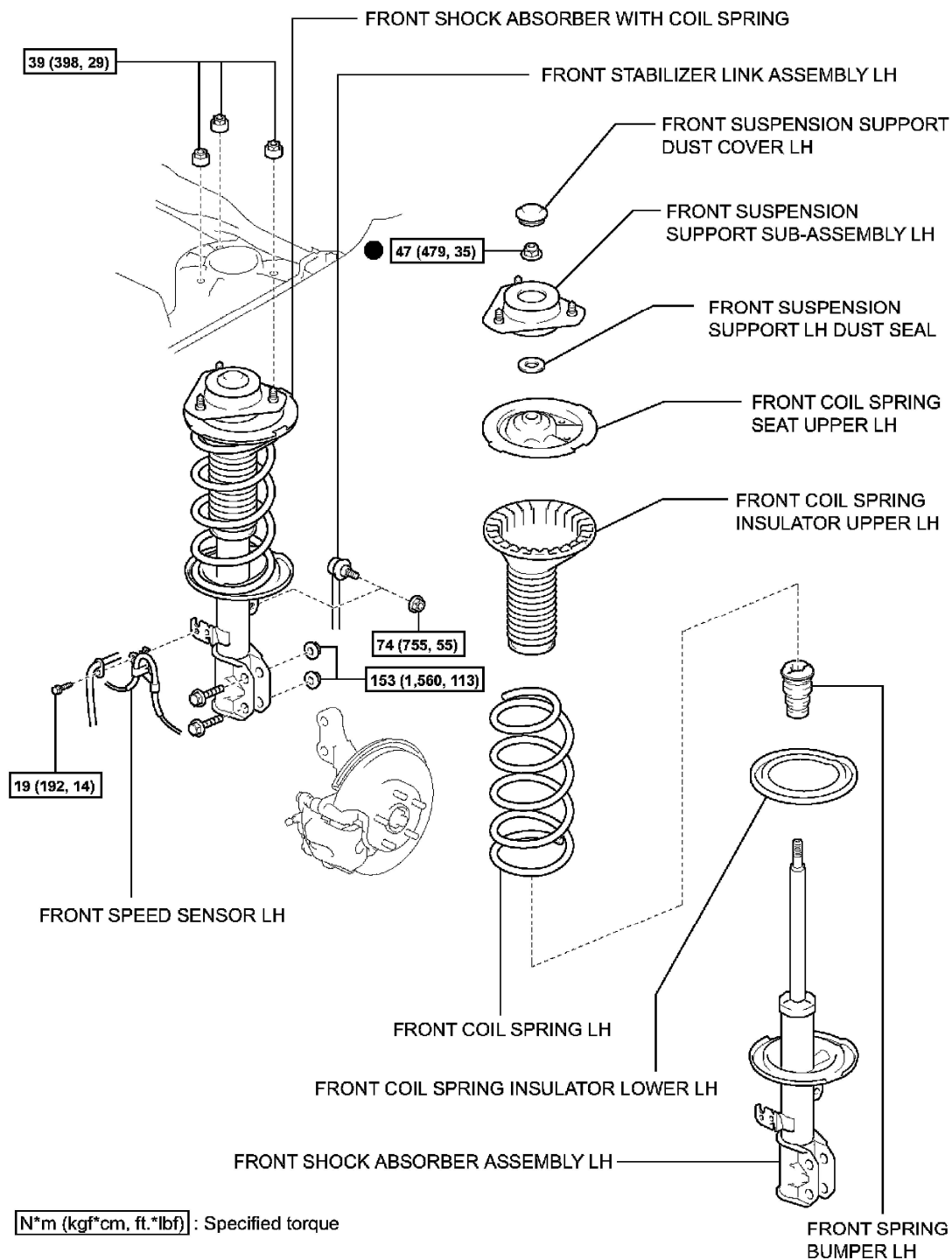


# Suspension Strut: Service and Repair

## FRONT SHOCK ABSORBER WITH COIL SPRING



### Components

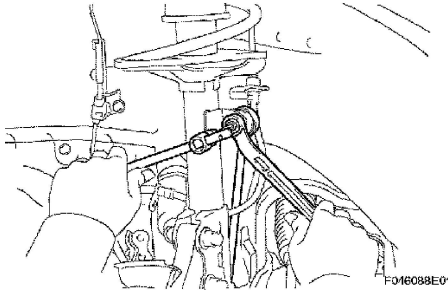
## REMOVAL

### HINT:

- ^ Use the same procedures for the RH side and LH side.
- ^ The procedures listed below are for the LH side.

1. REMOVE FRONT WHEEL
2. REMOVE FRONT WIPER ARM HEAD CAP
3. REMOVE FRONT WIPER ARM LH
4. REMOVE FRONT WIPER ARM RH

5. REMOVE HOOD TO COWL TOP SEAL
6. REMOVE COWL TOP VENTILATOR LOUVER LH
7. REMOVE COWL TOP VENTILATOR LOUVER RH
8. REMOVE WINDSHIELD WIPER MOTOR AND LINK

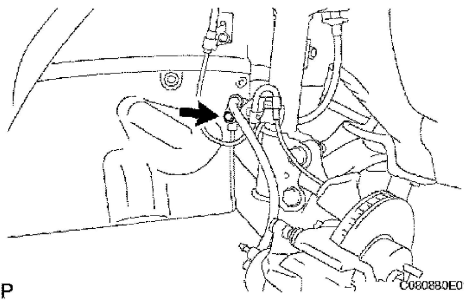


9. DISCONNECT FRONT STABILIZER LINK ASSEMBLY

- a. Place a wooden block on a jack, and support the front suspension lower No. 1 arm with the jack.
- b. Remove the nut and separate the front stabilizer link from the shock absorber with coil spring.

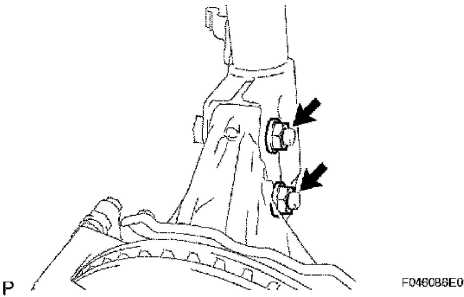
**HINT:** Use a 6 mm hexagon wrench to hold the stud if the ball joint turns together with the nut.

10. REMOVE FRONT SHOCK ABSORBER WITH COIL SPRING



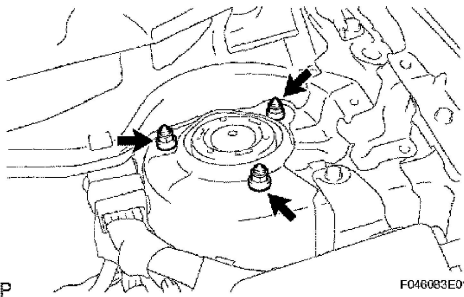
- a. Remove the bolt and disconnect the front flexible hose No. 1 and speed sensor front LH wire harness.

**NOTICE:** Be sure to completely disconnect the speed sensor front LH from the front shock absorber.



- b. Remove the 2 nuts on the lower side of the front shock absorber with coil spring.

**NOTICE:** Keep the bolts inserted.

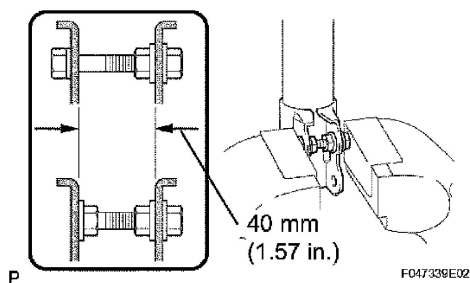


- c. Remove the 3 nuts.

- d. Lower the jack slowly Remove the 2 bolts on the lower side and the front shock absorber with coil spring.

**NOTICE:** Ensure that the speed sensor front LH is completely disconnected from the front shock absorber with coil spring.

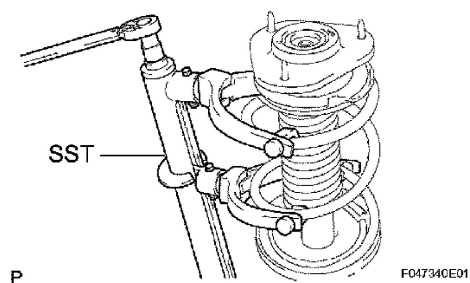
## DISASSEMBLY



### 1. FIX FRONT SHOCK ABSORBER WITH COIL SPRING

- a. Secure the front shock absorber with coil spring in a vise by clamping onto a double nutted bolt affixed to the bracket at the bottom of the absorber, as shown in the illustration to the left.

### 2. REMOVE FRONT SUPPORT TO FRONT SHOCK ABSORBER LH NUT

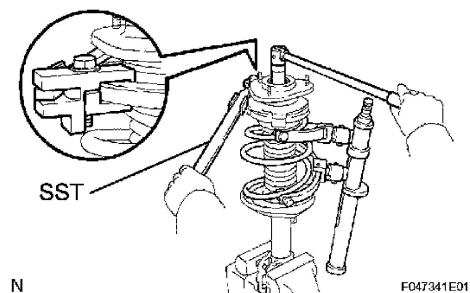


- a. Attach SST to the coil spring so that the upper and lower hooks of the installed area are as wide as possible.  
SST 09727-30021 (09727-00010, 09727-00021, 09727-00031)
- b. Fully compress the coil spring.

**NOTICE:** Do not use an impact wrench. It will damage SST.

**HINT:** The coil spring can also be installed/removed using the hydraulic spring compressor.

- c. Remove the front suspension support dust cover.



- d. Secure the front coil spring seat upper with SST and remove the front suspension support to front shock absorber LH nut.  
SST 09729-22031

### 3. REMOVE FRONT SUSPENSION SUPPORT SUB-ASSEMBLY LH

### 4. REMOVE FRONT SUSPENSION SUPPORT LH DUST SEAL

### 5. REMOVE FRONT COIL SPRING SEAT UPPER LH

### 6. REMOVE FRONT COIL SPRING INSULATOR UPPER LH

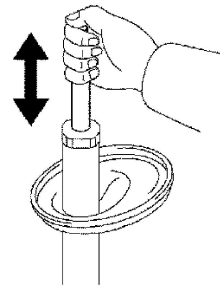
### 7. REMOVE FRONT COIL SPRING LH

### 8. REMOVE FRONT SPRING BUMPER LH

### 9. REMOVE FRONT COIL SPRING INSULATOR LOWER LH

### 10. REMOVE FRONT SHOCK ABSORBER ASSEMBLY LH

## INSPECTION



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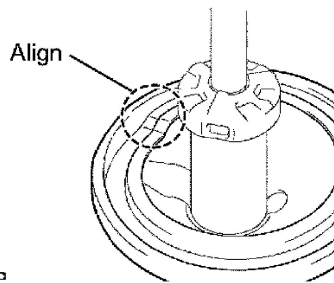
#### 1. INSPECT FRONT SHOCK ABSORBER ASSEMBLY LH

- a. Compress and extend the shock absorber rod 4 or more times. Check that there is no abnormal resistance or sound. If there is any abnormality, replace the shock absorber front LH with a new one.

**NOTICE:** When disposing of the shock absorber, see DISPOSAL.

### REASSEMBLY

#### 1. INSTALL FRONT SHOCK ABSORBER ASSEMBLY LH



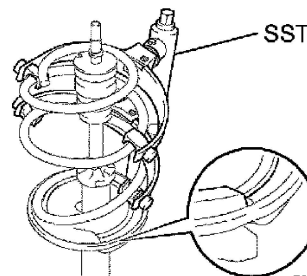
P

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#### 2. INSTALL FRONT COIL SPRING INSULATOR LOWER LH

- a. Install the front coil spring insulator lower to the front shock absorber so that both recessed parts are aligned.

#### 3. INSTALL FRONT SPRING BUMPER LH



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#### 4. INSTALL FRONT COIL SPRING LH

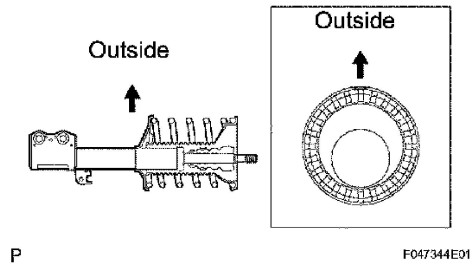
- a. Using SST, compress the coil spring.  
SST 09727-30021 (09727-00010, 09727-00021, 09727-00031)

**NOTICE:** Do not use an impact wrench. It will damage SST.

**HINT:** The coil spring can also be installed/removed using the hydraulic spring compressor.

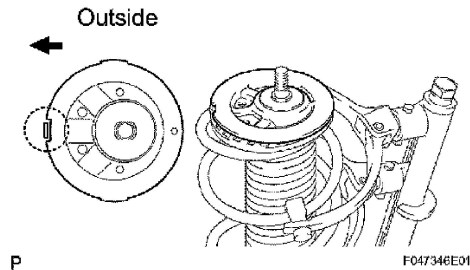
- b. Fit the lower end of the front coil spring LH into the recessed part of the spring lower seat.

**HINT:** Install the spring with the smaller diameter on top.



#### 5. INSTALL FRONT COIL SPRING INSULATOR UPPER LH

- a. Install the front coil spring insulator upper to the front shock absorber with the protruding part facing the outside of the vehicle.



#### 6. INSTALL FRONT COIL SPRING SEAT UPPER LH

- a. Install the front coil spring seat upper with the recess facing the outside of the vehicle.

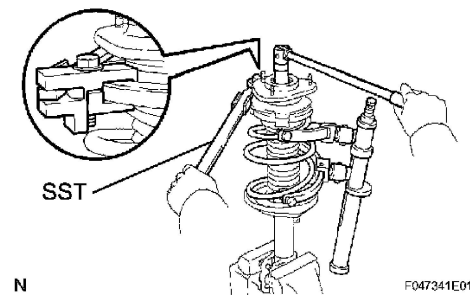
#### NOTICE:

- ^ Fit the protruding part of the front coil spring insulator upper LH to the recess of the front coil spring seat upper LH.
- ^ Ensure that the width across the flat parts of the piston rod and the front coil spring seat upper LH are fitted.

#### 7. INSTALL FRONT SUSPENSION SUPPORT LH DUST SEAL

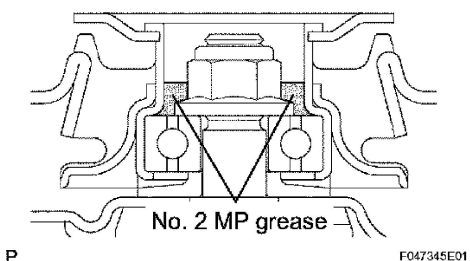
#### 8. INSTALL FRONT SUSPENSION SUPPORT SUB-ASSEMBLY LH

#### 9. INSTALL FRONT SUPPORT TO FRONT SHOCK ABSORBER LH NUT



- a. Secure the front coil spring seat upper with SST and tighten it with a new nut.  
Torque: **47 Nm (479 kgf-cm, 35 ft. lbs.)**
- b. Release SST while aligning the protruding part of the front coil spring insulator upper, the recess of the spring front coil spring seat upper and the shock absorber lower bracket, and then remove SST from the coil spring.  
SST 09729-22031

**NOTICE:** Do not use an impact wrench when removing SST.



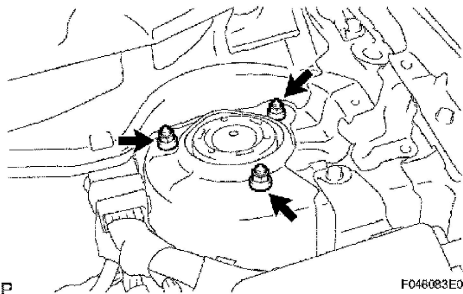
- c. Apply No. 2 MP grease to the parts indicated in the illustration and install the front suspension support dust cover.

## INSTALLATION

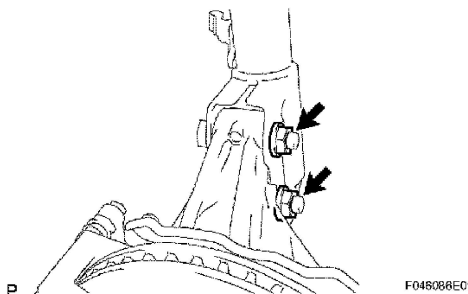
### HINT:

- ^ Use the same procedures for the RH side and LH side.
- ^ The procedures listed below are for the LH side.

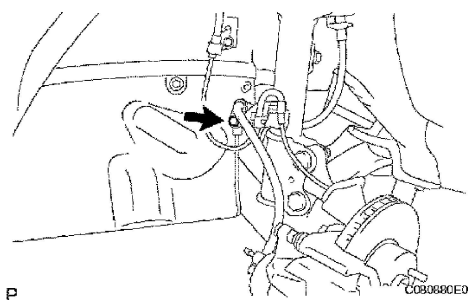
### 1. INSTALL FRONT SHOCK ABSORBER WITH COIL SPRING



- a. Insert the 2 bolts from the front side of the vehicle and install the front shock absorber with coil spring to the steering knuckle.
- b. Place a wooden block between the front shock absorber with coil spring and a jack. Slowly raise the jack and install the front shock absorber with coil spring (upper side) to the vehicle.
- c. Install the front shock absorber with coil spring (upper side) with the 3 nuts.  
Torque: **39 Nm (398 kgf-cm, 29 ft. lbs.)**

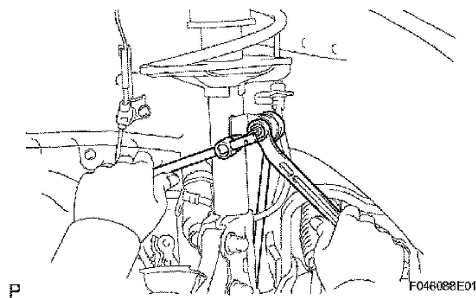


- d. Install the front shock absorber with coil spring to the steering knuckle with the 2 nuts.  
Torque: **153 Nm (1,560 kgf-cm, 113 ft. lbs.)**



- e. Connect the front flexible hose No. 1 and the speed sensor front LH to the shock absorber with the bolt.  
Torque: **19 Nm (192 kgf-cm, 14 ft. lbs.)**

**NOTICE:** Do not twist the speed sensor front while installing.



2. CONNECT FRONT STABILIZER LINK ASSEMBLY LH

- a. Connect the front stabilizer link to the front shock absorber with coil spring with the nut.  
Torque: **74 Nm (755 kgf-cm, 55 ft. lbs.)**

**HINT:** Use a 6 mm hexagon wrench to hold the stud if the ball joint turns together with the nut.

3. INSTALL WINDSHIELD WIPER MOTOR AND LINK

4. INSTALL COWL TOP VENTILATOR LOUVER LH

5. INSTALL COWL TOP VENTILATOR LOUVER RH

6. INSTALL HOOD TO COWL TOP SEAL

7. INSTALL FRONT WIPER ARM LH

8. INSTALL FRONT WIPER ARM RH

9. INSTALL FRONT WIPER ARM HEAD CAP

10. INSTALL FRONT WHEEL

Torque: **103 Nm (1,050 kgf-cm, 76 ft. lbs.)**

11. INSPECT AND ADJUST FRONT WHEEL ALIGNMENT

- a. Inspect and adjust the front wheel alignment.