is recommended to check the balance of the tire and the wheel assembly at the same time, and the tire replacement of the model with the tire pressure monitoring system needs to be re-calibrated.

1. The front and rear wheels of vehicles bear different loads when running, and wear differently. Therefore, in order to prevent the tires from being worn in a single direction, regular and timely rotation can make the tires wear evenly, thereby prolonging the life of the tires. It is recommended to rotate the tires every 5000-8000km, and the main purposes of tire rotation are as follows:

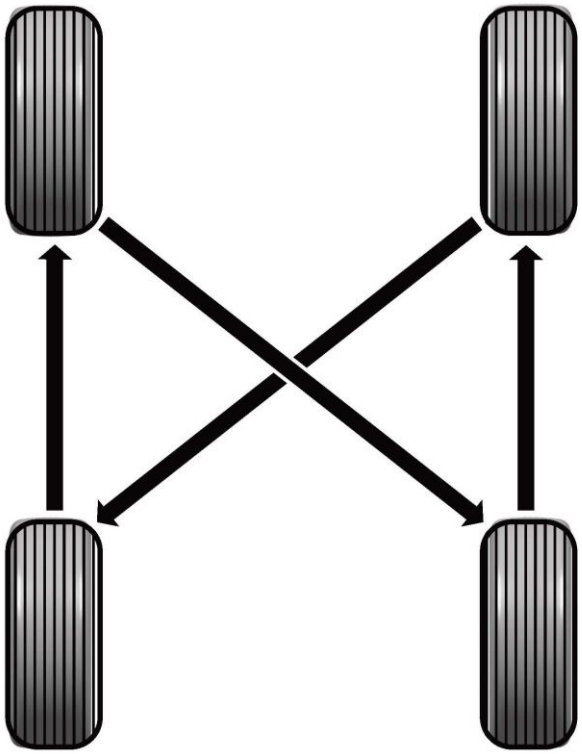
a. Ensure uniform tire wear to ensure stability and economy.

b. Check the condition of tires during rotation to detect damage in time and prevent accidents.

2. Rotate the wheel assembly as shown below.

CAUTION:

- Perform a cross rotation of the tires with "no direction of rotation" as shown below.



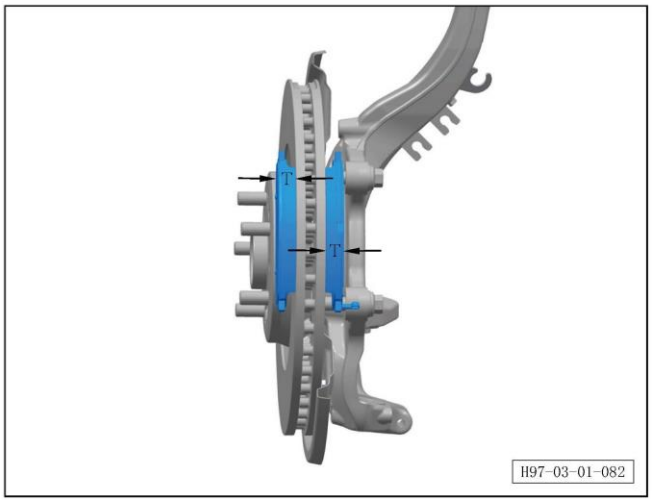
H97-03-01-081

3.1.7.4 Inspection of brake pad

CAUTION:

- If the thickness of the brake disc and brake pads reaches the wear limit, the customer must be informed and replacement is required.

1. Check the working condition of the brake pads.



a. Remove the brake pads.

b. Check whether there are rust spots, oil stains and other debris on the friction surface of the brake pads. If any, remove it.

CAUTION:

- If oil has penetrated the brake pads, the brake pads must be replaced.

c. Check the friction surface of the brake pad for cracks, rupture or damage, and replace the brake pad if any.

d. Check whether the brake pad guide is loose, and if so, refit or replace it.

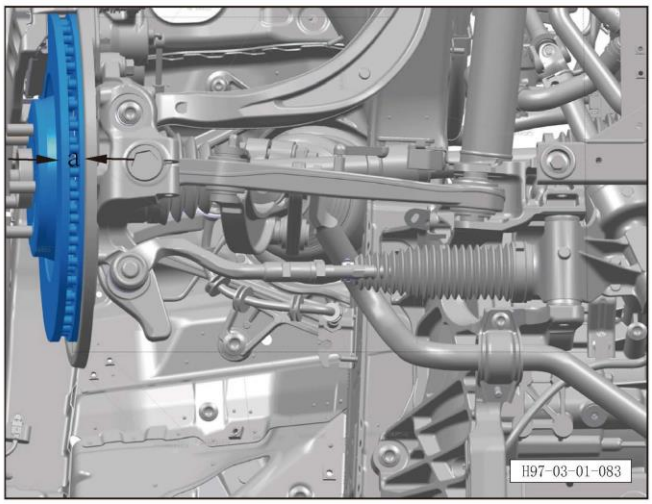
e. Measure the thickness of brake pad (without back plate) T, and replace the brake pad if the thickness exceeds the wear limit.

Wear limit thickness: 2mm.

3.1.7.5 Inspection of brake disc

1. Remove the wheel.

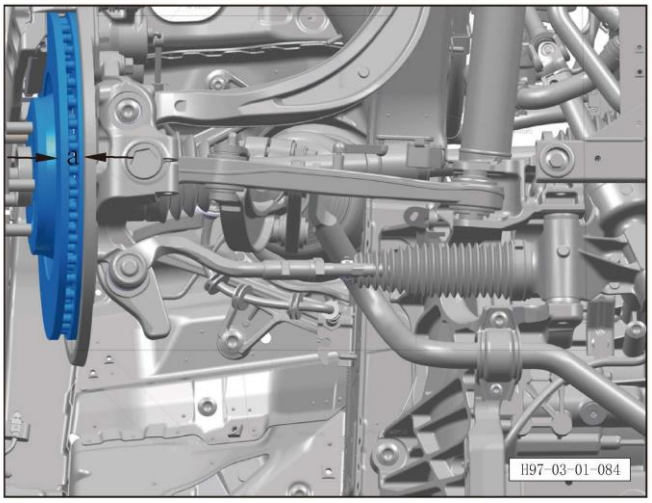
2. Check the front wheel brake disc.



a. Measure the thickness a of the front brake disc.

Thickness of front brake disc: 30mm.

Maintenance limit size: 28mm.



3. Check the rear brake disc.

a. Measure the thickness a of the rear brake disc.

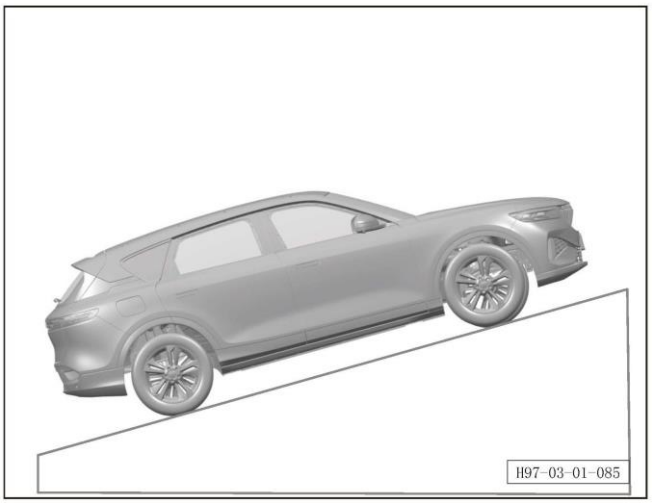
Thickness of rear brake disc: 20mm.

Maintenance limit size: 18mm.

CAUTION:

- When the wear of brake disc exceeds the specified value, the brake disc must be replaced.

3.1.7.6 Inspection of electronic parking brake



1. Check whether the electronic parking brake functions normally.

- Carry out a ramp parking inspection to see if the brake efficiency has decreased.

- Engage the driver's seat belt, drive the vehicle to a 15% grade, and apply the brake to park the vehicle.

- Engage in N gear.

- Activate electronic parking and release the service brake pedal when parking is completed.

- Observe whether the vehicle is fully parked. If there is displacement, it means that the parking efficiency is reduced.

2. Check whether the electronic parking brake is dragging.

- Release the electronic parking normally.

- If the red indicator lamp is on or flashing while driving, it indicates that the residual force is too large. Please repair and check in this case.

3.1.7.7 Inspection of shock absorber bearing

1 Check the front shock absorber bearing.

- Park the vehicle on a smoother road surface.

- Rotate the steering wheel back and forth, and listen carefully for any abnormal sound at the front shock absorber bearing.

- Drive the vehicle over the speed bump and listen carefully for any abnormal noise at the front shock absorber bearing.

CAUTION:

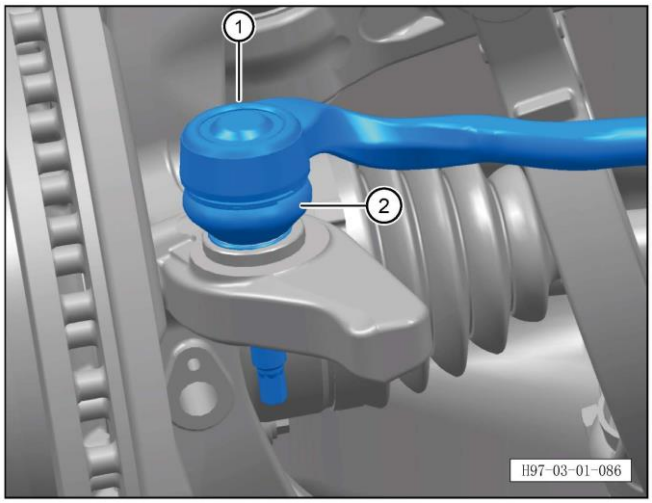
- If there is abnormal sound, please check the cause and replace the relevant parts.

- The vehicle speed should not be too fast when passing the speed bump in the road test.

- If there is abnormal sound, please check the cause and replace the relevant parts.

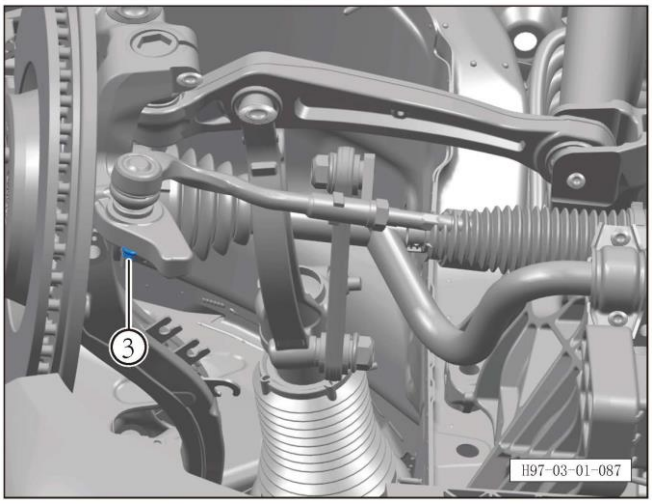
3.1.7.8 Inspection of steering tie rod ball joint and dust cover

1. Check the steering tie rod ball joints, fixtures and dust cover.



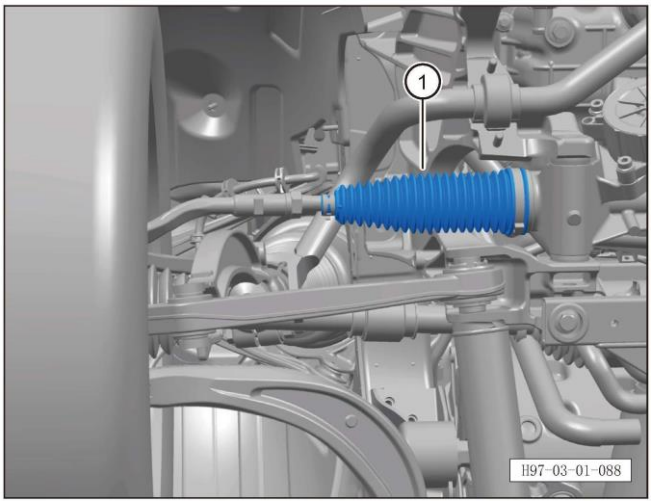
a. Lift the vehicle to a suitable height, shake the tie rod ① by hand, and check whether there is any clearance.

b. Check whether the steering tie rod dust cover ball joint ② is damaged. If so, replace the steering tie rod ball joint. See 6.1.6.1 Removal and refitting of steering & tie rod assembly



c. Check whether the tie rod ball joint fixing nut ③ is secure.

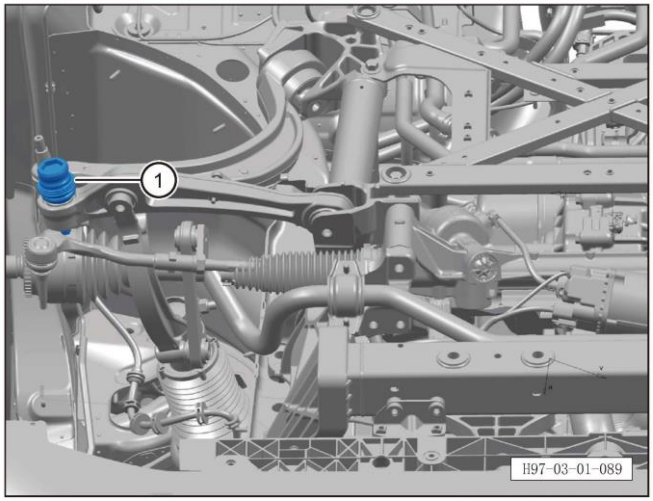
Tightening torque of nut ③: 90Nm+90°.



d. Check whether the steering gear rubber dust cover ① is damaged. If so, replace the steering gear rubber dust cover. See 6.1.6.6 Removal and refitting of steering gear dust cover

3.1.7.9 Inspection of lower swing arm ball joint and stabilizer bar tie rod ball joint

1. Lower arm ball joint.

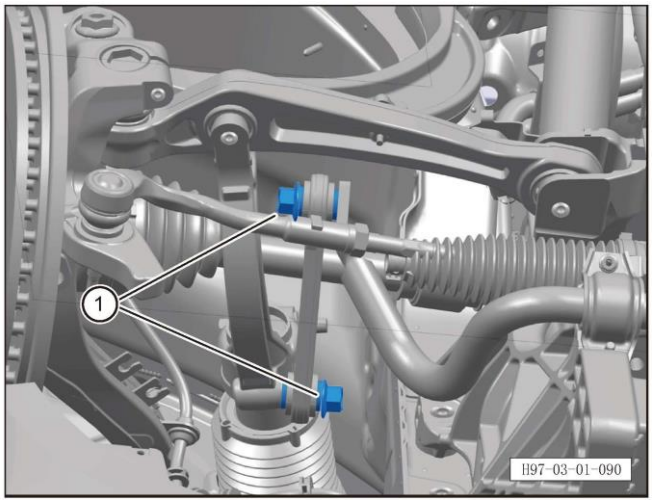


a. Check whether the lower swing arm ball joint seat ① is damaged.

b. Check whether the lower swing arm ball joint seat ① is loose.

c. In case of damage, replace the lower swing arm ball joint seat. See 6.2.8.4 Removal and refitting of front lower swing arm ball joint

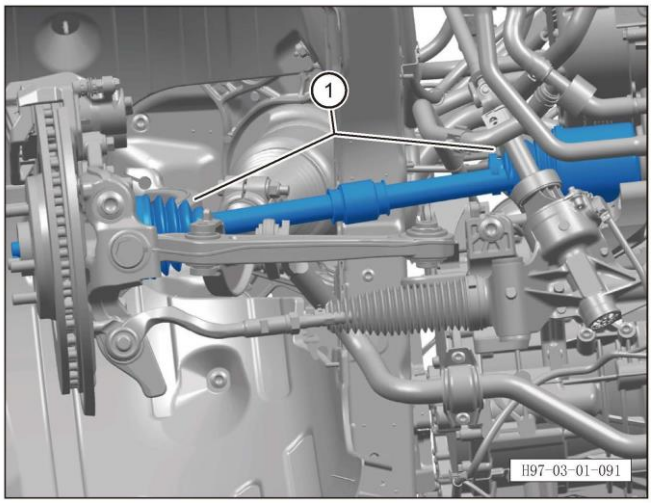
2. Stabilizer bar tie rod ball joint.



a. Check whether the stabilizer bar tie rod ball joint ① is damaged. If so, replace the stabilizer bar tie rod. See 6.2.9.1 Removal and refitting of stabilizer bar tie rod assembly

3.1.7.10 Inspection of drive shaft and dust cover

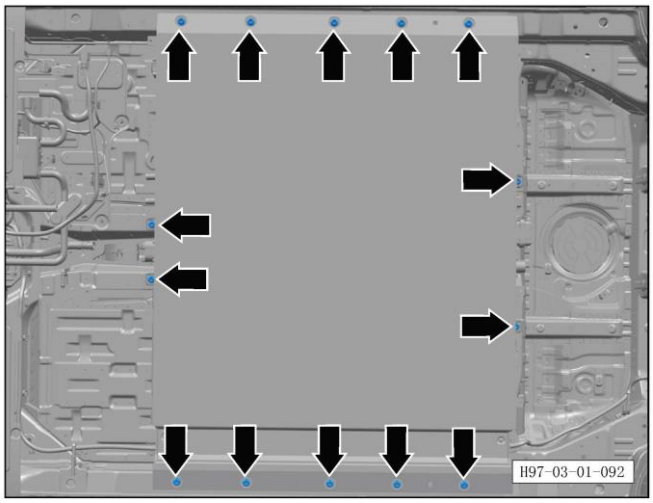
1. Visually inspect the drive shaft and dust cover.



a. Check the drive shaft and dust cover ① for damage and leakage.

b. In case of damage, replace the drive shaft and dust cover ①.

3.1.7.11 Inspection of high voltage battery and integrated MCU fixing bolts



1. Turn off all electrical appliances and the start switch.

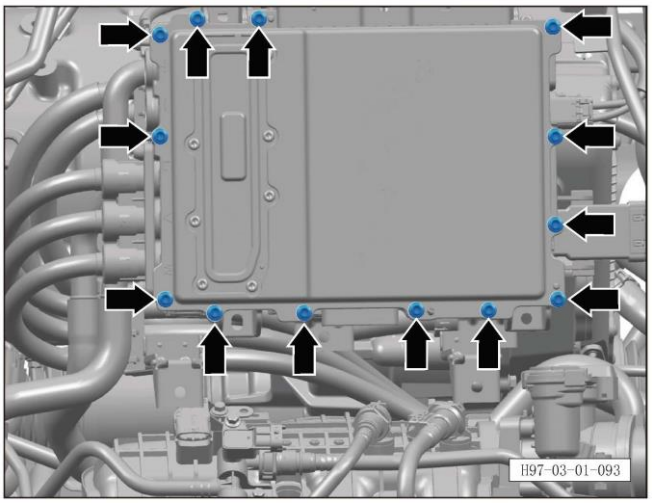
2. Disconnect the battery negative terminal. See 9.5.8.1 Removal and refitting of battery

3. Lift the vehicle.

4. Check the high voltage battery.

a. Check the 14 fixing bolts of the high voltage battery.

Tightening torque of bolt: 110±17Nm.



5. Tighten the integrated MCU.

a. Check the integrated MCU fixing bolts.

Tightening torque of bolt: 15±2Nm.

3.1.7.12 Tightening of chassis bolts

1. Turn off all electrical appliances and the start switch.

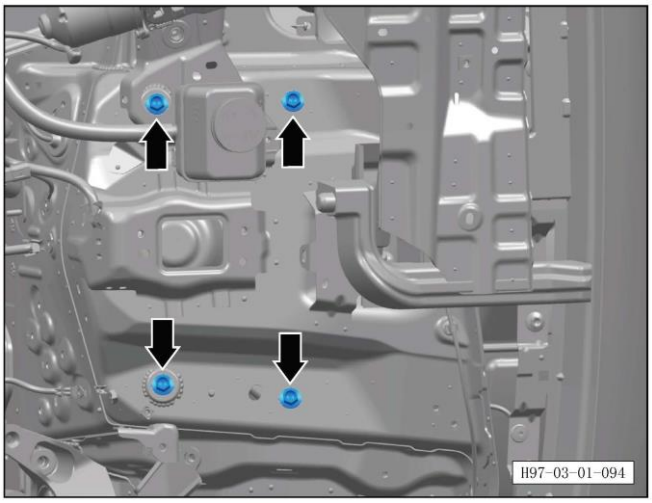
2. Disconnect the battery negative terminal. See 3.1.6.1 Removal and refitting of battery

3. Remove the wiper cover plate. See 8.6.7.9 Removal and refitting of wiper cover plate

4. Tighten the chassis bolts.

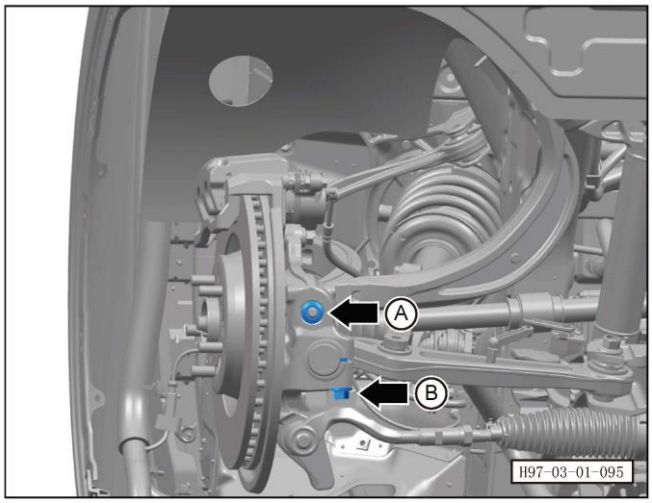
CAUTION:

- See the left side for the inspection procedure on the right side.



a. Check the front shock absorber strut assembly and the 4 fixing bolts of the body.

Tightening torque of bolt: 60±5Nm.

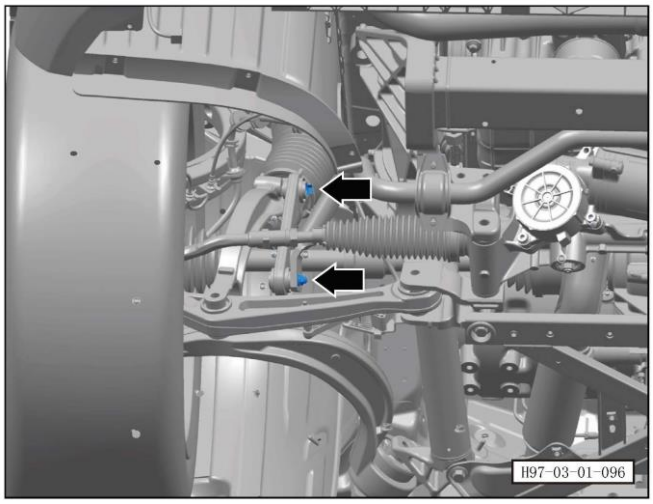


b. Check the lower front control arm fixing nut A

Tightening torque of nut: 70Nm+90°

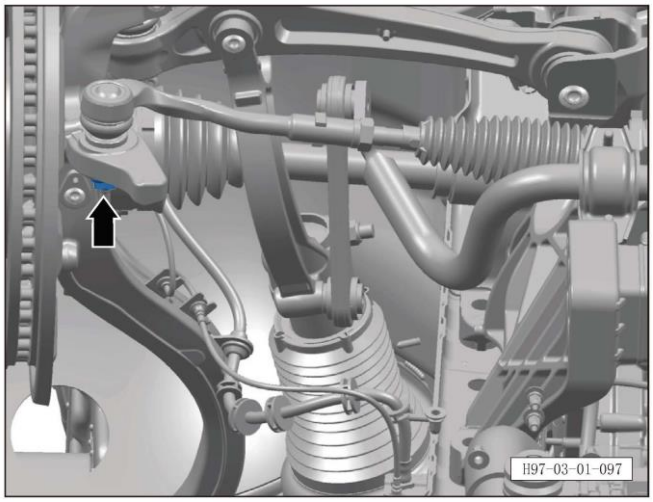
c. Check the front steering knuckle fixing bolt B.

Tightening torque of bolt: 70Nm+90°.



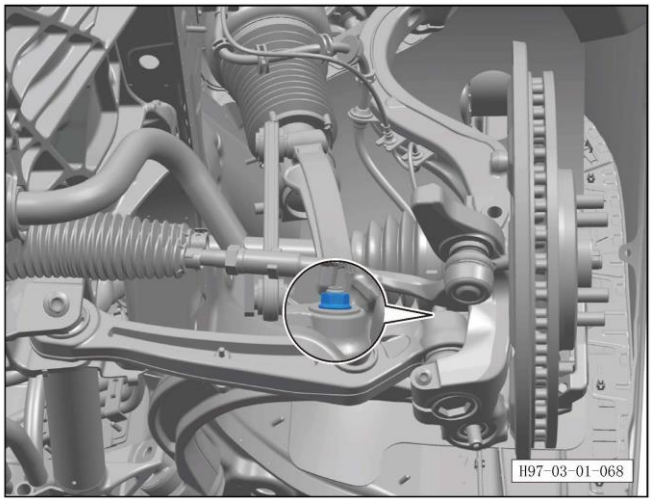
d. Check the 2 fixing nuts of the front stabilizer bar tie rod.

Tightening torque of nut: 40Nm+90°



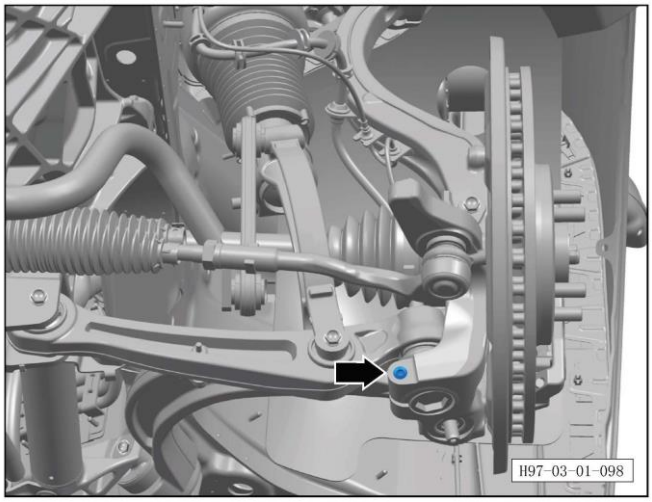
e. Check 1 fixing nut connecting the steering gear outer ball joint to the front steering knuckle.

Tightening torque of nut: 90Nm+90°



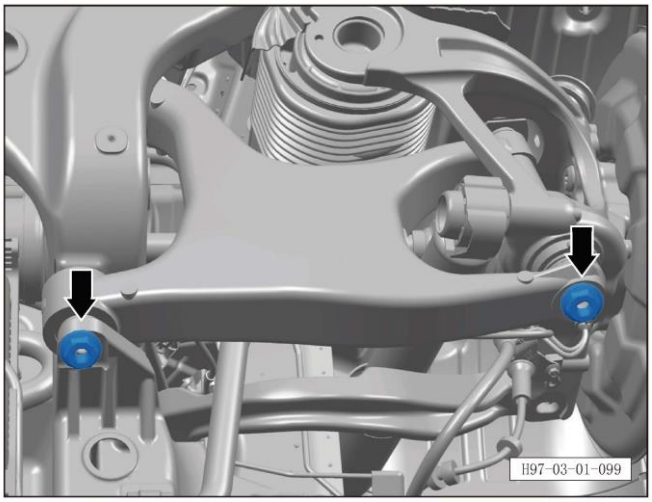
f. Check 1 fixing nut connecting the lower control arm ball joint to the steering knuckle.

Tightening torque of nut: 70Nm+90°



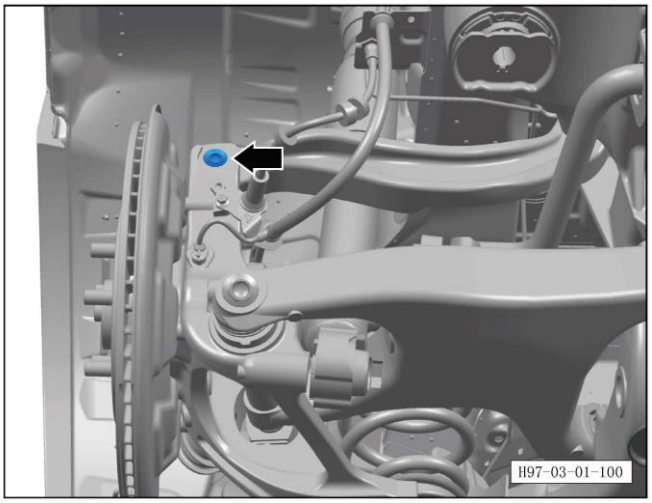
g. Check 1 fixing bolt connecting the lower control arm to the steering knuckle.

Tightening torque of bolt: 70Nm+90°.



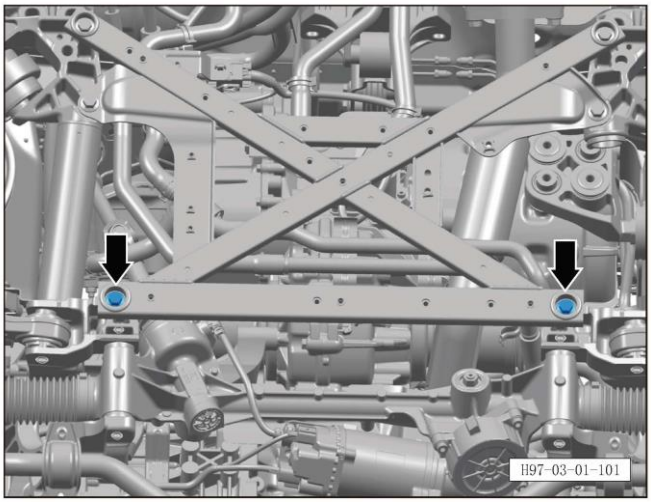
h. Check the 2 fixing nuts of the lower swing arm assembly.

Tightening torque of nut: 70Nm+180°



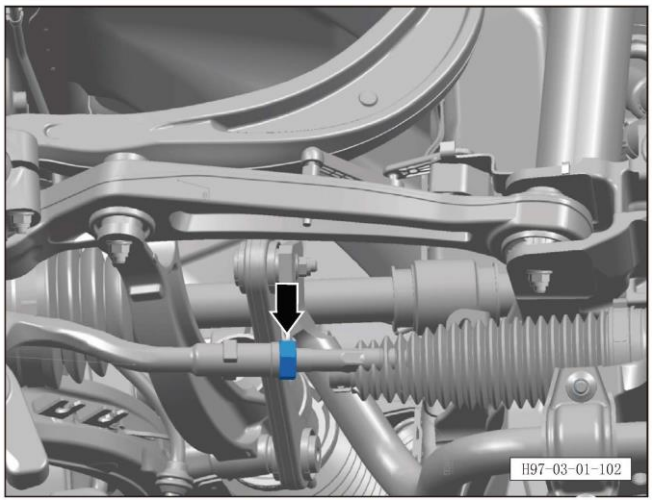
i. Check 1 fixing bolt of upper swing arm and steering knuckle.

Tightening torque of bolt: 70Nm+180°.



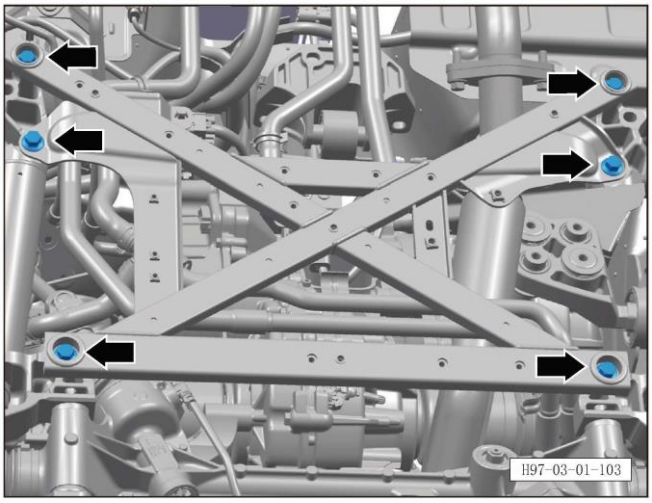
j. Check the 2 fixing bolts of the front subframe.

Tightening torque of bolt: 115Nm+90°.



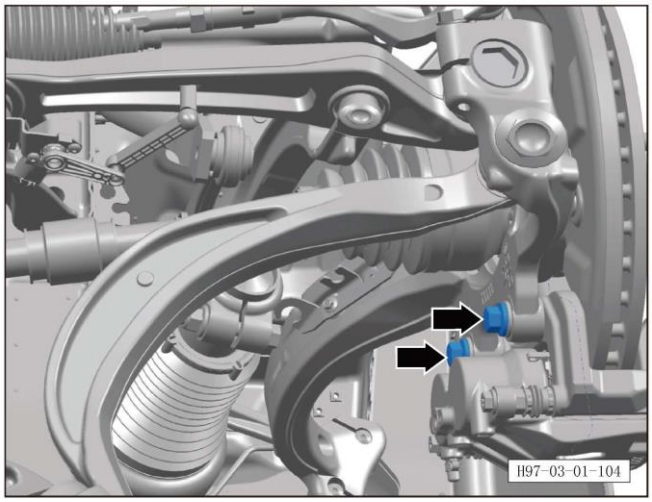
k. Check 1 lock nut connecting the steering gear outer ball joint to the steering gear assembly.

Tightening torque of nut: 100±10Nm.



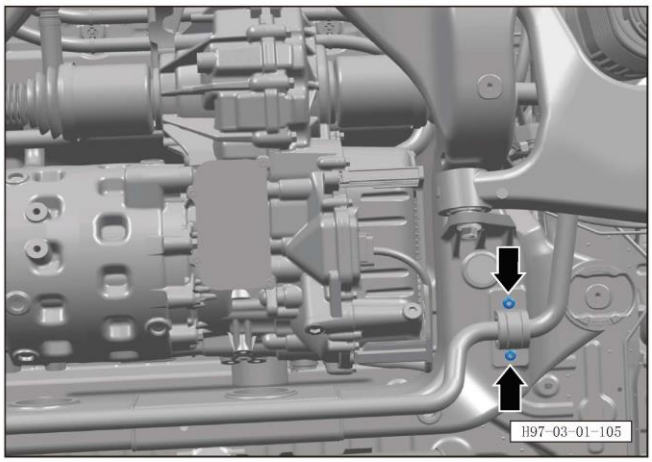
l. Check the 6 fixing bolts connecting the front subframe to the body.

Tightening torque of bolt: 115Nm+90°.



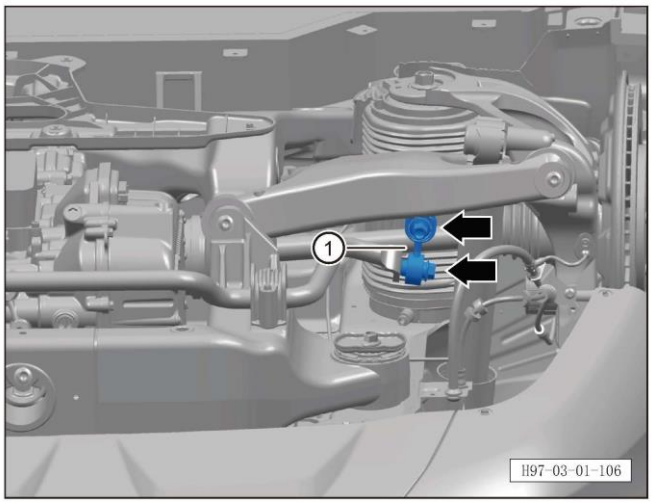
m. Check the 2 fixing bolts of the front caliper bracket.

Tightening torque of bolt: 120Nm+45°.



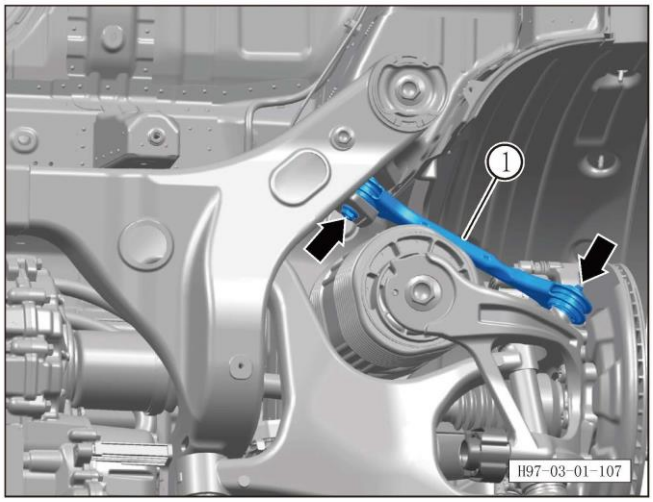
n. Check the 2 fixing nuts of the rear stabilizer bar.

Tightening torque of nut: 30±5Nm.



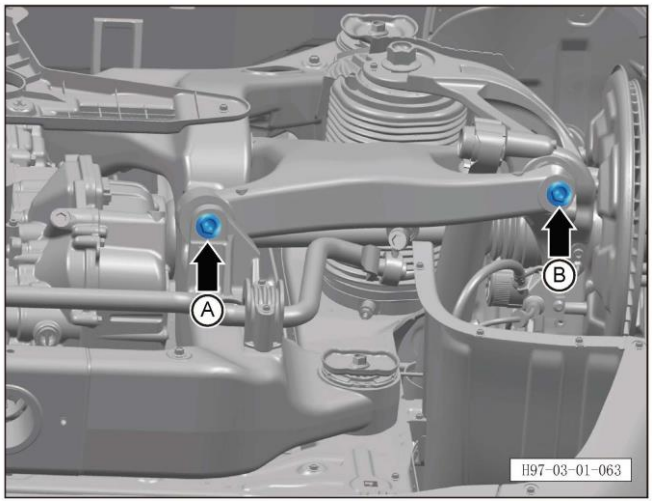
o. Check the 2 fixing nuts of the rear stabilizer bar tie rod assembly ①.

Tightening torque of nut: 55±5Nm.



p. Tighten the 2 fixing nuts of the rear toe-in arm assembly ①.

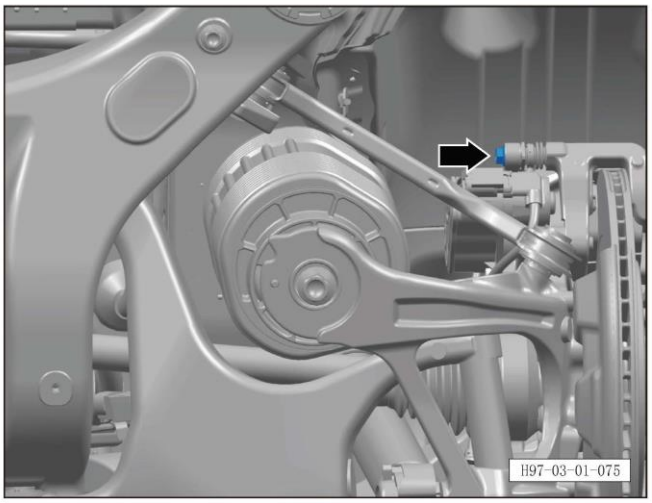
Tightening torque of nut: 70Nm+120°



q. Tighten the fixing nut A and bolt B of the rear lower arm assembly.

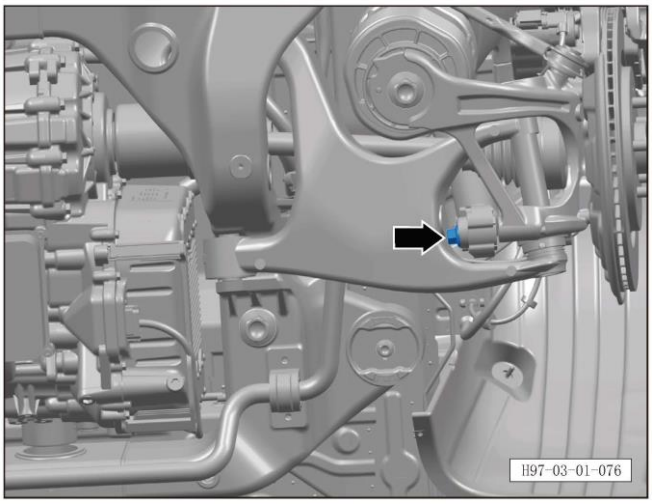
Tightening torque of nut A: 70Nm+180°.

Tightening torque of nut B: 120Nm+360°.



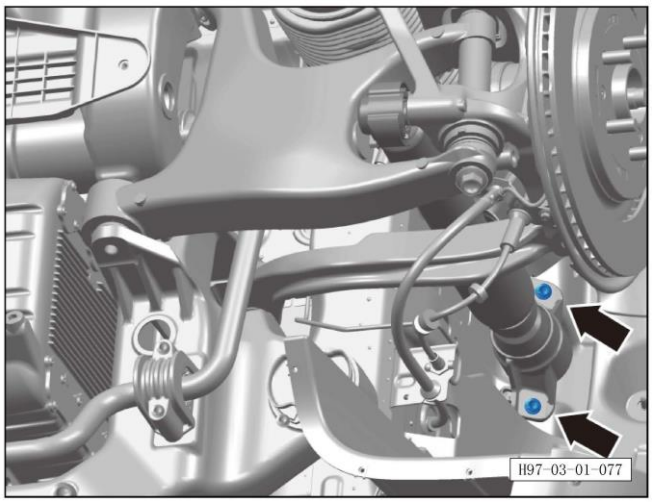
r. Tighten 1 fixing bolt of the rear caliper bracket.

Tightening torque of bolt: 120Nm+45°.



s. Tighten the 2 fixing bolts of the rear shock absorber assembly and the rear steering knuckle.

Tightening torque of bolt: 150Nm+180°.



t. Tighten the 2 fixing bolts connecting the rear strut assembly ① and the body.

Tightening torque of bolt: 40Nm+90°.

3.1.7.13 Test run

The following ranges depend on the vehicle equipment and road conditions (urban/rural), and are evaluated during the test run:

- Service brake: function, free travel, effect, distance, runout and braking noise.

- Steering system: function, steering clearance, steering wheel in neutral position in straight traveling.

- Radio, navigation system: function, reception, interference noise.

- A/C: inspection function (test functions of A/C at low temperature).

- Wheel: deviation in straight traveling (flat road surface).

- Unbalance: wheels, drive shafts.

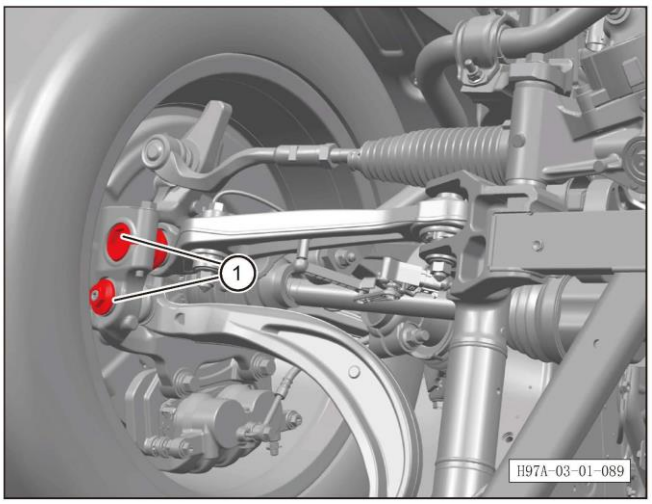
- Wheel bearing: abnormal sound.

- Seat belt: working conditions of automatic retractor.

- Instrument cluster: working conditions of all instruments.

3.1.7.14 Inspection of lower swing arm ball joint and stabilizer bar tie rod ball joint (Facelift)

1. Lower arm ball joint.

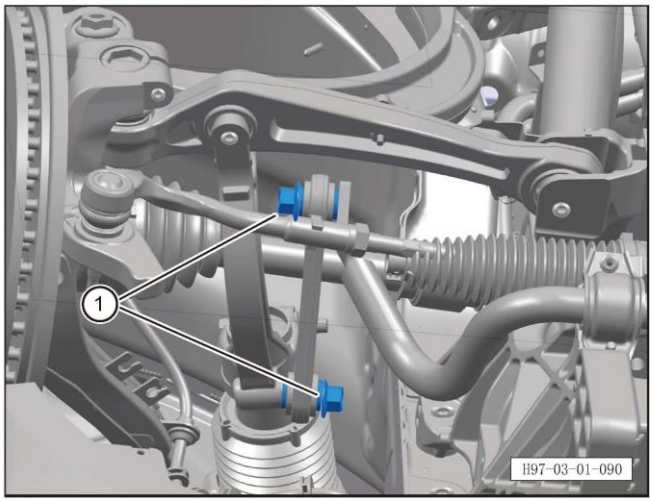


a. Check whether the lower swing arm ball joint seat ① is damaged.

b. Check whether the lower swing arm ball joint seat ① is loose.

c. In case of damage, replace the lower swing arm ball joint seat. See 6.2.8.4 Removal and refitting of front lower swing arm ball joint

2. Stabilizer bar tie rod ball joint.



a. Check whether the stabilizer bar tie rod ball joint ① is damaged. If so, replace the stabilizer bar tie rod. See 6.2.9.1 Removal and refitting of stabilizer bar tie rod assembly

3.1.7.15 Tightening of chassis bolts (Facelift)

1. Turn off all electrical appliances and the start switch.

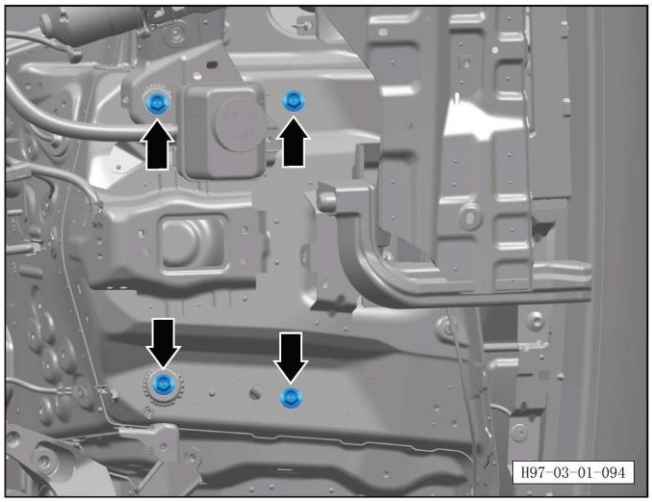
2. Disconnect the battery negative terminal. See 3.1.6.1 Removal and refitting of battery

3. Remove the wiper cover plate. See 8.6.7.9 Removal and refitting of wiper cover plate

4. Tighten the chassis bolts.

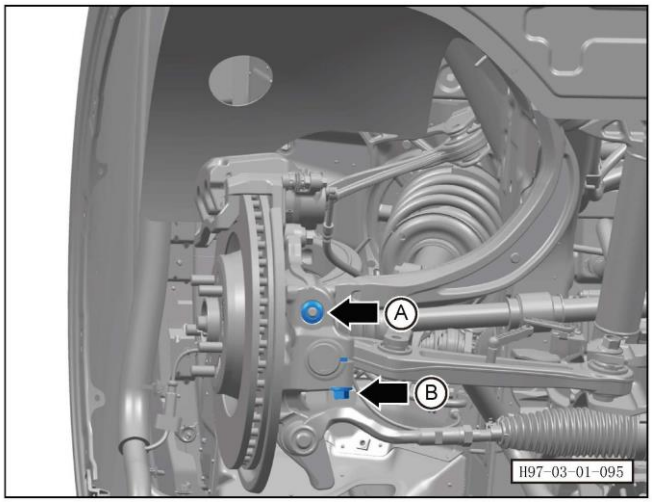
CAUTION:

- See the left side for the inspection procedure on the right side.



a. Check the front shock absorber strut assembly and the 4 fixing bolts of the body.

Tightening torque of bolt: 60±5Nm.

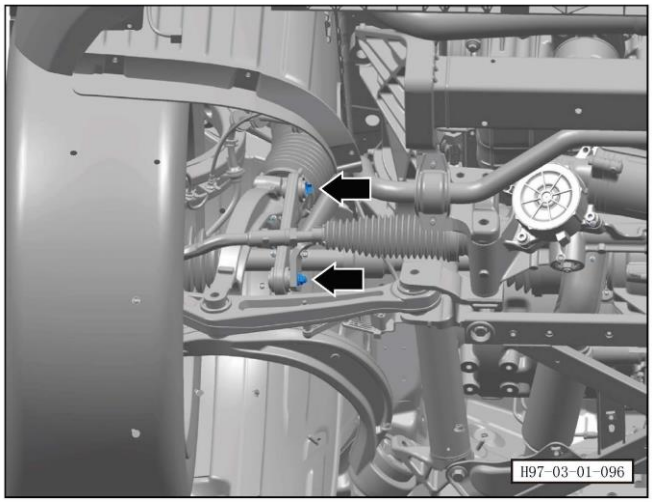


b. Check the lower front control arm fixing nut A

Tightening torque of nut: 70Nm+90°

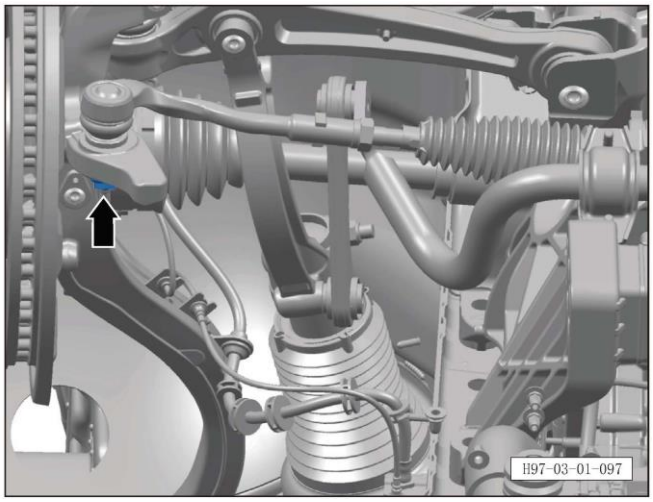
c. Check the front steering knuckle fixing bolt B.

Tightening torque of bolt: 70Nm+90°.



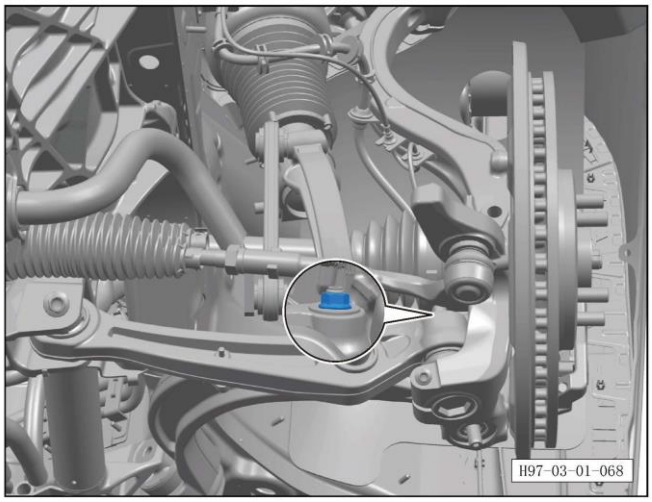
d. Check the 2 fixing nuts of the front stabilizer bar tie rod.

Tightening torque of nut: 40Nm+90°



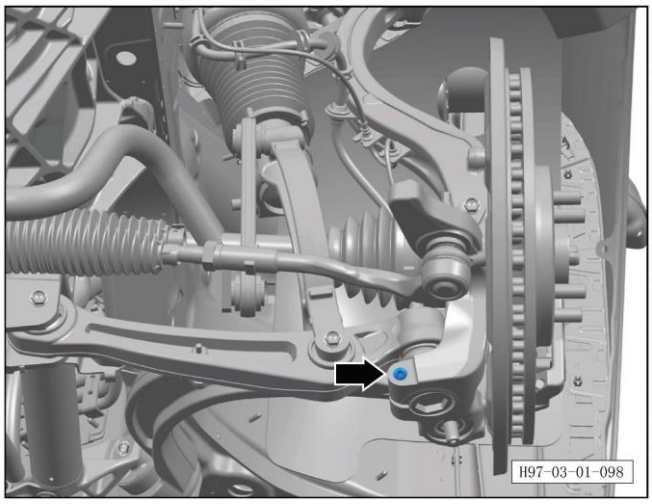
e. Check 1 fixing nut connecting the steering gear outer ball joint to the front steering knuckle.

Tightening torque of nut: 90Nm+90°



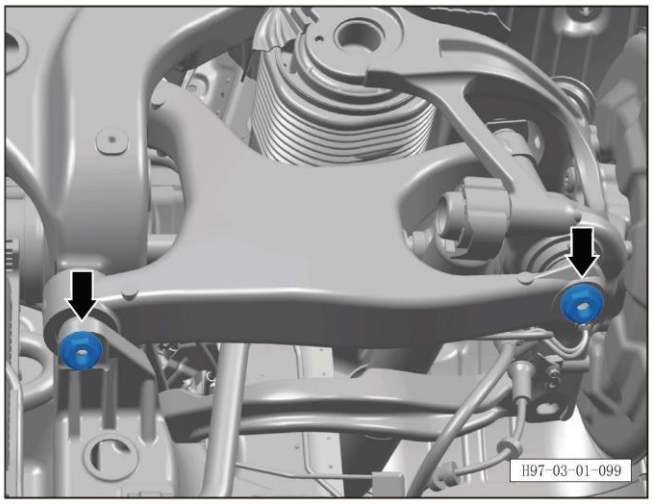
f. Check 1 fixing nut connecting the lower control arm ball joint to the steering knuckle.

Tightening torque of nut: 70Nm + 90°.



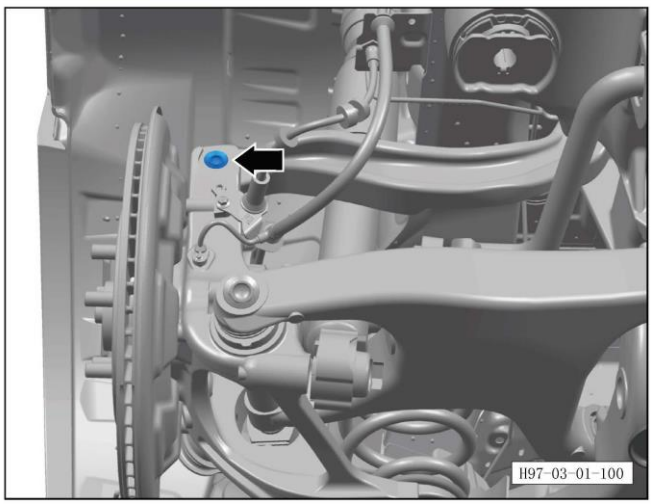
g. Check 1 fixing bolt connecting the lower control arm to the steering knuckle.

Tightening torque of bolt: 70Nm + 90°.



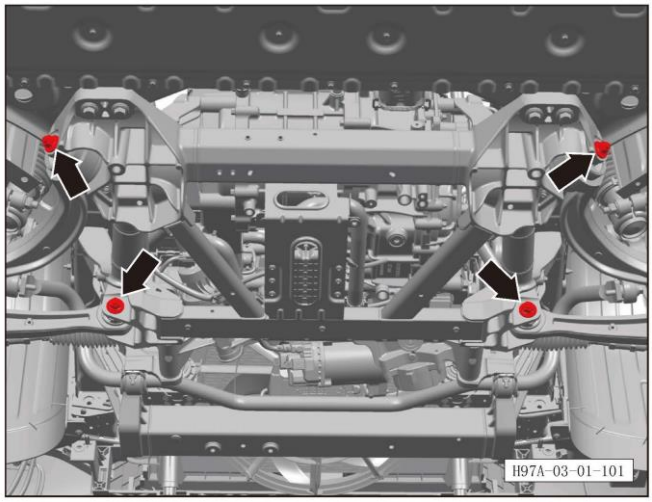
h. Check the 2 fixing nuts of the lower swing arm assembly.

Tightening torque of nut: 70Nm+180°



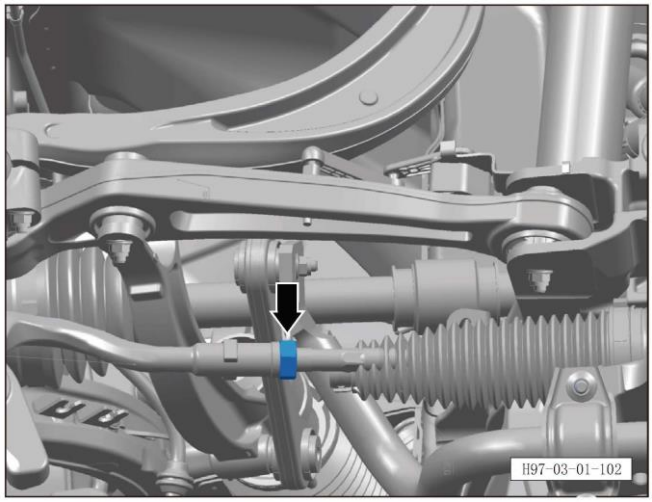
i. Check 1 fixing bolt of upper swing arm and steering knuckle.

Tightening torque of bolt: 70Nm+180°.



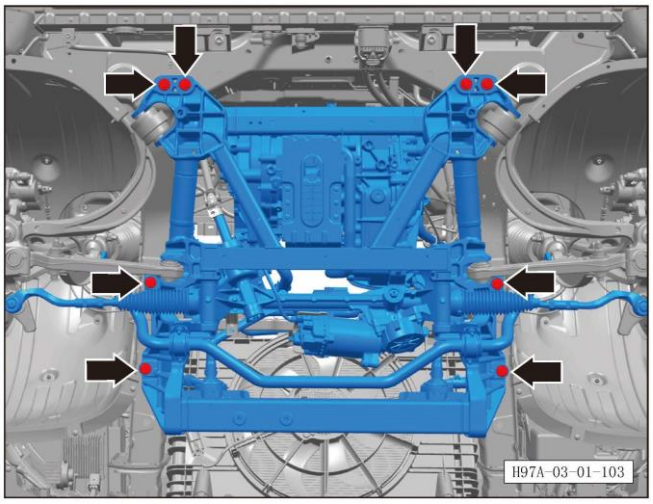
j. Check the 4 fixing bolts of the front subframe.

Tightening torque of bolt: 115Nm + 90°.



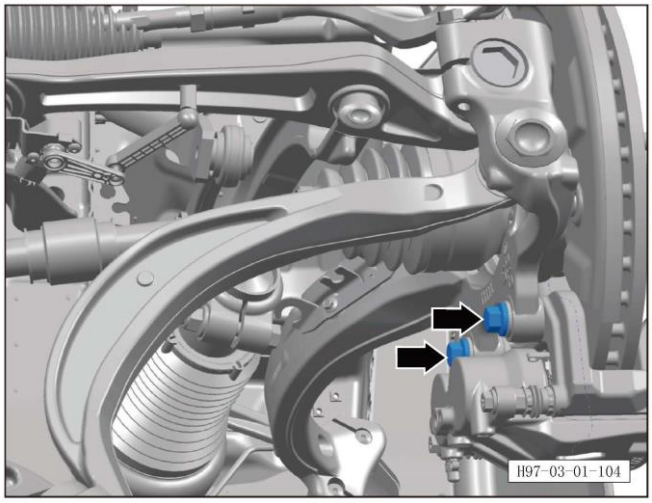
k. Check 1 lock nut connecting the steering gear outer ball joint to the steering gear assembly.

Tightening torque of nut: 110±10Nm.



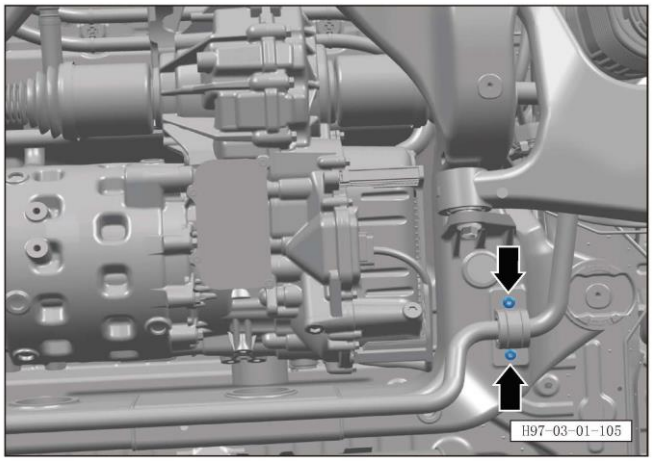
l. Check the 8 fixing bolts connecting the front subframe to the body.

Tightening torque of bolt: 115Nm+90°.



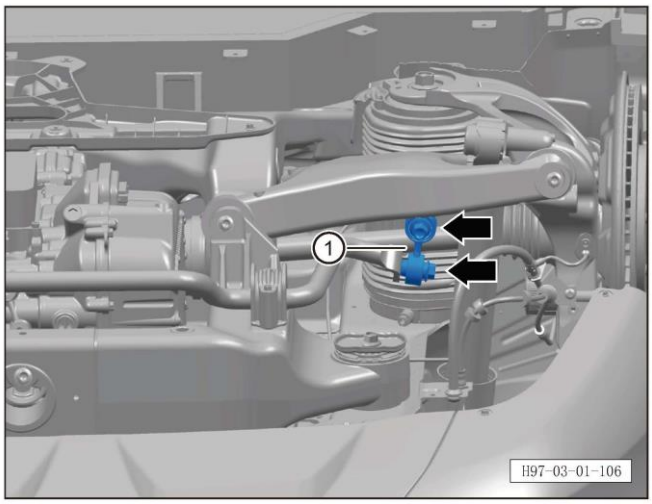
m. Check the 2 fixing bolts of the front caliper bracket.

Tightening torque of bolt: 120Nm + 45°.



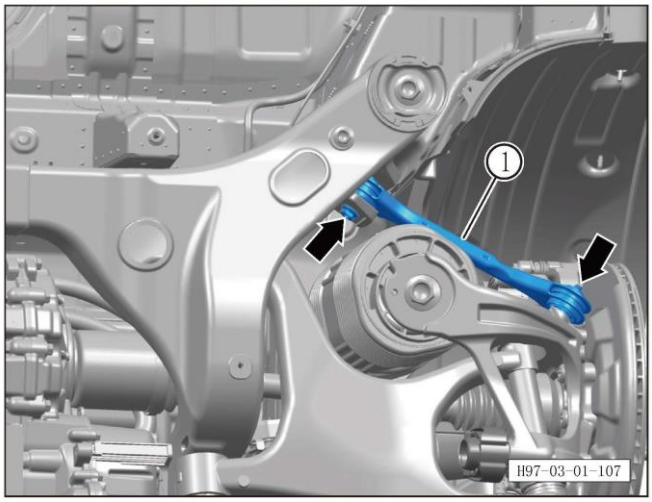
n. Check the 2 fixing nuts of the rear stabilizer bar.

Tightening torque of nut: 30±5Nm.



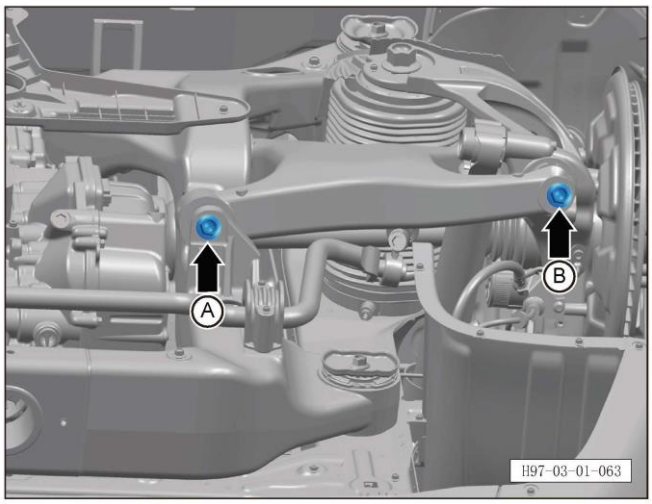
o. Check the 2 fixing nuts of the rear stabilizer bar tie rod assembly ①.

Tightening torque of nut: 55±5Nm.



p. Tighten the 2 fixing nuts of the rear toe-in arm assembly ①.

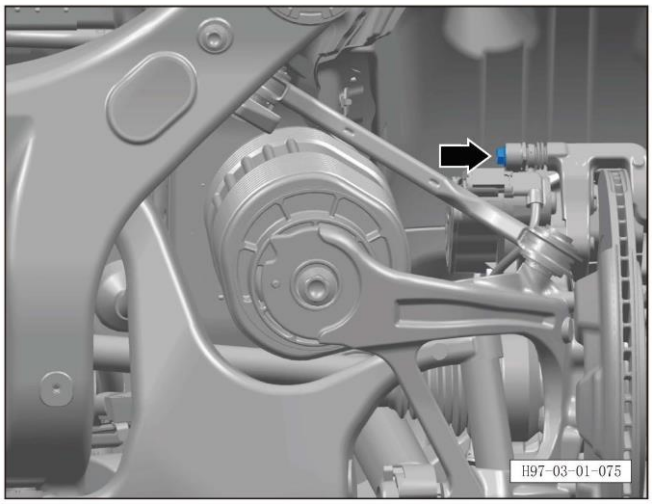
Tightening torque of nut: 70Nm+120°



q. Tighten the fixing nut A and bolt B of the rear lower arm assembly.

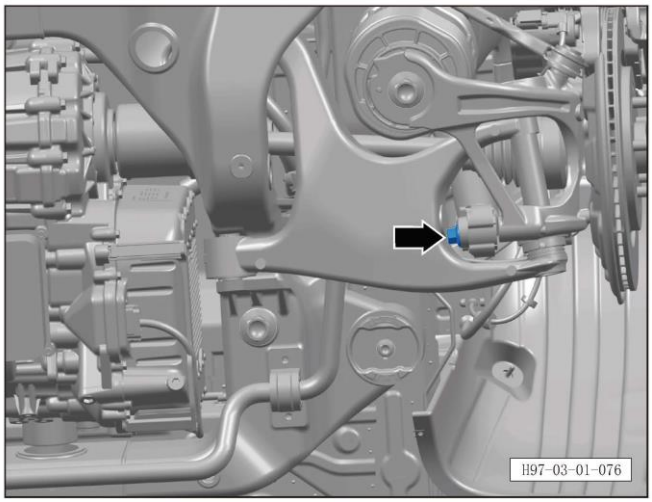
Tightening torque of nut A: 70Nm+180°.

Tightening torque of nut B: 120Nm+360°.



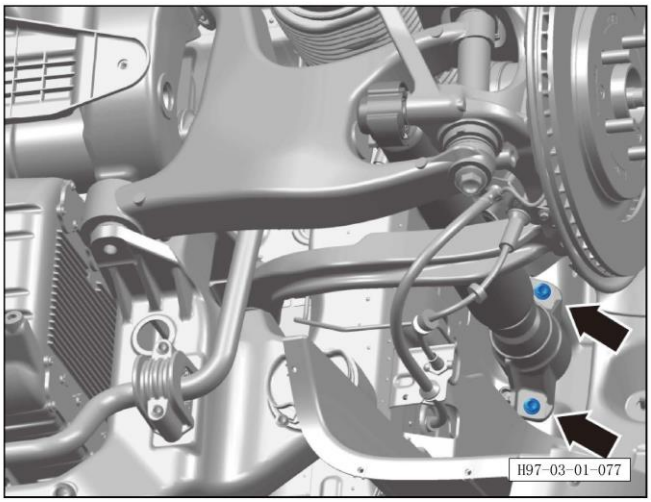
r. Tighten 1 fixing bolt of the rear caliper bracket.

Tightening torque of bolt: 120Nm + 45°.



s. Tighten the 2 fixing bolts of the rear shock absorber assembly and the rear steering knuckle.

Tightening torque of bolt: 150Nm+180°.



t. Tighten the 2 fixing bolts connecting the rear strut assembly ① and the body.

Tightening torque of bolt: 40Nm+90°.

3.1.8 Oil specification and filling volume (Facelift)

Item	Type	Specification (specified by manufacturer)	Consumption
Fuel	/	92# and above	56L
Coolant	Coolant (REV)	Coolant -35℃	6.5L (range extender)
			12.5L (battery system)
	Coolant (battery system of REV version)		21L
Range extender lubricating oil	Range extender lubrication system	SN Grade 5W-30 Fully Synthetic Lubricant	4L
Gear lubricant	Drive motor gear lubricant (including reducer)	ETF-EMC Electromechanical Coupling Lubricant	3L (single motor)
			6L (dual motor), filled separately
	Generator lubricating oil	ATF T6	1.1L
Windscreen washer fluid reservoir	Windscreen cleaning system	Choose the washer fluid of corresponding antifreeze level according to the actual local temperature	3.7L
A/C Refrigerant	A/C cooling system	R134a	0.67Kg (EV)
			0.62Kg (REV)
Brake Fluid	Brake System	Motor vehicle brake fluid	0.75L

Item	Type	Specification	Standard capacity	Actual consumption
Coolant	EV	Original coolant of VOYAH (-35 ℃)	19 L	19±1L
	REV		21 L	21±1L
Drive motor gear lubricant	Front motor (EV)	CASTROL 805C EV	0.85 L	/
	Rear motor (EV/PHEV)			/

3.2 Health and safety

3.2.1 Safety instructions

Many operations related to vehicle maintenance and repair can affect personal safety or health. This section lists some of the relevant hazardous operations and materials and equipment, as well as safety rules to avoid such hazards.

This section does not cover all issues related to health and safety. All operations and procedures and handling of materials should be carried out with the premise of ensuring safety and health. Before using any product, it is necessary to consult the product instruction manual provided by the manufacturer or supplier.

3.2.2 Acid and alkali

● Such as corrosive sodium carbonate, sulfuric acid.

● Used for cleaning batteries and other materials.

● Irritating or corrosive to eyes, skin, nose and throat, and can cause burns to human body and damage ordinary protective clothing. Avoid splashing on eyes, skin and clothing, wear appropriate protective clothing, gloves and goggles, and avoid inhalation of spray.

● Be sure to have flushing equipment nearby, such as eye flushing bottles, lotus pods, and soap, so that you can get timely help at any time in the event of a splash.

● Place eye hazard signs in prominent locations.

3.2.3 Airbag

● For highly flammable and explosive - follow the no smoking regulations.

● Airbags are installed in the steering wheel, the front passenger seat and the B-pillar and C-pillar as an auxiliary safety system.

● The airbag expander contains a high-energy propellant that produces extremely high temperatures when ignited.

● This propellant is kept in a hermetically sealed package, and the gas fills the entire airbag when the airbag is activated. Airbags must not be opened during repair, as this could result in a hazard from contact with propellant, and if a ruptured gas generator is found, full protective clothing should be worn when handling spilled material.

● After the airbag is normally deployed, safety goggles and gloves should be worn during repair.

● Deployed airbags should be disposed of in accordance with relevant local laws.

● After direct contact with gas derivatives:

- Rinse the contact area thoroughly with clean water.

- Seek medical attention as appropriate.

● Airbags - operations that should be performed. For your safety, please wear protection articles as much as possible before performing the following operations; when removing the airbag, be sure to turn off the start switch, and disconnect the battery negative terminal, then wait for 1.5 minutes before removal.

- Store the airbag assembly in an upright position.

- Keep the airbag assembly dry during storage.

- When carrying the airbag assembly, be careful not to touch the electrodes and keep the airbag as far away from the body as possible.

- Place the airbag assembly with the cover facing up.

- Carefully inspect the airbag assembly for damage.

- When connecting the airbag, disconnect the battery negative terminal first, wait for 1 minute, and then stand on the side of the airbag assembly.

- Accurately calibrate and maintain all equipment.
- Always wash your hands after handling a deployed airbag. Operations to avoid.
- Do not store flammable materials with components and gas generators.
- Do not immerse the airbag assembly in water or expose it to other liquids.
- Do not store components upside down.
- Do not attempt to open the casing of the gas generator.
- Do not expose the gas generator to open flames or heat sources.
- Do not place other objects on the component cover.
- Do not use damaged components.
- Do not touch the airbag assembly or the gas generator within 10 minutes after the airbag assembly is deployed.
- Do not use any electrical probes on the circuit.

3.2.4 A/C refrigerant

● Skin contact with refrigerant may cause frostbite.

● The instructions provided by the manufacturer must be followed and appropriate safety glasses and protective gloves must be worn.

● If the skin or eyes come into contact with the refrigerant, immediately flush the contact area with clean water. Also, flush the eyes with an appropriate rinse solution, do not rub eyes, and seek medical assistance as appropriate.

● A/C refrigerant - operations to be avoided.

- Do not store refrigerant in places exposed to sunlight or heat sources.
- When filling, do not hold the refrigerant cylinders upright, and keep their valves facing down.
- Do not expose the refrigerant cylinder to frost and snow.
- Do not drop the refrigerant cylinder.
- Do not discharge refrigerant directly into the atmosphere under any circumstances.
- Do not mix refrigerants such as R12 (dichlorodifluoromethane) and R134a (tetrafluoroethane).

3.2.5 Adhesives and sealants

Important considerations for use of adhesive/sealant

● Before using the adhesive/sealant, the surface of the adhesive application position must be cleaned and wiped with a special cleaning agent, so as not to affect the bonding effect. When using sealant, do not allow liquid sealant that cures at room temperature to enter the blind threaded hole, otherwise, the fastener will have a hydraulic locking effect when tightening, which will cause the fastener and (or) other parts to be damaged, and also prevent the fasteners from obtaining the correct clamping force during tightening, and affect the sealing effect, making the fasteners unable to be properly tightened and the parts loosened or separated, and causing serious damage to the engine and other components.

● Health and safety. The materials used in the adhesive/sealant contain hazardous substances, of which the long-term exposure can cause acute and chronic poisoning, occupational diseases, skin diseases and other diseases. When applying sealant, use ventilation breather to maintain ventilation in the workplace; wear protective gloves, masks, protective clothing, etc. during operation. After work, wash your hands carefully to keep the workplace clean, tidy, and hygienic.

- Waste adhesive or solvent-contaminated waste should be cleaned up in time and should not be accumulated for a long time.
- The product should be usually kept in a no-smoking area, kept clean when used, and applied using an applicator or container as much as possible.

Repair of adhesive/sealant

● Car failure or accident will generally lead to body deformation, steel plate cracking, solder joints falling off, etc., and sometimes local damage to other assembly components such as the engine and chassis, resulting in the falling off or damage of some adhesive/sealant products. In the car repair process, it is necessary to select adhesives with the same performance according to the material and functional requirements of the components. The following lists the adhesives/sealants that can be used in the car repair process, which can be selected for use in the car repair process.

Body repair

● The adhesive applied to the body can peel off or crack after deformation or cracking of body interiors and steel plates, and the parts applied with the adhesive need to be repaired during body repair.

- First use a tool to remove the adhesive on the surface of the body, and the remaining adhesive can be wiped off with alcohol.

- Use a special detergent to wipe the sealant application position to avoid residual adhesive and other impurities on the sealant application surface.

- Then apply the repair adhesive to the original sealant application position to achieve the effect of bonding and sealing.

Parts repair

● Some interior parts, reducers and other parts need to be repaired by bonding and sealing after being damaged. When applying sealant, the bonding surface should be cleaned to avoid burrs and cracks affecting the bonding effect.

Precautions for construction

● The adhesives/sealants are used to prevent water and dust from entering the vehicle, and to prevent corrosion. The original sealing joints are conspicuous, and should be resealed if damaged. When sealing open seams with an adhesive/sealant, a high consistency filler should be used. Follow instructions for selected materials.

● When spraying adhesive/sealant type materials, precautions must be taken to avoid spraying into openings of components (such as door locks, glass run channels, window regulators and seat belt retractors) and any moving or rotating parts . After applying the adhesive/sealant, make sure all body bleed holes are open.

● During construction operation, special protective glasses and gloves should be worn to prevent injury.

● When the vehicle leaves the factory, the body metal plates are all painted. After repairing and replacing parts, all exposed metal surfaces must be treated with anti-rust primer before coating.

3.2.6 Engine coolant

● Engine coolant may generate vapors when heated to a high temperature, and inhalation of these vapors should be avoided as much as possible.

● After direct contact with engine coolant, the amount of engine coolant absorbed directly through the skin may reach toxic or harmful doses. Swallowing engine coolant can be life-threatening, and anyone doing so should be sent to hospital immediately for medical attention.

● These products should never be used for processing with ordinary food or in connection with drinking water supply systems.

3.2.7 Asbestos

● Inhalation of asbestos dust can easily cause lung damage and even cancer.

● When disposing of asbestos dust waste, it should be moistened, placed in a sealed container and clearly marked on the surface of the container for easy and safe disposal. If it is necessary to attempt cutting or drilling on asbestos-containing material, it should be wetted, and only hand tools or low-speed power tools should be used.

3.2.8 Battery acid

● The gas released when a battery is charged is explosive, so never work with open flames near a charged battery or a battery that has recently been charged.

● Good ventilation must be maintained.

3.2.9 Brake fluid

Brake fluid may be slightly irritating if splashed on the skin and eyes, so avoid direct contact of brake fluid with the skin and eyes as much as possible. The risk of inhaling the brake fluid vapor at room temperature is not high, because its vapor pressure is very low.

3.2.10 Chemicals

● Chemicals such as solvents, sealants, adhesives, paints, resin foams, battery acid, engine coolant, brake fluids, lubricants and greases should be handled, stored and handled with great care. They can be toxic, noxious, aggressive, irritating or highly flammable, and have highly hazardous odors and dust.

● The effects of long-term overexposure to chemicals may be immediate or chronic, transient or permanent, cumulative, superficial, life-threatening or may affect longevity.

● Chemicals - operations to be performed.

- Carefully read and follow the warnings and precautions on the raw material container and any accompanying leaflets, posters or other instructions for use, and the Health and Safety Data Sheets for raw materials are available from the manufacturer.

- After contact with chemicals, remove them from skin and clothing as soon as possible, immediately change heavily immersed clothing and wash thoroughly.

- Strictly follow the operating procedure instructions and wear protective clothing to avoid direct contact of chemicals with skin and eyes.

- When handling chemicals, cleaning is required before taking breaks, eating, drinking, smoking, or using bathroom facilities.

- Keep the work area clean, tidy and free of chemical spills.

● Chemicals - operations to be avoided.

- Unless instructed by the manufacturer, do not mix chemicals at will; some chemicals form other toxic or harmful chemicals that, when mixed, release other toxic and harmful gases and may cause explosions and other accidents.

- Do not spray chemicals in a closed environment.

- Chemicals should not be heated unless instructed by the manufacturer, as some are highly flammable and others may emit toxic and harmful gases.

- Do not leave chemical containers open as escaping fumes may accumulate to the point of being toxic, harmful or explosive.

● Certain gases are heavier than air and can accumulate in enclosed spaces.

- Do not put chemicals in unlabeled containers.

- Do not use chemicals to remove the chemicals on your hands and clothes, especially solvents and fuels, which will dry the skin, and may cause inflammation of the skin or cause direct absorption of toxic and harmful substances through the skin to affect the health of the body.

- Unless the container has been supervised and cleaned, it should not be used to store other chemical materials indiscriminately.

- Do not sniff or smell chemicals. Brief exposure to gas in high concentration may still lead to poisoning or injury.

3.2.11 Dust

● Powder, dust and dirt may be irritating, harmful or toxic, so avoid inhalation of powdered chemicals and dust caused by dry friction operations. In case of poor ventilation, respirator protection is required to prevent dust inhalation.

● The fine dust of combustible substances may cause the danger of explosion, so avoid approaching the fire source.

3.2.12 Electric shock

● Misuse of electrical equipment not in accordance with the instructions may result in electric shock.

● Be sure to maintain electrical equipment within the specified time and test it frequently. Malfunctioning equipment should be marked and preferably moved out of the work area.

● Do not subject wires, cables, plugs and sockets to wear, kinks, cuts, cracks or other damage, and do not allow electrical equipment and wires to come into contact with water.

● Ensure that electrical equipment is protected by the correct fuse.

● Misuse of electrical equipment is prohibited, and equipment with any hidden troubles cannot be used, otherwise personal safety may be affected.

● It should be ensured that the cables of the electrical equipment will not be pinched or damaged when moving.

● Basic first aid training must be implemented for specialized electrical operators.

● In the event of an electric shock:

- Turn off the power before making contact with the victim.

- If power cannot be turned off, remove the victim's power supply with dry insulating material.

- If specially trained in first aid, perform first aid immediately.

- Seek medical assistance.

3.2.13 Exhaust gas

● The exhaust gas contains toxic and harmful chemical substances, such as carbon oxides, nitrogen oxides, acetaldehyde, lead and aromatic hydrocarbons. The engine may only be started with suitable exhaust gas extraction or general ventilation and in an open space.

3.2.14 Fiber isolation

● Used to isolate noise and sound.

● The fibrous nature and sharp edges of its surface may cause skin irritation.

● Follow the operating procedure instructions and wear gloves during operation to avoid excessive skin contact with fibers.

3.2.15 Fire

● Many materials related to vehicle maintenance are extremely flammable. Some materials will produce toxic and harmful gases when burned.

● Always observe fire safety when storing and handling flammable materials or solvents, especially near electrical equipment or where welding is in progress.

● Before using electrical and welding equipment, it must be confirmed that there is no fire hazard.

● When welding or using heating equipment, prepare a fire extinguisher around the work area.

3.2.16 First Aid

● In addition to complying with legal requirements, it is best to have personnel trained in professional first aid in the workplace.

● If eyes are splashed, rinse with clean water for at least 10 minutes.

● If the skin is contaminated, wash the contaminated area with soap and water.

● In case of frostbite, immerse the frostbitten area in ice or cold water.

● Persons who inhale toxic gas should be immediately moved to a place with fresh air, and should be immediately sent to the hospital for medical assistance if adverse reactions persist.

● In case of accidental ingestion of liquid, inform the physician of the information on the container or label. Do not induce vomiting unless instructed to do so on the label.

3.2.17 Foam - polyurethane

● Cured foam is a cushioning pad for seats and trim.

● The manufacturer's instructions should be followed.

● Components that do not produce chemical effects are irritating and may be harmful to skin and eyes, and should be operated with gloves and goggles on.

● Persons with chronic respiratory diseases, asthma, bronchial problems, or genetic allergies should not handle or approach uncured substances.

● Its spare parts, vapors or sprays can cause direct irritation and allergic reactions and may be toxic and harmful.

● Remember not to inhale vapors or sprays, and these materials must be used with adequate ventilation and respiratory protection.

● The mask cannot be removed immediately after spraying, but should be removed after the vapor and spray are completely dissipated.

● The combustion of uncured components and cured foam will produce toxic and harmful gases. During foam operation, the use of open flames, and electrical equipment are prohibited unless the vapor and spray have been completely removed, smoking. Any thermal cutting of foam or special foam should be done in a well-ventilated environment.

3.2.18 Fuel

● Direct contact of skin with fuel should be minimized as much as possible. If it occurs, immediately wash the skin in direct contact with fuel with soap and water.

● Gasoline is highly flammable - No smoking rules should be followed.

● If gasoline is swallowed by mistake, it will cause irritation to the mouth and throat, and absorption in the stomach will lead to general weakness and confusion. A small amount of gasoline can affect the safety of children. Therefore, if gasoline enters the lungs, it is very dangerous.

● Gasoline can cause dry skin. Prolonged or frequent contact with gasoline can cause skin allergies and dermatitis. If the liquid enters the eyes, it will cause severe pain in the eyes.

● Motor gasoline may contain a lot of benzene, which can cause poisoning after inhalation. Therefore, the concentration of gasoline vapor must be kept very low. Gasoline vapor in high concentration can cause irritation of eye, nose and throat, nausea, headache, depression and intoxication, and gasoline vapor in extremely high concentration can quickly cause loss of consciousness.

● When handling gasoline, good ventilation must be maintained, and special attention should be paid to avoid the danger of inhaling gasoline vapors caused by splashing when operating in a confined space.

● Special attention should be paid to the cleaning and maintenance of gasoline storage equipment.

● Gasoline should not be used as a detergent, and absolutely cannot be sucked by mouth.

3.2.19 Gas cylinder

● Gases such as oxygen, acetylene, argon and propane are usually stored in gas cylinders at a pressure of 13.8Mpa (2001psi). Special care must be taken when handling these cylinders to avoid mechanical damage to the cylinder or valve. The gas filled in the cylinder should be clearly and appropriately marked.

● Cylinders should be stored in a well-ventilated place, and should avoid exposure to ice, snow, or direct sunlight. Fuel gases, such as acetylene and propane, should not be stored with oxygen cylinders.

● Special attention should be paid to prevent leakage of gas cylinders and pipelines, and avoid sources of ignition.

● Only professionally trained personnel may carry out work related to gas cylinders.

3.2.20 General workshop tools and equipment

● It is very important to keep all tools and equipment in good working conditions at all times and to operate them correctly during use.

● Remember not to use tools or equipment contrary to their designed functions. Equipment such as cranes, jacks, axle and chassis brackets or slings should not be subjected to loads that exceed their maximum limits. Damage caused by overloading may not be immediately apparent and may result in a serious accident in the next use.

● Do not use tools or equipment that have been damaged or in poor working conditions, especially some high-speed equipment, such as grinding wheels. Damaged grinding wheels can shatter without warning and cause serious injury.

● Wear appropriate eye protection when using grinding wheels, chisels, or sandblasting equipment.

● Proper respirator must be worn when working with sandblasting equipment, handling asbestos-containing materials, or working with spray equipment.

● Ventilation must be available to control the amount of dust, spray and smoke in the environment.

3.2.21 Lubricants and greases

● Avoid prolonged and repeated contact with mineral oil. All lubricating oils and greases are irritating to eyes and skin.

● Prolonged and repeated exposure to mineral oils can cause the loss of the skin's natural oils, resulting in dryness, irritation and dermatitis. In addition, used engine oil is very likely to contain harmful substances that can cause skin cancer. Always use skin protection and have appropriate flushing equipment.

● Used engine oil should not be used as lubricating oil, or for any other purpose that may come in direct contact with the skin.

● Health protection safety rules.

- Prolonged and repeated contact with engine oil, especially used engine oil, should be avoided.

- Wear protective clothing, including impervious gloves.

- Do not put a wipe with engine oil in your pocket.

- Avoid engine oil contamination of clothing, especially intimate clothing.

- Do not wear clothing and shoes that are highly contaminated with engine oil. Work clothes must be washed regularly and kept clean.

- First aid treatment for open wounds should be available in a timely manner.

- At work, try to apply the barrier cream to the skin to avoid direct skin contact with the engine oil.

- Wash with soap and water to remove all engine oil. Applying a protectant containing lanolin will help replace the natural oils removed from the skin.

- If skin lesions develop, seek medical attention immediately.

- Remove engine oil residues from components as far as possible before working.

- Goggles, such as chemical goggles or masks, should be worn if direct eye contact is possible; in addition, eye rinsing equipment should be provided.

● Environmental precautions

- Used waste engine oil and oil filters should be recycled through an authorized or licensed waste disposer, or a waste engine oil recycler. In case of any doubt, promptly contact the disposal site of the relevant department of the local competent authority.

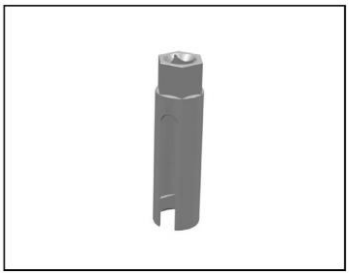
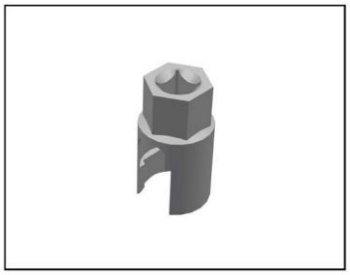
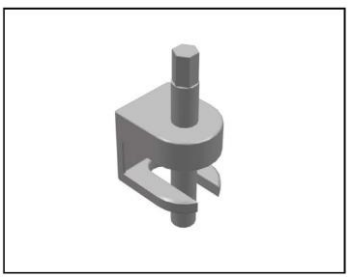
- It is illegal to pour used waste oil directly into the ground, sewers or drains, or into water pipes.

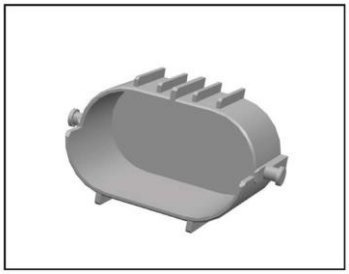
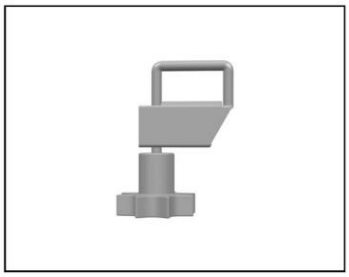
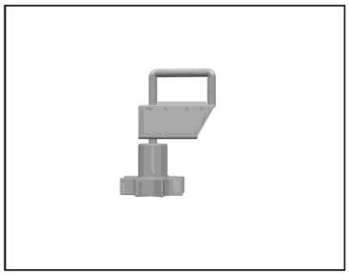
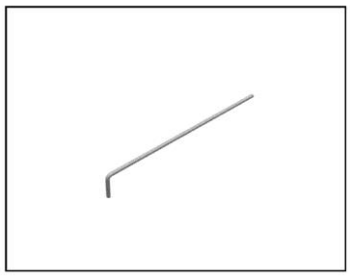
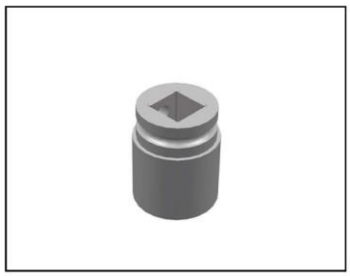
3.2.22 Noise

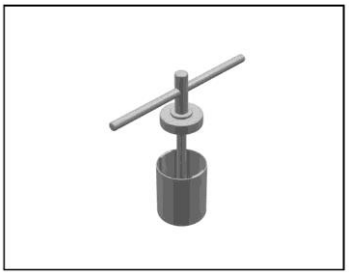
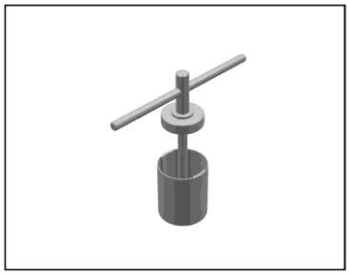
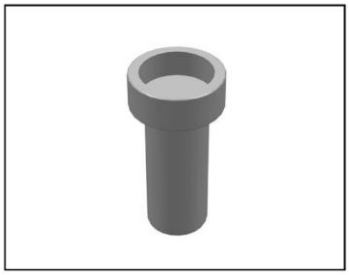
● Certain operations will generate extremely high decibel noise, which may cause hearing damage. In this case, appropriate hearing protection should be worn.

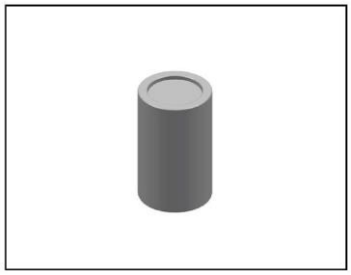
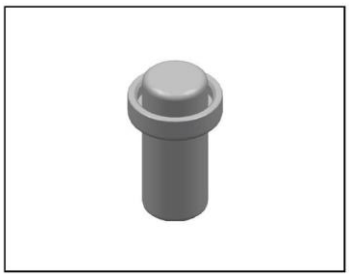
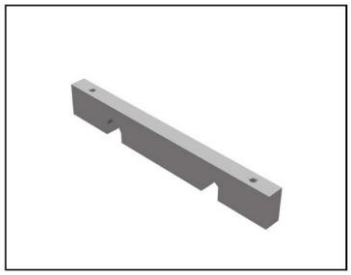
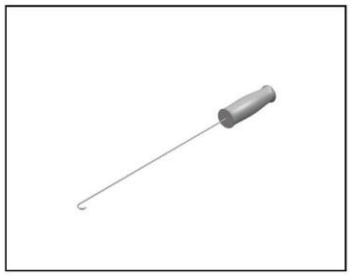
3.3 Special tools and equipment

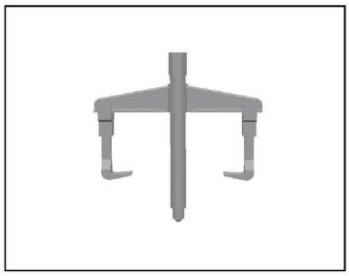
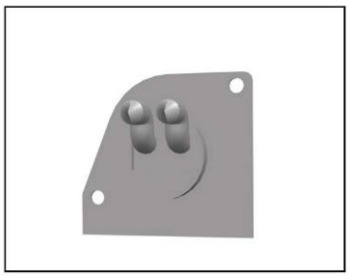
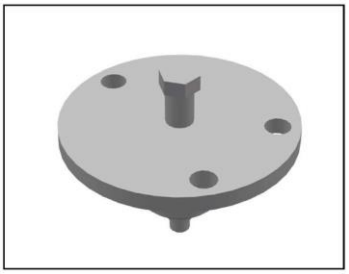
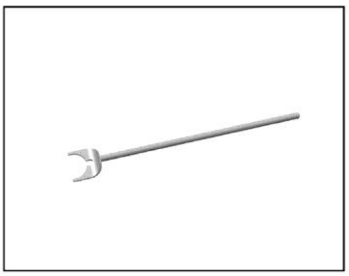
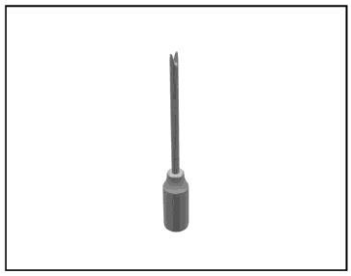
3.3.1 List of special tools

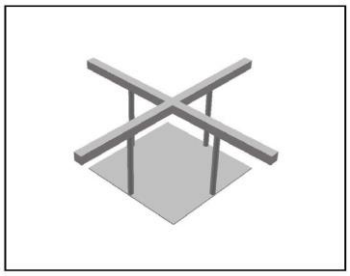
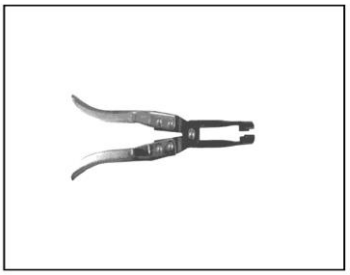
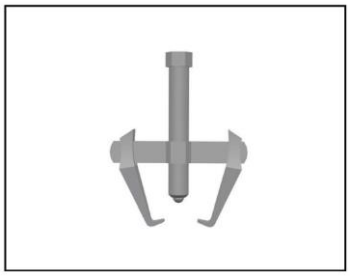
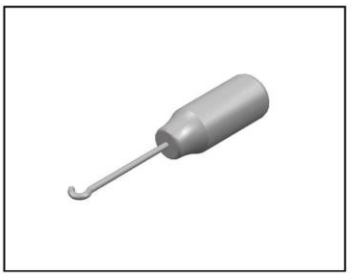
S/N	Diagram	Tool number	Name
1		H52201000	Special tool for removal and refitting of water pump belt
2		H52202000	Special tool for removal and refitting of oxygen sensor sleeve
3		H52224000	Special tool for removal and refitting of water temperature sensor sleeve
4		H52213000	Special tool for removal and refitting of spark plug sleeve
5		H52203000	Special tool for removal of wiper arm

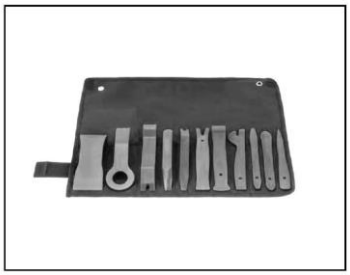
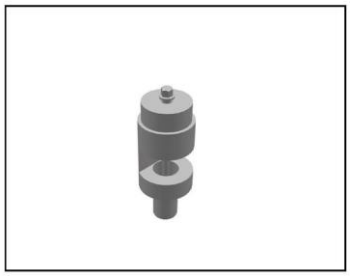
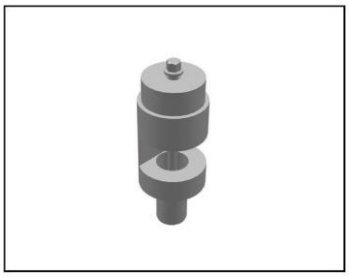
S/N	Diagram	Tool number	Name
6		H52204000	Special tool for high voltage battery high-voltage wire connector plug
7		H52205000	Special tool for water (flexible) pipe clamp
8		H52205001	Special tool for water (flexible) pipe clamp - small
9		H52206000	Special tool for removal of drive shaft bolt extension rod
10		H52220000	Drive shaft nut removal sleeve

S/N	Diagram	Tool number	Name
11		H52207000	Special tool for removal of rear subframe front rubber sheath
12		H52207001	Special tool for removal of rear subframe rear rubber sheath
13		H52207002	Special tool for removal of rear subframe middle rubber sheath
14		H52208000	Special tool for refitting of crankshaft front oil seal
15		H52208001	Special tool for refitting of crankshaft rear oil seal

S/N	Diagram	Tool number	Name
16		H52209000	Special tool for refitting of reducer left oil seal
17		H52209001	Special tool for refitting of reducer right oil seal
18		H52212000	Special tool for engine timing
19		H52211001	Special tool for removal of door trim panel anti-collision buckle
20		H971101A00	Special tool for removal of automobile fuel pump

S/N	Diagram	Tool number	Name
21		H52215000	Special tool for removal of crankshaft pulley two-jaw puller
22		H52217000	Special tool for fixing of flywheel
23		H52218000	Special tool for removal of drive shaft (hub side)
24		H52218001	Special tool for removal of drive shaft
25		H52226000	Special tool for removal of airbag

S/N	Diagram	Tool number	Name
26		H52219000	Suspension bracket support
27		H52221000	Special tool for removal of valve spring
28		H52222000	Special tool for valve oil seal extraction pliers
29		H52223000	Special tool for removal of front suspension upper control arm ball joint
30		H52225000	Special tool for removal of oil seal

S/N	Diagram	Tool number	Name
31		H52227000	11PC interior rubber clip extractor
32		H52228000	Bumper (radar mounting) hole cutting tool - small hole
33		H52228001	Bumper (radar mounting) hole cutting tool - large hole