

# Front Crossmember

## FRONT SUSPENSION

### 3. Front Crossmember

#### A: REMOVAL

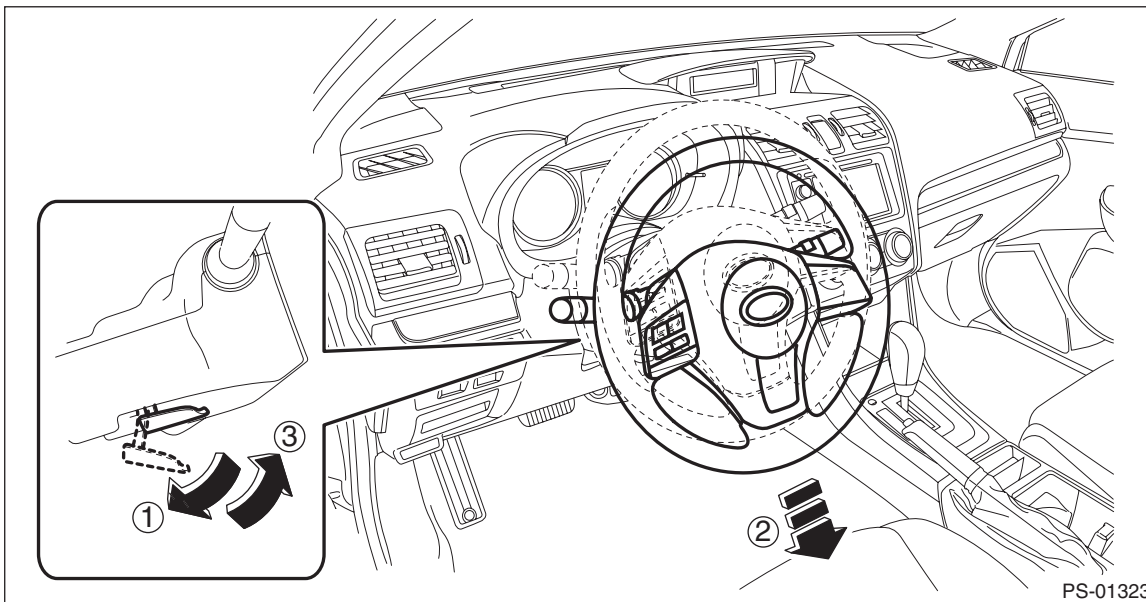
##### CAUTION:

- The power steering control module continues to operate after the engine stops and calculate the temperature in the control module. Therefore, before starting service of the power steering system which requires disconnection of the connector, stop the engine and allow approx. 30 minutes until the control module becomes cold.

- Before removal or installation, be sure to remove any foreign matter (dust, moisture, oil, etc.) from the power steering control module connector.

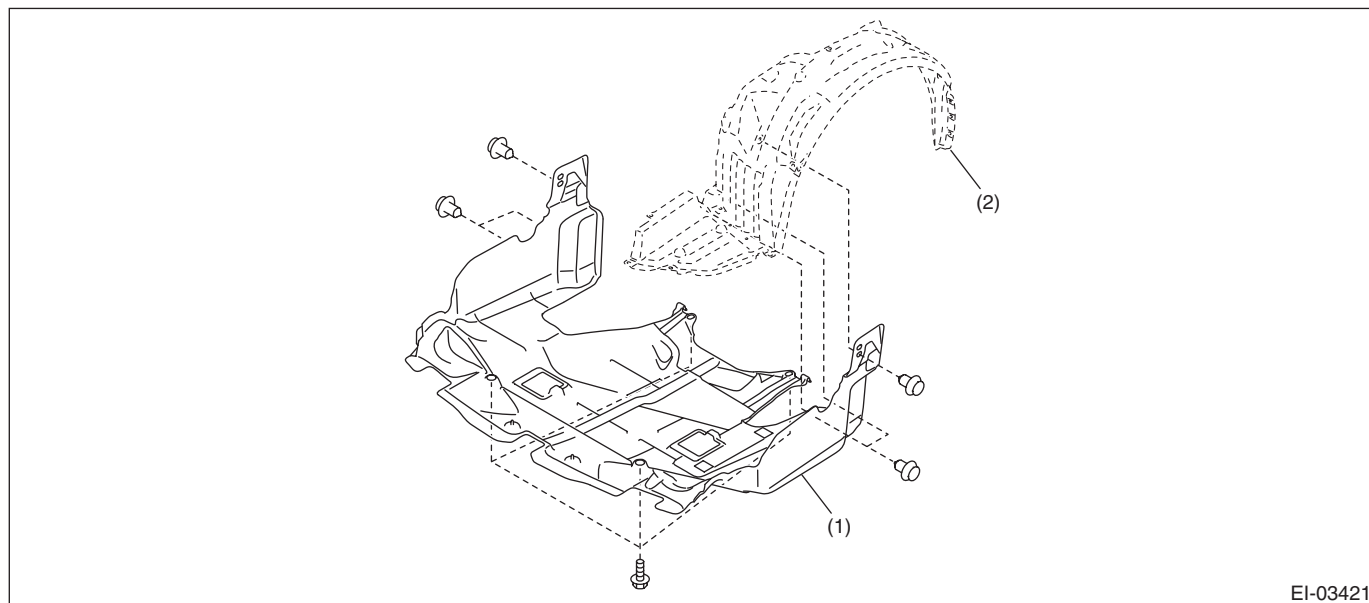
1) Disconnect the ground cable from battery.

2) Adjust the tilt position of the steering column to the lowest position and lock the tilt lever.



3) Lift up the vehicle, and then remove the front wheels.

4) Remove the bolts and clips, and remove the under cover - front.



(1) Under cover - front

(2) Mud guard - front

5) Remove the universal joint assembly - steering.

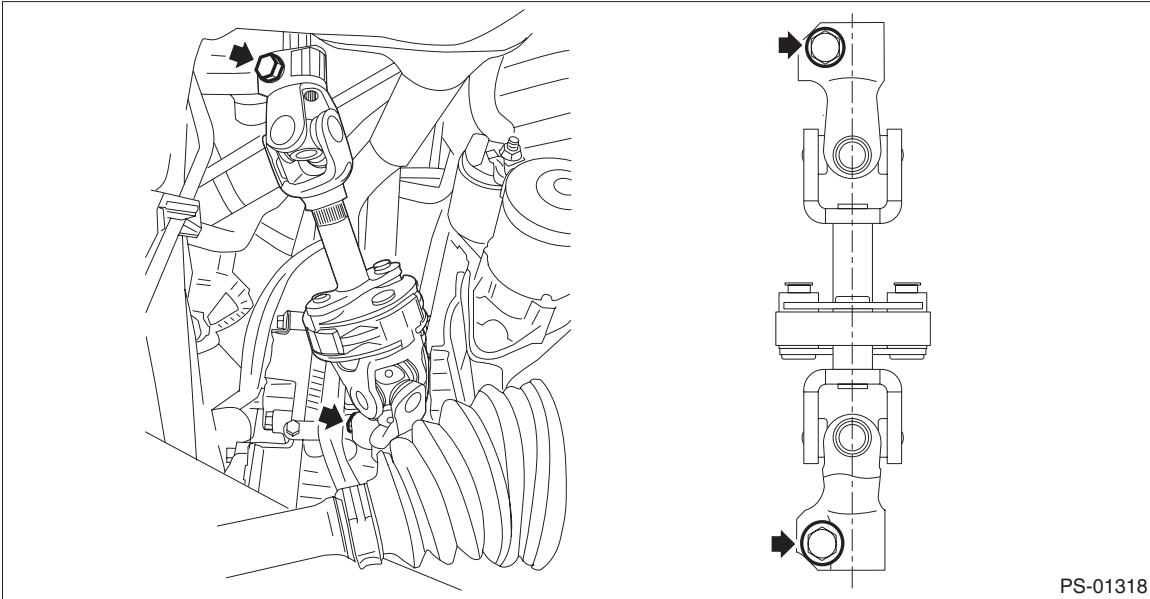
(1) Place alignment marks on the universal joint assembly - steering.

**NOTE:**

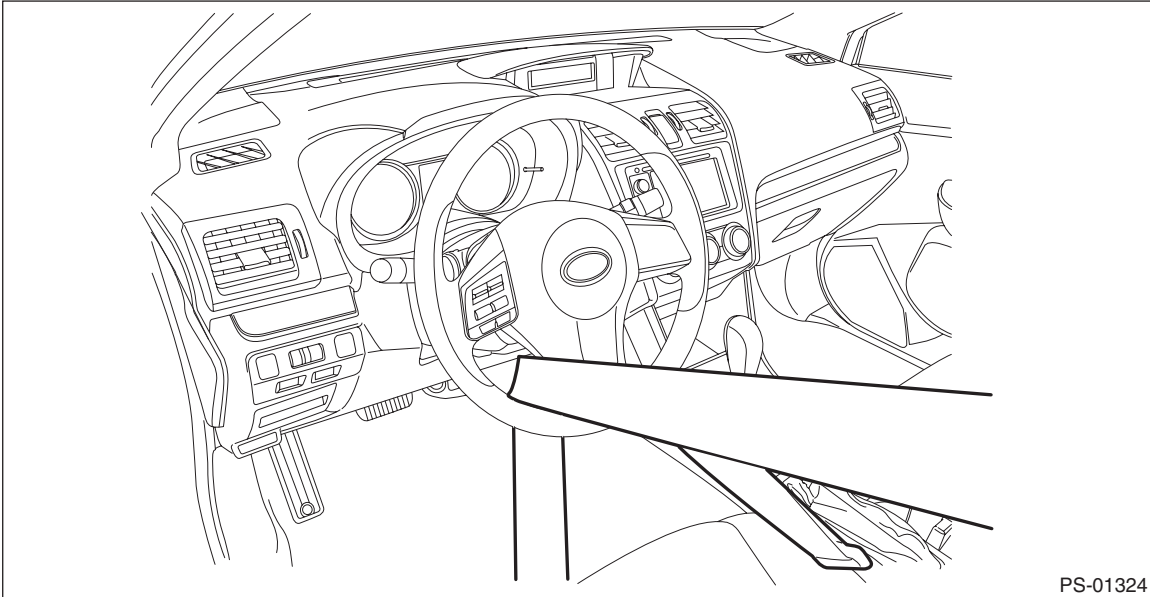
Place alignment marks on the following positions.

- Between the column assembly - steering and the universal joint assembly - steering
- Between the steering gearbox assembly and the universal joint assembly - steering

(2) Remove the bolt, and remove the universal joint assembly - steering.



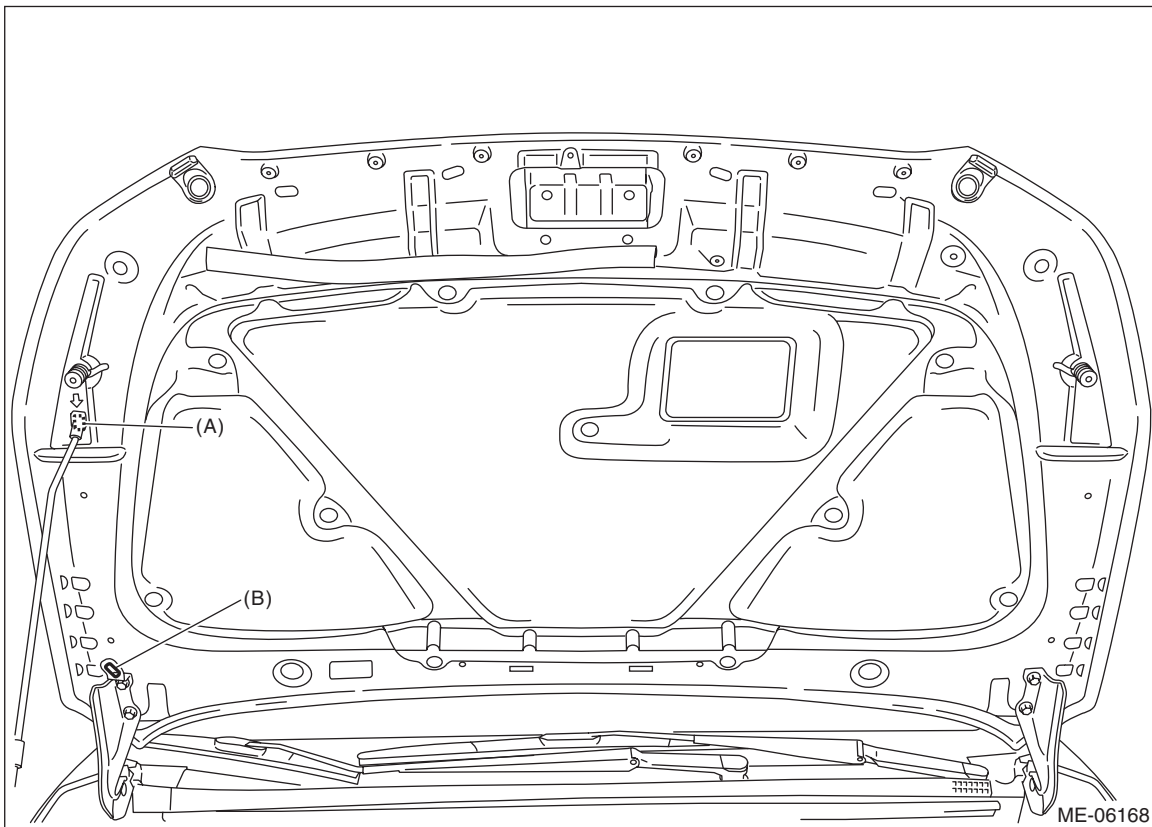
6) Prevent the steering wheel from turning using the seat belt.



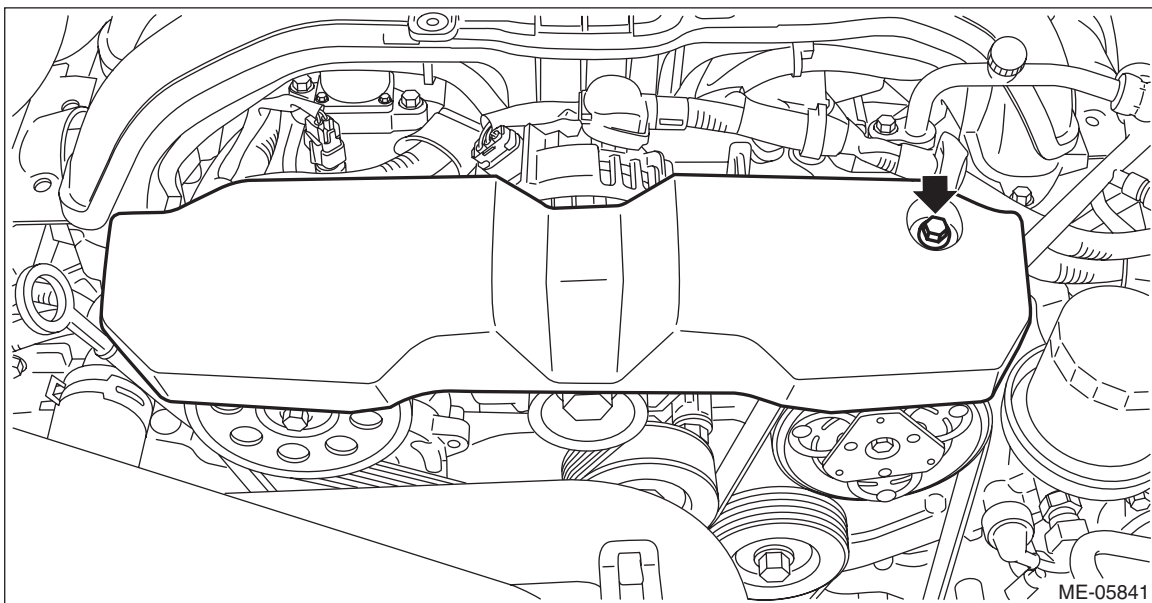
## Front Crossmember

### FRONT SUSPENSION

- 7) Change the front hood stay position from (A) to (B), and completely open the front hood.



- 8) Remove the V-belt covers.

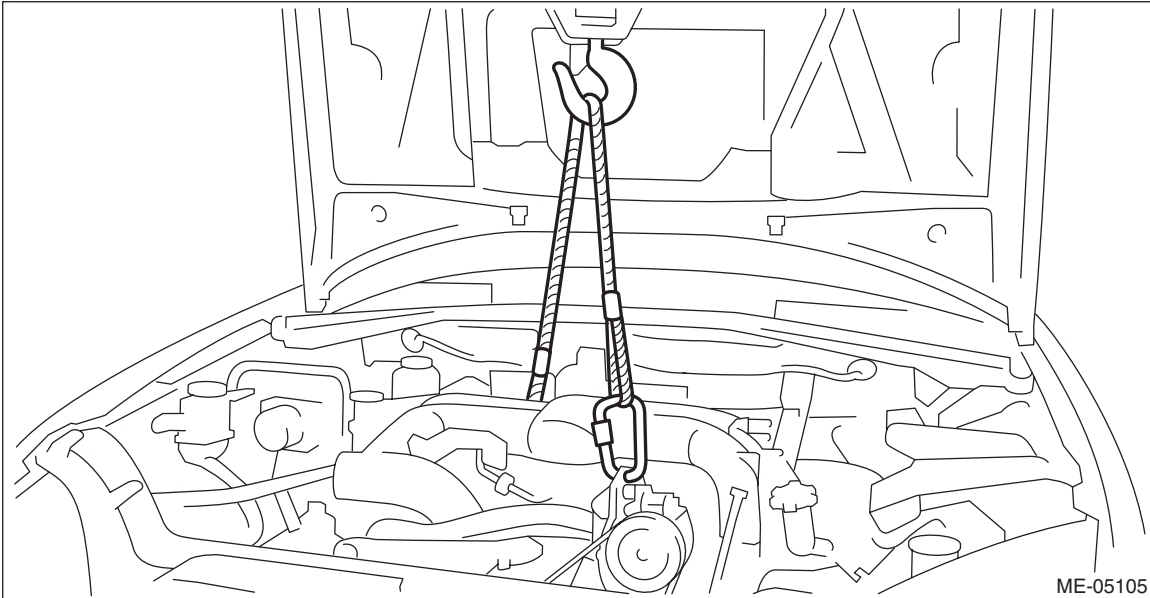


- 9) Disconnect the connector and harness clamp from power steering control module.

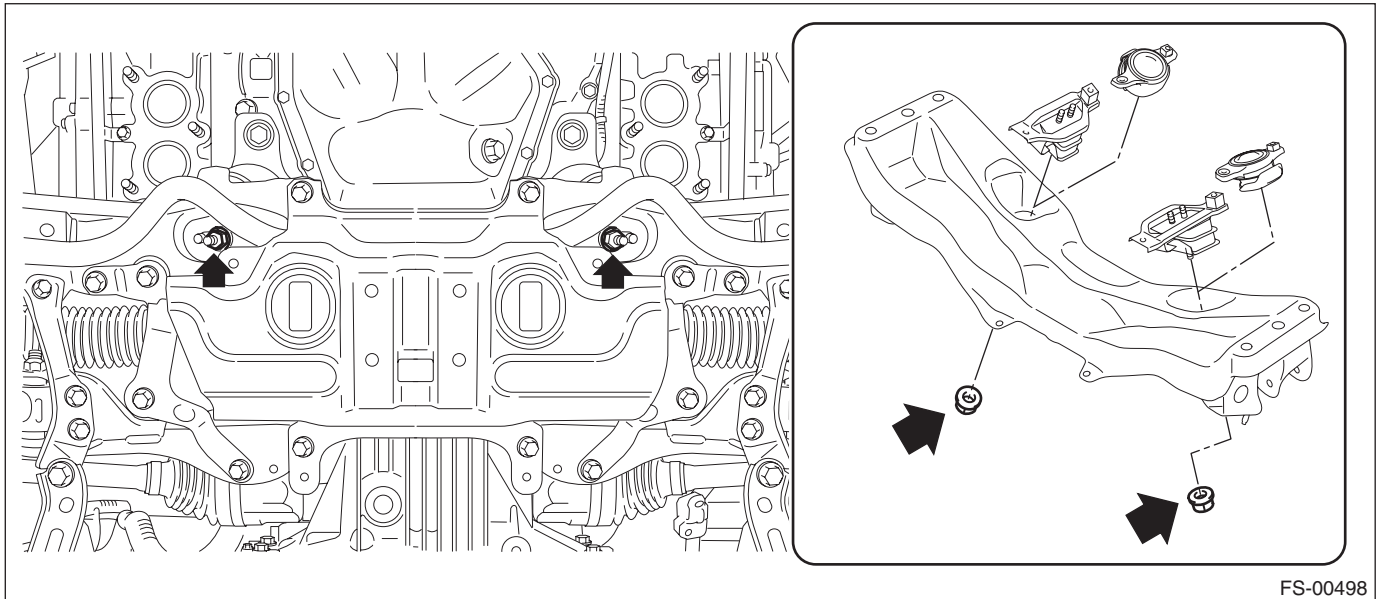
- 10) Support the engine with a lifting device and wire ropes.
  - (1) Support the engine with a lifting device and wire ropes.
  - (2) While lifting up the vehicle, also raise up the lifting device.

**CAUTION:**

**When lifting up the vehicle, raise up wire ropes at the same time.**



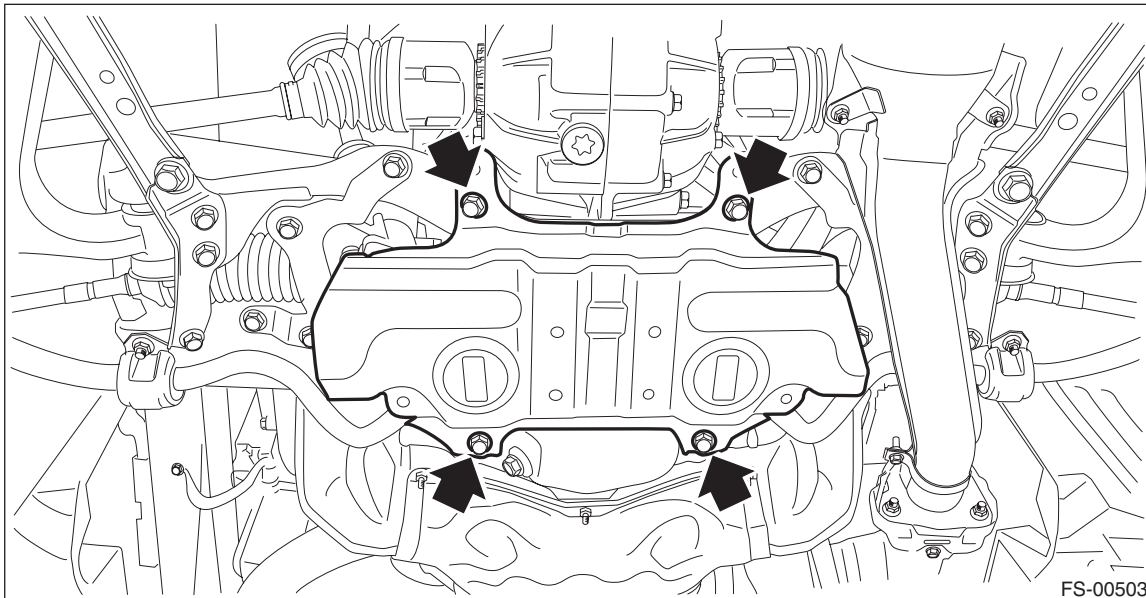
- 11) Remove the nuts which secure the engine mounting.
  - (1) Raise up the lifting device, and lift the engine by approx. 10 mm (0.39 in).
  - (2) Remove the nuts which secure the engine mounting to the front crossmember assembly.



## Front Crossmember

### FRONT SUSPENSION

12) Remove the bolt, and remove the front crossmember support.

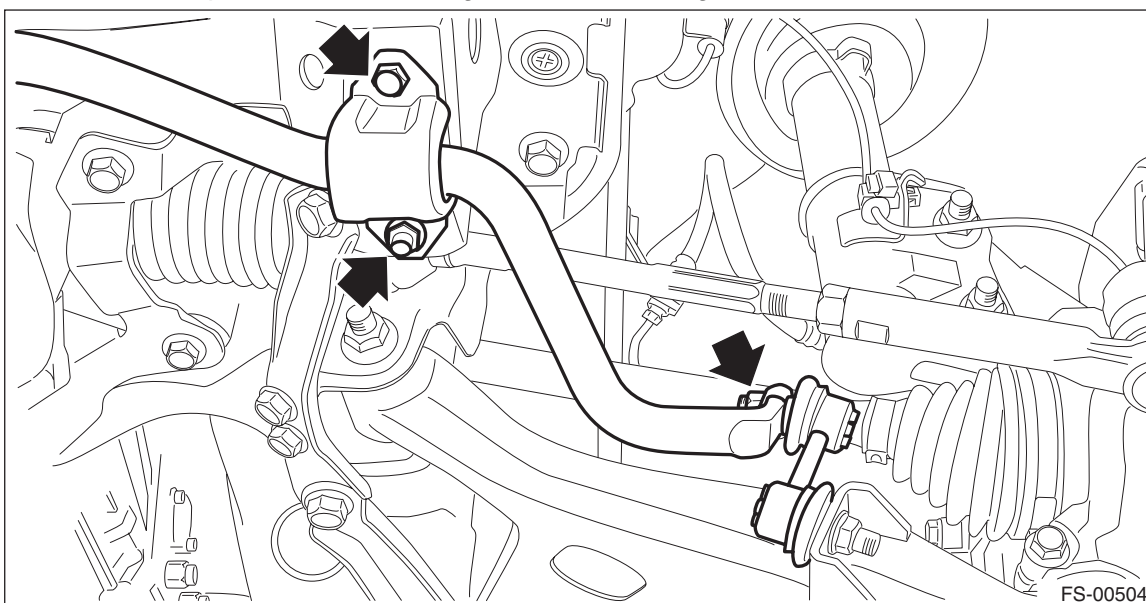


13) Remove the front exhaust pipe. <Ref. to EX(H4DO)-7, REMOVAL, Front Exhaust Pipe.>

14) Remove the front stabilizer.

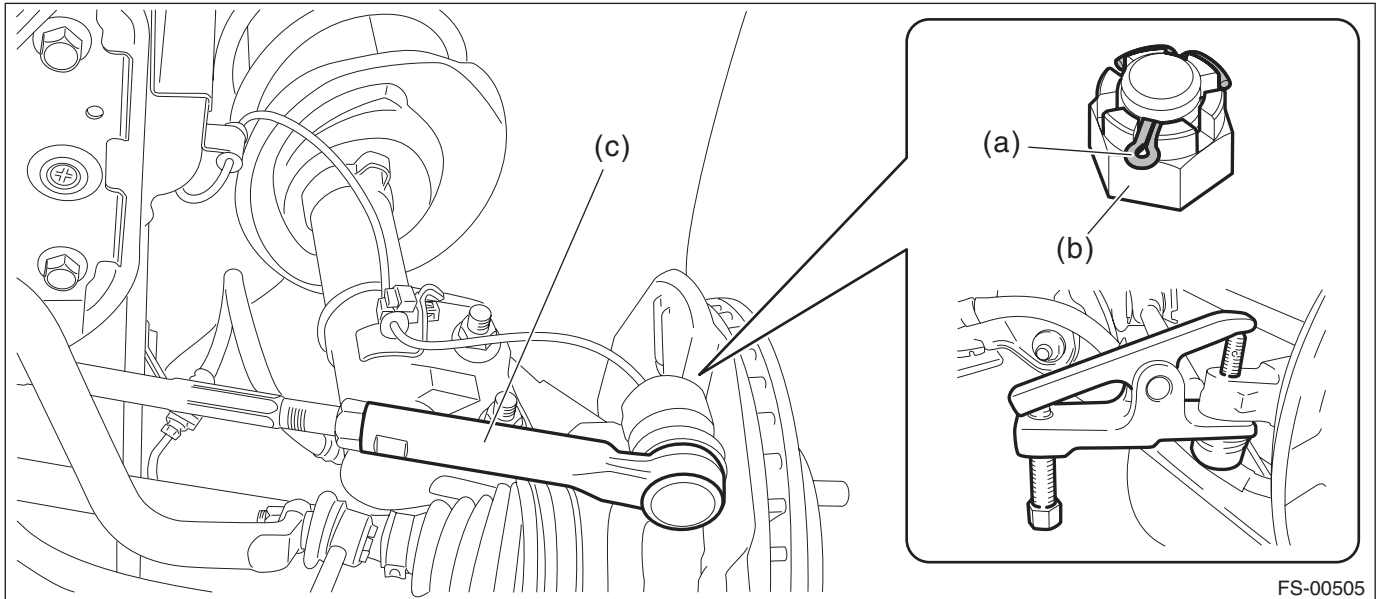
(1) Remove the left and right stabilizer links.

(2) Remove the clamp - stabilizer bushing on the left and right sides.

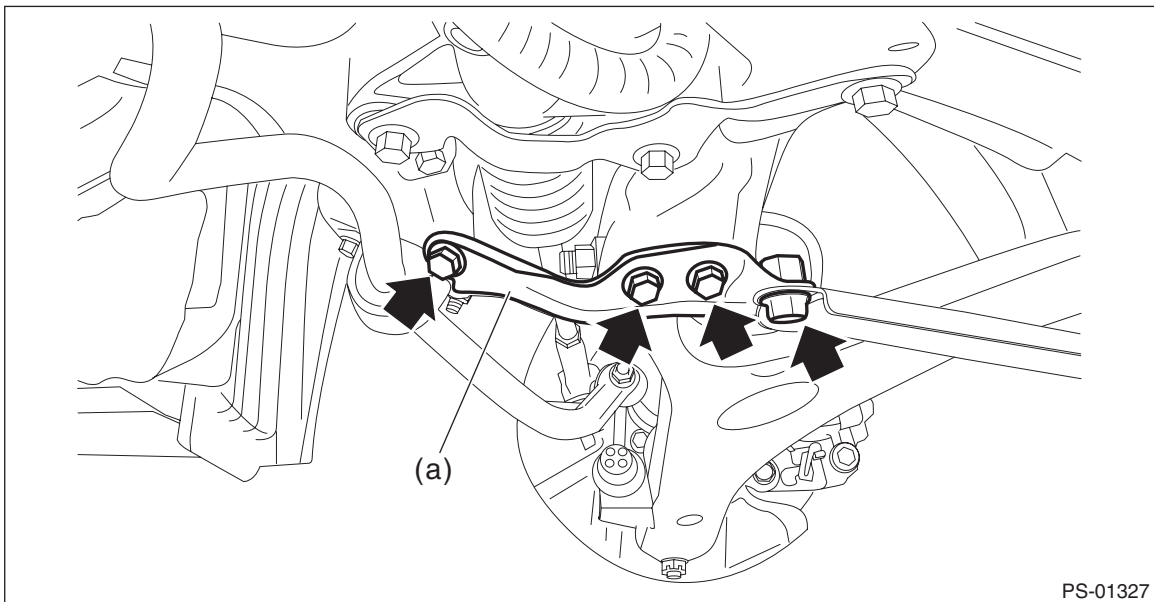


- 15) Disconnect the tie-rod end.
  - (1) Pull out the cotter pin (a).
  - (2) Remove the castle nut (b).
  - (3) Using a tie-rod ball joint puller, remove the tie-rod end (c).

**Preparation tool:**  
**Tie-rod ball joint puller**



- 16) Remove the support plate - front crossmember (a).

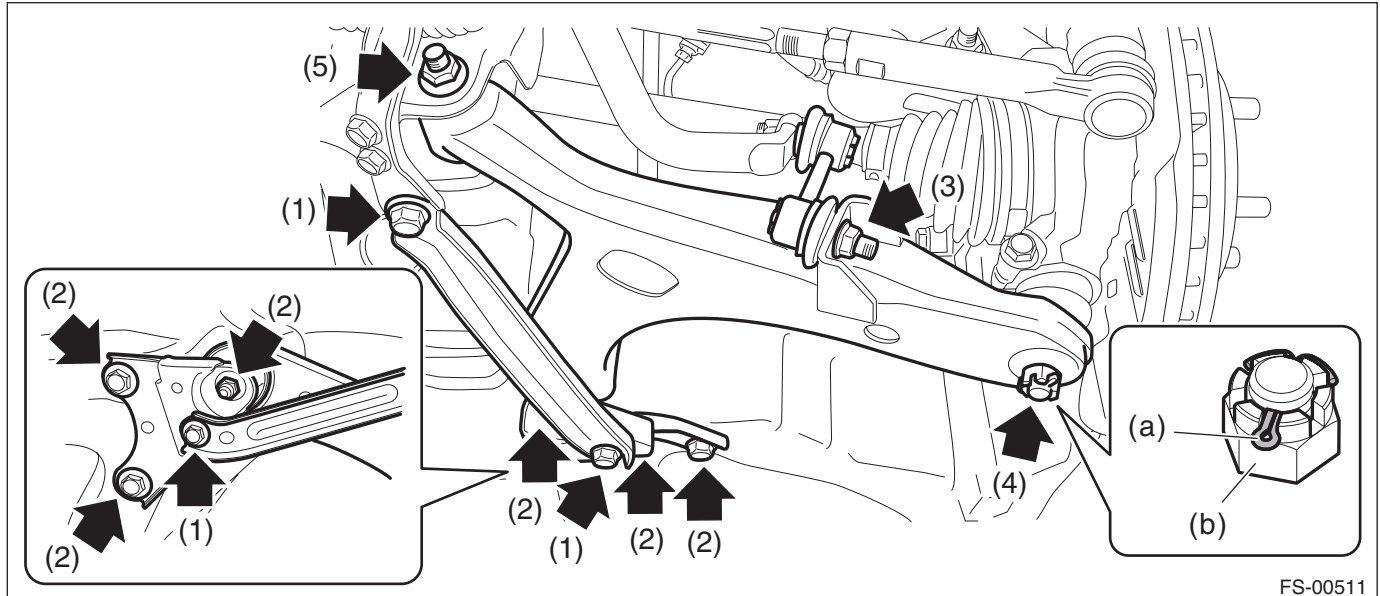


## Front Crossmember

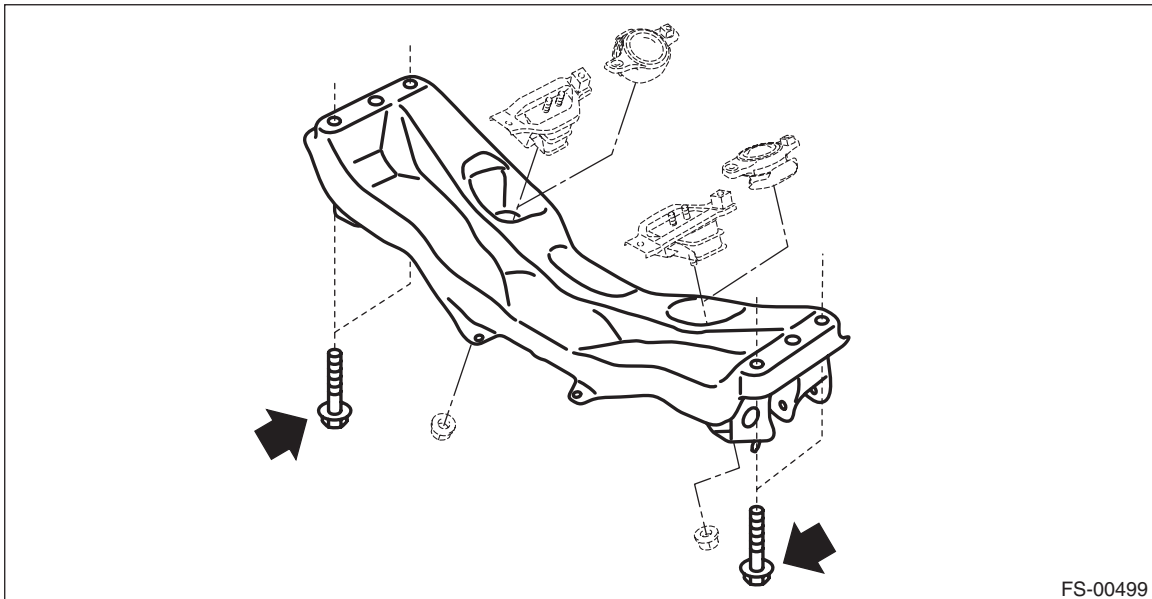
### FRONT SUSPENSION

17) Remove the front arm assembly.

- (1) Remove the bolt, and then detach the front support.
- (2) Remove the bolts and nuts, and then remove the front arm rear plate.
- (3) Remove the nut and disconnect the stabilizer link assembly.
- (4) Pull out the cotter pin (a), remove the castle nut (b), and remove the ball joint from front arm assembly.
- (5) Remove the nuts, pull out the flange bolt, and remove the front arm assembly.



18) Support the front crossmember assembly using a jack, and remove the bolts which hold the crossmember on the body.



19) Slowly lower the front crossmember assembly with the steering gearbox assembly as a single unit.

#### **CAUTION:**

**When removing the crossmember, make sure that the tie-rod end does not interfere with the drive shaft boot.**

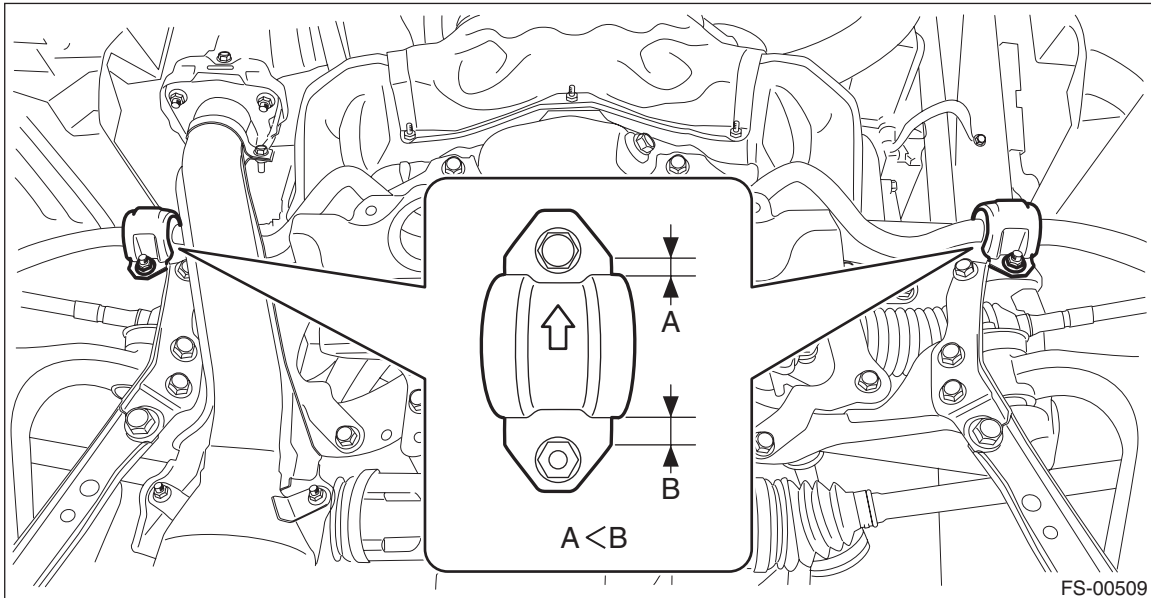
20) Remove the steering gearbox assembly from the front crossmember assembly.

## B: INSTALLATION

- 1) Check the crossmember for damage or cracks, and correct or replace if defective.
- 2) Install the universal joint assembly - steering. <Ref. to PS-14, INSTALLATION, Universal Joint.>
- 3) Install each part in the reverse order of removal.

### CAUTION:

- Use a new bolt and self-locking nut. For parts which are not reusable, refer to “COMPONENT”. <Ref. to FS-3, COMPONENT, General Description.>
- Always tighten the bushing in the state where the vehicle is at curb weight and the wheels are in full contact with the ground.
- Install the clamp - stabilizer bushing with the arrow mark facing the front of the vehicle.



### Tightening torque:

**Engine mount — front crossmember assembly: 45 N·m (4.59 kgf-m, 33.2 ft-lb)**

**Universal joint assembly - steering: 24 N·m (2.45 kgf-m, 17.7 ft-lb)**

**V-belt cover: 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)**

**Under cover - front: 17.5 N·m (1.78 kgf-m, 12.9 ft-lb)**

**Front suspension parts: <Ref. to FS-3, FRONT SUSPENSION, COMPONENT, General Description.>**

When tightening the castle nut, tighten the castle nut to the specified torque first, then tighten it further but within 60° until the hole in the ball stud is aligned with a slot in castle nut.

- 4) Install the front wheels.

### Tightening torque:

**120 N·m (12.24 kgf-m, 88.5 ft-lb)**

- 5) Inspect the wheel alignment and adjust if necessary.

- Inspection: <Ref. to FS-7, INSPECTION, Wheel Alignment.>
- Adjustment: <Ref. to FS-12, ADJUSTMENT, Wheel Alignment.>

### CAUTION:

**When the wheel alignment has been adjusted, perform “VDC sensor midpoint setting mode” of the VDC.**

- 6) Perform reinitialization of the auto headlight beam leveler system. (Model with auto headlight beam leveler) <Ref. to LI-17, PROCEDURE, Auto Headlight Beam Leveler System.>