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6.1 Steering system

6.1.1 Precautions

CAUTION:

- Before disconnecting the EPS intermediate shaft, the wheels shall be kept in the forward direction and the steering column assembly must be placed in the LOCK position.
- After disconnecting the above components, do not move the front tires and steering wheel, otherwise it will cause some components to be inaccurately positioned during the refitting process, leading to the airbag clock spring in the EPS column assembly deviating from the center position and thus being damaged.
- The steering column not only has the steering function, but also has the function of safety protection. To ensure the energy absorption of the steering column, be sure to use the specified screws, bolts and nuts and tighten them to the specified torque. The energy-absorbing column collapses in the event of a front-end collision, thus reducing the risk of driver injury.

- Precautions for lifting of vehicle with air suspension:

a. After adjusting the body to the standard height in standard mode, click the maintenance icon on the touch screen to adjust the system to the maintenance mode.

b. Use a lift to support the body without changing the body height;

Before disassembling the rear air spring assembly, it is necessary to control the distribution valve to discharge the air in the rear air spring through the after-sales scan tool, and close the solenoid valve as soon as possible after the bleeding (do not disconnect the air spring assembly from the air pipe until the lifting of the vehicle is completed);

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

d. Disconnect the negative terminal of the battery (refer to [3.1.6.1 Maintenance and inspection of battery](#))

e. Lift the vehicle (after the REV vehicle is lifted, the high voltage switch of the high voltage battery pack must be disconnected).

f. Perform subsequent maintenance operations.

(After removing the air pipe of the air spring, pay attention to protect the pipe and keep the cleanliness of the pipe head to prevent foreign matter from entering)

- Precautions for maintenance and operation of vehicles with air suspension:

a. When storing the front air spring, it is necessary to keep the shock absorber in the maximum stretching condition and charge 3-5bar air into the air spring through the pressure holding valve. It is not allowed to compress the front air spring strut assembly in any state, and the airbag collision shall be avoided during the storage.

b. Before refitting, use an inflation gun (with the gun nozzle of 6mm outer diameter) to charge 3-5bar of air into the front air spring assembly through the pressure holding valve (the air pressure in the front air spring is not allowed to exceed 12bar at any time);

c. Since the rear air spring has no shock absorber limit, it cannot be inflated when it is not loaded. Check its state before loading. It is forbidden to stretch or compress the rear air spring. Before use, it shall be detected in accordance with the detection method for the rear air spring detection specified in the maintenance process;

d. The air pressure charged into the rear air spring is not allowed to exceed 9bar at any time;

e. It is strictly forbidden to exit the maintenance mode before the vehicle is on the ground. You can only exit the maintenance mode when the disassembly & assembly of the air spring is completed and the vehicle is on the ground.

- For the lifting operation of the vehicle with air suspension, the operation requirements in the precautions must be followed before the maintenance; If the requirements in the matters are violated, the vehicle may be damaged, or worse, this may cause casualties.

- For detailed maintenance operations and precautions of air suspension system, please refer to the disassembly & assembly and maintenance chapters of the front/rear air spring about the system of chassis maintenance.

6.1.2 Introduction to structure and principle

Electric Power Steering (EPS) is a power steering system that directly relies on a motor to provide auxiliary torque. Compared with the traditional HPS (Hydraulic Power Steering), the EPS system has more advantages. EPS is mainly composed of torque sensor, vehicle speed sensor, electric motor, deceleration mechanism, ECU, etc. When the driver operates the steering wheel to turn, the torque sensor detects the turn and of steering wheel and the torque size, and sends the voltage signal to the ECU. According to the torque voltage signal, vehicle speed signal, etc. detected by the torque sensor, the ECU sends instructions to the MCU so that the motor outputs a power steering torque of the corresponding magnitude and direction, thereby generating auxiliary power. When the vehicle does not turn, the ECU does not send instructions to the MCU, and the motor does not work. Advantages of electric power steering (EPS)

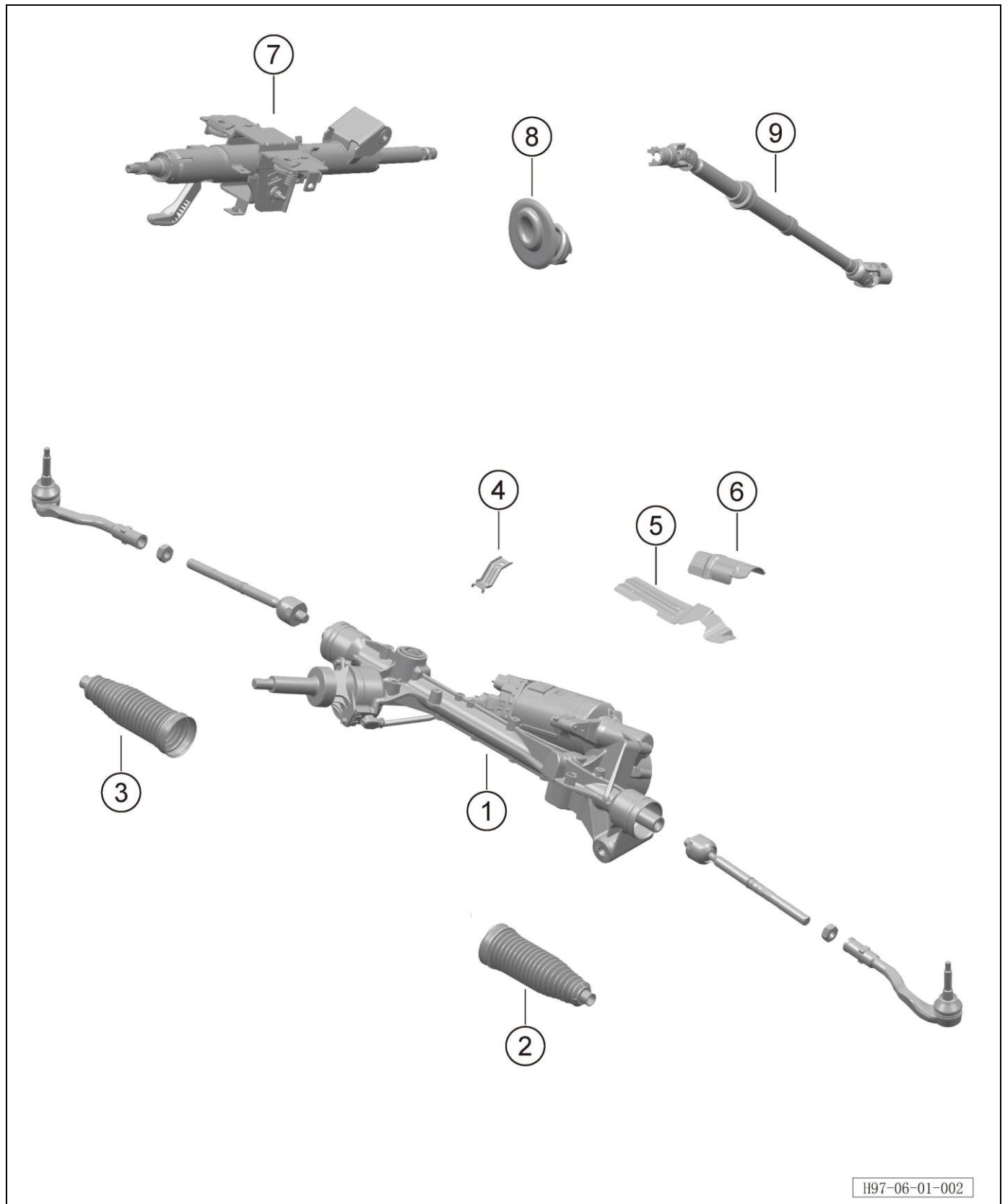
- Enhanced steering followability
- Improved steering return characteristics
- Improved control stability
- Providing variable steering boost
- Energy saving and environmental protection
- Simple system structure, small footprint, convenient layout and superior performance

This model is equipped with EPS and collapse energy-absorbing steering column.

6.1.3 Position diagram of parts




6.1.4 Exploded view



S/N	Part name	Loading quantity	Remarks
1	Steering gear & tie rod assembly	1	
2	Right steering gear dust cover	1	
3	Left steering gear dust cover	1	
4	EPS motor harness bracket	1	
5	Steering gear heat shield	1	
6	Steering gear heat insulation pad	1	
7	Upper steering shaft	1	
8	Lower steering shaft rubber bush	1	
9	Lower steering shaft	1	

6.1.5 Special tools

S/N	Diagram	Tool number	Name
1		H2309C00	Drive shaft nut removal sleeve

6.1.6 Front wheel steering assembly

6.1.6.2 Removal and refitting of steering gear & tie rod assembly

Removal procedure

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

1. Disconnect the battery negative terminal. Refer to [3.1.6.1 Maintenance and inspection battery](#)

2. Lift the vehicle.

3. Remove the front lower protective plate (refer to [8.6.4.3 Removal and refitting of front lower protective plate \(REV\)](#))

4. Remove the connecting bolts of the lower steering shaft. Please refer to [6.1.6.6 Removal and refitting of lower steering shaft](#)

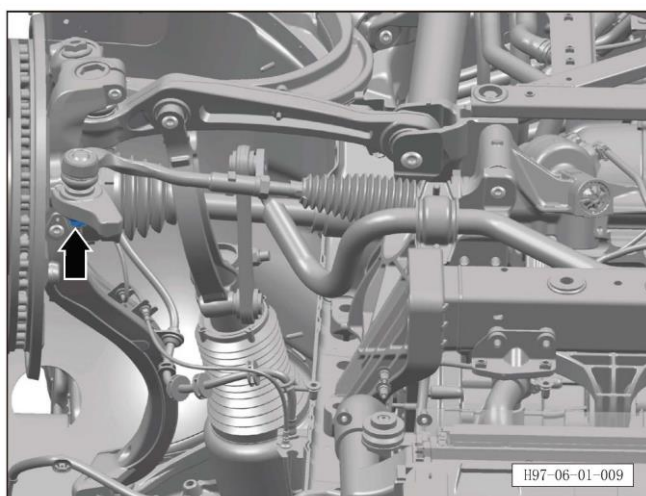
5. Remove the steering gear & tie rod assembly

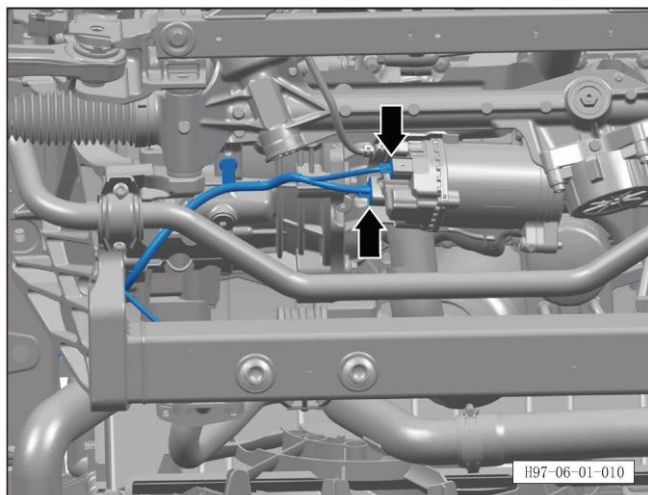
a. Remove the tie rod ball joint nuts.

Tightening torque of nut: 45Nm+90°.

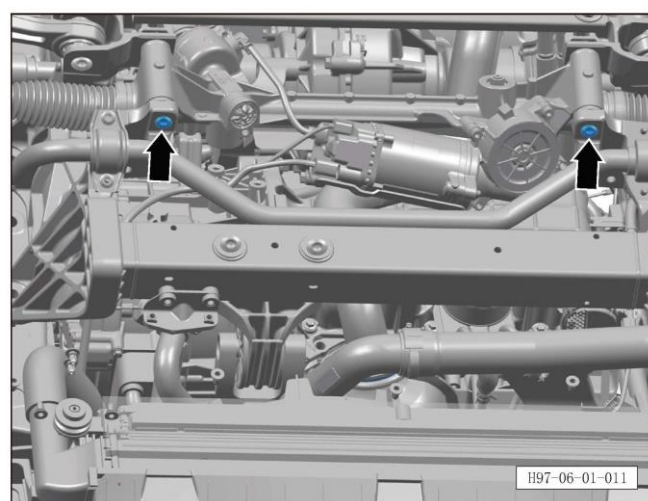
Note:

- The above is the removal of the left tie rod steering ball joint, which is the same as that of the right side.





b. Disengage 2 connectors of the steering gear .

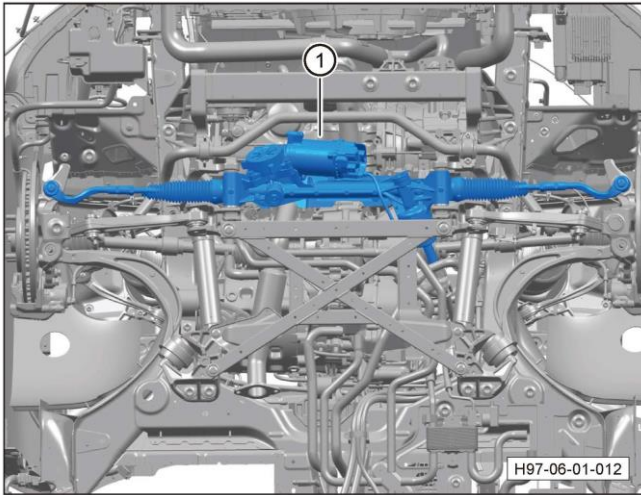


c. Unscrew 2 fixing bolts of the steering gear.

Tightening torque of bolt: $115\pm 17\text{Nm}$.

CAUTION:

- When refitting the steering gear fixing bolts, it is necessary to check whether the square nut is tightly attached to the subframe. When tightening the bolt, hold the square nut with a wrench to prevent the nut from slipping.
- After tightening the bolts, check whether the square nuts are tightened together, otherwise loosen the bolts, hold the nuts again and tighten them.



d. Remove the steering gear & tie rod assembly ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- After refitting, perform the four-wheel alignment.
- For the adjustment of front wheel toe-in (refer to [6.1.6.8 Adjustment of front wheel toe-in](#))
- A road test is required to confirm that the chassis has no abnormal noise and no deviation.

6.1.6.3 Removal and refitting of EPS motor harness bracket

Removal procedure

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

1. Disconnect the battery negative terminal. Refer to [3.1.6.1 Maintenance and inspection battery](#)

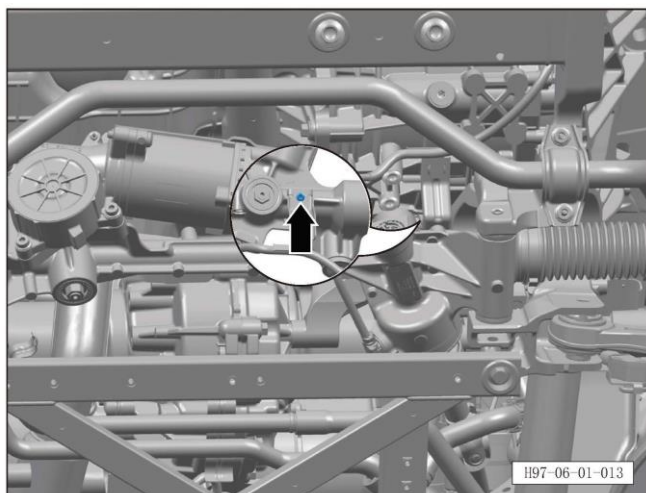
2. Lift the vehicle.

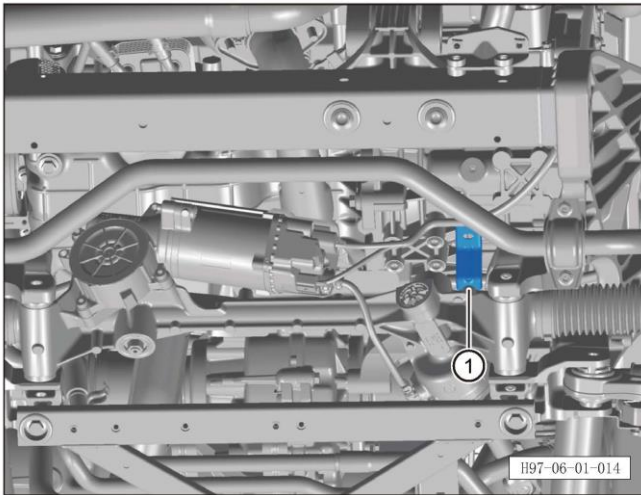
3. Remove the front lower protective plate (refer to [8.6.4.3 Removal and refitting of front lower protective plate \(REV\)](#))

4. Remove the EPS motor harness bracket.

a. Remove the fixing bolts of EPS motor harness bracket.

Tightening torque of bolt: $8\pm 1\text{Nm}$.





b. Remove the EPS motor harness bracket ①.

Refitting procedure

The refitting procedure is performed in reverse order.

6.1.6.4 Removal and refitting of steering gear insulation pad

Removal procedure

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

1. Disconnect the battery negative terminal. Refer to [3.1.6.1 Maintenance and inspection battery](#)

2. Lift the vehicle.

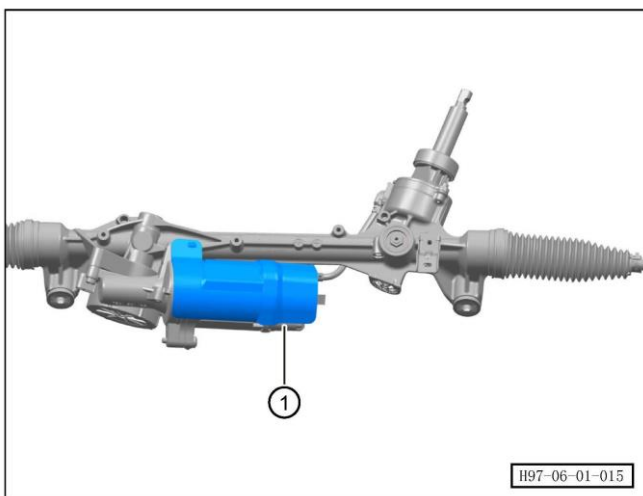
3. Remove the front lower protective plate (refer to [8.6.4.3 Removal and refitting of front lower protective plate \(REV\)](#))

4. Remove the steering gear & tie rod assembly (refer to [6.1.6.2 Removal and refitting of steering gear & tie rod assembly](#))

5. Remove the steering gear heat shield (refer to [6.1.6.5 Removal and refitting of steering gear heat shield](#))

6. Remove the steering gear insulation pad.

a. Remove the steering gear insulation pad ①.



Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- After refitting, perform the four-wheel alignment.

- For the adjustment of front wheel toe-in (refer to [6.1.6.8 Adjustment of front wheel toe-in](#))

- A road test is required to confirm that the chassis has no abnormal noise and no deviation.

6.1.6.5 Removal and refitting of steering gear heat shield

Removal procedure

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

1. Disconnect the battery negative terminal. Refer to [3.1.6.1 Maintenance and inspection battery](#)

2. Lift the vehicle.

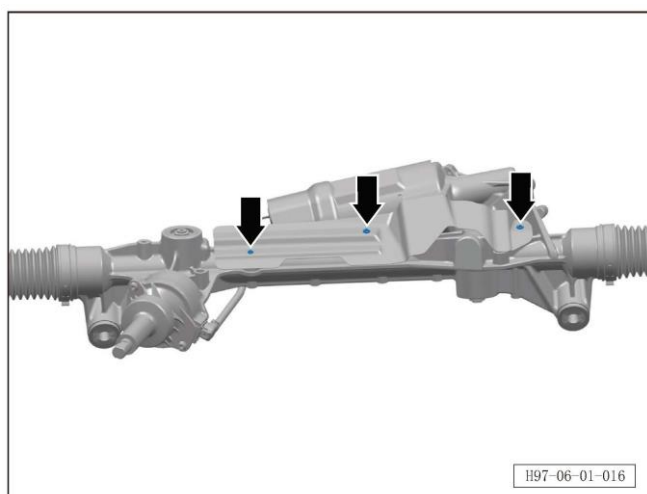
3. Remove the front lower protective plate (refer to [8.6.4.3 Removal and refitting of front lower protective plate \(REV\)](#))

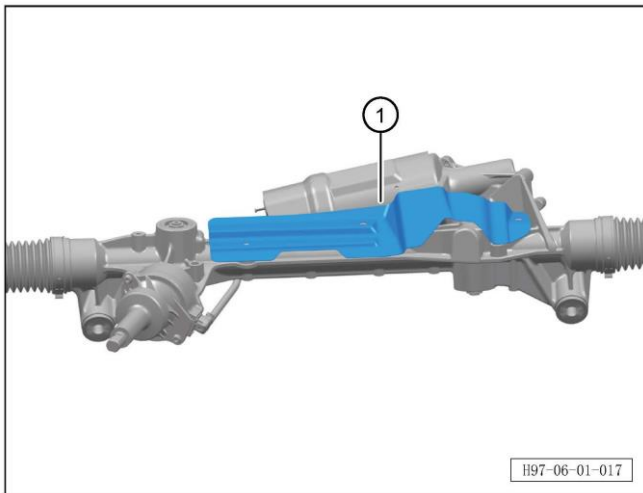
4. Remove the steering gear & tie rod assembly (refer to [6.1.6.2 Removal and refitting of steering gear & tie rod assembly](#))

6. Remove the steering gear heat shield.

a. Remove 3 fixing bolts of the steering gear heat shield.

Tightening torque of bolt: $8\pm 1\text{Nm}$.





b. Remove the steering gear heat shield ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- After refitting, perform the four-wheel alignment.
- For the adjustment of front wheel toe-in (refer to [6.1.6.8 Adjustment of front wheel toe-in](#))
- A road test is required to confirm that the chassis has no abnormal noise and no deviation.

6.1.6.6 Removal and refitting of lower steering shaft

Removal procedure

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

1. Disconnect the battery negative terminal. Refer to [3.1.6.1 Maintenance and inspection battery](#)

2. Lift the vehicle.

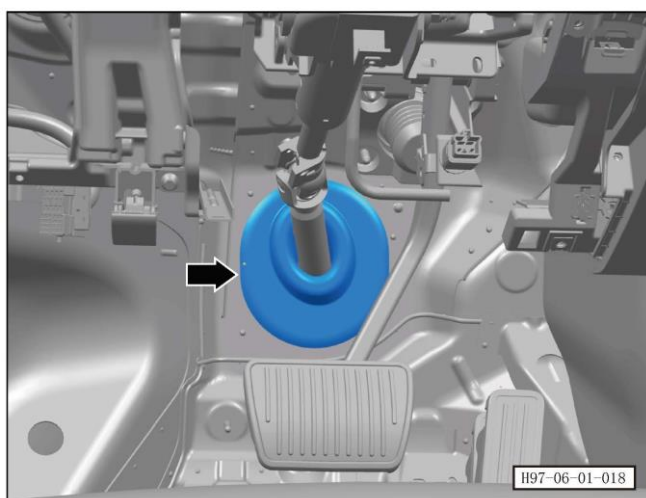
3. Remove the front lower protective plate (refer to [8.6.4.3 Removal and refitting of front lower protective plate \(REV\)](#))

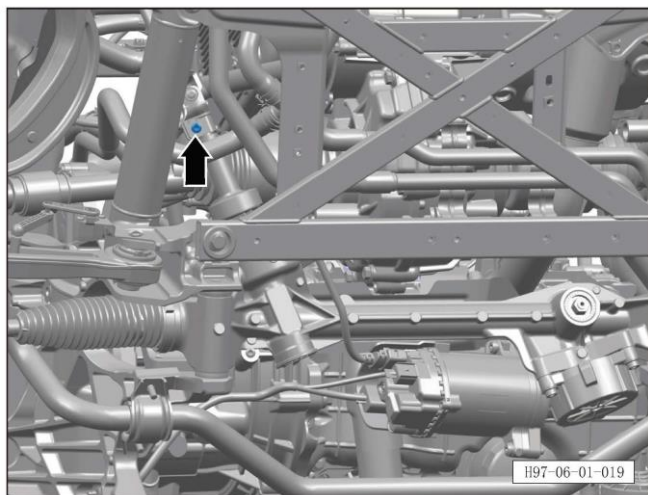
4. Remove the steering gear & tie rod assembly (refer to [6.1.6.2 Removal and refitting of steering gear & tie rod assembly](#))

5. Remove the connecting bolts of the upper steering shaft and the lower steering shaft (refer to [6.1.7.1 Removal and refitting of upper steering shaft](#))

6. Remove the lower steering shaft.

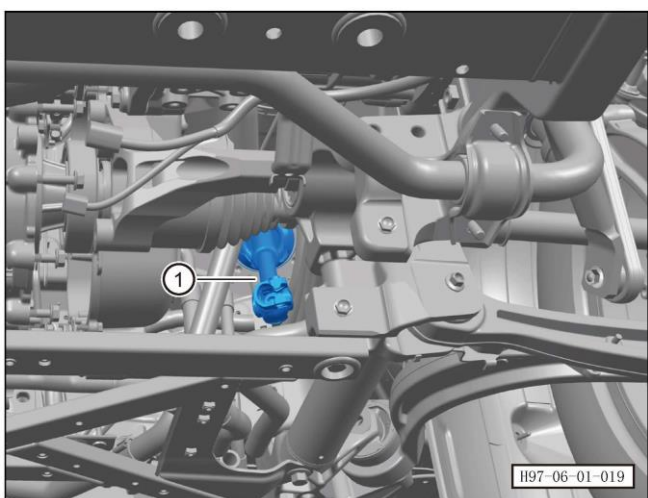
a. Remove the rubber bush.





b. Unscrew the connecting bolts of lower steering shaft.

Tightening torque of bolt: $40\pm 5\text{Nm}$.



c. Remove the lower steering shaft ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- After refitting, perform the four-wheel alignment.
- For the adjustment of front wheel toe-in (refer to [6.1.6.8 Adjustment of front wheel toe-in](#))
- A road test is required to confirm that the chassis has no abnormal noise and no deviation.

6.1.6.7 Removal and refitting of steering shaft dust cover

Removal procedure

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

1. Disconnect the battery negative terminal. Refer to [3.1.6.1 Maintenance and inspection battery](#)

2. Lift the vehicle.

3. Remove the front lower protective plate (refer to [8.6.4.3 Removal and refitting of front lower protective plate \(REV\)](#))

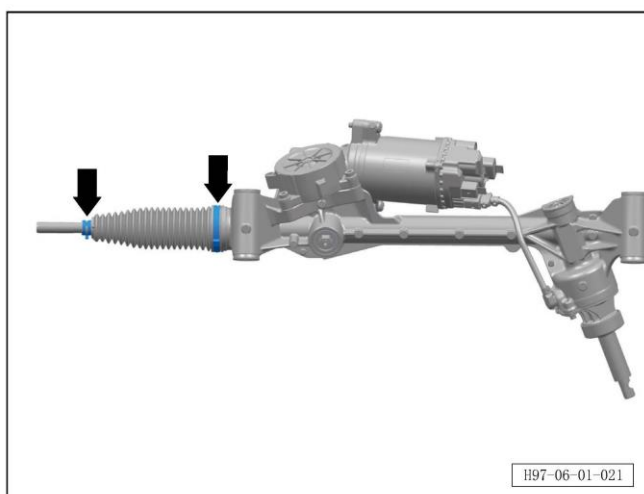
4. Remove the steering gear & tie rod assembly (refer to [6.1.6.2 Removal and refitting of steering gear & tie rod assembly](#))

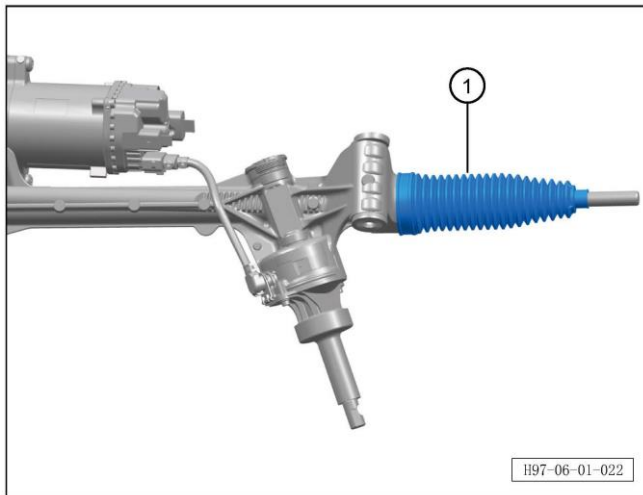
5. Remove the steering shaft dust cover.

a. Disengage 2 fixing clamps of the steering shaft dust cover.

Note:

- The above is the removal of the left steering shaft dust cover clamp, which is the same as that of the right side.





b. Remove the steering shaft dust cover ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- After refitting, perform the four-wheel alignment.
- For the adjustment of front wheel toe-in (refer to [6.1.6.8 Adjustment of front wheel toe-in](#))
- A road test is required to confirm that the chassis has no abnormal noise and no deviation.

6.1.6.8 Front wheel toe-in adjustment

Removal procedure

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

1. Disconnect the battery negative terminal. Refer to [3.1.6.1 Maintenance and inspection battery](#)

2. Lift the vehicle.

3. Remove the front lower protective plate (refer to [8.6.4.3 Removal and refitting of front lower protective plate \(REV\)](#))

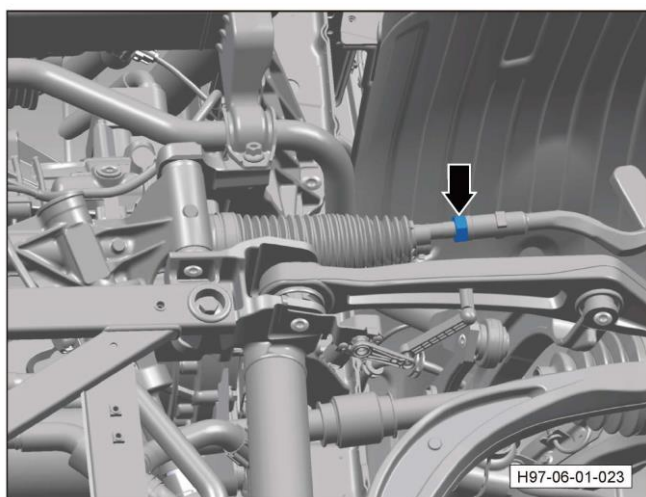
4. Remove the axle shaft bolts of the steering shaft (refer to [6.1.6.2 Removal and refitting of steering gear & tie rod assembly](#))

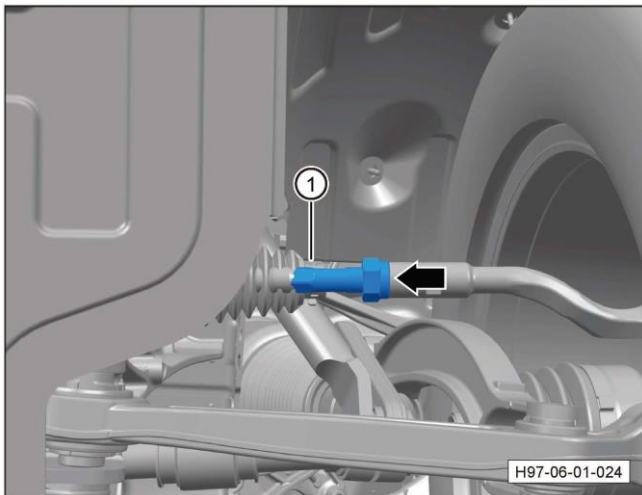
5. Adjust front wheel toe-in.

a. Loosen the nuts.

Note:

- The above is the removal of the left steering shaft adjusting nut, which is the same as that of the right side.





b. Adjust the steering shaft ① to an appropriate position and tighten the nuts.

Tightening torque of nut: $100\pm 10\text{Nm}$.

CAUTION:

- After refitting, perform the four-wheel alignment.
- For the adjustment of front wheel toe-in (refer to [6.1.6.8 Adjustment of front wheel toe-in](#))
- A road test is required to confirm that the chassis has no abnormal noise and no deviation.

6.1.7 Steering column assembly

6.1.7.1 Removal and refitting of upper steering shaft

Removal procedure

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

1. Disconnect the battery negative terminal. Refer to [3.1.6.1 Maintenance and inspection battery](#)

2. Lift the vehicle.

3. Remove the left lower guard assembly (refer to [8.2.4.20 Removal and refitting of left lower guard assembly](#))

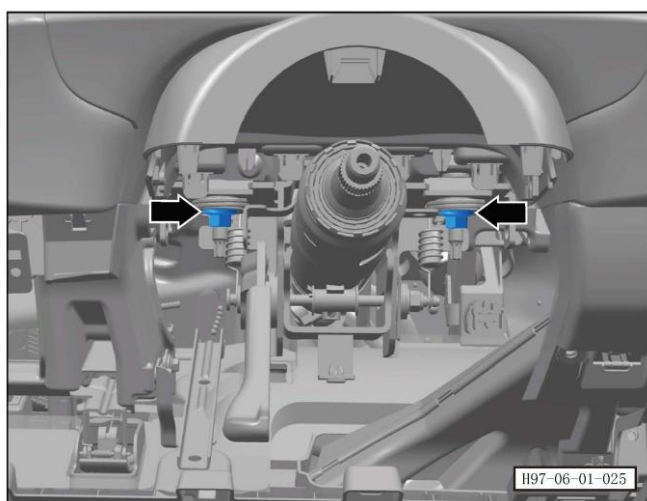
4. Remove the lower steering column shield (refer to [8.2.4.16 Removal and refitting of lower steering column shield assembly](#))

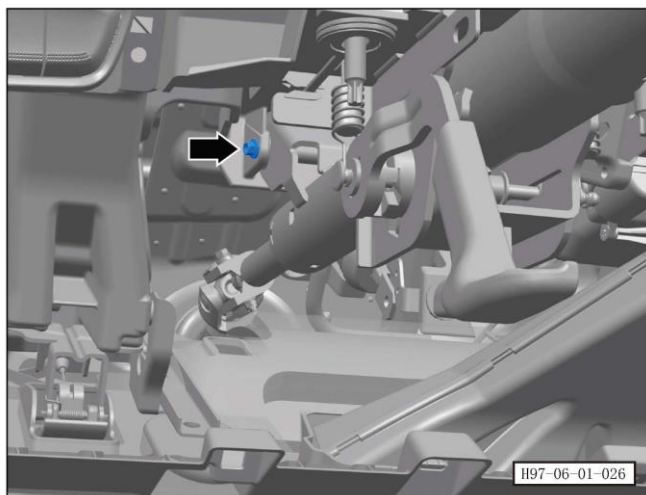
5. Remove the combination switch (refer to [Removal and refitting of combination switch](#))

6. Remove the upper steering shaft.

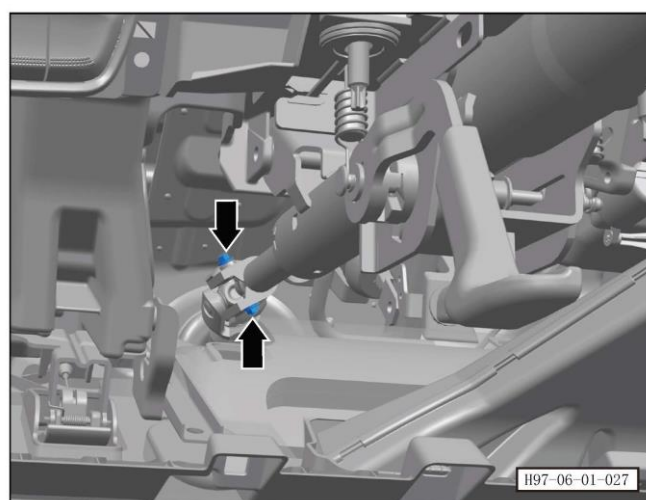
a. Unscrew 2 fixing nuts of the upper steering shaft.

Tightening torque of nut: $20\pm 5\text{Nm}$.

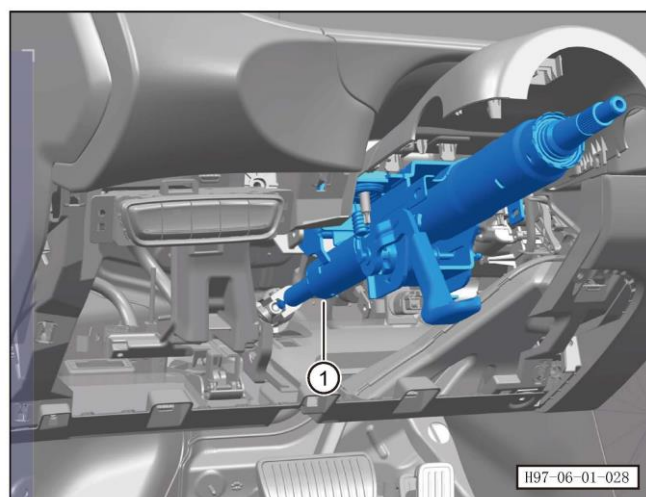




b. Unscrew 1 fixing bolt of the upper steering shaft.
Tightening torque of bolt: $20\pm 3\text{Nm}$.



c. Unscrew 1 fixing bolt and nut of the upper steering shaft.
Tightening torque of bolt and nut: $30\pm 3\text{Nm}$.



d. Remove the upper steering shaft ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- After refitting, perform the four-wheel alignment.
- A road test is required to confirm that the chassis has no abnormal noise and no deviation.

6.2 Front suspension system

6.2.1 Precautions

CAUTION:

- The vehicle shall be driven by an assistant while the technician inspects the faulty area requested for repair. Otherwise, personal injury may occur.
- Before maintaining electrical components, all electronics and start switches must be turned off, unless otherwise stated in operating procedures.
- Disconnect the negative terminal of the battery if the tool or device easily touches the exposed live terminal. Failure to follow these safety instructions may result in personal injury and damage to the vehicle.
- Test the vehicle on the road and comply with all traffic laws and regulations provided that safety can be ensured. Do not attempt any operation that may compromise the control of the vehicle. Failure to follow the above safety instructions may result in the serious personal injury and the vehicle damage.
- When lifting or jacking the engine for any reason, do not support the jack under the oil pan or crankshaft pulley. Improper lifting method will cause damage to engine components and accidental injuries.
- When repairing the suspension of the vehicle, it is forbidden for the customer to come under the lifted vehicle without permission to observe the chassis structure of the vehicle to prevent personal injury.
- Precautions for lifting of vehicle with air suspension:

- a. After adjusting the body to the standard height in standard mode, click the maintenance icon on the touch screen to adjust the system to the maintenance mode.
- b. Use a lift to support the body without changing the body height;

Before disassembling the rear air spring assembly, it is necessary to control the distribution valve to discharge the air in the rear air spring through the after-sales scan tool, and close the solenoid valve as soon as possible after the bleeding (do not disconnect the air spring assembly from the air pipe until the lifting of the vehicle is completed);

- c. Turn off all electrical appliances and the start switch.
- d. Disconnect the negative terminal of the battery (refer to [3.1.6.1 Maintenance and inspection of battery](#))
- e. Lift the vehicle (after the REV vehicle is lifted, the high voltage switch of the high voltage battery pack must be disconnected).
- f. Perform subsequent maintenance operations.

(After removing the air pipe of the air spring, pay attention to protect the pipe and keep the cleanliness of the pipe head to prevent foreign matter from entering)

- Precautions for maintenance and operation of vehicles with air suspension:
 - a. When storing the front air spring, it is necessary to keep the shock absorber in the maximum stretching condition and charge 3-5bar air into the air spring through the pressure holding valve. It is not allowed to compress the front air spring strut assembly in any state, and the airbag collision shall be avoided during the storage.
 - b. Before refitting, use an inflation gun (with the gun nozzle of 6mm outer diameter) to charge 3-5bar of air into the front air spring assembly through the pressure holding valve (the air pressure in the front air spring is not allowed to exceed 12bar at any time);
 - c. Since the rear air spring has no shock absorber limit, it cannot be inflated when it is not loaded. Check its state before loading. It is forbidden to stretch or compress the rear air spring. Before use, it shall be detected in accordance with the detection method for the rear air spring detection specified in the maintenance process;
 - d. The air pressure charged into the rear air spring is not allowed to exceed 9bar at any time;
 - e. It is strictly forbidden to exit the maintenance mode before the vehicle is on the ground. You can only exit the maintenance mode when the disassembly & assembly of the air spring is completed and the vehicle is on the ground.
- For the lifting operation of the vehicle with air suspension, the operation requirements in the precautions must be followed before the maintenance; If the requirements in the matters are violated, the vehicle may be damaged, or worse, this may cause casualties.
- For detailed maintenance operations and precautions of air suspension system, please refer to the disassembly & assembly and maintenance chapters of the front/rear air spring about the system of chassis maintenance.

6.2.2 Introduction to structure and principle

Vehicle suspension system:

-The suspension system refers to the entire support system consisting of springs and shock absorbers between the body and tires. Its function is to transmit the torque between the wheel and the frame, buffer the impact force brought by the road to the frame or the body, and attenuate the body vibration arising therefrom, so as to improve the ride comfort; Different suspension systems serving as 1 of the key components of modern cars will bring different driving experience to the driver, and determines the stability, comfort and safety of the vehicle when driving.

Suspension is generally composed of elastic elements, shock absorbers, guide mechanisms and stabilizer bars:

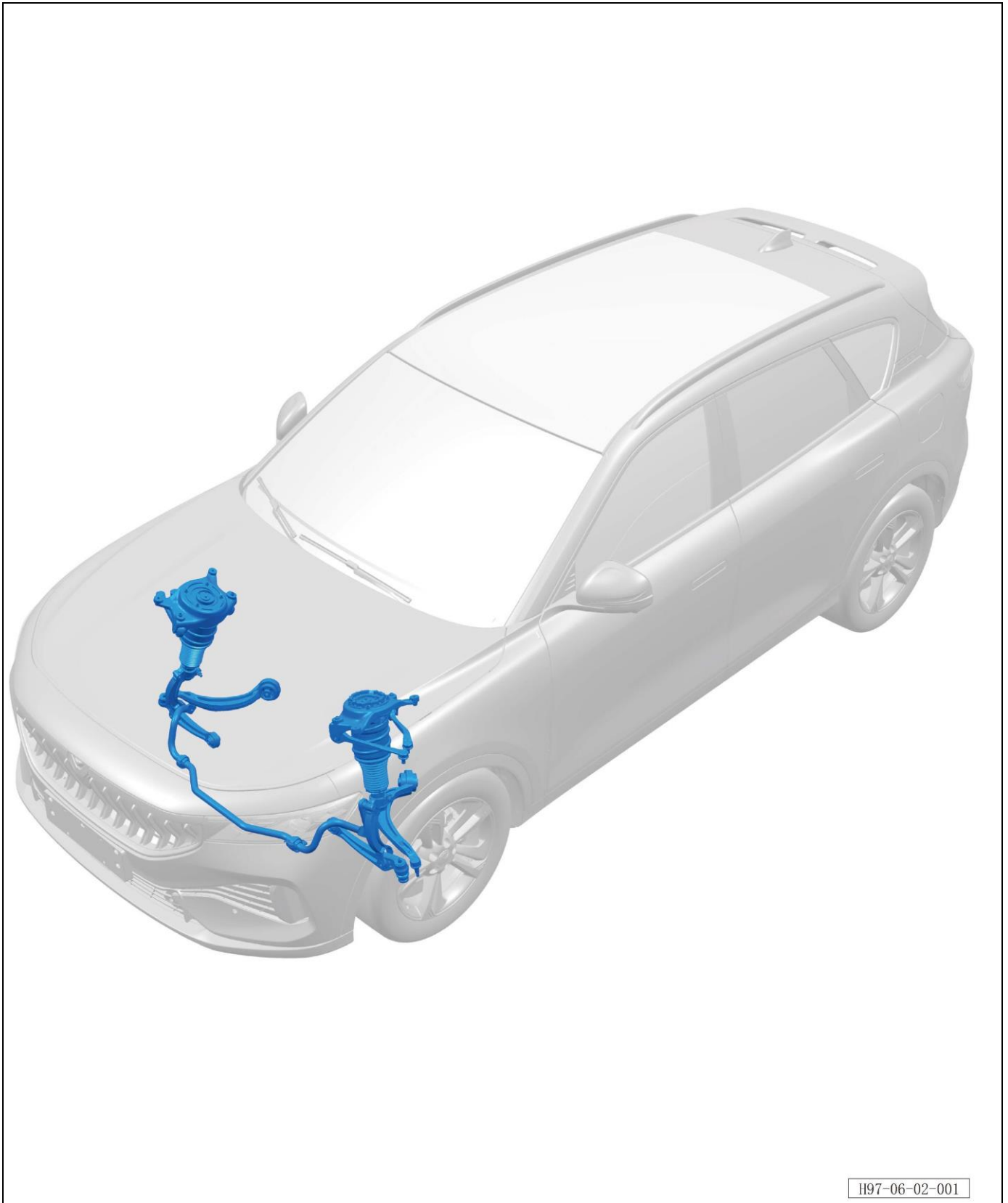
- Elastic elements are used to bear and transmit vertical loads, ease the impact of rough road surfaces on the body, attenuate vibrations and keep the tires in contact with the road surface all the time, so as to keep track of the vehicle driving route.

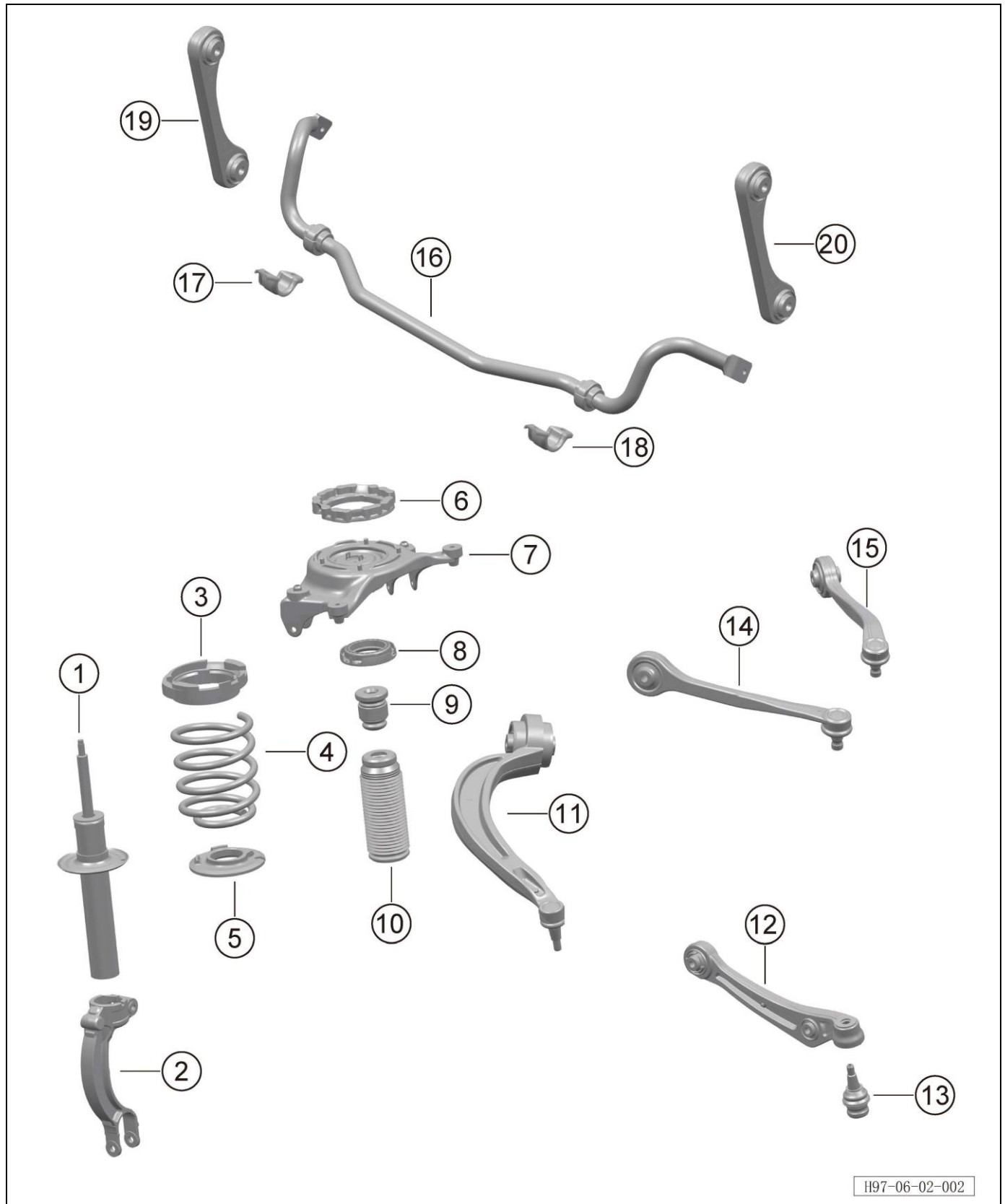
- The types of elastic elements include coil springs, hydro-pneumatic springs, air springs and rubber bush.

- Shock absorbers are used to attenuate vibrations caused by elastic systems and include: cylinder shock absorbers, adjustable shock absorbers and inflatable shock absorbers.

- The guiding mechanism is used to transmit the torque between the wheel and the body, and at the same time keep the wheel jumping with the body according to a certain trajectory. The guiding mechanism is composed of control swing arm rods, including single-link and multi-link types.

6.2.3 Position diagram of parts

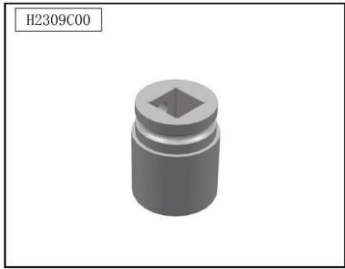
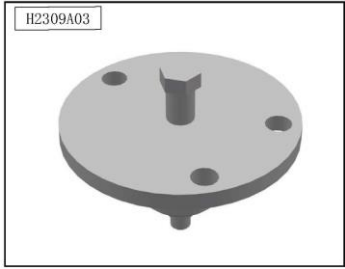
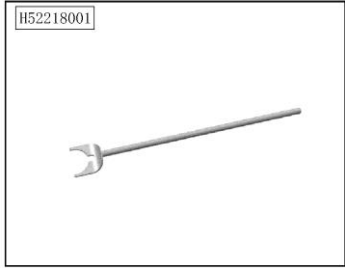
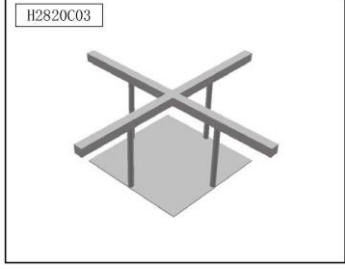


6.2.4 Exploded view

S/N	Part name	Loading quantity	Remarks
1	Left front shock absorber strut assembly	1	Standard for REV N1, standard for REV N2
1	Right front shock absorber strut assembly	1	Standard for REV N1, standard for REV N2
1	Left front shock absorber strut assembly	1	Optional for REV N1, optional for REV N2
1	Right front shock absorber strut assembly	1	Optional for REV N1, optional for REV N2
1	Left front shock absorber strut assembly	1	Standard for EV N1, standard for N2 EV
1	Right front shock absorber strut assembly	1	Standard for EV N1, standard for N2 EV
1	Left front shock absorber strut assembly	1	Optional for EV N1, optional for EV N2
1	Right front shock absorber strut assembly	1	Optional for EV N1, optional for EV N2
2	Front shock absorber lower support seat	2	
3	Spring upper rubber pad	2	
4	Front coil spring	2	
5	Spring lower rubber pad	2	
6	Front shock absorber rubber pad	2	
7	Front shock absorber upper support assembly	2	
8	Dust cover mounting base	2	
9	Buffer block	2	
10	Dust cover	2	
11	Front suspension left rear control arm	2	
12	Front suspension lower control arm	2	
13	Lower front control arm outer ball pin	2	
14	Front suspension left upper control arm	1	
15	Front suspension right upper control arm	1	

16	Front stabilizer bar assembly	1	
17	Left front stabilizer bar bracket	1	
18	Right front stabilizer bar bracket	1	
19	Left front stabilizer bar joint assembly	1	
20	Right front stabilizer bar joint assembly	1	

6.2.5 Special tools

S/N	Diagram	Tool number	Name
1	 <p>H2309C00</p>	H2309C00	Drive shaft nut removal sleeve
2	 <p>H2309A03</p>	H2309A03	Special tool for removal of drive shaft (Hub side)
3	 <p>H52218001</p>	H2309A02	Special tool for removal of drive shaft
4	 <p>H2820C03</p>	H2820C03	Suspension bracket support

6.2.6 Common faults

Front shock absorber:

1 Fault phenomenon: when the car is running, every time it vibrates up and down, the suspension will make a "cluck" sound, it indicates that the suspension works abnormally.

2 Fault cause

- The shock absorber is damaged.
- Shock absorber rubber bush damaged.
- The fastening bolts are loose.

3 When checking the fault and troubleshooting the shock absorber in an abnormal manner, it will heat up during operation. If the shock absorber does not heat up or is found to leak oil, it means that the shock absorber has been damaged. During the inspection, the condition of the shock absorber rubber bush shall also be checked. If any damage is found, the rubber bush shall be replaced together with the shock absorber in time. When replacing the shock absorber, it is recommended to replace the left and right shock absorbers concurrently.

Lower swing arm ball joint:

Inspection method:

1. Raise the vehicle so that the front suspension is free-hanging.
2. Hold the top and bottom of the front tire and pull the top of the wheel in and out.
3. Check whether there is a gap and whether the steering knuckle moves horizontally relative to the control arm
4. The ball joint must be replaced if the following conditions occur.
 - a. Ball joint loose.
 - b. Ball joint gland broken.
 - c. Ball joint bolts disconnected from steering knuckle.
 - d. Ball joint bolts loose on the steering knuckle.
 - e. Ball joint bolts will twist in the seat when being pressed with a finger.

Front stabilizer bar:

Inspection method:

1. One person starts the vehicle, and the assistant hears where the abnormal noise comes from outside the vehicle.
2. Check whether the stabilizer bar bush is aged and loose, if so, replace the front stabilizer bar assembly.
3. Check whether the plane bearing of the front shock absorber is damaged; if so, replace the plane bearing of the front shock absorber.
4. Check the tie rod ball joint and dust cover of steering gear for interference and oil leakage; if any, replace them.

Abnormal sound when turning steering wheel:

Inspection method:

1. One person starts the vehicle, and the assistant hears where the abnormal noise comes from outside the vehicle.
2. Turn the steering wheel to check the abnormal noise in the chassis.

Driving smoothness:

Inspection method:

1. Check whether the tire pressure is within the standard range; if not, adjust it to the standard value
2. Check whether the front shock absorber leaks oil, and replace the front shock absorber when necessary
3. Check whether the front coil spring is broken or loose, and replace the front coil spring when necessary
4. Check whether the front shock absorber is refitted correctly and whether the front shock absorber does not match the model, and replace the front shock absorber when necessary.
5. Check whether the fixing bolts of the front shock absorber are loose, and tighten them to the specified torque when necessary

Tilt or swing when cornering

Inspection method:

1. Check whether the front stabilizer bar connecting rod is loose, and re-tighten the connecting nuts of the front stabilizer bar connecting rod and the front strut assembly according to the specified torque.
2. Check whether the front shock absorber and the front coil spring seat are worn, replace the front shock absorber when necessary, and retighten the fixing nut on the front shock absorber.
3. Check whether the vehicle is overloaded and explain it to the user reasonably.
4. Check whether the front coil spring is broken or loose, and replace when necessary.

Noise diagnosis:

Inspection procedure:

1. Check whether each ball joint is sufficiently lubricated, and replace the ball joint when necessary.
2. Check whether the front suspension components is worn and replace the damaged components when necessary.
3. Check whether the lower swing arm bush is worn and replace the damaged lower swing arm when necessary.
4. Check whether the connecting rod of the front stabilizer bar is loose, and tighten it to the specified torque when necessary.
5. Check whether the front shock absorber or the rubber pad under the coil spring of the front strut is in good condition, whether the refitting is in place, whether there is damage, etc., and replace the damaged parts when necessary.
6. Check whether the coil spring of the front strut is misaligned, and re-refit it when necessary.
7. Check whether the front stabilizer bar bush is excessively worn, and replace the front stabilizer bar assembly when necessary.
8. Find a vehicle of the same model and comprehensively assess whether the noise is normal working noise.

6.2.7 Front strut assembly

6.2.7.1 Removal and refitting of front shock absorber strut and spring assembly

Removal procedure

Note:

- Distinguish the assembly relation of the shock absorber for different models.
- The following is the removal and refitting of left front shock absorber strut assembly, which can be referred to for the operations on the right side.

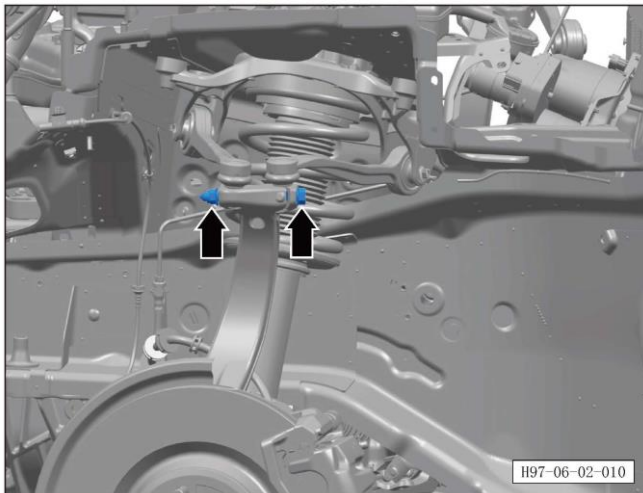
1. Remove the left engine compartment trim panel (refer to [8.6.6.10 Removal and refitting of engine compartment left front trim panel assembly](#))
2. Remove the wheel trim cover (refer to [6.5.8.1 Removal and refitting of wheel trim cover](#))
3. Lift the vehicle.
4. Remove the wheels (refer to [6.5.9.1 Removal and refitting of wheels](#))
5. For the removal of the left front wheel house guard assembly, please refer to [8.6.4.1 Removal and refitting of front wheel housing mudguard assembly](#)
6. Remove the front shock absorber strut assembly.

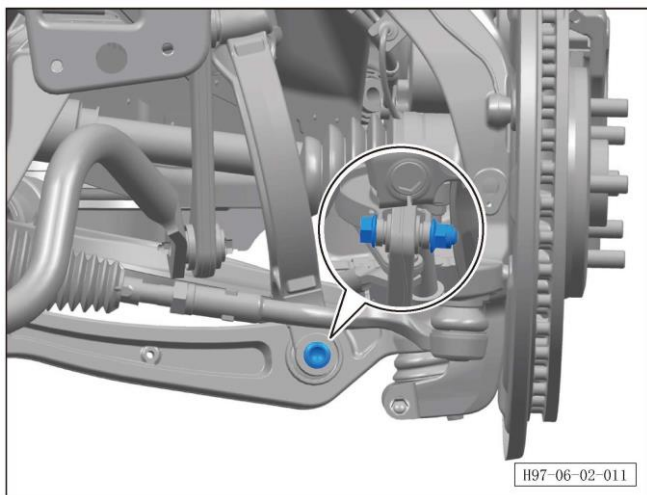
- a. Remove the fixing nuts of the steering knuckle, the front suspension left upper control arm assembly and the front suspension left rear upper control arm to remove the bolts.

Tightening torque of bolt/nut: $45\pm 7\text{Nm}$.

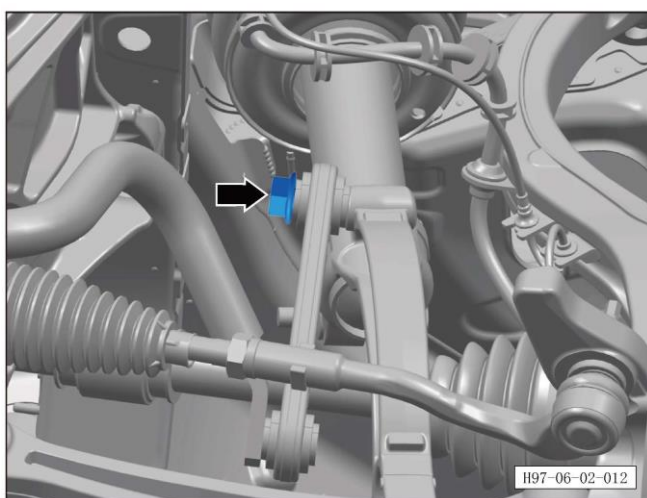
CAUTION:

- Protect the axle shaft and dust cover.
- Hang the axle shaft and brake disc on the body with hooks to avoid damage to the axle shaft and brake hose.

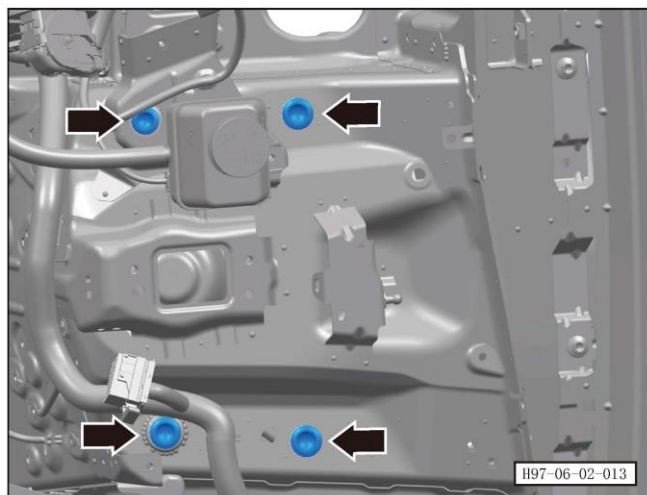




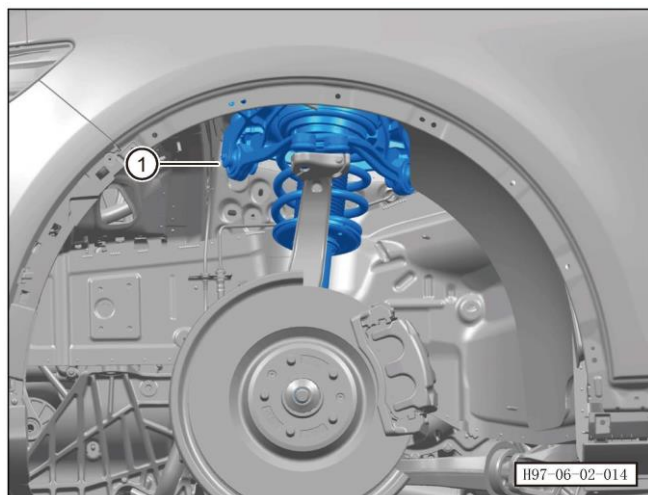
- b. Unscrew 1 bolt and 1 nut each.
Tightening torque of bolt/nut: $90\text{Nm}+90^\circ$.



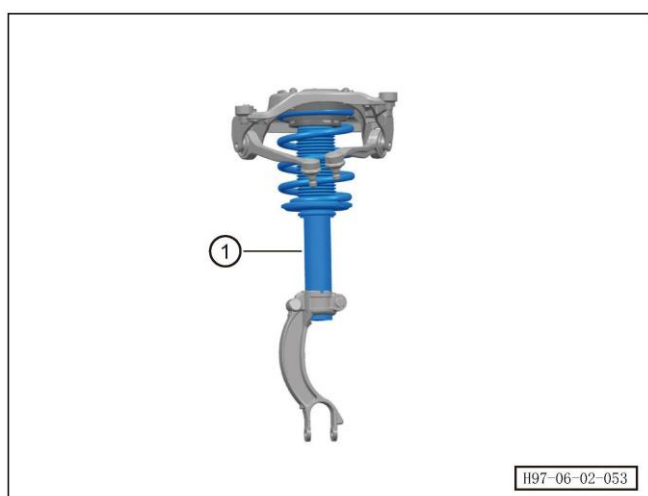
- c. Unscrew the fixing bolts of the front shock absorber strut assembly and the front stabilizer bar joint assembly, and disconnect them.
Tightening torque of bolt: $40\text{Nm}+90^\circ$.



- d. Remove 4 fixing bolts of the engine compartment.
Tightening torque of bolt: $60\pm 5\text{Nm}$.



e. Remove the left front upper arm, the left rear upper arm and the front shock absorber strut assembly①.



f. Remove the front shock absorber strut and spring assembly①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- Carry out four-wheel alignment after refitting (refer to [6.5.9.3 Four wheel alignment operation steps](#))

6.2.7.2 Removal and refitting of shock absorber lower support seat

Removal procedure

Note:

- The following is the removal of the lower support seat of the left shock absorber, which is the same as that of the right side.

1. To remove the front shock absorber strut assembly (refer to [6.2.7.1 Removal and refitting of front shock absorber strut and spring assembly](#))

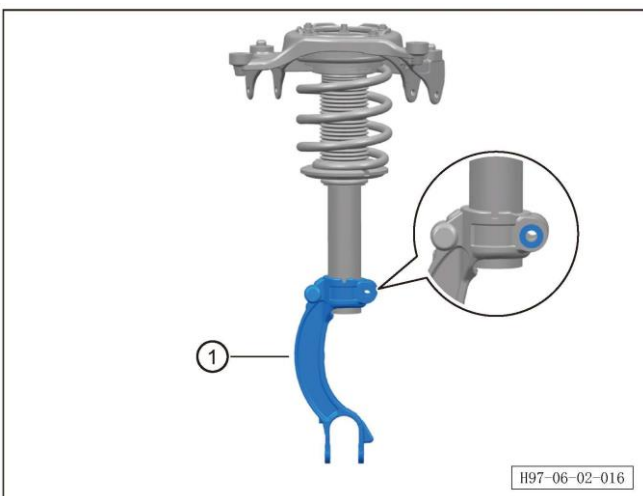
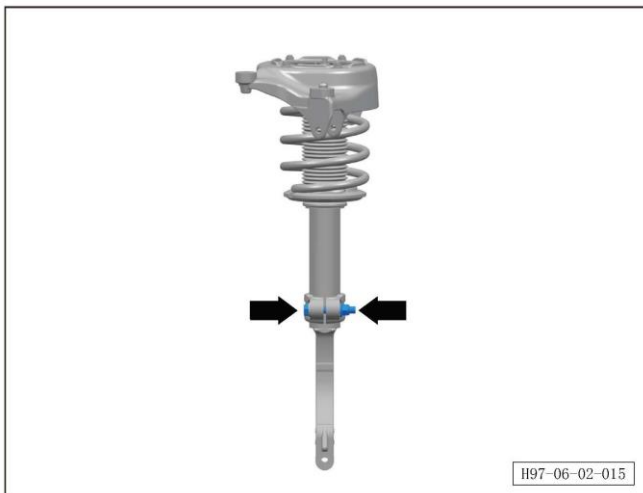
2. Remove the front suspension upper left control arm assembly (refer to [6.2.8.1 Removal and refitting of front suspension left upper control arm assembly](#))

3. To remove the rear suspension left rear upper control arm assembly (refer to [6.2.8.2 Removal and refitting of front suspension right upper control arm assembly](#))

4. Remove the front shock absorber lower support seat.

a. Unscrew the nuts securing the front shock absorber lower support seat to the shock absorber to remove the fixing bolts.

Tightening torque of bolt/nut: $55\pm 8\text{Nm}$.



b. Remove the front shock absorber lower support seat ①.

CAUTION:

- The gasket at the bolt fixing position shall not be removed.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- Carry out four-wheel alignment after refitting (refer to [6.5.9.3 Four wheel alignment operation steps](#))

6.2.7.3 Removal and refitting of upper reinforcement seat of the front shock absorber

Removal procedure

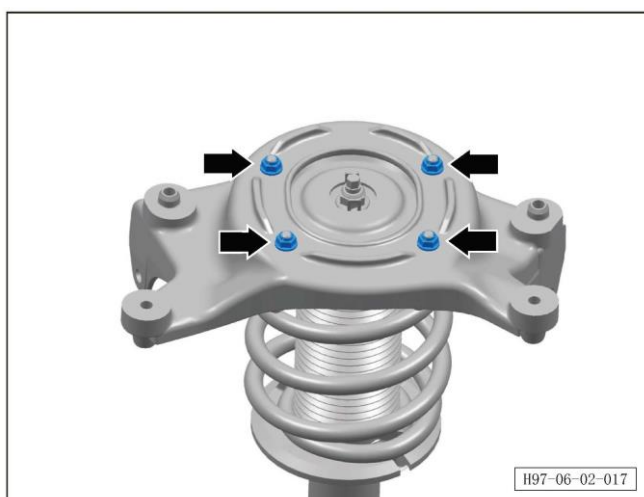
Note:

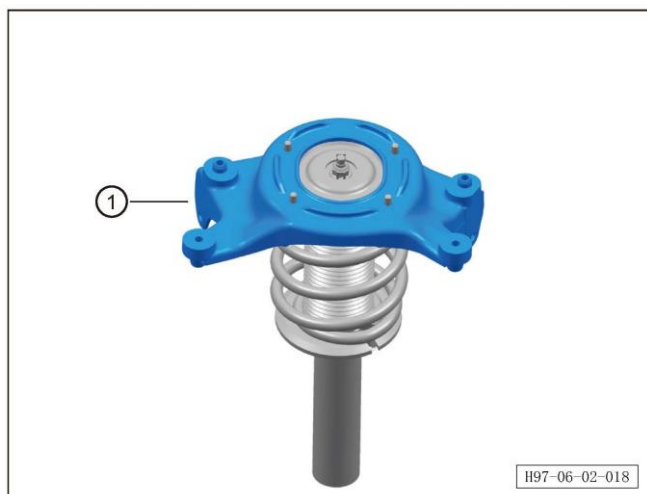
- The following is the removal of the upper reinforcement seat of the left shock absorber, which is the same as that of the right side.

1. To remove the front shock absorber strut assembly (refer to [6.2.7.1 Removal and refitting of front shock absorber strut and spring assembly](#))
2. Remove the front suspension upper left control arm assembly (refer to [6.2.8.1 Removal and refitting of front suspension left upper control arm assembly](#))
3. To remove the rear suspension left rear upper control arm assembly (refer to [6.2.8.2 Removal and refitting of front suspension right upper control arm assembly](#))
4. Remove the front shock absorber lower support seat.

a. Unscrew 4 fixing nuts of the reinforcement seat on the front shock absorber.

Tightening torque of nut: $45\pm 7\text{Nm}$.





b. Remove the reinforcement seat ① on the front shock absorber.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- Carry out four-wheel alignment after refitting (refer to [6.5.9.3 Four wheel alignment operation steps](#))

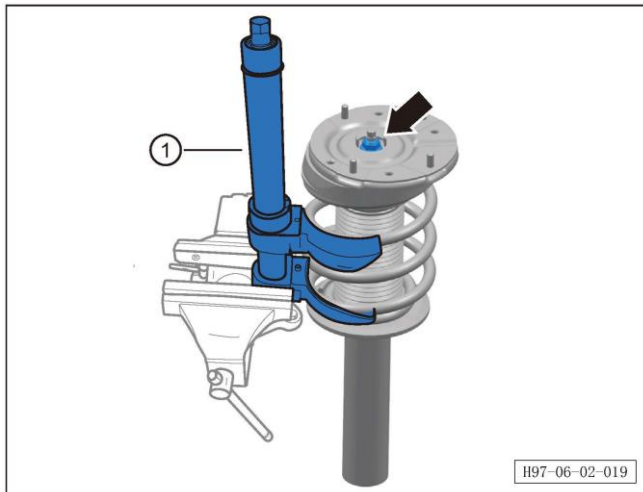
6.2.7.4 Removal and refitting of front shock absorber struts

Removal procedure

Note:

- The following is the removal of the left front shock absorber strut, which is the same as that of the right side.

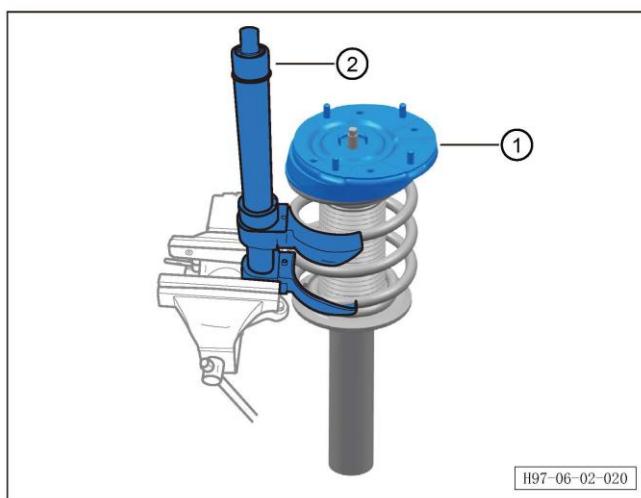
1. To remove the front shock absorber strut assembly (refer to [6.2.7.1 Removal and refitting of front shock absorber strut and spring assembly](#))
2. Remove the front suspension upper left control arm assembly (refer to [6.2.8.1 Removal and refitting of front suspension left upper control arm assembly](#))
3. To remove the rear suspension left rear upper control arm assembly (refer to [6.2.8.2 Removal and refitting of front suspension right upper control arm assembly](#))
4. Remove the front shock absorber lower support seat.



A. With the install tool shown in the figure, tighten the screw of the shock absorber spring compression tool set ①, and compress the front coil spring until there is no load on the mounting bracket on the strut of the front spring shock absorber assembly.

b. Unscrew the self-locking nut of the piston rod.

Tightening torque of self-lock nut: $65 \pm 10 \text{ Nm}$.



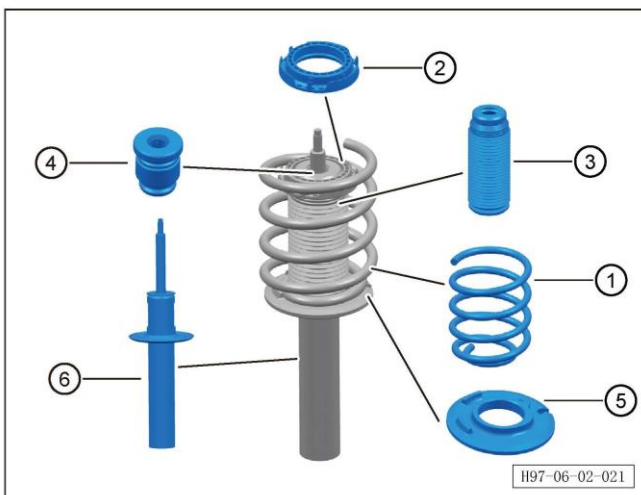
c. Remove the upper spring seat ①.

d. Slowly screw out the screw of the spring compression tool set ② of the shock absorber.

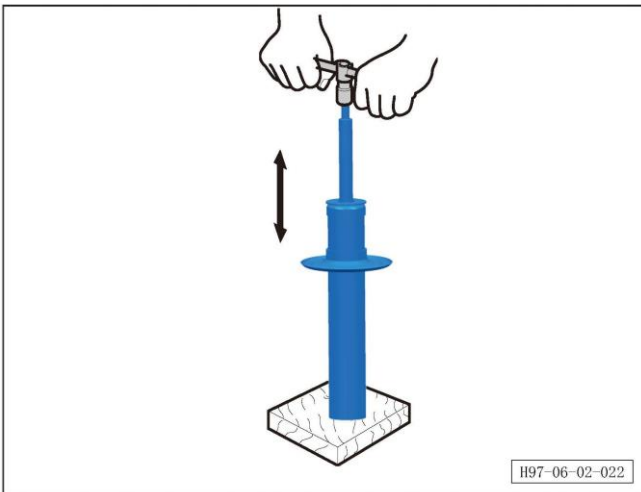
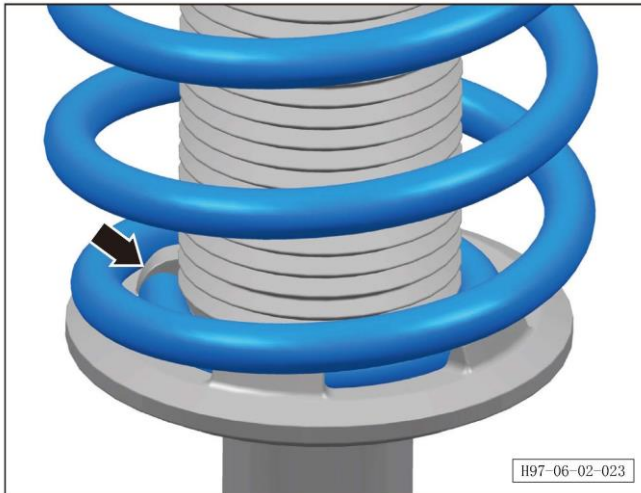
e. Remove the spring compression tool set ② of the shock absorber.

CAUTION:

- The ends of the coil springs must be attached against the limit position.



f. Remove the spring ①, front shock absorber dust cover mounting base ②, dust cover ③, damping block ④, lower spring rubber pad ⑤ and shock absorber assembly ⑥ in sequence.



Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- The end of the coil spring must be attached against the limit position - as shown by the arrow
- Refit the shock absorber mounting nuts on the shock absorber shaft end and secure the socket wrench.

Compress the shock absorber assembly by hand and check whether it can compress and extend smoothly in 1 full stroke. The shock absorber shall extend smoothly and continuously when the compression is released. If not, the shock absorber shall be replaced.

- During the test, check for oil leakage, abnormal noise and seizure.

6.2.7.5 Removal and refitting of front air spring strut assembly

CAUTION:

- Before the maintenance operation, the vehicle suspension mode must be adjusted to the maintenance mode (enter from the IHU main screen or the scan tool);

- Before refitting, the front air spring needs to be inflated with air source (inflation gun, etc.) through the pressure holding valve, so that the air pressure value reaches 3-5bar (the air pressure of the inflated front air spring shall not exceed 12bar at any time) ;

- When storing the removed front air spring assembly, it is necessary to check whether there is air pressure in the air spring during storage, and the air shall not be allowed to be completely leaked at any time. If it is found the lack of air, supply the air in time (to 3-5bar), and the compression of the front air spring strut assembly is not allowed at any time;

- During refitting and removal, pay attention to the protection of the air spring airbag to avoid bumping.

Note:

- Distinguish the assembly relation of the shock absorber for different models.
- The following is the removal of the left front air spring strut assembly, which can be referred to for the operations on the right side.

Removal procedure

1. Remove the left engine compartment trim panel (refer to [8.6.6.10 Removal and refitting of engine compartment left front trim panel assembly](#))
2. Remove the wheel trim cover (refer to [6.5.8.1 Removal and refitting of wheel trim cover](#))
3. Lift the vehicle.
4. Remove the wheels (refer to [6.5.9.1 Removal and refitting of wheels](#))
5. Remove the left front wheel house guard assembly (refer to [8.6.4.1 Removal and refitting of front wheel housing mudguard assembly](#))
6. Remove the front air spring strut assembly.

- a. Disconnect the front air spring pipeline connector.

Tightening torque of nut: $8\pm 1\text{Nm}$.

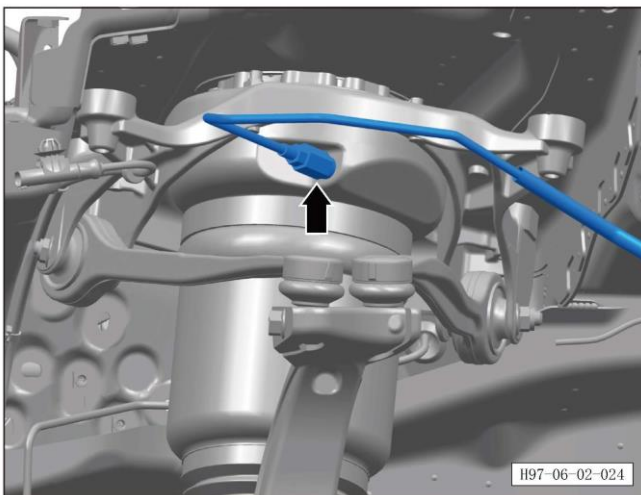
CAUTION:

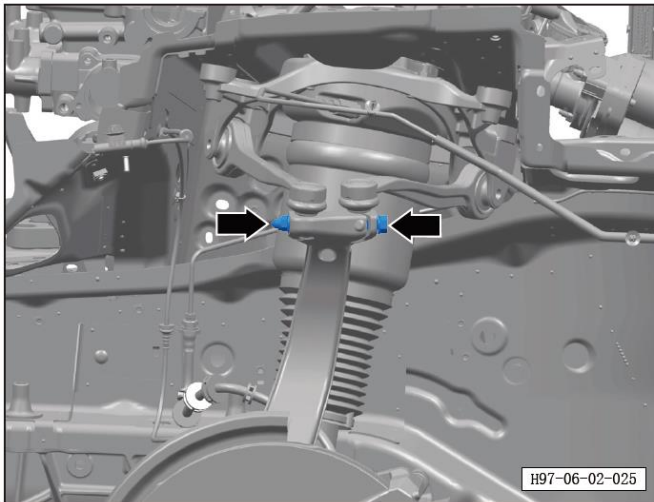
- Do not loosen the pressure holding valve, and remove it as soon as possible to prevent the excessive air loss.

Do not loosen the pressure holding valve during refitting.

- It is recommended to replace the air spring with a new one after removing the pipeline.

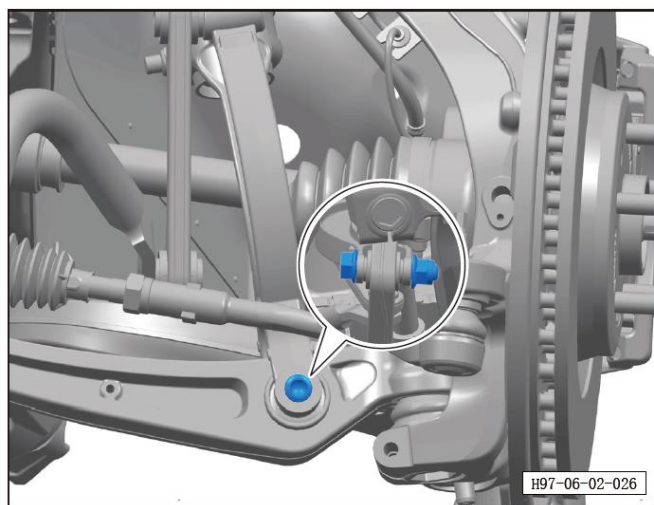
- When inserting the air pipe, first remove the dust plug, insert the air pipe into the joint until the first engraved pipeline is no longer visible, and pull the pipe back after it is installed in place to ensure that the circlip is smoothly stuck and will not come out .





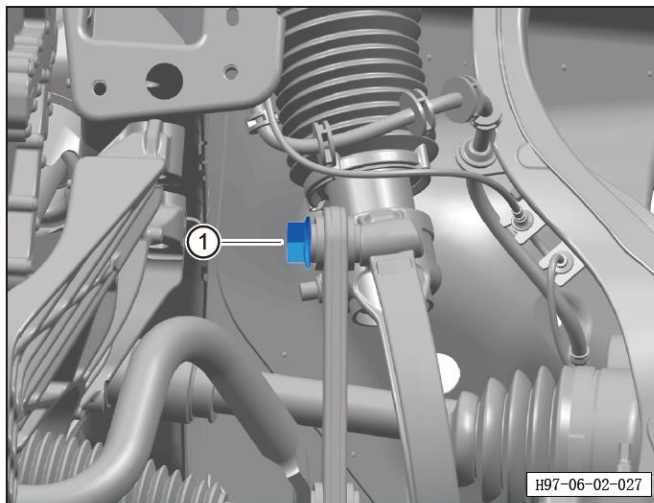
b. Unscrew the fixed nuts of the steering knuckle, the front suspension left upper control arm assembly and the front suspension left rear upper control arm, and take out the bolts.

Tightening torque of bolt/nut: $45\pm 7\text{Nm}$.



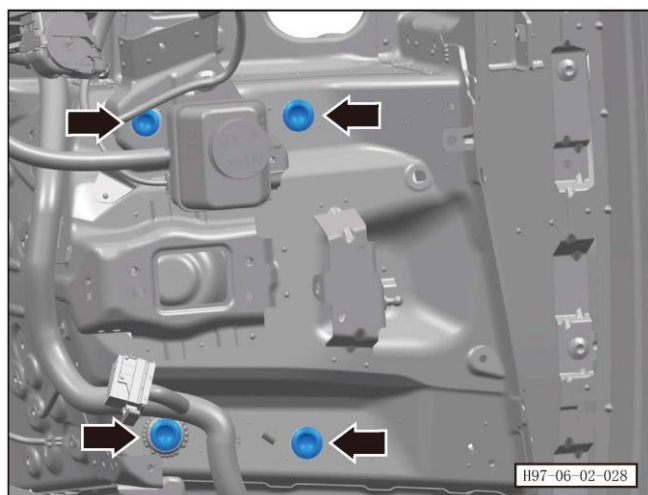
c. Unscrew the fixed bolts and nuts of the front air spring strut assembly and the front suspension left lower control arm assembly, and disconnect them.

Tightening torque of bolt/nut: $90\text{Nm}+90^\circ$.

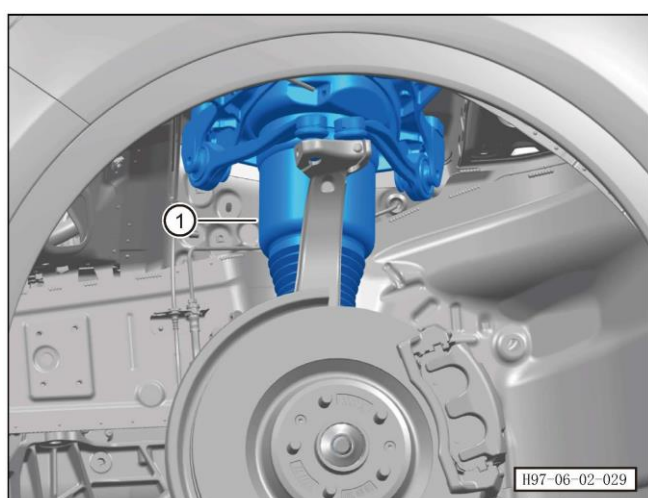


d. Unscrew the fixed bolt ① of the front air spring strut assembly and the front stabilizer bar joint assembly, and disconnect them.

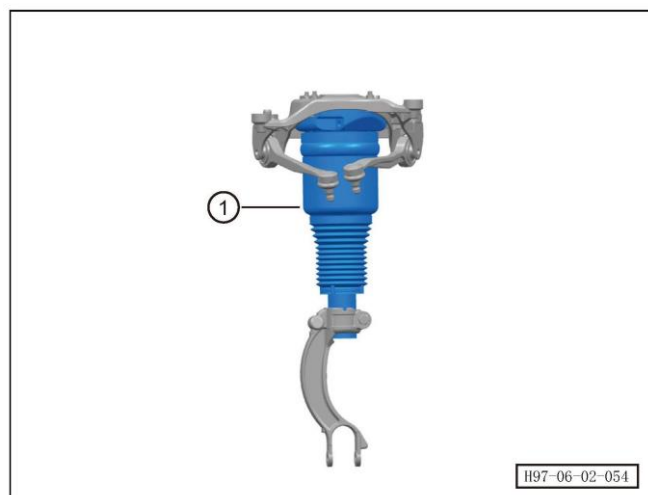
Tightening torque of bolt: $40\text{Nm}+90^\circ$.



- e. Unscrew 4 fixing bolts between the front air spring strut assembly and the body, and disconnect them.
Tightening torque of bolt: $60\pm 5\text{Nm}$.



- f. Remove the left front upper swing arm and left rear upper swing arm and front air spring strut assembly ①.



- g. Remove the front air spring strut assembly ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- After removal, pay attention to protect the pipeline and maintain the cleanliness of the pipe head to prevent foreign matters from entering the air pipe.
- Before refitting, use air source and an inflation gun (with the gun nozzle of $\phi 6$ outer diameter) to charge 3-5bar of air into the front air spring assembly through the pressure retaining valve (the air pressure in front air spring is not allowed to be more than 12bar at any time).
- Requirements for air pipe insertion: first remove the dust plug, insert the air pipe into the connector until the first marking line is no longer visible, and pull the pipe back after it is refitted in place to ensure that the circlip is smoothly stuck and will not come out ;
- Inflate the replaced front air spring separately by controlling the distribution valve with the scan tool.
- It is strictly forbidden to exit the maintenance mode before the vehicle is on the ground. You can only exit the maintenance mode when the disassembly & assembly of the air spring is completed and the vehicle is on the ground.
- The four-wheel alignment has performed.
- Test the vehicle on the road to check whether the refitting is in place, and there shall be no abnormal noise during driving.

Storage of the front air spring

CAUTION:

- When storing the front air spring, make sure that the shock absorber in the longest state, the air spring needs to be charged with 3-5bar air through the pressure retaining valve. The front air spring strut assembly is not allowed to be compressed in any state, and the airbag bumping shall be avoided during storage.

6.2.7.6 Removal and refitting of front air spring lower support seat

Removal procedure

Note:

- The following is the removal of the lower support seat of the left front air spring, which is the same as that of the right side.

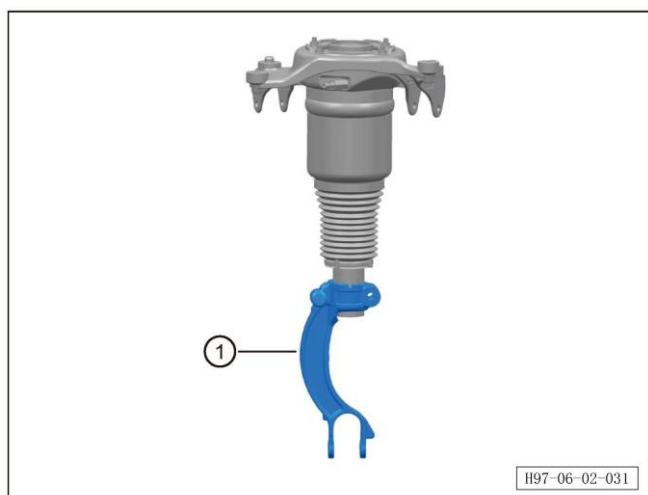
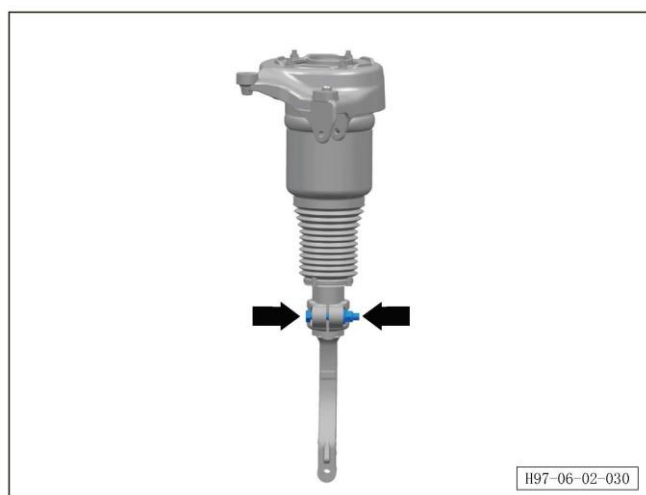
1. Remove the front air spring strut assembly (refer to [6.2.7.5 Removal and refitting of front air spring strut assembly](#))

2. Remove the front suspension upper left control arm assembly (refer to [6.2.8.1 Removal and refitting of front suspension left upper control arm assembly](#))

3. Disconnect the left rear upper control arm assembly from steering knuckle

4. Remove the air spring lower support seat.

a. Unscrew the nuts securing the lower support seat of the front air spring to the front air spring strut to remove the fixing bolts. Tightening torque of bolt/nut: $55\pm 8\text{Nm}$.



b. Remove the air spring lower support seat①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- When storing the front air spring, it is necessary to keep the shock absorber in the maximum stretching condition and charge 3-5bar air into the air spring through the pressure holding valve. It is not allowed to compress the front air spring strut assembly in any state, and the airbag collision shall be avoided during the storage.
- The air pressure in the front air spring is not allowed to exceed 12 bar at any time.
- After removal, pay attention to protect the pipeline and maintain the cleanliness of the pipe head to prevent foreign matters from entering the air pipe.
- Carry out four-wheel alignment after refitting (refer to [6.5.9.3 Four wheel alignment operation steps](#))

6.2.7.7 Removal and refitting of front air spring upper reinforcement seat

Removal procedure

Note:

- The following is the removal of the upper reinforcement seat of the left front air spring, which is the same as that of the right side.

CAUTION:

- Before the maintenance operation, the vehicle suspension mode must be adjusted to the maintenance mode (enter from the IHU main screen or the scan tool);

- Before refitting, the front air spring needs to be inflated with air source (inflation gun, etc.) through the pressure holding valve, so that the air pressure value reaches 3-5bar (the air pressure of the inflated front air spring shall not exceed 12bar at any time) ;

- When storing the removed front air spring assembly, it is necessary to check whether there is air pressure in the air spring during storage, and the air shall not be allowed to be completely leaked at any time. If it is found the lack of air, supply the air in time (to 3-5bar), and the compression of the front air spring strut assembly is not allowed at any time;

- During refitting and removal, pay attention to the protection of the air spring airbag to avoid bumping.

1. Remove the front air spring strut assembly (refer to [6.2.7.5 Removal and refitting of front air spring strut assembly](#))

2. Remove the front suspension upper left control arm assembly (refer to [6.2.8.1 Removal and refitting of front suspension left upper control arm assembly](#))

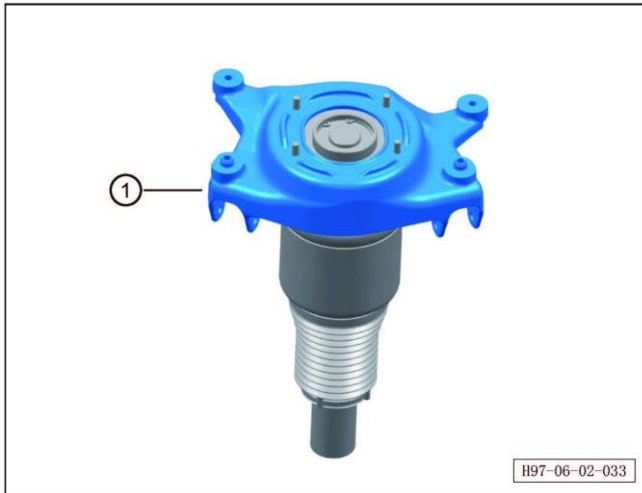
3. Disconnect the left rear upper control arm assembly from steering knuckle.

4. Remove the upper reinforcement seat of the front air spring.

a. Remove 4 fixing nuts of the reinforcement seat on the front shock absorber.

Tightening torque of nut: $45\pm 7\text{Nm}$.





b. Remove the reinforcement seat ① on the front shock absorber.

Refitting procedure

The refitting procedure is performed in reverse order.

6.2.7.8 Removal and refitting of front air spring dust cover

Removal procedure

Note:

- The following is the removal of the left front air spring dust cover, which is the same as that of the right side.

CAUTION:

- Before the maintenance operation, the vehicle suspension mode must be adjusted to the maintenance mode (enter from the IHU main screen or the scan tool);

- Before refitting, the front air spring needs to be inflated with air source (inflation gun, etc.) through the pressure holding valve, so that the air pressure value reaches 3-5bar (the air pressure of the inflated front air spring shall not exceed 12bar at any time) ;

- When storing the removed front air spring assembly, it is necessary to check whether there is air pressure in the air spring during storage, and the air shall not be allowed to be completely leaked at any time. If it is found the lack of air, supply the air in time (to 3-5bar), and the compression of the front air spring strut assembly is not allowed at any time;

- During refitting and removal, pay attention to the protection of the air spring airbag to avoid bumping.

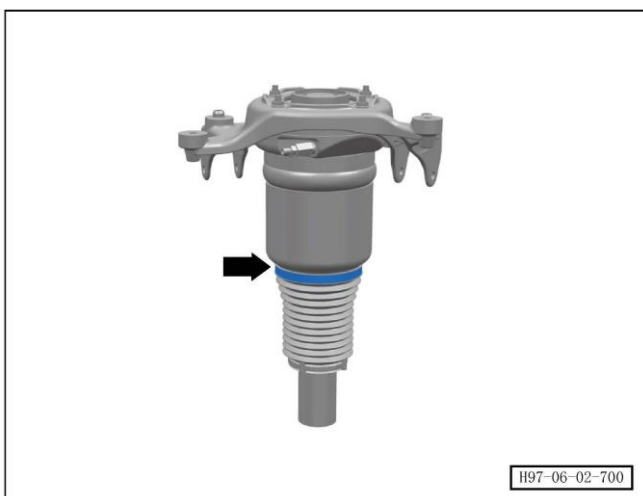
1. Remove the front air spring strut assembly (refer to [6.2.7.5 Removal and refitting of front air spring strut assembly](#))

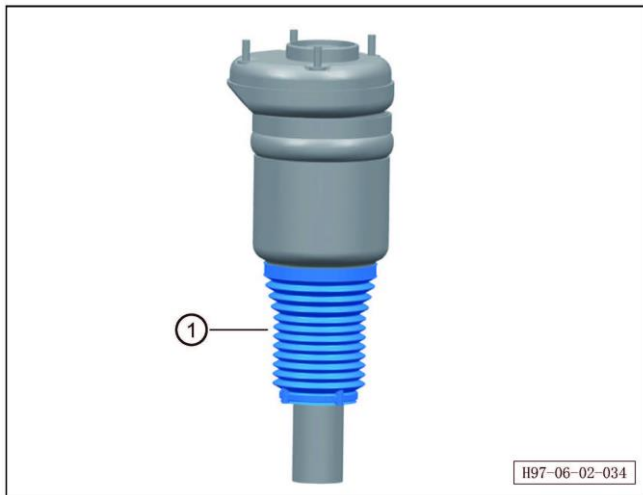
2. Remove the front suspension upper left control arm assembly (refer to [6.2.8.1 Removal and refitting of front suspension left upper control arm assembly](#))

3. Disconnect the left rear upper control arm assembly from steering knuckle.

4. Remove front air spring dust cover.

a. Disengage 1 fixing clamp of the front air spring dust cover.





b. Remove the dust cover ①.

The refitting procedure is performed in reverse order.

6.2.8 Front swing arm

6.2.8.1 Removal and refitting of front suspension left upper control arm assembly

Removal procedure

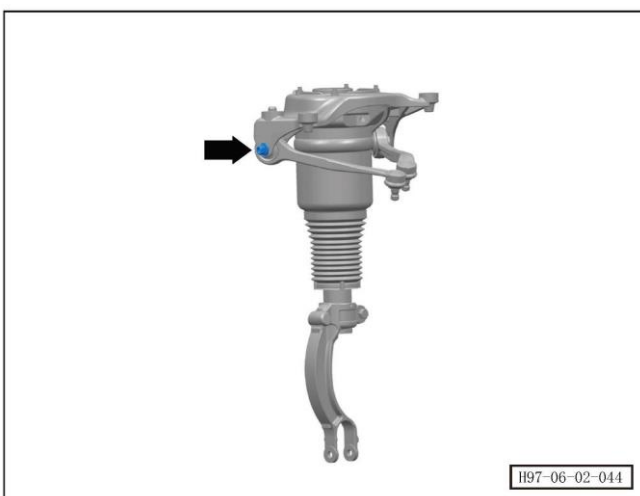
CAUTION:

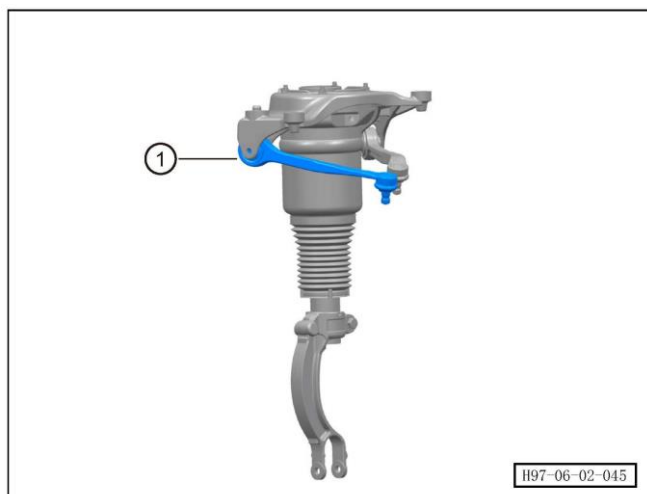
- Distinguish the assembly relation of the shock absorber for different models. Before the maintenance operation, the vehicle suspension mode must be adjusted to the maintenance mode (enter from the IHU main screen or the scan tool);
- Before refitting, the front air spring needs to be inflated with air source (inflation gun, etc.) through the pressure holding valve, so that the air pressure value reaches 3-5bar (the air pressure of the inflated front air spring shall not exceed 12bar at any time) ;
- When storing the removed front air spring assembly, it is necessary to check whether there is air pressure in the air spring during storage, and the air shall not be allowed to be completely leaked at any time. If it is found the lack of air, supply the air in time (to 3-5bar), and the compression of the front air spring strut assembly is not allowed at any time;
- During refitting and removal, pay attention to the protection of the air spring airbag to avoid bumping.
- The following is the removal of the left upper control arm of the front suspension, which can be referred to for the operations on the right side.

1. Lift the vehicle.
2. Remove the wheels (refer to [6.5.9.1 Removal and refitting of wheels](#))
3. Remove the front shock absorber strut assembly (refer to [6.2.7.1 Removal and refitting of front shock absorber strut and spring assembly](#))
4. Remove the front suspension left upper control arm assembly.

- a. Unscrew the front suspension left upper control arm assembly fixing bolts.

Tightening torque of bolt: $55\pm 8\text{Nm}$.





b. Remove the front suspension left upper control arm assembly ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- Carry out four-wheel alignment after refitting (refer to [6.5.9.3 Four wheel alignment operation steps](#))

6.2.8.2 Removal and refitting of front suspension right upper control arm assembly

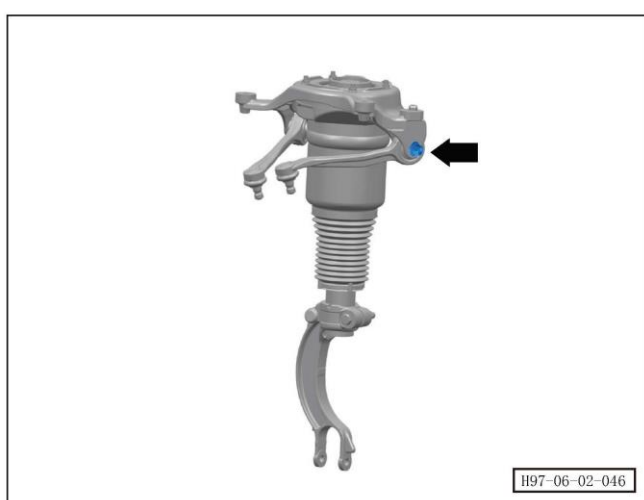
Removal procedure

Note:

- Distinguish the assembly relation of the shock absorber for different models. Before the maintenance operation, the vehicle suspension mode must be adjusted to the maintenance mode (enter from the IHU main screen or the scan tool);
- Before refitting, the front air spring needs to be inflated with air source (inflation gun, etc.) through the pressure holding valve, so that the air pressure value reaches 3-5bar (the air pressure of the inflated front air spring shall not exceed 12bar at any time) ;
- When storing the removed front air spring assembly, it is necessary to check whether there is air pressure in the air spring during storage, and the air shall not be allowed to be completely leaked at any time. If it is found the lack of air, supply the air in time (to 3-5bar), and the compression of the front air spring strut assembly is not allowed at any time;

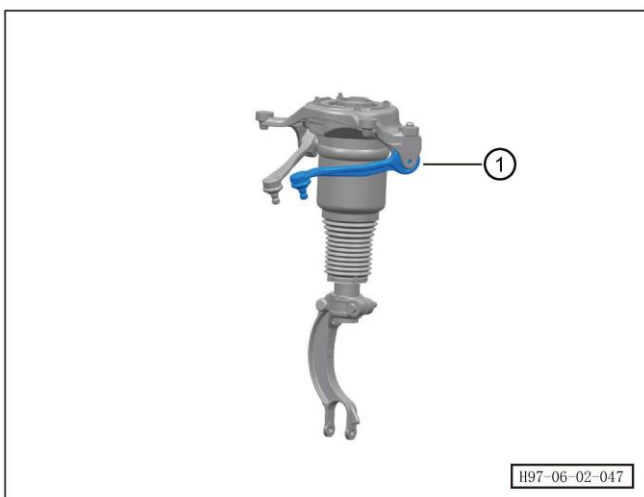
- During refitting and removal, pay attention to the protection of the air spring airbag to avoid bumping.
- The following is the removal and refitting of the upper right control arm on the left side of the front suspension, which can be referred to for the operations on the right side.

1. Lift the vehicle.
2. Remove the wheels (refer to [6.5.9.1 Removal and refitting of wheels](#))
3. Remove the front shock absorber strut assembly (refer to [6.2.7.1 Removal and refitting of front shock absorber strut and spring assembly](#))
4. Remove the front suspension right upper control arm assembly.



- a. Unscrew the fixing bolts of the front suspension right upper control arm assembly.

Tightening torque of bolt: $55\pm 8\text{Nm}$.



- b. Remove the front suspension right upper control arm assembly ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- Carry out four-wheel alignment after refitting (refer to [6.5.9.3 Four wheel alignment operation steps](#))

6.2.8.3 Removal and refitting of front suspension left lower control arm assembly

Removal procedure

Note:

- The following is the removal and refitting of front suspension left lower control arm assembly, which can be referred to for the operations on the right side.

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

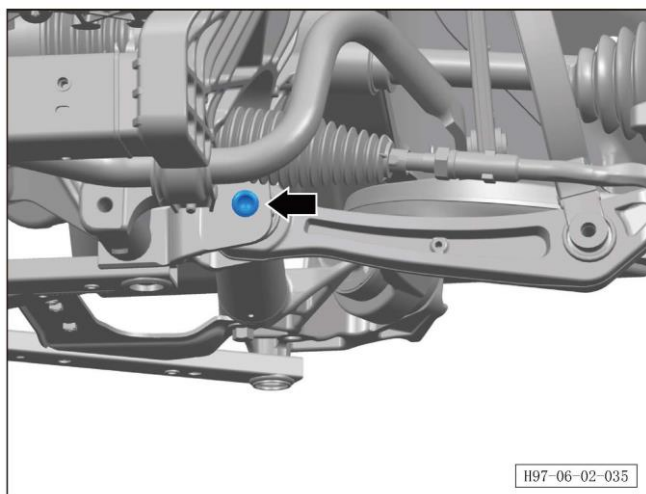
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

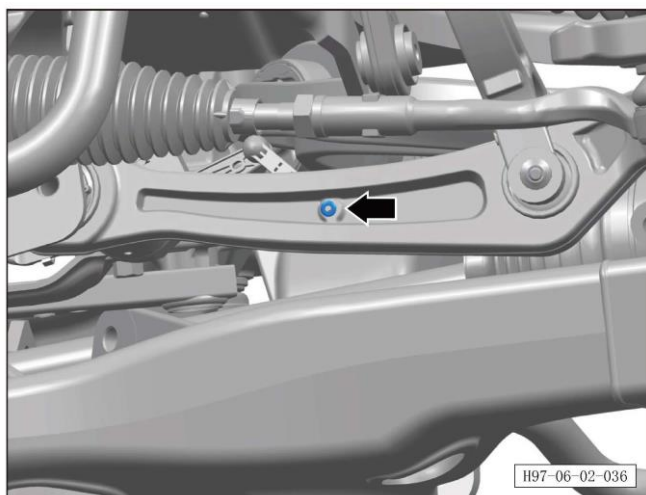
1. Lift the vehicle

2. Remove the front wheel (refer to [6.5.9.1 Removal and refitting of wheels](#))

3. Remove the front suspension left lower control arm assembly

a. Unscrew the fixed nuts of the front suspension left lower control arm assembly and the front subframe assembly, and remove the bolts. Tightening torque of nut: 70Nm+180°

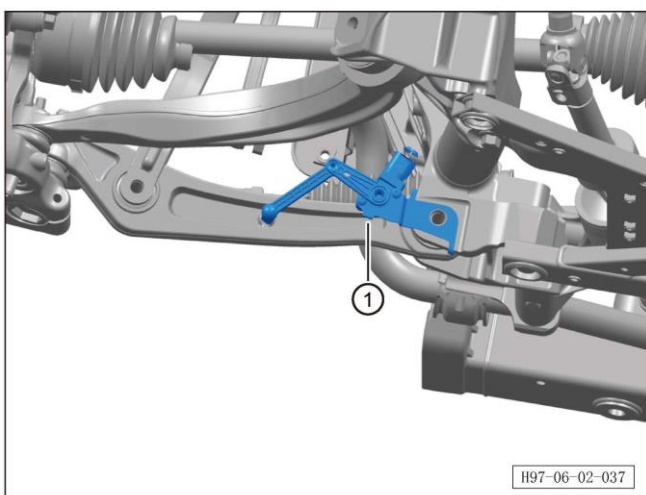




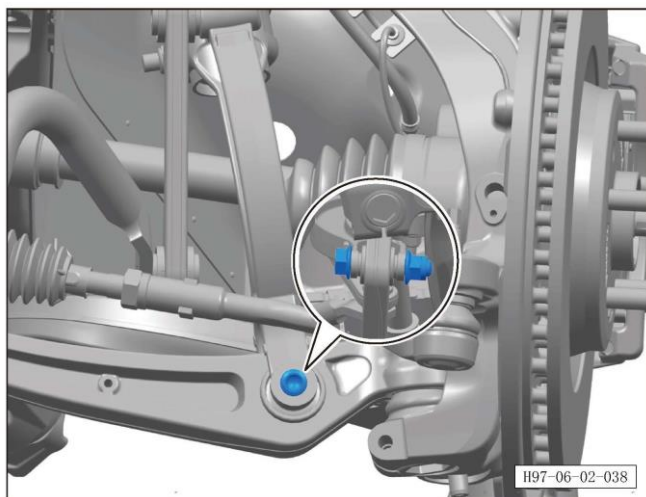
b. Unscrew 1 fixed nut connecting the front suspension left lower control arm assembly and the height sensor assembly. Tightening torque of nut: $8\pm 1\text{Nm}$.

CAUTION:

- Skip this step for models without air suspension.

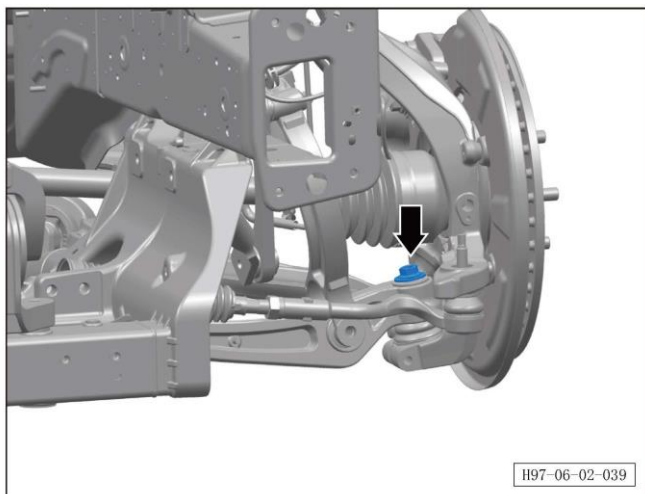


c. Remove the height sensor ①.



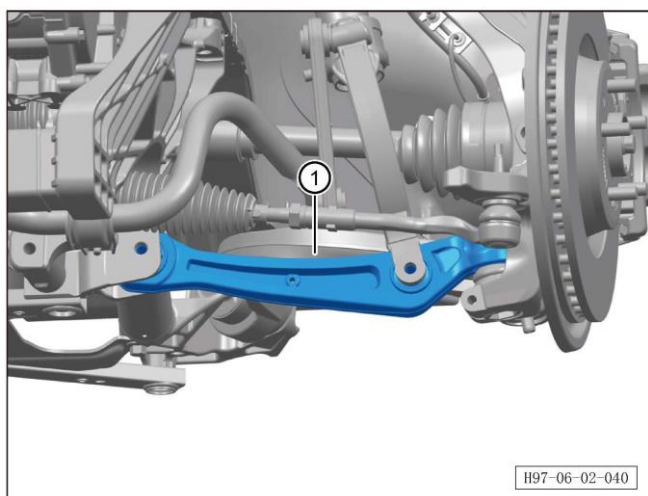
d. Unscrew the fixed bolts and nuts of the front suspension left lower control arm assembly and the front shock absorber lower support seat, and disconnect them.

Tightening torque of bolt/nut: $90\text{Nm}+90^\circ$.



e. Unscrew the fixing nuts of the front suspension left lower control arm assembly and the lower front control arm outer ball pin assembly, and disconnect them.

Tightening torque of nut: $160\pm 10\text{Nm}$.



f. Remove the front suspension left lower control arm assembly ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- After refitting, perform the four-wheel alignment.
- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.2.8.4 Removal and refitting of lower front control arm outer ball pin assembly

Removal procedure

Note:

- The following is the removal and refitting of left lower front control arm outer ball pin assembly, which can be referred to for the operations on the right side.

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

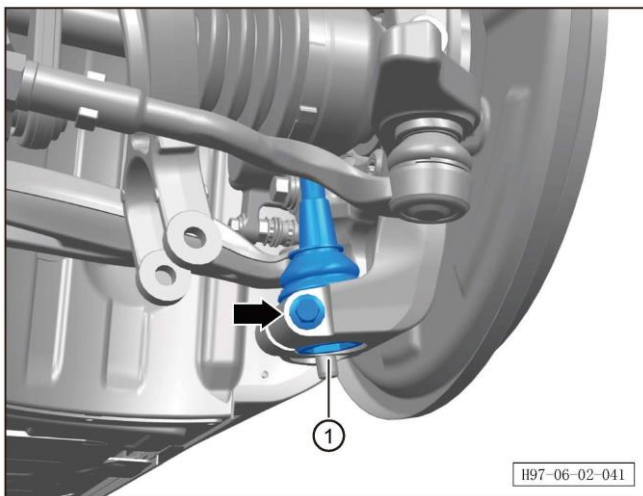
1. Remove the front wheel (refer to [6.5.9.1 Removal and refitting of wheels](#))

2. Remove the front suspension left lower control arm assembly (refer to [6.2.8.3 Removal and refitting of front suspension left lower control arm assembly](#))

3. Remove the lower front control arm outer ball pin assembly.

a. Unscrew 1 fixing bolt of the front control arm outer ball pin assembly to remove the front control arm outer ball pin assembly.

Tightening torque of bolt: 55 ± 5 Nm.



Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- After refitting, perform the four-wheel alignment.

- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.2.8.5 Removal and refitting of front suspension left rear control arm

Removal procedure

Note:

- The following is the removal and refitting of front suspension left rear control arm assembly, which can be referred to for the operations on the right side.

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

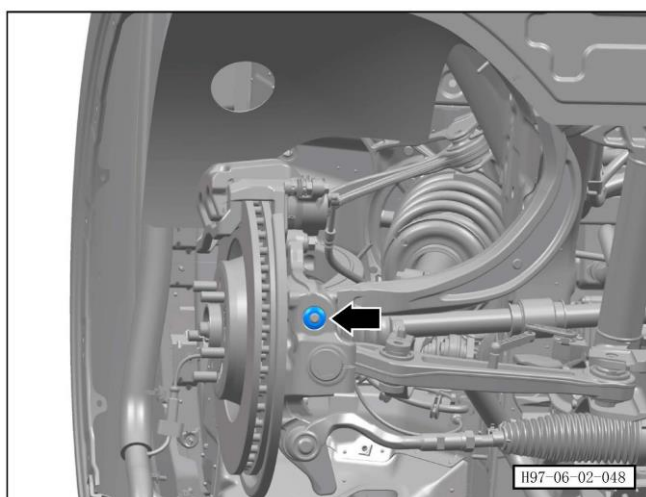
1. Lift the vehicle

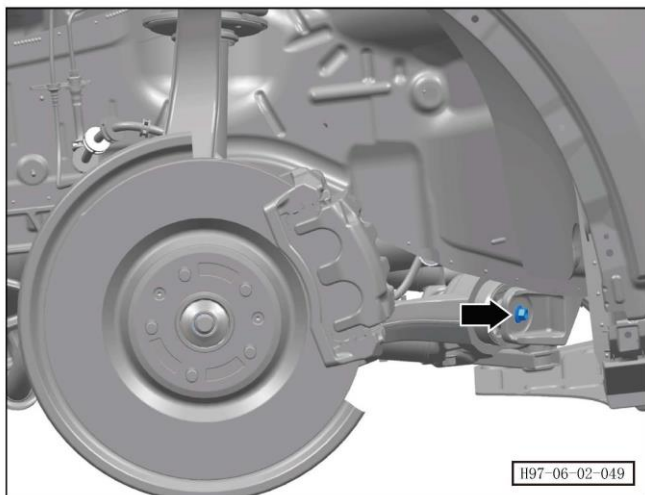
2. Remove the front wheel (refer to [6.5.9.1 Removal and refitting of wheels](#))

3. Remove the front suspension left rear control arm.

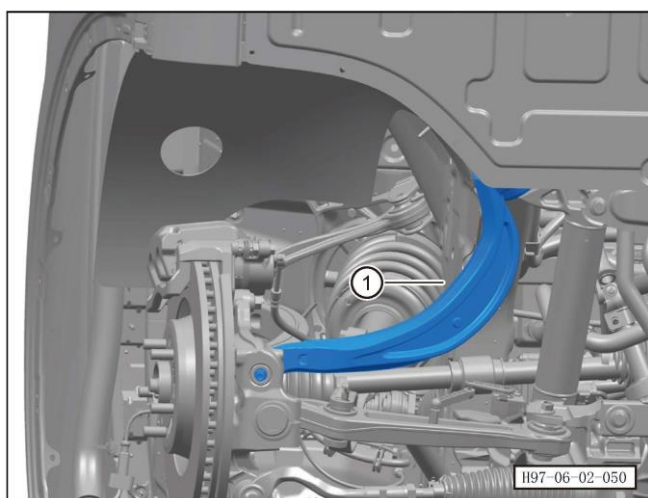
a. Unscrew 1 fixing nut of the lower control arm ball joint.

Tightening torque of nut: 70Nm+90°.





b. Unscrew 1 fixing bolt of the lower control arm.
Tightening torque of bolt: 70Nm+90°.



c. Remove the front suspension left rear control arm ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- After refitting, perform the four-wheel alignment.
- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

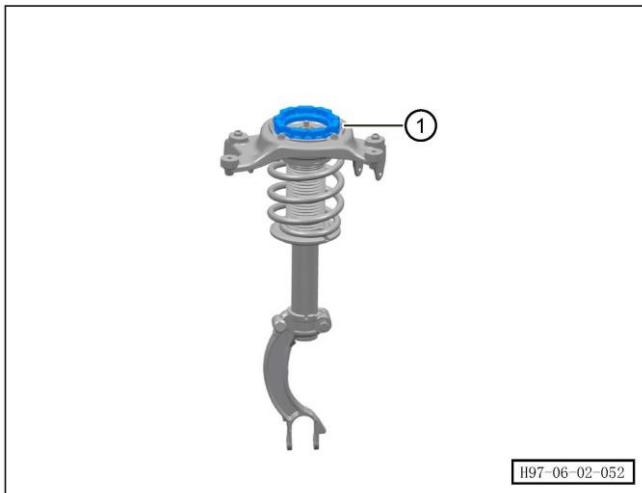
6.2.8.6 Removal and refitting of front shock absorber rubber pad (coil spring)

Removal procedure

Note:

- Distinguish the assembly relation of the shock absorber for different models.
- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.
- The following is the removal and refitting of front shock absorber rubber pad, which can be referred to for the operations on the right side.

1. Lift the vehicle.
2. Remove the wheels (refer to [6.5.9.1 Removal and refitting of wheels](#))
3. Remove the front shock absorber strut assembly (refer to [6.2.7.1 Removal and refitting of front shock absorber strut and spring assembly](#))
4. Remove the left front shock absorber rubber pad.
 - a. Remove the front shock absorber rubber pad ①.



Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- Carry out four-wheel alignment after refitting (refer to [6.5.9.3 Four wheel alignment operation steps](#))
- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

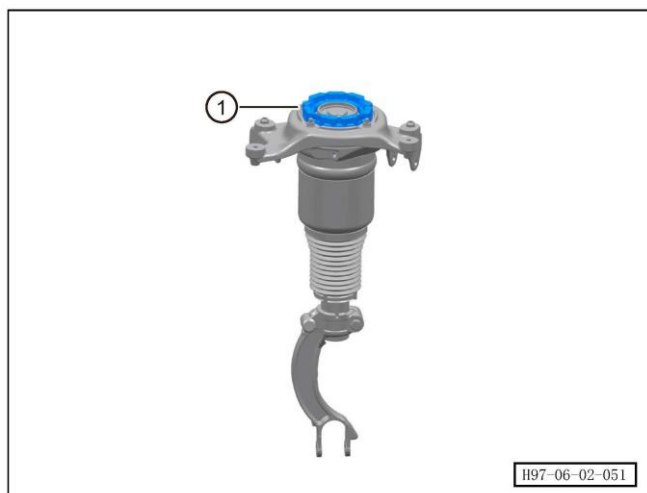
6.2.8.7 Removal and refitting of front shock absorber rubber pad (air spring)

Removal procedure

Note:

- Distinguish the assembly relation of the shock absorber for different models.
- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.
- The following is the removal and refitting of front shock absorber rubber pad, which can be referred to for the operations on the right side.

1. Lift the vehicle.
2. Remove the wheels (refer to [6.5.9.1 Removal and refitting of wheels](#))
3. Remove the front shock absorber strut assembly (refer to [6.2.7.1 Removal and refitting of front shock absorber strut and spring assembly](#))
4. Remove the left front shock absorber rubber pad.
 - a. Remove the front shock absorber rubber pad ①.



Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- Carry out four-wheel alignment after refitting (refer to [6.5.9.3 Four wheel alignment operation steps](#))
- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.2.8.8 Removal and refitting of front suspension left front lower control arm assembly

Note:

- The following is the removal and removal of front suspension left front lower control arm assembly, which can be referred to for the operations on the right side.

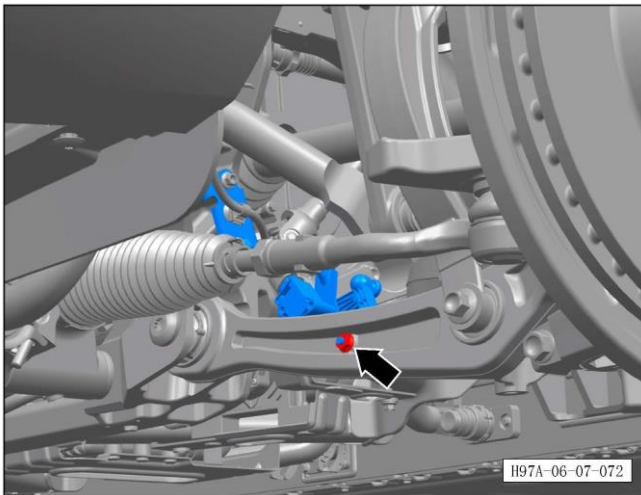
Note:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

- Control the vehicle to enter the "Air suspension maintenance mode" through the central control screen or diagnostic software.

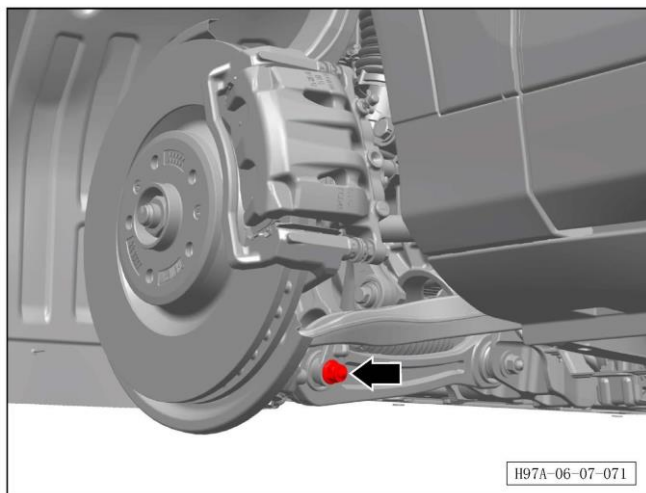
Removal procedure

1. Turn off all electrical appliances and the start switch.
2. Disconnect the battery negative terminal. Refer to [3.1.6.1 Maintenance and inspection battery](#)
3. Remove the left front wheel (refer to [6.5.9.1 Removal and refitting of wheels](#))
4. Remove the front suspension left front lower control arm assembly.

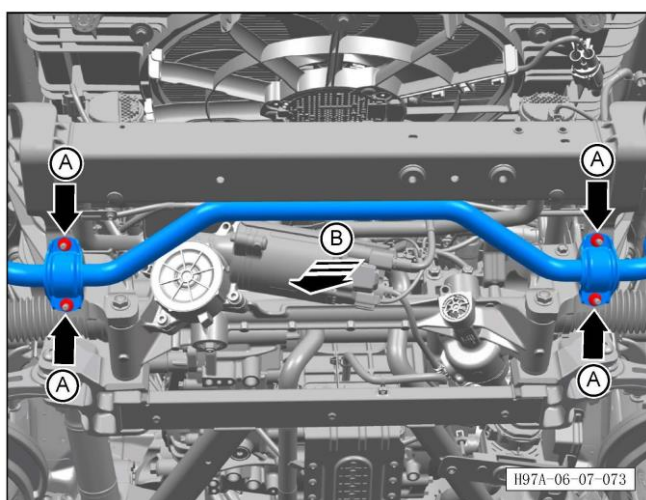


a. Unscrew 1 fixing nut of the left front height sensor assembly, and separate the height sensor assembly and the front suspension left front lower control arm assembly.

Tightening torque of nut: $8\pm 1\text{Nm}$.



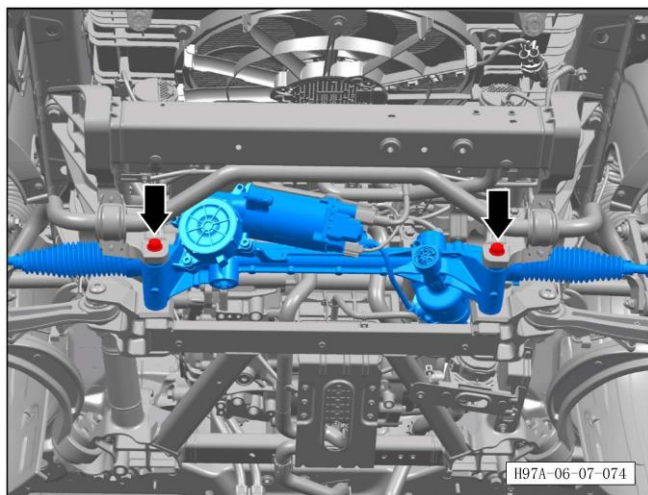
b. Unscrew 1 fixing nut of the front suspension left front lower control arm assembly and the left front shock absorber lower fork arm, and pull out the bolts.
Tightening torque of nut: $90\text{Nm}+90^\circ$



c. Unscrew 4 fixing nuts A of the stabilizer bar and pull down the stabilizer bar as indicated by the arrow B.
Tightening torque of nut A: $30\pm 3\text{Nm}$.

Note:

- Pull down the stabilizer bar as indicated by the arrow B to remove 2 fixing bolts of the steering gear assembly.

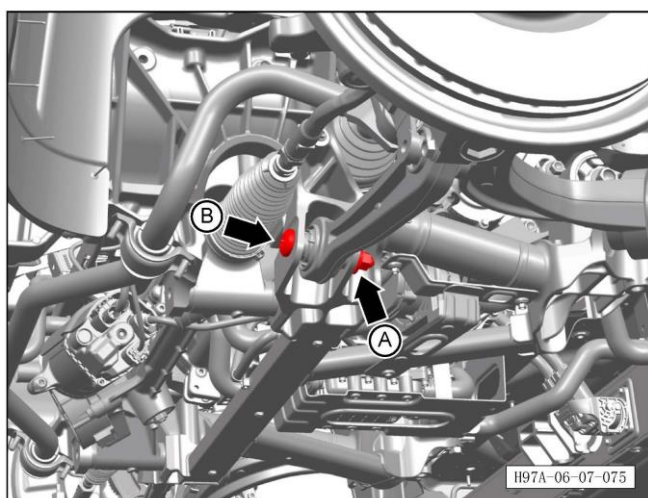


d. Unscrew 2 fixing bolts of the steering gear and lift the steering gear assembly.

Tightening torque of bolt: $115 \pm 10 \text{ Nm}$.

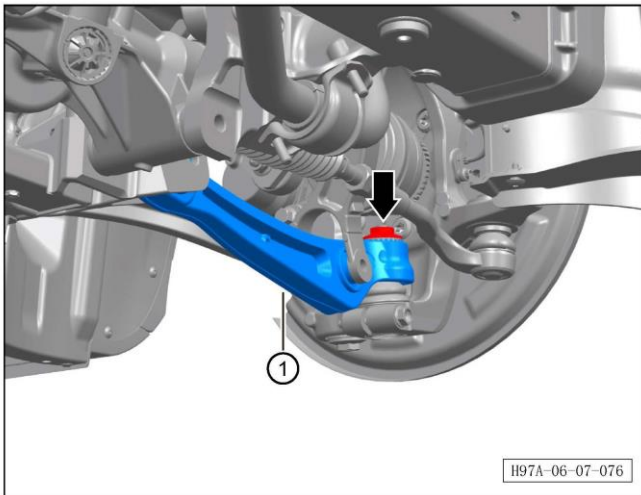
Note:

- Raise the steering gear assembly to withdraw the fixing bolts of the front suspension left front lower control arm assembly and the front subframe assembly.



e. Unscrew 1 fixing nut A of the front suspension left front lower control arm assembly and the front subframe assembly, and withdraw the bolt B.

Tightening torque of nut A: $70 \text{ Nm} 180^\circ$.



f. Unscrew 1 fixing nut of the left front suspension front lower control arm assembly to remove the front suspension left front control arm assembly ①.

Tightening torque of nut: $70\text{Nm} + 180^\circ$.

Refitting procedure

The refitting procedure is performed in reverse order.

6.2.9 Front stabilizer bar

6.2.9.1 Removal and refitting of left front stabilizer bar joint assembly

Removal procedure

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

1. Disconnect the battery negative terminal. Refer to [3.1.6.1 Maintenance and inspection battery](#)

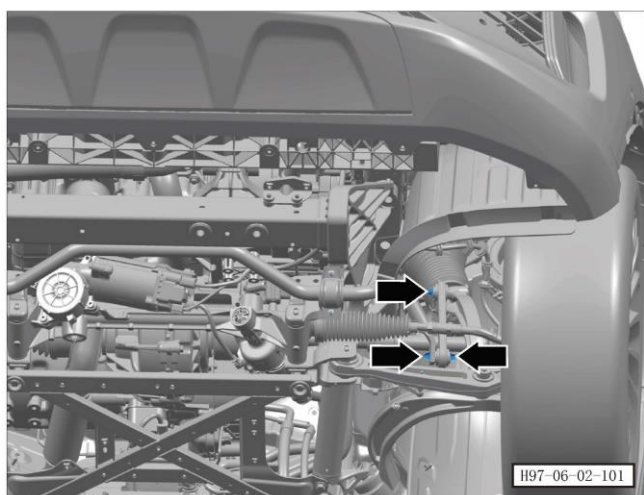
2. Lift the vehicle.

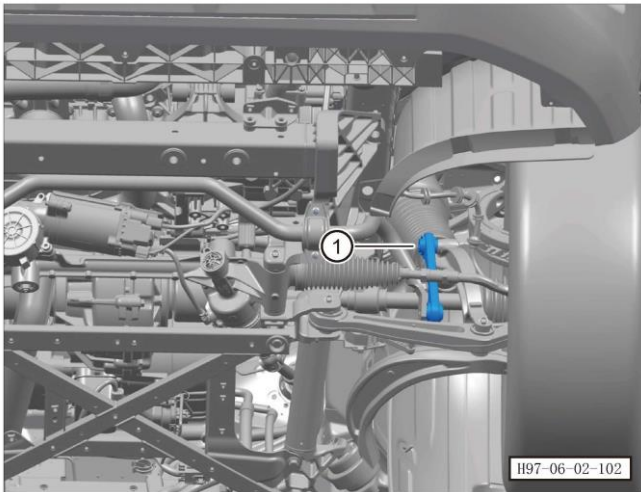
3. Remove the front lower protective plate (refer to [8.6.4.3 Removal and refitting of front lower protective plate \(REV\)](#))

4. Remove left front stabilizer bar joint assembly.

a. Unscrew 2 fixing bolts and 1 fixing nut of the left front stabilizer bar.

Tightening torque of bolt/nut: 40Nm+90°.





- b. Remove the left front stabilizer bar joint assembly ①.

Refitting procedure

The refitting procedure is performed in reverse order.
The refitting procedure is performed in reverse order.

CAUTION:

- Carry out four-wheel alignment after refitting (refer to [6.5.9.3 Four wheel alignment operation steps](#))
- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.2.9.2 Removal and refitting of right front stabilizer bar joint assembly

Removal procedure

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

1. Disconnect the battery negative terminal. Refer to [3.1.6.1 Maintenance and inspection battery](#)

2. Lift the vehicle.

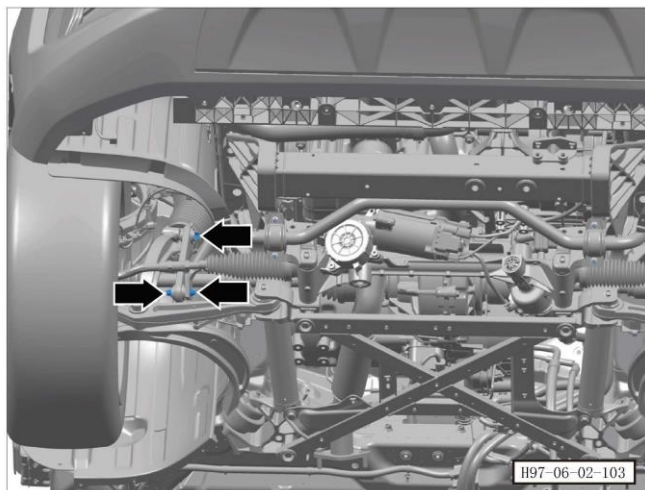
3. Remove the front lower protective plate (refer to [8.6.4.3 Removal and refitting of front lower protective plate \(REV\)](#))

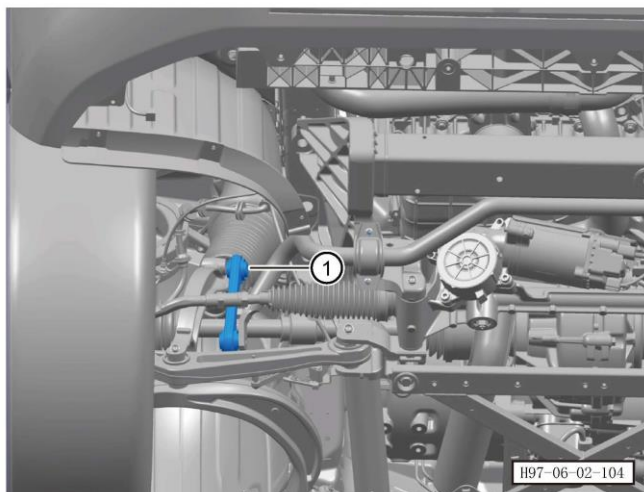
4. Remove right front stabilizer bar joint assembly.

a. Unscrew 2 fixing bolts and 1 fixing nut of the right front stabilizer bar joint assembly.

Tightening torque of bolt: 40Nm+90°.

Tightening torque of nut: 40Nm+90°





- b. Remove the right front stabilizer bar joint assembly ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- After refitting, perform the four-wheel alignment.
- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

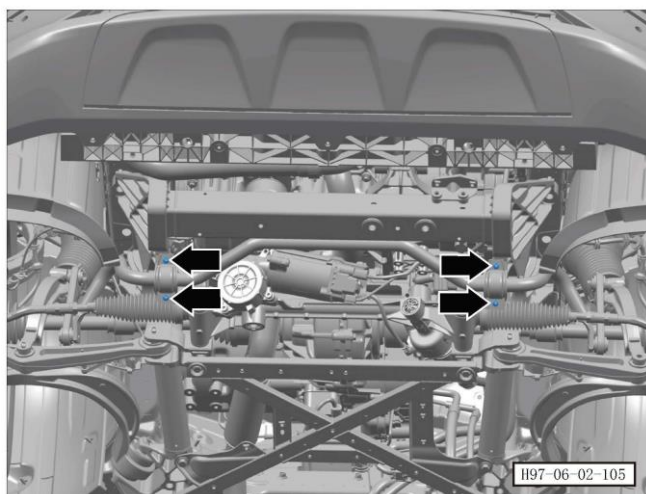
6.2.9.3 Removal and refitting of front stabilizer bar bracket

Removal procedure

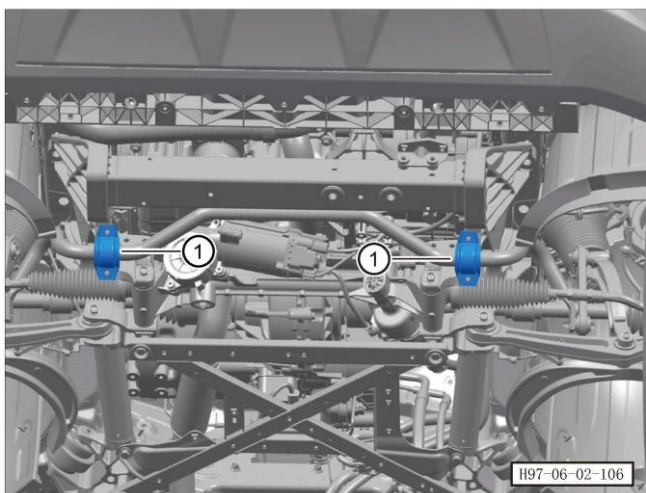
CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
 - After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.
1. Disconnect the negative terminal of the battery (refer to [3.1.6.1 Maintenance and inspection of battery](#))
 2. Lift the vehicle.

3. Remove the front lower protective plate (refer to [8.6.4.3 Removal and refitting of front lower protective plate \(REV\)](#))
4. Remove the front stabilizer bar bracket.
 - a. Unscrew 4 fixing nuts of the front stabilizer bar bracket. Tightening torque of nut: $30\pm 3\text{Nm}$.



- b. Remove the front stabilizer bar bracket ①.



Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- After refitting, perform the four-wheel alignment.
- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.2.9.4 Removal and refitting of front stabilizer bar assembly

Removal procedure

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

1. Disconnect the negative terminal of the battery (refer to [3.1.6.1 Maintenance and inspection of battery](#))

2. Lift the vehicle.

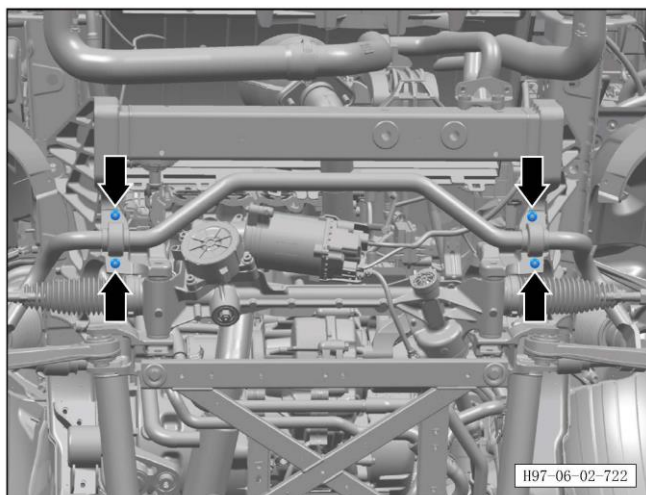
3. Remove the front lower protective plate (refer to [8.6.4.3 Removal and refitting of front lower protective plate \(REV\)](#))

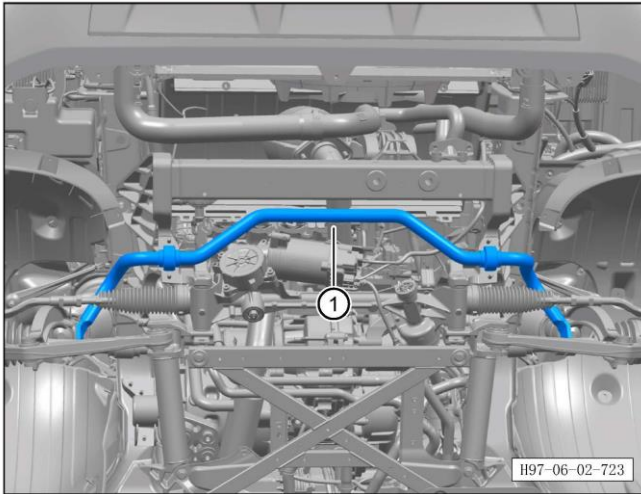
4. Remove the bolts and nuts of the left front stabilizer bar joint assembly (refer to [6.2.9.1 Removal and refitting of left front stabilizer bar joint assembly](#))

5. Remove the bolts and nuts of the front right stabilizer bar joint assembly (refer to [6.2.9.2 Removal and refitting of right front stabilizer bar joint assembly](#))

6. Remove the front stabilizer bar assembly.

a. Unscrew 4 fixing nuts of the front stabilizer bar bracket. Tightening torque of nut: $30\pm 3\text{Nm}$.





- b. Remove front stabilizer bar assembly ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.3 Rear suspension system

6.3.1 Precautions

CAUTION:

- The vehicle shall be driven by an assistant while the technician inspects the faulty area requested for repair. Otherwise, personal injury may occur.
- Before maintaining electrical components, all electronics and start switches must be turned off, unless otherwise stated in operating procedures.
- Disconnect the negative terminal of the battery if the tool or device easily touches the exposed live terminal. Failure to follow these safety instructions may result in personal injury and damage to the vehicle.
- Test the vehicle on the road and comply with all traffic laws and regulations provided that safety can be ensured. Do not attempt any operation that may compromise the control of the vehicle. Failure to follow the above safety instructions may result in the serious personal injury and the vehicle damage.
- When lifting or jacking the engine for any reason, do not support the jack under the oil pan or crankshaft pulley. Lifting the engine incorrectly can cause damage to the components.
- When repairing the suspension of the vehicle, it is forbidden for the customer to come under the lifted vehicle without permission to observe the chassis structure of the vehicle to prevent personal injury.
- Precautions for lifting of vehicle with air suspension:
 - a. After adjusting the body to the standard height in standard mode, click the maintenance icon on the touch screen to adjust the system to the maintenance mode.
 - b. Use a lift to support the body without changing the body height;

Before disassembling the rear air spring assembly, it is necessary to control the distribution valve to discharge the air in the rear air spring through the after-sales scan tool, and close the solenoid valve as soon as possible after the bleeding (do not disconnect the air spring assembly from the air pipe until the lifting of the vehicle is completed);

- c. Turn off all electrical appliances and the start switch.
- d. Disconnect the negative terminal of the battery (refer to [3.1.6.1 Maintenance and inspection of battery](#))
- e. Lift the vehicle (after the REV vehicle is lifted, the high voltage switch of the high voltage battery pack must be disconnected).
- f. Perform subsequent maintenance operations.

(After removing the air pipe of the air spring, pay attention to protect the pipe and keep the cleanliness of the pipe head to prevent foreign matter from entering)

- Precautions for maintenance and operation of vehicles with air suspension:
 - a. When storing the front air spring, it is necessary to keep the shock absorber in the maximum stretching condition and charge 3-5bar air into the air spring through the pressure holding valve. It is not allowed to compress the front air spring strut assembly in any state, and the airbag collision shall be avoided during the storage.
 - b. Before refitting, use an inflation gun (with the gun nozzle of 6mm outer diameter) to charge 3-5bar of air into the front air spring assembly through the pressure holding valve (the air pressure in the front air spring is not allowed to exceed 12bar at any time);
 - c. Since the rear air spring has no shock absorber limit, it cannot be inflated when it is not loaded. Check its state before loading. It is forbidden to stretch or compress the rear air spring. Before use, it shall be detected in accordance with the detection method for the rear air spring detection specified in the maintenance process;
 - d. The air pressure charged into the rear air spring is not allowed to exceed 9bar at any time;
 - e. It is strictly forbidden to exit the maintenance mode before the vehicle is on the ground. You can only exit the maintenance mode when the disassembly & assembly of the air spring is completed and the vehicle is on the ground.
- For the lifting operation of the vehicle with air suspension, the operation requirements in the precautions must be followed before the maintenance; If the requirements in the matters are violated, the vehicle may be damaged, or worse, this may cause casualties.
- For detailed maintenance operations and precautions of air suspension system, please refer to the disassembly & assembly and maintenance chapters of the front/rear air spring about the system of chassis maintenance.

6.3.2 Introduction to structure and principle

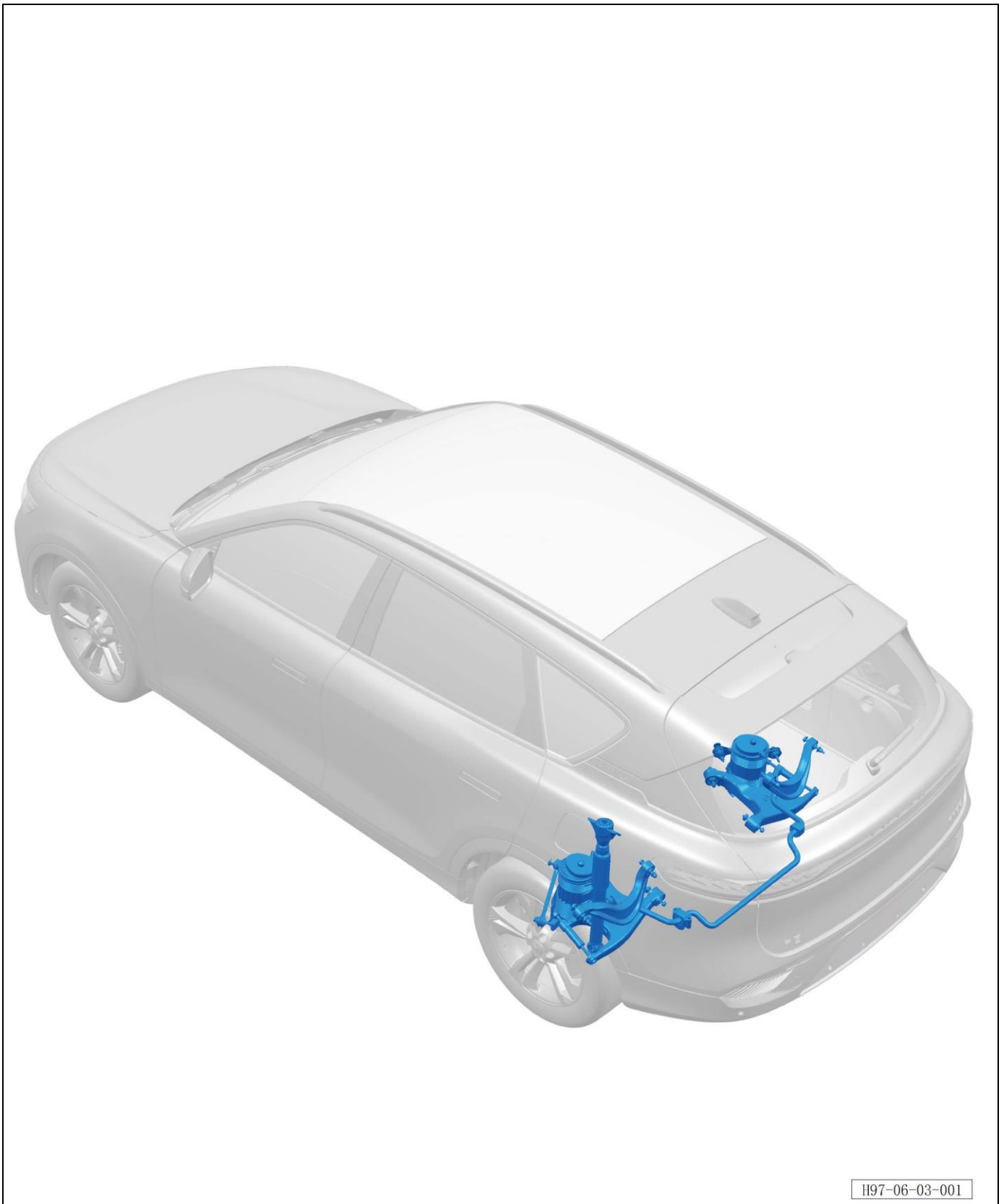
The suspension system refers to the entire support system consisting of springs and shock absorbers between the body and the tires. The function of the suspension system is to transmit the torque between the wheel and the frame, buffer the impact force brought by the road to the frame or the body, and attenuate the body vibration arising therefrom, so as to improve the ride comfort; Different suspension systems serving as 1 of the key components of modern cars will bring different driving experience to the driver, and determines the stability, comfort and safety of the vehicle when driving.. Suspension is generally composed of elastic elements, shock absorbers, guide mechanisms and stabilizer bars:

- The elastic elements are used to bear and transmit vertical loads, ease the impact of rough road surfaces on the body, keep the tires in contact with the road surface all the time and keep track of the vehicle driving route.
- The elastic elements include leaf springs, torsion bar springs, coil springs, hydro-pneumatic springs, air springs, rubber springs, etc.
- Shock absorbers are used to attenuate vibrations caused by elastic systems and include: cylinder shock absorbers, adjustable shock absorbers and inflatable shock absorbers.
- The guiding mechanism is used to transmit the torque between the wheel and the body, and at the same time keep the wheel jumping with the body according to a certain trajectory. The guiding mechanism is composed of control swing arm rods, including single-link or multi-link types. The rear suspension of this model is equipped with trapezoidal arm multi-link independent suspension:
- The trapezoidal arm multi-link independent suspension is a suspension consisting of (3-5) rods to control the position change of the wheels. The multi-link type independent suspension can make the wheels swing around the axis which forms two angles with the longitudinal axis of the vehicle. It is a compromise between the horizontal arm type and the longitudinal arm type. The wishbone and trailing arm suspensions can be obtained to different degrees by properly selecting the angle between the swing arm axis and the longitudinal axis of the vehicle, and such advantage can meet the different requirements for the usage performance.

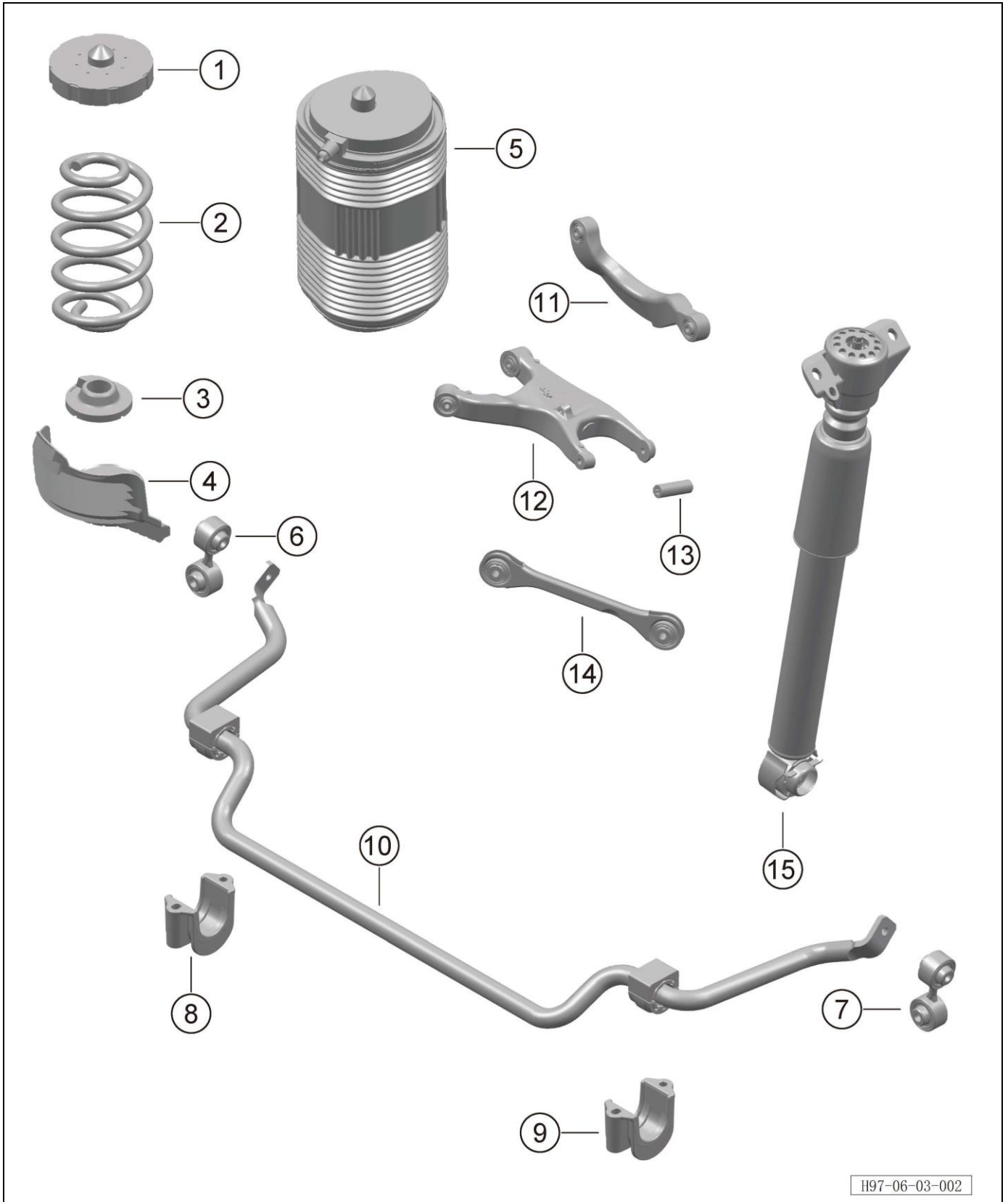
Advantages:

- The change of track and toe-in is small when the wheels run out, so that the vehicle can be steered smoothly according to the driver's intention regardless of driving or braking status.

6.3.3 Position diagram of parts

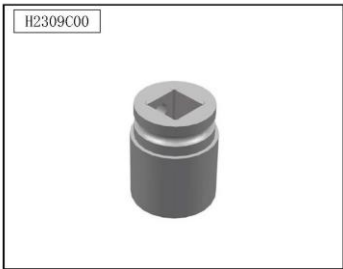
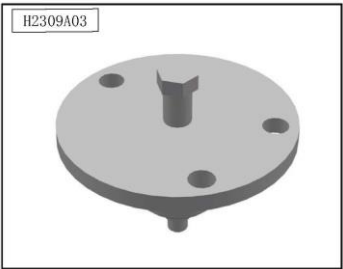
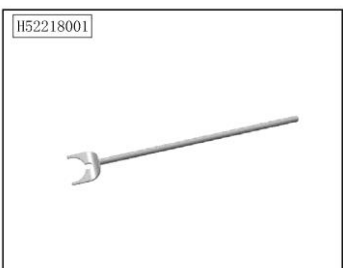
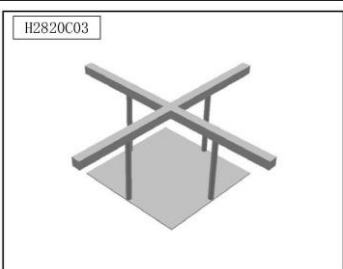


6.3.4 Exploded view



S/N	Part name	Loading quantity	Remarks
1	Rear coil spring upper gasket	2	
2	Rear coil spring	2	
2	Rear coil spring	2	
3	Rear coil spring lower gasket	2	
4	Rear coil spring mounting seat dust cover assembly (right)	1	
4	Rear coil spring mounting seat dust cover assembly (left)	1	
5	Rear air spring assembly	2	
6	Right rear stabilizer bar joint assembly	1	
7	Left rear stabilizer bar joint assembly	1	
8	Right rear stabilizer bar bracket	1	
9	Left rear stabilizer bar bracket	1	
10	Rear stabilizer bar assembly	1	
10	Rear stabilizer bar assembly	1	
11	Right rear upper swing arm	1	
12	Remove the toe-in control arm assembly	2	
13	Rear lower control arm mounting liner	2	
14	Left rear upper swing arm	1	
15	Rear shock absorber strut assembly	2	

6.3.5 Special tools

S/N	Diagram	Tool number	Name
1	 H2309C00	H2309C00	Drive shaft nut removal sleeve
2	 H2309A03	H92309A03	Special tool for removal of drive shaft (Hub side)
3	 H52218001	H2309A02	Special tool for removal of drive shaft
4	 H2820C03	H2820C03	Suspension bracket support

6.3.6 Common faults

Driving smoothness:

Inspection method:

1. Check whether the tire pressure is within the standard range; if not, adjust it to the standard value
2. Check whether the rear shock absorber leaks oil, and replace the rear shock absorber when necessary
3. Check whether the rear coil spring is broken or loose, and replace the rear coil spring when necessary
4. Check whether the rear shock absorber is refitted correctly, whether the rear shock absorber does not match the model, and replace the rear shock absorber when necessary.
5. Check whether the fixing bolts of the rear shock absorber are loose, and tighten them to the specified torque when necessary

Tilt or swing when cornering

Inspection method:

1. Check whether the connecting rod of the rear stabilizer bar is loose, and re-tighten the connecting nuts of the connecting rod of the rear stabilizer bar and the rear strut assembly according to the specified torque.
2. Check whether the rear shock absorber and the rear coil spring seat are worn, replace the rear shock absorber when necessary, and retighten the fixing nuts on the rear shock absorber.
3. Check whether the vehicle is overloaded and explain it to the user reasonably.
4. Check whether the rear coil spring is broken or loose, and replace when necessary.

Noise diagnosis:

Inspection procedure:

1. Check whether each ball joint is sufficiently lubricated, and replace the ball joint when necessary.
2. Check whether the rear suspension components are worn and replace the damaged components when necessary.
3. Check whether the lower swing arm bush is worn and replace the damaged lower swing arm when necessary.
4. Check whether the connecting rod of the rear stabilizer bar is loose, and tighten it to the specified torque when necessary.
5. Check whether the rear shock absorber or the rubber pad under the coil spring of the rear strut is in good condition, whether the refitting is in place, whether there is damage, etc., and replace the damaged parts when necessary.
6. Check whether the coil spring of the rear strut is misaligned, and re-refit it when necessary.
7. Check whether the rear stabilizer bar bush is excessively worn and replace the rear stabilizer bar assembly when necessary.
8. Find a vehicle of the same model and comprehensively assess whether the noise is normal working noise.

6.3.7 Coil spring

6.3.7.1 Removal and refitting of rear coil spring

Removal procedure

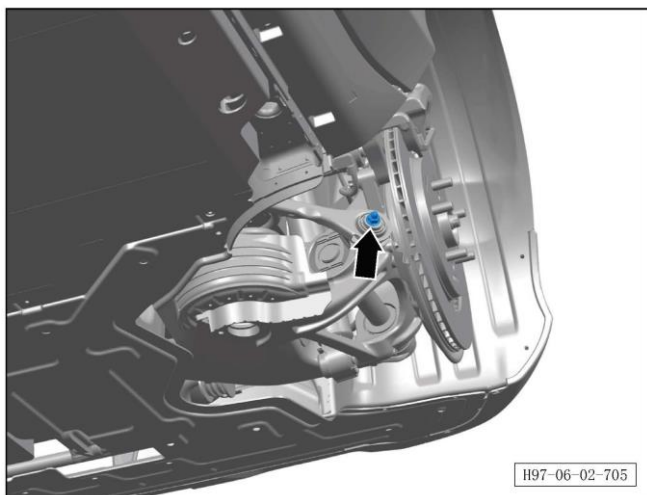
Note:

- The following is the removal and refitting of left rear coil spring, which can be referred to for the operations on the right side.

1. Lift the vehicle.
2. Remove the wheels (refer to [6.5.9.1 Removal and refitting of wheels](#))
3. Remove rear coil spring.

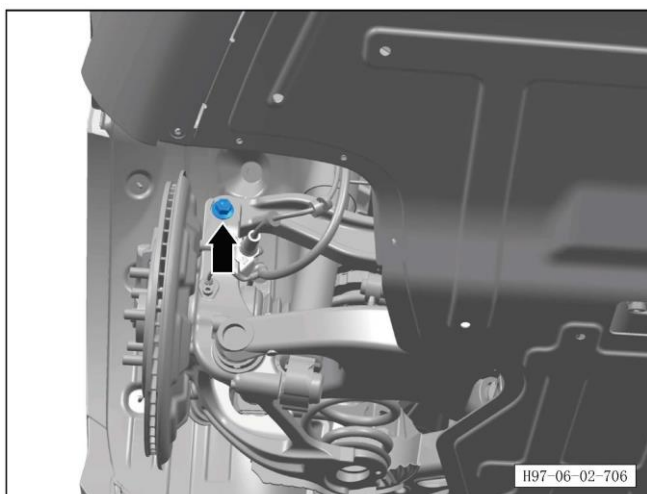
a. Remove 1 fixing nut of the rear toe-in control arm assembly and pull out the bolt.

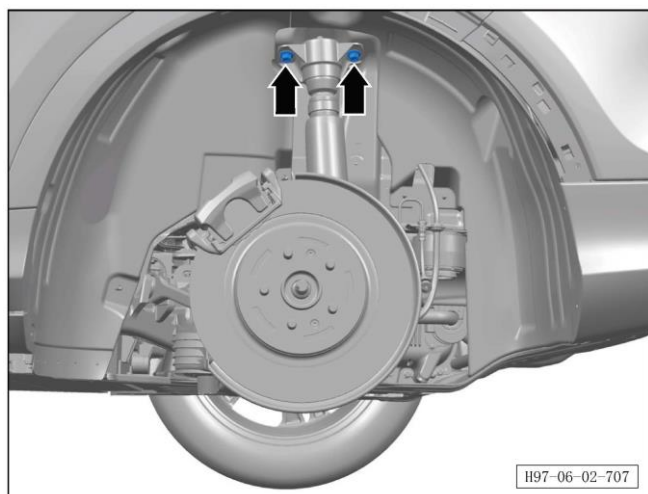
Tightening torque of nut: 70Nm+180°



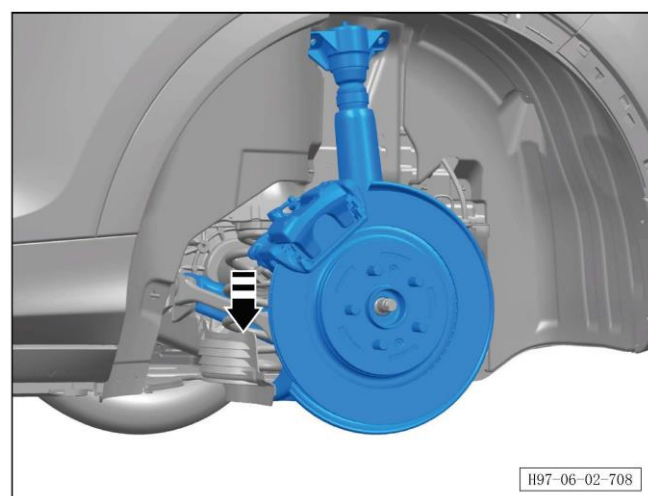
b. Unscrew 1 fixing bolt of the left rear upper swing arm.

Tightening torque of bolt: 115±17Nm.

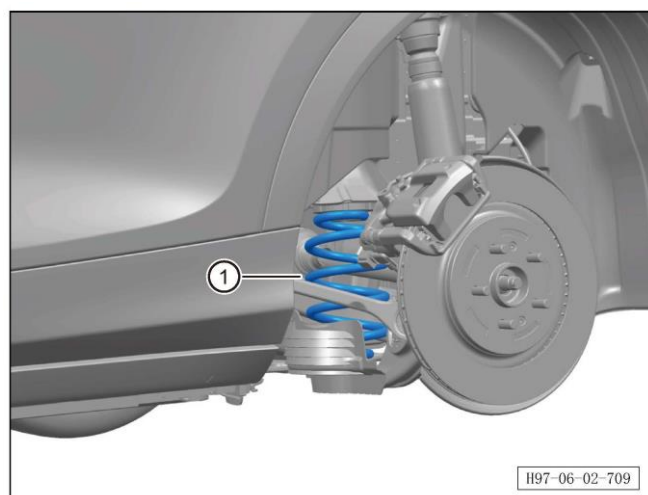




c. Unscrew 2 fixing bolts of the rear shock absorber assembly. Tightening torque of bolt: 40Nm+90°.



d. After jacking the lower swing arm with the jacking tool, pull down the left rear brake assembly as indicated by the arrow.



e. Take out the left rear coil spring ①.

CAUTION:

- When removing the coil spring, it is necessary to jack the lower swing arm with the jacking tool.

Refitting procedure

The refitting procedure is performed in reverse order.

6.3.7.2 Removal and refitting of rear air spring

Removal procedure

Note:

- The following is the removal and refitting of left rear air spring, which can be referred to for the operations on the right side.

Note:

- The following is the removal and refitting of left rear air spring assembly, which can be referred to for the operations on the right side.

- Since the rear air spring has no shock absorber limit, it cannot be inflated when it is unloaded and its status shall be checked before loading.

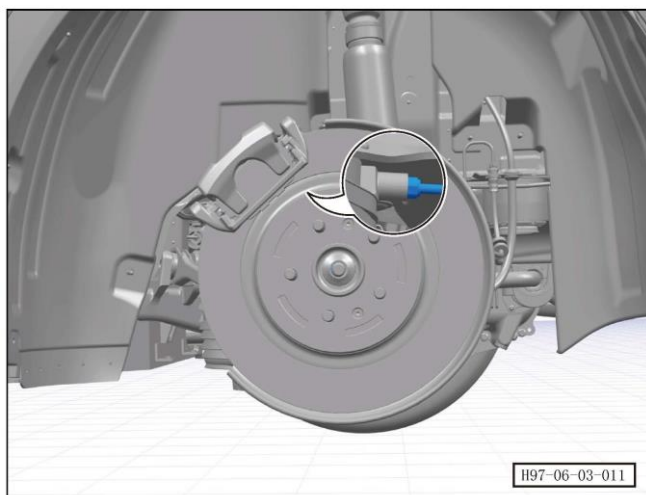
1. Lift the vehicle.
2. Remove the wheels (refer to [6.5.9.1 Removal and refitting of wheels](#))
3. Remove rear air spring.

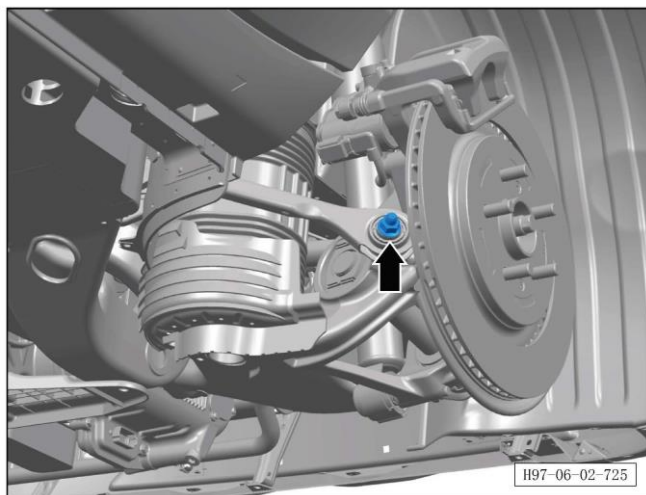
a. Unscrew 1 joint nut connecting the left rear air spring to the air pipe.

Tightening torque of nut: $6\pm 1\text{Nm}$.

CAUTION:

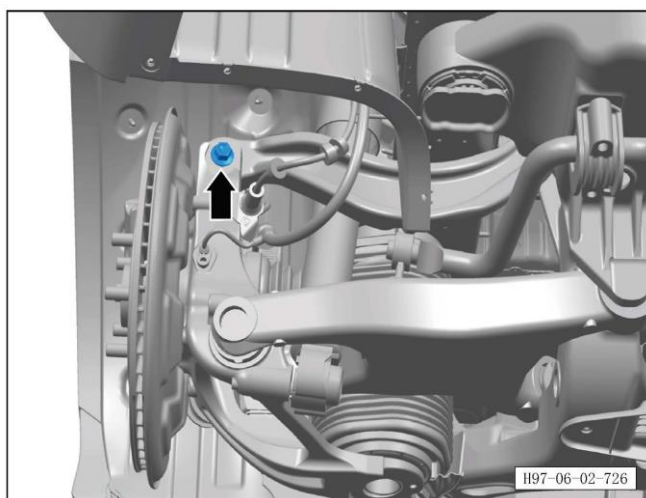
- To lift an vehicle with air suspension, you shall adjust the system to maintenance mode first.
- After the air spring is deflated, disconnect the air pipe or cut off the power supply of the inflation pump as soon as possible to avoid the air spring being damaged by accidental inflation due to system fault.
- The rear air spring has no shock absorber limit. When disassembling or refitting it, it is strictly forbidden to pull so as to avoid deformation.





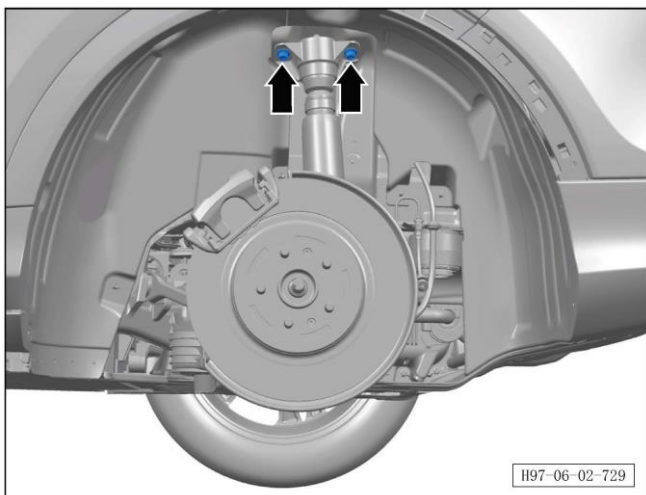
b. Remove 1 fixing nut of the rear toe-in control arm assembly and pull out the bolt.

Tightening torque of nut: $70\text{Nm}+180^\circ$



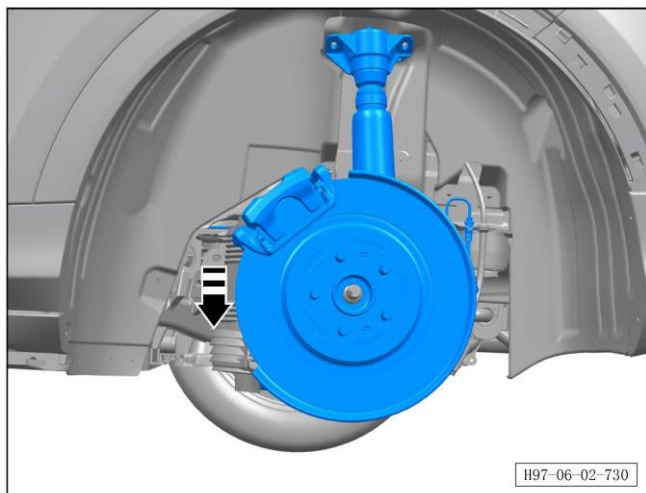
c. Unscrew 1 fixing bolt of the left rear upper swing arm.

Tightening torque of bolt: $115\pm 17\text{Nm}$.

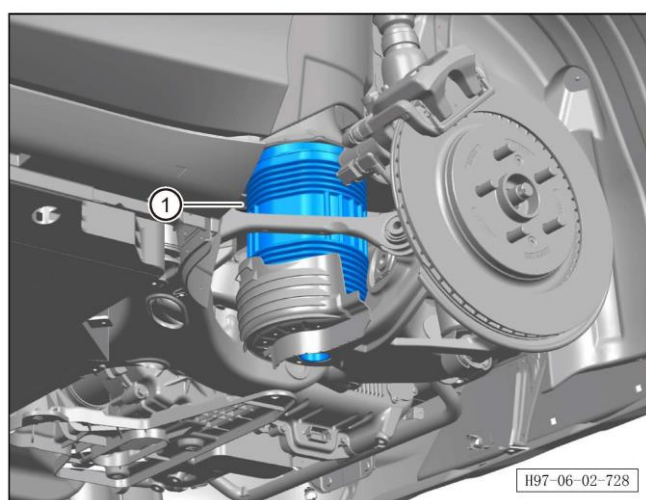


d. Unscrew 2 fixing bolts of the rear shock absorber assembly.

Tightening torque of bolt: $40\text{Nm}+90^\circ$.



e. After jacking the lower swing arm with the jacking tool, pull down the left rear brake assembly as indicated by the arrow.



f. Remove the rear air spring ①.

CAUTION:

- When removing the air spring, it is necessary to jack the lower swing arm with the jacking tool.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- If the rear 2 air springs must be replaced, the refitting steps on the right side are the same as those on the left side.

- After refitting, the rear air springs on the left and right cannot be inflated at the same time.

- If the rear air spring of the original vehicle needs to be reused, please lift the steering knuckle to the design position with a jack (that is, the distance from the wheel center to the upper edge of the wheel trim shall be $433\pm 10\text{mm}$, and then unscrew the air spring joint)

f. After removing the hydraulic jack, refit the tires, and then control the lifter to make the vehicle fall to the ground;

g. Inflate the rear air spring to the a standard position height (which is forbidden to exceed the off-road mode position) to complete the refitting work, and then close the solenoid valve after the inflation is completed.

CAUTION:

- The four-wheel alignment has performed.

- Test the vehicle on the road to check whether the refitting is in place, and there shall be no abnormal noise during driving.

- **CAUTION:** do not charge more than 9 bar of air pressure to the rear air spring at any time!

Inspection of the rear air spring

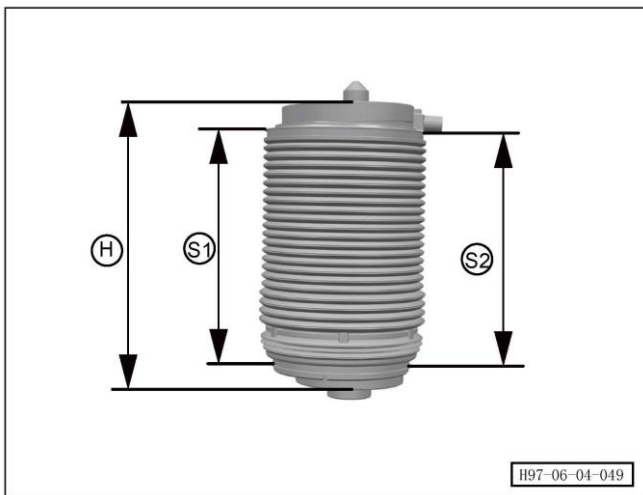
CAUTION:

- Inspection methods of rear air spring assembly:

- Measured value of part length: $H=265\pm 5\text{mm}$ (spring length at the standard position);

- Measure the distance between the upper and lower clamp positions of the dust cover between the upper and lower surfaces for the parallelism, and the difference between the highest point and the lowest point of the distance shall be less than 5mm, ($S1-S2 \leq 5\text{mm}$, the specific position of S1 and S2 shall be judged according to the actual situations).

- Check the air spring, it can not be loaded if it exceed the tolerance. You must refit spare parts that meet the standard.



6.3.7.3 Removal and refitting of rear coil spring mounting seat dust cover assembly

Removal procedure

Note:

- The following is the removal and refitting of left rear coil spring mounting seat dust cover assembly, which can be referred to for the operations on the right side.

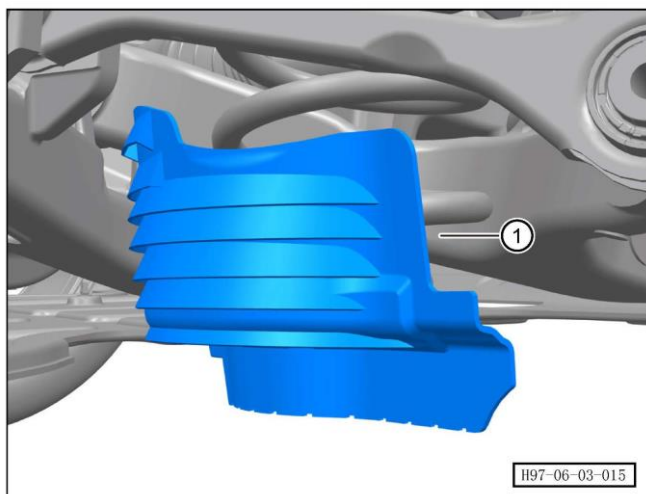
1. Remove the wheel trim cover (refer to [6.5.8.1 Removal and refitting of wheel trim cover](#))
2. Lift the vehicle.
3. Remove the wheels (refer to [6.5.9.1 Removal and refitting of wheels](#))
4. Remove the rear brake assembly (refer to [6.6.5.2 Removal and refitting of rear brake assembly](#))
5. Remove the rear coil spring mounting seat dust cover assembly.

a. Take out the rear coil spring mounting seat dust cover assembly

①.

CAUTION:

- When removing the coil spring mounting seat dust cover assembly, it is necessary to jack the lower swing arm with the jacking tool.



Refitting procedure

The refitting procedure is performed in reverse order.

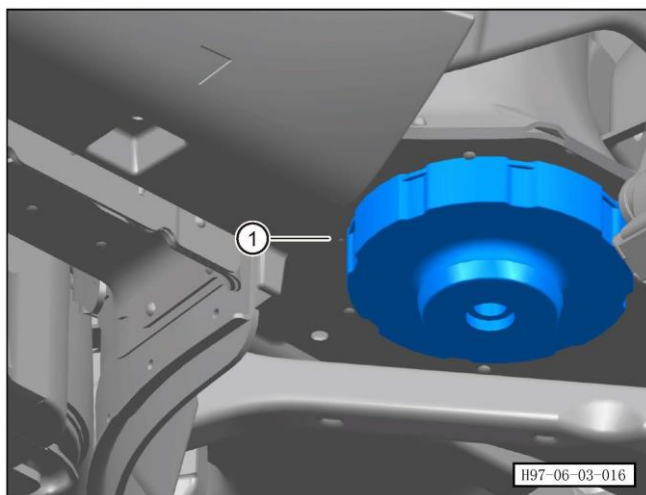
6.3.7.4 Removal and refitting of rear coil spring upper pad

Note:

- The following is the removal and refitting of left rear coil spring upper pad, which can be referred to for the operations on the right side.

Removal procedure

1. Remove the wheel trim cover (refer to [6.5.8.1 Removal and refitting of wheel trim cover](#))
2. Lift the vehicle.
3. Remove the wheels (refer to [6.5.9.1 Removal and refitting of wheels](#))
4. Remove the rear brake assembly (refer to [6.6.5.2 Removal and refitting of rear brake assembly](#))
5. Remove the rear coil spring (refer to [6.3.7.1 Removal and refitting of rear coil spring](#))
6. Remove the rear coil spring upper gasket.
 - a. Remove the rear coil spring upper pad^①.



Refitting procedure

The refitting procedure is performed in reverse order.

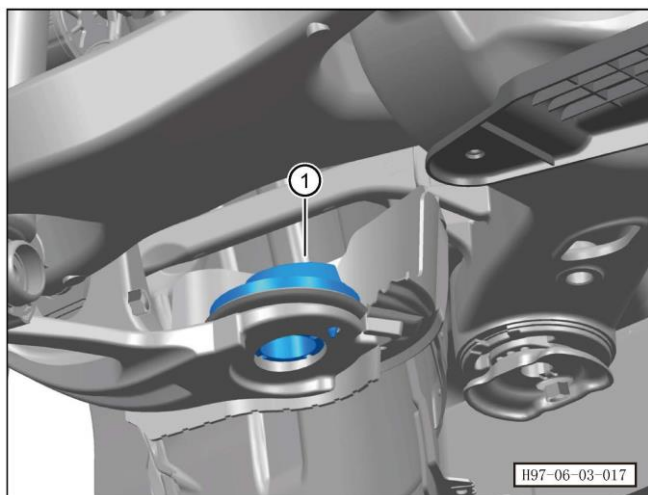
6.3.7.5 Removal and refitting of rear coil spring lower pad

Removal procedure

Note:

- The following is the removal and refitting of left rear coil spring lower pad, which can be referred to for the operations on the right side.

1. Remove the wheel trim cover (refer to [6.5.8.1 Removal and refitting of wheel trim cover](#))
2. Lift the vehicle.
3. Remove the wheels (refer to [6.5.9.1 Removal and refitting of wheels](#))
4. Remove the rear brake assembly (refer to [6.6.5.2 Removal and refitting of rear brake assembly](#))
5. Remove the rear coil spring (refer to [6.3.7.1 Removal and refitting of rear coil spring](#))
6. Remove the rear coil spring lower gasket.
 - a. Remove the rear coil spring lower pad①.



Refitting procedure

The refitting procedure is performed in reverse order.

6.3.8 Rear swing arm

6.3.8.1 Removal and refitting of left rear lower swing arm assembly

Removal procedure

Note:

- The following is the removal and refitting of left rear lower swing arm assembly, which can be referred to for the operations on the right side.

CAUTION:

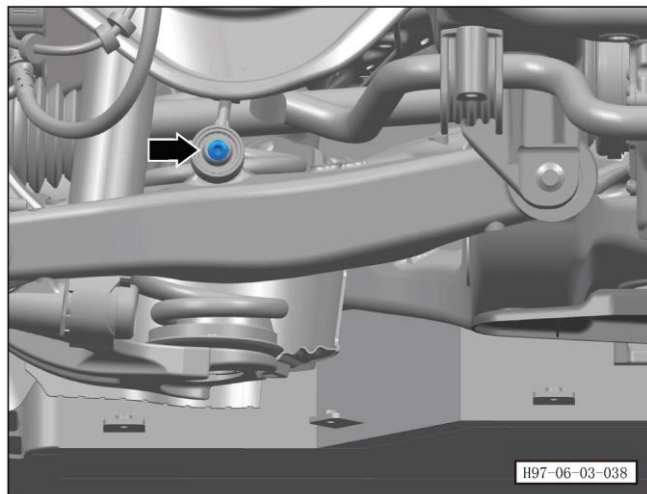
- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

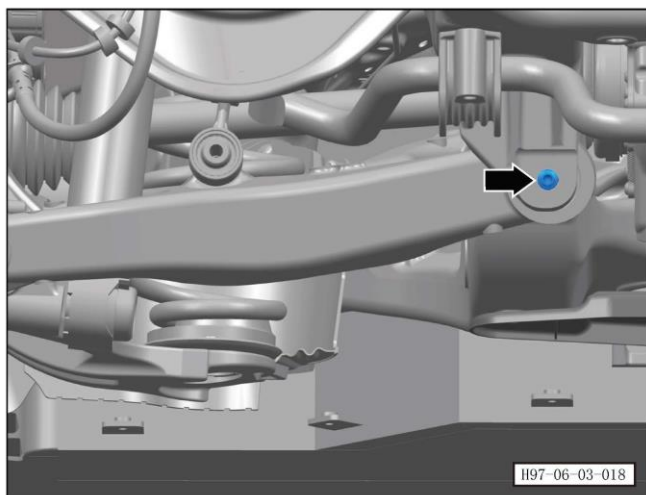
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

1. Remove the wheel trim cover (refer to [6.5.8.1 Removal and refitting of wheel trim cover](#))
2. Lift the vehicle.
3. Remove the wheels (refer to [6.5.9.1 Removal and refitting of wheels](#))
4. Remove the rear brake assembly (refer to [6.6.5.2 Removal and refitting of rear brake assembly](#))
5. Remove the left rear lower swing arm assembly.

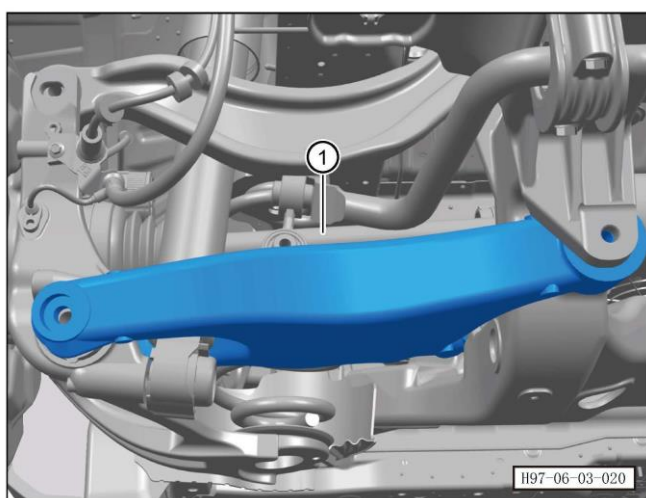
a. Unscrew 1 fixing bolt of the rear stabilizer bar joint.

Tightening torque of bolt: $55\pm 10\text{Nm}$.





b. Unscrew 1 fixing nut of the lower swing arm assembly. Tightening torque of nut: 70Nm+180°.



c. Remove the left rear lower swing arm assembly ①.

Refitting procedure

The refitting procedure is performed in reverse order.

The refitting procedure is performed in reverse order.

CAUTION:

- After refitting, perform the four-wheel alignment.
- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.3.8.2 Removal and refitting of rear lower control arm mounting liner

Note:

- The following is the removal and refitting of left rear lower control arm mounting liner, which can be referred to for the operations on the right side.

CAUTION:

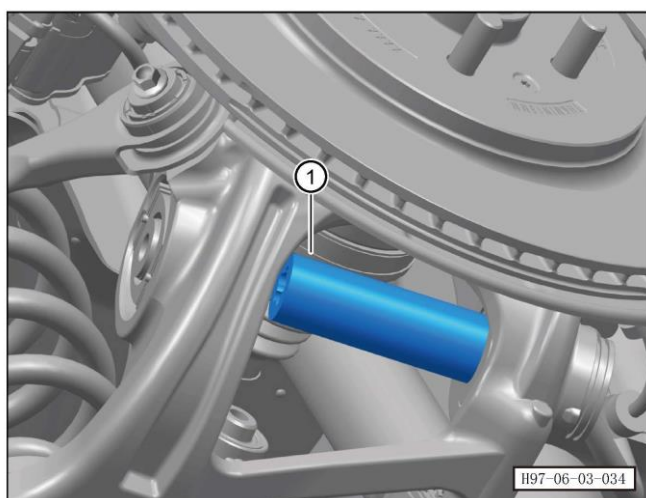
- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

Removal procedure

1. Remove the wheel trim cover (refer to [6.5.8.1 Removal and refitting of wheel trim cover](#))
2. Lift the vehicle.
3. Remove the wheels (refer to [6.5.9.1 Removal and refitting of wheels](#))
4. Remove the left rear lower swing arm assembly and the connecting bolts of the brake (refer to [6.6.5.2 Removal and refitting of rear brake assembly](#))
5. Remove the rear lower control arm mounting liner.

- a. Remove the rear lower control arm mounting liner ①.



Refitting procedure

The refitting procedure is performed in reverse order.

The refitting procedure is performed in reverse order.

CAUTION:

- After refitting, perform the four-wheel alignment.
- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.3.8.3 Removal and refitting of rear toe-in control arm assembly

Note:

- The following is the removal and refitting of left rear front control arm assembly, which can be referred to for the operations on the right side.

Removal procedure

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

1. Remove the wheel trim cover (refer to [6.5.8.1 Removal and refitting of wheel trim cover](#))

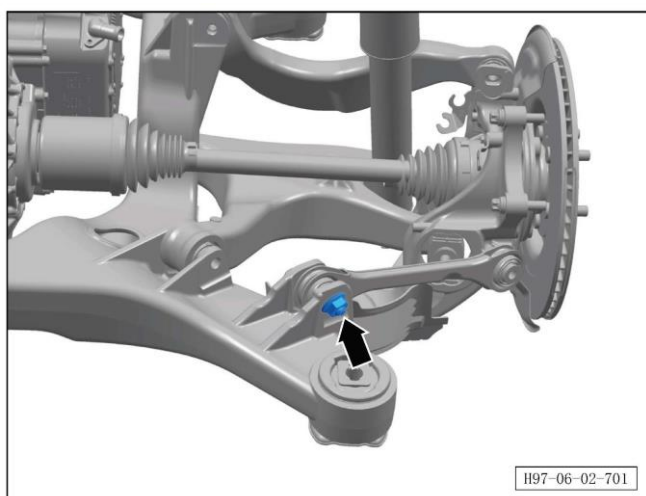
2. Lift the vehicle.

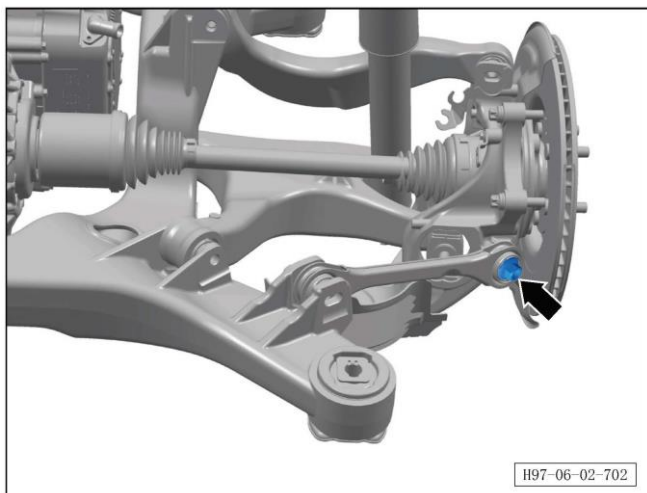
3. Remove the rear subframe assembly (refer to [6.7.13.1 Removal and refitting of rear subframe assembly](#))

4. Remove the rear toe-in control arm assembly.

a. Unscrew the normal 1 fixing nut of the rear toe-in control arm and pull out the bolt.

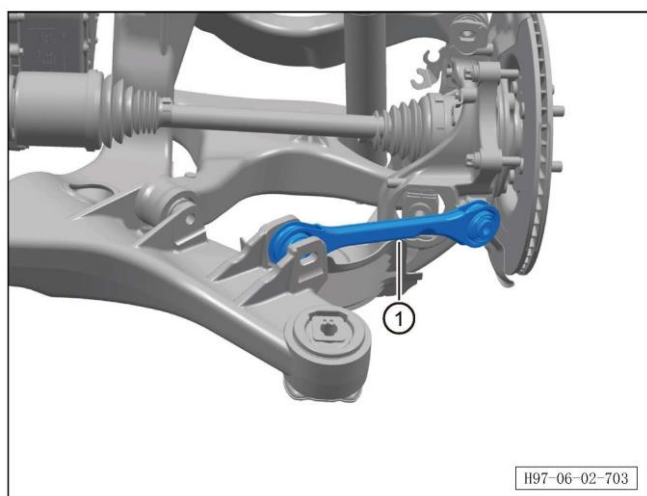
Tightening torque of nut: 70Nm+120°





b. Unscrew 1 fixing bolt of the rear toe-in control arm assembly and pull out.

Tightening torque of bolt: 70Nm+120°.



c. Remove the rear toe-in control arm assembly ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- After refitting, perform the four-wheel alignment.
- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.3.8.4 Removal and refitting of left rear upper swing arm

Removal procedure

Note:

- The following is the removal and refitting of left rear upper swing arm, which can be referred to for the operations on the right side.

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

1. Remove the wheel trim cover (refer to [6.5.8.1 Removal and refitting of wheel trim cover](#))

2. Lift the vehicle.

3. Remove the wheels (refer to [6.5.9.1 Removal and refitting of wheels](#))

4. Remove the left rear lower swing arm assembly (refer to [6.3.8.1 Removal and refitting of left rear lower swing arm assembly](#))

5. Remove the rear stabilizer bar assembly (refer to [6.3.10.1 Removal and refitting of rear stabilizer bar assembly](#))

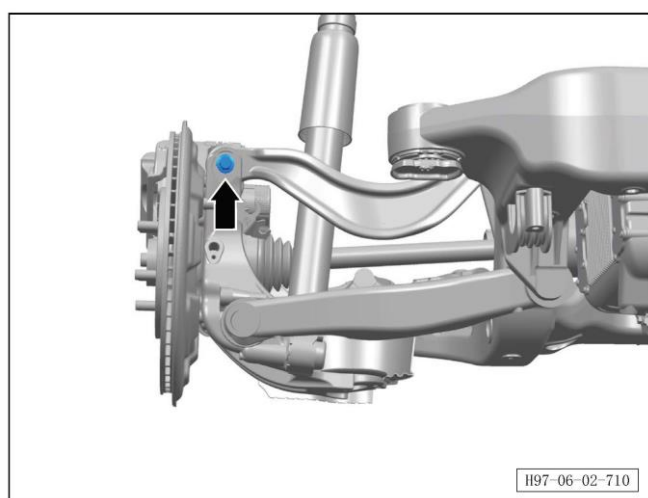
6. Remove the left rear coil spring (refer to [6.3.7.1 Removal and refitting of rear coil spring](#))

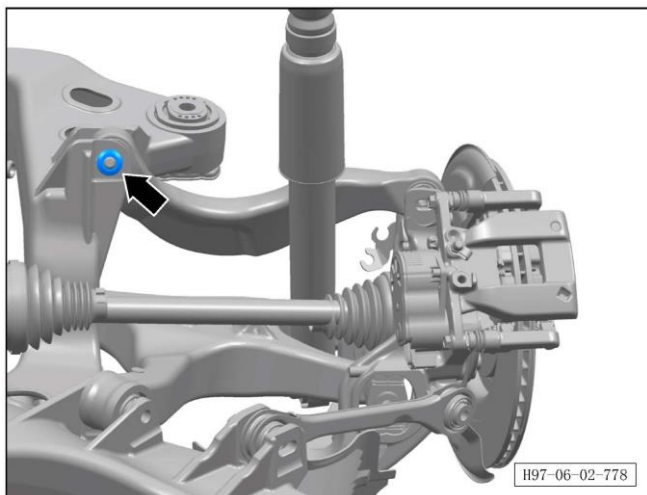
7. Remove the rear toe-in control arm assembly (refer to [6.3.8.3 Removal and refitting of rear toe-in control arm assembly](#))

8. Remove the left rear upper swing arm.

a. Unscrew 1 fixing bolt of the rear upper swing arm.

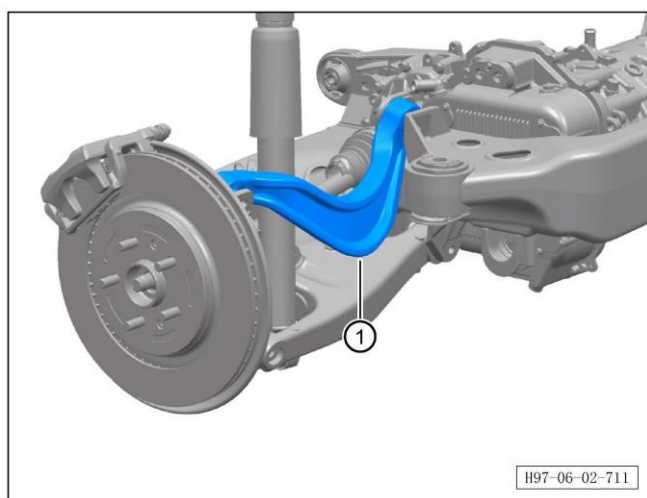
Tightening torque of bolt: $115\pm 17\text{Nm}$.





b. Unscrew 1 fixing nut of the left rear upper swing arm and pull out the bolt.

Tightening torque of nut: 70Nm+180°



c. Remove the left rear upper swing arm ①.

CAUTION:

- When taking out the left rear upper swing arm from the vehicle, pay attention to avoid the pipeline harness to avoid damage to the harness and pipeline.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- After refitting, perform the four-wheel alignment.
- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.3.8.5 Removal and refitting of rear suspension left rear upper control arm

Note:

- The following is the removal of the rear suspension left rear upper control arm, which can be referred to for the operations on the right side.

Note:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

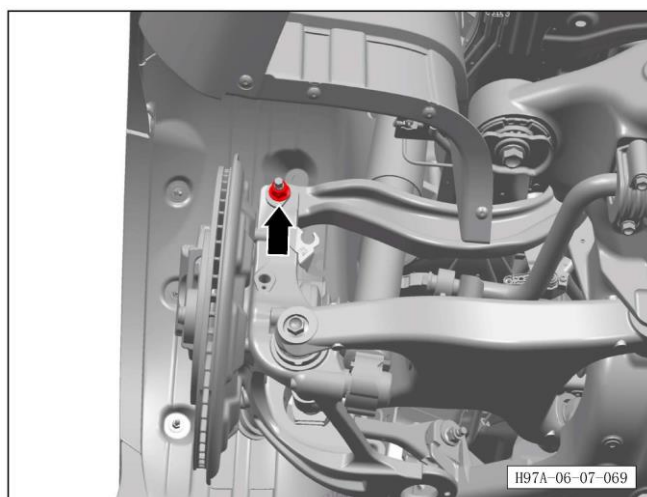
- Control the vehicle to enter the "Air suspension maintenance mode" through the central control screen or diagnostic software.

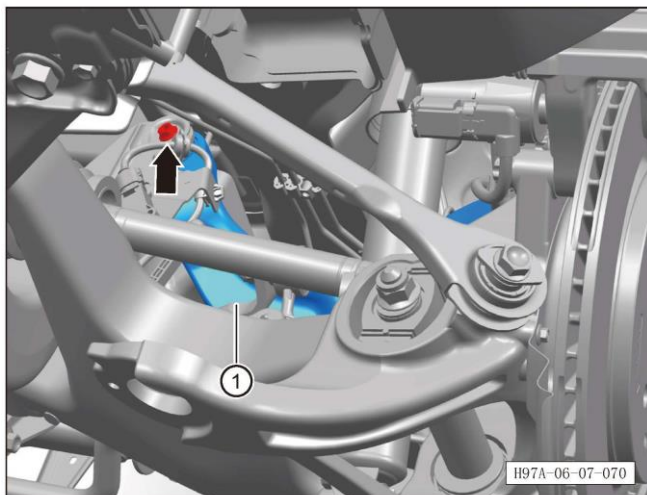
Removal procedure

1. Turn off all electrical appliances and the start switch.
2. Disconnect the battery negative terminal. Refer to [3.1.6.1 Maintenance and inspection battery](#)
3. Remove the left rear wheel (refer to [6.5.9.1 Removal and refitting of wheels](#))
4. Remove the left rear air spring assembly (refer to [6.3.7.2 Removal and refitting of rear air spring](#))
5. Remove the rear suspension left rear upper control arm.

a. Unscrew 1 fixing nut of the rear suspension left rear upper control arm and pull out the bolt.

Tightening torque of nut: $115\pm 17\text{Nm}$.





b. Unscrew 1 fixing bolt of the rear suspension left rear upper control arm to remove the rear suspension left rear upper control arm ①. Tightening torque of bolt: 70Nm+180°.

CAUTION:

- After loosening the fixing bolts of the rear suspension left rear upper control arm, hold the nuts behind the rear suspension left rear upper control arm with a wrench.

Refitting procedure

The refitting procedure is performed in reverse order.

6.3.9 Rear strut assembly

6.3.9.1 Removal and refitting of rear shock absorber strut assembly

Removal procedure

Note:

- The following is the removal and refitting of left rear shock absorber strut assembly, which can be referred to for the operations on the right side.

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

1. Remove the wheel trim cover (refer to [6.5.8.1 Removal and refitting of wheel trim cover](#))

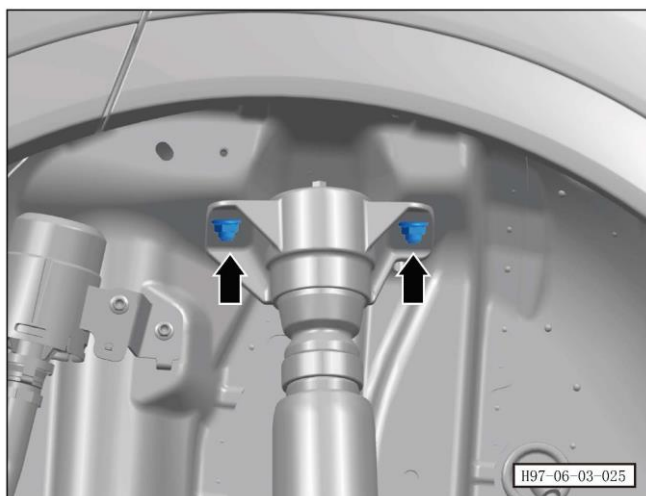
2. Lift the vehicle.

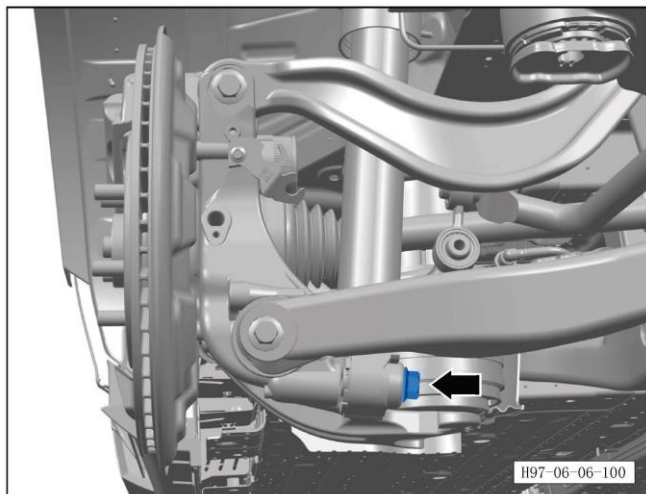
3. Remove the wheels (refer to [6.5.9.1 Removal and refitting of wheels](#))

4. Remove the rear shock absorber strut assembly.

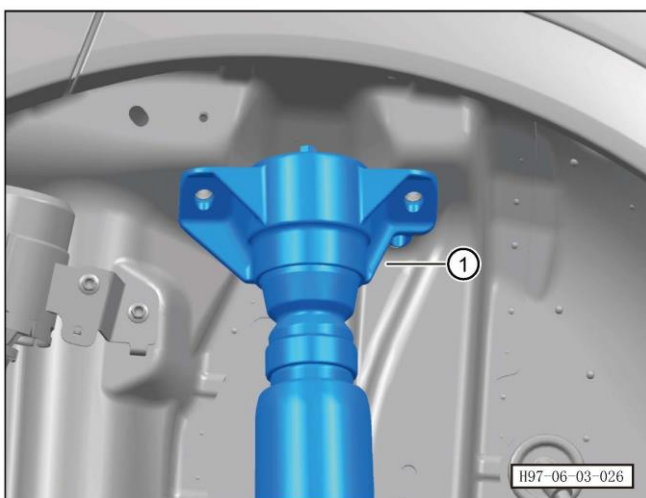
a. Unscrew 2 fixing nuts on the upper of the rear shock absorber.

Tightening torque of nut: 40Nm+90°.





b. Unscrew 1 fixing bolt on the lower part of the rear shock absorber strut assembly. Tightening torque of bolt: 40Nm+90°.



c. Remove the rear shock absorber strut assembly ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- After refitting, perform the four-wheel alignment.
- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.3.10 Rear stabilizer bar

6.3.10.1 Removal and refitting of rear stabilizer bar assembly

Removal procedure

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

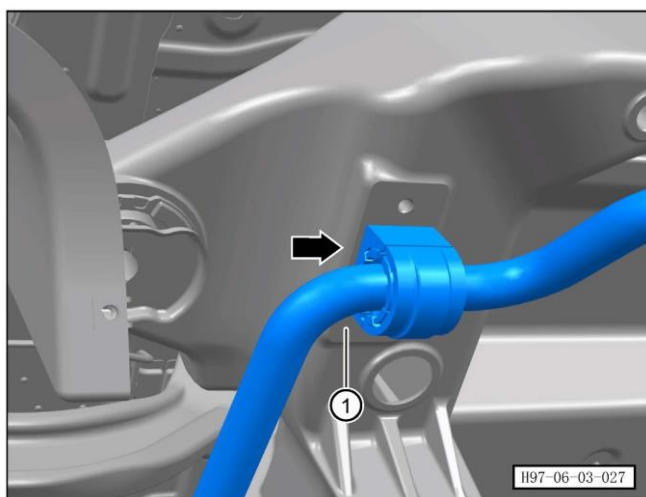
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

1. Lift the vehicle.
2. Remove the bolts of the rear stabilizer bar joint assembly (refer to [6.3.10.3 Removal and refitting of rear stabilizer bar joint assembly](#))
3. Remove the rear stabilizer bar bracket (refer to [6.3.10.2 Removal and refitting of rear stabilizer bar bracket](#))
4. Remove the rear stabilizer bar assembly.

a. Disengage the bushing to remove the rear stabilizer bar assembly①.

Note:

- The above is the removal and refitting of rear stabilizer bar left bush, which can be referred to for the operations on the right side.



Refitting procedure

The refitting procedure is performed in reverse order.

The refitting procedure is performed in reverse order.

CAUTION:

- After refitting, perform the four-wheel alignment.
- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

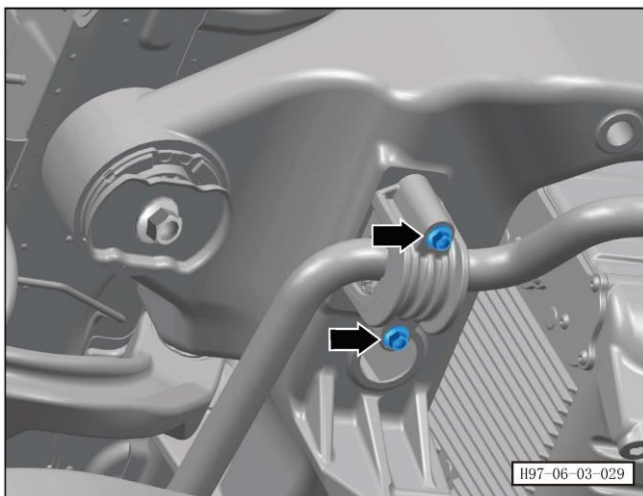
6.3.10.2 Removal and refitting of rear stabilizer bar bracket

Removal procedure

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

1. Lift the vehicle.
2. Remove the rear stabilizer bar bracket.

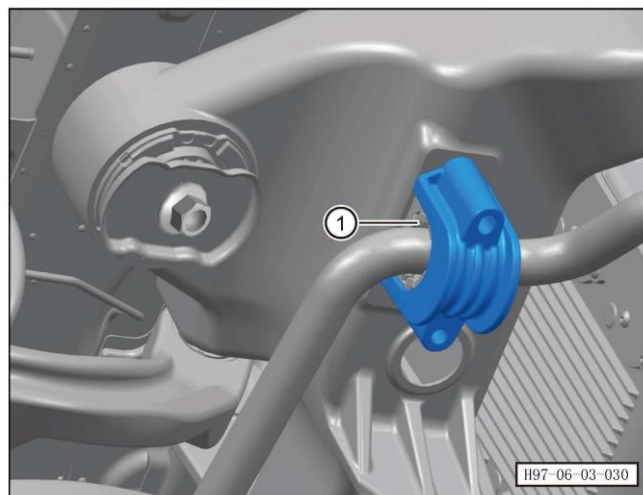


- a. Unscrew 2 fixing nuts of the rear stabilizer bar bracket.

Tightening torque of nut: $30 \pm 5 \text{ Nm}$.

Note:

- The above is the removal and refitting of the rear stabilizer bar bracket nut, which can be referred to for the operations on the right side.



- b. Remove the rear stabilizer bar bracket ①.

Note:

- The above is the removal and refitting of the rear stabilizer bar bracket, which can be referred to for the operations on the right side.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- After refitting, perform the four-wheel alignment.
- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.3.10.3 Removal and refitting of rear stabilizer bar joint assembly

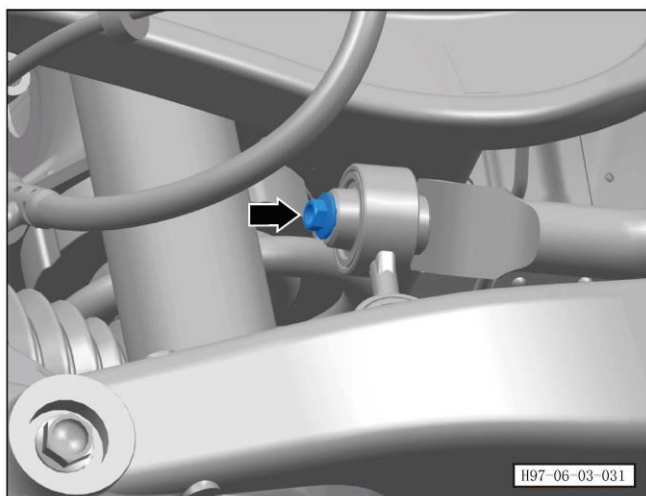
Removal procedure

CAUTION:

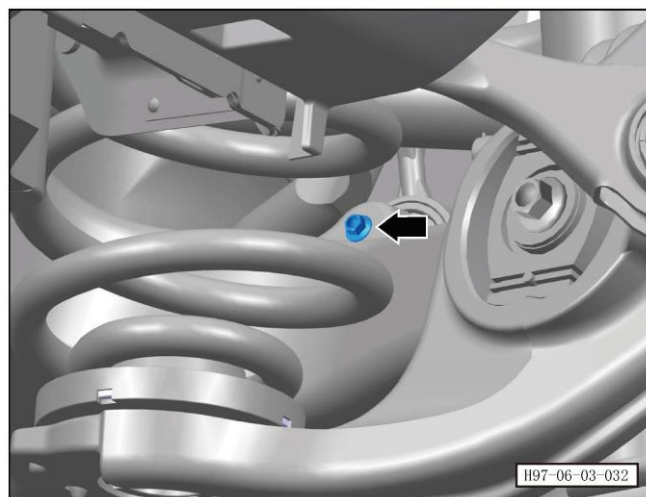
- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

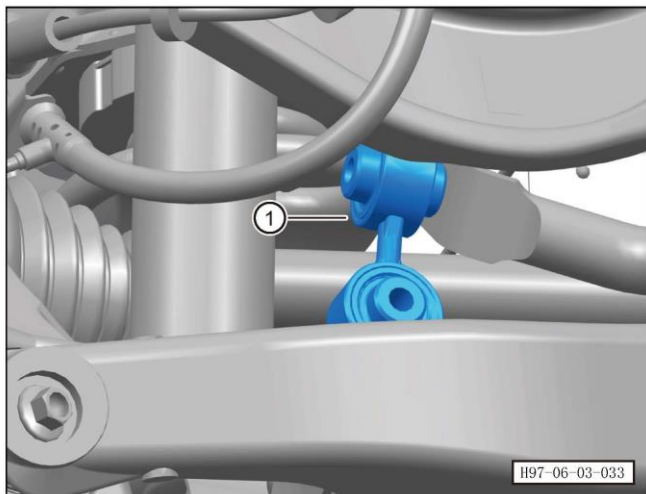
1. Lift the vehicle.
2. Remove the rear stabilizer bar joint assembly.

- a. Unscrew 1 fixing bolt of the rear stabilizer bar.
Tightening torque of bolt: $55\pm 5\text{Nm}$.



- b. Unscrew 1 fixing bolt of the rear stabilizer bar.
Tightening torque of bolt: $55\pm 5\text{Nm}$.





c. Remove the stabilizer bar joint assembly ①.

Refitting procedure

The refitting procedure is performed in reverse order.

Note:

- The above is the removal of the left rear stabilizer bar joint assembly, which can be referred to for the operations on the right side.

CAUTION:

- After refitting, perform the four-wheel alignment.
- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.4 Active suspension system

6.4.1 Precautions

- Precautions for lifting of vehicle with air suspension:

a. After adjusting the body to the standard height in standard mode, click the maintenance icon on the touch screen to adjust the system to the maintenance mode.

b. Use a lift to support the body without changing the body height;

Before disassembling the rear air spring assembly, it is necessary to control the distribution valve to discharge the air in the rear air spring through the after-sales scan tool, and close the solenoid valve as soon as possible after the bleeding (do not disconnect the air spring assembly from the air pipe until the lifting of the vehicle is completed);

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

d. Disconnect the negative terminal of the battery (refer to [3.1.6.1 Maintenance and inspection of battery](#))

e. Lift the vehicle (after the REV vehicle is lifted, the high voltage switch of the high voltage battery pack must be disconnected).

f. Perform subsequent maintenance operations.

(After removing the air pipe of the air spring, pay attention to protect the pipe and keep the cleanliness of the pipe head to prevent foreign matter from entering)

- Precautions for maintenance and operation of vehicles with air suspension:

a. When storing the front air spring, it is necessary to keep the shock absorber in the maximum stretching condition and charge 3-5bar air into the air spring through the pressure holding valve. It is not allowed to compress the front air spring strut assembly in any state, and the airbag collision shall be avoided during the storage.

b. Before refitting, use an inflation gun (with the gun nozzle of 6mm outer diameter) to charge 3-5bar of air into the front air spring assembly through the pressure holding valve (the air pressure in the front air spring is not allowed to exceed 12bar at any time);

c. Since the rear air spring has no shock absorber limit, it cannot be inflated when it is not loaded. Check its state before loading. It is forbidden to stretch or compress the rear air spring. Before use, it shall be detected in accordance with the detection method for the rear air spring detection specified in the maintenance process;

d. The air pressure charged into the rear air spring is not allowed to exceed 9bar at any time;

e. It is strictly forbidden to exit the maintenance mode before the vehicle is on the ground. You can only exit the maintenance mode when the disassembly & assembly of the air spring is completed and the vehicle is on the ground.

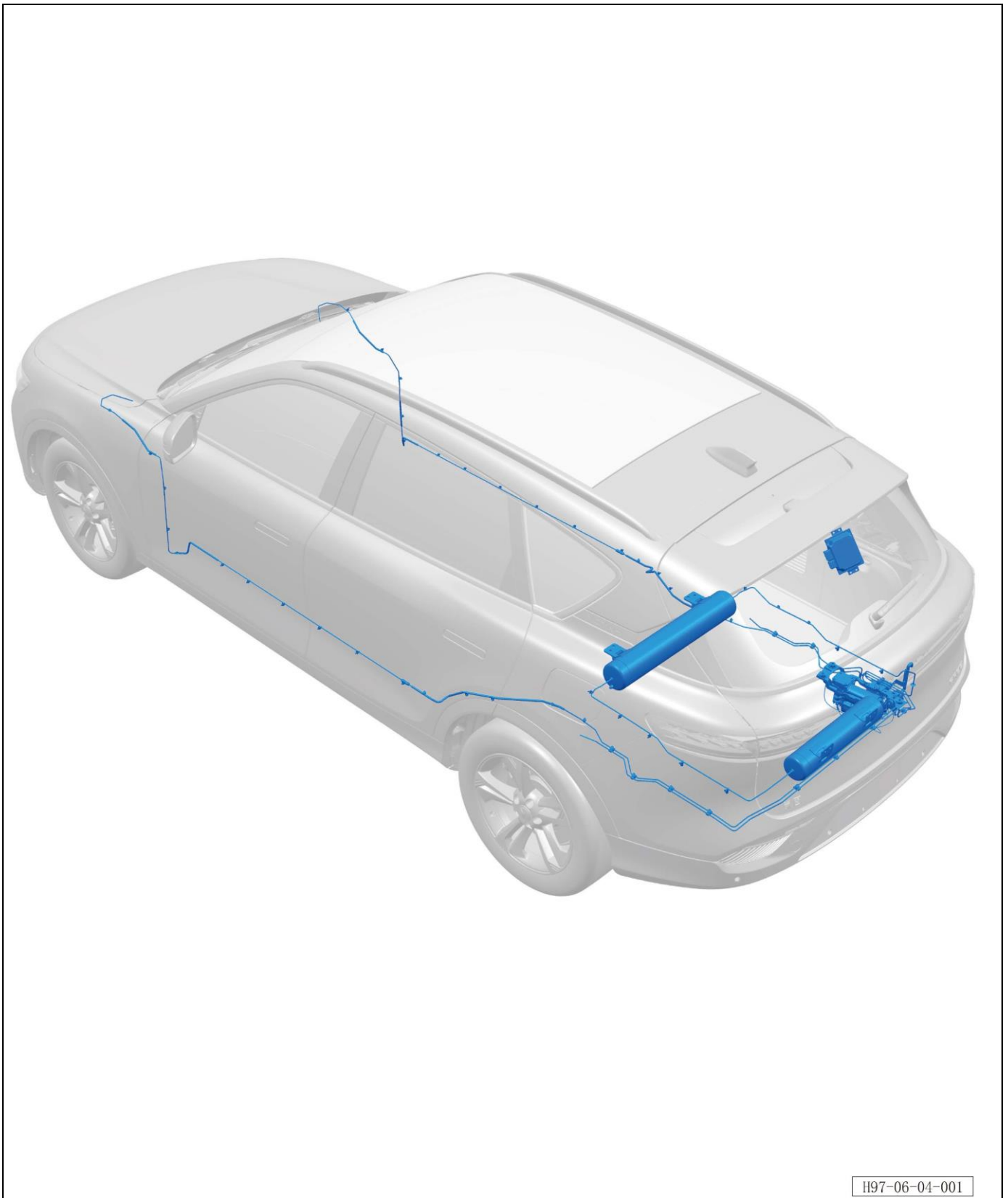
- For the lifting operation of the vehicle with air suspension, the operation requirements in the precautions must be followed before the maintenance; If the requirements in the matters are violated, the vehicle may be damaged, or worse, this may cause casualties.

- For detailed maintenance operations and precautions of air suspension system, please refer to the disassembly & assembly and maintenance chapters of the front/rear air spring about the system of chassis maintenance.

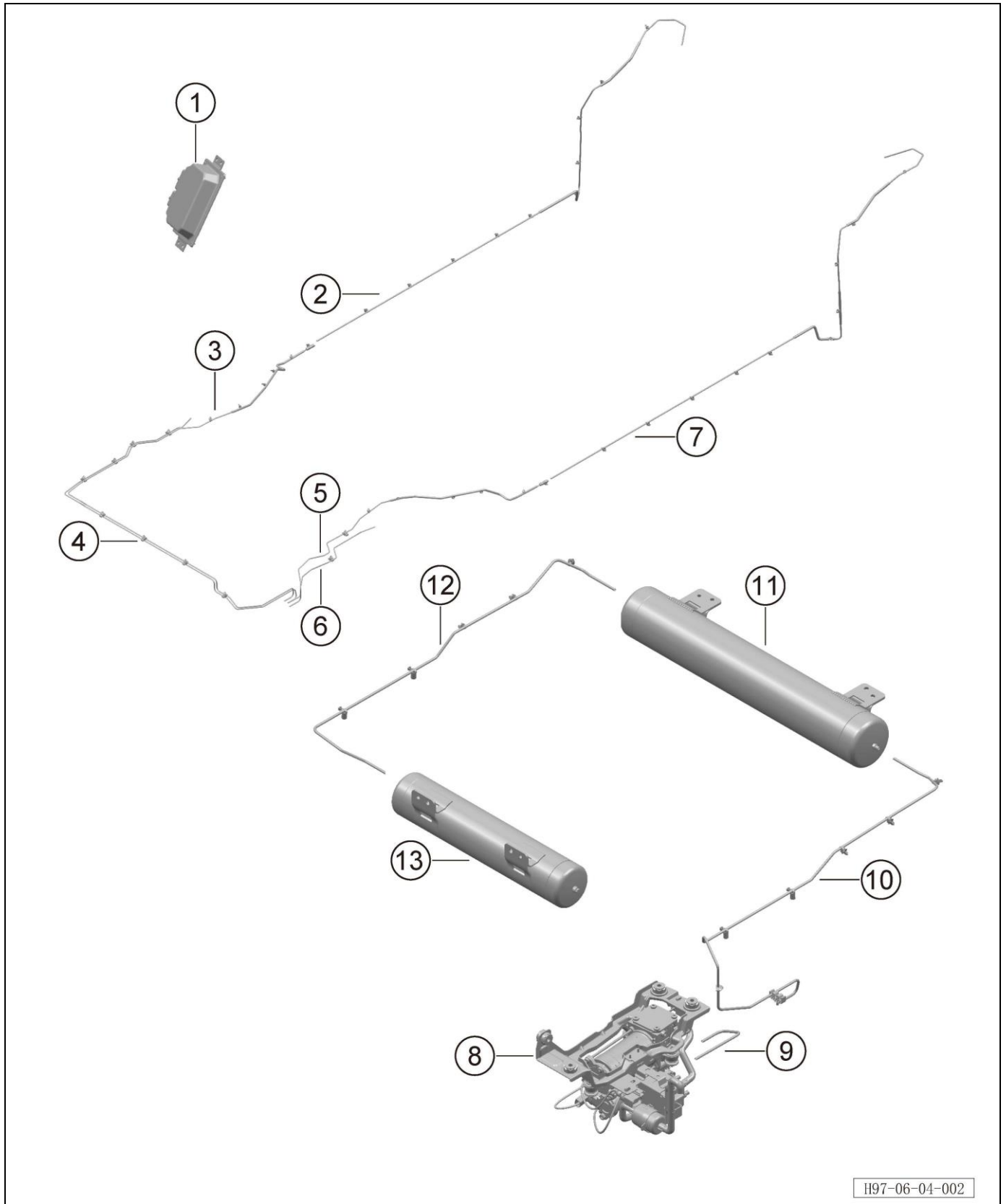
6.4.2 Introduction to structure and principle

Active suspension system, also known as active braking guided suspension system, dynamic variable suspension system, etc., plays the function of controlling the body vibration and body height by changing the height, shape and damping of the suspension system, which can mainly improve the operation stability, ride comfort and other performance of the vehicle. Compared with the traditional steel automobile suspension system, the active suspension system has many advantages. The most important one is that the elastic coefficient of the spring, that is, namely the softness and hardness of the spring, can be automatically adjusted according to the needs. For example, the suspension can be hardened when running at high speed to improve the body stability. When running at low speed for a long time, the control unit will consider it passing through a bumpy road, thus making the suspension become softer to improve the comfort of shock absorption. In addition, the acceleration arising from the impact of the wheel on the ground is also one of the parameters considered when the air spring is automatically adjusted. For example, when the vehicle corners at high speed, the air springs and shock absorbers of the outer wheels will automatically stiffen to reduce the body roll, and the electronic module will also harden the springs and shock absorbers of the front wheels during emergency braking so as to reduce the tilting forward inertia of the body. Therefore, models equipped with air springs have higher handling limits and more comfort than other vehicles.

6.4.3 Position diagram of parts

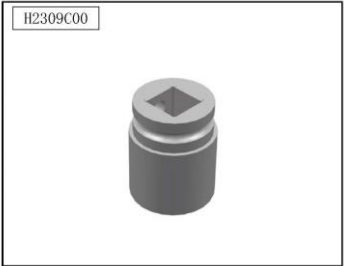

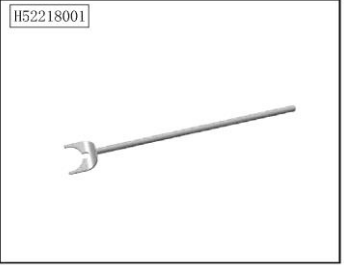
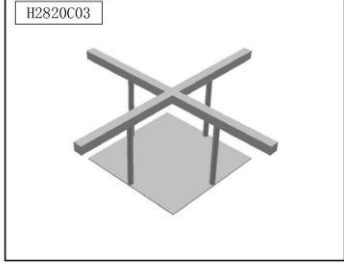


6.4.4 Exploded view



S/N	Part name	Loading quantity	Remarks
1	AirS control unit	1	
2	Left front air spring pipeline front section	1	
3	Left front air spring pipeline rear section	1	
4	Left rear air spring pipeline	1	
5	Right front air spring pipeline rear section	1	
6	Right rear air spring pipeline	1	
7	Right front air spring pipeline front section	1	
8	Electric air pump & bracket and accessories assembly	1	
9	Air pump distribution valve connecting pipeline	1	
10	Air pump main air reservoir connecting pipeline	1	
11	Main air reservoir assembly	1	
12	Auxiliary air reservoir connecting pipeline	1	
13	Auxiliary air reservoir assembly	1	

6.4.5 Special tools

S/N	Diagram	Tool number	Name
1	 <p>H2309C00</p>	H2309C00	Drive shaft nut removal sleeve
2	 <p>H2309A03</p>	H2309A03	Special tool for removal of drive shaft (Hub side)
3	 <p>H52218001</p>	H2309A02	Special tool for removal of drive shaft
4	 <p>H2820C03</p>	H2820C03	Suspension bracket support

6.4.6 Common faults

Front shock absorber:

1 Fault phenomenon: when the car is running, every time it vibrates up and down, the suspension will make a "cluck" sound, it indicates that the suspension works abnormally.

2 Fault cause

- The shock absorber is damaged.
- Shock absorber rubber bush damaged.
- The fastening bolts are loose.

3 When checking the fault and troubleshooting the shock absorber in an abnormal manner, it will heat up during operation. If the shock absorber does not heat up or is found to leak oil, it means that the shock absorber has been damaged. During the inspection, the condition of the shock absorber rubber bush shall also be checked. If any damage is found, the rubber bush shall be replaced together with the shock absorber in time. When replacing the shock absorber, it is recommended to replace the left and right shock absorbers concurrently.

Lower swing arm ball joint:

Inspection method:

1. Raise the vehicle so that the front suspension is free-hanging.
2. Hold the top and bottom of the front tire and pull the top of the wheel in and out.
3. Check whether there is a gap and whether the steering knuckle moves horizontally relative to the control arm
4. The ball joint must be replaced if the following conditions occur.
 - a. Ball joint loose.
 - b. Ball joint gland broken.
 - c. Ball joint bolts disconnected from steering knuckle.
 - d. Ball joint bolts loose on the steering knuckle.
 - e. Ball joint bolts will twist in the seat when being pressed with a finger.

Front stabilizer bar:

Inspection method:

1. One person starts the vehicle, and the assistant hears where the abnormal noise comes from outside the vehicle.
2. Check whether the stabilizer bar bush is aged and loose, if so, replace the front stabilizer bar assembly.
3. Check whether the plane bearing of the front shock absorber is damaged; if so, replace the plane bearing of the front shock absorber.
4. Check the tie rod ball joint and dust cover of steering gear for interference and oil leakage; if any, replace them.

Abnormal sound when turning steering wheel:

Inspection method:

1. One person starts the vehicle, and the assistant hears where the abnormal noise comes from outside the vehicle.
2. Turn the steering wheel to check the abnormal noise in the chassis.

6.4.7 Active suspension control unit

6.4.7.2 Removal and refitting of air suspension controller

Removal procedure

Note:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

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

2. Open the rear trunk lid.

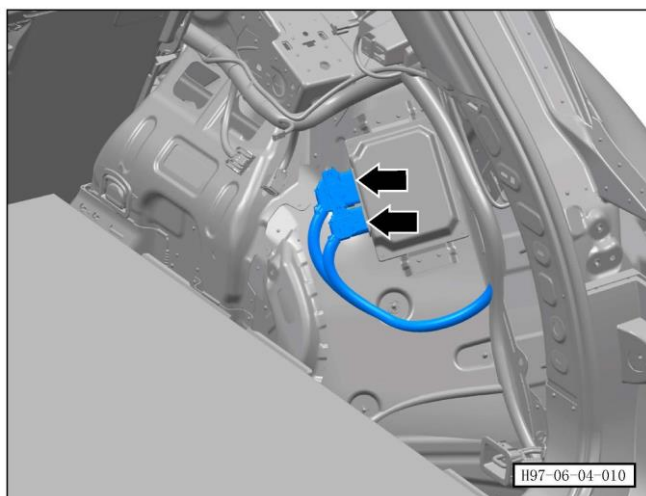
3. Disconnect the battery negative terminal. Refer to [3.1.6.1 Maintenance and inspection battery](#)

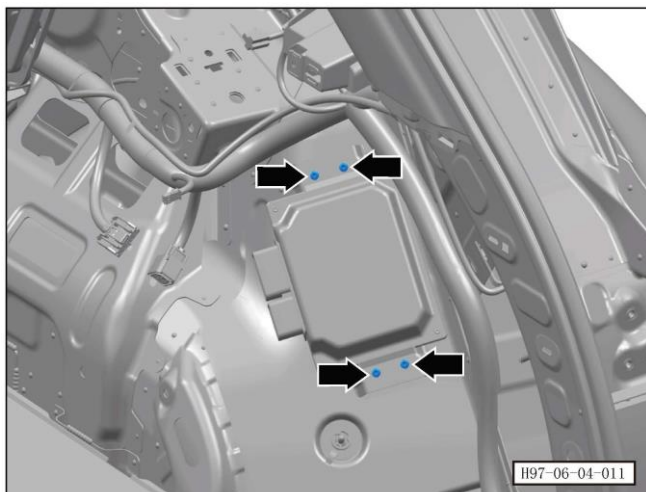
4. Open trunk.

5. Remove the rear side wall interior trim panel assembly (refer to [8.5.5.10 Removal and refitting of rear side wall interior trim panel assembly](#))

4. Remove the air suspension control unit.

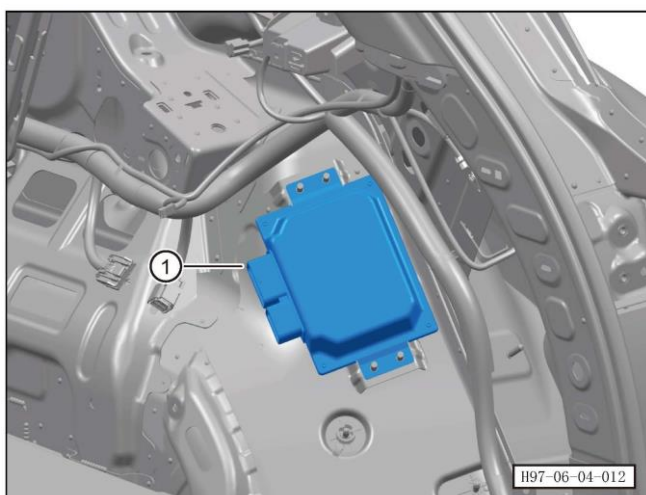
a. Disengage 2 connectors from the air suspension controller.





b. Unscrew 4 fixing bolts of the air suspension controller.

Tightening torque of bolt: $8\pm 1\text{Nm}$.



c. Remove the air suspension controller ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- After refitting, perform the four-wheel alignment.
- A road test is required to check whether the refitting is in place, and confirm that there shall be no abnormal noise and no deviation.

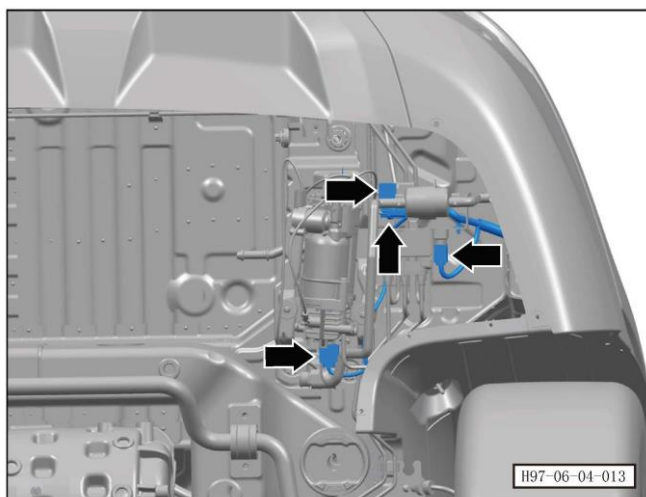
6.4.7.3 Removal and refitting of electric air pump & bracket and accessories assembly

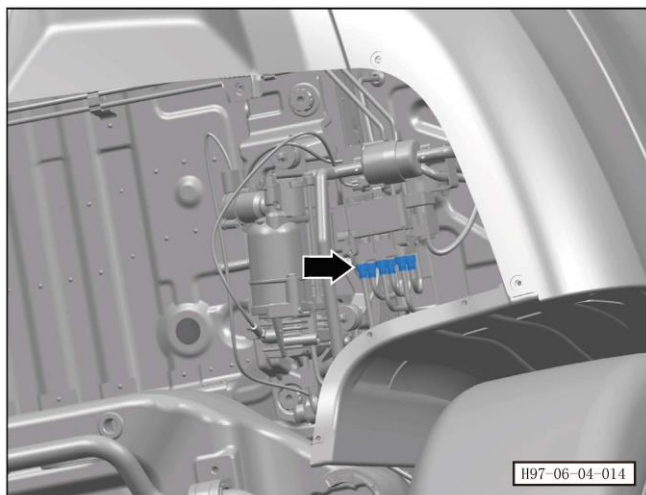
CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

Removal procedure

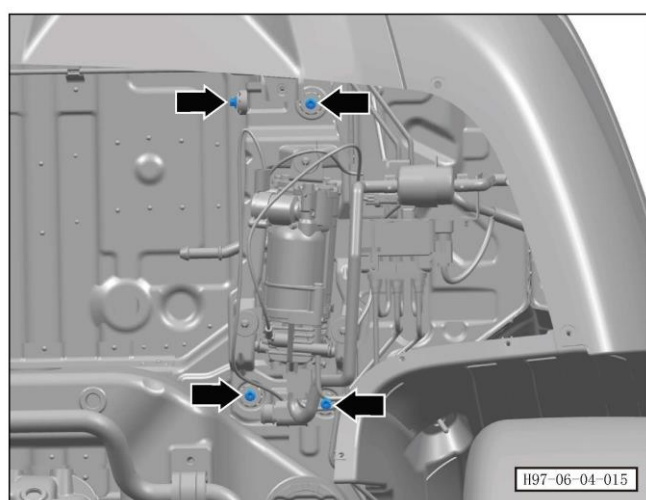
1. Turn off all electrical appliances and the start switch.
2. Lift the vehicle.
3. Disconnect the battery negative terminal. Refer to [3.1.6.1 Maintenance and inspection battery](#)
4. Remove the rear lower protective plate (refer to [8.6.4.3 Removal and refitting of front lower protective plate \(REV\)](#))
5. Remove the electric air pump & bracket and accessory assembly.
 - a. Disengage 4 connectors of the electric air pump & bracket and accessory assembly.





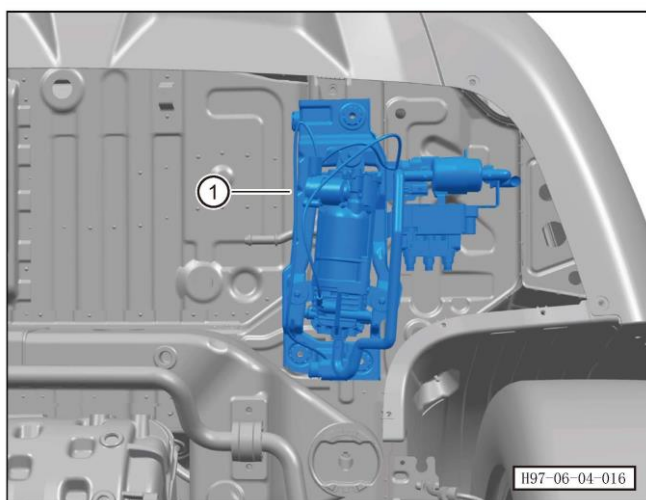
b. Unscrew 6 connecting nuts of the electric air pump connector.

Tightening torque of nut: $8\pm 1\text{Nm}$.



c. Unscrew 4 fixing bolts of the electric air pump & bracket and accessory assembly.

Tightening torque of bolt: $20\pm 3\text{Nm}$.



d. Remove the electric air pump & bracket and accessory assembly ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.4.8 Air reservoir

6.4.8.1 Removal and refitting of main air reservoir assembly

CAUTION:

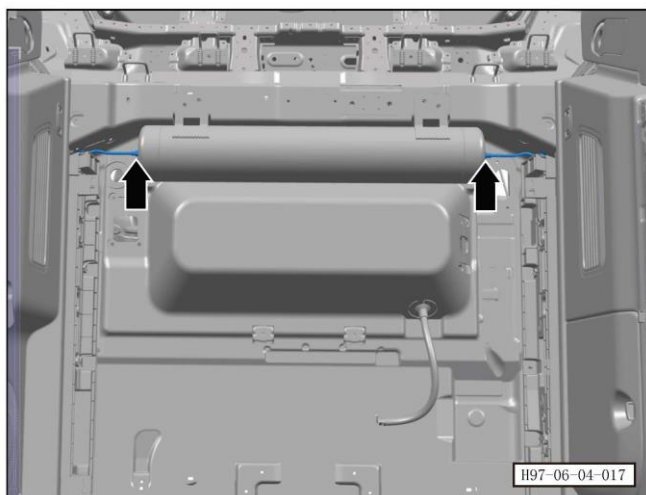
- Depressurize the active suspension system before operation to avoid personal injury.

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

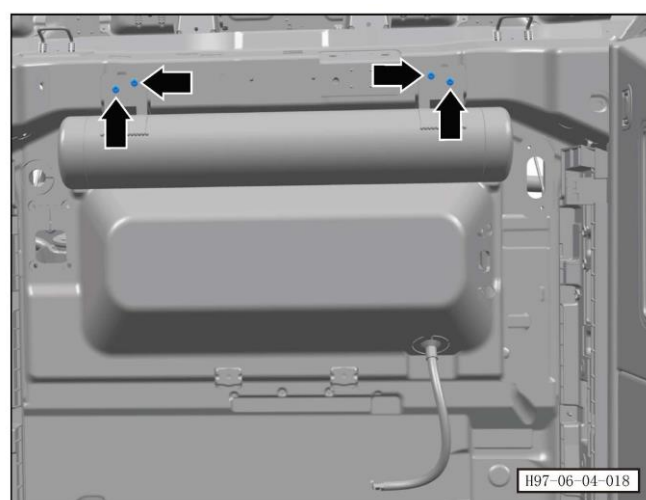
Removal procedure

1. Turn off all electrical appliances and the start switch.
2. Disconnect the battery negative terminal. Refer to [3.1.6.1 Maintenance and inspection battery](#)
3. Lift the vehicle.
4. Remove the rear lower protective plate (refer to [8.6.4.3 Removal and refitting of front lower protective plate \(REV\)](#))
5. Removing the trunk carpet assembly (refer to [8.5.8.1 Removal and refitting of trunk carpet assembly](#))
6. Remove the main air reservoir assembly (refer to [6.4.8.1 Removal and refitting of main air reservoir assembly](#))



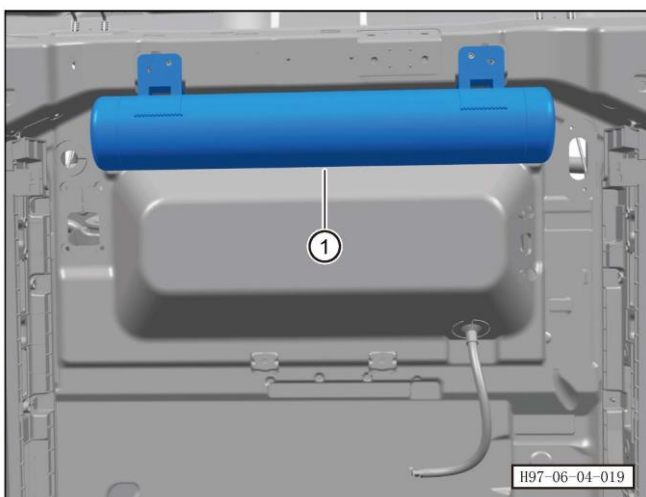
a. Unscrew 2 connecting bolts of the main air reservoir assembly.

Tightening torque of bolt: $20\pm 3\text{Nm}$.



b. Unscrew 4 fixing bolts of the main air reservoir assembly.

Tightening torque of bolt: $20\pm 3\text{Nm}$.



c. Remove the main air reservoir assembly ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

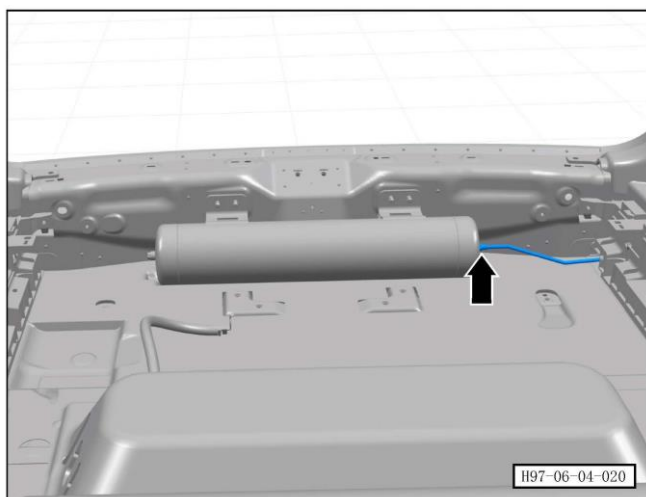
6.4.8.2 Removal and refitting of auxiliary air reservoir assembly

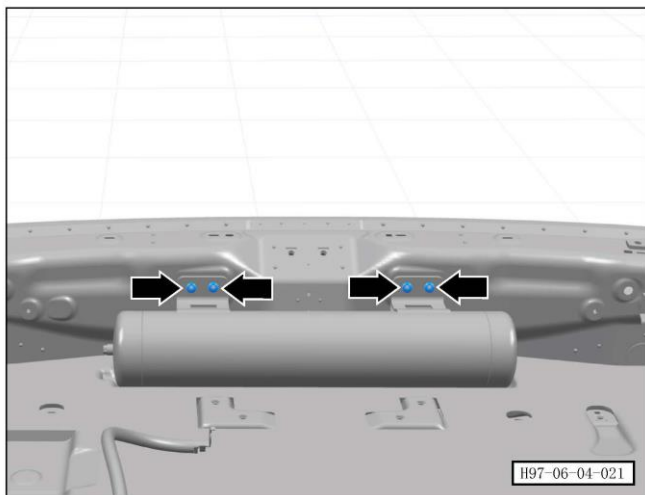
CAUTION:

- Depressurize the active suspension system before operation to avoid personal injury.
- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

Removal procedure

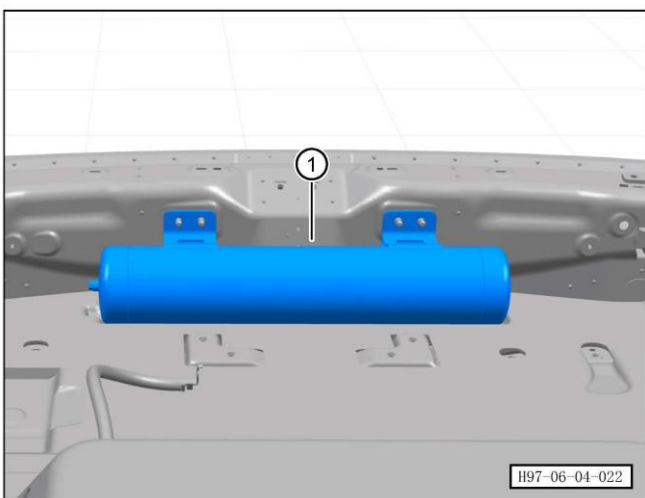
1. Turn off all electrical appliances and the start switch.
 2. Disconnect the battery negative terminal. Refer to [3.1.6.1 Maintenance and inspection battery](#)
 3. Lift the vehicle.
 4. Remove the rear lower protective plate (refer to [8.6.4.6 Removal and refitting of rear lower protective plate \(REV\)](#))
 5. Removing the trunk carpet assembly (refer to [8.5.8.1 Removal and refitting of trunk carpet assembly](#))
 6. Remove the auxiliary air reservoir assembly.
 - a. Unscrew the connecting bolts of the auxiliary air reservoir assembly.
- Tightening torque of bolt: $20\pm 3\text{Nm}$.





b. Unscrew 4 fixing bolts of the auxiliary air reservoir assembly.

Tightening torque of bolt: $20\pm 3\text{Nm}$.



c. Remove the auxiliary air reservoir assembly ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.4.9 Air pipeline

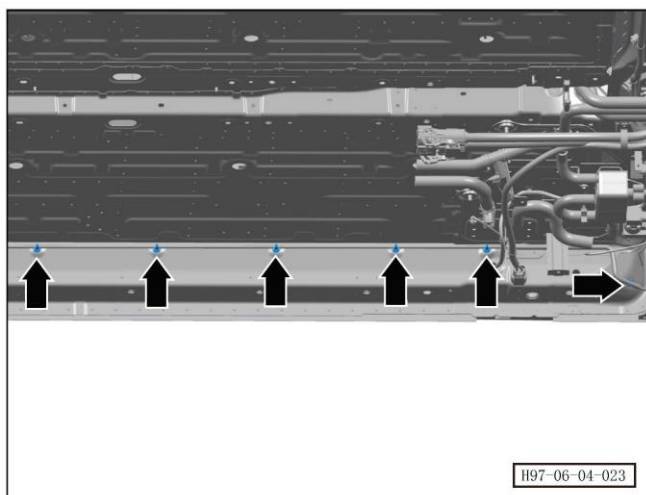
6.4.9.1 Removal and refitting of left front air spring pipeline front section

CAUTION:

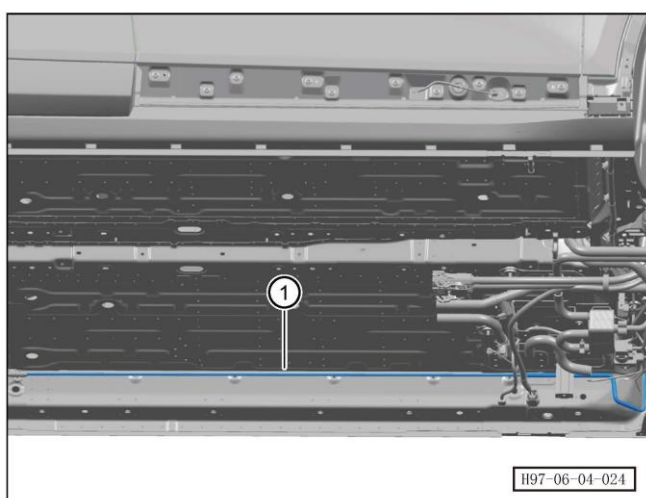
- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

Removal procedure

1. Turn off all electrical appliances and the start switch.
2. Disconnect the negative terminal of the battery (refer to [3.1.6.1 Maintenance and inspection of battery](#))
3. Lift the vehicle.
4. Remove the rear lower protective plate (refer to [8.6.4.6 Removal and refitting of rear lower protective plate \(REV\)](#))
5. Remove the bolts connecting the air spring pipeline front section and the front air spring strut assembly (refer to [6.2.7.5 Removal and refitting of front air spring strut assembly](#))
6. Remove the connecting bolts of the left front air spring pipeline front and rear sections (refer to [6.4.9.2 Removal and refitting of left front air spring pipeline rear section](#))
7. Remove the left front air spring pipeline front section.



a. Disengage 6 fixing clips of the left front air spring pipeline front section.



b. Remove the left front air spring pipeline ① front section.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- After refitting, perform the four-wheel alignment.
- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.4.9.2 Removal and refitting of left front air spring pipeline rear section

CAUTION:

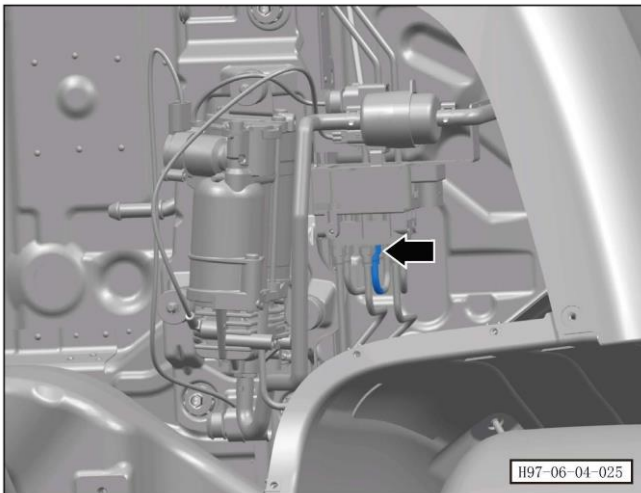
- Depressurize the active suspension system before operation to avoid personal injury.
- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

Removal procedure

1. Turn off all electrical appliances and the start switch.
2. Disconnect the battery negative terminal. Refer to [3.1.6.1 Maintenance and inspection battery](#)
3. Lift the vehicle.
4. Remove the rear lower protective plate (refer to [8.6.4.6 Removal and refitting of rear lower protective plate \(REV\)](#))
5. Remove the middle lower protective plate (refer to [8.6.4.5 Removal and refitting of middle lower protective plate \(REV\)](#))
6. Remove the battery pack assembly (refer to [5.1.5.1 Removal and refitting of battery pack assembly \(REV\)](#))
7. Remove the left front air spring pipeline rear section.

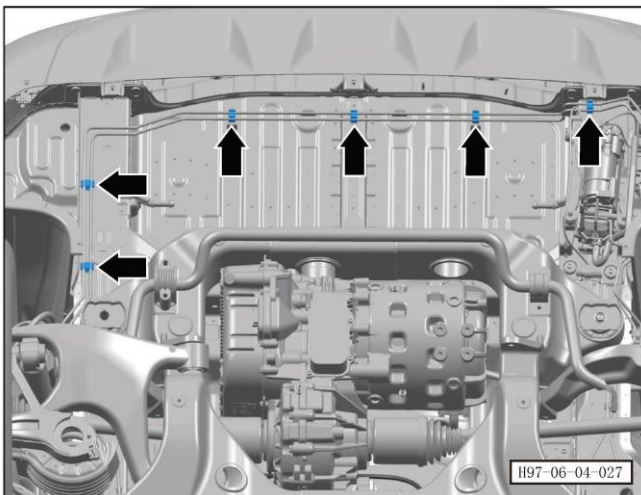
- a. Remove the connecting bolts of the left front air spring pipeline rear section.

Tightening torque of bolt: $8\pm 1\text{Nm}$.

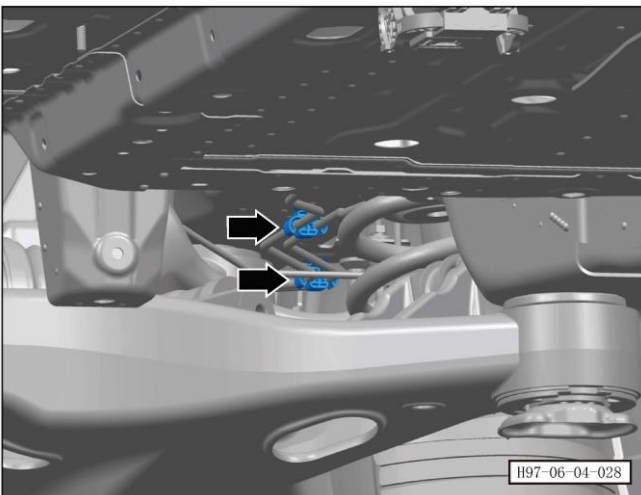




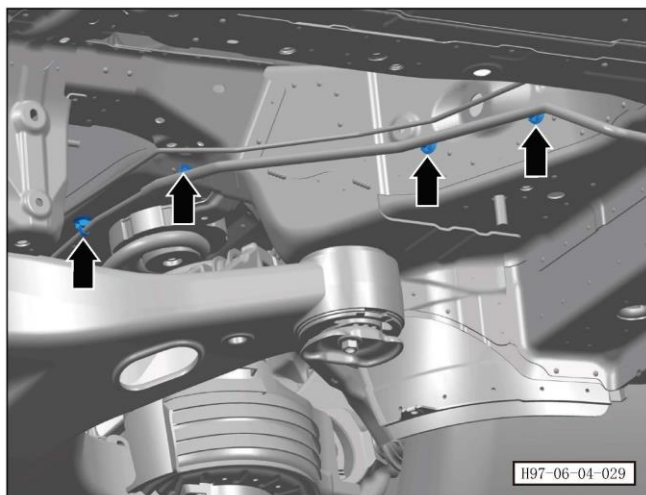
- b. Remove the fixing bolts of the left front air spring pipeline rear section.
Tightening torque of bolt: $8\pm 1\text{Nm}$.



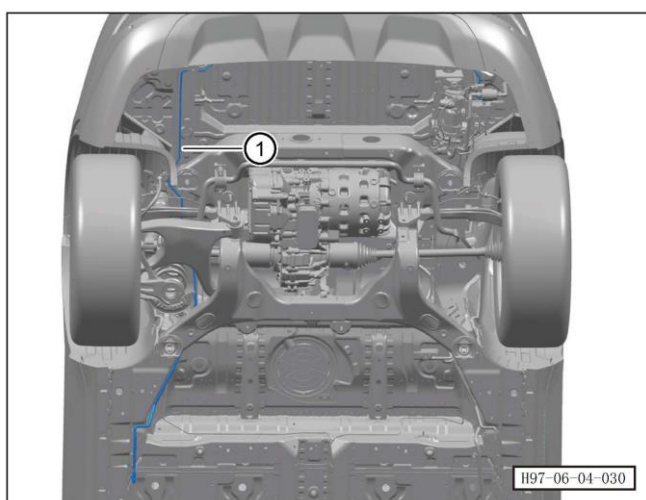
- c. Disengage 6 fixing clips of the air spring pipeline.



- d. Disengage 2 fixing clips of the air spring pipeline.



e. Disengage 4 fixing clips of the air spring pipeline.



f. Remove the left front air spring pipeline ① rear section.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.4.9.3 Removal and refitting of right front air spring pipeline front section

Removal procedure

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

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

2. Disconnect the battery negative terminal. Refer to [3.1.6.1 Maintenance and inspection battery](#)

3. Lift the vehicle.

4. Remove the rear lower protective plate (refer to [8.6.4.6 Removal and refitting of rear lower protective plate \(REV\)](#))

5. Remove the middle lower protective plate (refer to [8.6.4.5 Removal and refitting of middle lower protective plate \(REV\)](#))

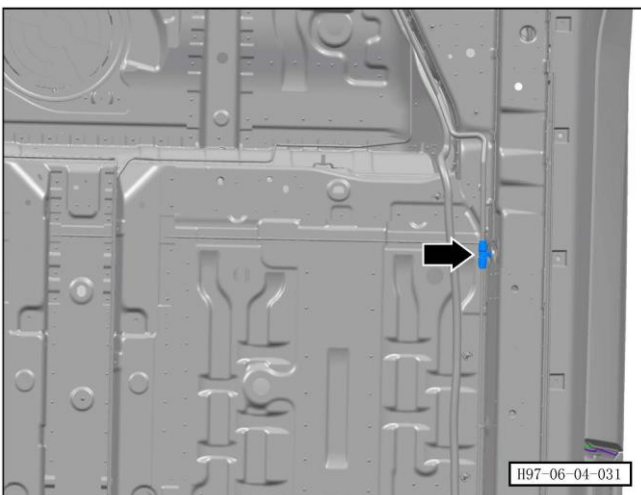
6. Remove the battery pack assembly (refer to [5.1.5.2 Removal and refitting of battery pack assembly \(REV\)](#))

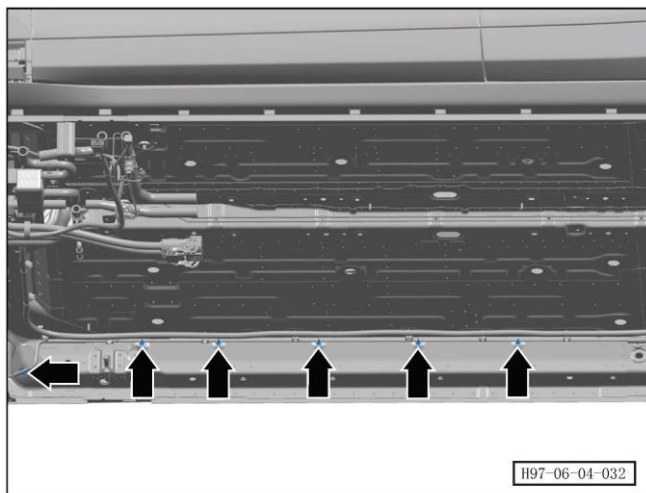
7. Remove the connecting bolts of the left front air spring pipeline front and rear sections (refer to [6.4.9.2 Removal and refitting of left front air spring pipeline rear section](#))

8. Remove right front air spring pipeline front section.

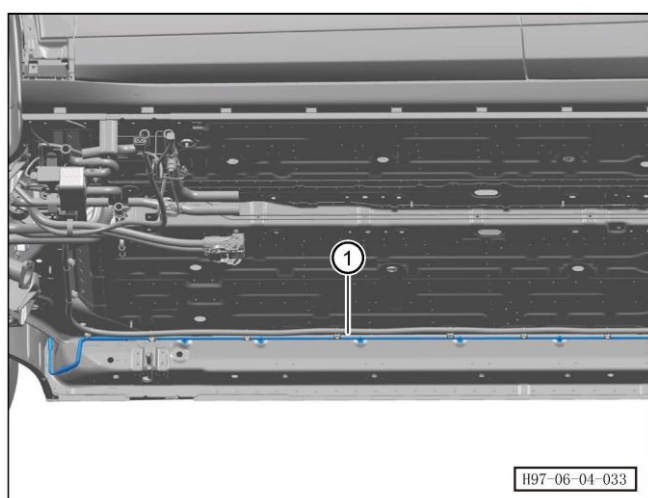
a. Unscrew 1 connecting bolt of the right front air spring pipeline front section.

Tightening torque of bolt: $8\pm 1\text{Nm}$.





b. Disengage the 6 fixing clips of the right front air spring pipeline front section.



c. Remove the right front air spring pipeline ① front section.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- After refitting, perform the four-wheel alignment.
- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.4.9.4 Removal and refitting of right front air spring pipeline rear section

Removal procedure

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

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

2. Disconnect the battery negative terminal. Refer to [3.1.6.1 Maintenance and inspection battery](#)

3. Lift the vehicle.

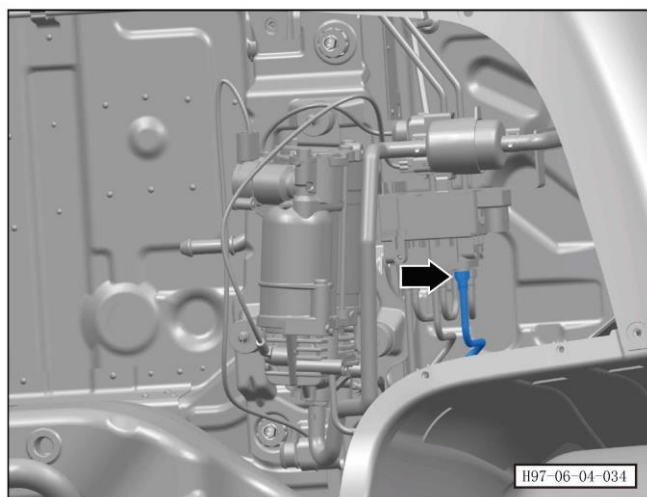
4. Remove the rear lower protective plate (refer to [8.6.4.6 Removal and refitting of rear lower protective plate \(REV\)](#))

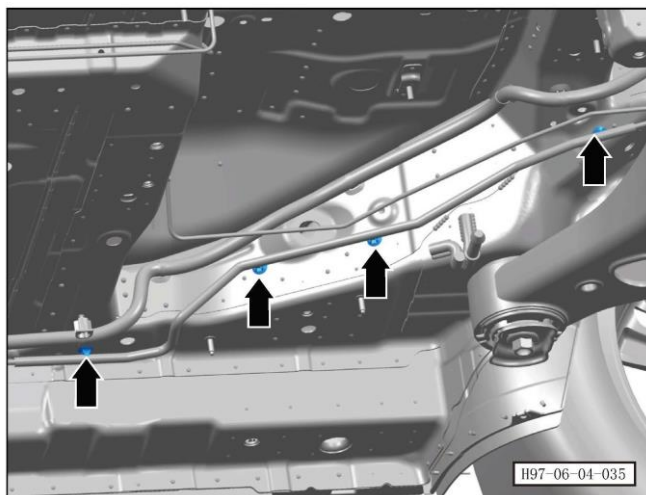
5. Remove the connecting bolts of the right front air spring pipeline front and rear sections (refer to [6.4.9.3 Removal and refitting of right front air spring pipeline front section](#))

6. Remove the right front air spring pipeline rear section.

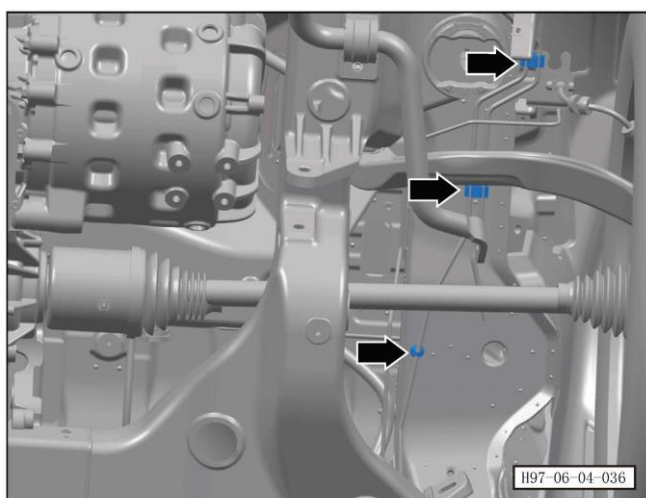
a. Unscrew 1 fixing bolt of the right front air spring pipeline rear section.

Tightening torque of bolt: $8\pm 1\text{Nm}$.

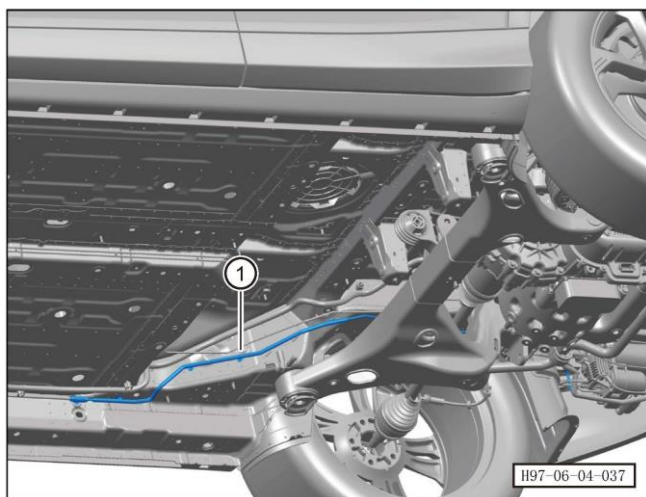




b. Disengage 4 fixing clips of the right front air spring pipeline rear section.



c. Disengage 3 fixing clips of the right front air spring pipeline rear section.



d. Remove the right front air spring pipeline ① rear section.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.4.9.5 Removal and refitting of left rear air spring pipeline

CAUTION:

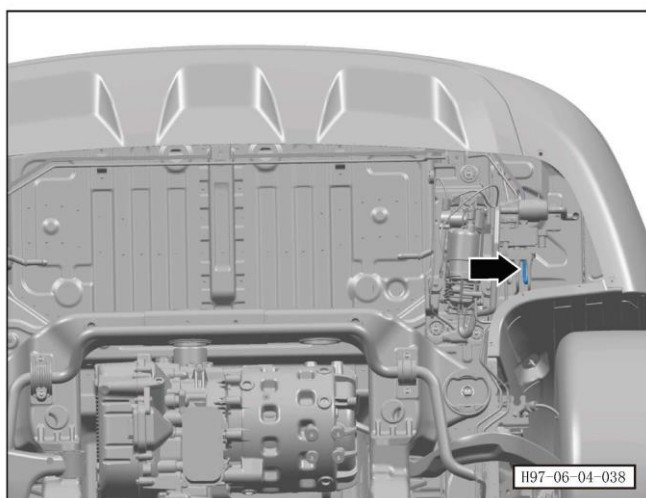
- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

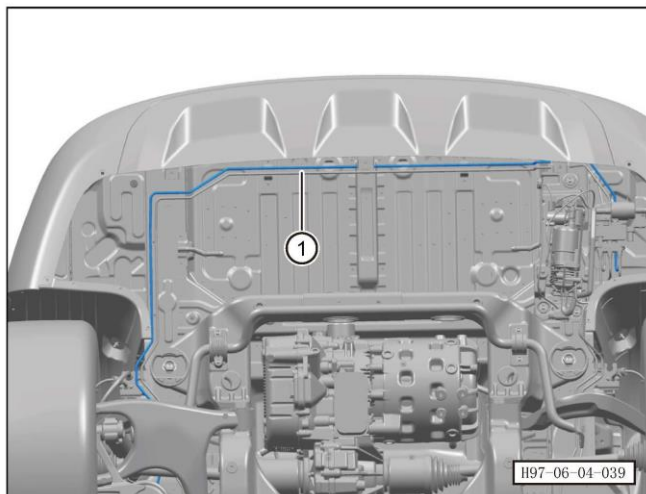
Removal procedure

1. Turn off all electrical appliances and the start switch.
2. Disconnect the battery negative terminal. Refer to [3.1.6.1 Maintenance and inspection battery](#)
3. Lift the vehicle.
4. Remove the rear lower protective plate (refer to [8.6.4.6 Removal and refitting of rear lower protective plate \(REV\)](#))
5. Remove the clips of the left rear air spring pipeline and the left front air spring pipeline rear section (refer to [6.4.9.2 Removal and refitting of left front air spring pipeline rear section](#))
6. Remove the left rear air spring pipeline.

- a. Unscrew 1 fixing bolt.

Tightening torque of bolt: $8\pm 1\text{Nm}$.





b. Remove the left rear air spring pipeline ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- After refitting, perform the four-wheel alignment.
- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.4.9.6 Removal and refitting of right rear air spring pipeline

Removal procedure

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

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

2. Disconnect the battery negative terminal. Refer to [3.1.6.1 Maintenance and inspection battery](#)

3. Lift the vehicle.

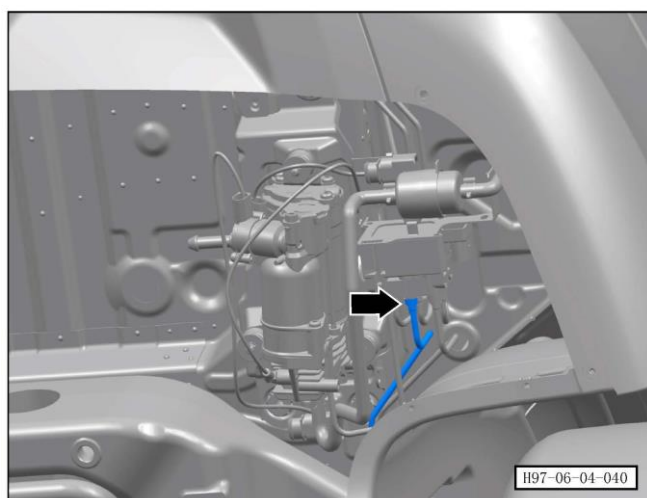
4. Remove the rear lower protective plate (refer to [8.6.4.6 Removal and refitting of rear lower protective plate \(REV\)](#))

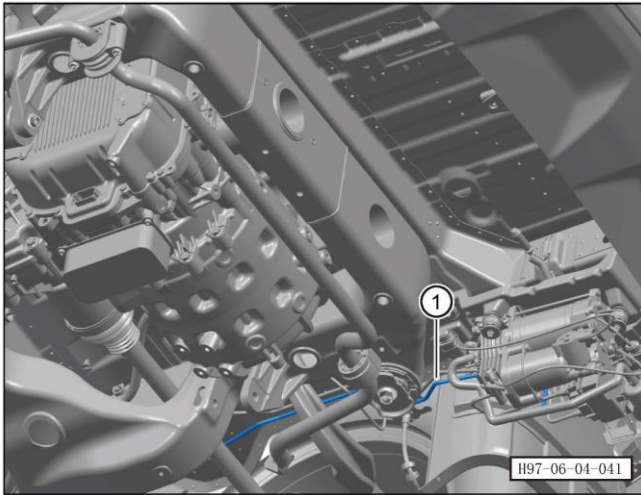
5. Remove the clips of right rear air spring pipeline and the right front air spring pipeline rear section (refer to [6.4.9.4 Removal and refitting of right front air spring pipeline rear section](#))

6. Remove the right rear air spring pipeline.

a. Unscrew 1 fixing bolt.

Tightening torque of bolt: $8\pm 1\text{Nm}$.





b. Remove the left rear air spring pipeline ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.4.9.7 Removal and refitting of air pump distribution valve connecting pipeline

Removal procedure

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

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

2. Disconnect the battery negative terminal. Refer to [3.1.6.1 Maintenance and inspection battery](#)

3. Lift the vehicle.

4. Remove the rear lower protective plate (refer to [8.6.4.6 Removal and refitting of rear lower protective plate \(REV\)](#))

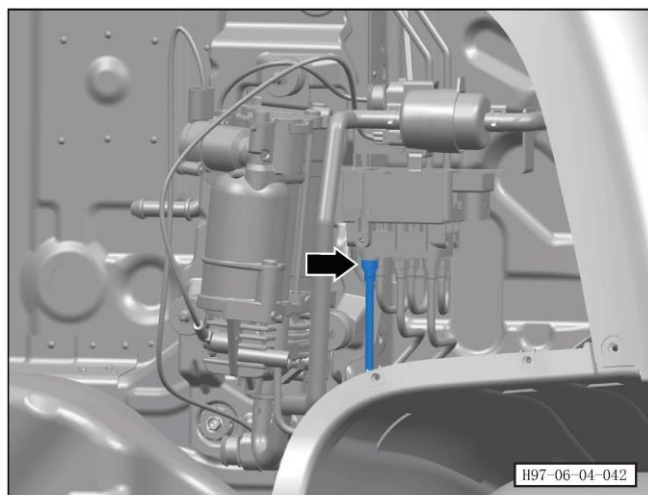
5. Remove the left rear side wall interior trim panel assembly (refer to [8.5.5.10 Removal and refitting of rear side wall interior trim panel assembly](#))

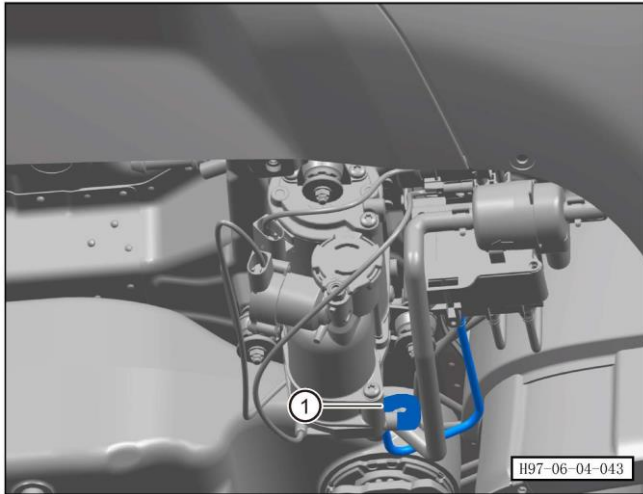
6. Remove the pipelines of electric air pump & bracket and accessories assembly (refer to [6.4.7.3 Removal and refitting of electric air pump & bracket and accessories assembly](#))

7. Remove the connecting pipe of the air pump distribution valve.

a. Unscrew 1 fixing bolt.

Tightening torque of bolt: $8\pm 1\text{Nm}$.





b. Remove the connecting pipe ① of the air pump distribution valve.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.4.9.8 Removal and refitting of air pump main air reservoir connecting pipeline

CAUTION:

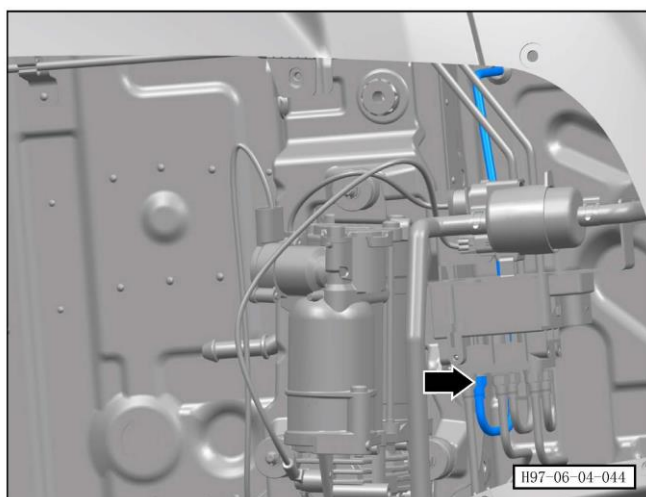
- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

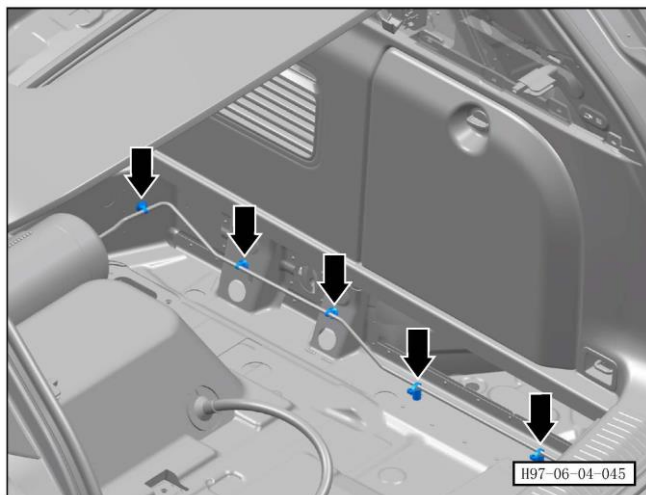
Removal procedure

1. Turn off all electrical appliances and the start switch.
2. Disconnect the battery negative terminal. Refer to [3.1.6.1 Maintenance and inspection battery](#)
3. Lift the vehicle.
4. Remove the rear lower protective plate (refer to [8.6.4.6 Removal and refitting of rear lower protective plate \(REV\)](#))
5. Removing the trunk carpet assembly (refer to [8.5.8.1 Removal and refitting of trunk carpet assembly](#))
6. Remove the connecting bolts of the connecting pipelines between the main air reservoir assembly and the air pump main air reservoir (refer to [6.4.8.1 Removal and refitting of main air reservoir assembly](#))
7. Remove the connecting pipeline of the air pump main air reservoir.

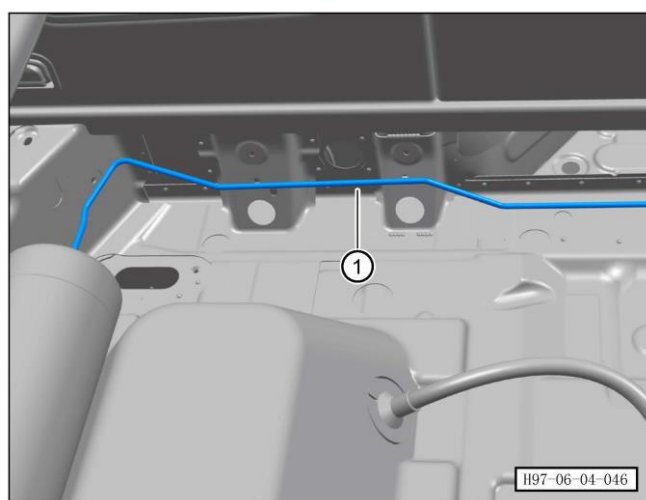
- a. Unscrew 1 fixing bolt of the connecting pipeline of the air pump main air reservoir.

Tightening torque of bolt: $8\pm 1\text{Nm}$.





b. Disengage 5 fixing clips of the connecting pipeline of the air pump main air reservoir.



c. Remove the connecting pipeline ① of the air pump main air reservoir.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.4.9.9 Removal and refitting of auxiliary air reservoir connecting pipe

Removal procedure

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

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

2. Disconnect the battery negative terminal. Refer to [3.1.6.1 Maintenance and inspection battery](#)

3. Lift the vehicle.

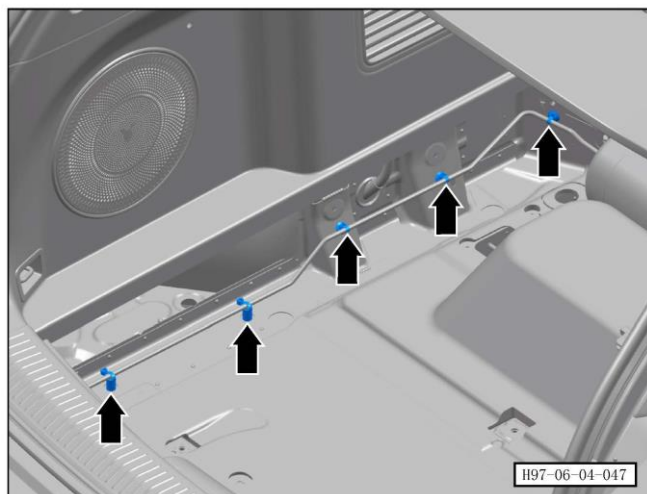
4. Removing the trunk carpet assembly (refer to [8.5.8.1 Removal and refitting of trunk carpet assembly](#))

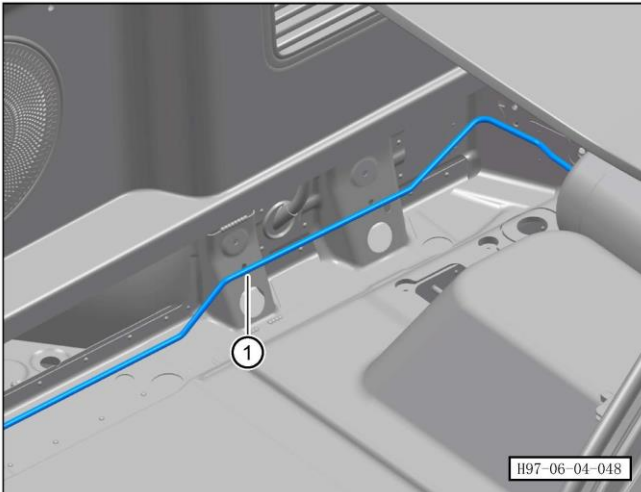
5. Remove the left rear side wall interior trim panel assembly (refer to [8.5.5.10 Removal and refitting of rear side wall interior trim panel assembly](#))

6. Remove the connecting bolts of the connecting pipelines between the main air reservoir assembly and the air pump main air reservoir (refer to [6.4.8.1 Removal and refitting of main air reservoir assembly](#))

7. Remove the connecting pipe of the air pump auxiliary air reservoir.

a. Disengage 5 fixing clips of the connecting pipeline of the air pump auxiliary air reservoir.





b. Remove the connecting pipe ① of the air pump auxiliary air reservoir.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.5 Driving system

6.5.1 Precautions

Since tires are driven on various road surfaces, their wear is inevitable. When the tires are worn evenly to the wear indicator on the sidewall under normal conditions, it can no longer be used and needs to be replaced. If the tires are found to be unevenly worn, it indicates that there is a problem with the use of the tires and needs to be checked in time. Under normal circumstances, the uneven wear of tires has the following conditions:

1. Central wear of the crown. This happens because the tire pressure is so high that only the center part of the crown touches the ground, causing the center of the crown to wear out faster than both sides. If this type of wear occurs, the tire pressure needs to be checked and brought down to the standard range.
2. Two crown shoulders are worn. This happens because the tire pressure is so low that the shoulders of the crown touch the ground, causing the crown shoulders to wear out faster than the center. The tire pressure shall also be checked and inflated to within the standard range if such wear occurs.
3. Wear on the inside or outside of the crown. This happens due to inaccurate wheel alignment or long-term lack of tire transposition, in which the substandard front wheel camber angle and the front wheel toe-in will cause the front wheel to wear eccentrically. The occurrence of such wear requires four-wheel alignment and, if necessary, perform tire interchange.
4. Sawtooth wear appears on crown. This kind of serrated wear is related to the front wheel toe-in, arranged from the outside to the inside of the crown. It means that the front wheel toe-in is too large, otherwise, it means that the front wheel toe-in is too small.
5. Crown wavy or disc-like wear. This is caused by the poor balance of the wheel, the abnormal hub, axle and their bearings or inaccurate wheel alignment. After such wear occurs, the wheel shall be balanced or four-wheel alignment shall be carried out in time, and the relevant hubs and bearings shall be checked.
6. Partial wear of the tire crown. This is caused by the partial wear of the tread caused by sudden braking that locks the wheel or a quick start that causes the wheel to slip. This kind of wear will accelerate the shortening of tire life, so emergency braking and sudden start shall be avoided as much as possible. In order to use the tires better and prolong the service life of the tires, it is very necessary to check the wear condition of the tires frequently. From the normal even wear and uneven wear of the tire, it can be found whether there is a problem in the use of the tire, and the cause can be found out in time, so that the tire can play its role in a normal environment. Get the tires to service to the greatest extent

- Precautions for lifting of vehicle with air suspension:

- a. After adjusting the body to the standard height in standard mode, click the maintenance icon on the touch screen to adjust the system to the maintenance mode.
- b. Use a lift to support the body without changing the body height;

Before disassembling the rear air spring assembly, it is necessary to control the distribution valve to discharge the air in the rear air spring through the after-sales scan tool, and close the solenoid valve as soon as possible after the bleeding (do not disconnect the air spring assembly from the air pipe until the lifting of the vehicle is completed);

- c. Turn off all electrical appliances and the start switch.
- d. Disconnect the negative terminal of the battery (refer to [3.1.6.1 Maintenance and inspection of battery](#))
- e. Lift the vehicle (after the REV vehicle is lifted, the high voltage switch of the high voltage battery pack must be disconnected).
- f. Perform subsequent maintenance operations.

(After removing the air pipe of the air spring, pay attention to protect the pipe and keep the cleanliness of the pipe head to prevent foreign matter from entering)

- Precautions for maintenance and operation of vehicles with air suspension:

- a. When storing the front air spring, it is necessary to keep the shock absorber in the maximum stretching condition and charge 3-5bar air into the air spring through the pressure holding valve. It is not allowed to compress the front air spring strut assembly in any state, and the airbag collision shall be avoided during the storage.

b. Before refitting, use an inflation gun (with the gun nozzle of 6mm outer diameter) to charge 3-5bar of air into the front air spring assembly through the pressure holding valve (the air pressure in the front air spring is not allowed to exceed 12bar at any time);

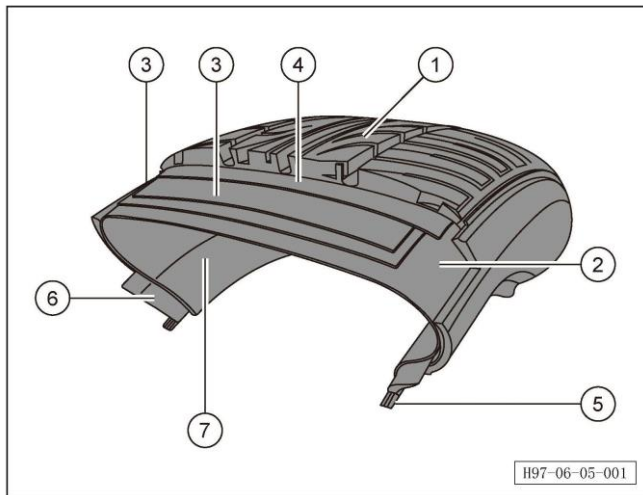
c. Since the rear air spring has no shock absorber limit, it cannot be inflated when it is not loaded. Check its state before loading. It is forbidden to stretch or compress the rear air spring. Before use, it shall be detected in accordance with the detection method for the rear air spring detection specified in the maintenance process;

d. The air pressure charged into the rear air spring is not allowed to exceed 9bar at any time;

e. It is strictly forbidden to exit the maintenance mode before the vehicle is on the ground. You can only exit the maintenance mode when the disassembly & assembly of the air spring is completed and the vehicle is on the ground.

- For the lifting operation of the vehicle with air suspension, the operation requirements in the precautions must be followed before the maintenance; If the requirements in the matters are violated, the vehicle may be damaged, or worse, this may cause casualties.

- For detailed maintenance operations and precautions of air suspension system, please refer to the disassembly & assembly and maintenance chapters of the front/rear air spring about the system of chassis maintenance.



6.5.2 Introduction to structure and principle

1. Tread

a. The part of the tire in contact with the road surface, makes the vehicle have driving and braking performance through friction, and shall have good wear resistance, puncture resistance, impact resistance, heat dissipation and other performances.

2. Tire body

a. The ply in the tire, main stress-bearing component of the tire, is impact resistant and shall have good flex resistance during driving.

3. Belt bundle

a. The steel ply between the tread and the tire body protects the tire body, inhibits tread deformation, maintains the ground contact surface of the tread, and improves wear resistance and driving stability.

4. Cap ply

a. The special ply above the belt bundle suppresses the movement of the belt bundle when the tire is running, prevents the belt bundle from disengagement during high-speed driving, and maintains the stability of the tire size under high-speed conditions.

5. Bead

a. The skim coating steel wire is wound in a certain shape (square or hexagonal shape), which plays the role of attaching the tire to the rim to fix the tire.

6. Quarter rubber strip

a. The filling material above the wire ring in the tire prevents the bead from dispersing, slows down the impact of the bead, protects the bead, and prevents air from entering during molding.

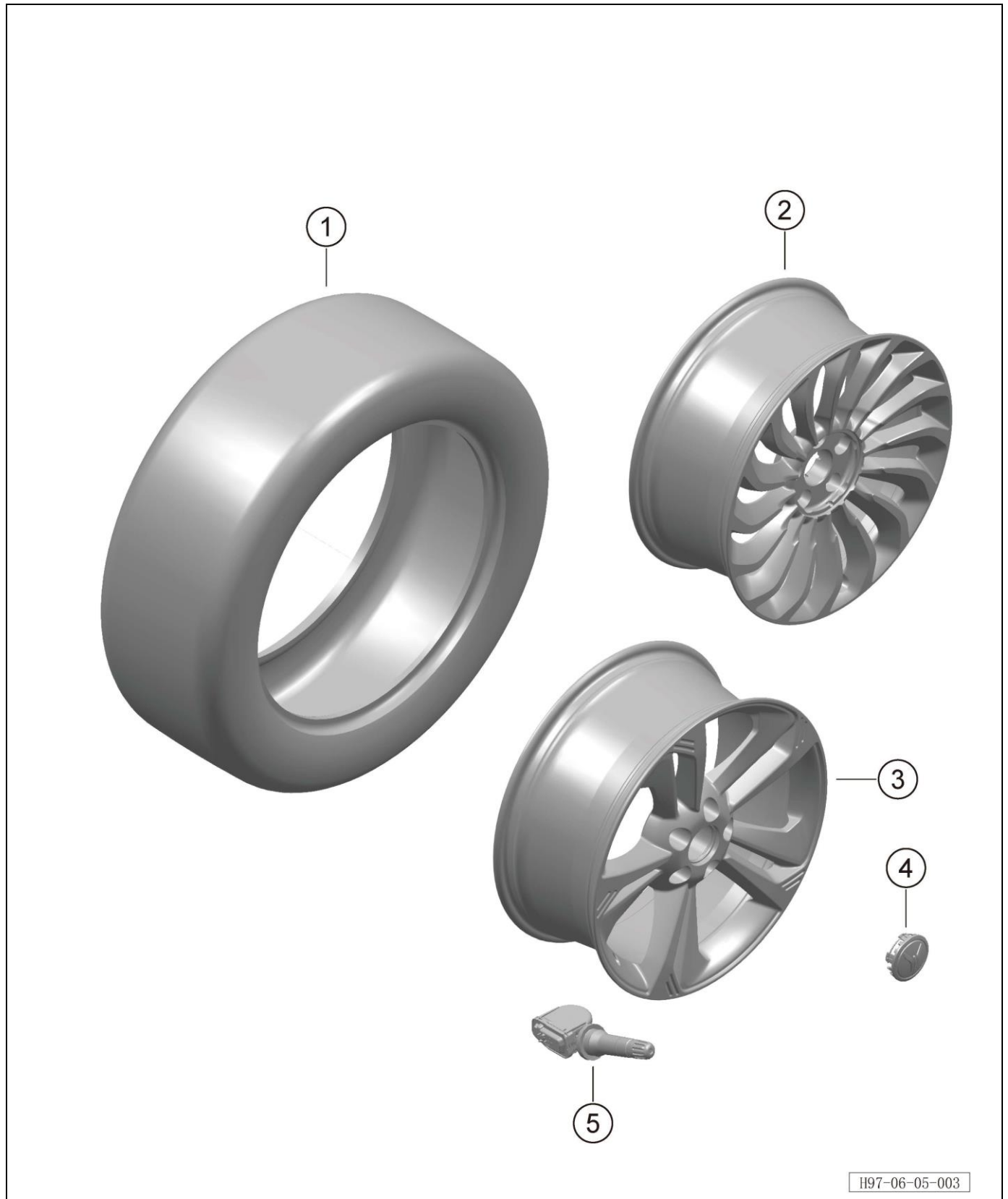
7. Inner liner

a. The airtight part of the tubeless tire is made of special rubber, which is equivalent to the role of the inner tube.

6.5.3 Position diagram of parts



6.5.4 Exploded view



S/N	Part name	Loading quantity	Remarks
1	Tires	4	
2	Wheel	4	Premium
3	Wheel	4	Base
4	Wheel trim cover	4	
5	Tire pressure sensor	4	

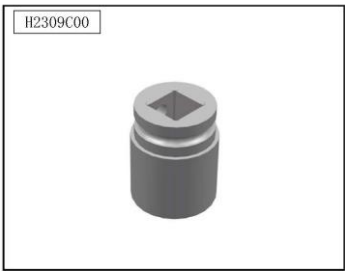
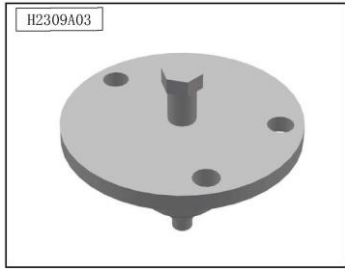
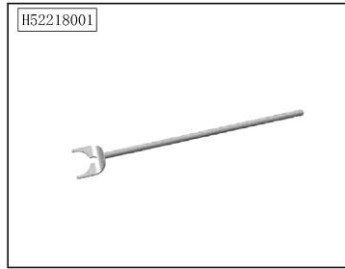
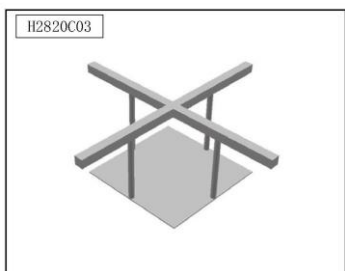
6.5.5 Technical parameters

Four-wheel alignment:

			Curb+0 (unloaded)	Curb+3 (half load)	
Front overhang	Toe-in (deg)	Nominal value	0.0595	0.009	
		Tolerance \pm	0.05	0.05	
		max	0.1095	0.059	
		min	0.0095	-0.041	
	Camber angle (deg)	Nominal value	-0.5715	-0.761	
		Tolerance \pm	0.5	0.5	
		max	-0.0715	-0.261	
		min	-1.0715	-1.261	
		Δ	Nominal value	0.5	0.5
			max	0.5	0.5
			min	-0.5	-0.5
	Kingpin caster angle (deg)	Nominal value	4.2139	4.5377	
		Tolerance \pm	0.5	0.5	
		max	4.7139	5.0377	
		min	3.7139	4.0377	
		Δ	Nominal value	0.5	0.5
			max	0.5	0.5
			min	-0.5	-0.5
	Kingpin caster angle (deg)	Nominal value	4.1398	3.981	
		Tolerance \pm	0.5	0.5	
		max	4.6398	4.481	
min		3.6398	3.481		
Δ		Nominal value	0.5	0.5	
		max	0.5	0.5	
		min	-0.5	-0.5	

			Curb+0 (unloaded)	Curb+3 (half load)	
Rear overhang	Toe-in (deg)	Nominal value	0.1579	0.182	
		Tolerance \pm	0.05	0.05	
		max	0.2079	0.232	
		min	0.1079	0.132	
	Camber angle (deg)	Nominal value	-1.2766	-1.459	
		Tolerance \pm	0.5	0.5	
		max	-0.7766	-0.959	
		min	-1.7766	-0.959	
		Δ	Nominal value	0.5	0.5
			max	0.5	0.5
			min	-0.5	-0.5
	Thrust angle (deg)	Nominal value	0	0	
		Tolerance \pm	0.15	0.15	
		max	0.15	0.15	
min		-0.15	-0.15		

6.5.6 Special tools

S/N	Diagram	Tool number	Name
1	 <p>H2309C00</p>	H2309C00	Drive shaft nut removal sleeve
2	 <p>H2309A03</p>	H2309A03	Special tool for removal of drive shaft (hub side)
3	 <p>H52218001</p>	H2309A02	Special tool for removal of drive shaft
4	 <p>H2820C03</p>	H2820C03	Suspension bracket support

6.5.7 Common faults

Inspection of brake lining

- 1 Check whether the friction surface of the brake lining is cracked or scratched, if any, it is recommended to replace the brake lining.
- 2 Check the thickness of the friction plate, if it exceeds the limit value of the friction lining, replace the friction lining.

Inspection of brake caliper

- 1 Inspect the caliper housing for cracks, severe wear and damage, and if so, the caliper needs to be replaced.
- 2 Check whether the seal ring of the brake caliper piston dust cover is cracked, broken, chipped, aged or not properly refitted in the brake caliper body, etc. Replace the brake caliper in any of the above conditions.
- 3 Check whether the brake fluid leaks from the caliper piston dust cover seal ring and the brake lining, and replace the brake caliper if there are signs of brake fluid leakage.
- 4 Check whether the brake caliper piston can smoothly enter the caliper cylinder and the stroke is complete. The movement of the brake caliper piston in the caliper cylinder shall be smooth and even. If the caliper piston is stuck or difficult to reach the bottom, replace the brake caliper.

Inspection of lining guide plate

Whether the lining guide plate is missing, severely corroded, has bent mounting tabs.

If any of the above is found, the lining guide plate needs to be replaced.

7.1.6.4 Check whether the floating pin of the brake caliper has the following conditions:

- Seizure
- Blocking
- Cracked or broken sheath
- Missing sheath

If any of the above is found, the caliper and dust cover seal ring needs to be replaced.

Brake disc surface and wear inspection

Clean the friction surface of the brake disc with industrial alcohol or brake cleaner, and check whether the friction surface of the brake disc has the following conditions:

- Severe rust or pitting corrosion
- Slight surface rust
- Cracks or burn spot
- Severe discoloration and bluing
- Deep scratches on the friction surface of brake disc

If one or more of the above conditions are present on the friction surface of the brake disc, the brake disc needs to be resurfaced or replaced.

CAUTION!

After the brake disc is resurfaced or replaced, the lining shall also be replaced.

6.5.8 Tires

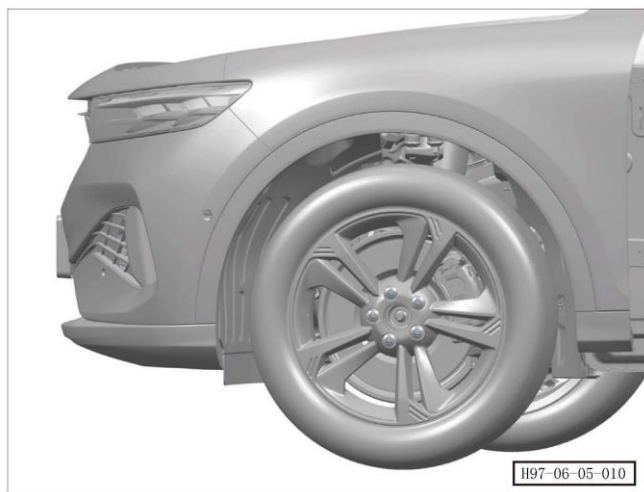
6.5.8.1 Removal and refitting of wheel trim cover

Removal procedure

- a. Remove the wheel trim cover.

CAUTION:

- Distinguish the assembly relation between tires and trim covers of different models.



Refitting procedure

The refitting procedure is performed in reverse order.

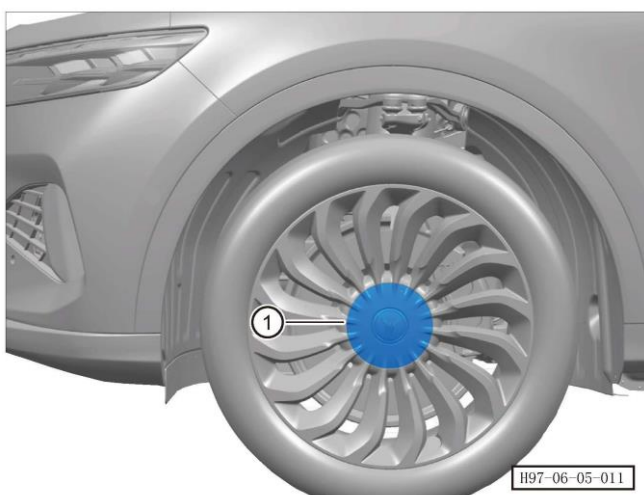
6.5.8.2 Removal and refitting of wheel trim cover

Removal procedure

CAUTION:

- Distinguish the assembly relation between tires and trim covers of different models.

- a. Remove the wheel trim cover.



Refitting procedure

The refitting procedure is performed in reverse order.

6.5.9 Wheels

6.5.9.1 Removal and refitting of wheels

Removal procedure

CAUTION:

- Distinguish the assembly relation between tires and trim covers of different models. To remove the tire nuts, diagonal removal from bottom to top is required.

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

1. Remove the wheel trim cover (refer to [6.5.8.1 Removal and refitting of wheel trim cover](#))

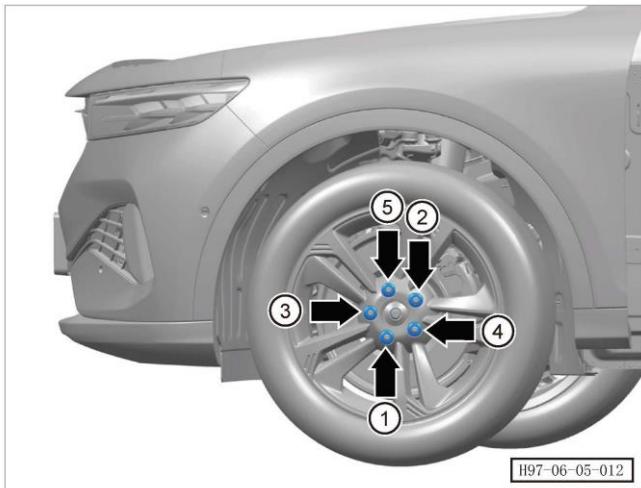
2. Lift the vehicle.

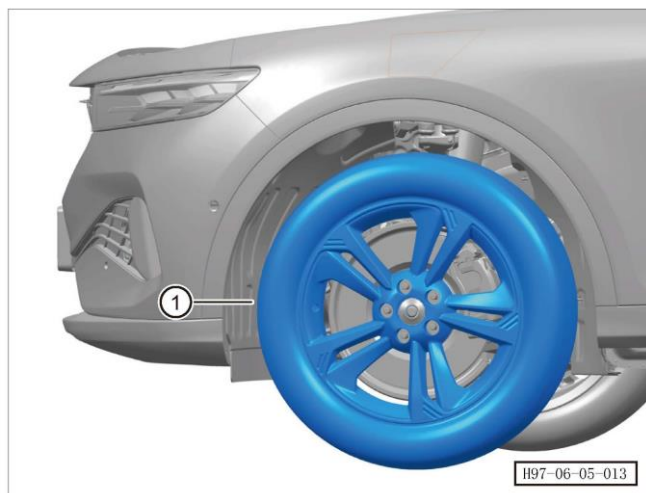
3. Remove the wheel.

4. Tire dynamic balance (refer to [6.5.9.4 Removal and refitting of balance weight](#))

a. Unscrew 5 tire fixing bolts.

Tightening torque of bolt: $160\pm 10\text{Nm}$.





b. Remove the wheel ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- Perform anti-corrosion treatment of the centering part of the wheel centering seat.

The contact surfaces of wheels and hubs are not allowed to be waxed, and the threads of wheel bolts are not allowed to be treated with lubricants or preservatives. Mounting nuts need to be refitted diagonally from top to bottom

- If the tires are replaced or the four wheels are rotated, the tires need to be dynamically balanced.

The refitting procedure is performed in reverse order.

CAUTION:

- After refitting, perform the four-wheel alignment.
- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.5.9.2 Removal and refitting of wheels

CAUTION:

- Distinguish the assembly relation between tires and trim covers of different models. To remove the tire nuts, diagonal removal from bottom to top is required.

Removal procedure

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

1. Remove the wheel trim cover (refer to [6.5.8.2 Removal and refitting of wheel trim cover](#))

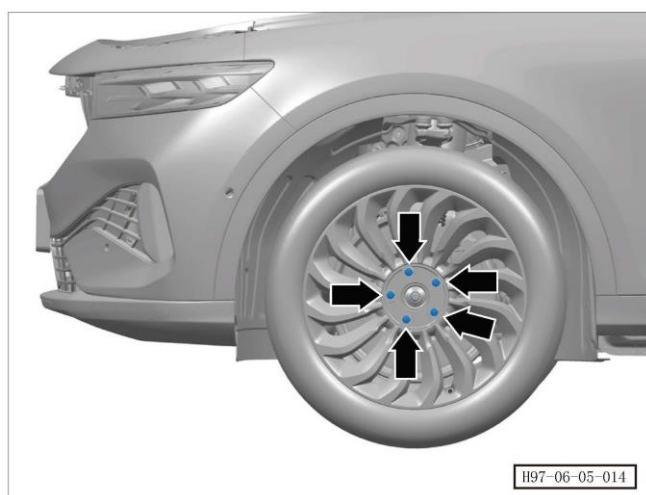
2. Lift the vehicle.

3. Remove the wheel.

4. Tire dynamic balance (refer to [5.9.4 Removal and refitting of balance weight](#))

a. Unscrew 5 tire fixing nuts.

Tightening torque of nut: $160\pm 10\text{Nm}$.



b. Remove the wheel ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- Perform anti-corrosion treatment of the centering part of the wheel centering seat. The contact surfaces of wheels and hubs are not allowed to be waxed, and the threads of wheel bolts are not allowed to be treated with lubricants or preservatives. Mounting nuts need to be refitted diagonally from top to bottom
- If the tires are replaced or the four wheels are rotated, the tires need to be dynamically balanced.

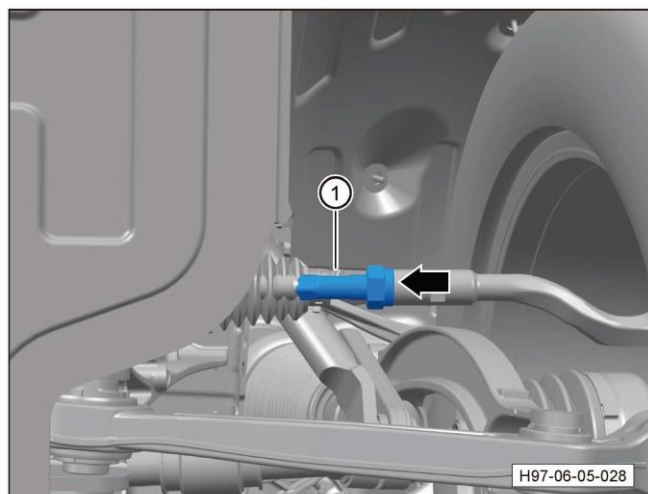
6.5.9.3 Four wheel alignment operation steps

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

Operation steps

1. Adjust front wheel toe-in.



- a. Park the vehicle on the four-wheel aligner lift (the vehicles with air spring are adjusted to comfort mode);
- b. Loosen the nuts.
- c. Adjust the steering shaft ① to an appropriate position and tighten the nut.

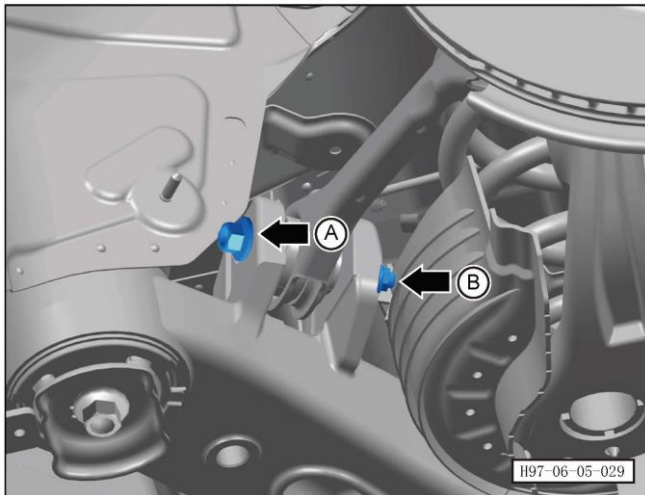
Tightening torque of nut: $100\pm 10\text{Nm}$.

Note:

- The above is the removal of the left steering shaft adjusting nut, which is the same as that of the right side.

CAUTION:

Check the tire pressure of the four tires, and the tire pressure of all four tires is required to be 2.5bar.



2. Adjust rear wheel toe-in.

a. Loosen the locking nut B, adjust the eccentric adjustment bolt A, and adjust the toe-in value of the single side of the rear wheel to within the range of the standard value.

b. After adjustment, tighten the locking nut B, and re-check the toe-in value of the rear wheels.

Tightening torque of bolt A: $70\text{Nm}+120^\circ$.

Tightening torque of nut B: $70\text{Nm}+120^\circ$.

CAUTION:

- After tightening the locking nut, the toe-in value can vary slightly.

3. Check front wheel camber

Front wheel camber is unadjustable.

If the measured value exceeds the allowable value, the body subframe must be checked for damage.

4. Adjust rear wheel camber.

a. Loosen the locking nut A, adjust the eccentric adjustment bolt B, and adjust the toe-in value of the single side of the rear wheel to within the standard value range.

b. After adjustment, tighten the locking nut A, and re-check the toe-in value of the rear wheels.

Tightening torque of bolt: $70\text{Nm}+180^\circ$.

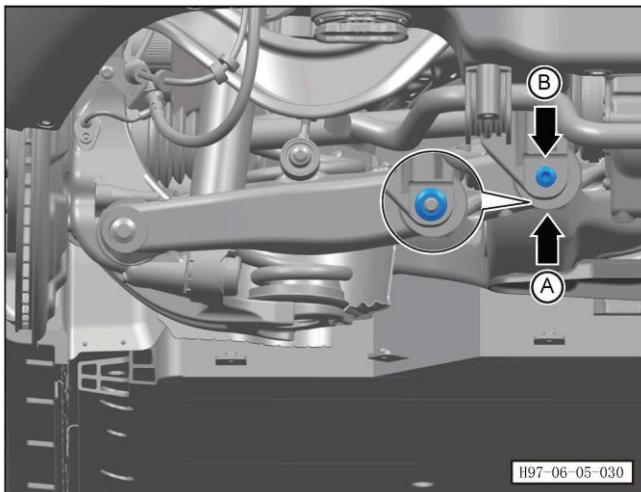
Tightening torque of nut: $70\text{Nm}+180^\circ$

CAUTION:

- After tightening the locking nut, the toe-in value can vary slightly.

- After refitting, perform the four-wheel alignment.

- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.



			Coil spring	Air spring (Comfort mode)	
Front suspension	Toe-in (deg)	Nominal value	0.17	0.10	Adjustable
		Tolerance \pm	0.05	0.05	
	Camber (deg)	Nominal value	-0.5	-0.71	Not adjustable
		Tolerance \pm	0.5	0.5	
	Caster angle (deg)	Nominal value	3.48	3.98	Not adjustable
		Tolerance \pm	0.5	0.5	
Inclination angle (deg)	Nominal value	4.03	4.21	Not adjustable	
	Tolerance \pm	0.5	0.5		
Rear suspension	Toe-in (deg)	Nominal value	0.17	0.18	Adjustable
		Tolerance \pm	0.05	0.05	
	Camber angle (deg)	Nominal value	-1.37	-1.53	Adjustable
		Tolerance \pm	0.5	0.5	

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Parameter values of four wheel alignment parameters:
Precautions for checking the right deviation of the vehicle at a constant speed:

1. Loosen the following four bushes on the left and right (to easily rotated state without removal)

(1) Connecting bolts between the front stabilizer bar link and the shock absorber fork

(2) Connecting bolts between the front stabilizer bar link and the stabilizer bar

(3) Rear connecting bolts between the front suspension subframe and lower swing arm

(4) Front connecting bolts between the front suspension subframe and lower swing arm

2. Turn the steering wheel to the left and right to the limit position, turn it twice, and finally turn the steering wheel to the left limit position and hold the steering wheel.

3. Tighten the bolts in sequence according to the specified torque with a torque wrench; left 1 → left 2 → right 1 → right 2 → left 3 → right 3 → left 4 → right 4.

4. The following are all critical torques:

(1) Connecting bolts between the front stabilizer bar link and the shock absorber fork: (70 \pm 5) Nm; Static torque range 58.8– 95.2Nm

(2) Connecting bolts between the front stabilizer bar link and the stabilizer bar: (70 \pm 5) Nm; Static torque range 58.8 – 95.2Nm

(3) Rear connecting bolts of front suspension subframe and lower swing arm: (110 \pm 10) Nm, static torque range 90-130 Nm;

(4) Front connecting bolts between the front suspension subframe and lower swing arm: (110 \pm 10) Nm, static torque range 90-130 Nm;

5. Readjust the four-wheel alignment parameters of the vehicle to the nominal values.

Precautions

1. During the whole operation process, pay attention to protect the height sensor to prevent damage caused by contact with the swing arm, drive shaft and other components.

2. After all key torque points are tightened, the static torque needs to be measured and recorded;

6.5.9.4 Removal and refitting of balance weight

Removal procedure

CAUTION:

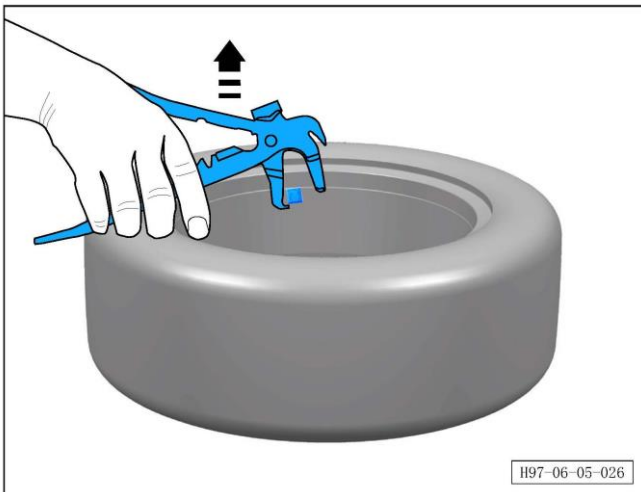
- Distinguish the tire assembly relation of different models. To remove the tire nuts, diagonal removal from bottom to top is required.

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

1. Remove the wheel trim cover (refer to [6.5.8.1 Removal and refitting of wheel trim cover](#))
2. Lift the vehicle.
3. Remove the wheels (refer to [6.5.9.1 Removal and refitting of wheels](#))
4. Remove the balance weight.
 - a. Remove the balance weight.



Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- Tire dynamic balance is required when refitting the balance weight.

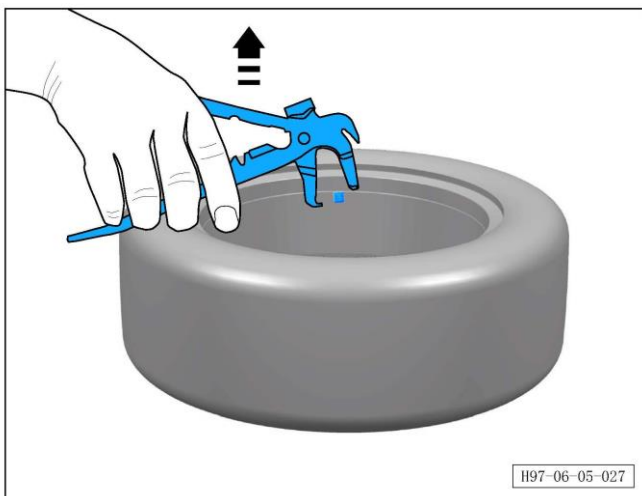
6.5.9.5 Removal and refitting of tire dynamic balance

Removal procedure

CAUTION:

- This wheel is an R20 type wheel. To remove the tire nuts, diagonal removal from bottom to top is required.
- When removing the balance weight, you need to clean the tire tread gravel and debris, and wipe the wheel hub with a rag.
- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

1. Remove the wheel trim cover (refer to [6.5.8.2 Removal and refitting of wheel trim cover](#))
2. Lift the vehicle.
3. Remove the wheels (refer to [6.5.9.2 Removal and refitting of wheels](#))
4. Remove the balance weight.
 - a. Remove the balance weight.



Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION: tire dynamic balance is required when refitting the balance weight.

6.5.10 Tires

6.5.10.1 Removal and refitting of tires

Removal procedure

CAUTION: distinguish the tire assembly relation of different models. To remove the tire nuts, diagonal removal from bottom to top is required.

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

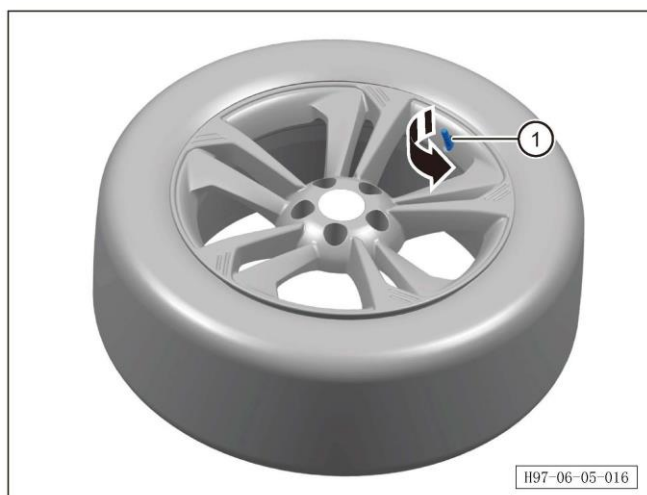
1. Remove the wheel trim cover (refer to [6.5.8.2 Removal and refitting of wheel trim cover](#))

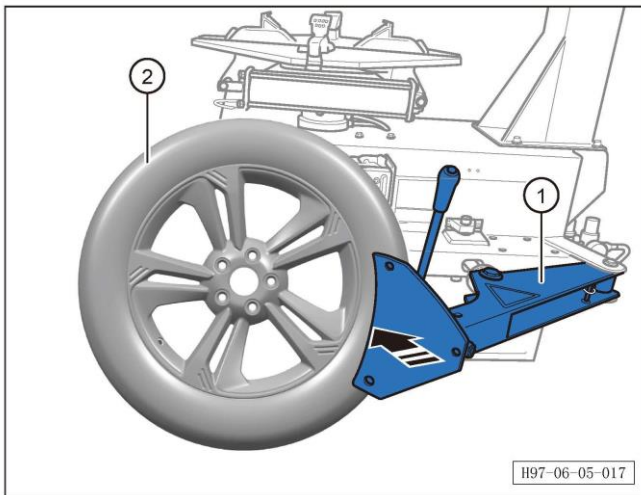
2. Lift the vehicle.

3. Remove the wheels (refer to [6.5.9.2 Removal and refitting of wheels](#))

4. Remove the tires.

a. Unscrew the valve cover. Use the deflation tool ① to unscrew the valve core as indicated by the arrow to exhaust the gas.

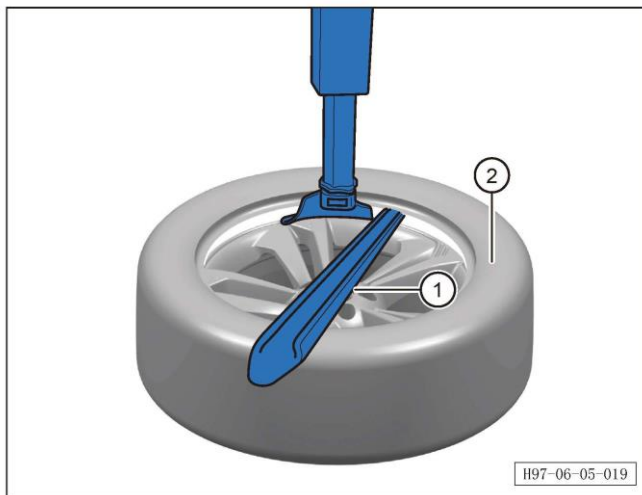




b. Use the tire changer ① to press the tire ② out of the steel rim groove as indicated by the arrow.

Note:

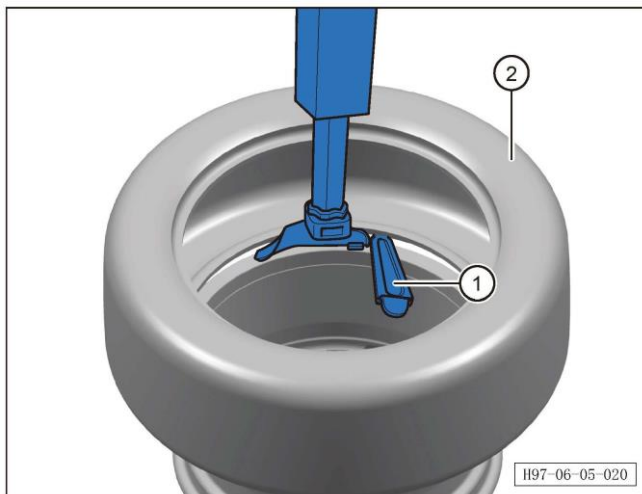
- When using the tire changer, do not touch the steel rim to avoid damage to the steel rim.
- When using the tire changer, avoid the valve position to avoid damage to the tire pressure sensor.



c. Pry up the tire ② with the tire stick ①, press the rotary switch, and take out the tire ②.

Note:

- During the process of refitting or removing tires, pay attention to the distance between the head of the tire changer and the hub to avoid damage to the surface of the hub.
- The wheel shall be firmly clamped during tire change, and it shall be started after checking. It is strictly forbidden to separate the tire by hand when turning.
- When disassembling and assembling tires, be careful not to damage the tire openings to avoid tire leakage.



d. Use the tire rod ① to pry up the tire ②, press the rotary switch, and take out the tire ②.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- After refitting the tire, the tire needs to be dynamically balanced.
- After fitting new tires or tire rotation, it is necessary to match the tire pressure sensor with the tire pressure sensor control unit.

6.5.10.2 Removal and refitting of tires

Removal procedure

Note:

- Distinguish the tire assembly relation of different models.
- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

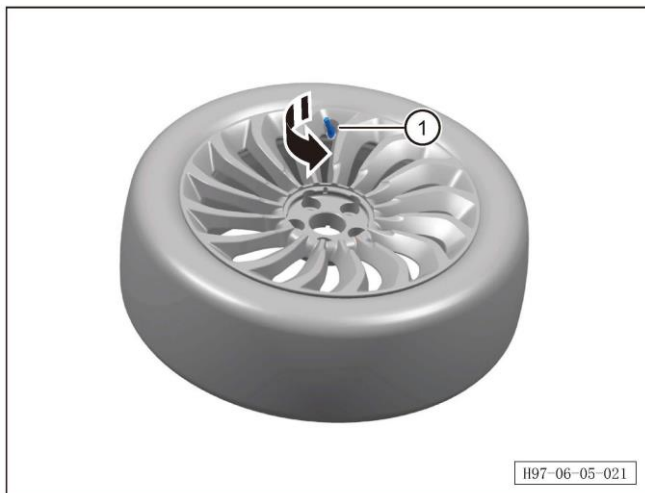
1. Remove the wheel trim cover (refer to [6.5.8.2 Removal and refitting of wheel trim cover](#))

2. Lift the vehicle.

3. Remove the wheels (refer to [6.5.9.2 Removal and refitting of wheels](#))

4. Remove the tires.

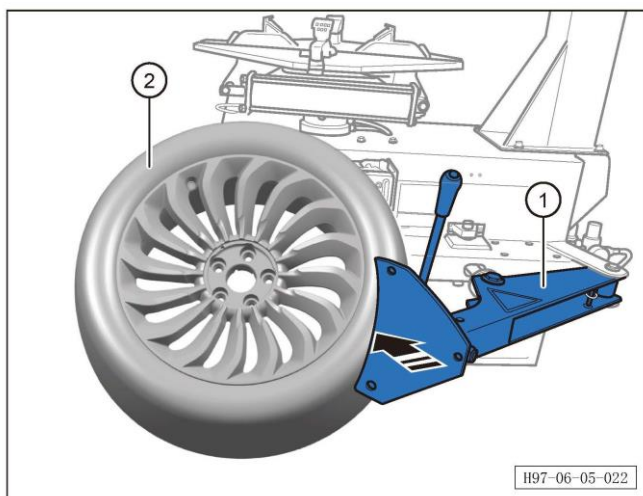
a. Unscrew the valve cover. Use the deflation tool ① to unscrew the valve core as indicated by the arrow to exhaust the gas.

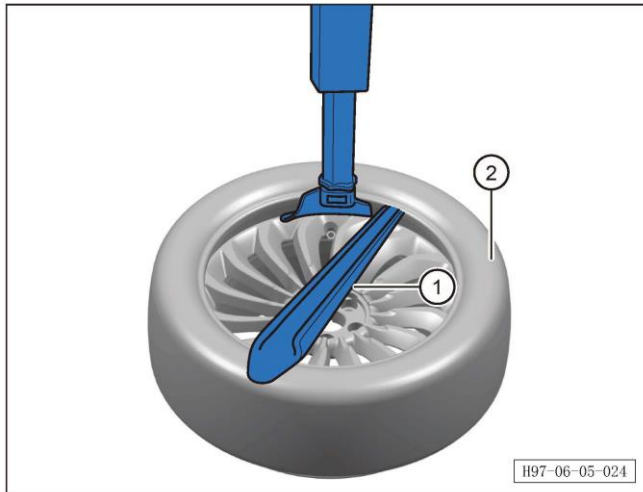


b. Use the tire changer ① to press the tire ② out of the steel rim groove as indicated by the arrow.

Note:

- When using the tire changer, do not touch the steel rim to avoid damage to the steel rim.
- When using the tire changer, avoid the valve position to avoid damage to the tire pressure sensor.

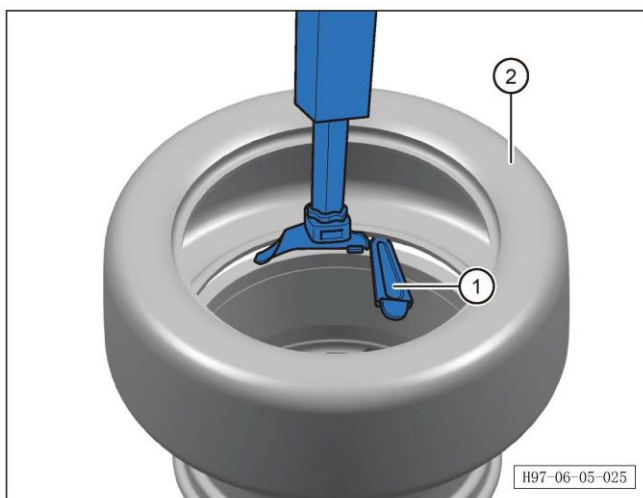




c. Pry up the tire ② with the tire stick ①, press the rotary switch, and take out the tire ②.

Note:

- During the process of refitting or removing tires, pay attention to the distance between the head of the tire changer and the hub to avoid damage to the surface of the hub.
- The wheel shall be firmly clamped during tire change, and it shall be started after checking. It is strictly forbidden to separate the tire by hand when turning.
- When disassembling and assembling tires, be careful not to damage the tire openings to avoid tire leakage.



d. Use the tire rod ① to pry up the tire ②, press the rotary switch, and take out the tire ②.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- After refitting the tire, the tire needs to be dynamically balanced.
- After fitting new tires or tire rotation, it is necessary to match the tire pressure sensor with the tire pressure sensor control unit.

6.6 Brake system

6.6.1 Precautions

Warnings about handling of ESP system components

Warning!

- Some components in the ESP system cannot be serviced individually. The removal or disconnection of these components may result in personal injury or abnormal system operation. For this reason, only removable and mountable components can be serviced.

Warning for brake dust

Warning!

- When repairing wheel brake parts, avoid the following operations:

- Do not grind the friction plate.

- Do not use sandpaper to polish the brake friction plate.

- Do not use dry brush or compressed air to clean wheel brake parts.

- Some models or certain retrofitted brake components after the sales of the vehicle may contain fibers, which can be mixed with dust, and the inhalation of such dust can seriously damage your body. To ensure your health, use a damp cloth to remove the dust from brake components.

Warning for brake fluid

Warning!

- Never use brake fluid stored in an open container, as the brake fluid absorbs moisture. The use of unsuitable or contaminated brake fluid may cause system failure, loss of vehicle control and personal injury.

- Brake fluid irritates skin and eyes. In case of contact, the following measures should be taken:

- In case of eye contact, rinse with water thoroughly.

- In case of skin contact, wash with soap and water.

Warning for replacement of brake pipe

Warning!

- Install and secure the brake pipe carefully with correct fasteners for replacement; otherwise, the brake pipe and brake system may be damaged, resulting in personal injury.

Important precautions for filling brake fluid in brake system

CAUTION:

- When filling brake fluid in the brake master cylinder reservoir, only brake fluid in clean and sealed containers should be used. The fluid meets the DOT4 requirements. Failure to use the recommended brake fluid will result in system contamination that can damage rubber seals or rubber gaskets inside hydraulic brake system components.

Important precautions for brake caliper

CAUTION:

- When removing the brake caliper, use a steel wire to secure the brake caliper to prevent damage to the brake pipe.

- Precautions for lifting of vehicle with air suspension:

a. After adjusting the body to the standard height in standard mode, click the maintenance icon on the touch screen to adjust the system to the maintenance mode.

b. Use a lift to support the body without changing the body height;

Before disassembling the rear air spring assembly, it is necessary to control the distribution valve to discharge the air in the rear air spring through the after-sales scan tool, and close the solenoid valve as soon as possible after the bleeding (do not disconnect the air spring assembly from the air pipe until the lifting of the vehicle is completed);

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

d. Disconnect the negative terminal of the battery (refer to [3.1.6.1 Maintenance and inspection of battery](#))

e. Lift the vehicle (after the REV vehicle is lifted, the high voltage switch of the high voltage battery pack must be disconnected).

f. Perform subsequent maintenance operations.

(After removing the air pipe of the air spring, pay attention to protect the pipe and keep the cleanliness of the pipe head to prevent foreign matter from entering)

- Precautions for maintenance and operation of vehicles with air suspension:

a. When storing the front air spring, it is necessary to keep the shock absorber in the maximum stretching condition and charge 3-5bar air into the air spring through the pressure holding valve. It is not allowed to compress the front air spring strut assembly in any state, and the airbag collision shall be avoided during the storage.

b. Before refitting, use an inflation gun (with the gun nozzle of 6mm outer diameter) to charge 3-5bar of air into the front air spring assembly through the pressure holding valve (the air pressure in the front air spring is not allowed to exceed 12bar at any time);

c. Since the rear air spring has no shock absorber limit, it cannot be inflated when it is not loaded. Check its state before loading. It is forbidden to stretch or compress the rear air spring. Before use, it shall be detected in accordance with the detection method for the rear air spring detection specified in the maintenance process;

d. The air pressure charged into the rear air spring is not allowed to exceed 9bar at any time;

e. It is strictly forbidden to exit the maintenance mode before the vehicle is on the ground. You can only exit the maintenance mode when the disassembly & assembly of the air spring is completed and the vehicle is on the ground.

- For the lifting operation of the vehicle with air suspension, the operation requirements in the precautions must be followed before the maintenance; If the requirements in the matters are violated, the vehicle may be damaged, or worse, this may cause casualties.

- For detailed maintenance operations and precautions of air suspension system, please refer to the disassembly & assembly and maintenance chapters of the front/rear air spring about the system of chassis maintenance.

Precautions for adding of brake fluid and air discharging:

Warning!

When servicing any brake fluid pipeline component of the vehicle, drain the brake fluid in corresponding pipeline under service;

After servicing, replace the brake fluid with the brake fluid specified by the manufacturer, and discharge the air from the brake pipeline system completely.

It is forbidden to mix old and new brake fluid;

The adding of brake fluid and exhausting process is applicable to manual adding of brake fluid and discharging of brake system of the vehicle.

Brake fluid model: Kunlun Star 7104-1 (DOT 4)

Tools: open-end wrench, 10 mm open-end wrench for H97 front brake, 11 mm open-end wrench for rear brake

Operation step:

After assembling of vehicle brake system, adding of brake fluid and air discharging can be done to ESC, Ibooster, IPB, and other wet samples with two persons:

The principle of exhausting is that the exhausting is carried from far to near and the same circuit is exhausted first. If, during exhausting, the brake fluid level is below the MIN mark, replenish in time. If it is found that there is no brake fluid in the reservoir, repeat the exhausting procedure as follows.

a. Open the air outlet of the right rear brake;

- b. Fill the reservoir with brake fluid with the brake pedal in free state, and depress the brake pedal repeatedly. Lift your foot off the brake pedal completely after it is depressed each time, and hold for more than 1 s until the brake pedal is fully returned.
- c. Tighten the air outlet if no air bubbles can be found in the brake fluid discharged from the air outlet;
- d. Open the air outlet of the left front brake and repeat steps b and c;
- e. Open the air outlet of the left rear brake and repeat steps b and c;
- f. Open the air outlet of the right front brake and repeat the steps b and c;
- g. Depress the brake pedal forcefully (above 500 N) for 5-7 times with the air outlet closed, and then depress and hold the brake pedal;
- h. Open the air outlet of the right rear brake for pressure relief, and then tighten the air outlet;
- i. Repeat steps g and h for 5 times;
- j. Carry out exhausting on the air outlet of the left front brake using steps g, h, i, and the air outlet as described in step g changes to the air outlet of the left front brake;
- k. Carry out exhausting on the air outlet of the left rear brake using steps g, h, i, and the air outlet as described in step g changes to the air outlet of the left rear brake;
- l. Carry out exhausting on the air outlet of the right front brake using steps g, h, i, and the air outlet as described in step g changes to the air outlet of the right front brake;
- m. After executing the above steps, drive the vehicle for a certain period at 20 km/h-80 km/h, and apply full brake for more than 5 times during driving;
- n. Carry out exhausting on the vehicle again following steps g, h, i, j, k, and l;

The above is the exhausting process of the vehicle. Due to the differences in vehicles, a little air bubbles may remain in the brake system of the vehicle after exhausting in accordance with the above steps. In this case, it is necessary to repeat the exhausting until there are no bubbles in the brake system.

6.6.2 Structure and operation

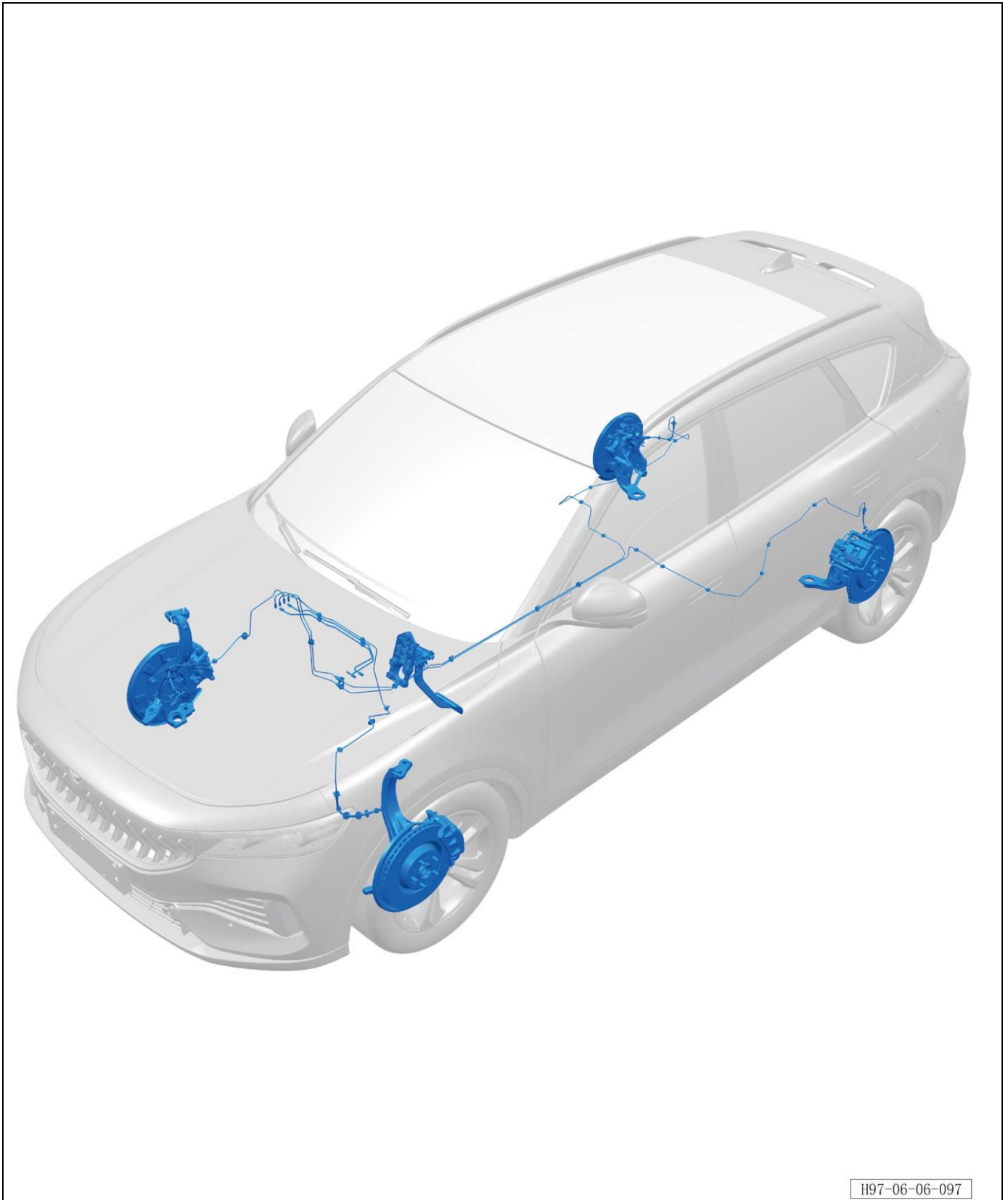
The front brake system consists of the following components:

- Brake lining: It applies the mechanical output force generated from the hydraulic brake caliper on the friction surface of the brake disc.
- Brake lining guide plate: It is located between the brake lining and the brake lining mounting bracket to ensure smooth movement of the brake lining and eliminate noises.
- Brake disc: It utilizes the mechanical output force of the brake lining acting on the friction surface of the brake disc to slow the wheel assembly down for vehicle braking.
- Brake caliper: It receives the hydraulic pressure from the brake master cylinder, and converts the hydraulic pressure into mechanical output force which will then act on the inner brake lining; when the brake master cylinder returns, the brake caliper piston automatically returns.
- Brake caliper and brake lining bracket: It fixes the brake lining and the brake caliper in place, and maintains a proper fit position with the hydraulic brake caliper so that the brake lining slides when the mechanical output force acts on the inner brake lining.
- Brake caliper floating pin: It refits and fixes the hydraulic brake caliper in place, and maintains a proper fit position with the brake caliper bracket so that the brake caliper can slides relative to the brake lining when the mechanical output force acts.

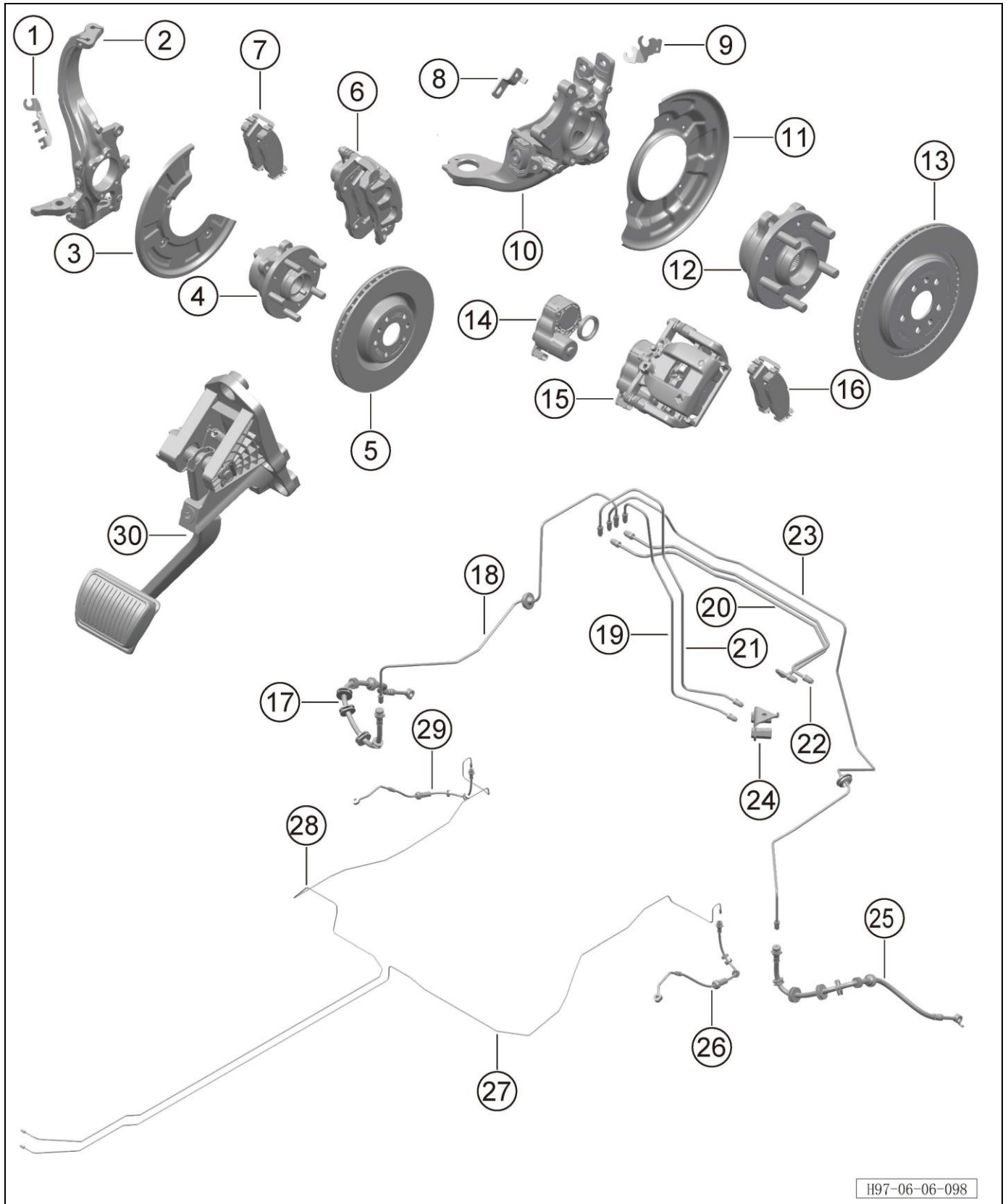
Operation of the front brake system:

- The mechanical output force generated from the hydraulic brake caliper piston acts on the inner brake lining. When the piston pushes the inner brake lining outward, the caliper housing simultaneously pulls the outer brake lining inward simultaneously so that the output force is evenly distributed, and then the brake lining applies the output force to the friction surface on both sides of the brake disc so as to slow the wheel assembly down.

6.6.3 Position diagram of parts



6.6.4 Exploded view



S/N	Part name	Loading quantity	Remarks
1	Front wheel speed sensor bracket	2	
2	Front steering knuckle	2	
3	Front brake disc dust cover	2	
4	Front hub bearing assembly	2	
5	Front brake disc	2	
6	Front brake caliper	2	
7	Front friction plate	2	
8	Rear wheel speed sensor bracket I	2	
9	Rear wheel speed sensor bracket	2	
10	Rear steering knuckle	2	
11	Rear brake disc dust cover	2	
12	Rear hub bearing assembly	2	
13	Rear brake disc	2	
14	ESP motor assembly repair kit	2	Including hexagon socket head bolt, EPS motor assembly, and seal ring
15	Rear brake caliper assembly	2	
16	Rea friction plate	2	
17	Right front brake hose	1	
18	Brake pipeline assembly 4#	1	
19	Brake pipeline assembly 5#	1	
20	Brake pipeline assembly 2#	1	
21	Brake pipeline assembly 6#	1	
22	Brake pipeline assembly 1#	1	

23	Brake pipeline assembly 3#	1	
24	Four-way joint	1	
25	Left front brake hose	1	
26	Left rear brake hose	1	
27	Brake pipeline assembly 7#	1	
28	Brake pipeline assembly 8#	1	
29	Right rear brake hose	1	
30	Brake pedal and bracket assembly	1	

6.6.5 Brake disc

6.6.5.1 Removal and refitting of front brake assembly

Removal procedure

CAUTION:

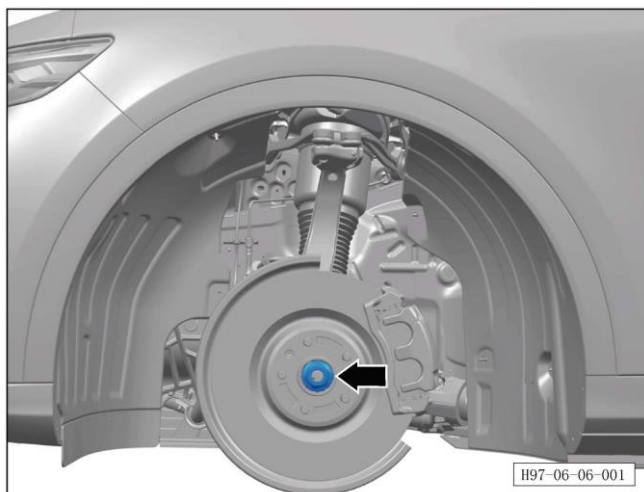
- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

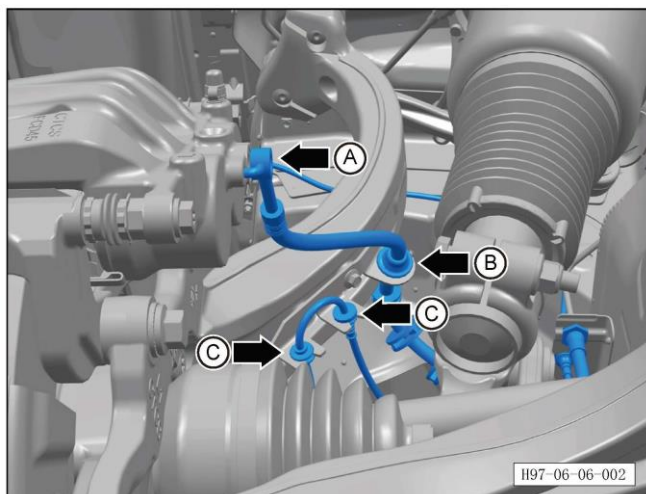
Note:

- This part introduces the removal and refitting of the left front brake assembly, which can be referred to for the operations on the right side.
- Mark the reusable brake lining so that it can be refitted at the same position. Otherwise, uneven braking will occur.

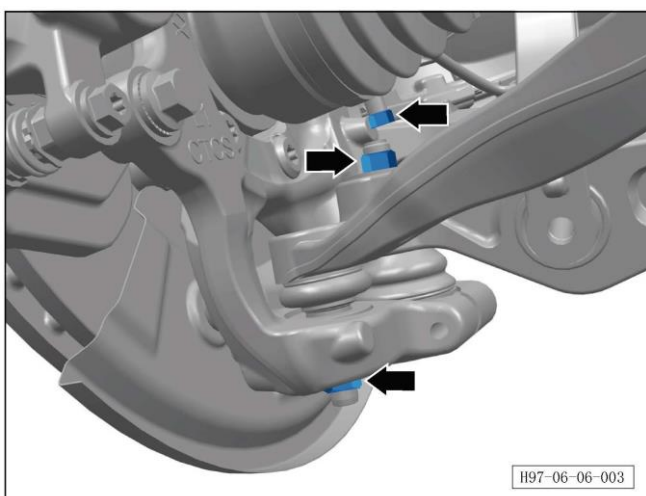
1. Remove the front wheel (refer to [6.5.9.1 Removal and refitting of wheels](#))
2. Open the exhaust valve to relieve system pressure.
3. Place a rag directly below the hose connection.
4. Use the brake fluid bleed tool to suck the brake fluid in the brake fluid reservoir out of the left front brake caliper (refer to [3.1.4.4 Change of brake fluid](#))
5. Remove front brake assembly.
 - a. Unscrew the fixing nut of the drive shaft assembly.

Tightening torque of nut: $330\pm 15\text{Nm}$.





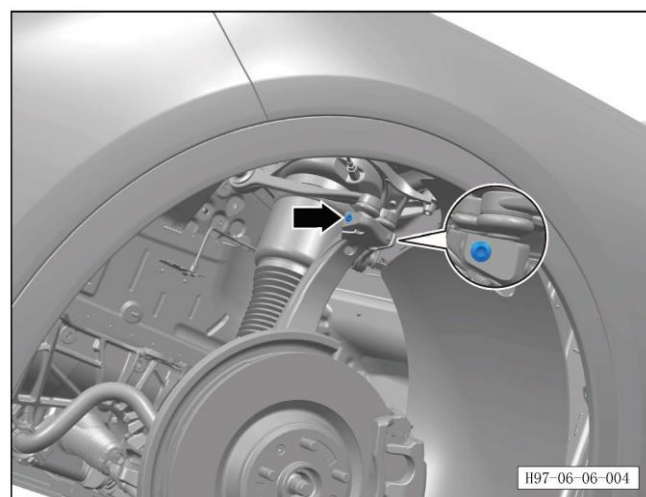
b. Unscrew the fixing bolt A of the front brake hose, and disengage the fixing clip B of the front brake hose and the fixing clip C of the front wheel speed sensor. Tightening torque of bolt: $30\pm 2\text{Nm}$.



c. Unscrew the 3 fixing bolts of the front brake assembly. Tightening torque of bolt: $90\text{Nm}+90^\circ$.

CAUTION:

The ball joint nut is not reusable and should be replaced.



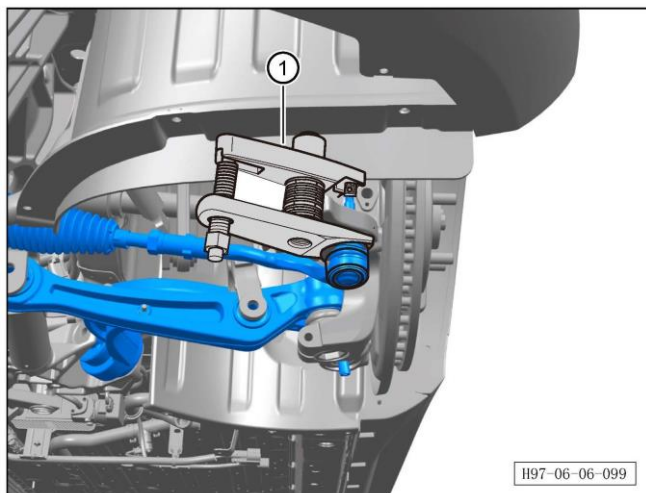
d. Unscrew 1 fixing bolt and 1 fixing nut of the front brake assembly.

Tightening torque of bolt: $45\pm 7\text{Nm}$.

Tightening torque of nut: $45\pm 7\text{Nm}$.

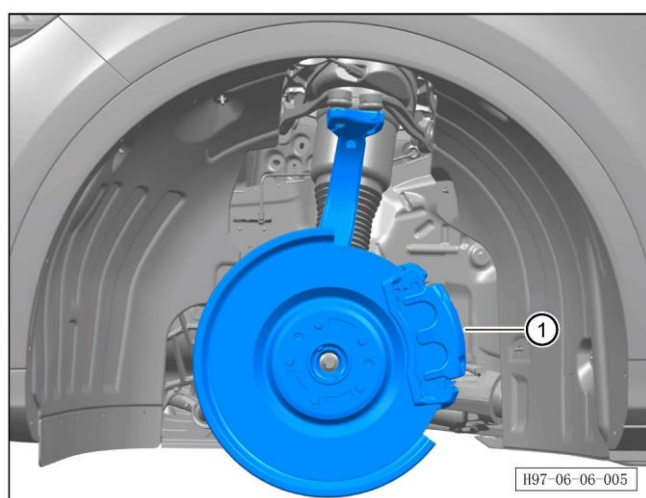
CAUTION:

The ball joint nut is not reusable and should be replaced.

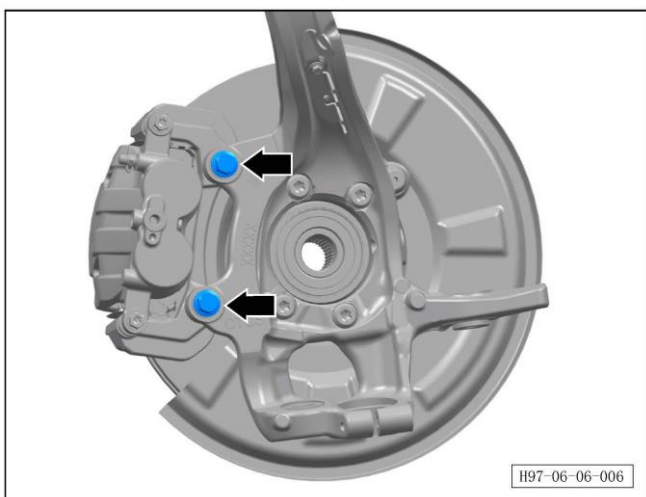


e. Refit the front lower swing arm ball joint removal tool ①, press out the steering gear outer ball joint from the front steering knuckle, and disconnect them.

f. Refit the front lower swing arm ball joint removal tool ①, press out the lower swing arm ball joint from the front steering knuckle, and disconnect them.

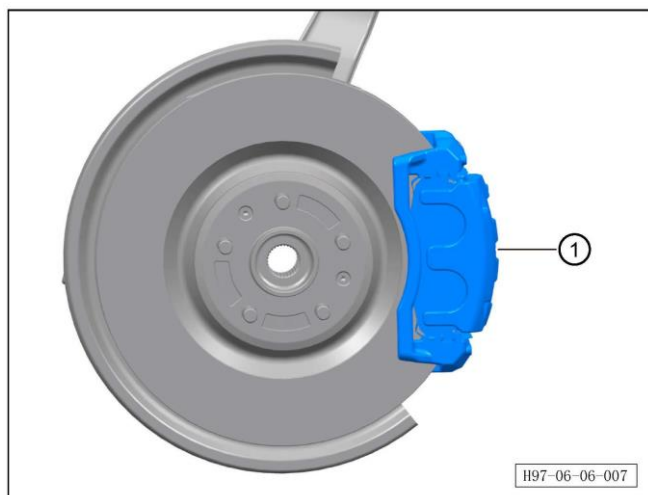


g. Remove the front brake assembly and brake caliper assembly ①.



h. Unscrew the fixing bolt of the front brake caliper assembly.

Tightening torque of bolt: 120Nm+45°.



i. Remove the front brake caliper assembly ① and take it down.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

Tighten the fixing bolt and fixing nut to the specified torque.

After refitting, perform four-wheel alignment ([refer to 6.5.9.3 Four-wheel alignment](#))

CAUTION:

- Check the hoses and pipe connections for leaks, and if necessary, retighten them.
- Every time you refit a brake caliper assembly or a brake hose, neaten the brake hose and keep it in a naturally bent state.
- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.6.5.2 Removal and refitting of rear brake assembly

Removal procedure

Note:

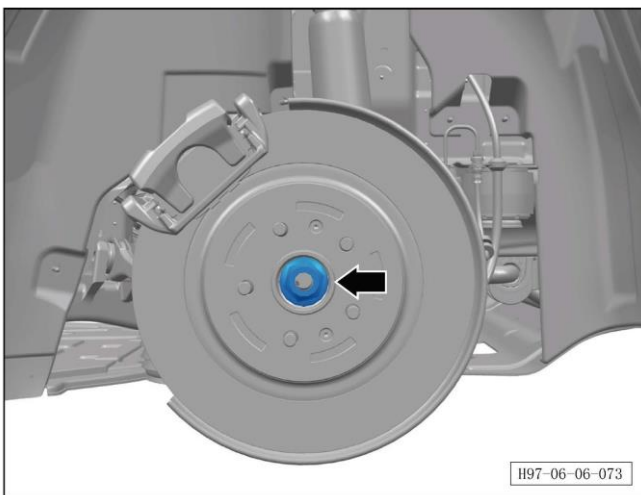
- This part introduces the removal and refitting of the left rear brake assembly, which can be referred to for the operations on the right side.
- Mark the reusable brake lining so that it can be refitted at the same position. Otherwise, the uneven braking will occur.

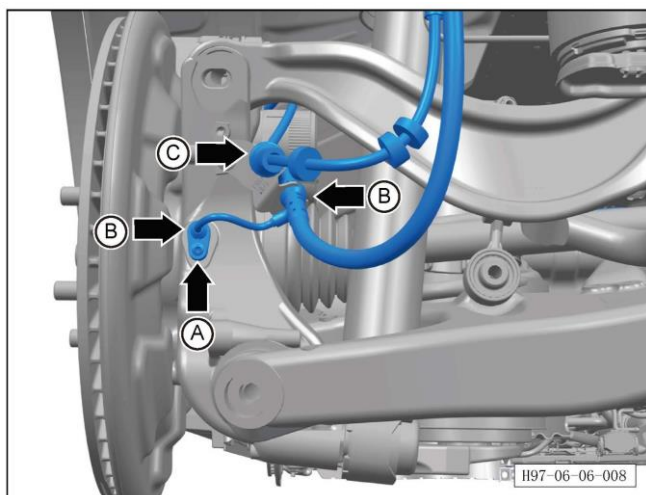
CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

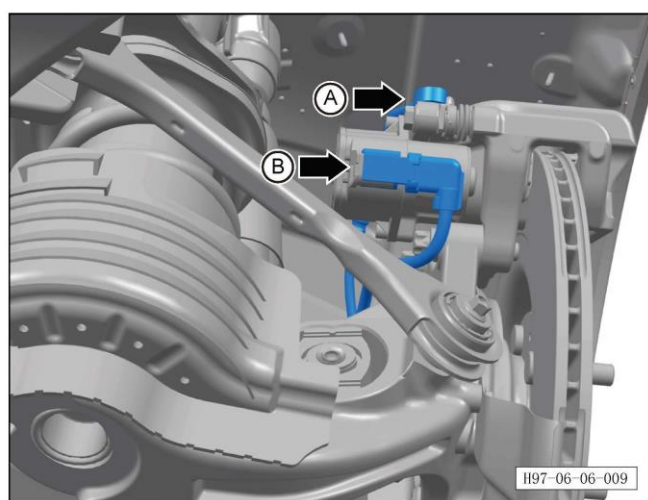
1. Remove the rear wheel (refer to [6.5.9.1 Removal and refitting of wheels](#))
2. Open the exhaust valve to relieve system pressure.
3. Place a rag directly below the hose connection.
4. Use the brake fluid bleed tool to suck the brake fluid in the brake fluid reservoir out of the left rear brake caliper (refer to [3.1.4.4 Change of brake fluid](#))
5. Remove the bolt at the lower part of the rear shock absorber strut assembly (refer to [6.3.9.1 Removal and refitting of rear shock absorber strut assembly](#))
6. Remove rear brake assembly.

- a. Unscrew the fixing nut of the drive shaft assembly.
Tightening torque of nut: $330\pm 15\text{Nm}$.

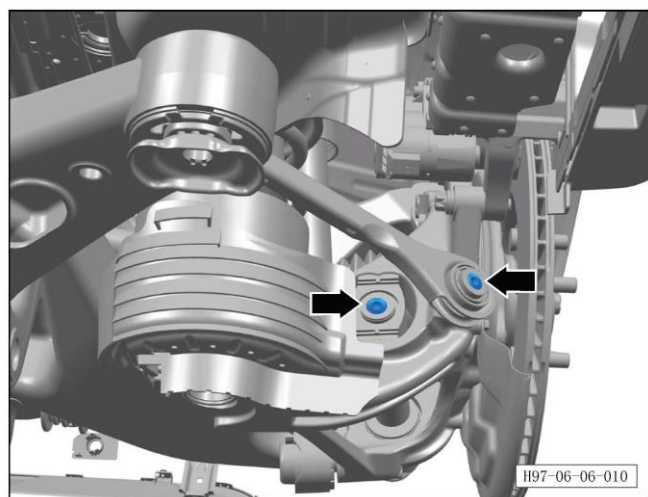




b. Unscrew the fixing bolt A, and disengage the front wheel speed fixing clip B and the brake hose clip C.
Tightening torque of bolt: $8\pm 1\text{Nm}$.



c. Unscrew the brake hose fixing bolt A and disconnect the rear wheel speed sensor B.
Tightening torque of bolt: $30\pm 2\text{Nm}$.

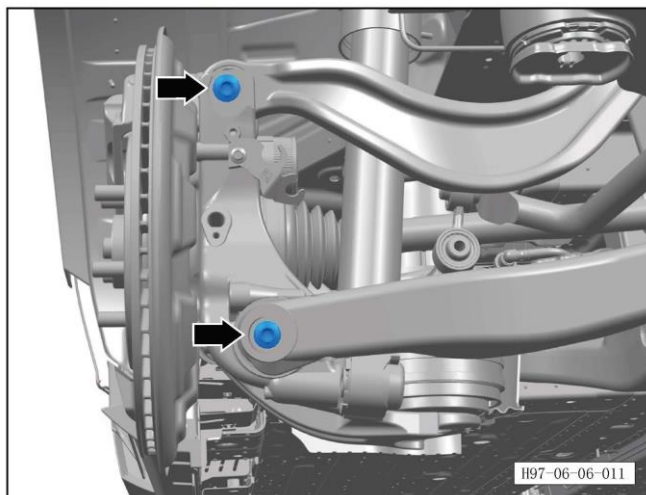


d. Unscrew the 2 fixing bolts of the rear brake assembly.

Tightening torque of bolt: $70\text{Nm}+180^\circ$.

CAUTION:

The ball joint nut is not reusable and should be replaced.



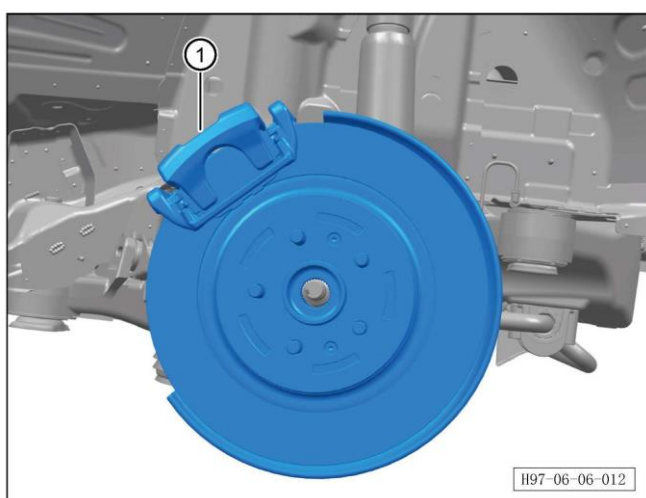
e. Unscrew the 2 fixing bolts of the rear brake assembly.

Tightening torque of upper swing arm bolt: $115 \pm 17 \text{ Nm}$.

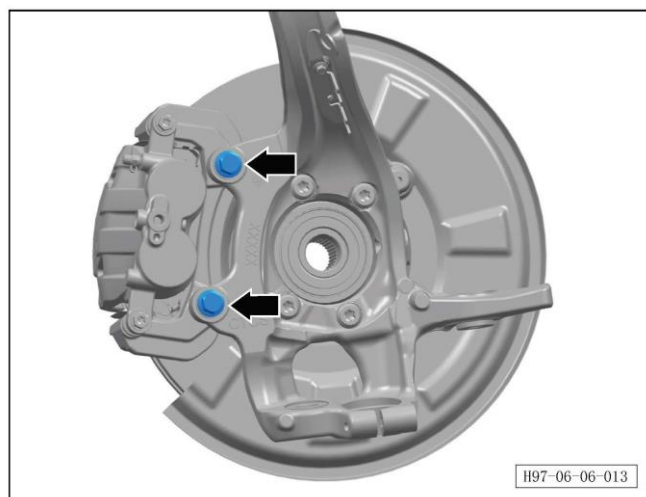
Tightening torque of lower control arm bolt: $70 \text{ Nm} + 90^\circ$.

CAUTION:

The ball joint nut is not reusable and should be replaced.

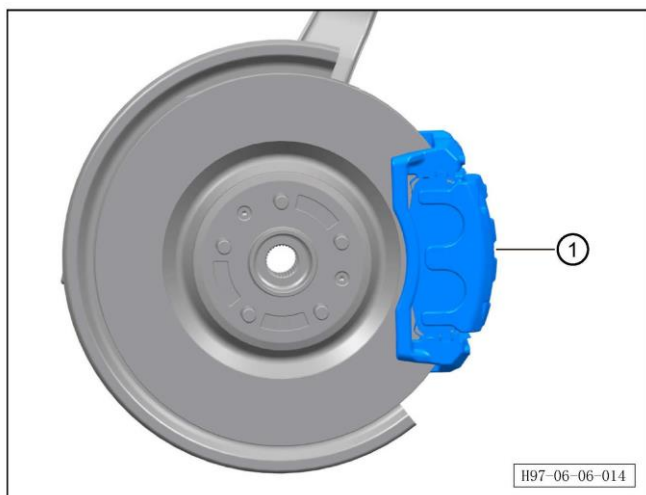


f. Remove the rear brake assembly and brake caliper assembly ①.



g. Unscrew the fixing bolt of the rear brake caliper assembly.

Tightening torque of bolt: $120 \text{ Nm} + 45^\circ$.



h. Remove the rear brake caliper assembly ① and take out the rear brake assembly.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- Tighten the fixing bolt and fixing nut to the specified torque.
- After refitting, conduct four-wheel alignment (refer to [6.5.9.3 Four-wheel alignment](#))

CAUTION:

- Check the hoses and pipe connections for leaks, and if necessary, retighten them.
- Every time you refit a brake caliper assembly or a brake hose, neaten the brake hose and keep it in a naturally bent state.
- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.6.5.3 Removal and refitting of front steering knuckle

Removal procedure

Note:

- This part introduces the removal and refitting of the left front steering knuckle, which is generally the same as that of the right front steering knuckle.

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

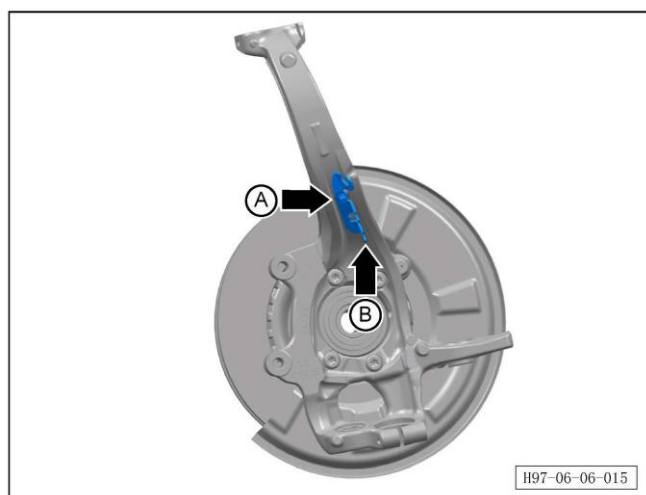
1. Remove the front wheel (refer to [6.5.9.1 Removal and refitting of wheels](#))

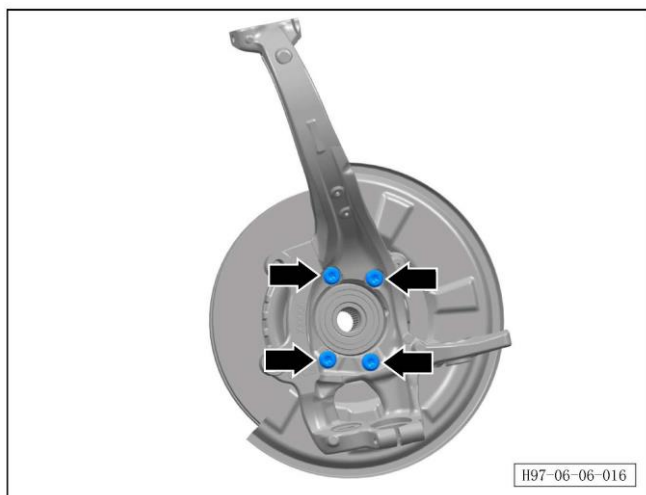
2. Remove the front brake assembly (refer to [6.6.5.1 Removal and refitting of brake](#))

3. Remove front steering knuckle.

a. Unscrew the bolt A of the front wheel speed sensor fixing bracket, and take out the front wheel speed sensor and the fixing bracket.

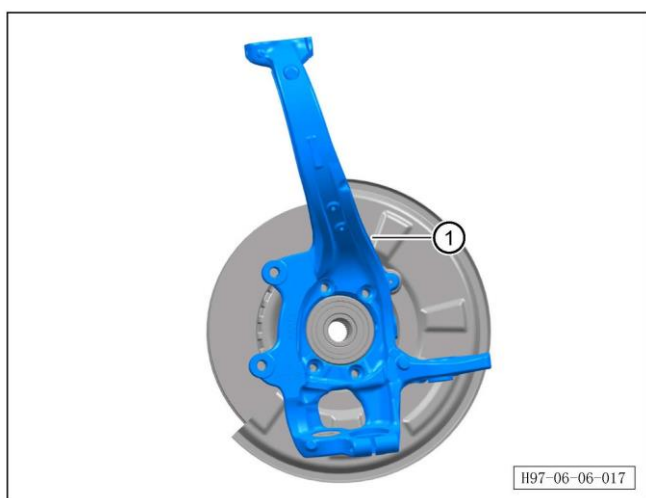
Tightening torque of bolt: $8\pm 1\text{Nm}$.





b. Unscrew the 4 fixing bolts of the front steering knuckle.

Tightening torque of bolt: 115+90°.Nm



c. Remove the front steering knuckle ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- After refitting, perform the four-wheel alignment.
- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.6.5.4 Removal and refitting of rear steering knuckle

Note:

- This part introduces the removal and refitting of the left rear steering knuckle, which is generally the same as that of the right rear steering knuckle.

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

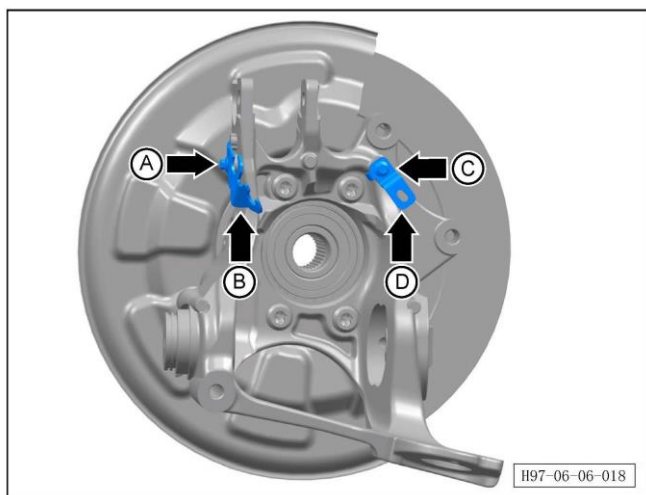
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

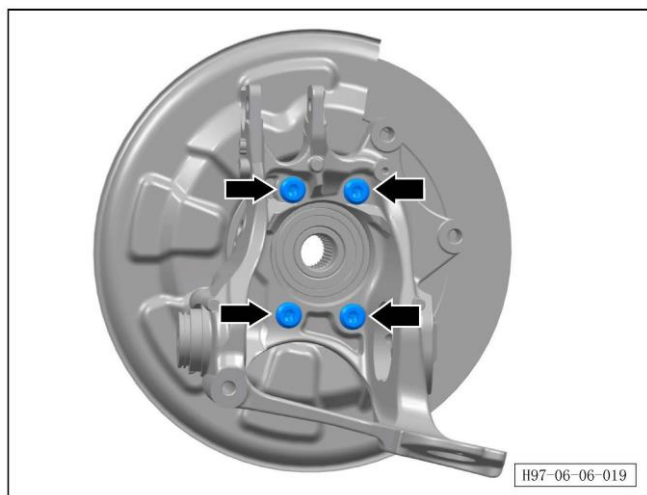
Removal procedure

1. Remove the rear wheel (refer to [6.5.9.1 Removal and refitting of wheels](#))
2. Remove the brake assembly (refer to [6.6.5.1 Removal and refitting of brake](#))
3. Remove rear steering knuckle.
 - a. Unscrew the bolt A of the brake hose fixing bracket, and take out the fixing bracket B of the brake hose.
 - b. Unscrew the bolt C of the rear wheel speed sensor fixing bracket, and take out the rear wheel speed sensor and the fixing bracket D.

Tightening torque of bolt A: $8\pm 1\text{Nm}$.

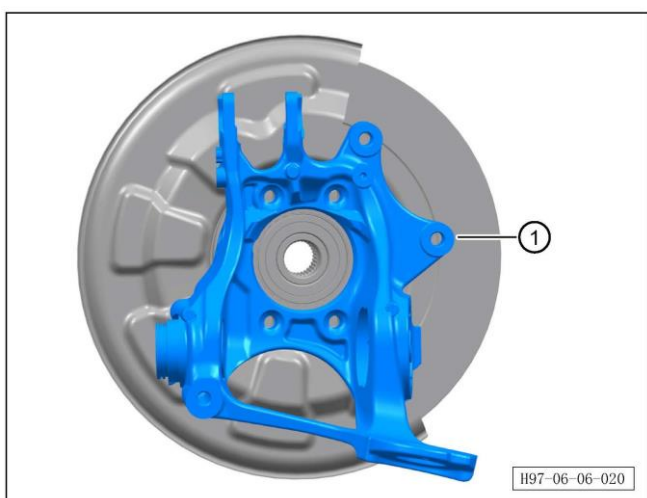
Tightening torque of bolt C: $8\pm 1\text{Nm}$.





c. Unscrew the 4 fixing bolts of the rear steering knuckle.

Tightening torque of bolt: 115+90°.Nm



c. Remove the rear steering knuckle ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- After refitting, perform the four-wheel alignment.
- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.6.5.5 Removal and refitting of front brake lining

Note:

- This part introduces the removal and refitting of the left front brake lining, which can be referred to for the operations on the right side.
- Mark the reusable brake lining so that it can be refitted at the same position. Otherwise, uneven braking will occur.

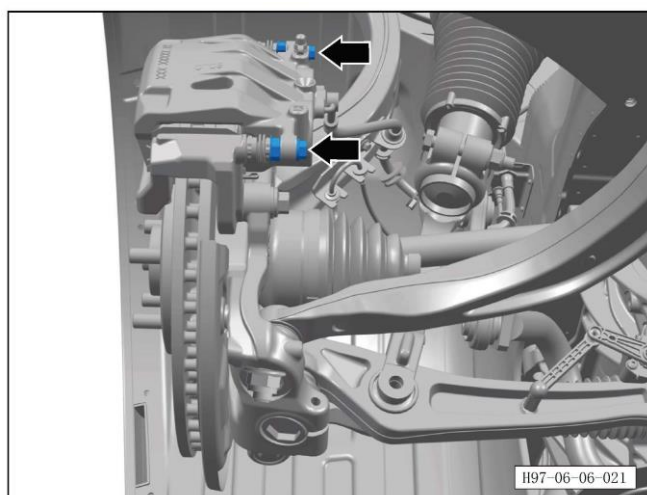
CAUTION:

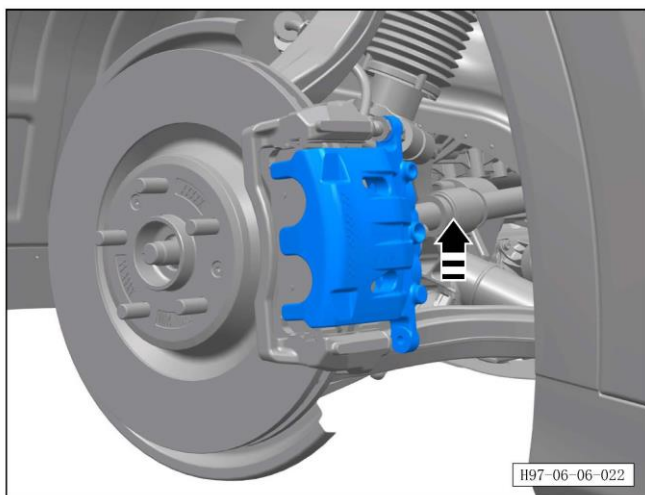
- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

Removal procedure

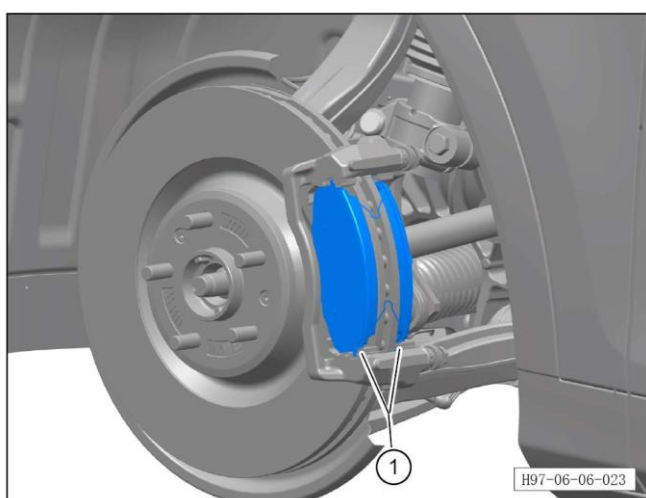
1. Remove the front wheel (refer to [6.5.9.1 Removal and refitting of wheels](#))
2. Remove front brake lining.

- a. Unscrew the 2 fixing bolts of the caliper bracket.
Tightening torque of bolt: $55\pm 5\text{Nm}$.

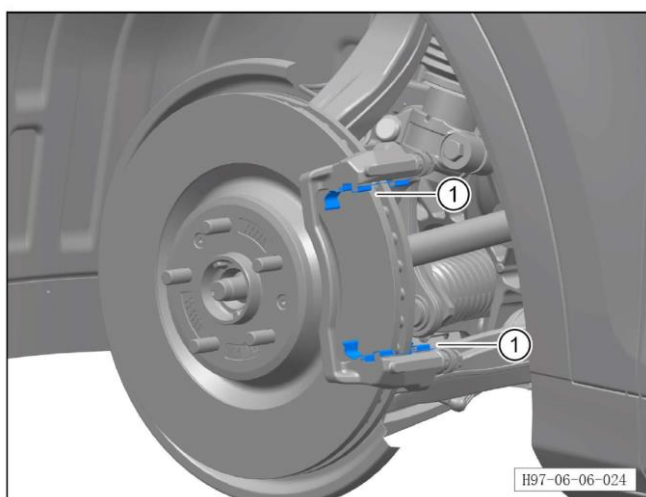




b. Take out the caliper in the direction of the arrow and fix it with a steel wire to prevent the brake hose from being damaged under pressure.



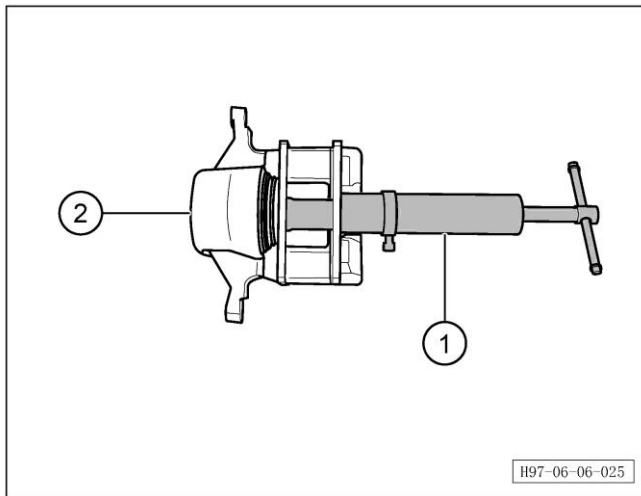
c. Take out the front brake lining and the return spring ①.



d. Remove the front brake lining limit spring ①.

CAUTION:

- Check the wear on the front brake lining, and if necessary, replace the front brake lining.
- Thoroughly clean the friction surface of the front caliper and front brake disc.



Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- Use a brake caliper piston reset tool ① to reset the front brake piston ②.
- When refitting the front caliper, neaten the brake hose and keep it naturally bent.
- Suck out a small amount of brake fluid from the brake fluid reservoir before pressing the brake piston back to the cylinder with a caliper piston reset tool so as to prevent the brake fluid overflow from causing damages due to piston reset.
- Depress the brake pedal several times with the vehicle parked after replacement of the brake lining, so as to make the brake pedal returns to its normal travel.
- Check the brake fluid level after replacement of the brake lining.
- Check the hoses and pipe connections for leaks, and if necessary, retighten them.

Parameters of front brake lining

Thickness of outer brake lining	Thickness of inner brake lining	Wear limit
10.5mm	10.5mm	2 mm (excluding lining back plate)

CAUTION:

- After refitting, perform the four-wheel alignment.
- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.6.5.6 Removal and refitting of rear brake lining

Note:

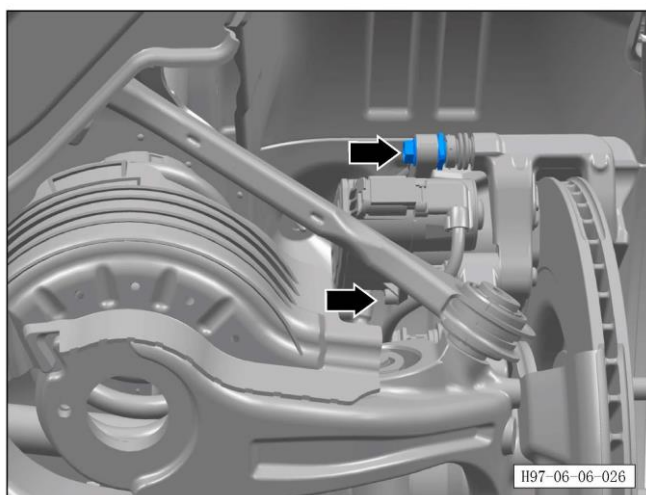
- This part introduces the removal and refitting of the left rear brake lining, which can be referred to for the operations on the right side.
- Mark the reusable brake lining so that it can be refitted at the same position. Otherwise, uneven braking will occur.

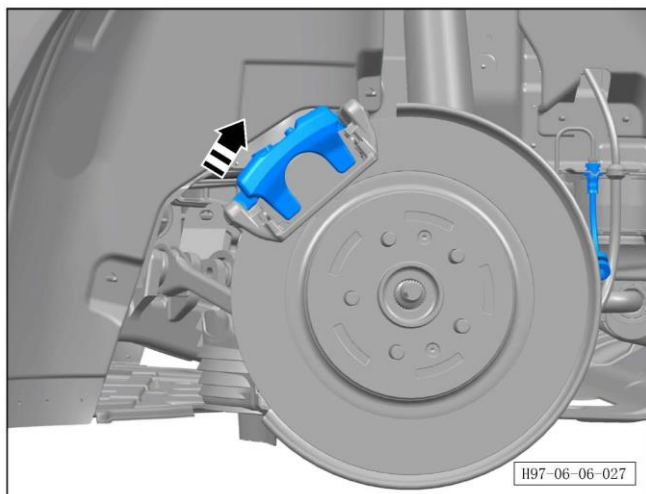
CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

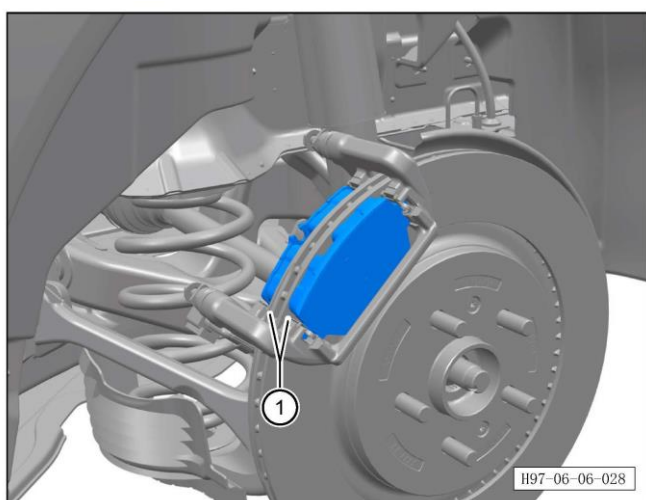
Removal procedure

1. Remove the rear wheel (refer to [6.5.9.1 Removal and refitting of wheels](#))
 - a. Remove rear brake lining.
 - a. Unscrew the 2 fixing bolts of the caliper bracket.
- Tightening torque of bolt: $55\pm 5\text{Nm}$.

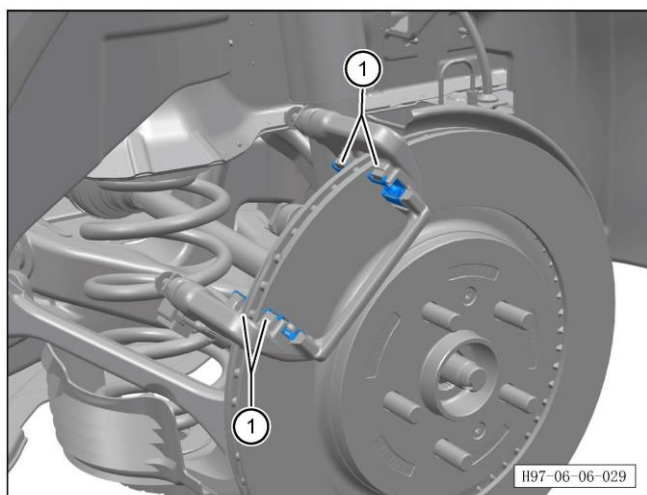




b. Take out the caliper in the direction of the arrow and fix it with a steel wire to prevent the brake hose from being damaged under pressure.



c. Take out the rear brake lining ①.



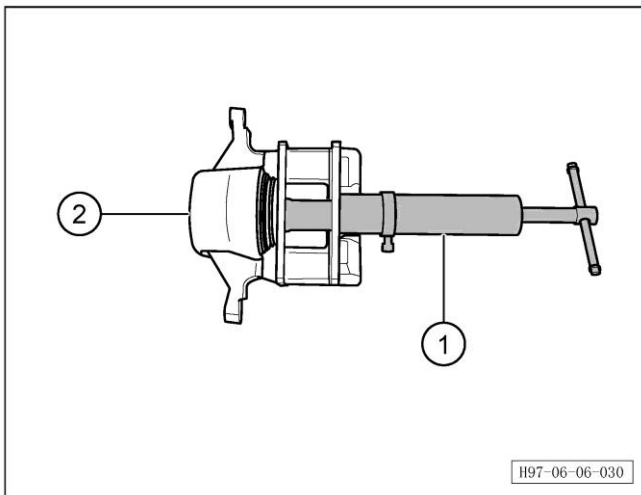
d. Remove the rear brake pad limit spring ①.

CAUTION:

- Check the wear on the front brake lining, and if necessary, replace the front brake lining.
- Thoroughly clean the friction surface of the front caliper and front brake disc.

Refitting procedure

The refitting procedure is performed in reverse order.

**CAUTION:**

- Use a brake caliper piston reset tool ① to reset the front brake piston ②.
- When refitting the front caliper, neaten the brake hose and keep it naturally bent.
- Suck out a small amount of brake fluid from the brake fluid reservoir before pressing the brake piston back to the cylinder with a caliper piston reset tool so as to prevent the brake fluid overflow from causing damages due to piston reset.
- Depress the brake pedal several times with the vehicle parked after replacement of the brake lining, so as to make the brake pedal returns to its normal travel.
- Check the brake fluid level after replacement of the brake lining.
- Check the hoses and pipe connections for leaks, and if necessary, retighten them.

Parameters of rear brake lining

Thickness of outer brake lining	Thickness of inner brake lining	Wear limit
11mm	11mm	2 mm (excluding lining back plate)

CAUTION:

- After refitting, perform the four-wheel alignment.
- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.6.5.7 Removal and refitting of hub bearing assembly

Note:

- This part introduces the removal and refitting of the left hub bearing assembly, which can be referred to for the operations on the right side.
- The removal and refitting of rear hub bearing assembly can refer to those of the front hub bearing assembly as those procedures are generally the same.

CAUTION:

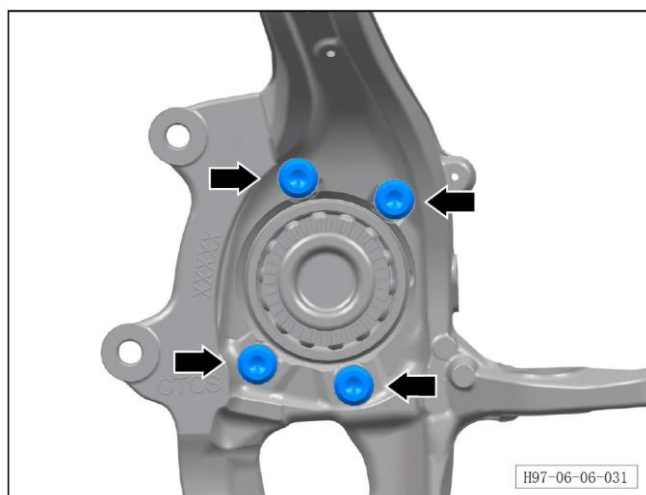
- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

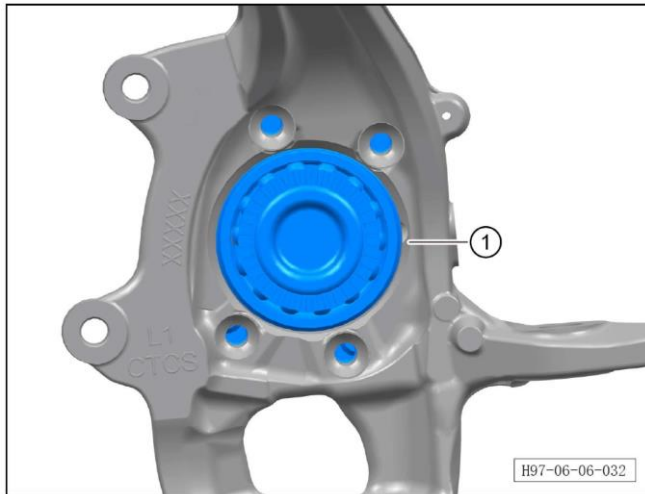
Removal procedure

1. Remove the 4 wheels (refer to [6.5.9.1 Removal and refitting of wheels](#))
2. Remove the brake assembly (refer to [6.6.5.1 Removal and refitting of brake](#))
3. Remove the steering knuckle (refer to [6.6.5.3 Removal and refitting of front steering knuckle](#))
4. Remove hub and bearing assembly.

- a. Screw out the 4 fastening bolts of hub bearing assembly.

Tightening torque of bolt: $165\pm 16\text{Nm}$.





b. Remove the hub bearing assembly ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- After refitting, perform the four-wheel alignment.
- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.6.5.8 Removal and refitting of front brake disc

Note:

- This part introduces the removal and refitting of the left front brake disc, which can be referred to for the operations on the right side.

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

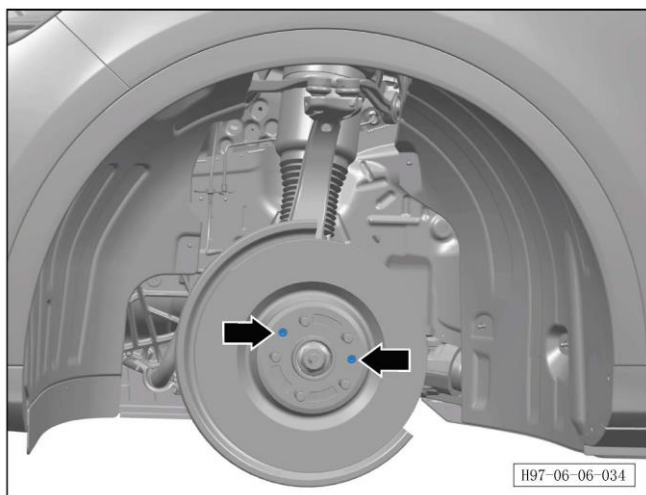
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

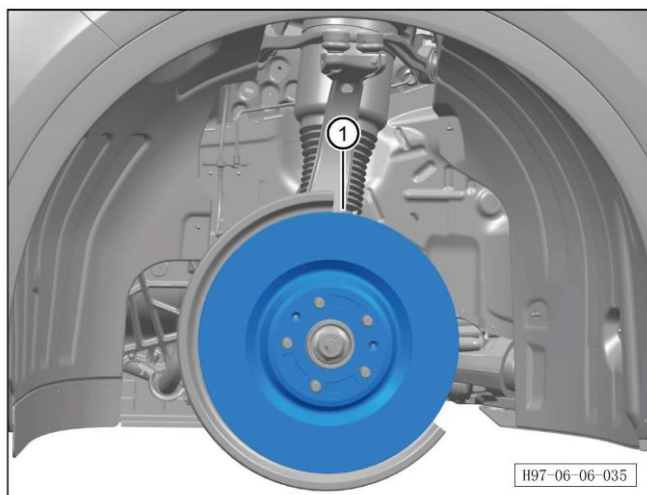
Removal procedure

1. Remove the front wheel (refer to [6.5.9.1 Removal and refitting of wheels](#))
2. Remove the front brake caliper assembly (refer to [6.6.6.1 Removal and refitting of brake caliper](#))
3. Remove front brake disc.

a. Unscrew the 2 fixing screws of the brake disc.

Tightening torque of screw: $6.5 \pm 1.5 \text{ Nm}$.





b. Remove the front brake disc ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

Check the wear on the front brake disc, and if necessary, replace the front brake disc.

No grease or stains shall be found on the brake disc during refitting.

Parameters of front brake disc:

Front brake disc (2WD) thickness	Wear limit
30mm	28mm
Front brake disc (4WD) thickness	Wear limit
30mm	28mm

CAUTION:

- After refitting, perform the four-wheel alignment.
- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.6.5.9 Removal and refitting of rear brake disc

Note:

- This part introduces the removal and refitting of the left rear brake disc, which can be referred to for the operations on the right side.

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

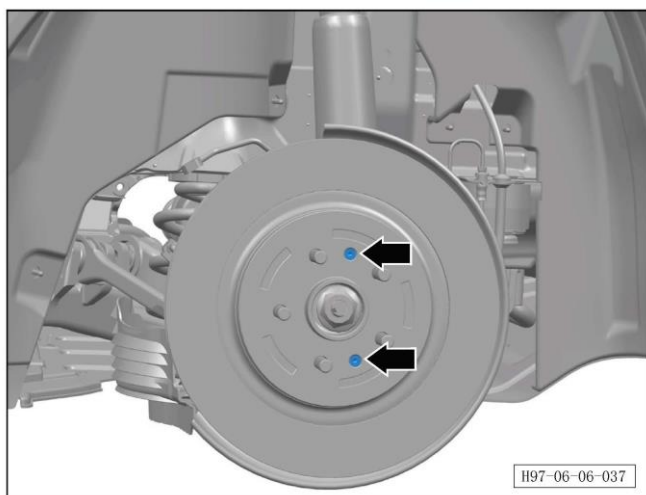
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

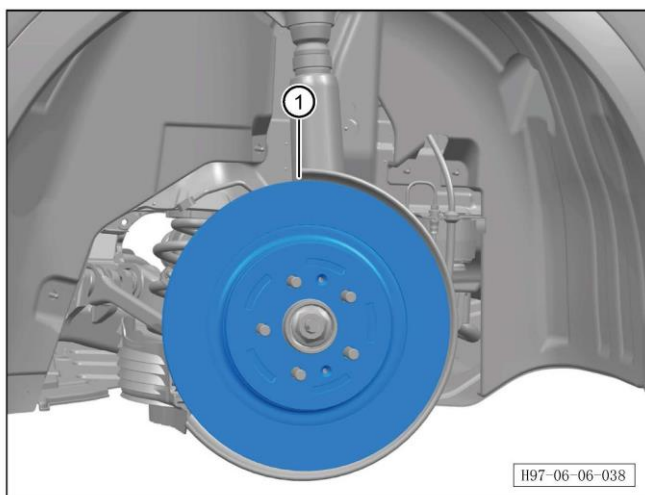
Removal procedure

1. Remove the rear wheel (refer to [6.5.9.1 Removal and refitting of wheels](#))
2. Remove the rear brake caliper assembly (refer to [6.6.6.2 Removal and refitting of brake caliper](#))
3. Remove rear brake disc.

a. Unscrew the 2 fixing screws of the rear brake disc.

Tightening torque of screw: $6.5 \pm 1.5 \text{ Nm}$.





b. Remove the rear brake disc ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

No grease or stains shall be found on the brake disc during refitting.

Check the wear on the front brake disc, and if necessary, replace the front brake disc.

Parameters of rear brake disc

Rear brake disc (2WD) thickness	Wear limit
20mm	18mm
Rear brake disc (4WD) thickness	Wear limit
20mm	18mm

CAUTION:

- After refitting, perform the four-wheel alignment.
- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.6.5.10 Removal and refitting of front brake disc dust cover

Note:

- This part introduces the removal and refitting of the left front brake disc dust cover, which is generally the same as that of the right front brake disc dust cover.

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

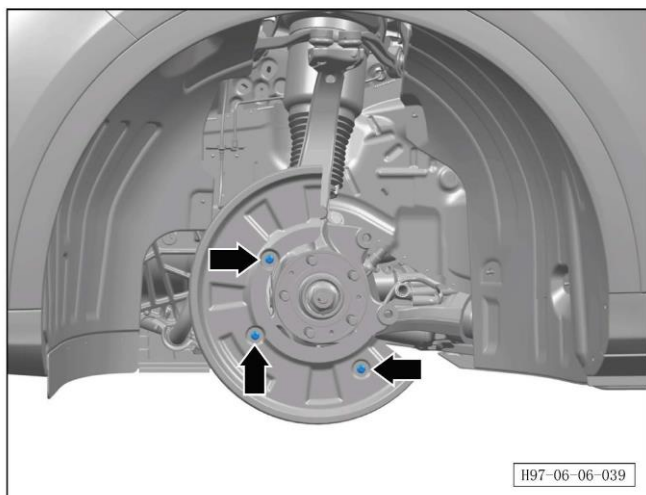
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

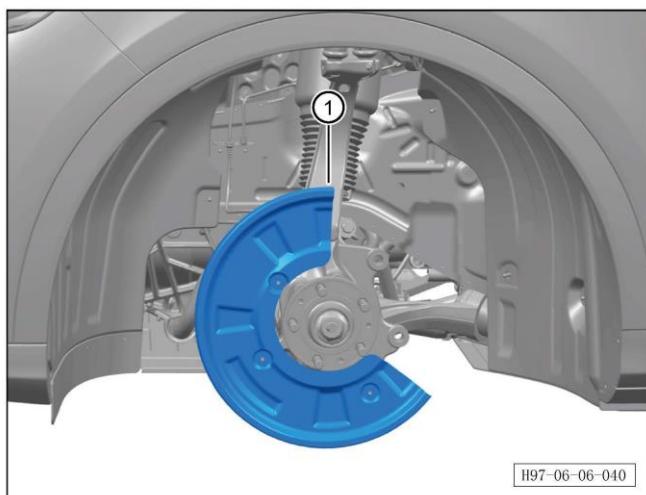
Removal procedure

1. Remove the front wheel (refer to [6.5.9.1 Removal and refitting of wheels](#))
2. Remove the front brake disc (refer to [6.6.5.8 Removal and refitting of front brake disc](#))
3. Remove front brake disc dust cover.

a. Unscrew the 3 fixing screws of the brake disc dust cover.

Tightening torque of bolt: $6.5 \pm 1.5 \text{ Nm}$.





b. Remove the front brake disc dust cover ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- After refitting, perform the four-wheel alignment.
- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.6.5.11 Removal and refitting of rear brake disc dust cover

Note:

- This part introduces the removal and refitting of the left rear brake disc dust cover, which is generally the same as that of the right rear brake disc dust cover.

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

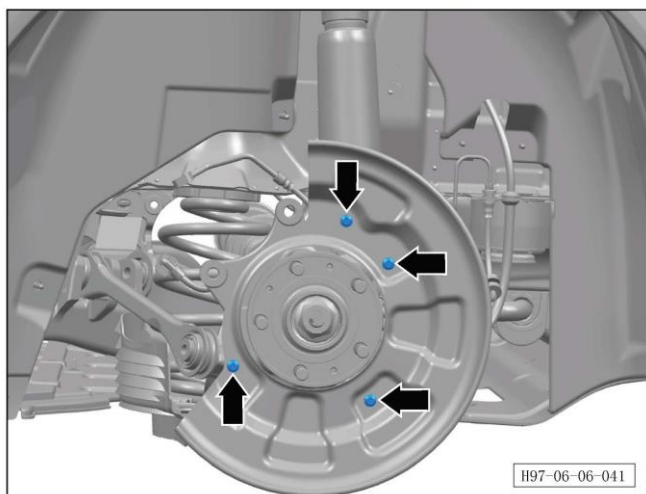
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

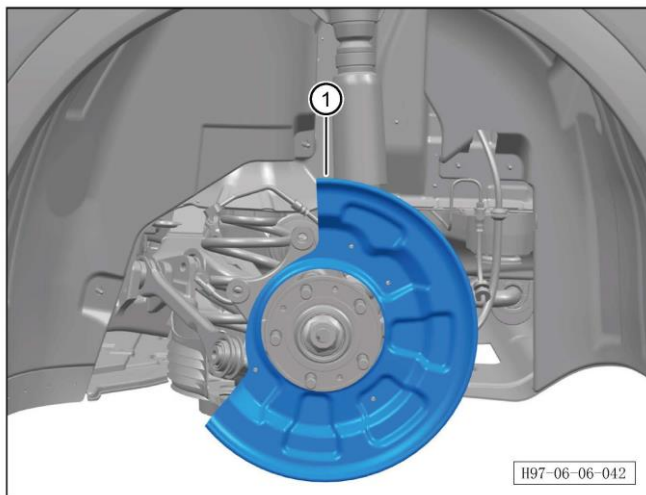
Removal procedure

1. Remove the rear wheel (refer to [6.5.9.1 Removal and refitting of wheels](#))
2. Remove the rear brake disc (refer to [6.6.5.9 Removal and refitting of rear brake disc](#))
3. Remove rear brake disc dust cover.

a. Unscrew the 4 fixing screws of the brake disc dust cover.

Tightening torque of bolt: $6.5 \pm 1.5 \text{ Nm}$.





b. Remove the rear brake disc dust cover ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- After refitting, perform the four-wheel alignment.
- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.6.5.12 Removal and refitting of front wheel speed sensor bracket

Note:

- This part introduces the removal and refitting of the left front wheel speed sensor bracket, which can be referred to for the operations on the right side.

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

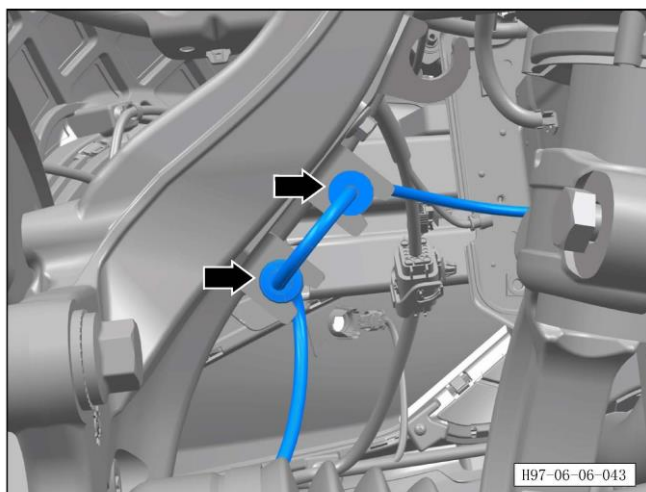
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

Removal procedure

1. Remove the front wheel (refer to [6.5.9.1 Removal and refitting of wheels](#))

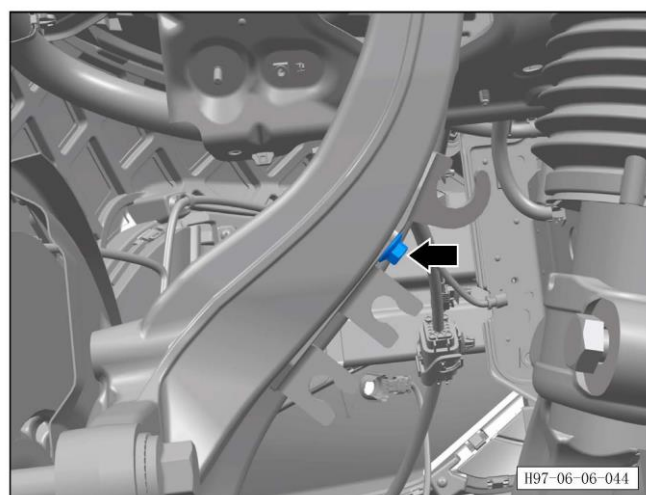
2. Remove front wheel speed sensor bracket.

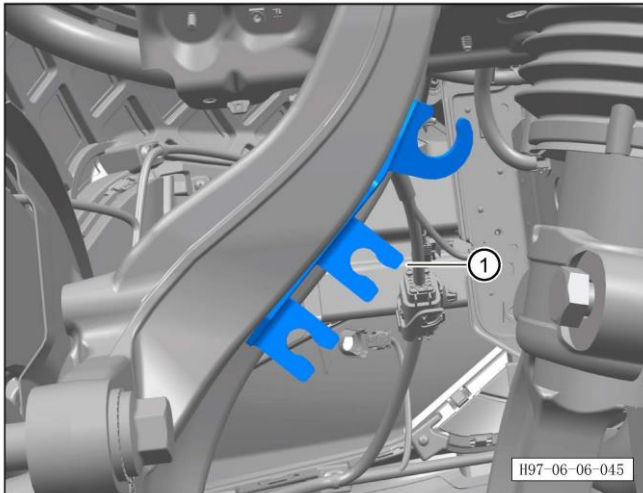
a. Disconnect the 2 clips of the front wheel speed sensor.



b. Unscrew the fixing bolt of the front wheel speed sensor bracket.

Tightening torque of bolt: 8 ± 1 Nm.





c. Take down the front wheel speed sensor bracket ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- After refitting, perform the four-wheel alignment.
- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.6.5.13 Removal and refitting of rear wheel speed sensor bracket

Note:

- This part introduces the removal and refitting of the left rear wheel speed sensor bracket, which can be referred to for the operations on the right side.

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

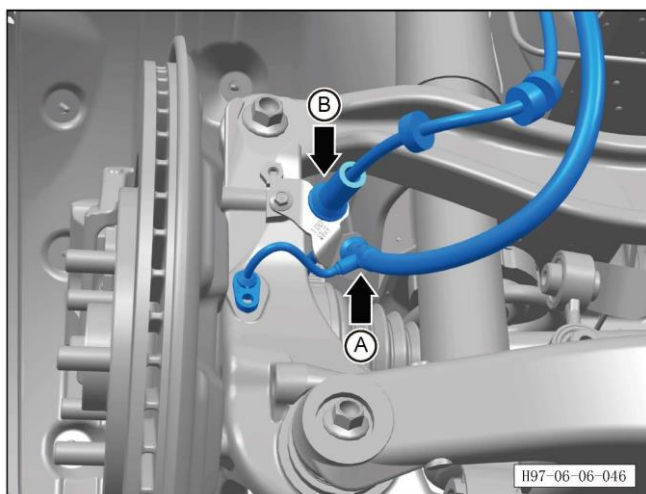
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

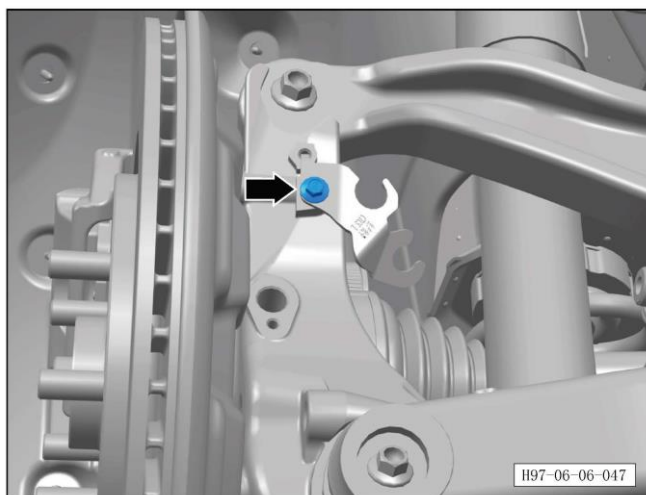
Removal procedure

1. Remove the rear wheel (refer to [6.5.9.1 Removal and refitting of wheels](#))

2. Remove rear wheel speed sensor bracket.

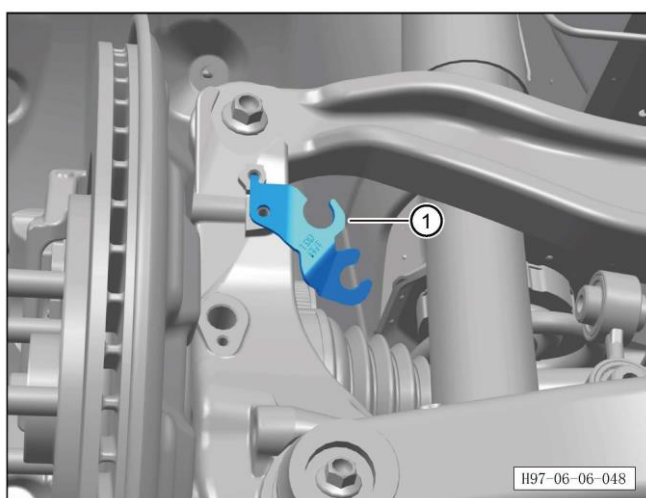
a. Disconnect the clip A of the front wheel speed sensor and the clip B of the rear brake hose.





b. Unscrew the fixing bolt of the rear wheel speed sensor bracket.

Tightening torque of bolt: $8\pm 1\text{Nm}$.



c. Take down the rear wheel speed sensor bracket ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- After refitting, perform the four-wheel alignment.
- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.6.5.14 Removal and refitting of rear wheel speed sensor bracket I

Note:

- This part introduces the removal and refitting of the left rear wheel speed sensor bracket I, which can be referred to for the operations on the right side.

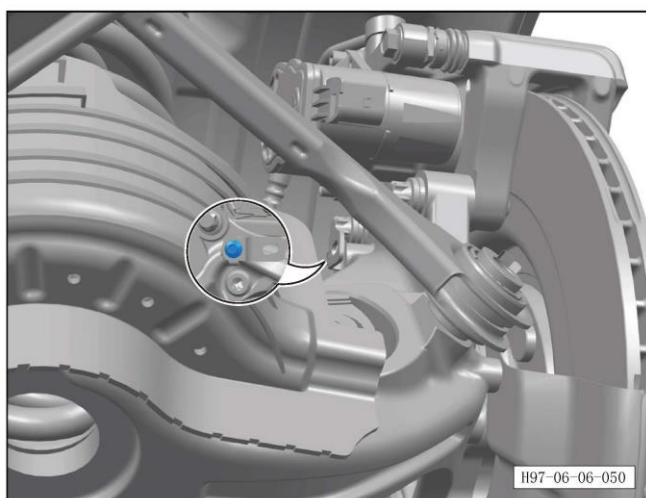
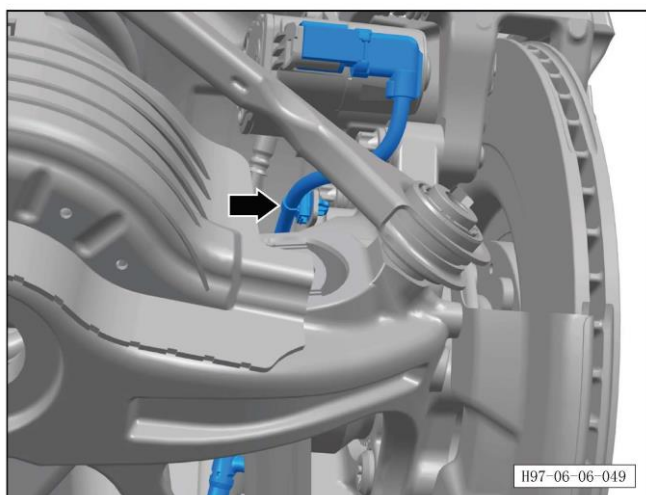
CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

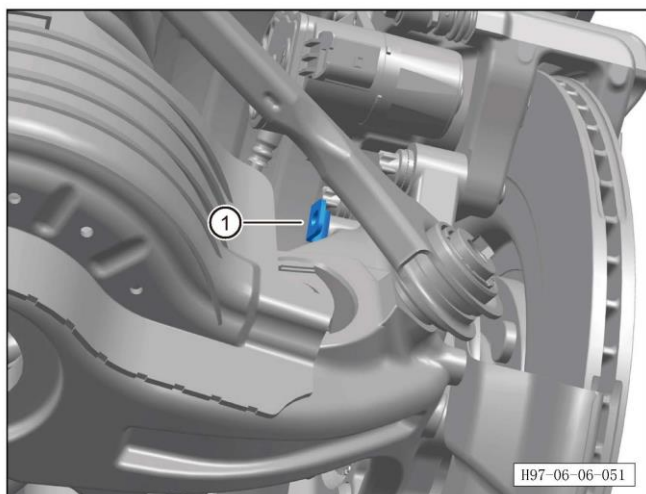
Removal procedure

1. Remove the rear wheel (refer to [6.5.9.1 Removal and refitting of wheels](#))
2. Remove rear wheel speed sensor bracket I.
 - a. Disconnect the clip of the rear wheel speed sensor.



- b. Unscrew the fixing bolt of the rear wheel speed sensor bracket I.

Tightening torque of bolt: 8 ± 1 Nm.



c. Take out the rear wheel speed sensor bracket I ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- After refitting, perform the four-wheel alignment.
- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.6.6 Brake caliper

6.6.6.1 Removal and refitting of front brake caliper assembly

Note:

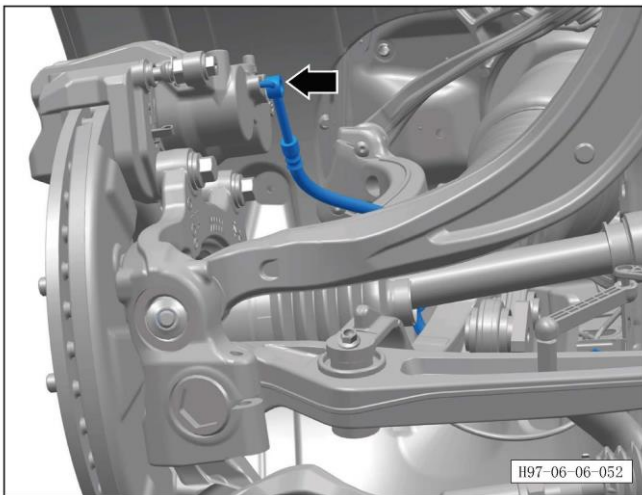
- This part introduces the removal and refitting of the left front brake caliper assembly, which can be referred to for the operations on the right side.
- When removing the caliper, do not spill brake fluid on the vehicle, otherwise it may damage the paint. If the brake fluid has been spilled onto paint, remove the brake fluid with water immediately.
- Wrap the disassembled hose connector with a rag or non-woven repair cloth to prevent leakage of brake fluid.
- The brake disc and brake lining shall be free of any grease.

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

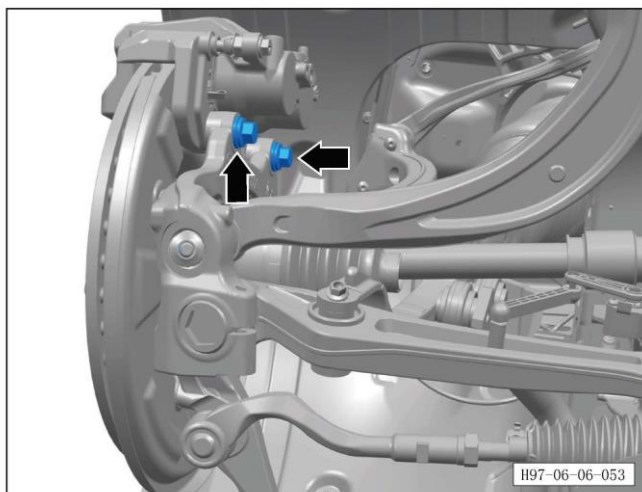
Removal procedure

1. Remove the front wheel (refer to [6.5.9.1 Removal and refitting of wheels](#))
2. Open the exhaust valve to relieve system pressure.
3. Place a rag directly below the hose connection.
4. Use the brake fluid bleed tool to suck the brake fluid in the brake fluid reservoir out of the left front brake caliper (refer to [3.1.4.4 Change of brake fluid](#))
5. Remove front brake caliper assembly.



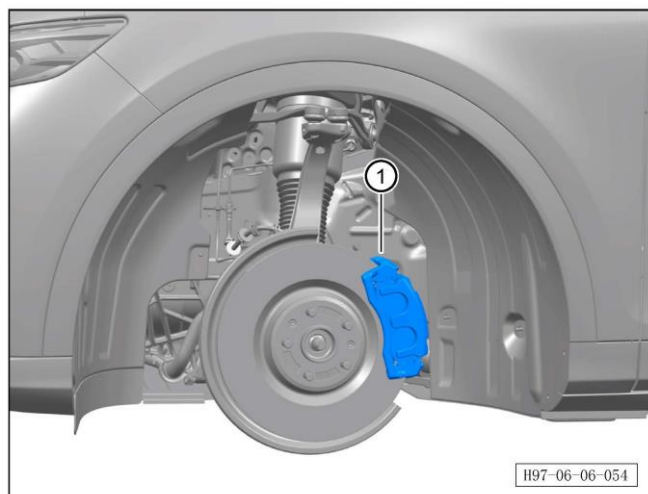
- a. Unscrew the fixing bolt of the brake hose.

Tightening torque of bolt: $30\pm 2\text{Nm}$.



- b. Unscrew the 2 fixing bolts of the front brake caliper assembly.

Tightening torque of bolt: $120\text{Nm}+45^\circ$.



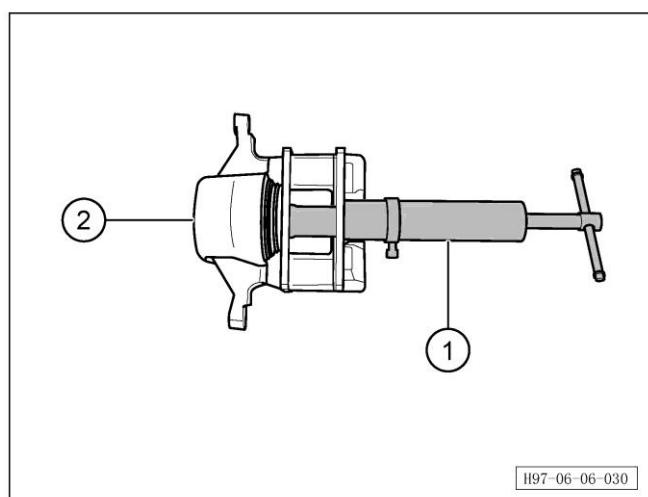
c. Remove the front brake caliper assembly ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- Use a brake caliper piston reset tool ① to reset the front brake piston ②.
- When refitting the front caliper, neaten the brake hose and keep it naturally bent.
- Suck out a small amount of brake fluid from the brake fluid reservoir before pressing the brake piston with a caliper piston reset tool so as to prevent the brake fluid overflow due to piston reset.
- Depress the brake pedal several times with the vehicle parked after replacement of the brake lining, so as to make the brake pedal returns to its normal travel.
- Check the brake fluid level after replacement of the brake lining.
- Check the hoses and pipe connections for leaks, and if necessary, retighten them.



CAUTION:

- After refitting, perform the four-wheel alignment.
- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.6.6.2 Removal and refitting of rear brake caliper assembly

Note:

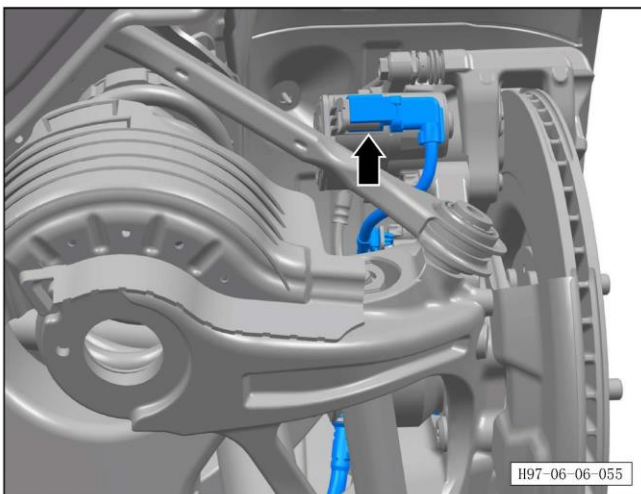
- This part introduces the removal and refitting of the left rear brake caliper assembly, which can be referred to for the operations on the right side.
- When removing the caliper, do not spill brake fluid on the vehicle, otherwise it may damage the paint. If the brake fluid has been spilled onto paint, remove the brake fluid with water immediately.
- Wrap the disassembled hose connector with a rag or non-woven repair cloth to prevent leakage of brake fluid.
- The brake disc and brake lining shall be free of any grease.

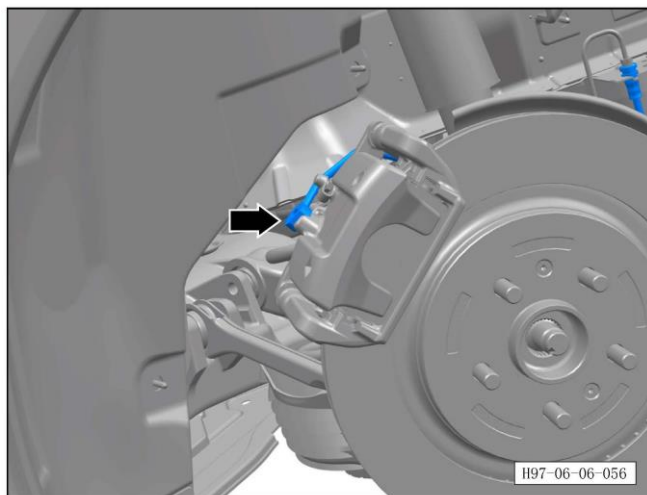
CAUTION:

- For lifting operations of the vehicle with air suspension, please refer to "Precautions" in corresponding sections and "Removal, refitting and maintenance of front/rear air spring".
-
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

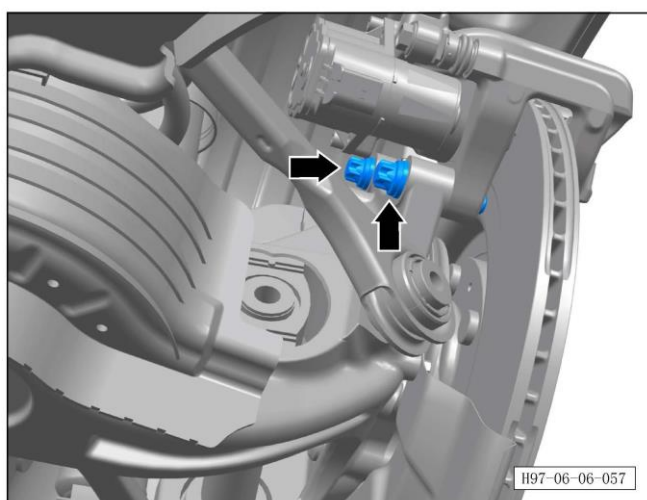
Removal procedure

1. Remove the rear wheel (refer to [6.5.9.1 Removal and refitting of wheels](#))
2. Open the exhaust valve to relieve system pressure.
3. Place a rag directly below the hose connection.
4. Use the brake fluid bleed tool to suck the brake fluid in the brake fluid reservoir out of the left rear brake caliper (refer to [3.1.4.4 Change of brake fluid](#))
5. Remove rear brake caliper assembly.
 - a. Disconnect the rear wheel speed sensor connector.

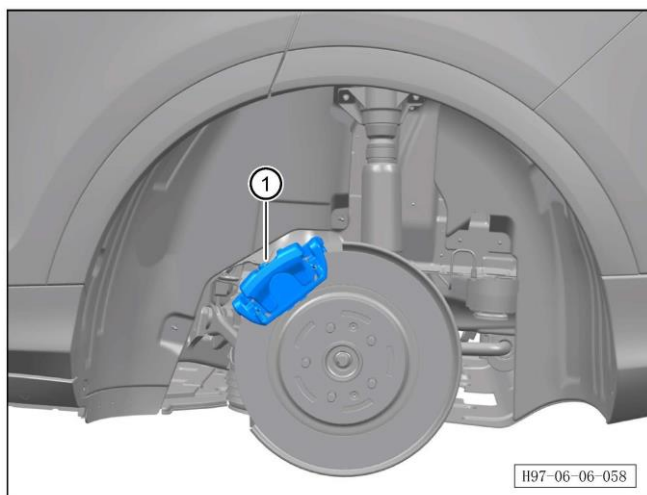




- b. Unscrew the brake hose fixing bolt.
Tightening torque of bolt: $30\pm 2\text{Nm}$.



- c. Unscrew the 2 fixing bolts of the rear brake caliper assembly.
Tightening torque of bolt: $120\text{Nm}+45^\circ$.



- d. Remove the rear brake caliper assembly ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.6.6.3 Removal and refitting of front brake wheel cylinder assembly

Note:

- This part introduces the removal and refitting of the front wheel cylinder assembly, which can be referred to for the operations on the right side.
- When removing the caliper, do not spill brake fluid on the vehicle, otherwise it may damage the paint. If the brake fluid has been spilled onto paint, remove the brake fluid with water immediately.
- Wrap the disassembled hose connector with a rag or non-woven repair cloth to prevent leakage of brake fluid.
- The brake disc and brake lining shall be free of any grease.

CAUTION:

- For lifting operations of the vehicle with air suspension, please refer to "Precautions" in corresponding sections and "Removal, refitting and maintenance of front/rear air spring".
-
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

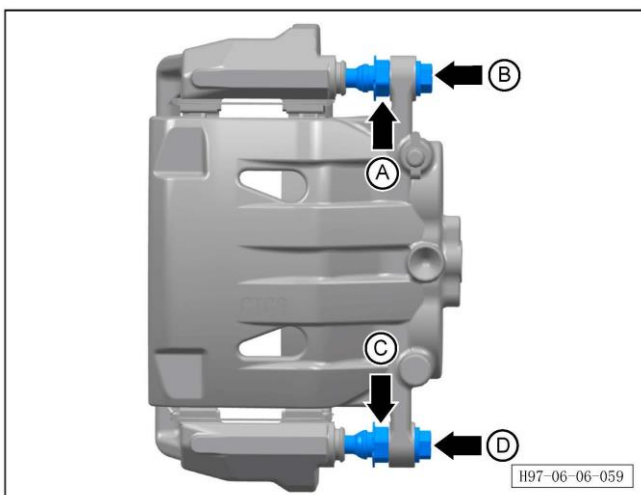
Removal procedure

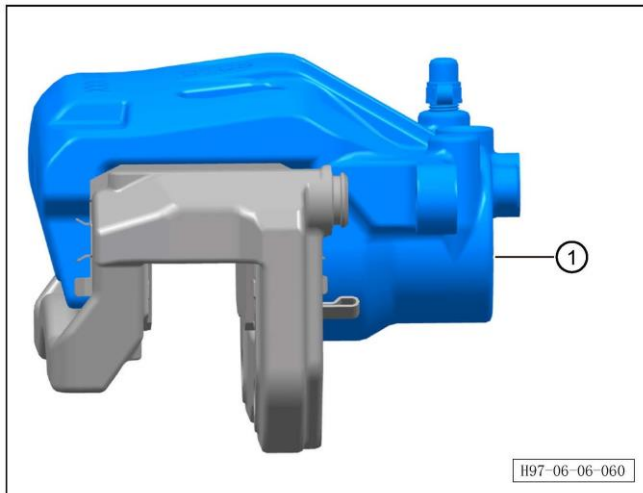
1. Remove the front brake caliper assembly (refer to [6.6.6.1 Removal and refitting of front brake caliper assembly](#))
2. Remove front brake cylinder assembly.

- a. Fix the nut A and unscrew the fixing bolt B of the front brake caliper.
- b. Fix the nut C and unscrew the fixing bolt D of the front brake caliper.

Tightening torque of bolt B: $55\pm 5\text{Nm}$.

Tightening torque of bolt D: $55\pm 5\text{Nm}$.





c. Remove the front brake wheel cylinder assembly ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.6.6.4 Removal and refitting of rear brake wheel cylinder assembly

Note:

- This part introduces the removal and refitting of the left rear brake wheel cylinder assembly, which can be referred to for the operations on the right side.
- When removing the caliper, do not spill brake fluid on the vehicle, otherwise it may damage the paint. If the brake fluid has been spilled onto paint, remove the brake fluid with water immediately.
- Wrap the disassembled hose connector with a rag or non-woven repair cloth to prevent leakage of brake fluid.
- The brake disc and brake lining shall be free of any grease.

CAUTION:

- For lifting operations of the vehicle with air suspension, please refer to "Precautions" in corresponding sections and "Removal, refitting and maintenance of front/rear air spring".

-

- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

1. Remove the rear brake caliper assembly (refer to [6.6.6.2 Removal and refitting of rear brake caliper assembly](#))

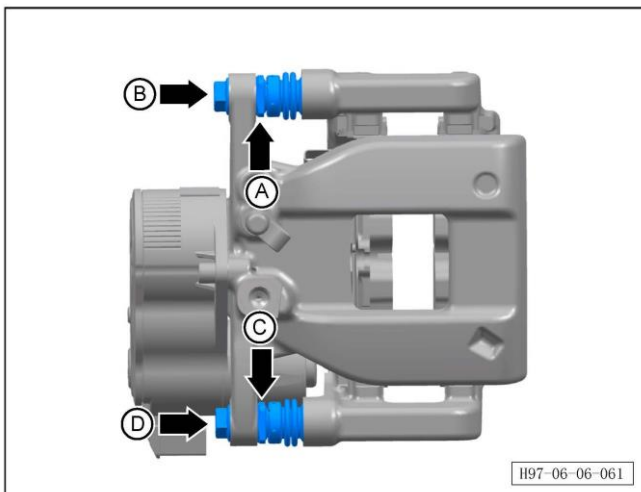
2. Remove rear brake cylinder assembly.

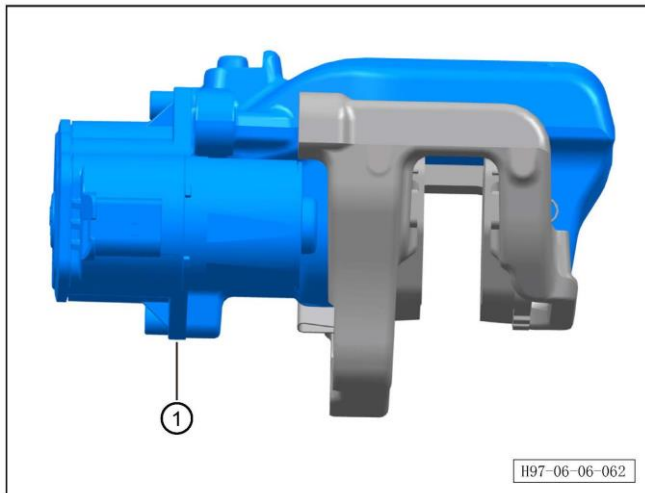
a. Fix the nut A and unscrew the fixing bolt B of the rear brake caliper.

b. Fix the nut C and unscrew the fixing bolt of the rear brake caliper.

Tightening torque of bolt B: $55\pm 5\text{Nm}$.

Tightening torque of bolt D: $55\pm 5\text{Nm}$.





c. Remove the rear brake wheel cylinder assembly ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- After refitting, perform the four-wheel alignment.
- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.6.7 Brake pedal assembly

6.6.7.1 Removal and refitting of brake pedal bracket assembly

CAUTION:

- It is prohibited to place carpets for they can shorten the travel of the brake pedal.

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

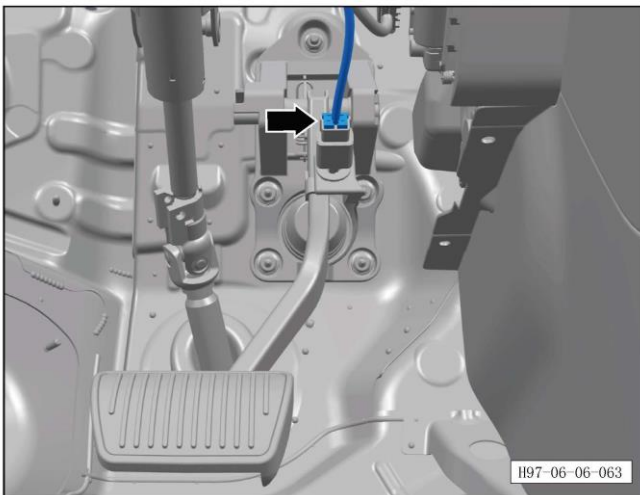
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

Removal procedure

1. Remove the left lower guard assembly (refer to [8.2.4.20 Removal and refitting of left lower guard assembly](#))

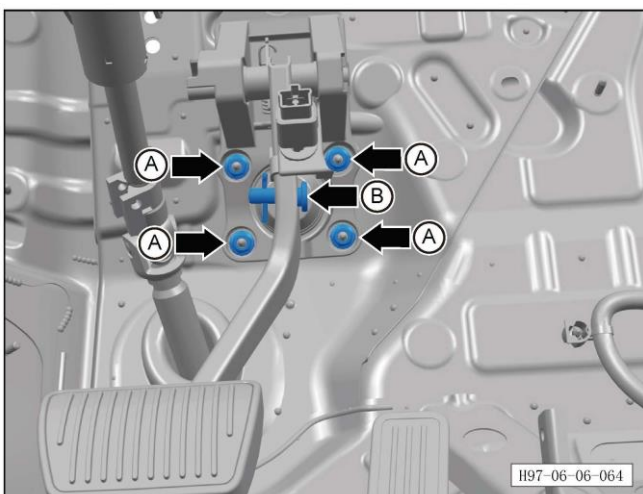
2. Remove the brake pedal assembly.

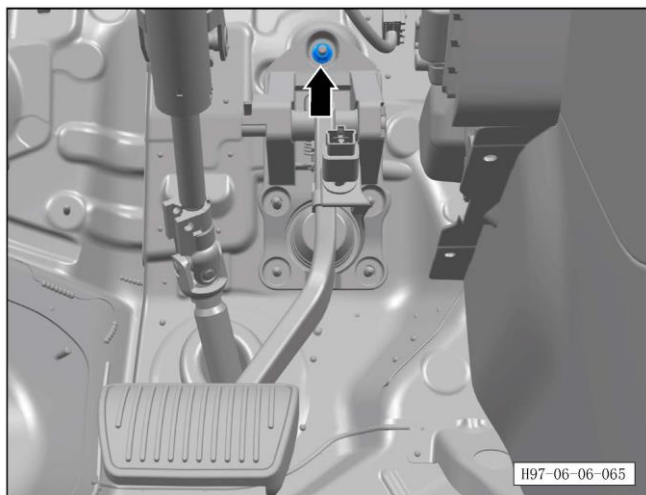
a. Disconnect the brake pedal connector.



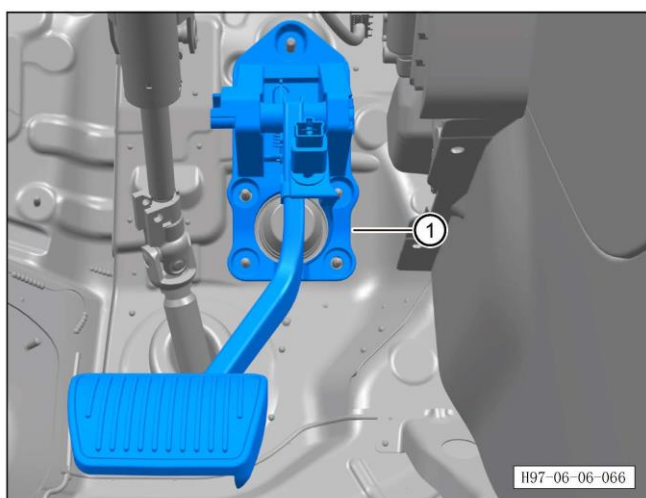
b. Unscrew the 4 fixing bolts A of the brake pedal assembly and disconnect the pin B of the booster.

Tightening torque of bolt: $23\pm 3\text{Nm}$.





c. Screw out the fixing bolts of brake pedal assembly.
Tightening torque of bolt: $23\pm 3\text{Nm}$.



d. Remove the brake pedal assembly ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- After refitting, perform the four-wheel alignment.
- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.6. 8 Brake hose

6.6.8.1 Removal and refitting of front brake hose

CAUTION:

- This part introduces the removal and refitting of the left front brake hose, which can be referred to for the operations on the right side.
- Place a rag just below the pipeline interface before removing the brake hose to avoid damage caused by the brake fluid which is both toxic and corrosive.

CAUTION:

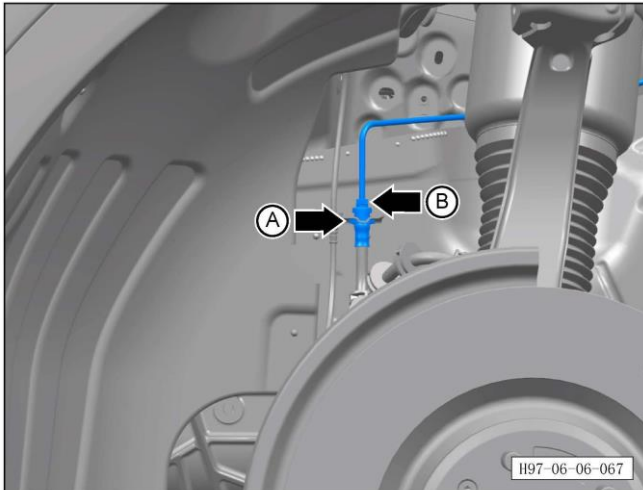
- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

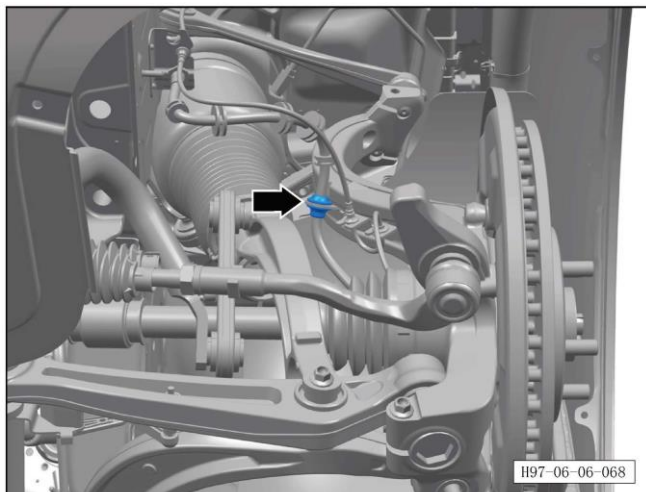
Removal procedure

1. Remove the front wheel (refer to [6.5.9.1 Removal and refitting of wheels](#))
2. Use the brake fluid bleed tool to suck the brake fluid in the brake fluid reservoir out of the left rear brake caliper (refer to [3.1.4.4 Change of brake fluid](#))
3. Remove the front brake hose.

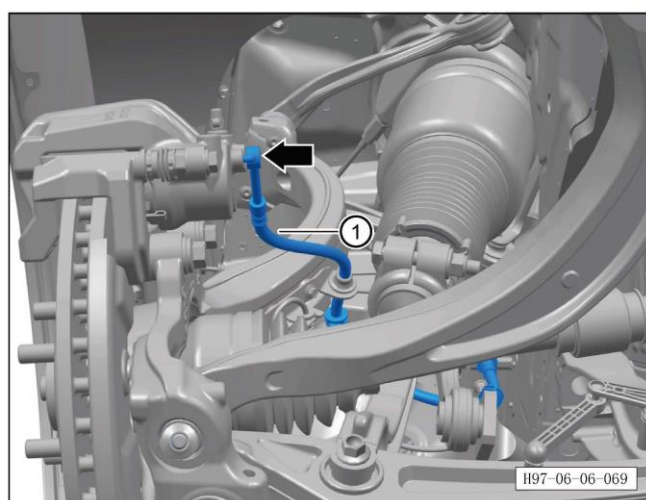
- a. Fix the nut A of the brake hose and unscrew the fixing nut B.

Tightening torque of nut: $16\pm 1\text{Nm}$.





b. Disconnect the brake hose fixing clip.



c. Unscrew the fixing bolt of the brake hose, and take out the front brake hose ①.

Tightening torque of bolt: $30\pm 2\text{Nm}$.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.6.8.2 Removal and refitting of rear brake hose

CAUTION:

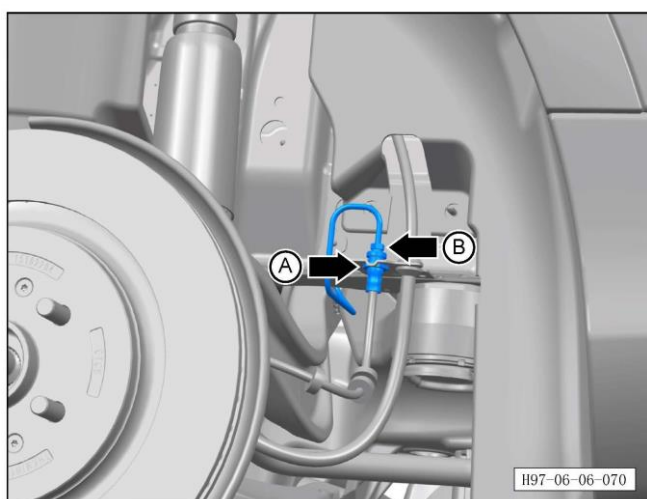
- This part introduces the removal and refitting of the left rear brake hose, which can be referred to for the operations on the right side.
- Place a rag just below the pipeline interface before removing the brake hose to avoid damage caused by the brake fluid which is both toxic and corrosive.
- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

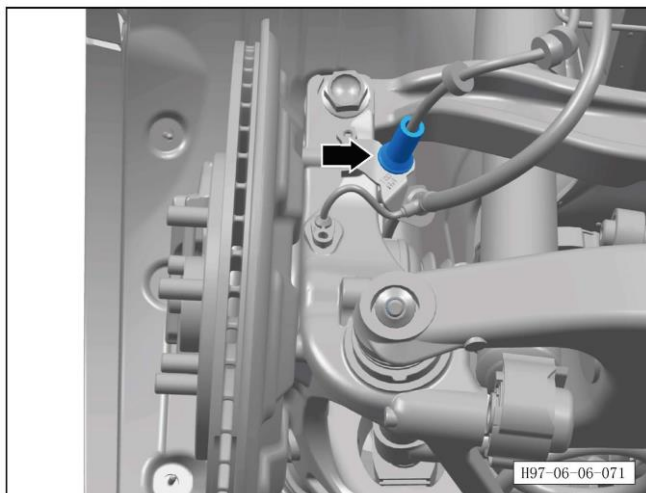
Removal procedure

1. Remove the front wheel (refer to [6.5.9.1 Removal and refitting of wheels](#))
2. Use the brake fluid bleed tool to suck the brake fluid in the brake fluid reservoir out of the left rear brake caliper (refer to [3.1.4.4 Change of brake fluid](#))
3. Remove the rear brake hose.

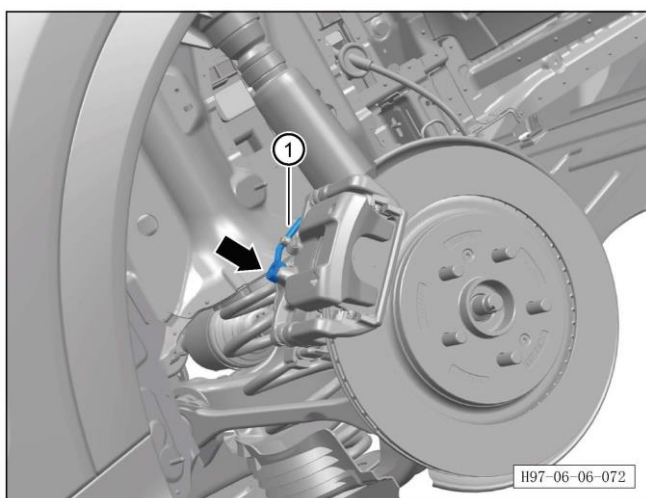
- a. Fix the nut A of the brake hose and unscrew the fixing nut B.

Tightening torque of nut: $16\pm 1\text{Nm}$.





b. Disconnect the brake hose fixing clip.



c. Unscrew the fixing bolt of the brake hose, and take out the front brake hose ①.

Tightening torque of bolt: $30\pm 2\text{Nm}$.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.6.9 Brake pipe

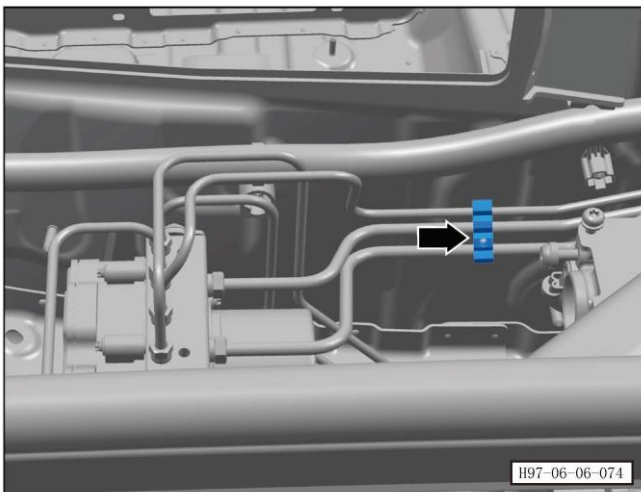
6.6.9.1 Removal and refitting of brake pipeline assembly 1#

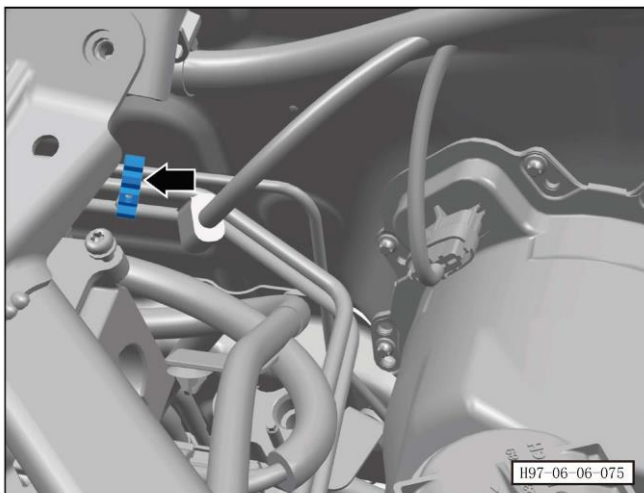
CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

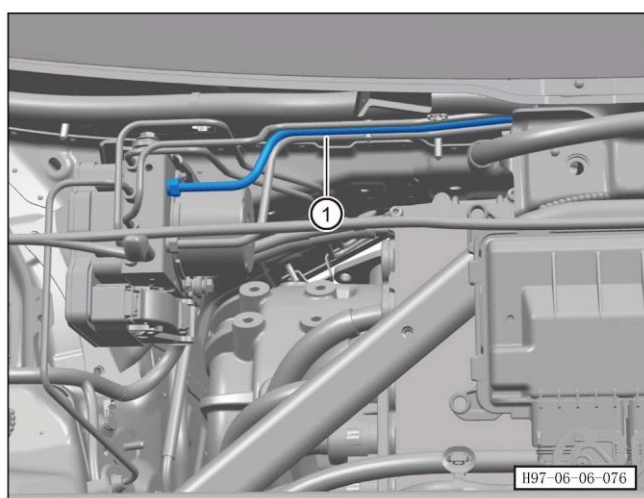
Removal procedure

1. Open the engine hood.
2. Remove the engine compartment trim panel.
3. Use the brake fluid bleed tool to suck the brake fluid in the brake fluid reservoir out of the left rear brake caliper (refer to [3.1.4.4 Change of brake fluid](#))
4. Remove the windshield lower trim panel (refer to [8.6.6.9 Removal and refitting of front windshield lower cover plate seal](#))
5. Remove the A/C air inlet duct assembly (refer to [10.1.11.1 Removal and refitting of A/C air inlet duct assembly](#))
6. Remove the bolt connecting the ESP actuator assembly and the brake pipeline (refer to [6.7.5.3 Removal and refitting of ESP actuator assembly](#))
7. Remove the bolt connecting the lboostor assembly and the brake pipeline (refer to [6.7.7.4 Removal and refitting of lboostor assembly](#))
8. Remove the brake pipeline assembly 1#.
 - a. Disconnect 1 three-bolt pipe clamp of the brake pipeline.





b. Disconnect 1 three-bolt pipe clamp of the brake pipeline.



c. Detach the brake pipeline assembly 1# ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.6.9.2 Removal and refitting of brake pipeline assembly 2#

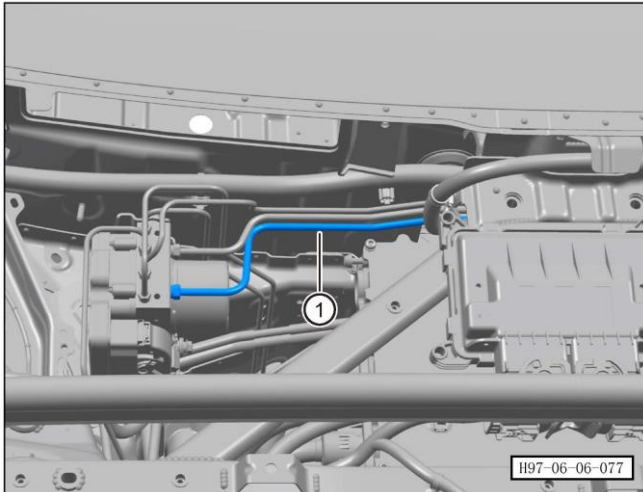
Removal procedure

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

1. Open the engine hood.
2. Remove the engine compartment rear trim panel assembly (refer to [8.6.6.12 Removal and refitting of engine compartment rear trim panel assembly](#))
3. Use the brake fluid bleed tool to suck the brake fluid in the brake fluid reservoir out of the left rear brake caliper (refer to [3.1.4.4 Change of brake fluid](#)).
4. Remove the windshield lower cover plate seal (refer to [8.6.6.9 Removal and refitting of front windshield lower cover plate seal](#))
5. Remove the A/C air inlet duct assembly (refer to [10.1.11.1 Removal and refitting of A/C air inlet duct assembly](#))
6. Remove the bolt connecting the ESP actuator assembly and the brake pipeline (refer to [6.7.5.3 Removal and refitting of ESP actuator assembly](#))
7. Remove the bolt connecting the lboosters assembly and the brake pipeline (refer to [6.7.7.4 Removal and refitting of lboosters assembly](#))
8. Remove the three-bolt pipe clamp of the brake pipeline (refer to [6.6.9.2 Brake pipeline assembly 2#](#))
9. Remove the brake pipeline assembly 2#.



- a. Detach the brake pipeline assembly 2#.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

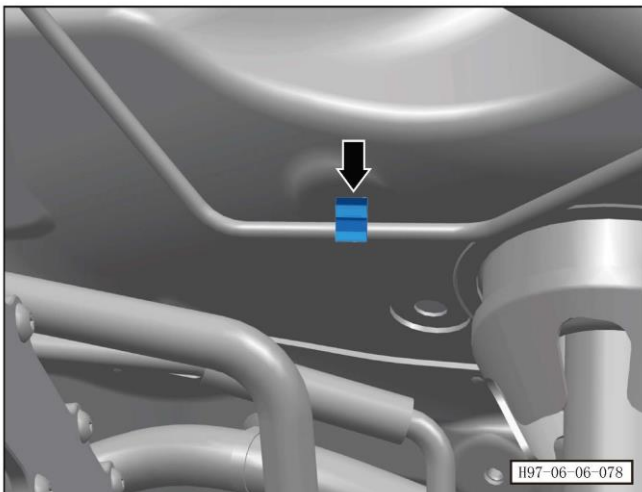
6.6.9.3 Removal and refitting of brake pipeline assembly 3#

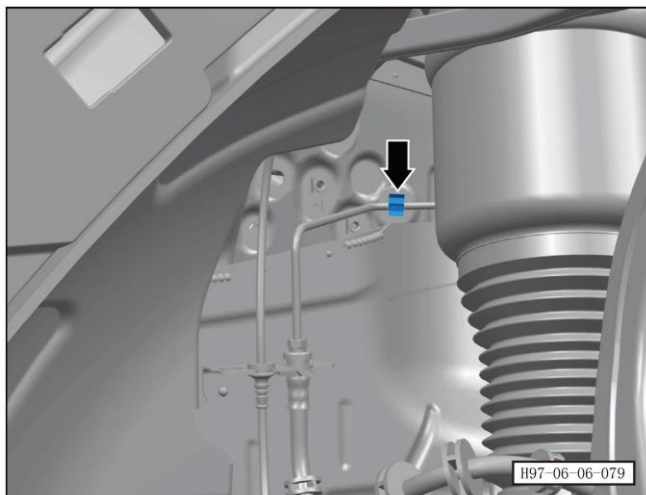
Removal procedure

CAUTION:

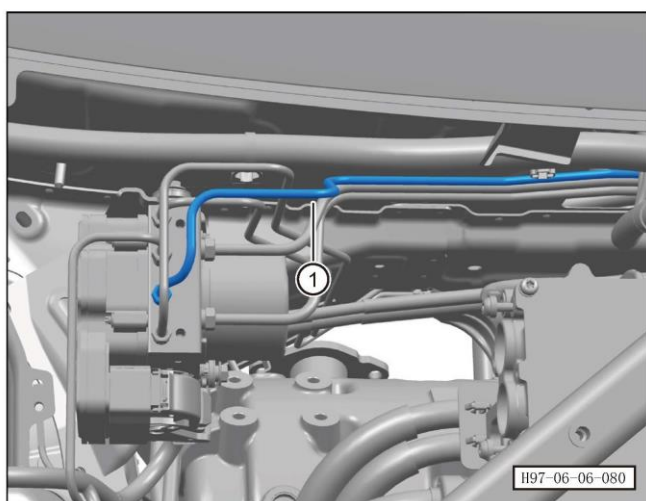
- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

1. Open the engine hood.
2. Remove the engine compartment rear trim panel assembly (refer to [8.6.6.12 Removal and refitting of engine compartment rear trim panel assembly](#))
3. Use the brake fluid bleed tool to suck the brake fluid in the brake fluid reservoir out of the left rear brake caliper (refer to [3.1.4.4 Change of brake fluid](#)).
4. Remove the windshield lower cover plate seal (refer to [8.6.6.9 Removal and refitting of front windshield lower cover plate seal](#))
5. Remove the A/C air inlet duct assembly (refer to [10.1.11.1 Removal and refitting of A/C air inlet duct assembly](#))
6. Remove the bolt connecting the ESP actuator assembly and the brake pipeline (refer to [6.7.5.3 Removal and refitting of ESP actuator assembly](#))
7. Remove the three-bolt pipe clamp of the brake pipeline (refer to [6.6.9.2 Brake pipeline assembly 2#](#))
8. Remove the brake pipeline assembly 3#.
 - a. Disconnect 1 single bolt pipe clamp of the brake pipeline.





b. Disconnect 1 single bolt pipe clamp of the brake pipeline.



c. Detach the brake pipeline assembly 3# ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.6.9.4 Removal and refitting of brake pipeline assembly 4#

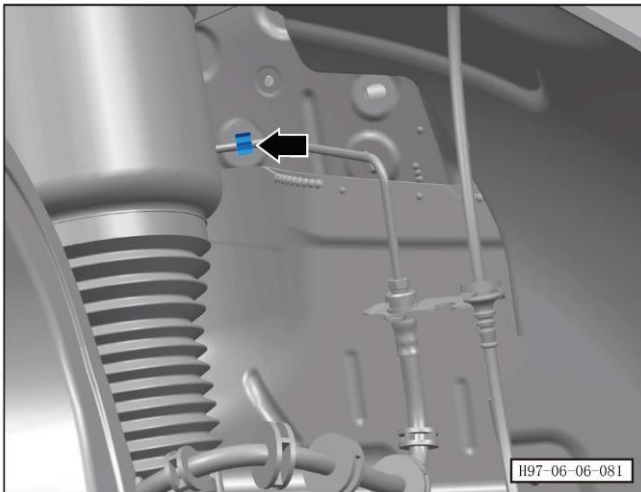
Removal procedure

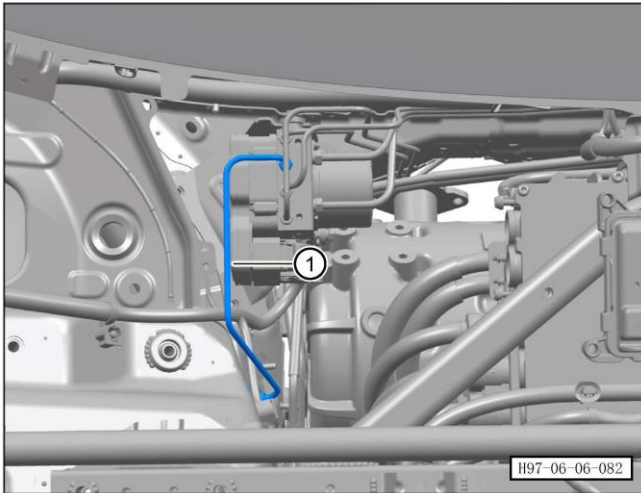
CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

1. Open the engine hood.
2. Remove the engine compartment rear trim panel assembly (refer to [8.6.6.12 Removal and refitting of engine compartment rear trim panel assembly](#))
3. Use the brake fluid bleed tool to suck the brake fluid in the brake fluid reservoir out of the left rear brake caliper (refer to [3.1.4.4 Change of brake fluid](#)).
4. Remove the windshield lower cover plate seal (refer to [8.6.6.9 Removal and refitting of front windshield lower cover plate seal](#))
5. Remove the A/C air inlet duct assembly (refer to [10.1.11.1 Removal and refitting of A/C air inlet duct assembly](#))
6. Remove the bolt connecting the ESP actuator assembly and the brake pipeline (refer to [6.7.5.3 Removal and refitting of ESP actuator assembly](#))
7. Remove the brake pipeline assembly 4#.
 - a. Disconnect 1 single bolt pipe clamp of the brake pipeline.





b. Detach the brake pipeline assembly 4# ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

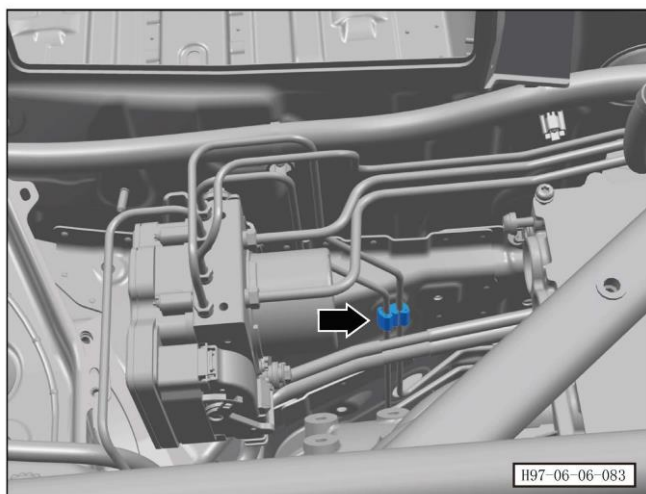
6.6.9.5 Removal and refitting of brake pipeline assembly 5#

CAUTION:

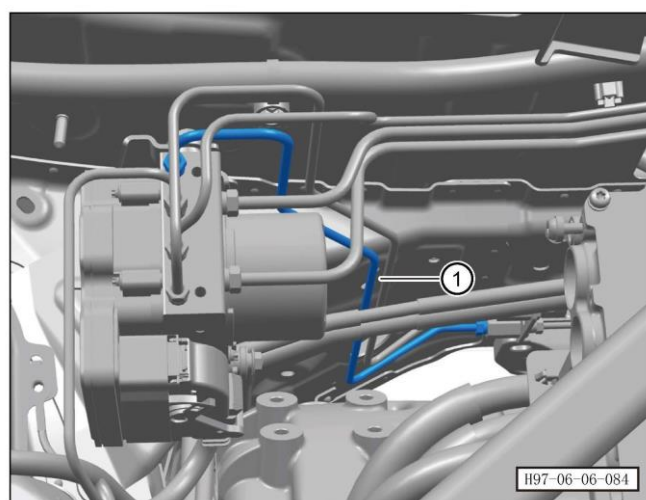
- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

Removal procedure

1. Open the engine hood.
2. Remove the engine compartment rear trim panel assembly (refer to [8.6.6.12 Removal and refitting of engine compartment rear trim panel assembly](#))
3. Use the brake fluid bleed tool to suck the brake fluid in the brake fluid reservoir out of the left rear brake caliper (refer to [3.1.4.4 Change of brake fluid](#)).
4. Remove the windshield lower cover plate seal (refer to [8.6.6.9 Removal and refitting of front windshield lower cover plate seal](#))
5. Remove the A/C air inlet duct assembly (refer to [10.1.11.1 Removal and refitting of A/C air inlet duct assembly](#))
6. Remove the bolt connecting the ESP actuator assembly and the brake pipeline (refer to [6.7.5.3 Removal and refitting of ESP actuator assembly](#))
8. Remove the brake pipeline assembly 5#.



a. Disconnect one double bolt pipe clamp I of the brake pipeline.



b. Detach the brake pipeline assembly 5# ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

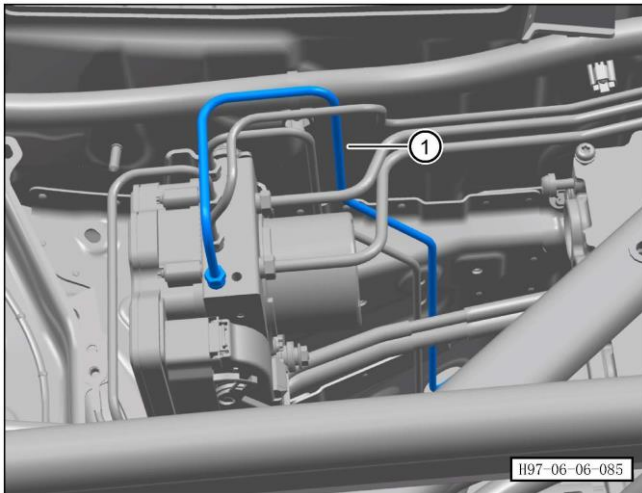
6.6.9.6 Removal and refitting of brake pipeline assembly 6#

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

Removal procedure

1. Open the engine hood.
2. Remove the engine compartment rear trim panel assembly (refer to [8.6.6.12 Removal and refitting of engine compartment rear trim panel assembly](#))
3. Use the brake fluid bleed tool to suck the brake fluid in the brake fluid reservoir out of the left rear brake caliper (refer to [3.1.4.4 Change of brake fluid](#)).
4. Remove the windshield lower cover plate seal (refer to [8.6.6.9 Removal and refitting of front windshield lower cover plate seal](#))
5. Remove the A/C air inlet duct assembly (refer to [10.1.11.1 Removal and refitting of A/C air inlet duct assembly](#))
6. Remove the bolt connecting the ESP actuator assembly and the brake pipeline (refer to [6.7.5.3 Removal and refitting of ESP actuator assembly](#))
7. Remove the bolt connecting the four-way joint and the brake pipeline (refer to [6.6.9.9 Removal and refitting of four-way joint](#))
8. Remove the brake pipeline assembly 6#.



- a. Detach the brake pipeline assembly 6# ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

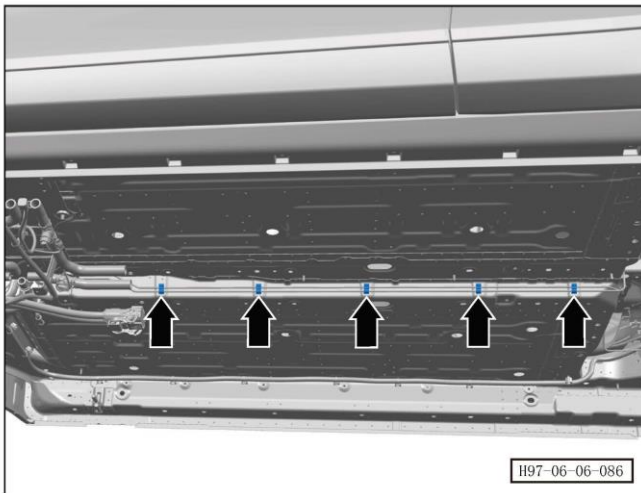
6.6.9.7 Removal and refitting of brake pipeline assembly 7#

CAUTION:

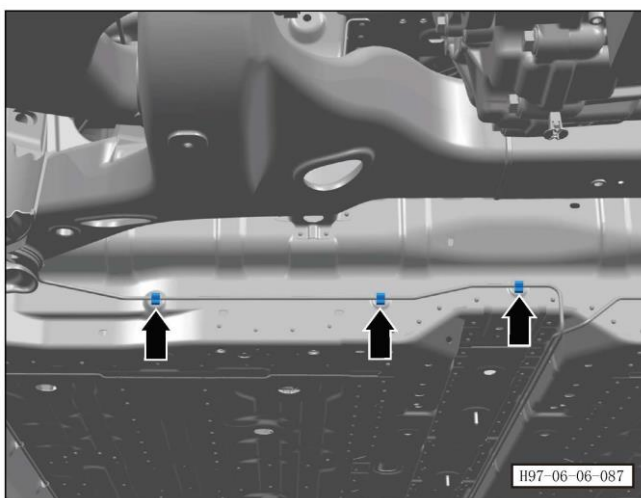
- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

Removal procedure

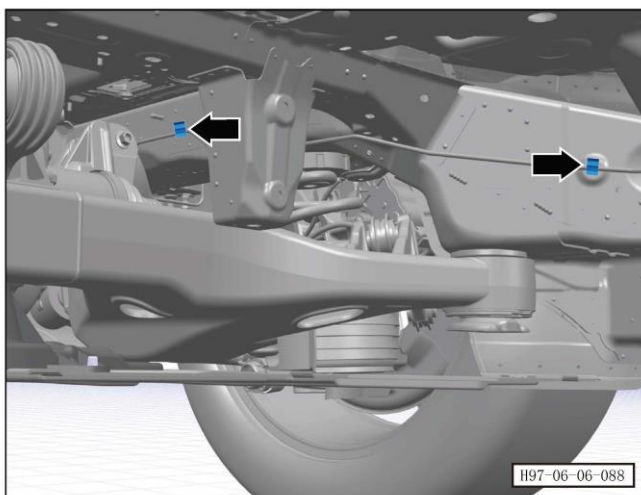
1. Open the engine compartment.
2. Use the brake fluid bleed tool to suck the brake fluid in the brake fluid reservoir out of the left rear brake caliper (refer to [3.1.4.4 Change of brake fluid](#))
3. Lift the vehicle.
4. Remove the rear lower protective plate (refer to [8.6.4.6 Removal and refitting of rear lower protective plate \(REV\)](#))
5. For the battery pack assembly (refer to [5.1.5.2 Removal and refitting of battery pack assembly \(REV\)](#))
6. Remove the windshield lower cover plate seal (refer to [8.6.6.9 Removal and refitting of front windshield lower cover plate seal](#))
7. Remove the A/C air inlet duct assembly (refer to [10.1.11.1 Removal and refitting of A/C air inlet duct assembly](#))
8. Remove the bolt connecting the ESP actuator assembly and the brake pipeline (refer to [6.7.5.3 Removal and refitting of ESP actuator assembly](#))
9. Remove the bolt connecting the four-way joint and the brake pipeline (refer to [6.6.9.9 Removal and refitting of four-way joint](#))
10. Remove the bolt connecting the rear brake hose (left) and the brake pipeline (refer to [6.6.8.2 Removal and refitting of rear brake hose \(left\)](#))
11. Remove the brake pipeline assembly 7#.

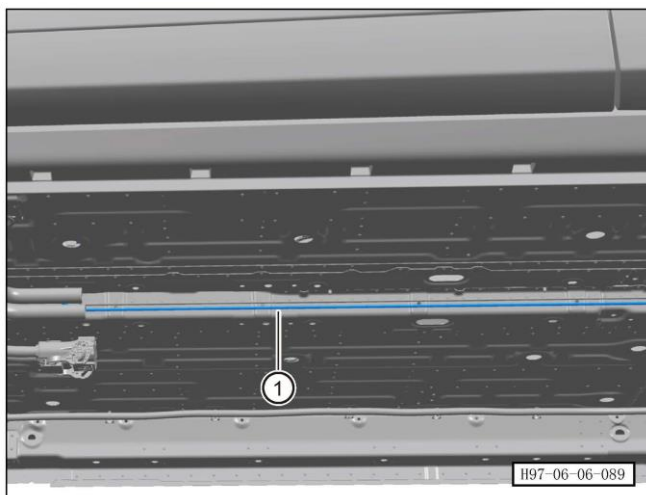


a. Disconnect the double- pipe clamp I of the five brake pipelines.



b. Disconnect 5 single bolt pipe clamp of the brake pipeline.





c. Detach the brake pipeline assembly 7# ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- After refitting, perform the four-wheel alignment.
- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

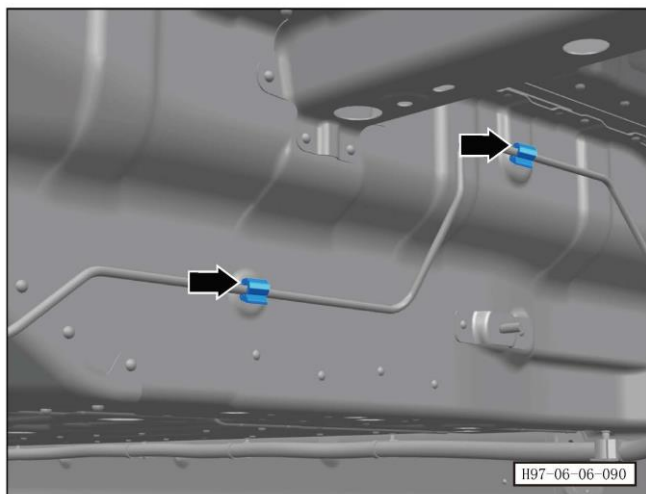
6.6.9.8 Removal and refitting of brake pipeline assembly 9#

CAUTION:

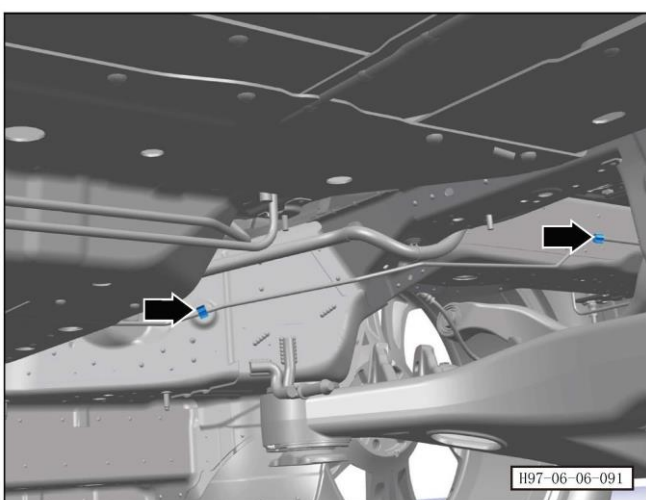
- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

Removal procedure

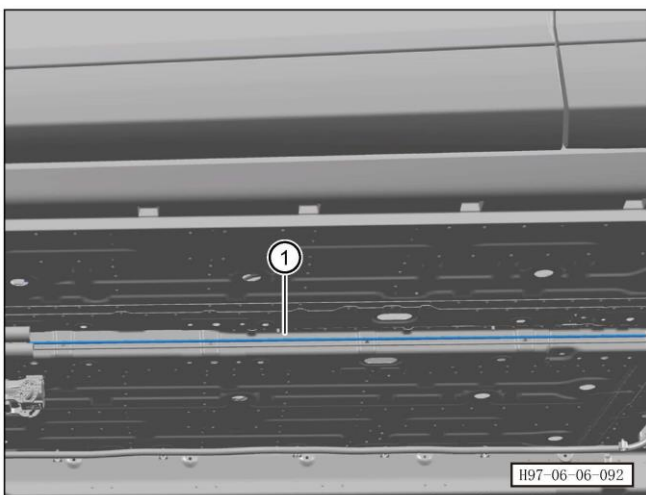
1. Open the engine compartment.
2. Use the brake fluid bleed tool to suck the brake fluid in the brake fluid reservoir out of the left rear brake caliper (refer to [3.1.4.4 Change of brake fluid](#))
3. Lift the vehicle.
4. Remove the rear lower protective plate (refer to [8.6.4.6 Removal and refitting of rear lower protective plate \(REV\)](#))
5. For the battery pack assembly (refer to [5.1.5.2 Removal and refitting of battery pack assembly \(REV\)](#))
6. Remove the windshield lower cover plate seal (refer to [8.6.6.9 Removal and refitting of front windshield lower cover plate seal](#))
7. Remove the A/C air inlet duct assembly (refer to [10.1.11.1 Removal and refitting of A/C air inlet duct assembly](#))
8. Remove the bolt connecting the ESP actuator assembly and the brake pipeline (refer to [6.7.5.3 Removal and refitting of ESP actuator assembly](#))
10. Remove the bolt connecting the four-way joint and the brake pipeline (refer to [6.6.9.9 Removal and refitting of four-way joint](#))
11. Remove the bolt connecting the rear brake hose (left) and the brake pipeline (refer to [6.6.8.2 Removal and refitting of rear brake hose \(left\)](#))
12. Disconnect the double bolt pipe clamp of the brake pipeline assembly 9# (refer to [6.6.9.7 Removal and refitting of brake pipeline assembly 7#](#))
13. Remove the brake pipeline assembly 9#.



a. Disconnect 2 single bolt pipe clamp of the brake pipeline.



b. Disconnect 2 single bolt pipe clamp of the brake pipeline.



c. Detach the brake pipeline assembly 9# ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.6.9.9 Removal and refitting of four-way joint

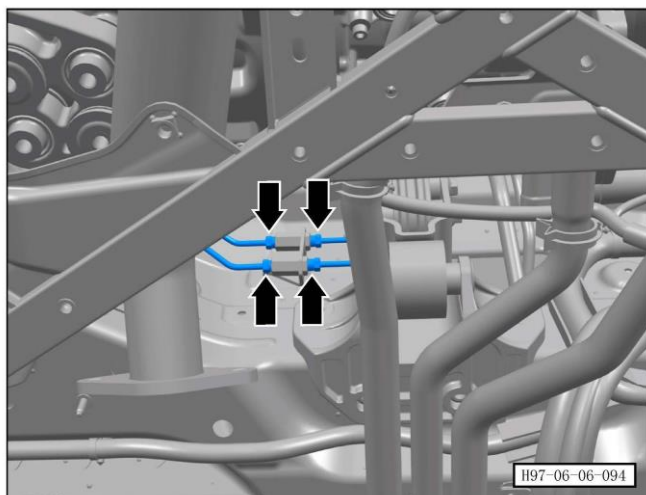
CAUTION:

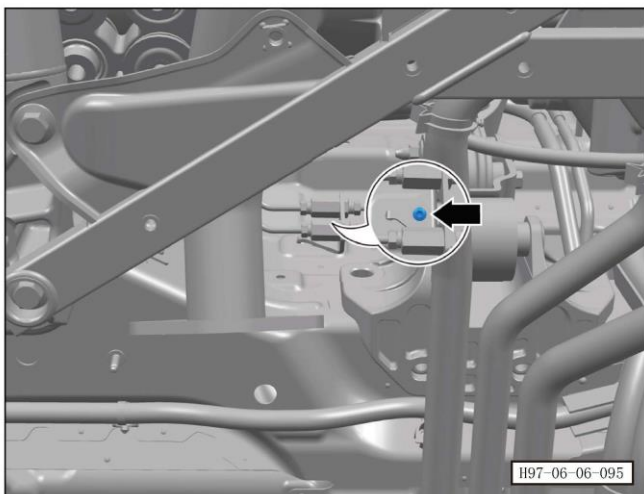
- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

Removal procedure

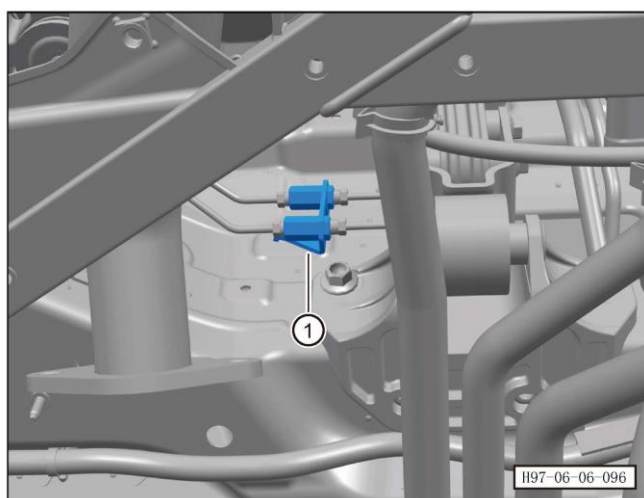
1. Open the engine compartment.
2. Use the brake fluid bleed tool to suck the brake fluid in the brake fluid reservoir out of the left rear brake caliper (refer to [3.1.4.4 Change of brake fluid](#))
3. Lift the vehicle.
4. Remove the four-way joint.
 - a. Remove the 4 connecting bolts of the brake pipeline.

Tightening torque of bolt: $16\pm 1\text{Nm}$.





- a Remove 1 retaining bolts.
Tightening torque of bolt: $8\pm 1\text{Nm}$.



- c. Detach the four-way joint ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.7. Chassis electronics

6.7.1 Precautions

- Chassis system fault diagnosis.

The most tough situation the troubleshooting faces is that no any fault symptoms are present. In this case, you must analyze the fault as described by the user thoroughly. In addition, you need to simulate the same or similar conditions and environments as when the customer's vehicle fails. If you begin to troubleshoot without confirming the symptoms of the fault, something important will be ignored during repair and wrong guesses may be put forward somewhere no matter how experienced and skilled the maintenance personnel are. This will make troubleshooting impossible.

- Check easily accessible or visible system components for obvious damage or conditions under which a fault may occur.

- The connector joint and the vibration fulcrum are main parts that shall be thoroughly checked; in case the fault is possibly caused by vibration, it is recommended to use vibration method.

a. Gently vibrate the potentially faulty sensor part with your finger and check for faults.

b. Gently shake the connector vertically and horizontally.

c. Gently shake the harness vertically and horizontally.

- Precautions for lifting of vehicle with air suspension:

a. After adjusting the body to the standard height in standard mode, click the maintenance icon on the touch screen to adjust the system to the maintenance mode.

b. Use a lift to support the body without changing the body height;

Before disassembling the rear air spring assembly, it is necessary to control the distribution valve to discharge the air in the rear air spring through the after-sales scan tool, and close the solenoid valve as soon as possible after the bleeding (do not disconnect the air spring assembly from the air pipe until the lifting of the vehicle is completed);

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

d. Disconnect the negative terminal of the battery (refer to [3.1.6.1 Maintenance and inspection of battery](#))

e. Lift the vehicle (after the REV vehicle is lifted, the high voltage switch of the high voltage battery pack must be disconnected).

f. Perform subsequent maintenance operations.

(After removing the air pipe of the air spring, pay attention to protect the pipe and keep the cleanliness of the pipe head to prevent foreign matter from entering)

- Precautions for maintenance and operation of vehicles with air suspension:

a. When storing the front air spring, it is necessary to keep the shock absorber in the maximum stretching condition and charge 3-5bar air into the air spring through the pressure holding valve. It is not allowed to compress the front air spring strut assembly in any state, and the airbag collision shall be avoided during the storage.

b. Before refitting, use an inflation gun (with the gun nozzle of 6mm outer diameter) to charge 3-5bar of air into the front air spring assembly through the pressure holding valve (the air pressure in the front air spring is not allowed to exceed 12bar at any time);

c. Since the rear air spring has no shock absorber limit, it cannot be inflated when it is not loaded. Check its state before loading. It is forbidden to stretch or compress the rear air spring. Before use, it shall be detected in accordance with the detection method for the rear air spring detection specified in the maintenance process;

d. The air pressure charged into the rear air spring is not allowed to exceed 9bar at any time;

e. It is strictly forbidden to exit the maintenance mode before the vehicle is on the ground. You can only exit the maintenance mode when the disassembly & assembly of the air spring is completed and the vehicle is on the ground.

- For the lifting operation of the vehicle with air suspension, the operation requirements in the precautions must be followed before the maintenance; If the requirements in the matters are violated, the vehicle may be damaged, or worse, this may cause casualties.

- For detailed maintenance operations and precautions of air suspension system, please refer to the disassembly & assembly and maintenance chapters of the front/rear air spring about the system of chassis maintenance.

6.7.2 Description and operation

This vehicle adopts electronic stability program (ESP) system, which integrates anti-lock braking system (ABS), hill-start hold control (HHC) system, hydraulic brake assist (HBA) system, traction control system (TCS) and electric brakeforce distribution (EBD) system.

Overview of anti-lock braking system (ABS)

- ABS is a kind of active safety device, which is written as anti-lock braking system and abbreviated as ABS.
- If the front wheels are locked when applying brakes, the vehicle will be unable to make turns. To be specific, the driver may not be able to perform steering operations for the purpose of avoiding obstacles or pedestrians and of driving on curves during braking; in case the rear wheels are locked, the braking stability of the vehicle will be deteriorated, resulting in vehicle drifting and even turning and other dangerous phenomena under the influence of tiny lateral force (such as lateral wind). In addition, when the wheels are locked, the local area of the tire may be subject to severe friction, greatly shortening the service life of the tire.
- The electronically controlled anti-lock braking system (ABS) is of a structure in which an electronic control device is added to the original braking system. It works to prevent the wheels from locking by automatically adjusting the brake forces distributed on wheels during braking, so as to obtain the optimum braking performance and greatly improve the driving safety.

Advantages of ABS

- Make full use of the brake performance and shorten the braking time and braking distance.
- Effectively prevent the vehicle from slipping and drifting during emergency braking to ensure driving stability.
- Make turns during emergency braking to ensure good steering maneuverability.
- Avoid the violent friction between the tire and the ground and reduce the wear of the tire.

The ABS consists of an anti-lock electronic control system and a common braking system. The anti-lock electronic control system includes a sensor, a controller and an actuator.

The ABS control device detects the wheel speed through the wheel speed sensor, and monitors whether the wheel locks when the vehicle is braking; in case of normal braking, the driver's force on the brake pedal is small, thus the wheel will not lock, the controller does not output control signals, and the ABS does not operate. In case of emergency braking or a braking when the wheel slips on the ground, the slip rate of each wheel is high and the wheel will be locked. At this time, the ABS controller sends a control signal to instruct the actuator to act and adjust the braking force of the brake, preventing the wheel from locking.

The self-diagnosis ECU of ABS is capable to carry out self-diagnosis and execute fail-safe function. When the start switch is in "ON" position, the system will conduct self-diagnosis. If the system does not operate normally, the MIL will be normally illuminated, the ABS will stop working, the normal braking will be resumed, and relevant DTCs will be stored in the fault memory to remind the driver to repair the ABS in time. The DTCs can be read using the diagnostic scan tool.

General

- The ABS is distributed diagonally, and the vacuum booster generates braking force for boosting by pneumatic means.
- There is no mechanical brake force adjuster on vehicles with ABS, thus the ABS controller is used to distribute the braking force.
- ABS fault will not affect the normal braking system. In case of a fault in ABS, the normal braking system still works normally. However, the braking characteristics are changed in this case.
- If the ABS indicator is illuminated, the rear wheels may lock prematurely when braking.

Traction Control System (TCS)

The traction control system (TCS) is also called the tracking control system, which determines whether the driving wheel slips according to the number of revolutions of the driving wheel and that of the driven wheel. In case the number of revolutions of the driving wheel is larger than that of the driven wheel, this system works as an anti-slip control system to suppress the rotation speed of the driving wheel.

- When the vehicle brakes on a slippery road, the wheels will spin and even lose control of the direction. Similarly, when the vehicle starts or accelerates rapidly, the driving wheels may also slip, and the vehicle may lose control of direction on slippery roads covered with ice and snow, causing a danger. The function of the TCS is to automatically control the driving force when the vehicle accelerates, so that the slippage of the tires is within a reasonable range, thereby maintaining the stability of the vehicle.

Wheel speed sensor

The wheel speed sensor is a Hall-type sensor mounted above the front steering knuckle or the rear hub assembly. When the wheel rotates, the sensor will generate a square wave signal. The frequency (1-2,000 Hz) of this signal will change the number of magnetic poles passing through the magnetic encoder with the rotation of the wheel, so that the vehicle speed signal changes in proportion to the wheel speed. The signal voltage will change within the range of 1.1 V-1.9 V. The ABS/ESP electrical unit can obtain the speed of each wheel through the signal from the wheel speed sensor, and then treat this wheel speed as a reference signal for relevant control system.

Electronic brakeforce distribution (EBD)

The electric brakeforce distribution (EBD) is a part of the ABS, which balances the braking force distributed on the front and rear wheels according to the loads on the vehicle during normal braking. EBD applies a greater braking force to the rear wheels by adjusting the slip rate, thus obtaining the shortest braking distance while ensuring braking stability. This system improves the stability and ease of operation of the vehicle during braking especially when driving on poor or slippery roads.

Electronic stability program (ESP)

The ESP system is a new type of active safety system for the vehicle. It is of a structure that is added with a yaw angle sensor and a steering angle sensor, etc., for vehicle turning based on ABS and TCS. It controls the driving force and braking force of the front, rear, left and right wheels via ECU to ensure the lateral stability of the vehicle. The ESP system consists of three parts: sensor, ECU and actuator. The ECU monitors the running state of the vehicle and intervenes and controls the engine and braking system of the vehicle. The typical ESP sensor mainly includes 4 wheel speed sensors, steering angle sensor, yaw rate sensor, etc., and the actuator includes a traditional braking system (vacuum booster, pipeline and brake), a hydraulic regulator, etc. The ECU is linked with the engine management system to intervene and adjust the engine power output. The ESP system mainly controls the longitudinal and lateral stability of the vehicle to ensure that the vehicle runs according to the driver's intention. The core of the ESP system is ABS. That is, when the tire is about to lock during braking of the vehicle, the ESP system continuously brakes hundreds of times within one second. This is somewhat similar to mechanical "cadence braking". In this way, when the vehicle is fully braked, the

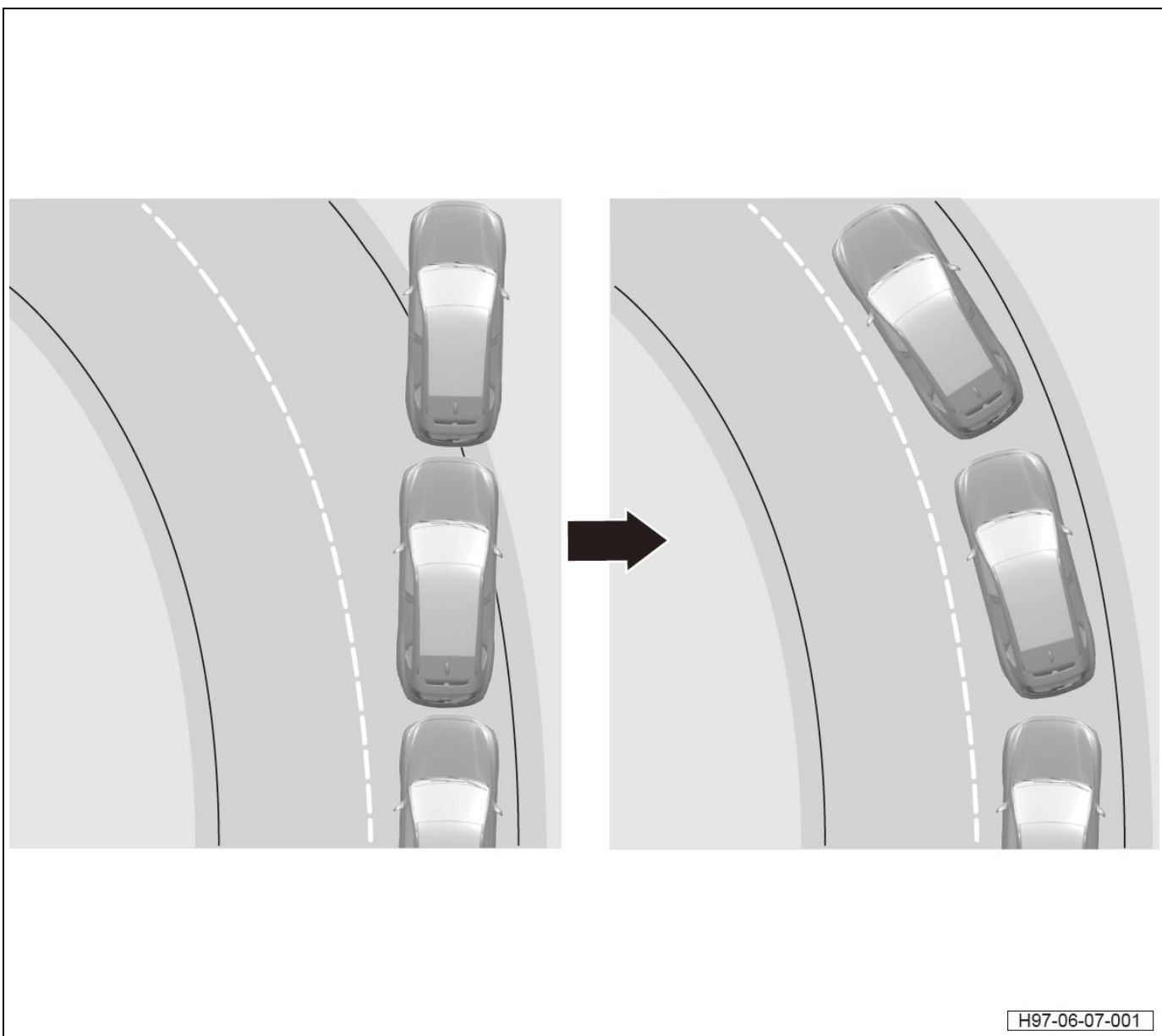
tires still maintain rolling. The effect of rolling friction is better than that of sliding friction after locking, and the driving direction of the vehicle can be controlled. The ESP system ensures the lateral stability of the vehicle in such a manner that when this system detects under-steering or over-steering of the vehicle based on the signals from the yaw angle sensor, the steering angle sensor and the wheel speed sensor, it will brake a single wheel or multiple wheels so as to regulate the body posture of the vehicle when it changes lanes or goes through a corner, thus improving its stability and safety when changing lanes or cornering. During driving, the wheel speed sensor continuously sends the speed signals of each wheel and provides vehicle speed, throttle opening and other information to ECU; the steering angle sensor provides information about driver's turning direction and angle; the yaw angle sensor provides information about vehicle inclination and roll speed. Upon receipt of the signal, ECU will determine the safe driving state of the vehicle and the driver's control intention, and then sends commands for adjusting the engine speed and wheel braking force so as to eliminate over-steering and under-steering. Simultaneously, the ESP indicator will flash to remind the driver to correct the steering state of the vehicle, thereby avoiding vehicle drifting, over-steering, under-steering and wheel locking and greatly improving driving safety and stability.

Features of ESP:

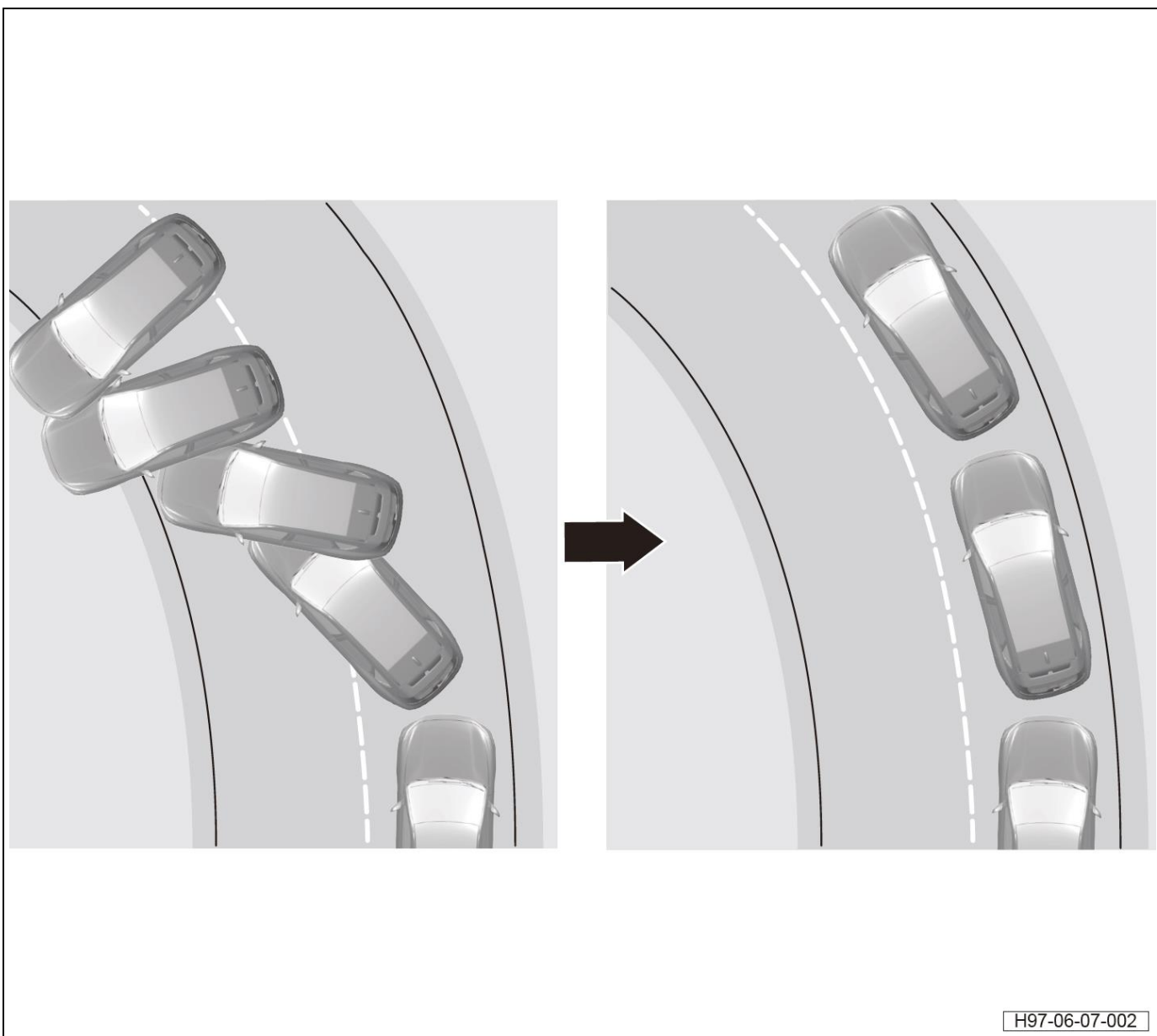
- Monitoring of driving status in a real time manner: ESP monitors the driver's control actions, road conditions, and vehicle motion status in a real time manner, and continuously adjusts the engine system and braking system.

- Active safety control: ABS and other safety technologies are mainly applied to intervene in driver's actions and correct driving safety; but they cannot be used to control the engine. The ESP system can actively adjust and control the engine torque according to the driving state, adjust the driving force and braking force of each wheel and eliminate over-steering and under-steering.

- Advance warning reminder: As a kind of traction control system, ESP can control the driving wheels and the driven wheels compared with other traction control systems. When the driver operates improperly or the road surface is abnormal, the warning lamp will flash under the control of ESP to remind the driver to correct driving errors in time in advance and take preventive measures. For example: When a RWD vehicle suffers from over-steering, the rear wheels will lose control and drift, and in this case ESP will brake the front wheels on the outside of the curve to stabilize the vehicle; in case of under-steering, ESP will brake the rear wheels on the inside of the curve so as to correct the driving direction of the vehicle.



In case of under-steering, ESP will command the rear brake on the inside of the curve to operate and intervene in the drive motor management system to prevent the vehicle from exiting the curve.



In case of over-steering, ESP will command the front brake on the outside of the curve to operate and intervene in the drive motor management system to prevent vehicle drifting.

Overview of hill-start hold control (HHC)

- HHC system is a kind of active safety system in which the software functions have been extended based on ESP system, and it is mainly used to help the driver start the vehicle smoothly on steep slopes. When the vehicle is stationary, the HHC system detects whether the vehicle is on a slope via a longitudinal acceleration sensor. When the stationary vehicle starts to go uphill on a slope (forward uphill or reverse uphill), the HHC system will automatically operate. When the driver releases the service brake pedal at starting of the vehicle, the HHC system will maintain previous brake pressure to ensure that the vehicle is still stationary, and then gradually reduce the brake pressure as the driving torque increases. In this way, the vehicle will never slide on the slope in opposite direction even the parking brake is not applied, greatly improving the situations of vehicle starting on a slope, frequent stopping, starting, parking, etc.

- When the vehicle starts on a slope, the HHC system prevents the vehicle from sliding backward after the brake pedal is released and before the accelerator pedal is depressed, improving the safety and reliability of vehicle starting on a slope.

Working condition:

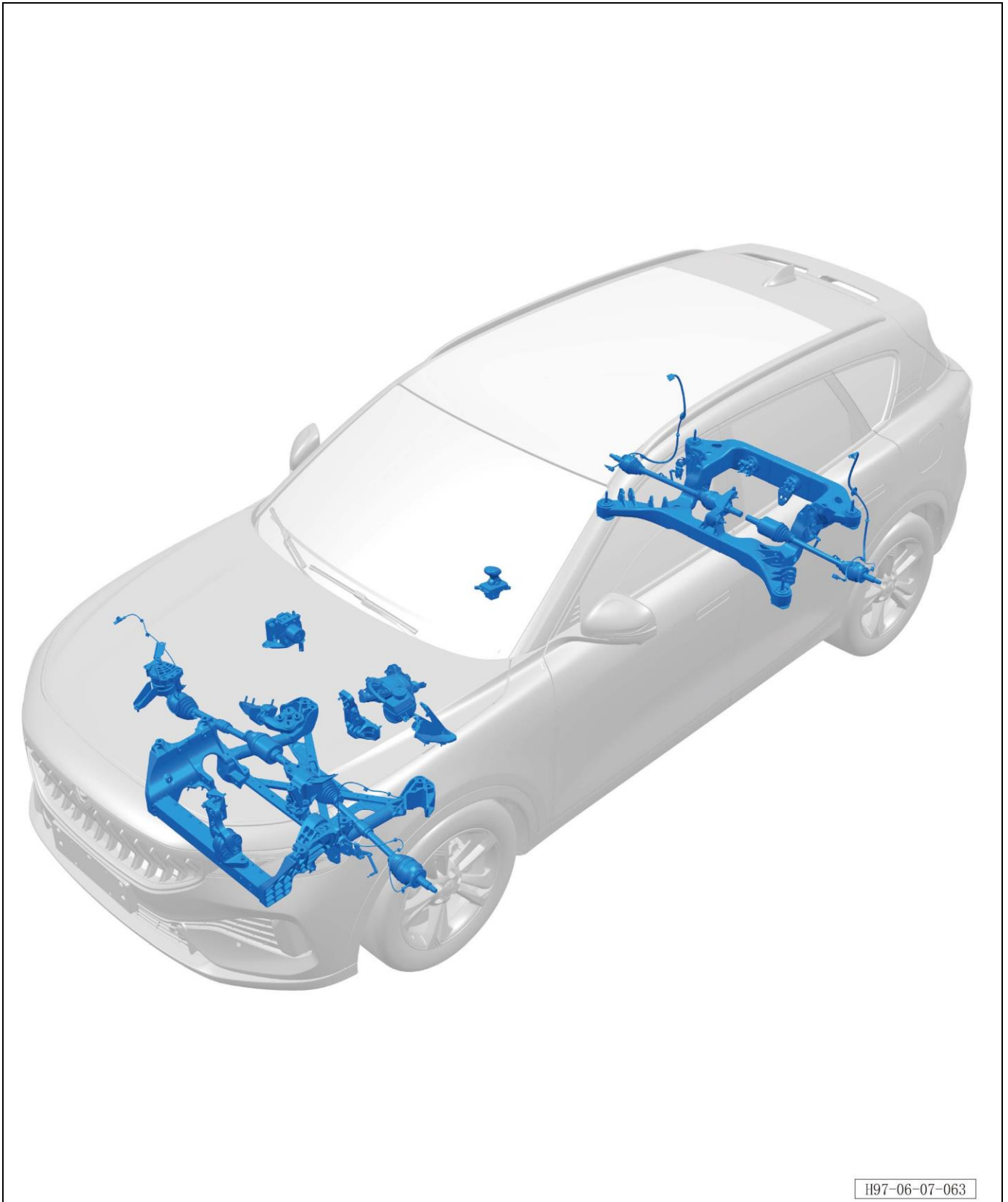
- The shift lever is in any position other than P (AT vehicle).
- The accelerator pedal is not depressed.
- The vehicle is stationary.
- The parking brake is not applied.
- Providing the above basic conditions are met, when the driver further depresses the brake pedal of the stopped vehicle, the HHC is activated.

Hill descent control (HDC)

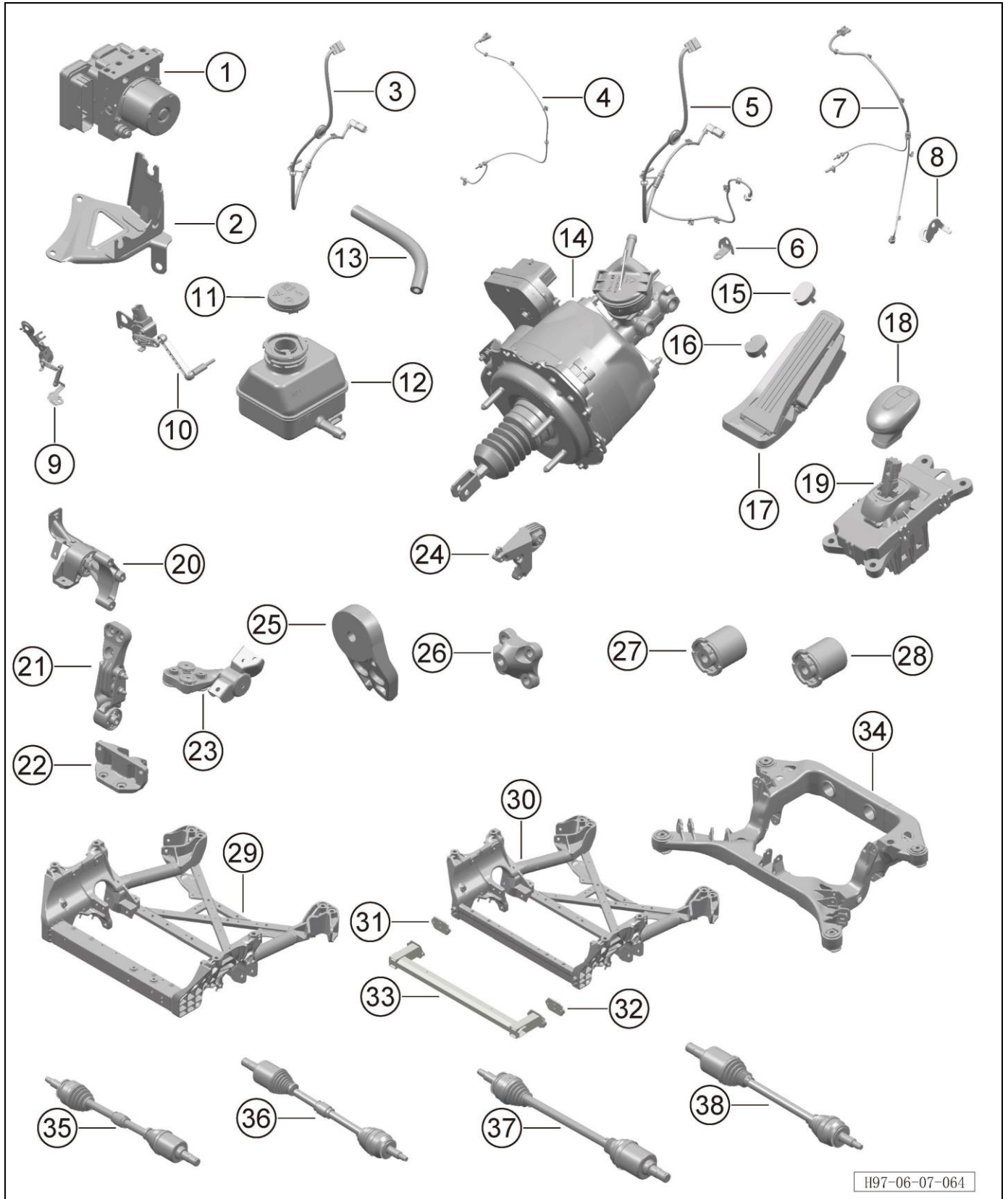
The working principle of the HDC is that in the event of sharp downhill driving, downhill driving on slippery roads and other steep downhill driving, the ESP will apply active brake according to rotational speed, torque, gear, and other input signals to make the vehicle run at a constant low speed, thereby ensuring the safety of steep downhill driving at a low speed. Hydraulic Brake Assist (HBA)

HBA system assists the driver in emergency braking. It determines if there is a need for full braking based on the speed at which the driver steps on the brake pedal. As long as the driver depresses the pedal to the floor all the time, the system will automatically increase the braking force to the threshold at which the ABS is activated. If the driver releases the brake pedal, the system will reduce the braking force to the specified value.

6.7.3 Position diagram of parts



6.7.4 Exploded view



H97-06-07-064

S/N	Part name	Loading quantity	Remarks
1	ESP actuator assembly	1	
2	ESP actuator bracket assembly	1	
3	Rear wheel speed sensor assembly	2	Standard for N1, standard for N2
4	Front wheel speed sensor assembly	2	Standard for N1, standard for N2
5	Rear wheel speed sensor assembly	2	Optional for N1, optional for N2, standard for N3
6	Rear height sensor harness bracket	2	Optional for N1, optional for N2, standard for N3
7	Front wheel speed sensor assembly	2	Optional for N1, optional for N2, standard for N3
8	Front height sensor harness bracket	2	Optional for N1, optional for N2, standard for N3
9	Rear bracket height sensor assembly	2	
10	Front bracket height sensor assembly	2	
11	Fluid reservoir cover	1	
12	Fluid reservoir and accessories assembly	1	
13	Fluid reservoir connecting hose	1	
14	Ibooster assembly	1	
15	Accelerator pedal bolt cap I	1	
16	Accelerator pedal bolt cap II	1	
17	Electronic throttle pedal assembly	1	
18	Shift lever	1	
19	Gearshift mechanism assembly	1	
20	Front motor mounting assembly (front)	1	
21	Front motor mounting assembly (rear)	1	
22	Front motor mount rear mounting bracket assembly	1	

23	Front motor mounting assembly (right)	1	
24	Rear motor mounting assembly (front)	1	
25	Rear motor mount rear bracket	1	
26	Rear motor mount bracket (right)	1	
27	Rear motor mount bush (right)	1	
28	Rear motor mount bush (right)	1	
29	Front subframe assembly	1	REV
30	Front subframe assembly	1	EV
31	Right front subframe connecting beam frame assembly mounting plate assembly	1	EV
32	Left front subframe connecting beam frame assembly mounting plate assembly	1	EV
33	Front subframe connecting beam frame assembly	1	EV
34	Rear subframe assembly	1	
35	Right front drive shaft assembly	1	
36	Left front drive shaft assembly	1	
37	Right rear drive shaft assembly	1	
38	Left rear drive shaft assembly	1	

6.7.5 Chassis control module

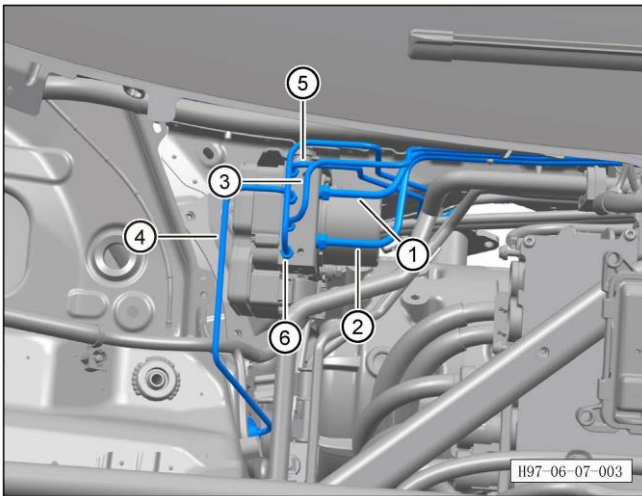
6.7.5.2 Removal and refitting of ESP actuator assembly

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

Removal procedure

1. Turn off all electrical appliances and the start switch.
2. Disconnect the battery negative terminal (refer to [3.1.6.1 Maintenance and inspection of battery](#))
3. Drain brake fluid (refer to [3.1.4.4 Change of brake fluid](#))
4. Remove the windshield lower cover plate seal (refer to [8.6.6.9 Removal and refitting of front windshield lower cover plate seal](#))
5. Remove the A/C air inlet duct assembly (refer to [10.1.11.1 Removal and refitting of A/C air inlet duct assembly](#))



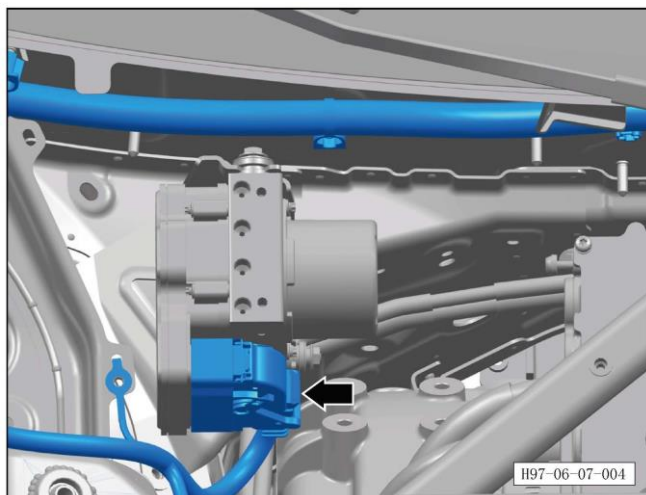
6. Remove the ESP actuator assembly.
 - a. Place a lint-free cloth under the ESP control unit.
 - b. Unscrew the 6 fixing nuts of the brake pipelines 1, 2, 3, 4, 5, and 6.

Tightening torque of nut: $8\pm 1\text{Nm}$.

- c. Seal the brake pipeline and the threaded hole with a sealing plug.

CAUTION:

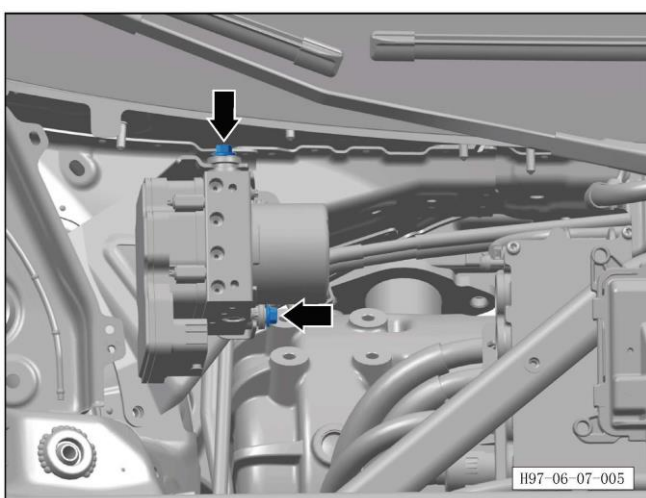
- Prevent the control pipeline in the area of the ESP control unit from being bent.



b. Disconnect the ESP actuator assembly connector.

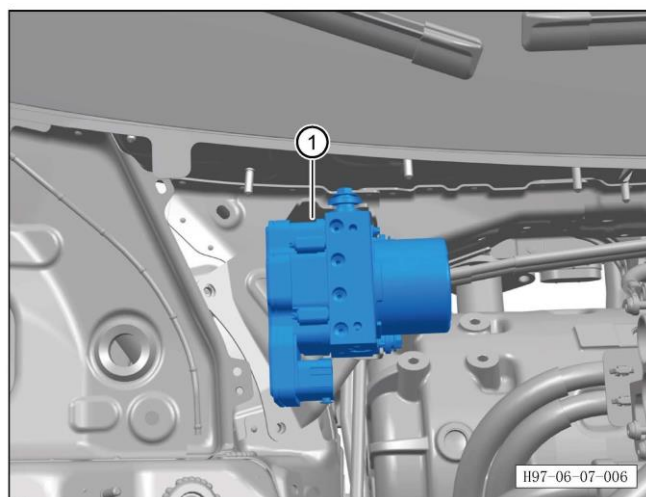
CAUTION:

- The needle at the ESP actuator plug shall be properly protected to prevent deformation.



c. Unscrew the 2 fixing bolts of the ESP actuator assembly.

Tightening torque of bolt: $23\pm 3\text{Nm}$.



d. Take out the ESP actuator assembly ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- Prevent the elastic support from being deformed when taking it out.
- The sealing plug on the ESP control unit can be removed only when the corresponding brake pipeline is refitted.
- If the sealing plug has been previously disengaged from the ESP control unit, the brake fluid may flow out and sufficient filling amount cannot be guaranteed.
- Tighten the 6 fixing nuts of the brake pipeline manually during refitting.
- Check the brake fluid level, and when necessary, add brake fluid (refer to [3.1.4.4 Change of brake fluid](#))
- After refitting, bleed the brake system ([refer to 3.1.4.4 Change of brake fluid](#))

CAUTION:

- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.7.5.3 Removal and refitting of ESP actuator bracket assembly

CAUTION:

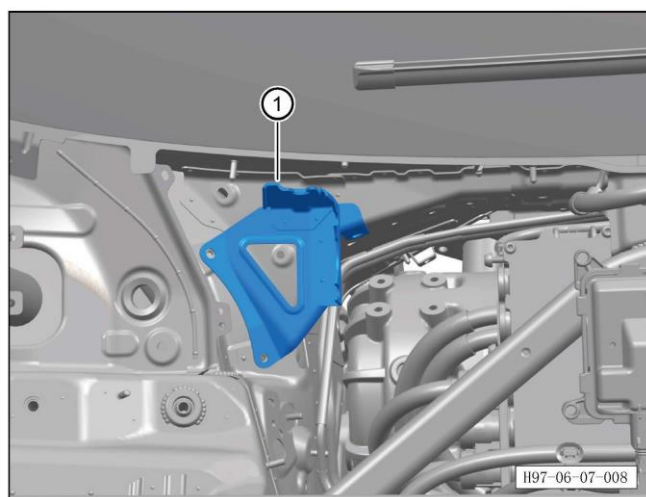
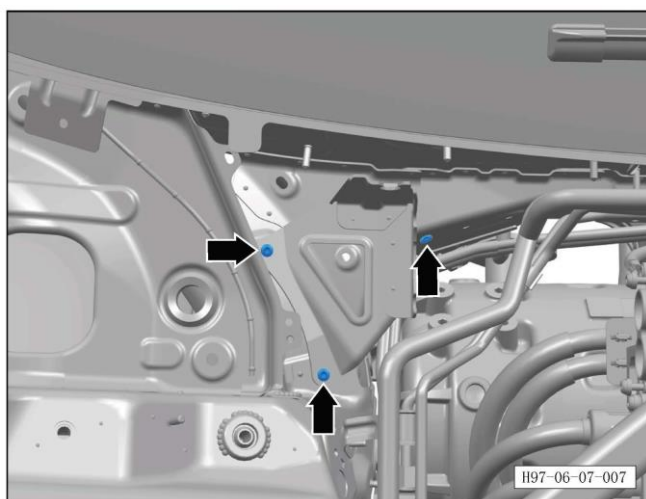
- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

Removal procedure

1. Remove the bolt connecting the ESP actuator assembly and the brake pipeline (refer to [6.7.5.2 Removal and refitting of ESP actuator assembly](#))
2. Remove the ESP actuator bracket assembly.

- a. Unscrew the 3 fixing bolts of the ESP actuator bracket assembly.

Tightening torque of bolt: $20\pm 3\text{Nm}$.



- b. Take out the ESP actuator bracket assembly ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.7.6 Chassis sensor

6.7.6.1 Removal and refitting of front wheel speed sensor assembly

Note:

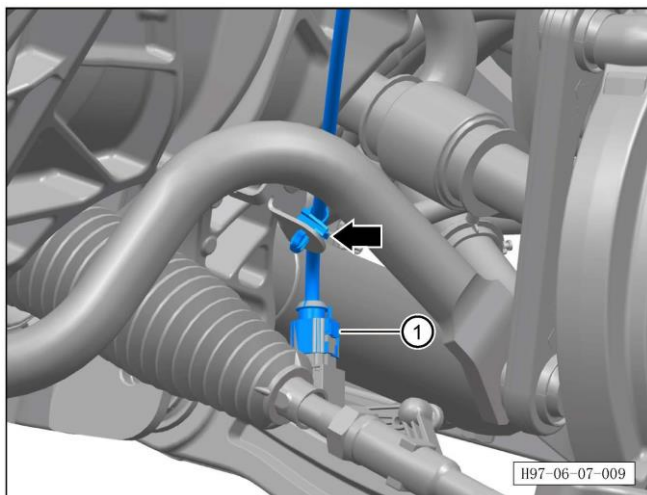
- This part introduces the removal and refitting of the left front wheel speed sensor, which can be referred to for the operations on the right side.

CAUTION:

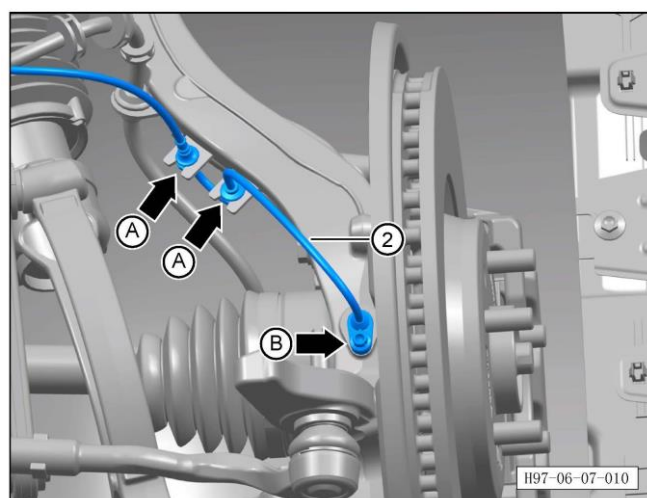
- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

Removal procedure

1. Turn off all electrical appliances and the start switch.
2. Disconnect the battery negative terminal. Refer to [3.1.6.1 Maintenance and inspection battery](#)
3. Remove the front wheel (refer to [6.5.9.1 Removal and refitting of wheels](#))
4. Remove the front wheel mudguard (refer to [8.6.4.1 Removal and refitting of front wheel mudguard](#))
5. Remove front wheel speed sensor assembly.

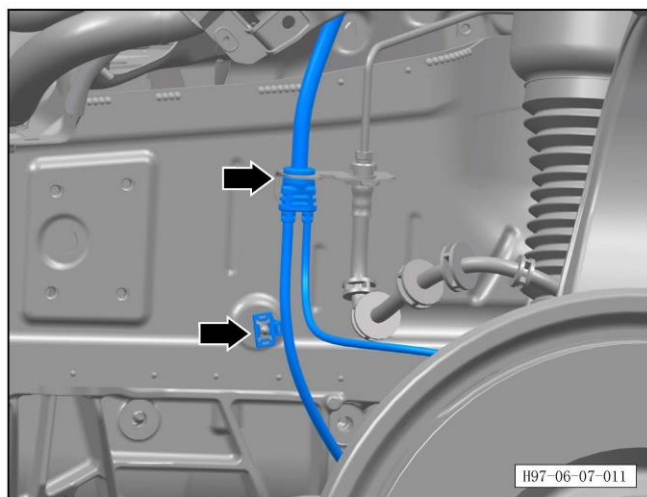


a. Disconnect the harness locating clip and take out the front height sensor assembly ①.

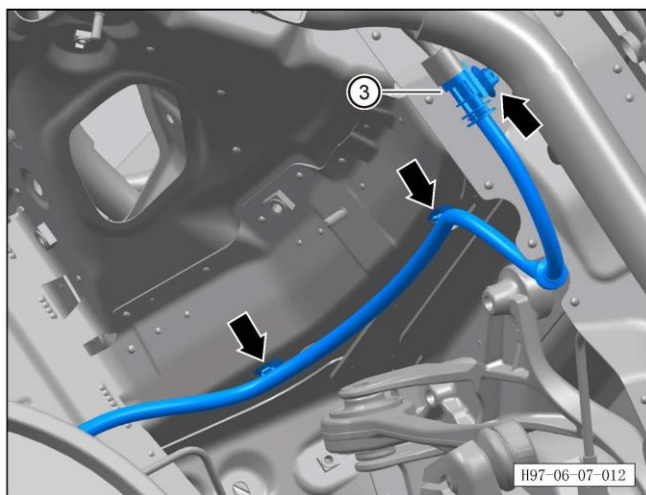


b. Disconnect the locating clip A of the harness, unscrew the fixing bolt B of the front wheel speed sensor, and take out the front wheel speed sensor assembly ②.

Tightening torque of bolt: $8\pm 1\text{Nm}$.



c. Disconnect the harness locating clip.



d. Disengage the harness locating clip and disconnect the front wheel speed sensor assembly ③.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.7.6.2 Removal and refitting of rear wheel speed sensor assembly

Note:

- This part introduces the removal and refitting of the left rear wheel speed sensor, which can be referred to for the operations on the right side.

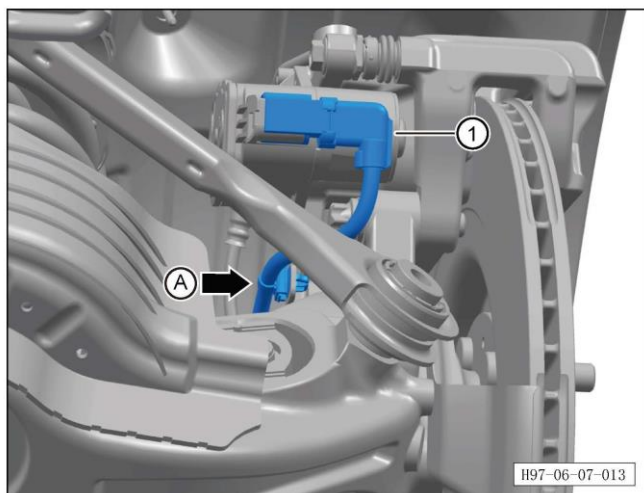
CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

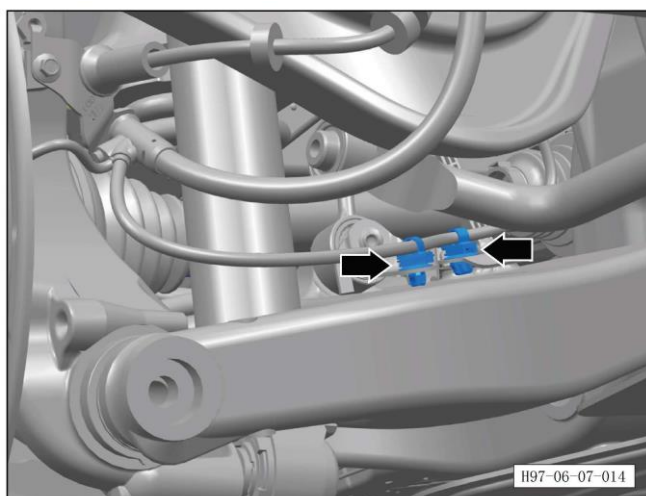
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

Removal procedure

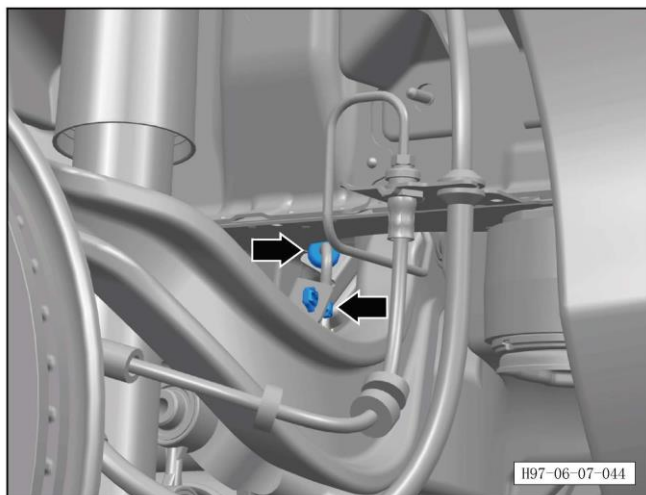
1. Turn off all electrical appliances and the start switch.
2. Disconnect the battery negative terminal. Refer to [3.1.6.1 Maintenance and inspection battery](#)
3. Remove the rear wheel (refer to [6.5.9.1 Removal and refitting of wheels](#))
4. Remove rear wheel speed sensor assembly.



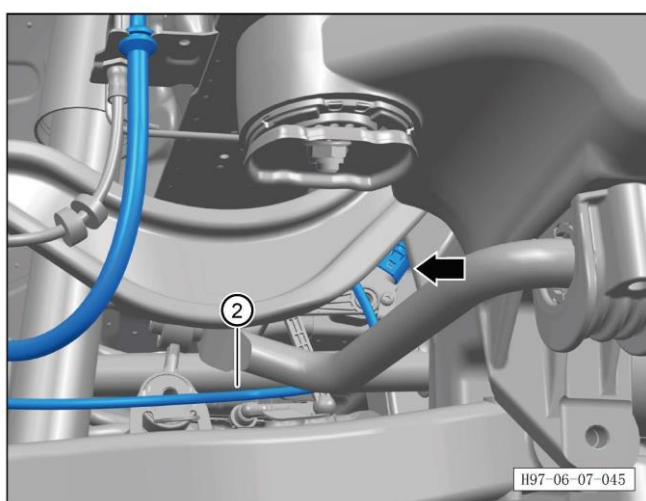
- a. Disengage the harness locating clip A and disconnect the wheel speed sensor assembly connector ①.



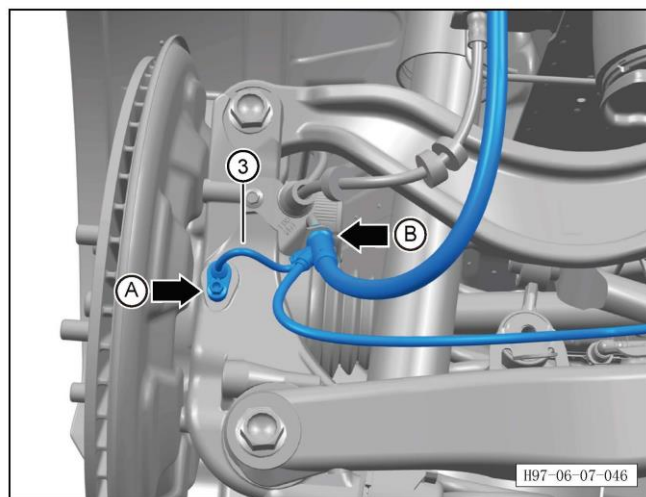
- b. Disconnect the harness locating clip.



c. Disconnect the harness locating clip.

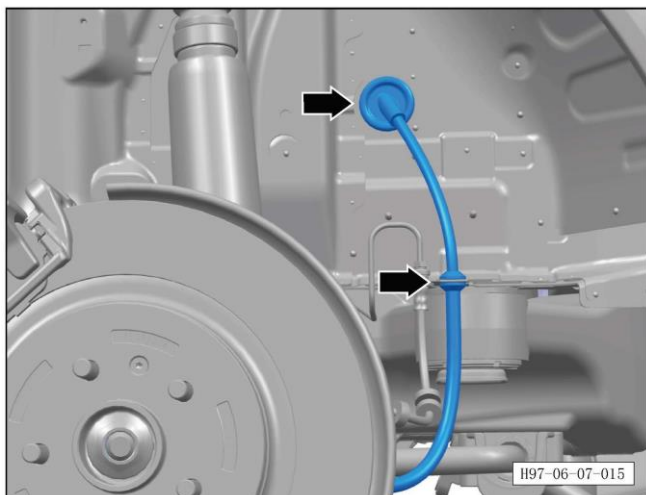


d. Disconnect the rear height sensor assembly connector, and take out the rear height sensor assembly ②.

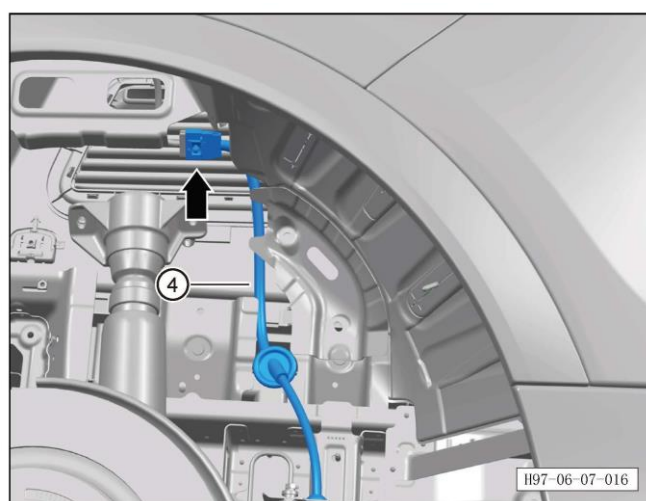


e. Unscrew the fixing bolt A of the rear wheel speed sensor, take out the rear wheel speed sensor ③, and disconnect the harness locating clip B.

Tightening torque of bolt: $8\pm 1\text{Nm}$.



f. Disconnect the harness locating clip.



g. Disconnect the rear wheel speed sensor assembly connector, and take out the rear wheel speed sensor assembly ④.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.7.6.3 Removal and refitting of left front bracket height sensor assembly

Note:

- The following is the removal and refitting of the left front bracket height sensor assembly, which can be referred to for the operations on the right side.

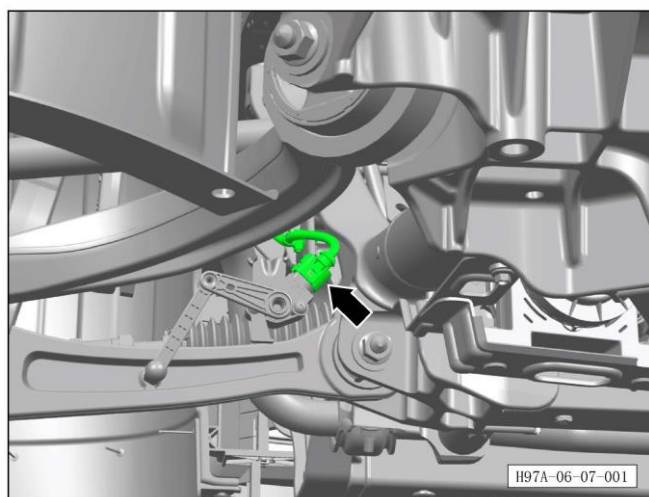
CAUTION:

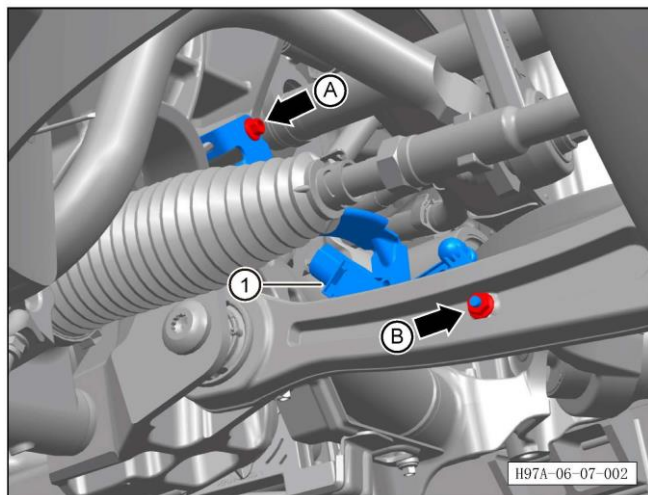
- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

Removal procedure

1. Turn off all electrical appliances and the start switch.
2. Disconnect the battery negative terminal. Refer to [3.1.6.1 Maintenance and inspection battery](#)
3. Remove the left front bracket height sensor assembly.
 - a. Disconnect 1 harness connector of the left front bracket height sensor assembly.





b. Unscrew 1 fixing bolt A of the left front bracket height sensor assembly.

Tightening torque of bolt A: $8\pm 1\text{Nm}$.

c. Unscrew 1 fixing nut B of the left front bracket height sensor assembly, and remove the left front bracket height sensor assembly ①.

Tightening torque of nut B: $8\pm 1\text{Nm}$.

Refitting procedure

The refitting procedure is performed in reverse order.

6.7.6.4 Removal and refitting of rear height sensor harness bracket

Note:

- This part introduces the removal and refitting of the left rear height sensor, which can be referred to for the operations on the right side.

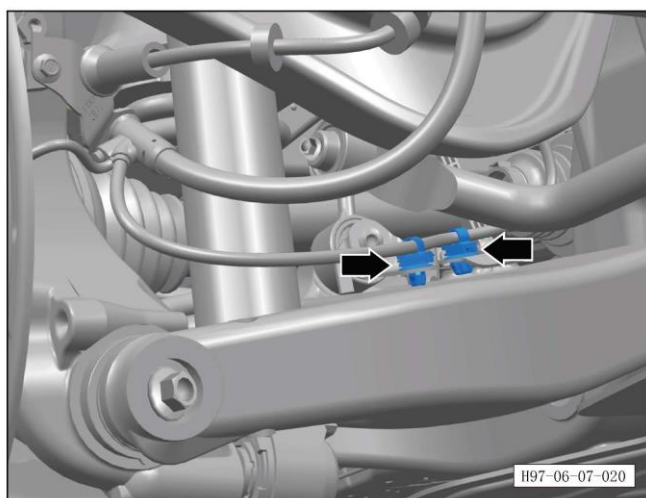
CAUTION:

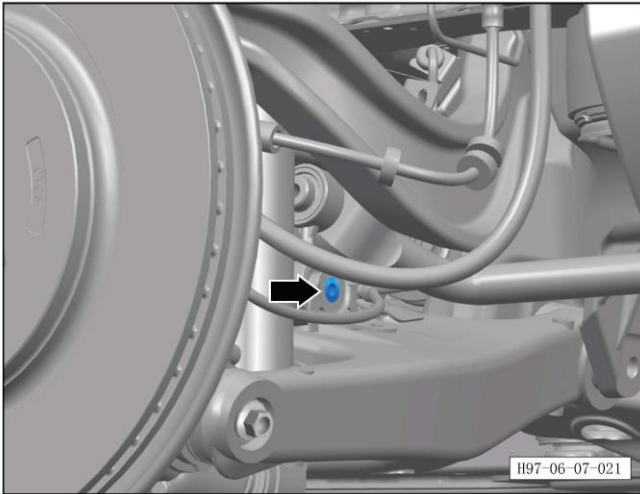
- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

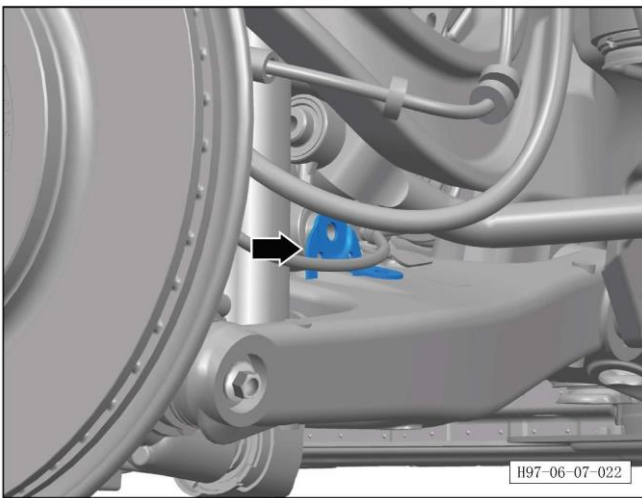
Removal procedure

1. Turn off all electrical appliances and the start switch.
2. Disconnect the battery negative terminal. Refer to [3.1.6.1 Maintenance and inspection battery](#)
3. Remove the front wheel (refer to [6.5.9.1 Removal and refitting of wheels](#))
4. Remove the rear height sensor harness bracket.
 - a. Disconnect the harness clip of the rear height sensor.

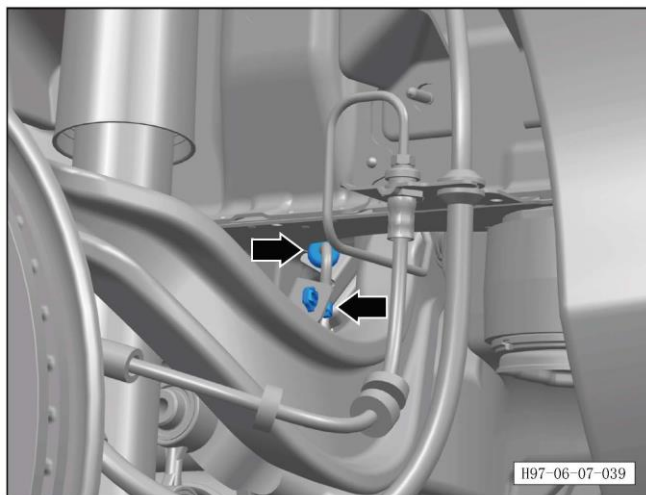




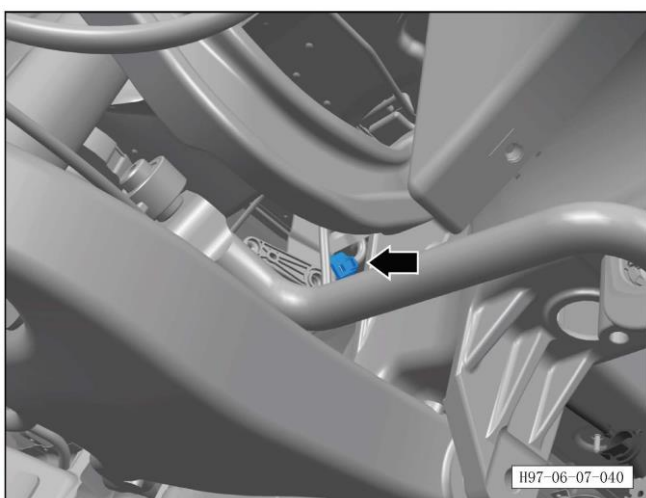
- b. Unscrew the fixing bolt of the rear height sensor harness bracket.
Tightening torque of bolt: $8\pm 1\text{Nm}$.



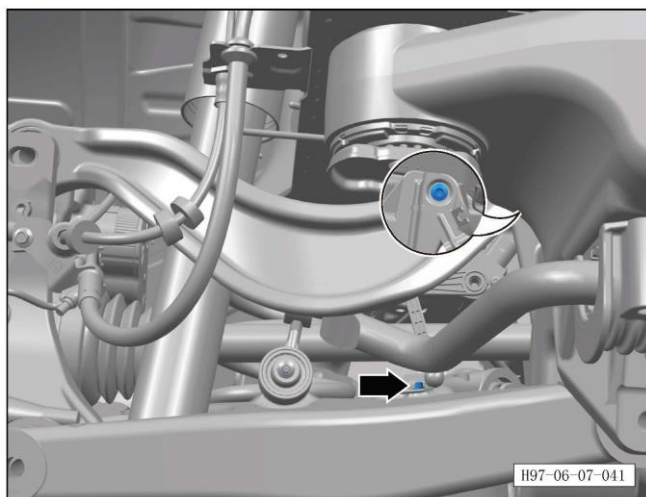
- c. Take out the rear height sensor harness bracket.



d. Disconnect the harness clip of the rear height sensor.

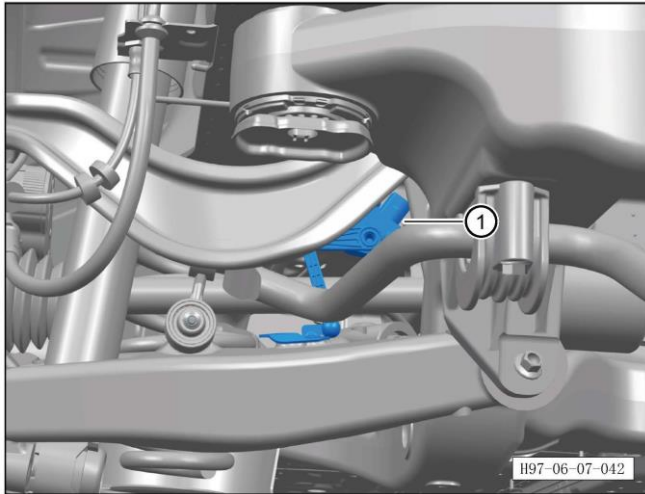


e. Disconnect the rear height sensor connector.



f. Unscrew the 2 fixing bolts of the rear height sensor harness bracket.

Tightening torque of bolt: $8\pm 1\text{Nm}$.



g. Take out the rear height sensor harness bracket ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.7.7 Intelligent integrated brake control unit

6.7.7.2 Removal and refitting of fluid reservoir

CAUTION:

- Before removing the brake master cylinder & brake fluid reservoir assembly, place a piece of cloth under it to prevent the brake fluid from falling onto the vehicle.

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

- Only new brake fluid is used, and pay attention to the label on the brake fluid reservoir.

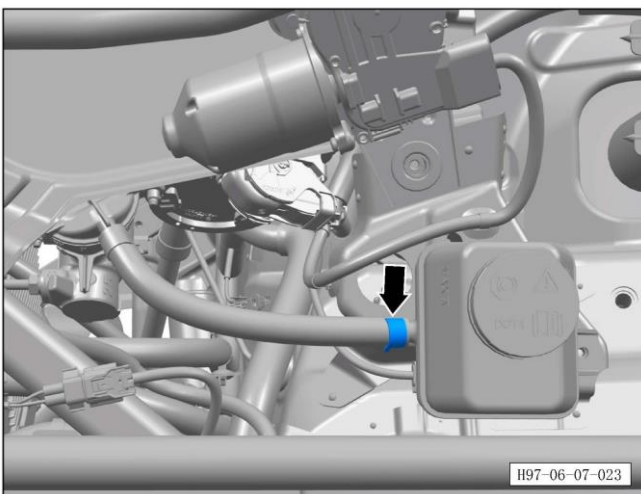
CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

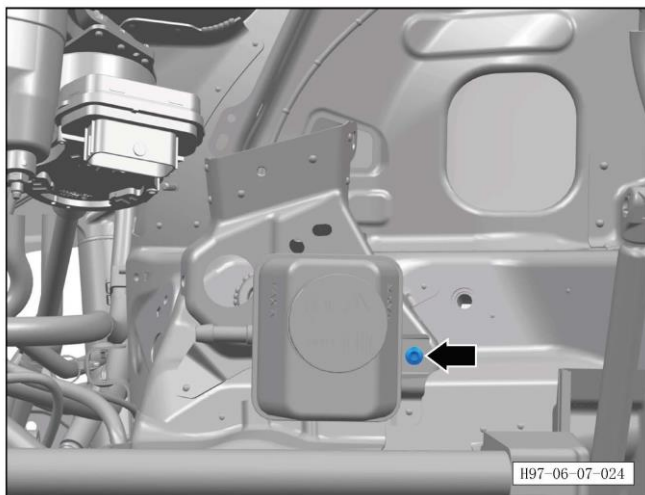
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

Removal procedure

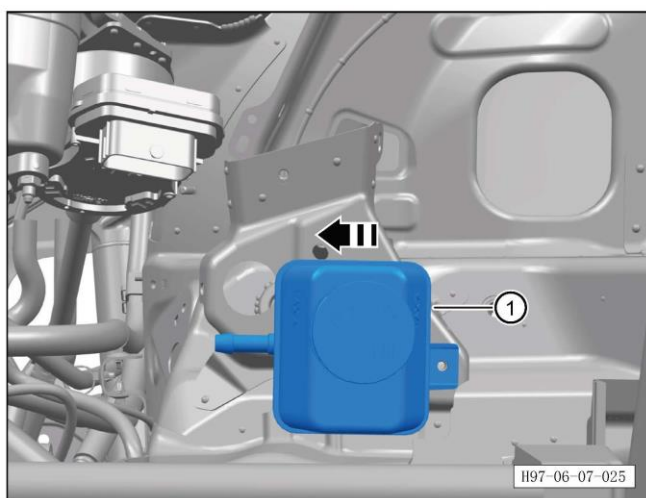
1. Turn off all electrical appliances and the start switch.
2. Disconnect the battery negative terminal. Refer to [3.1.6.1 Maintenance and inspection battery](#)
3. Use the brake fluid bleed tool to suck the brake fluid in the brake fluid reservoir out of the left front brake caliper (refer to [3.1.4.4 Change of brake fluid](#))
4. Remove the windshield lower cover plate seal (refer to [8.6.6.9 Removal and refitting of front windshield lower cover plate seal](#))
5. Remove and refit the brake fluid reservoir.



- a. Remove the clamp of the reservoir connecting hose and disconnect the brake fluid reservoir connecting hose.



b. Unscrew the fixing bolt of the brake fluid reservoir.
Tightening torque of bolt: 8 ± 1 Nm.



c. Push out the brake fluid reservoir ① in the direction of the arrow.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- After refitting, add brake fluid.
- After refitting, bleed the brake system.
- Check brake fluid level, and when necessary, add brake fluid.

CAUTION:

- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.7.7.3 Removal and refitting of brake fluid reservoir connecting hose

CAUTION:

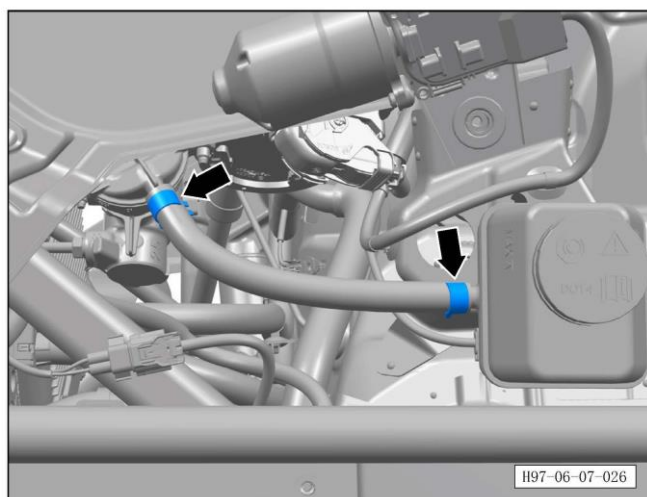
- Before removing the reservoir hose, place a piece of cloth under the brake master cylinder & brake fluid reservoir assembly to prevent the brake fluid from falling onto the vehicle.
- Brake fluid is toxic and corrosive, so never spill it onto the body paint.
- Only new brake fluid is used, and pay attention to the label on the brake fluid reservoir.

CAUTION:

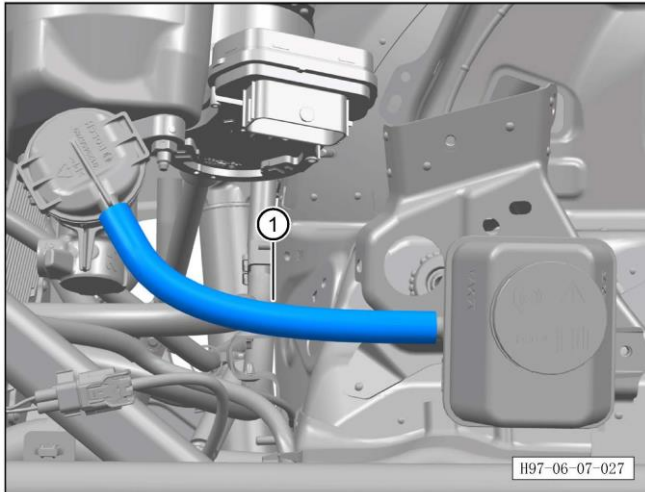
- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

Removal procedure

1. Turn off all electrical appliances and the start switch.
2. Disconnect the battery negative terminal (refer to [3.1.6.1 Maintenance and inspection of battery](#))
3. Use the brake fluid bleed tool to suck the brake fluid in the brake fluid reservoir out of the left front brake caliper (refer to [3.1.4.4 Change of brake fluid](#))
4. Remove and refit the brake fluid reservoir connecting hose.



- a. Remove the clamp of the brake fluid reservoir connecting hose.



b. Disconnect the brake fluid reservoir connecting hose ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- Add brake fluid and re-bleed.
- Store and dispose of used oil in a unified manner.
- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.7.7.4 Removal and refitting of lbooster assembly

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

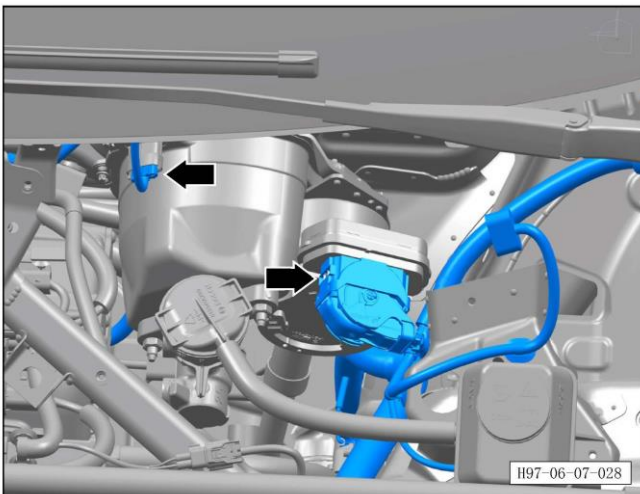
Removal procedure

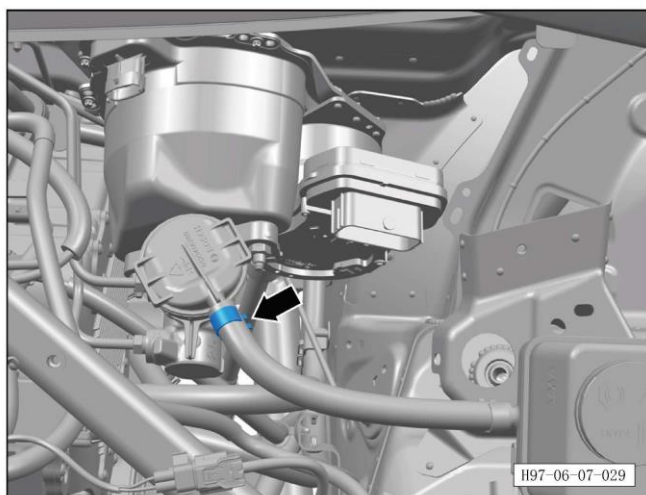
1. Turn off all electrical appliances and the start switch.
2. Disconnect the battery negative terminal. Refer to [3.1.6.1 Maintenance and inspection battery](#)
3. Use the brake fluid bleed tool to suck the brake fluid in the brake fluid reservoir out of the left front brake caliper (refer to [3.1.4.4 Change of brake fluid](#))
4. Remove the windshield lower cover plate seal (refer to [8.6.6.9 Removal and refitting of front windshield lower cover plate seal](#))
5. Remove the front brake motor and bracket assembly (refer to [8.6.7.15 Removal and refitting of front wiper motor and bracket assembly](#))
6. For water deflector, refer to [8.6.6.18 Removal and refitting of water deflector](#)
7. Remove the lbooster assembly.

- a. Disconnect the lbooster assembly connector.

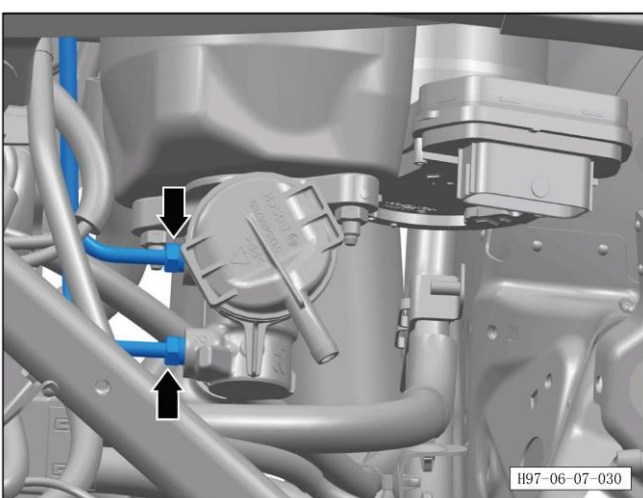
CAUTION:

- The pin at the lbooster assembly plug shall be properly protected to prevent deformation.





b. Remove the clamp and disconnect the booster assembly from the vacuum brake hose.

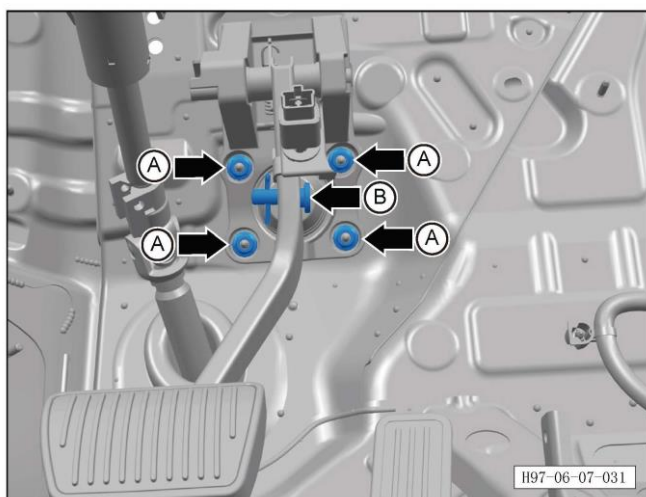


c. Unscrew the fixing nut of the brake pipeline.
d. Seal the brake pipeline and the threaded hole with a sealing plug.

Tightening torque of nut: $8\pm 1\text{Nm}$.

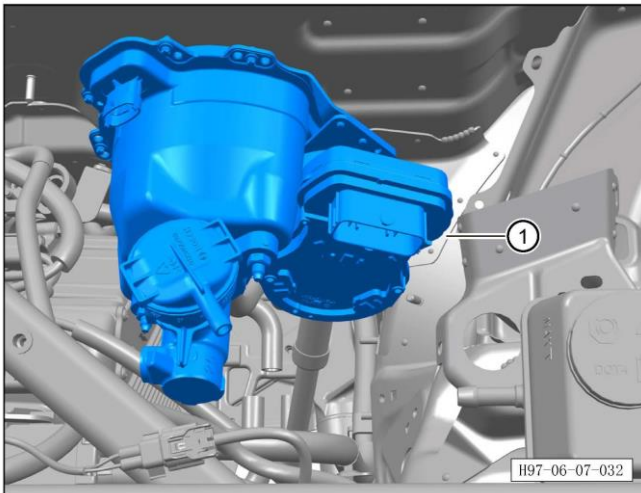
CAUTION:

- Prevent the control pipeline in the area of the ESP control unit from being bent.



e. Unscrew the fixing nut (as shown by arrow A) of the booster assembly, and detach the locking pin (as shown by arrow B) of the booster assembly.

Tightening torque of nut: $23\pm 3\text{Nm}$.



f. Remove the lbooster assembly ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.7.8 Accelerator pedal assembly

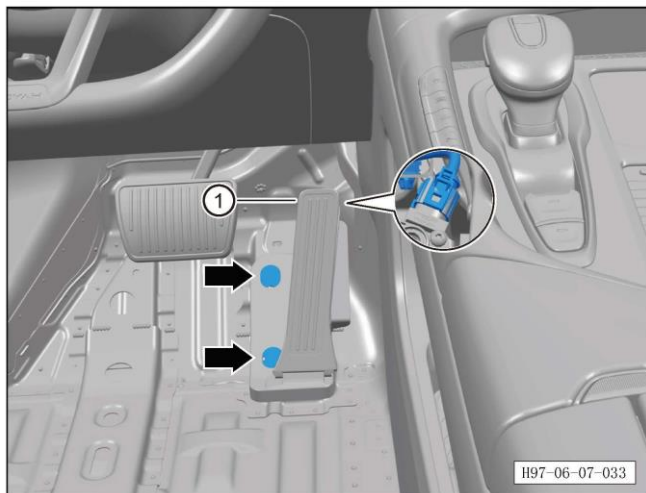
6.7.8.1 Removal and refitting of electronic accelerator pedal assembly

Removal procedure

1. Remove the electronic accelerator pedal assembly.

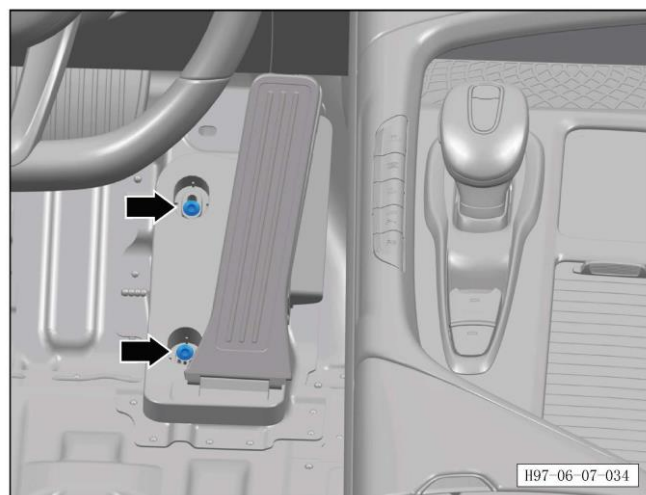
a. Disengage the accelerator pedal connector ①.

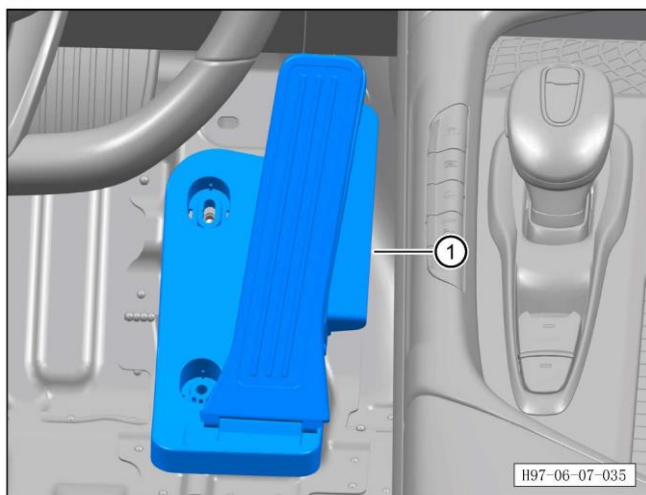
b. Disengage the 2 plug caps of the accelerator pedal bolt.



c. Unscrew the 2 fixing bolts of the electronic accelerator pedal assembly.

Tightening torque of bolt: $8\pm 1\text{Nm}$.





- d. Take out the electronic accelerator pedal assembly
①.

Refitting procedure

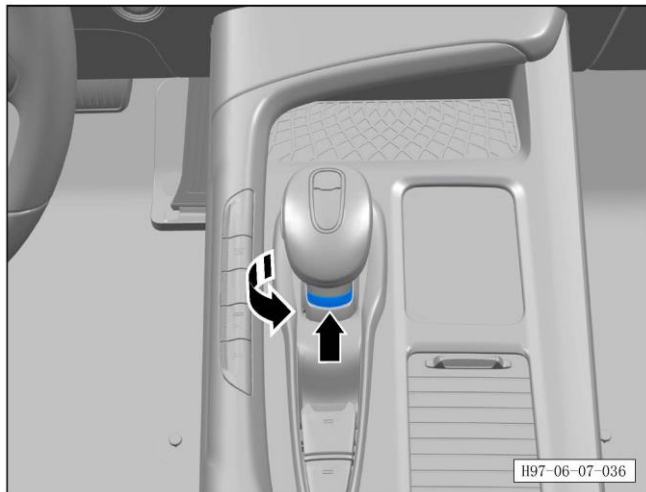
The refitting procedure is performed in reverse order.

6.7.9 Shifter assembly

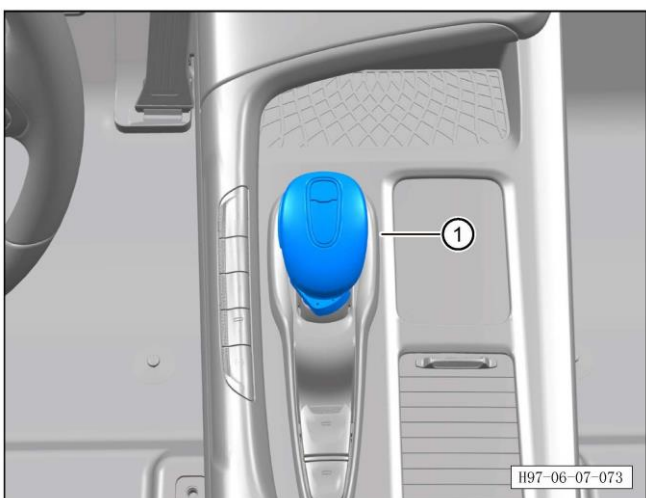
6.7.9.2 Removal and refitting of shift lever

Removal procedure

1. Remove the shift lever.



a. Rotate the shift lever latch in the direction of the arrow.



b. Disengage the shift lever ①.

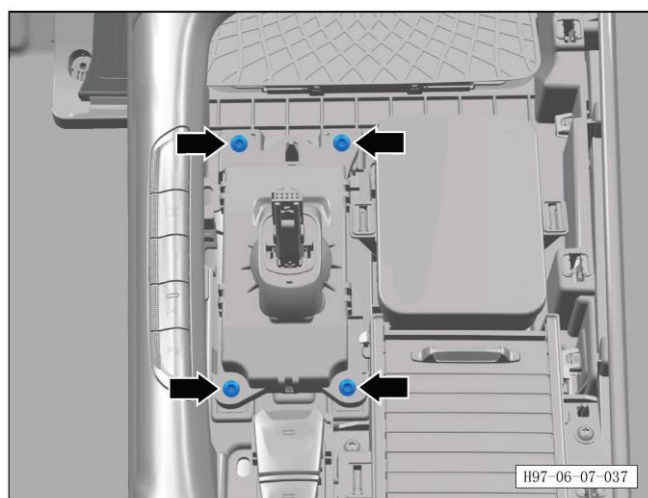
Refitting procedure

The refitting procedure is performed in reverse order.

6.7.9.3 Removal and refitting of gearshift mechanism assembly

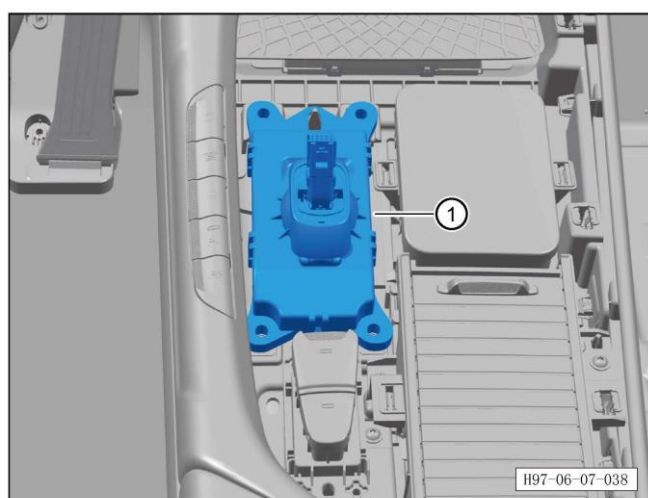
Removal procedure

1. Turn off all electrical appliances and the start switch.
2. Disconnect the battery negative terminal (refer to [3.1.6.1 Maintenance and inspection of battery](#))
3. Remove the shift lever (refer to [6.7.9.1 Removal and refitting of shift lever](#))
4. Remove the shift panel (refer to [8.3.4.4 Removal and refitting of shift panel assembly](#))
5. Remove the gearshift mechanism assembly.



- a. Unscrew the 4 fixing bolts of the gearshift mechanism assembly.
- b. Disengage the connector under the gearshift mechanism assembly.

Tightening torque of bolt: $8\pm 1\text{Nm}$.



- c. Take out the gearshift mechanism assembly ①.

Refitting procedure

The refitting procedure is performed in reverse order.

6.7.10 Rear motor mount mechanism

6.7.10.1 Removal and refitting of rear motor mount rear bracket

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

Removal procedure

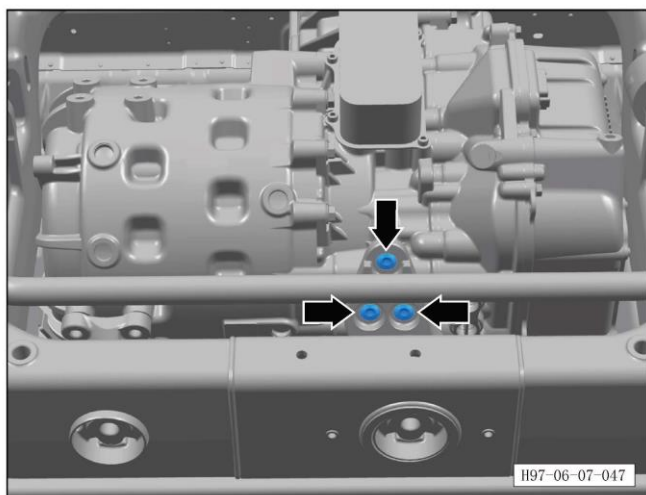
1. Lift the vehicle.
2. Remove the bottom lower protective plate (refer to [8.6.4.3 Removal and refitting of front lower protective plate \(REV\)](#))
3. Remove the motor mounting rear bracket.

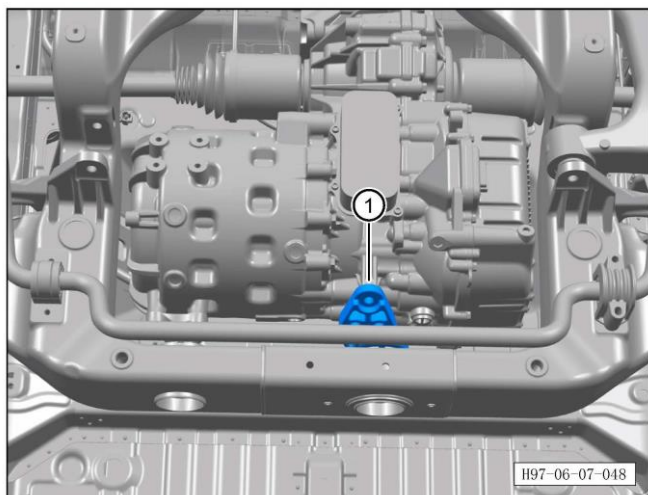
- a. Unscrew the 3 fixing bolts of the motor mount rear bracket.

Tightening torque of bolt: $65\pm 10\text{Nm}$.

CAUTION:

- Remove 1 bolt connecting the rubber bush in the subframe and the motor mount rear bracket.





b. Take out the motor mount rear bracket ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.7.10.2 Removal and refitting of rear motor right mount bracket

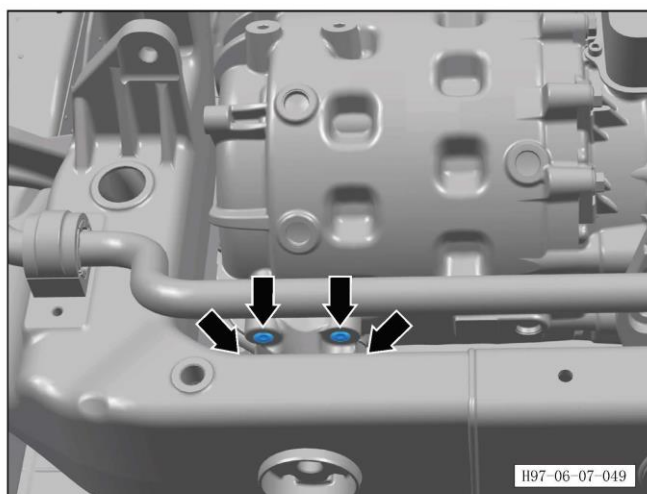
CAUTION:

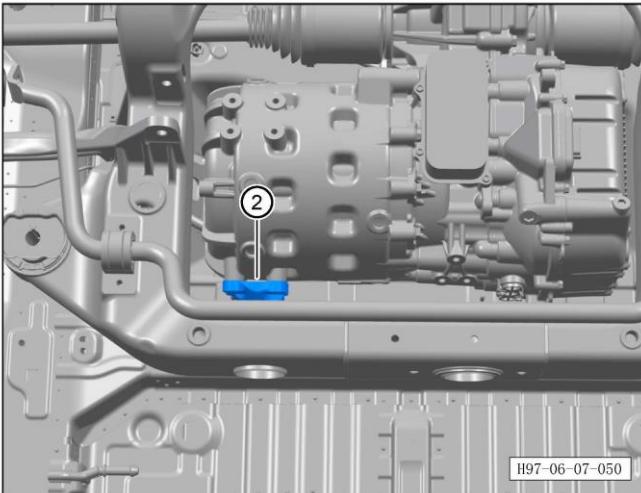
- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

Removal procedure

1. Lift the vehicle.
2. Remove the bottom lower protective plate (refer to [8.6.4.3 Removal and refitting of front lower protective plate \(REV\)](#))
3. Remove the rear motor assembly (refer to [5.2.5.1 Removal and refitting of rear drive motor assembly](#))
4. Remove the rear motor right mount bracket.
 - a. Lift the drive motor assembly out, and then unscrew the 4 fixing bolts of the rear motor right mount bracket.

Tightening torque of bolt: $60\pm 10\text{Nm}$.





b. Take out the rear motor right mount bracket ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

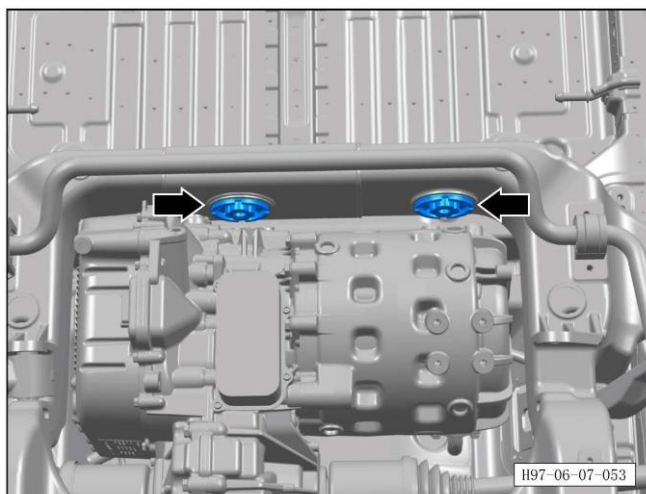
6.7.10.3 Removal and refitting of rear motor mount bush

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

Removal procedure

1. Remove the bottom lower protective plate (refer to [8.6.4.3 Removal and refitting of front lower protective plate \(REV\)](#))
3. Remove the rear motor right mount bracket (refer to [6.7.10.2 Removal and refitting of rear motor right mount bracket](#))
4. Remove the motor rear mount bracket (refer to [6.7.10.1 Removal and refitting of rear motor mount rear bracket](#))
5. Remove the rear motor mount bush.
 - a. Remove the rear subframe assembly and take out the 2 rear motor mount bushes.



Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.7.10.4 Removal and refitting of rear motor front mount assembly

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

Removal procedure

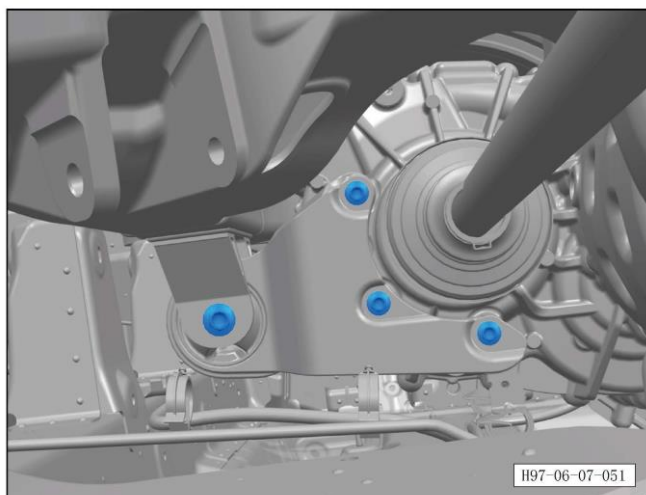
1. Remove the bottom lower protective plate (refer to [8.6.4.3 Removal and refitting of front lower protective plate \(REV\)](#))
2. Remove the rear motor front mount assembly.

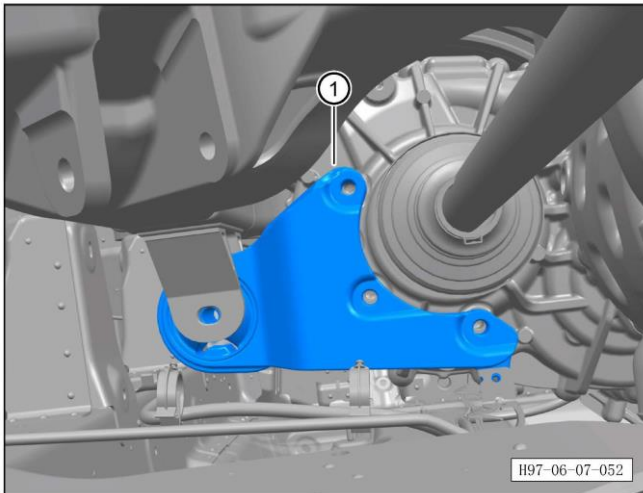
- a. Unscrew the 4 fixing bolts of the rear motor front mount assembly.

Tightening torque of bolt: $60\pm 10\text{Nm}$.

Note:

- Before removal, hold the rear drive motor assembly with a jacking tool.





b. Take out the rear motor front mount assembly ①.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.7.11 Front motor mount mechanism

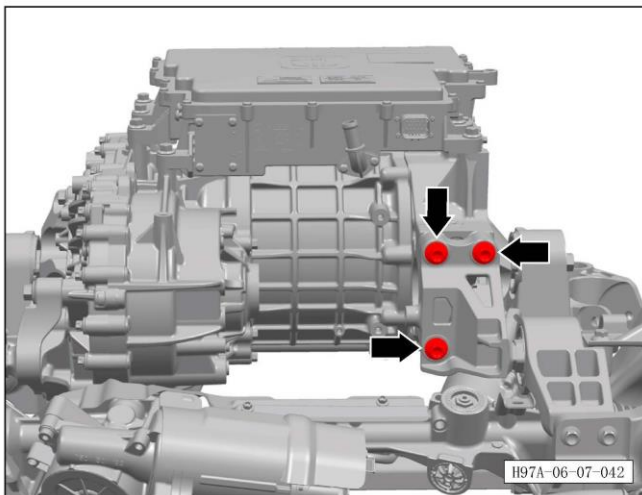
6.7.11.1 Removal and refitting of front motor left front mount bracket assembly (EV)

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

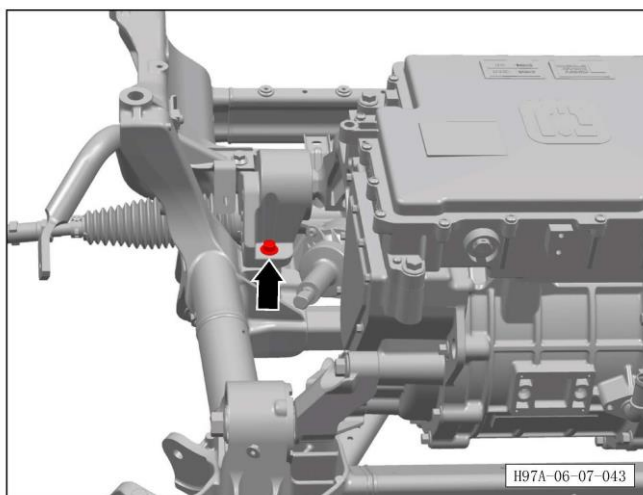
Removal procedure

1. Remove front subframe assembly (EV). Refer to [6.7.12.4 Removal and refitting of front subframe assembly \(EV\)](#)
2. Remove the front motor left front mount bracket assembly.



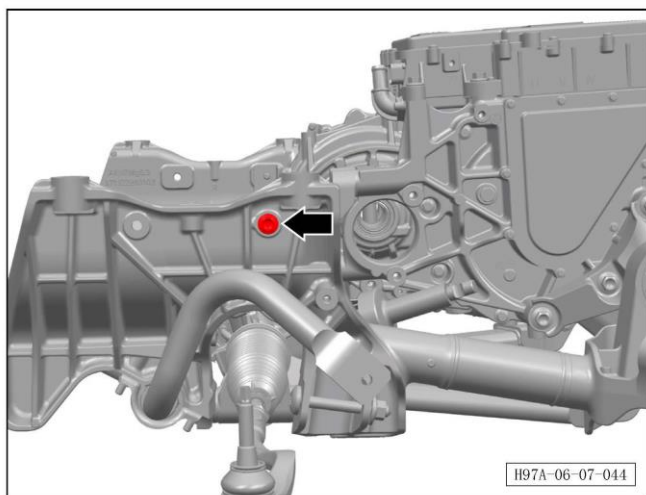
- a. Support the front drive motor with a bracket, and unscrew the 3 fixing bolts between the front motor left front mount bracket assembly and the front drive motor.

Tightening torque of bolt: $100 \pm 10 \text{ Nm}$.



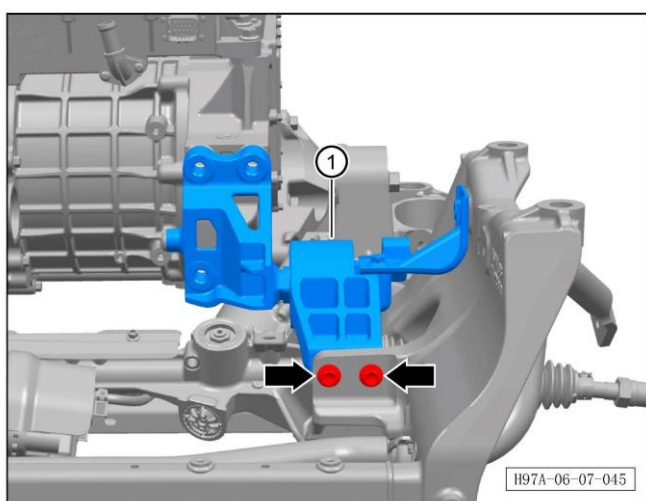
- b. Unscrew 1 fixing bolt between the front motor left front mount bracket assembly and the rear part of the front subframe.

Tightening torque of bolt: $55 \pm 5 \text{ Nm}$.



c. Unscrew 1 fixing bolt between the front motor left front mount bracket assembly and the left side of the front subframe.

Tightening torque of bolt: $55\pm 5\text{Nm}$.



d. Unscrew the 2 fixing bolts between the front motor left front mount bracket assembly and the front part of the front subframe, and take out the front motor left front mount bracket assembly ①.

Tightening torque of bolt: $55\pm 5\text{Nm}$.

Refitting procedure

The refitting procedure is performed in reverse order.

6.7.11.2 Removal and refitting of front motor front mount assembly (REV)

Note:

- The front motor front mount assembly (REV) is described below.

CAUTION:

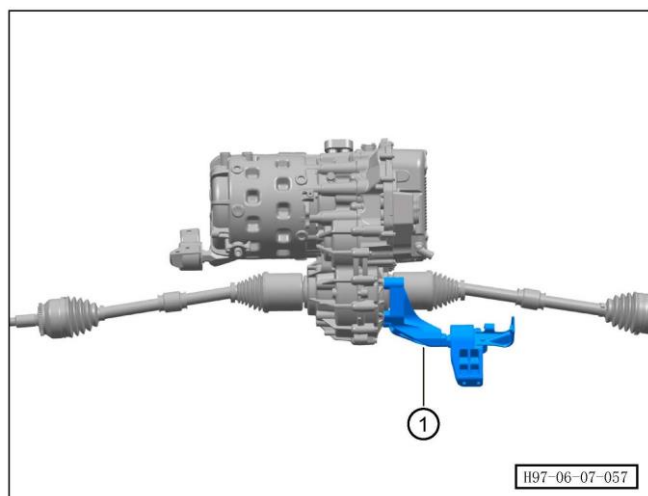
- For lifting operations of the vehicle with air suspension, please refer to "Precautions" in corresponding sections and "Removal, refitting and maintenance of front/rear air spring".

- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

Removal procedure

1. Disconnect the battery negative terminal. Refer to [3.1.6.1 Maintenance and inspection battery](#)
2. Remove the battery (refer to [9.4.4.2 Removal and refitting of battery \(EV\)](#) and [3.1.6.1 Maintenance and inspection of battery](#))
3. Remove the front drive motor assembly (refer to [5.2.9.1 Removal and refitting of front drive motor assembly \(REV\)](#))
4. Remove the front motor front mount assembly.

a. Hang the drive motor with the hanger, and detach the front motor front mount assembly①



Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.7.11.3 Removal and refitting of front motor front mount assembly (EV)

Note:

- The front motor front mount assembly (EV) is described below.

CAUTION:

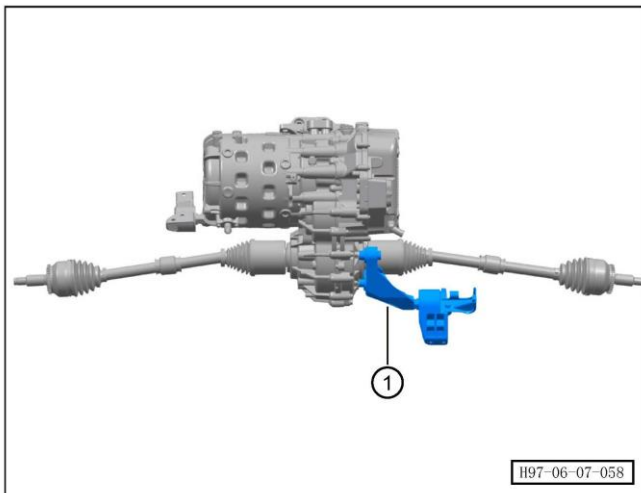
- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

Removal procedure

1. Disconnect the battery negative terminal. Refer to [3.1.6.1 Maintenance and inspection battery](#)
2. Remove the battery (refer to [9.4.4.2 Removal and refitting of battery \(EV\)](#))
3. Remove the front drive motor assembly (refer to [5.2.4.1 Removal and refitting of front drive motor assembly \(REV\)](#))
4. Remove the front motor front mount assembly.

a. Hang the drive motor with the hanger, and detach the front motor front mount assembly.



Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.7.11.3 Removal and refitting of front motor left rear mount bracket assembly (EV)

Note:

- The following is the removal and refitting of the front motor left rear mount assembly, which can be referred to for the operations on the right side.

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

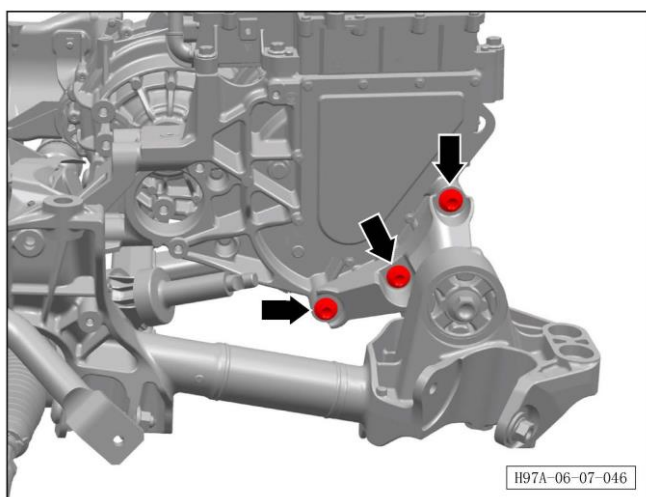
Removal procedure

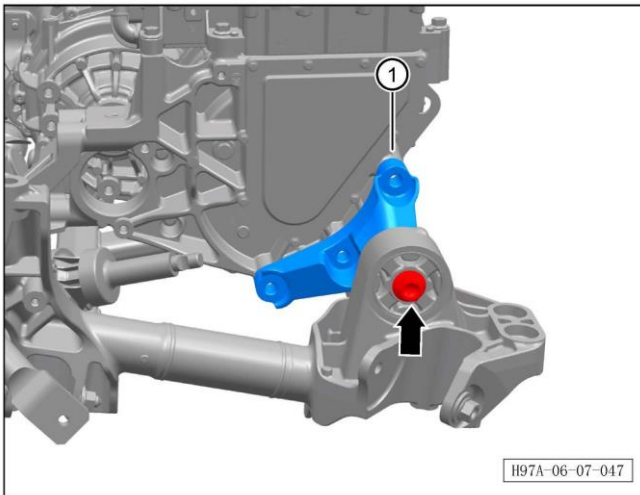
1. Remove the front subframe assembly (EV) (refer to [6.7.12.4 Removal and refitting of front subframe assembly \(EV\)](#))

2. Remove the front motor left rear mount bracket assembly.

a. Support the front drive motor with a bracket, and unscrew the 3 fixing bolts between the front motor left rear mount bracket assembly and the front drive motor.

Tightening torque of bolt: $100\pm 10\text{Nm}$.





b. Unscrew 1 fixing bolt between the front motor left rear mount bracket assembly and the front subframe, and remove the front motor left rear mount bracket assembly ①.

Tightening torque of bolt: $100\pm 10\text{Nm}$.

Refitting procedure

The refitting procedure is performed in reverse order.

6.7.11.4 Removal and refitting of front motor right front mount bracket assembly (EV)

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

Removal procedure

1. Remove the front subframe assembly (EV) (refer to [6.7.12.4 Removal and refitting of front subframe assembly \(EV\)](#))

2. Remove the front motor left front mount bracket assembly.

a. Support the front drive motor with a bracket, and unscrew the 3 fixing bolts A between the front motor right front mount bracket assembly.

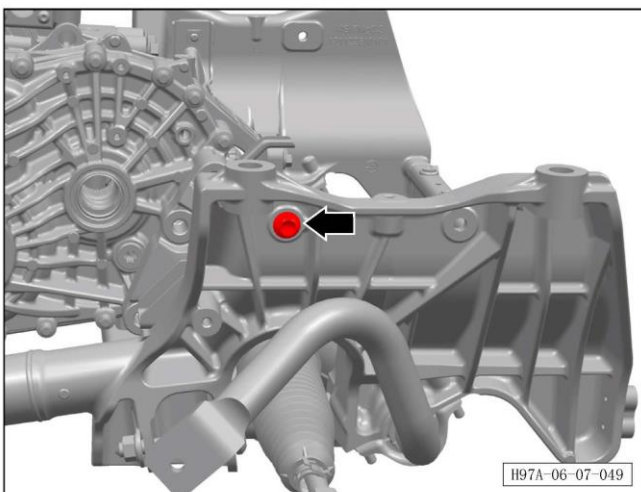
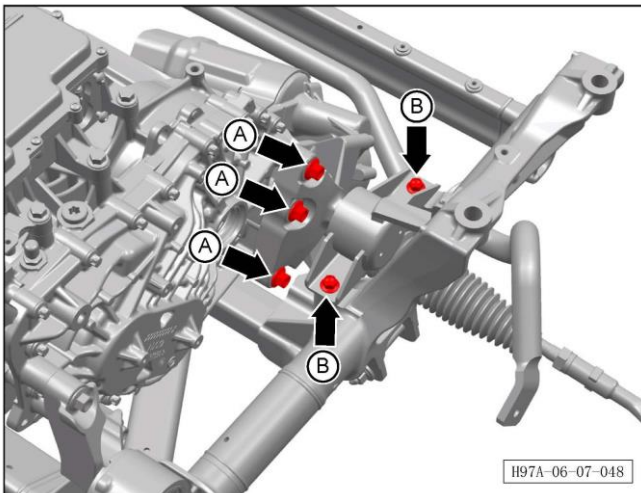
Tightening torque of bolt: $100\pm 10\text{Nm}$.

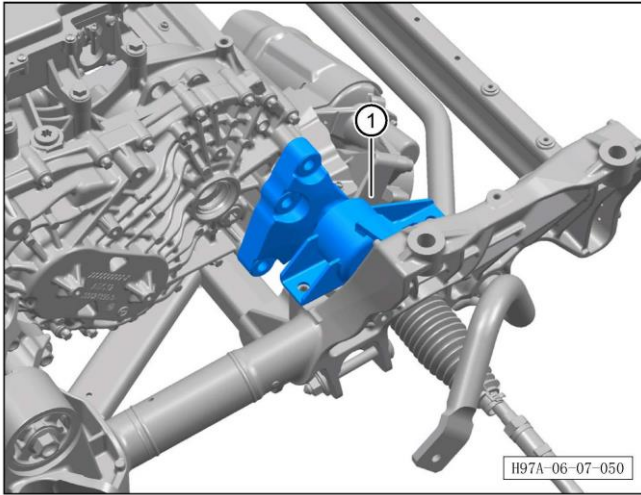
b. Unscrew the 2 fixing bolts B between the front motor right front mount bracket assembly and the front subframe.

Tightening torque of bolt: $55\pm 5\text{Nm}$.

c. Unscrew 1 fixing bolt between the front motor right front mount bracket assembly and the right side of the front subframe.

Tightening torque of bolt: $55\pm 5\text{Nm}$.





d. Take out the front motor right front mount bracket assembly ①.

Tightening torque of bolt: $100\pm 10\text{Nm}$.

Refitting procedure

The refitting procedure is performed in reverse order.

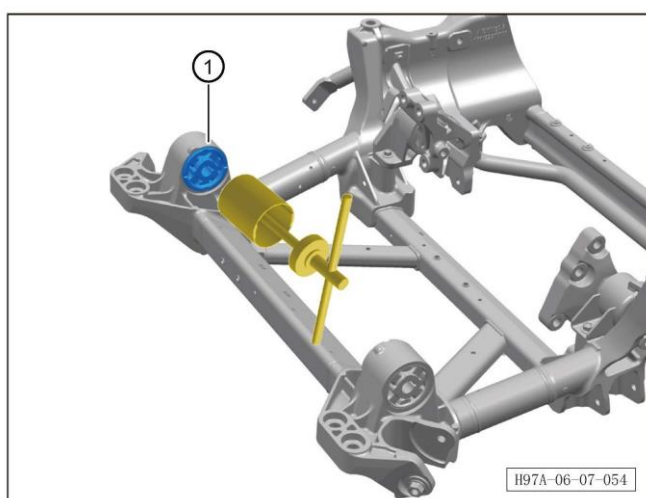
6.7.11.5 Removal and refitting of front motor rear mount assembly

Note:

- The following is the removal and refitting of the front motor left rear mount assembly, which is the same as that of the right side.

Removal procedure

1. Remove the front subframe assembly (refer to [6.7.12.4 Removal and refitting of front subframe assembly \(EV\)](#))
2. Remove the front drive motor assembly (refer to [5.2.4.6 Removal and refitting of front drive motor assembly \(EV - facelift\)](#))
3. Remove the front motor rear mounting assembly.



- a. Use a special tool to press out the front motor rear mount assembly ①.

Refitting procedure

The refitting procedure is performed in reverse order.

6.7.12 Front subframe

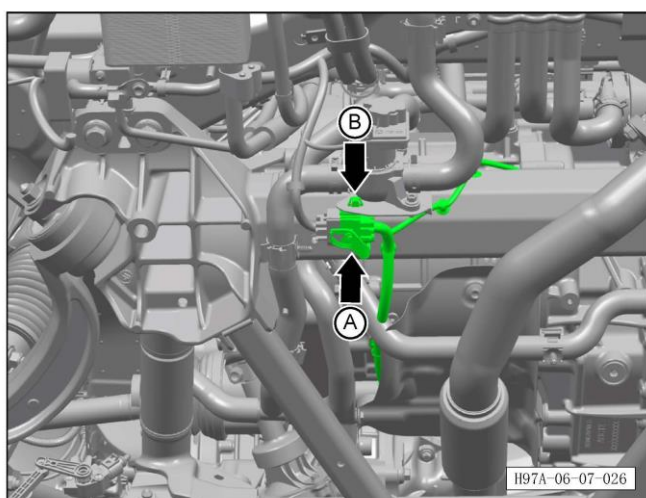
6.7.12.1 Removal and refitting of front subframe assembly (REV)

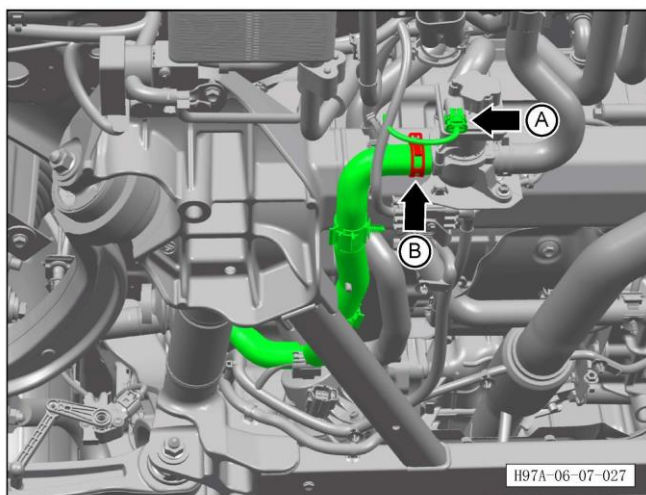
CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

Removal procedure

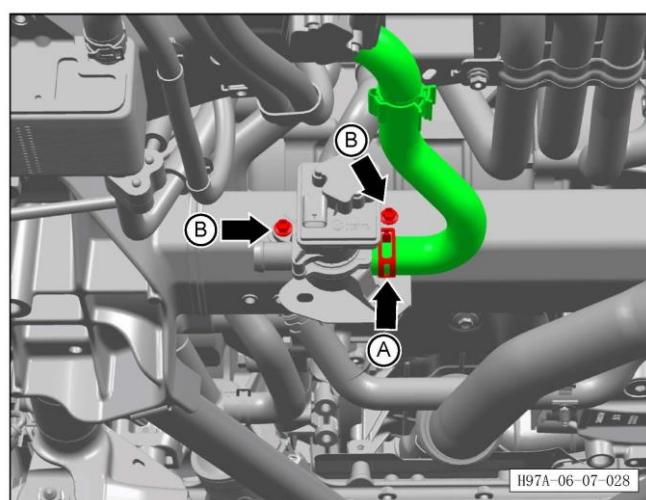
1. Turn off all electrical appliances and the start switch.
2. Disconnect the battery negative terminal. Refer to [3.1.6.1 Maintenance and inspection battery](#)
3. Remove the middle lower protective plate (refer to [8.6.4.5 Removal and refitting of middle lower protective plate](#))
4. Remove the front drive shaft assembly (refer to [6.7.14.1 Removal and refitting of front drive shaft assembly](#))
6. Remove front subframe assembly.
 - a. Disconnect the front subframe harness connector A, and disengage 1 fixing clip B of the front subframe harness assembly.





b. Disconnect 1 harness connector A of the three-way proportional valve assembly.

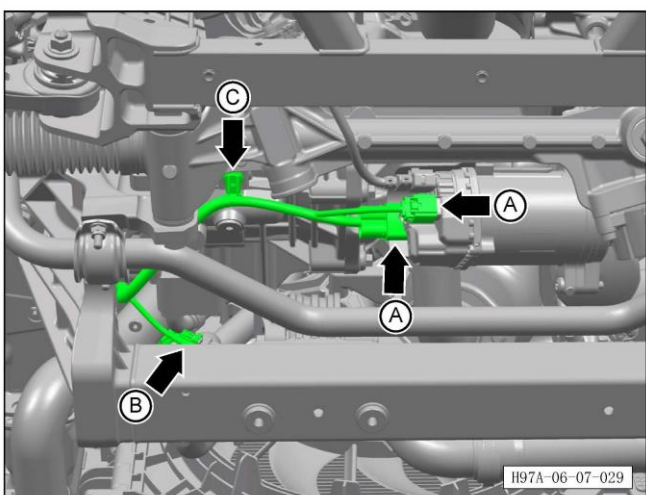
c. Disengage 1 fixing pipe clamp B at the rear section of the generator water outlet pipe, and disconnect the water pipe.



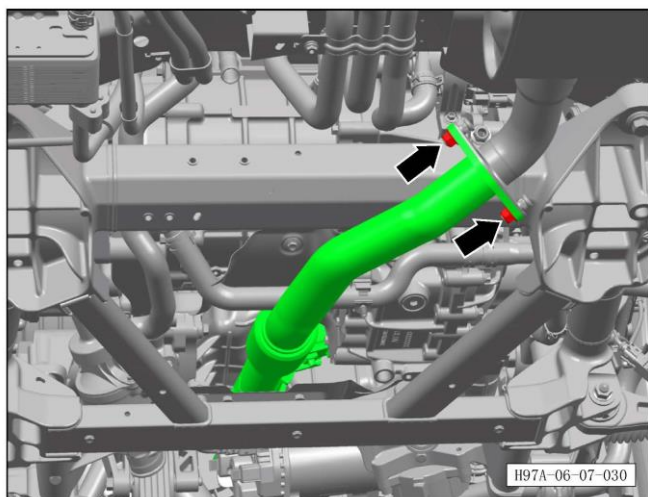
d. Disengage 1 fixing pipe clamp A of the four-way control valve water pipe 1.

e. Unscrew the 2 fixing bolts B of the three-way proportional valve assembly bracket and separate the three-way proportional valve assembly from the rear subframe.

Tightening torque of bolt B: $8\pm 1\text{Nm}$.

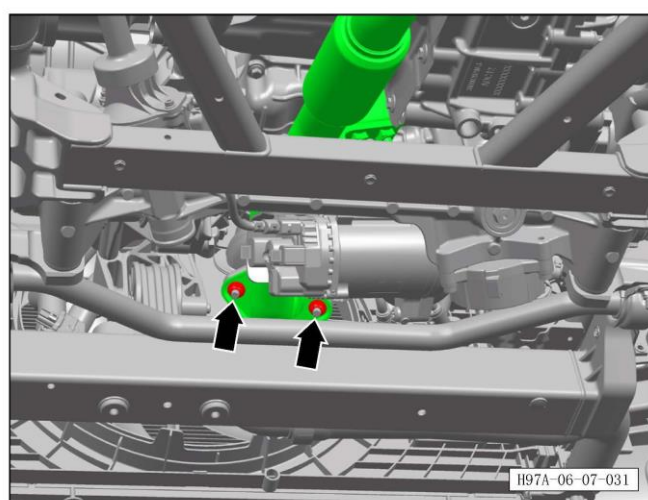


f. Disconnect the 2 harness connectors A of the steering gear and 1 harness connector B of the RCV assembly, and disengage the harness fixing clip C.



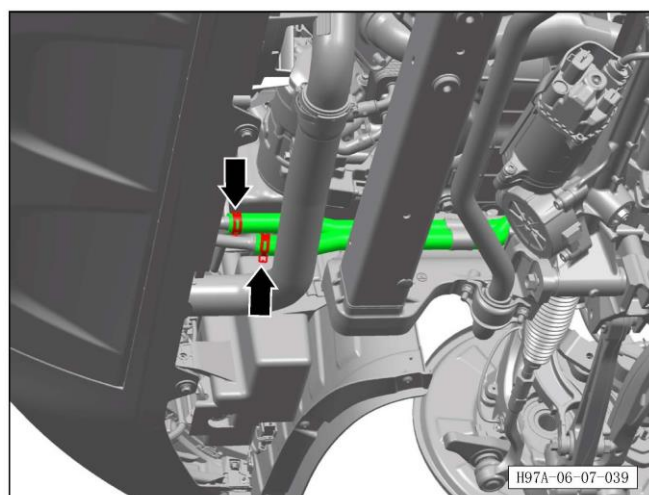
g. Unscrew the 2 fixing nuts connecting the front end exhaust pipe assembly and the front muffler, and separate the front end exhaust pipe assembly from the front muffler.

Tightening torque of nut: $8\pm 1\text{Nm}$.

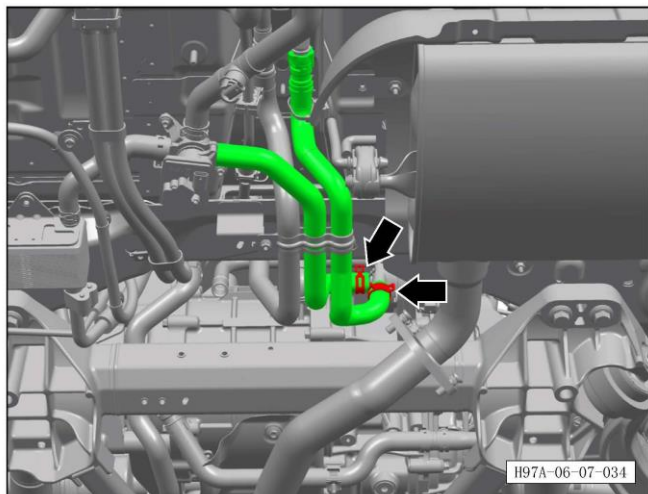


h. Unscrew the 2 fixing nuts connecting the front end exhaust pipe assembly and the catalytic converter housing assembly, and separate the front end exhaust pipe assembly from the catalytic converter housing assembly.

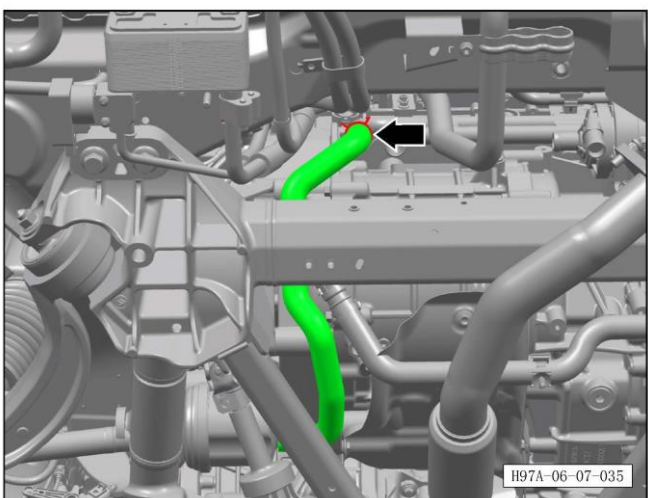
Tightening torque of nut: $8\pm 1\text{Nm}$.



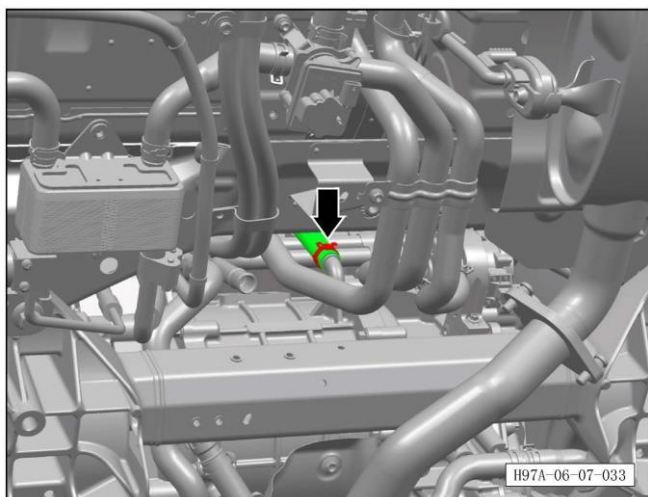
i. Disengage the fixing pipe clamp of the low-temperature radiator water outlet pipe and water inlet pipe, and disconnect the water pipes.



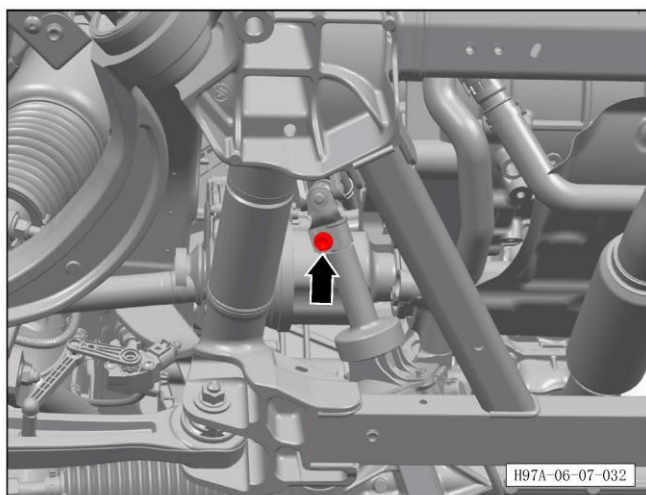
j. Disengage the fixing pipe clamp of the motor water pump water outlet hose and water inlet pipe, and disconnect the pipelines.



k. Disengage 1 fixing pipe clamp at the rear section of the generator water outlet pipe, and disconnect the water pipe.

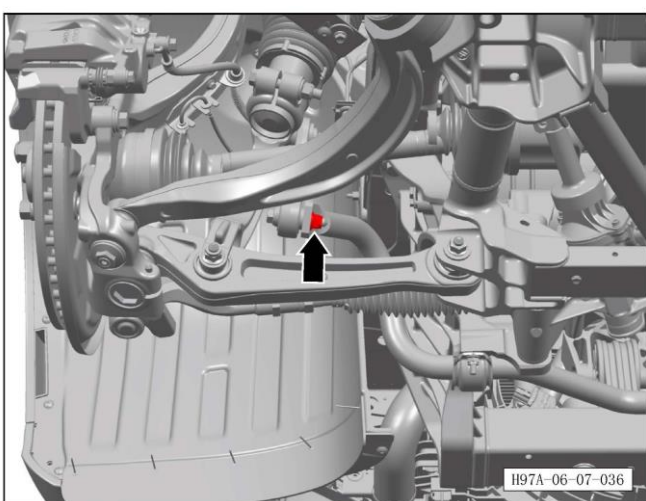


l. Disengage 1 fixing pipe clamp of the water tank water inlet hose, and disconnect the hose.



m. Unscrew 1 fixing bolt between the steering gear and the lower steering shaft.

Tightening torque of bolt: $40\pm 5\text{Nm}$.

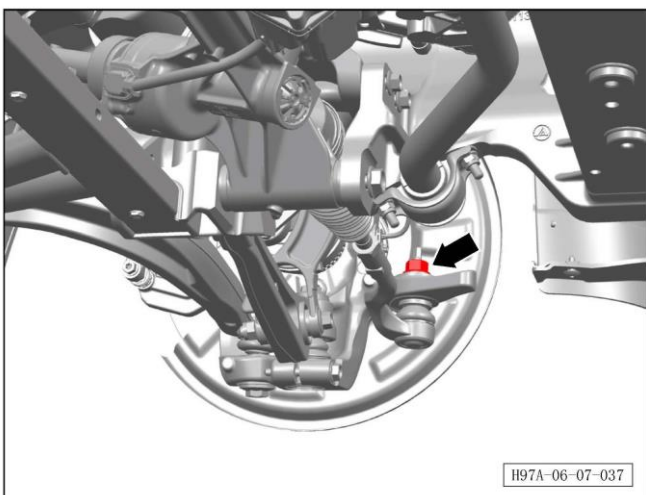


n. Unscrew 1 fixing nut connecting the left front stabilizer bar joint assembly and the front stabilizer bar assembly, and separate the left front stabilizer bar joint assembly from the front stabilizer bar assembly.

Tightening torque of nut: $50+90^\circ\text{ Nm}$

CAUTION:

- The above is the removal of the left front stabilizer bar ball joint fixing nut, which can be referred to for the operations on the right side.

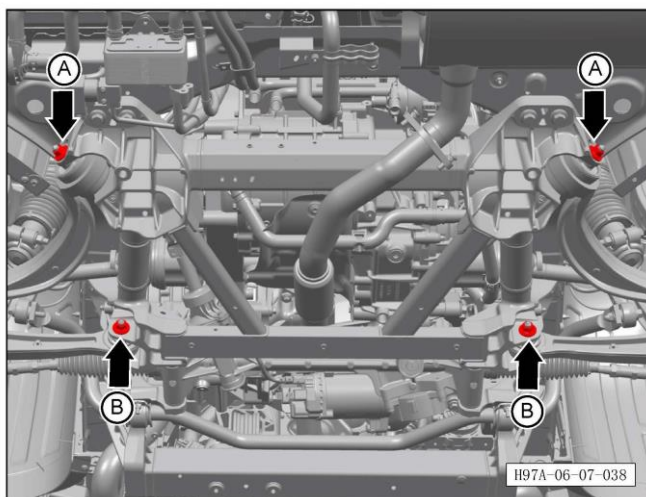


o. Unscrew 1 fixing nut of the left outer ball joint of the steering gear.

Tightening torque of nut: $40\pm 5\text{Nm}$.

CAUTION:

- The above is the removal of the fixing nut of the steering gear left outer ball joint, which can be referred to for the operations on the right side.

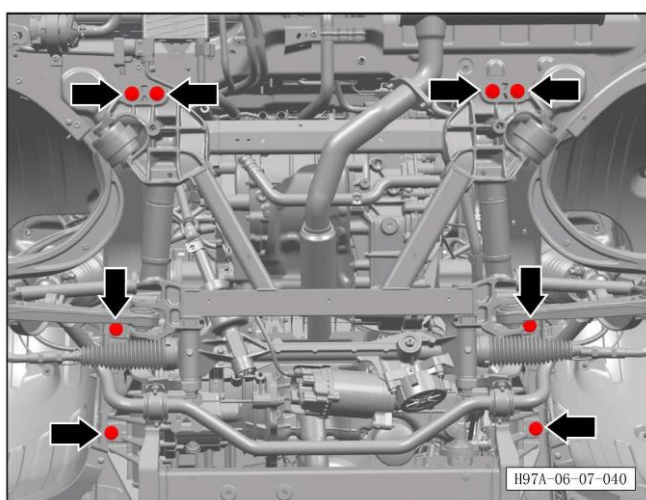


p. Unscrew the 2 fixing nuts A between the front suspension lower control arm assembly and the front subframe, and pull out the bolt.

Tightening torque of nut A: $40\pm 5\text{Nm}$.

q. Unscrew the 2 fixing nuts B between the front suspension front lower control arm assembly and the front subframe, and pull out the bolt.

Tightening torque of nut B: $70+180^\circ\text{Nm}$.

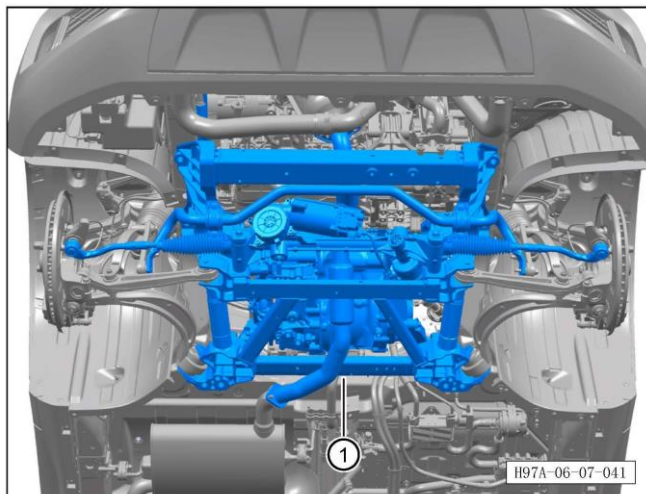


r. Screw out the 8 fixing bolts of the front subframe.

Tightening torque of bolt: $115+90^\circ\text{Nm}$.

CAUTION:

- Pay attention to the fixing clip of the harness and the pipeline when lowering the front subframe assembly, so as to avoid damages to the harness and the pipeline.



s. Disengage the front subframe assembly ①.

CAUTION:

- Pay attention to the fixing clip of the harness and the pipeline when lowering the front subframe assembly, so as to avoid damages to the harness and the pipeline.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- Refit the water pipe bracket assembly first when raising the subframe assembly with a jack.
- Coolant cannot be reused, mixed or replaced with that of different colors. Check that the coolant level is between the MAX and MIN marks.
- It is necessary to discharge the air.

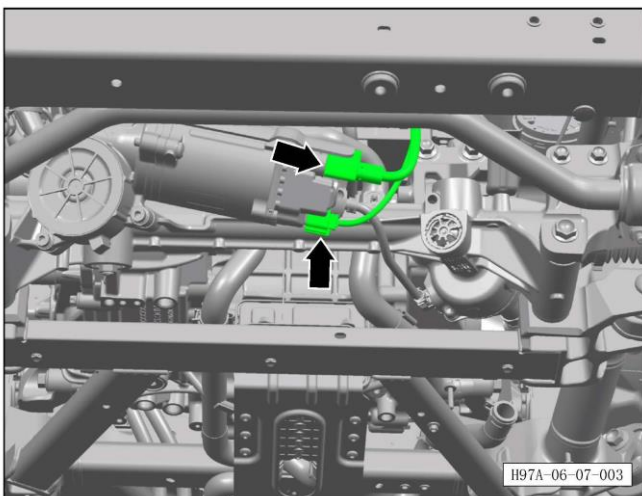
6.7.12.2 Removal and refitting of front subframe assembly (EV)

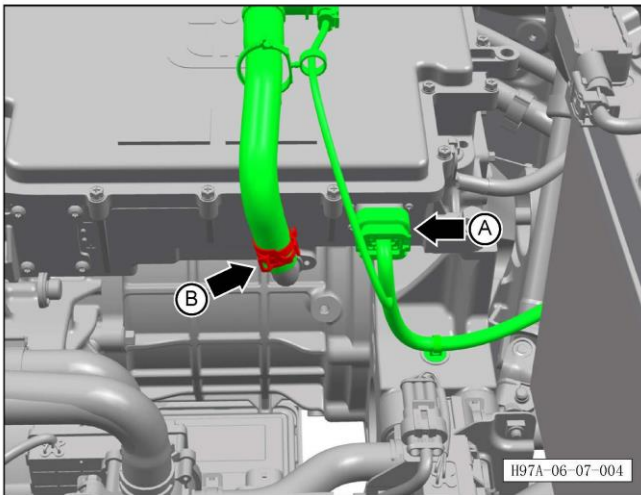
CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

Removal procedure

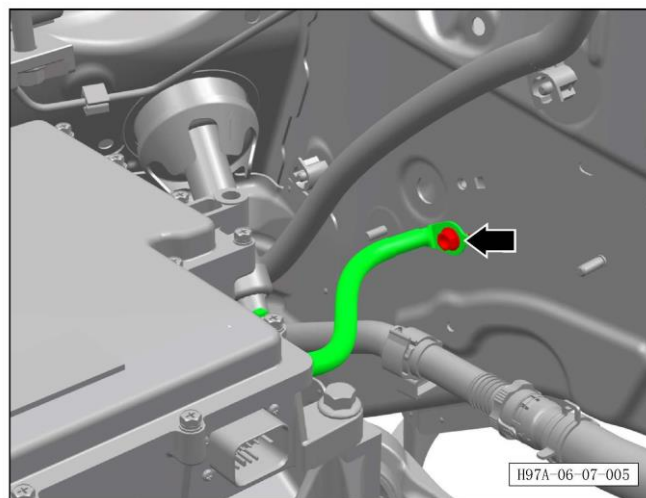
1. Turn off all electrical appliances and the start switch.
2. Disconnect the battery negative terminal. Refer to [3.1.6.1 Maintenance and inspection battery](#)
3. Remove the engine compartment item box assembly (refer to [8.5.11.1 Removal and refitting of engine compartment item box](#))
4. Remove the front motor high-voltage harness assembly (refer to [5.5.7.1 Front motor high-voltage harness assembly](#))
5. Remove the middle lower protective plate (refer to [8.6.4.5 Removal and refitting of middle lower protective plate](#))
6. Remove the front bracket height sensor assembly (refer to [6.7.6.3 Removal and refitting of left front bracket height sensor assembly](#))
7. Remove the battery pack water pump (refer to [4.4.8.62 Removal and refitting of battery pack water pump](#))
8. Remove the front drive shaft assembly (refer to [6.7.14.1 Removal and refitting of front drive shaft assembly](#))
8. Remove front subframe assembly.
 - a. Disconnect the 2 harness connectors of the steering gear.





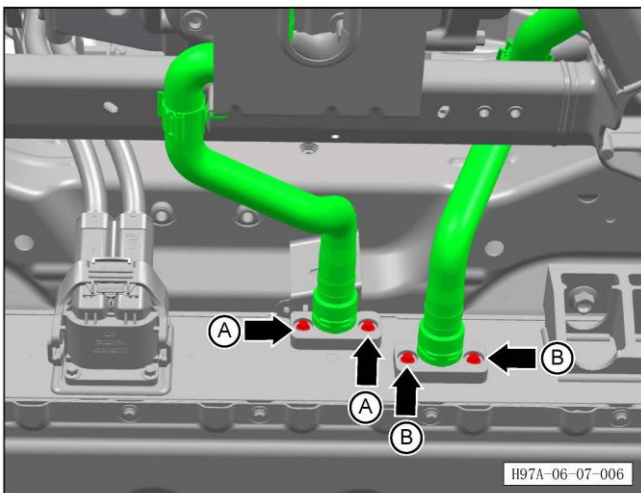
b. Disconnect 1 harness connector A (160 kW) of the front electric drive system assembly.

c. Disengage 1 fixing clamp B of the front motor water inlet hose, and disconnect the front motor water inlet hose.



d. Unscrew 1 fixing bolt of the front electric drive system assembly 160 kW ground harness.

Tightening torque of bolt: $8\pm 1\text{Nm}$.

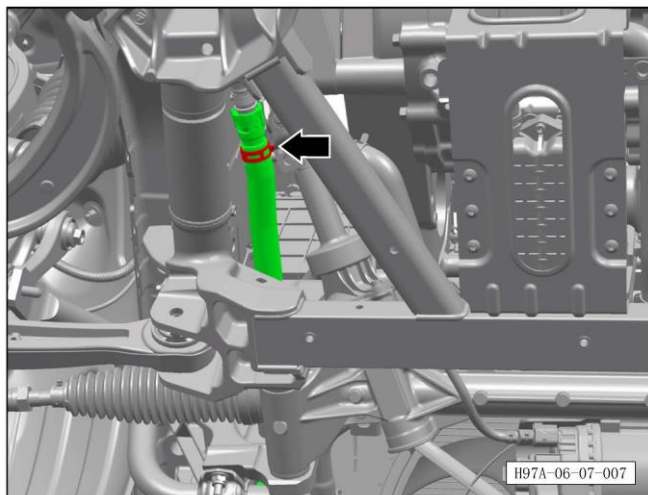


e. Unscrew the 2 fixing bolts A of the battery pack water inlet pipe, and disconnect the battery pack water inlet pipe.

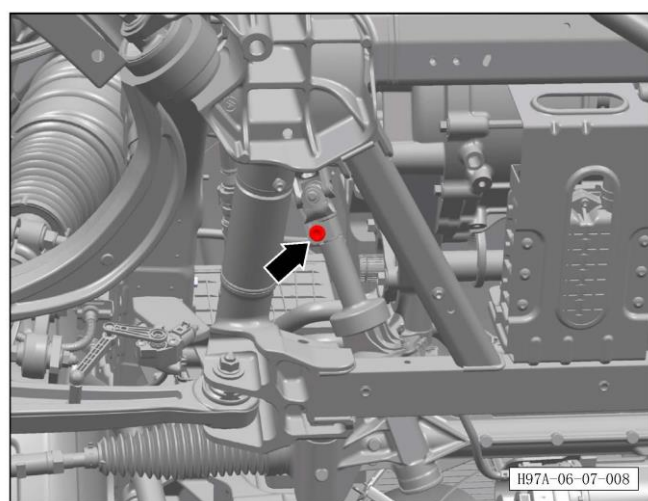
Tightening torque of bolt A: $8\pm 1\text{Nm}$.

f. Unscrew the 2 fixing bolts B of the battery pack water outlet pipe, and disconnect the battery pack water outlet pipe.

Tightening torque of bolt B: $8\pm 1\text{Nm}$.

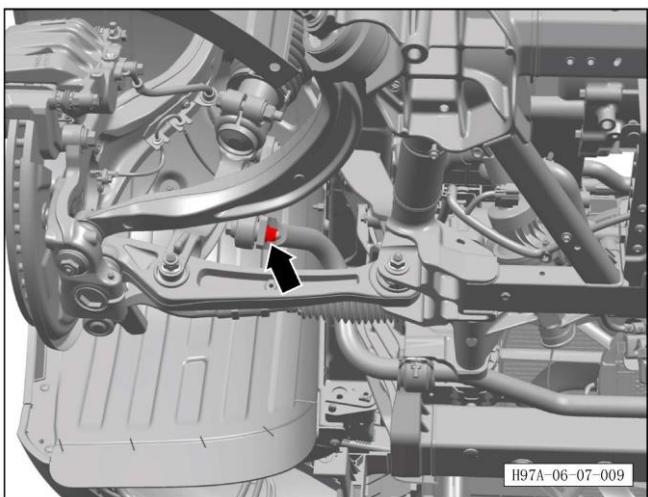


g. Disengage 1 fixing clamp between the water pump and the charger water outlet pipe, and disconnect the water pipe.



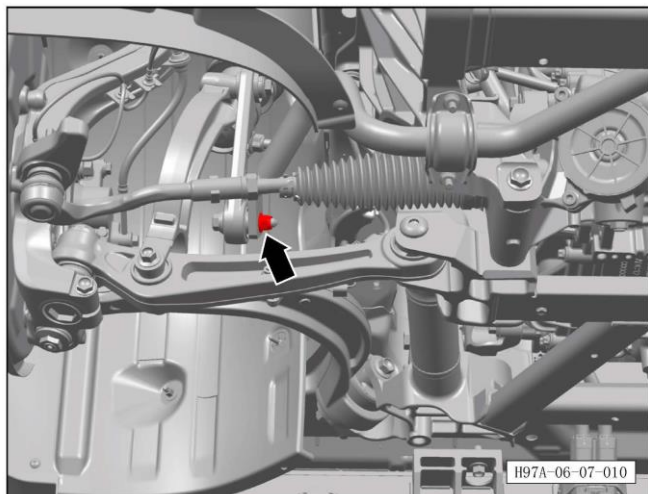
h. Unscrew 1 fixing bolt between the steering gear and the lower steering shaft.

Tightening torque of bolt: $40\pm 5\text{Nm}$.



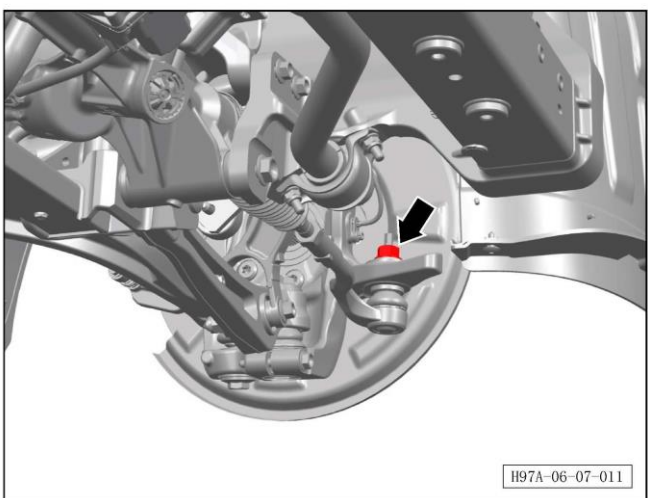
i. Unscrew 1 fixing nut connecting the left front stabilizer bar joint assembly and the front stabilizer bar assembly, and separate the left front stabilizer bar joint assembly from the front stabilizer bar assembly.

Tightening torque of nut: $40\pm 5\text{Nm}$.



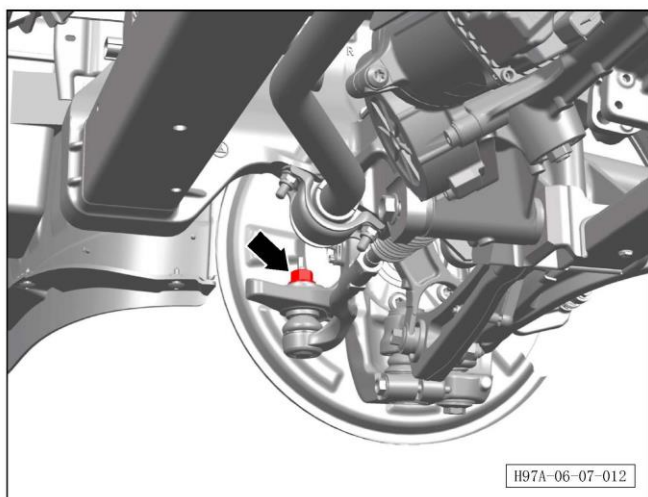
j. Unscrew 1 fixing nut connecting the right front stabilizer bar joint assembly and the front stabilizer bar assembly, and separate the right front stabilizer bar joint assembly from the front stabilizer bar assembly.

Tightening torque of nut: $40\pm 5\text{Nm}$.



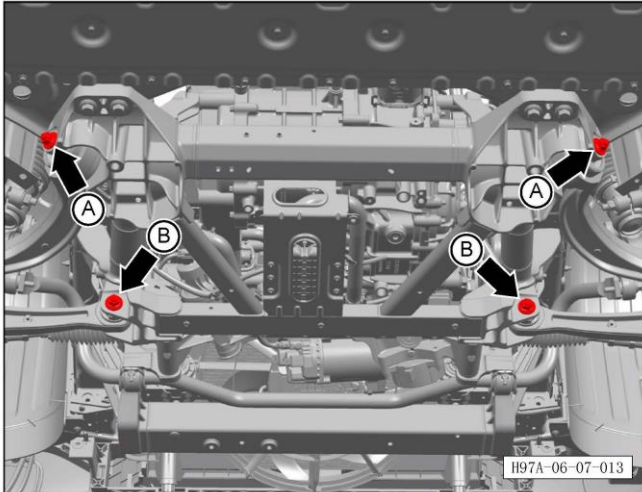
k. Unscrew 1 fixing nut of the left outer ball joint of the steering gear.

Tightening torque of nut: $40\pm 5\text{Nm}$.



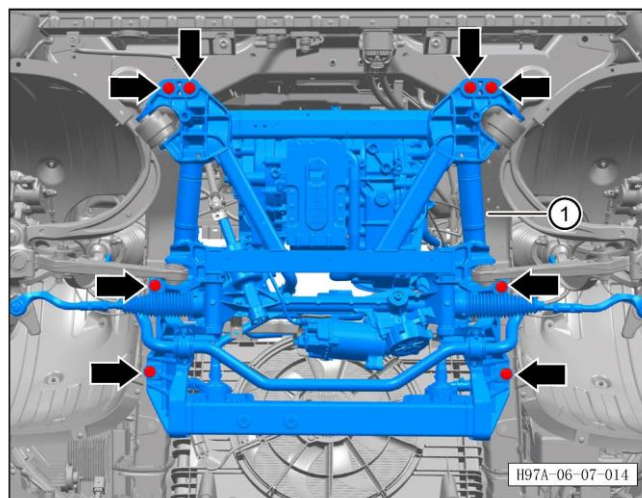
l. Unscrew 1 fixing nut of the right outer ball joint of the steering gear.

Tightening torque of nut: $40\pm 5\text{Nm}$.



m. Unscrew the 2 fixing nuts A between the front suspension lower control arm assembly and the front subframe, and pull out the bolt.

Tightening torque of nut A: $40\pm 5\text{Nm}$.



n. Unscrew the 2 fixing nuts B between the front suspension front lower control arm assembly and the front subframe, and pull out the bolt.

Tightening torque of nut B: $70+180^\circ\text{Nm}$.

o. Unscrew 8 fixing bolts of the front subframe, and lower the front subframe ①.

Tightening torque of bolt: $115+90^\circ\text{Nm}$.

CAUTION:

- Pay attention to the fixing clip of the harness and the pipeline when lowering the front subframe assembly, so as to avoid damages to the harness and the pipeline.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- Refit the water pipe bracket assembly first when raising the subframe assembly with a jack.

- Coolant cannot be reused, mixed or replaced with that of different colors. Check that the coolant level is between the MAX and MIN marks.

- It is necessary to discharge the air.

6.7.13 Rear subframe assembly

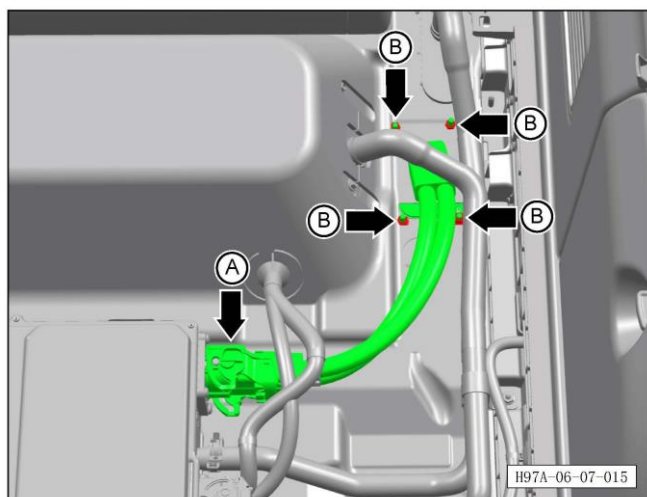
6.7.13.1 Removal and refitting of rear subframe assembly

CAUTION:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly assembly and maintenance chapter of front/rear air springs.
- After adjusting the body to the standard height, touch the maintenance icon on the touch screen to adjust the system to the maintenance mode.

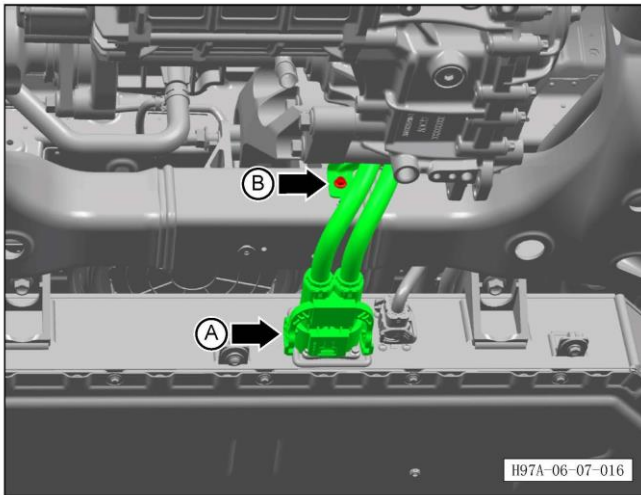
Removal procedure

1. Turn off start switch.
2. Disconnect the battery negative terminal (refer to [3.1.6.1 Maintenance and inspection of battery](#))
3. Remove the high voltage (refer to [3.1.6.2 High voltage removal](#))
4. Lift up rear carpet.
5. Remove the rear lower protective plate (refer to [8.6.4.6 Removal and refitting of rear lower protective plate \(REV\)](#))
6. Remove the rear height sensor assembly (refer to [6.7.6.5 Removal and refitting of left front bracket height sensor assembly \(facelift\)](#))
7. Remove rear subframe assembly.



- a. Disconnect rear motor high-voltage harness connector A.
- b. Unscrew the 4 fixing nuts B of the rear motor high-voltage harness bracket.

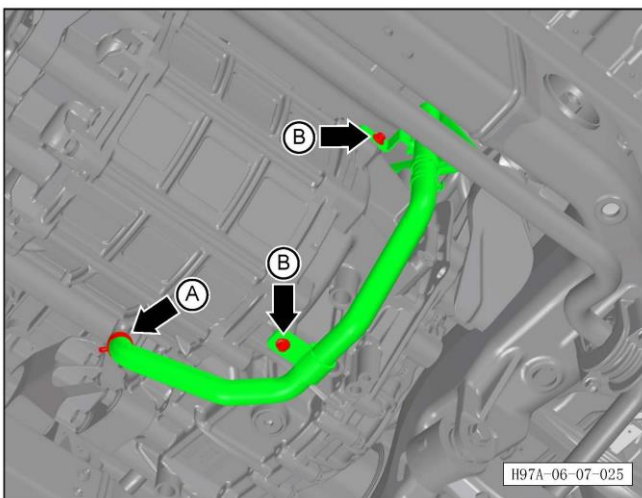
Tightening torque of nut B: $8\pm 1\text{Nm}$.



c. Disconnect the battery pack rear high-voltage harness connector A.

d. Unscrew 1 fixing bolt B between the battery pack rear high-voltage harness bracket and the rear subframe.

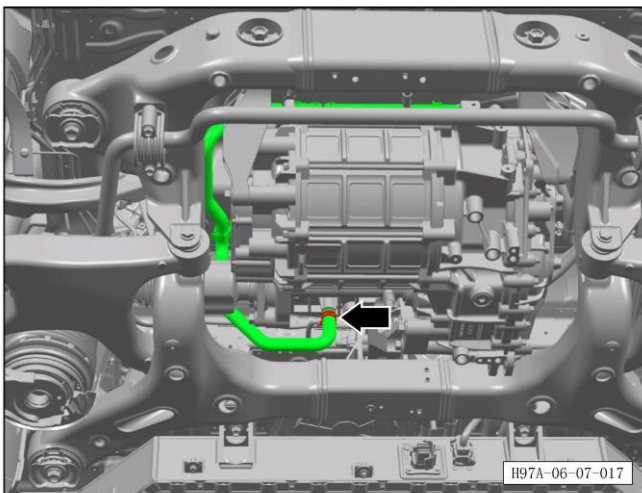
Tightening torque of bolt B: $8\pm 1\text{Nm}$.



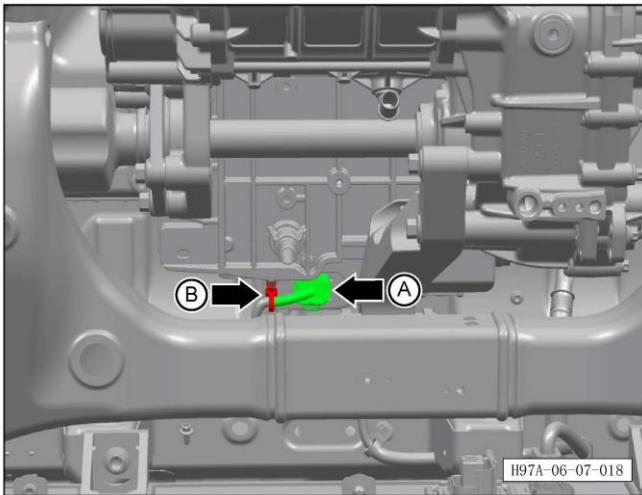
e. Disengage 1 fixing clamp A of the rear motor water outlet hose, and disconnect the rear motor water outlet hose.

f. Unscrew the 2 fixing bolts B between the rear motor water outlet pipe bracket and the rear motor assembly.

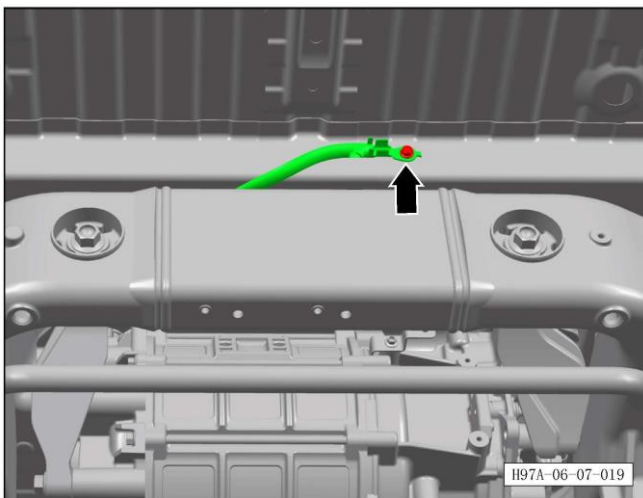
Tightening torque of bolt B: $8\pm 1\text{Nm}$.



g. Disengage 1 fixing clamp of the rear motor water inlet hose, and disconnect the rear motor water inlet hose.

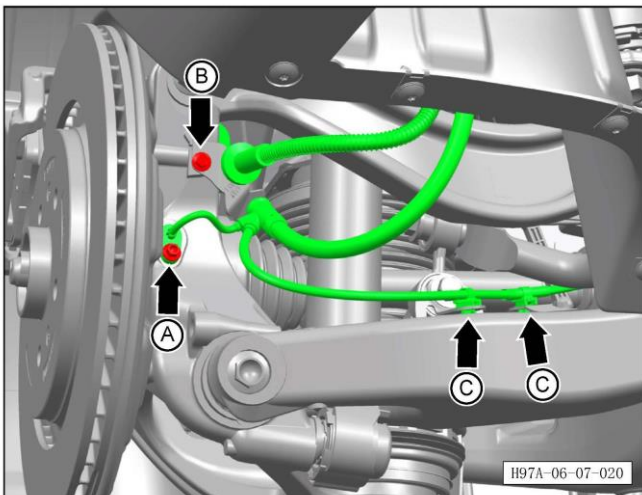


h. Disconnect 1 connecting harness A between the auxiliary body harness and the rear motor assembly, and disengage 1 fixing clip B of the auxiliary body harness.



i. Unscrew 1 fixing bolt of the rear motor assembly ground harness.

Tightening torque of bolt: $14\pm 2\text{Nm}$.



j. Unscrew 1 fixing bolt A of the left rear wheel speed sensor assembly, and disengage the 2 fixing clips C of the left rear wheel speed sensor harness.

Tightening torque of bolt A: $8\pm 1\text{Nm}$.

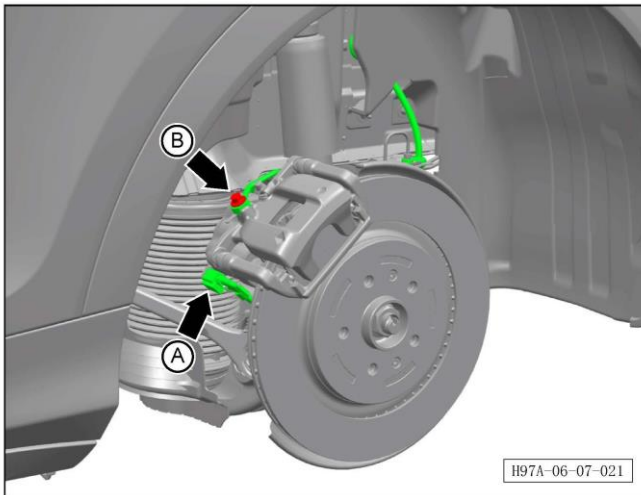
k. Unscrew 1 bolt B of the left rear brake hose fixing bracket.

Tightening torque of bolt B: $8\pm 1\text{Nm}$.

Note:

- The above is the bolt removal and connector disconnection of the left rear wheel speed sensor assembly, which is the same as that of the right side.

- This part introduces the removal of bolts from the left rear brake hose mounting bracket, which can be referred to for the operations on the right side.



l. Disconnect 1 harness connector A connecting the left rear wheel speed sensor assembly and the left rear brake caliper assembly.

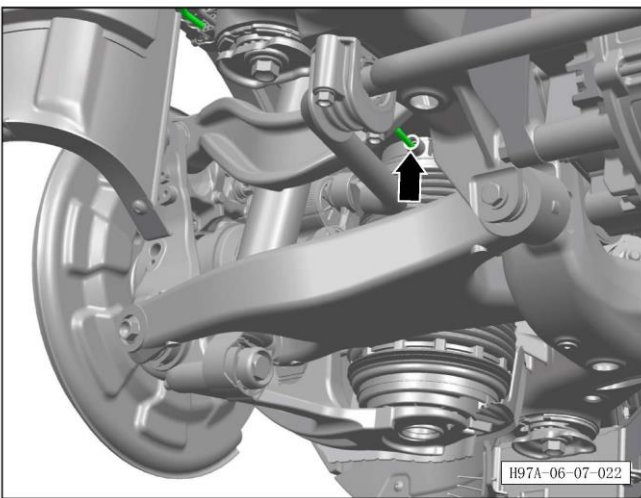
m. Unscrew 1 fixing bolt B connecting the left rear brake hose and the left rear brake caliper assembly.

Tightening torque of bolt B: $8\pm 1\text{Nm}$.

Note:

- The above is the disconnection of the left rear wheel speed sensor assembly harness connector, which is the same as that of the right side.

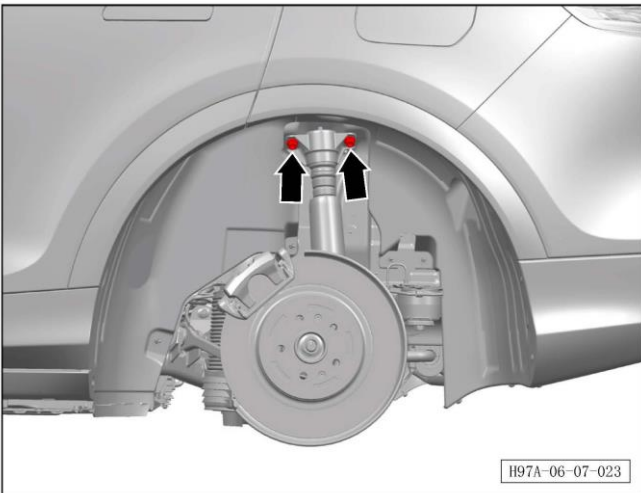
- This part introduces the removal of the left rear brake hose bolt, which can be referred to for the operations on the right side.



n. Disengage the left rear air spring pipeline from the left rear air spring.

Note:

- The above is the disengagement of the left rear air spring pipeline, which is the same as that of the right side.

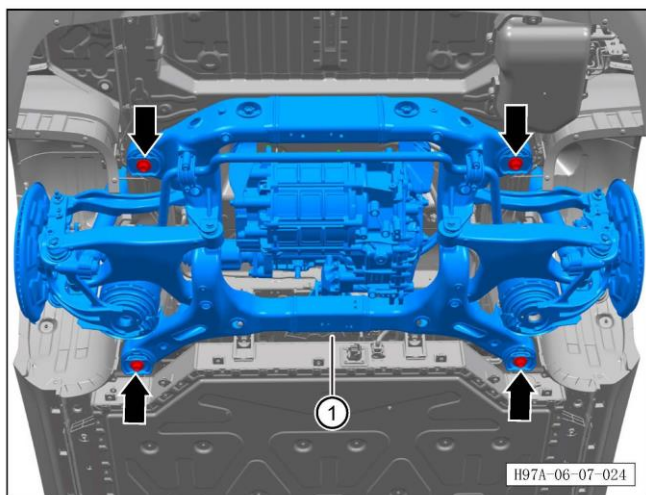


o. Unscrew the 2 fixing bolts of the left rear shock absorber.

Tightening torque of bolt: $40+90^\circ.\text{Nm}$

Note:

- The above is the removal of the left rear shock absorber bolt, which is the same as that of the right side.



p. Unscrew 4 fixing bolts of the rear subframe assembly, and lower the rear subframe assembly ①.

Tightening torque of bolt: $160+90^{\circ}$.Nm

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- After refitting, perform the four-wheel alignment.
- A road test must be carried out to check whether the refitting is in place, and confirm that the chassis has no abnormal noise and no deviation.

6.7.14 Front drive system

6.7.14.1 Removal and refitting of left front drive shaft assembly

Note:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.

- Control the vehicle to enter the "Air suspension maintenance mode" through the central control screen or diagnostic software.

Removal procedure

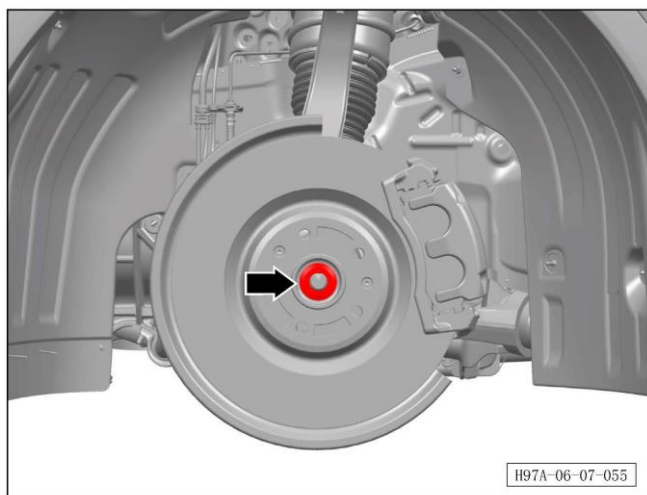
1. Turn off all electrical appliances and the start switch.
2. Disconnect the battery negative terminal. Refer to [3.1.6.1 Maintenance and inspection battery](#)
3. Remove the left front wheel (refer to [6.5.9.1 Removal and refitting of wheels](#))
4. Remove the front lower protective plate (refer to [8.6.4.4 Removal and refitting of front lower protective plate \(EV\)](#))
5. Remove left front drive shaft assembly.

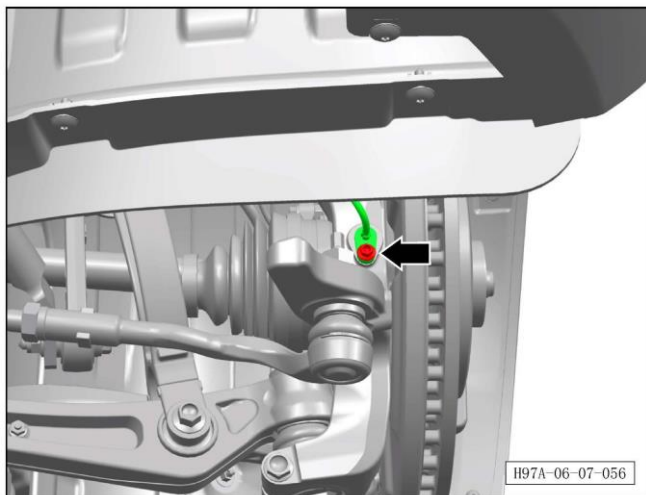
a. Unscrew hub lock nut.

Tightening torque of nut: $330\pm 15\text{Nm}$.

Note:

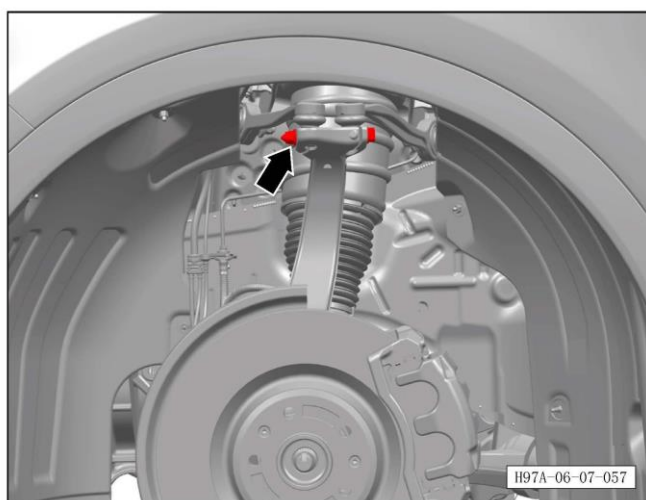
- A tool should be used to clamp the main brake disc.





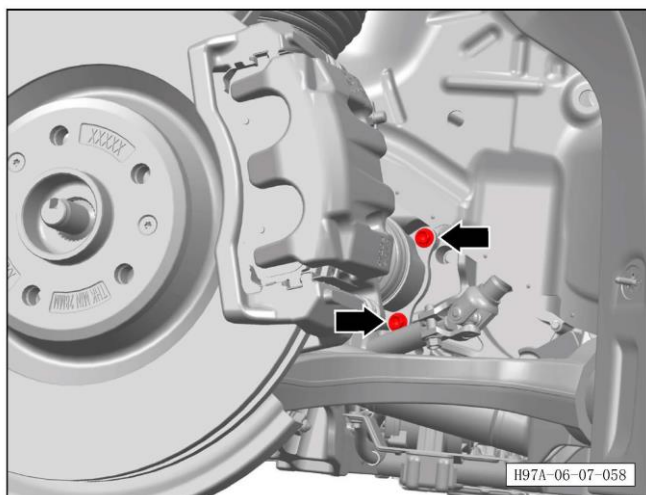
b. Unscrew 1 fixing bolt of the left front wheel speed sensor assembly, and disengage the left front wheel speed sensor assembly.

Tightening torque of bolt: $8\pm 1\text{Nm}$.

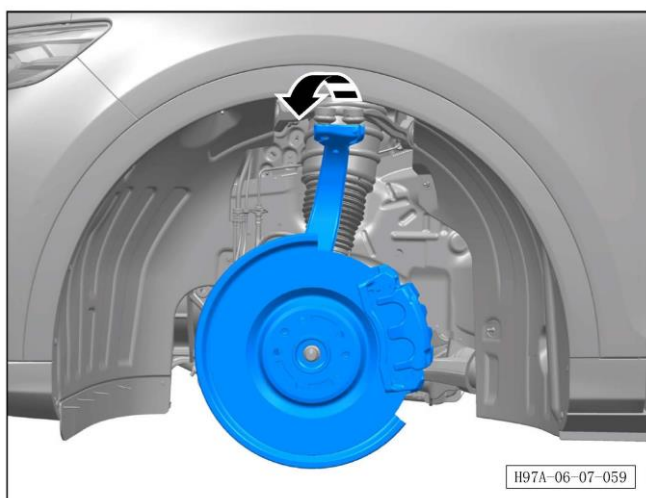


c. Unscrew 1 fixing nut between the left front brake assembly and the full suspension upper control arm, and pull out the bolt.

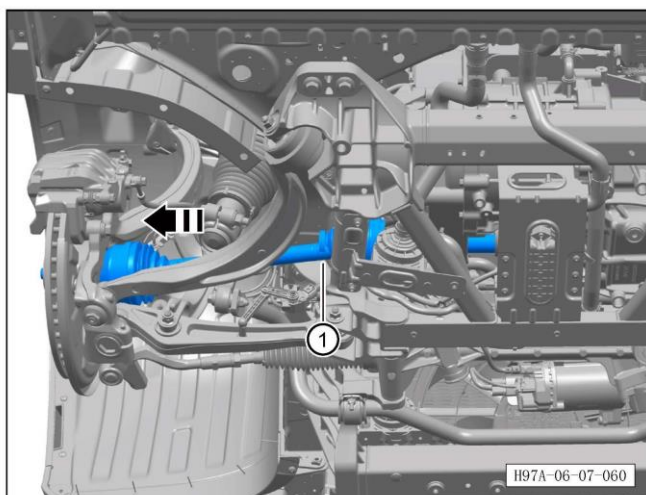
Tightening torque of nut: $45\pm 7\text{Nm}$.



d. Unscrew the 2 fixing bolts between the front connecting shaft assembly and the front drive motor.
Tightening torque of bolt: $50\pm 5\text{Nm}$.



e. Flip the left front brake assembly down in the direction of the arrow and separate the left front brake assembly from the left front drive shaft.



f. Pull out the left front drive shaft assembly ① in the direction of the arrow.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- The drive motor gear lubricant cannot be reused or mixed, and should be changed with new lubricant.
- The left front drive shaft oil seal must be replaced with a new one.
- After refitting, carry out four-wheel alignment and road test to ensure that there are no abnormal noises in chassis parts or deviations during driving.

6.7.14.2 Removal and refitting of right front drive shaft assembly

Note:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- Control the vehicle to enter the "Air suspension maintenance mode" through the central control screen or diagnostic software.

Removal procedure

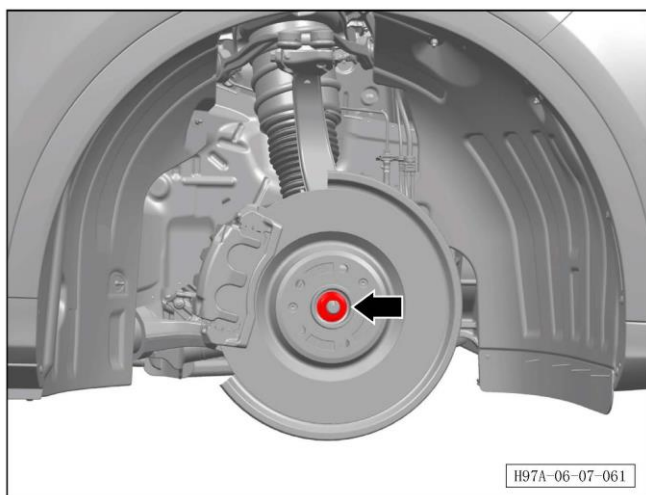
1. Turn off all electrical appliances and the start switch.
2. Disconnect the battery negative terminal. Refer to [3.1.6.1 Maintenance and inspection battery](#)
3. Remove the right front wheel (refer to [6.5.9.1 Removal and refitting of wheels](#))
4. Remove the front lower protective plate. Refer to [? Removal and refitting of front lower protective plate](#)
5. Remove left front drive shaft assembly.

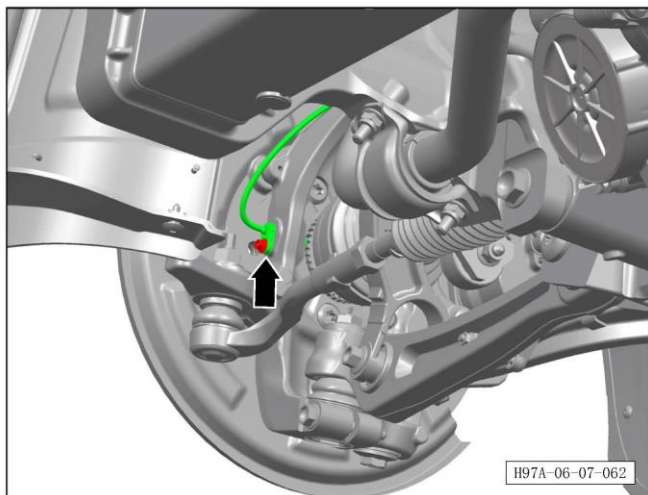
- a. Unscrew hub lock nut.

Tightening torque of nut: $330\pm 15\text{Nm}$.

Note:

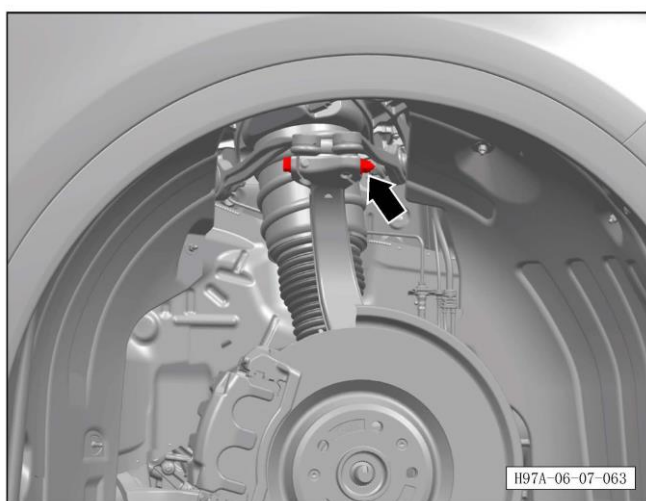
- A tool should be used to clamp the main brake disc.





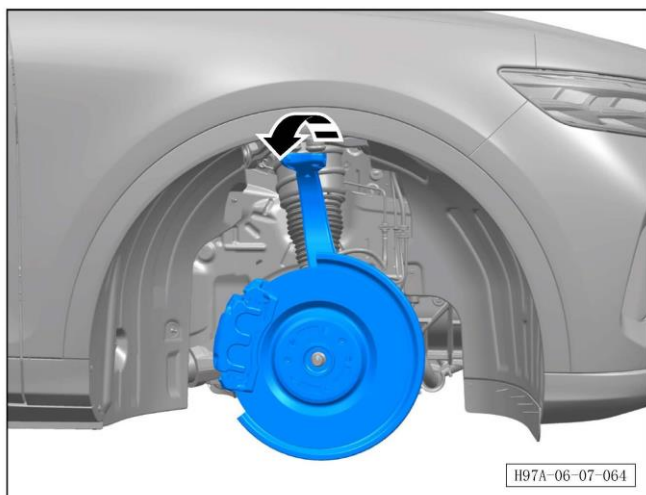
b. Unscrew 1 fixing bolt of the right front wheel speed sensor assembly, and disengage the right front wheel speed sensor assembly.

Tightening torque of bolt: $8\pm 1\text{Nm}$.

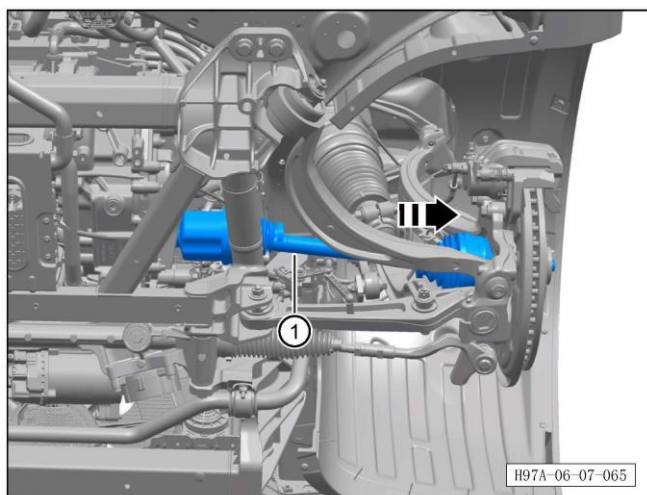


c. Unscrew 1 fixing nut between the right front brake assembly and the full suspension upper control arm, and pull out the bolt.

Tightening torque of nut: $50\pm 5\text{Nm}$.



e. Flip the right front brake assembly down in the direction of the arrow and separate the right front brake assembly from the right front drive shaft.



f. Pull out the right front drive shaft assembly ① in the direction of the arrow.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- The drive motor gear lubricant cannot be reused or mixed, and should be changed with new lubricant.
- The left front drive shaft oil seal must be replaced with a new one.
- After refitting, carry out four-wheel alignment and road test to ensure that there are no abnormal noises in chassis parts or deviations during driving.

6.7.15 Rear drive system

6.7.15.1 Removal and refitting of left rear drive shaft assembly

Note:

- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- Control the vehicle to enter the "Air suspension maintenance mode" through the central control screen or diagnostic software.

Removal procedure

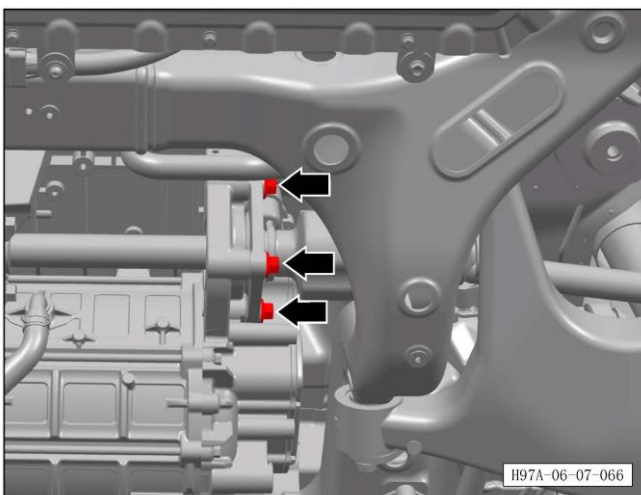
1. Turn off all electrical appliances and the start switch.
2. Disconnect the battery negative terminal. Refer to [3.1.6.1 Maintenance and inspection battery](#)
3. Remove the left rear wheel (refer to [6.5.9.1 Removal and refitting of wheels](#))
4. Remove the rear lower protective plate (refer to [8.6.4.6 Removal and refitting of rear lower protective plate](#))
5. Remove the rear lower protective plate bracket (refer to [8.6.4.9 Removal and refitting of rear lower protective plate bracket](#))
6. Remove the left rear brake assembly (refer to [6.6.5.2 Removal and refitting of rear brake assembly](#))
7. Remove left rear drive shaft assembly.

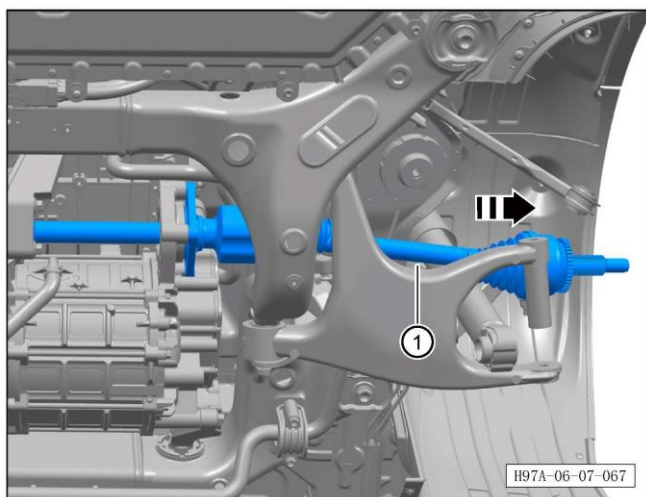
Note:

- It is not required to completely remove the left rear brake caliper assembly. You only need to fix it on the body with a strap.

- a. Unscrew the 2 fixing bolts between the rear connecting shaft assembly and the rear drive motor.

Tightening torque of bolt: $50\pm 5\text{Nm}$.





b. Pull out the left rear drive shaft assembly ① in the direction of the arrow.

Refitting procedure

The refitting procedure is performed in reverse order.

CAUTION:

- The drive motor gear lubricant cannot be reused or mixed, and should be changed with new lubricant.
- The left front drive shaft oil seal must be replaced with a new one.
- After refitting, carry out four-wheel alignment and road test to ensure that there are no abnormal noises in chassis parts or deviations during driving.

6.7.15.2 Removal and refitting of right rear drive shaft assembly

Note:

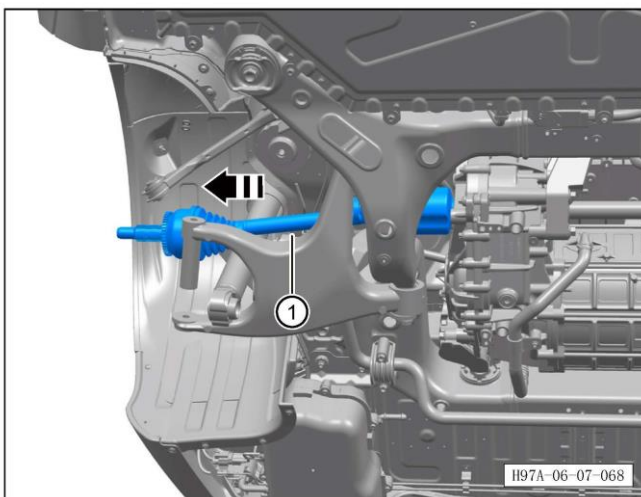
- For the lifting operation of the vehicle with air suspension, please refer to the precautions in the chapter and the disassembly & assembly and maintenance chapter of front/rear air springs.
- Control the vehicle to enter the "Air suspension maintenance mode" through the central control screen or diagnostic software.

Removal procedure

1. Turn off all electrical appliances and the start switch.
2. Disconnect the battery negative terminal. Refer to [3.1.6.1 Maintenance and inspection battery](#)
3. Remove the right rear wheel (refer to [6.5.9.1 Removal and refitting of wheels](#))
4. Remove the rear lower protective plate (refer to [8.6.4.6 Removal and refitting of rear lower protective plate](#))
5. Remove the rear lower protective plate bracket (refer to [8.6.4.9 Removal and refitting of rear lower protective plate bracket](#))
6. Remove the right rear brake assembly (refer to [6.6.5.2 Removal and refitting of rear brake assembly](#))
7. Remove right rear drive shaft assembly.

Note:

- It is not required to completely remove the right rear brake caliper assembly. You only need to fix it on the body with a strap.



- a. Pull out the left rear drive shaft assembly ① in the direction of the arrow.

Refitting procedure

The refitting procedure is performed in reverse order.