

<b>Last Modified:</b> 12-04-2024	6.11:8.1.0	<b>Doc ID:</b> RM1000000029PNE
<b>Model Year Start:</b> 2023	<b>Model:</b> Prius Prime	<b>Prod Date Range:</b> [12/2022 - ]
<b>Title:</b> AXLE AND DIFFERENTIAL: FRONT AXLE HUB: INSTALLATION; 2023 - 2024 MY Prius Prius Prime [12/2022 - ]		

## INSTALLATION

### CAUTION / NOTICE / HINT

**NOTICE:**

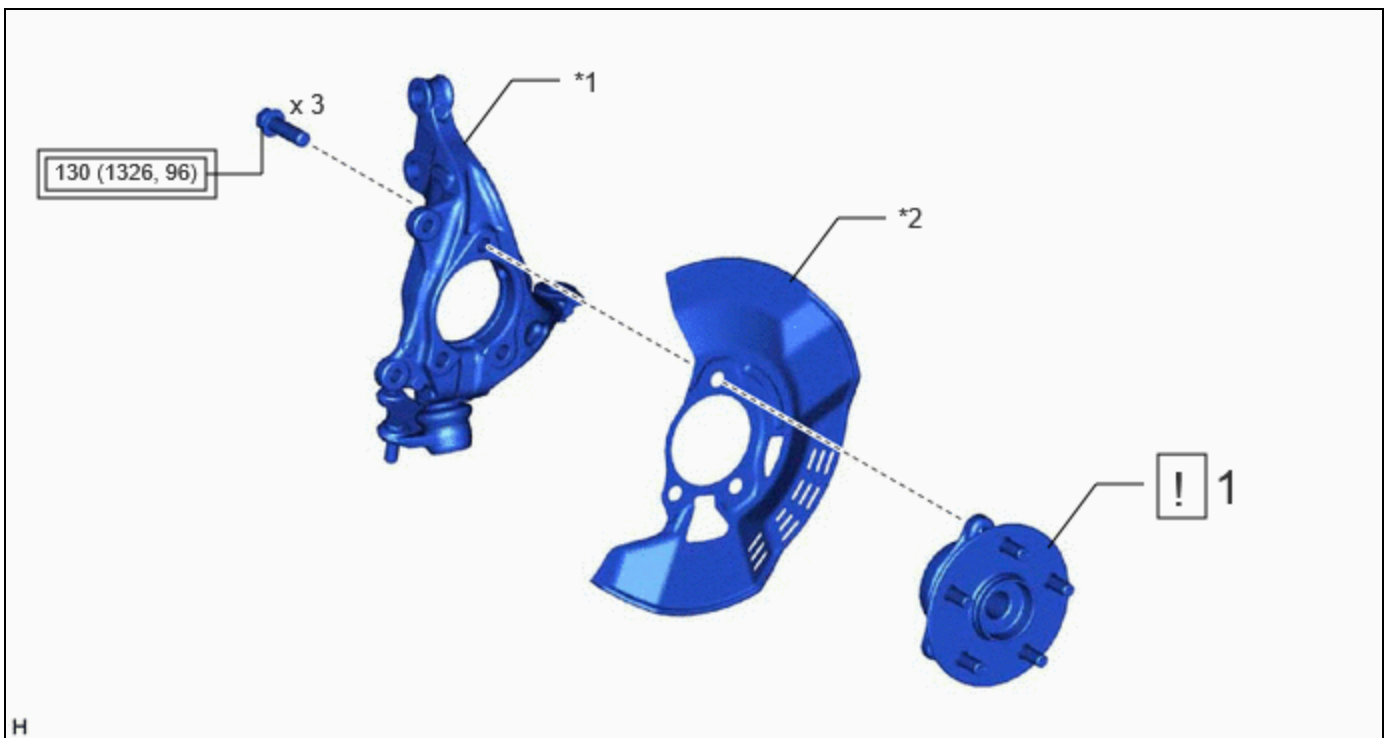
- When the brake pedal is first depressed after replacing the brake pads or pushing back the disc brake piston, DTCs may be stored. As there is no malfunction, clear the DTC.
- While the auxiliary battery is connected, even if the ignition switch is off, the brake control system activates when the brake pedal is depressed or any door courtesy switch turns on. Therefore, when servicing the brake system components, do not operate the brake pedal or open/close the doors while the auxiliary battery is connected.

**HINT:**


- Use the same procedure for the RH side and LH side.
- The following procedure is for the LH side.

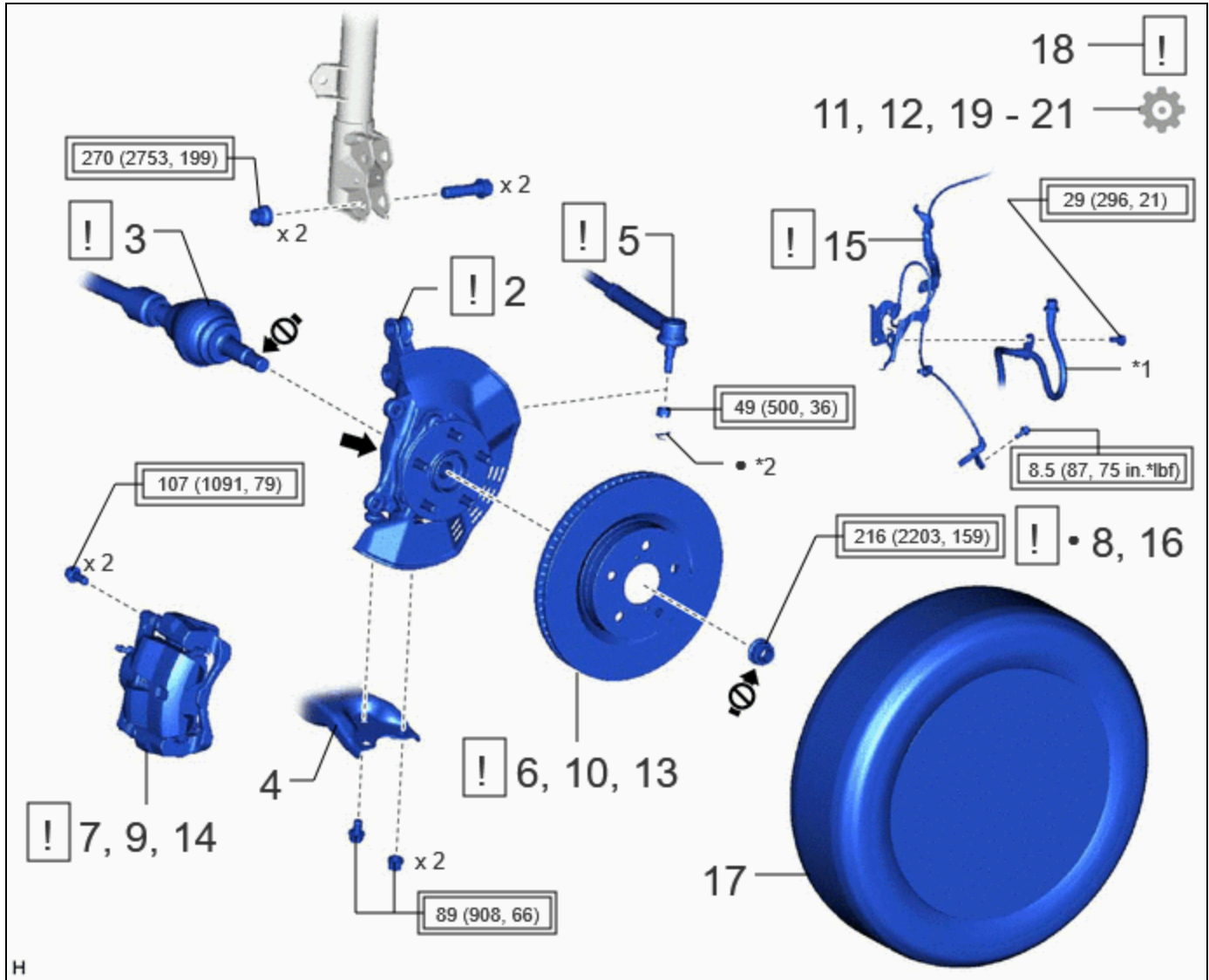
### CAUTION / NOTICE / HINT




#### COMPONENTS (INSTALLATION)









	PROCEDURE	PART NAME CODE			
1	FRONT AXLE HUB SUB-ASSEMBLY	43502C	<a href="#">INFO</a>	-	-

*1	STEERING KNUCKLE	*2	FRONT DISC BRAKE DUST COVER
	Tightening torque for "Major areas involving basic vehicle performance such as moving/turning/stopping": N*m (kgf*cm, ft.*lbf)		-



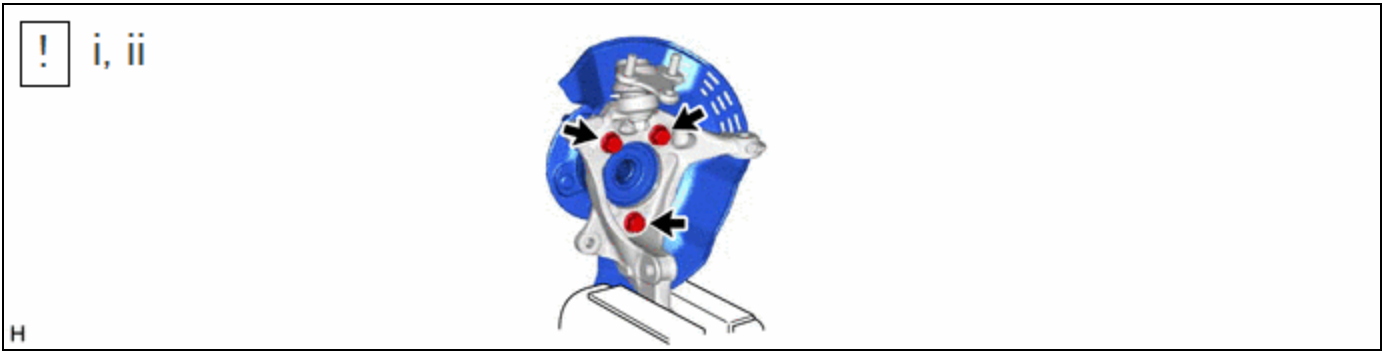
PROCEDURE		PART NAME CODE			
2	FRONT AXLE ASSEMBLY	-	<a href="#">INFO</a>	-	-
3	FRONT DRIVE SHAFT ASSEMBLY	43420	<a href="#">INFO</a>	-	-
4	FRONT LOWER NO. 1 SUSPENSION ARM SUB-ASSEMBLY	48069	-	-	-
5	TIE ROD END SUB-ASSEMBLY	45047	<a href="#">INFO</a>	-	-
6	INSTALL FRONT DISC	43512	<a href="#">INFO</a>	-	-

PROCEDURE		PART NAME CODE			
7	INSTALL FRONT DISC BRAKE CALIPER ASSEMBLY	-	INFO	-	-
8	INSTALL FRONT AXLE SHAFT NUT	43502H	INFO	-	-
9	SEPARATE FRONT DISC BRAKE CALIPER ASSEMBLY	-	INFO	-	-
10	REMOVE FRONT DISC	43512	INFO	-	-
11	INSPECT FRONT AXLE HUB BEARING LOOSENESS	-	-	-	INFO
12	INSPECT FRONT AXLE HUB RUNOUT	-	-	-	INFO
13	INSTALL FRONT DISC	43512	INFO	-	-
14	INSTALL FRONT DISC BRAKE CALIPER ASSEMBLY	-	INFO	-	-
15	FRONT SPEED SENSOR	89543	INFO	-	-
16	STAKE FRONT AXLE SHAFT NUT	43502H	INFO	-	-
17	FRONT WHEEL	-	-	-	-
18	CONNECT CABLE TO NEGATIVE AUXILIARY BATTERY TERMINAL	-	INFO	-	-
19	INSPECT AND ADJUST FRONT WHEEL ALIGNMENT	-	-	-	INFO
20	CHECK FOR SPEED SENSOR SIGNAL	-	-	-	INFO
21	INITIALIZATION AFTER RECONNECTING AUXILIARY BATTERY TERMINAL	-	-	-	INFO

*1	FRONT FLEXIBLE HOSE	*2	COTTER PIN
	Tightening torque for "Major areas involving basic vehicle performance such as moving/turning/stopping": N*m (kgf*cm, ft.*lbf)	•	Non-reusable part
	Toyota Body Grease W		Do not apply lubricants to the threaded parts

## PROCEDURE

### 1. INSTALL FRONT AXLE HUB SUB-ASSEMBLY



(1) Secure the steering knuckle between aluminum plates in a vise.

**NOTICE:**

Do not overtighten the vise.

(2) Install the front axle hub sub-assembly and front disc brake dust cover to the steering knuckle with the 3 bolts.

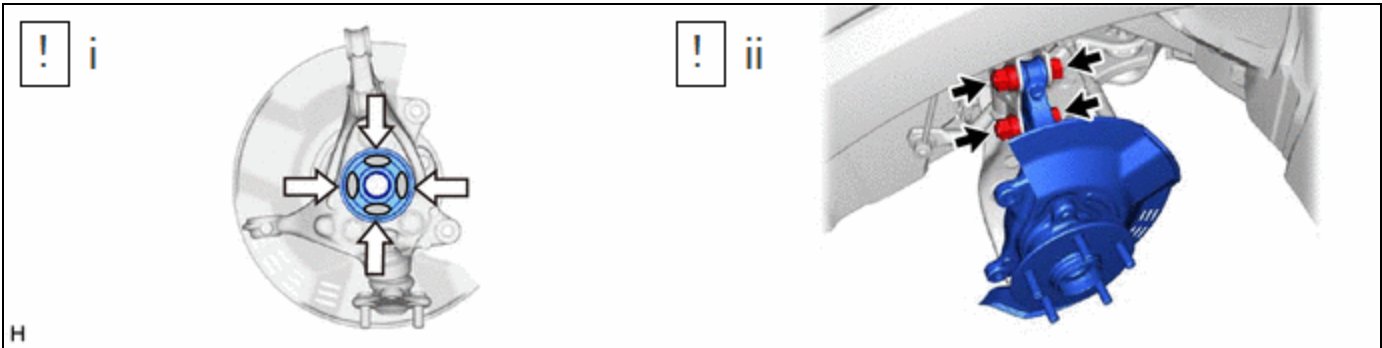
**Torque:**

**130 N·m {1326 kgf·cm, 96 ft·lbf}**

**NOTICE:**

- Be careful not to damage the speed sensor rotor or contact surfaces.
- Do not allow foreign matter to contact the speed sensor rotor or contact surfaces.

**2. INSTALL FRONT AXLE ASSEMBLY**



➔	Toyota Body Grease W	-	-
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(1) Apply 0.1 to 0.3 g (0.00353 to 0.0105 oz.) of Toyota Body Grease W to each of the 4 areas shown in the illustration.

(2) Install the front axle assembly to the front shock absorber assembly with the 2 bolts and 2 nuts.

**Torque:**

**270 N·m {2753 kgf·cm, 199 ft·lbf}**

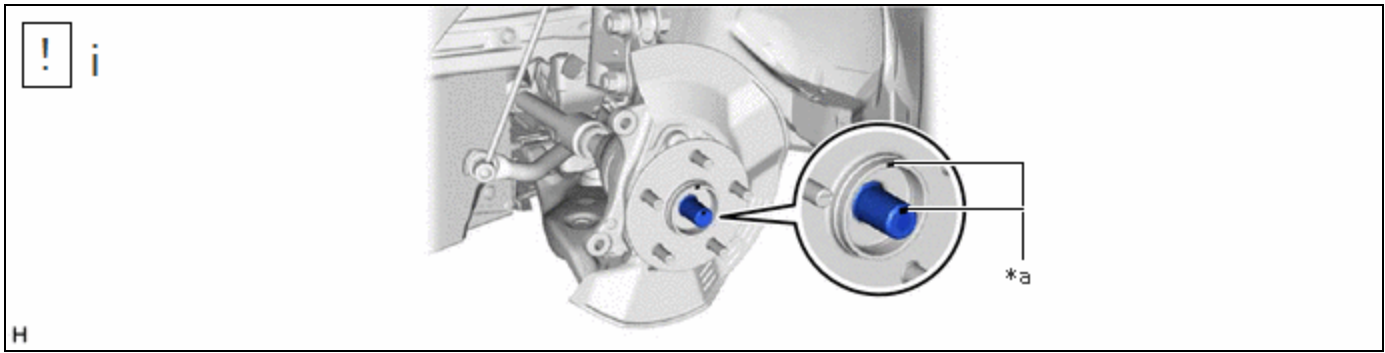
**NOTICE:**

- Do not apply lubricants to the steering knuckle and shock absorber contact surfaces.
- When installing the nuts, keep the bolts from rotating.

**HINT:**

The bolts can be installed in either direction, however, make sure that they are both installed in the same direction.

### 3. INSTALL FRONT DRIVE SHAFT ASSEMBLY



*a	Matchmark	-	-
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(1) Align the matchmarks on the front drive shaft assembly and front axle hub sub-assembly, and connect the front drive shaft assembly to the front axle assembly.

#### NOTICE:

- Do not push the front axle assembly towards the outside of the vehicle any further than necessary.
- Check that there is no foreign matter on the speed sensor rotor or contact surfaces.
- Do not damage the front drive shaft outboard joint boot.
- Do not damage the front disc brake dust cover.
- Do not damage the speed sensor rotor.

### 4. CONNECT FRONT LOWER NO. 1 SUSPENSION ARM SUB-ASSEMBLY

Torque:

89 N·m {908 kgf·cm, 66 ft·lbf}

### 5. CONNECT TIE ROD END SUB-ASSEMBLY

	Click here <a href="#">INFO</a>
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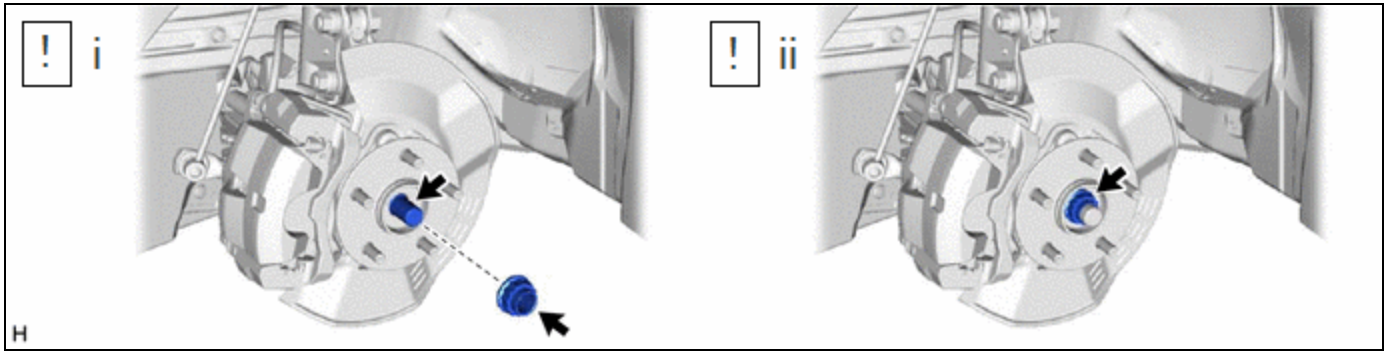
### 6. INSTALL FRONT DISC

	Click here <a href="#">INFO</a>
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### 7. INSTALL FRONT DISC BRAKE CALIPER ASSEMBLY

	Click here <a href="#">INFO</a>
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### 8. INSTALL FRONT AXLE SHAFT NUT



(1) Clean the threaded parts on the front drive shaft assembly and a new front axle shaft nut using non-residue solvent.

**NOTICE:**

- Make sure to perform this work even when using a new front drive shaft assembly.
- Keep the threaded parts free of oil and foreign matter.

(2) Using a 30 mm deep socket wrench, while applying the brakes, temporarily install the front axle shaft nut.

**Torque:**

**216 N·m {2203 kgf·cm, 159 ft·lbf}**


**NOTICE:**

Stake the front axle shaft nut after inspecting for looseness and runout in the following steps.


**HINT:**

Depress the brake pedal to prevent the drive shaft from rotating.

**9. SEPARATE FRONT DISC BRAKE CALIPER ASSEMBLY**

	<a href="#">Click here</a> <span style="background-color: #0056b3; color: white; padding: 2px 5px; font-size: 0.8em;">INFO</span>
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**10. REMOVE FRONT DISC**

	<a href="#">Click here</a> <span style="background-color: #0056b3; color: white; padding: 2px 5px; font-size: 0.8em;">INFO</span>
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**11. INSPECT FRONT AXLE HUB BEARING LOOSENESS**

[Click here](#) INFO

**12. INSPECT FRONT AXLE HUB RUNOUT**

[Click here](#) INFO

**13. INSTALL FRONT DISC**

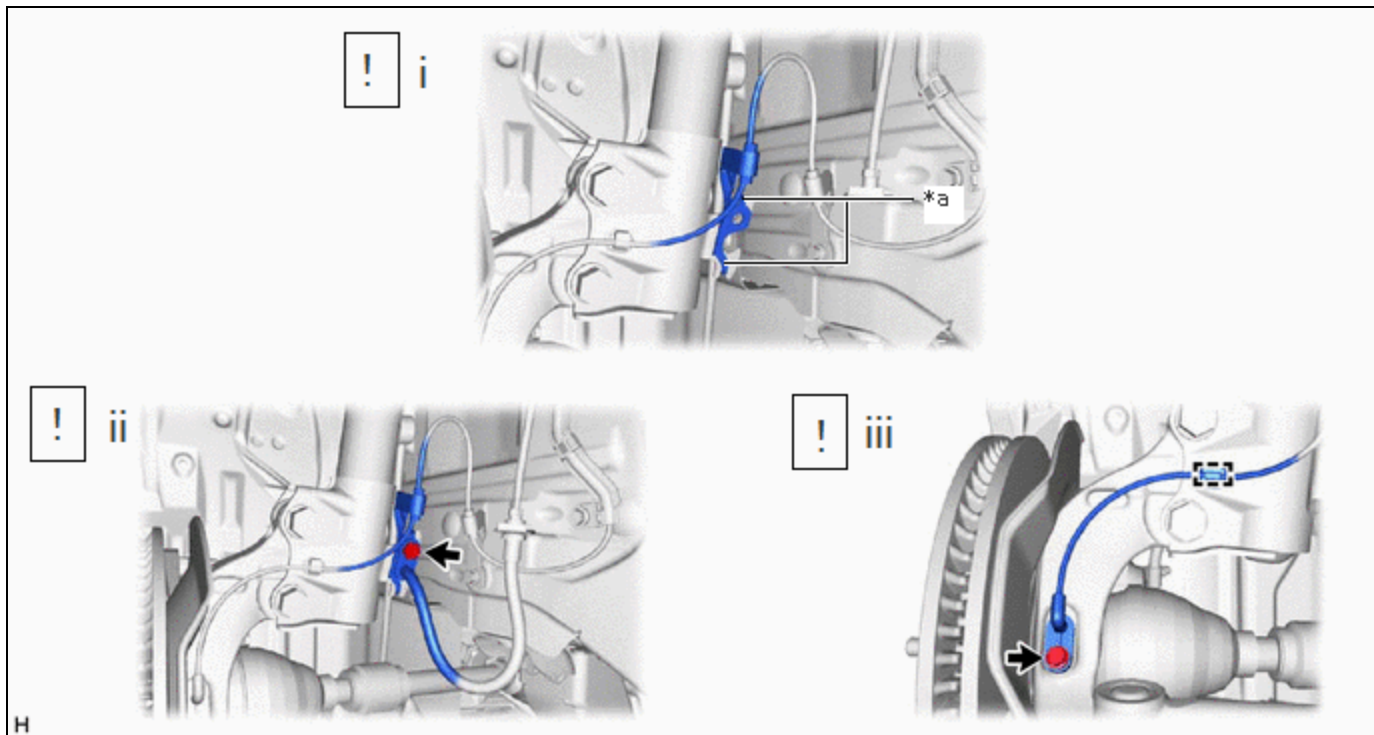
	<a href="#">Click here</a> <span style="background-color: #0056b3; color: white; padding: 2px 5px; font-size: 0.8em;">INFO</span>
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## 14. INSTALL FRONT DISC BRAKE CALIPER ASSEMBLY



Click here [INFO](#)

## 15. INSTALL FRONT SPEED SENSOR



*a	Hook	-	-
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(1) Set the 2 hooks of the front speed sensor to the front shock absorber assembly.

### NOTICE:

Do not twist the front speed sensor when installing it.

(2) Install the front speed sensor and front flexible hose to the front shock absorber assembly with the bolt.

### Torque:

**29 N·m {296 kgf·cm, 21 ft·lbf}**

### NOTICE:

Do not twist the front flexible hose when installing it.

(3) Install the front speed sensor to the steering knuckle with the bolt.

### Torque:

**8.5 N·m {87 kgf·cm, 75 in·lbf}**

### NOTICE:

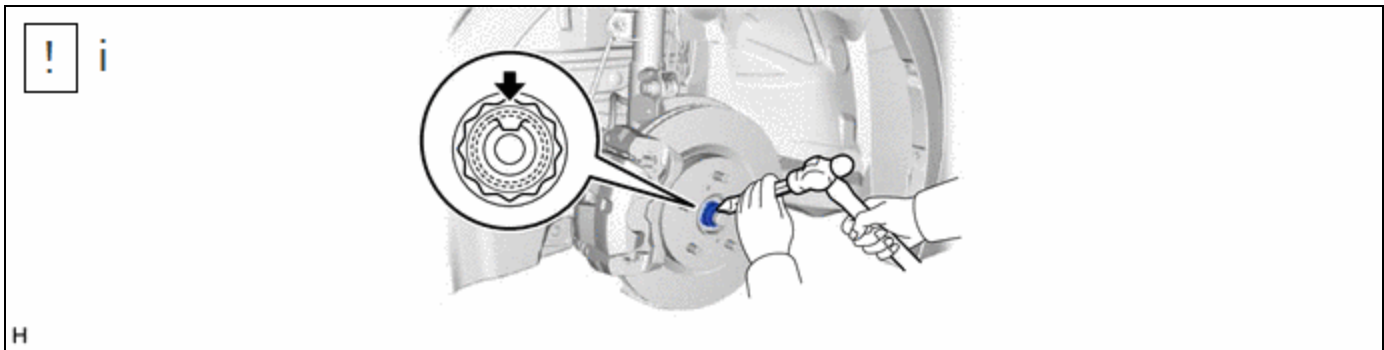
- Prevent foreign matter from attaching to the front speed sensor tip.
- Firmly insert the front speed sensor body into the steering knuckle before tightening the bolt.
- After installing the front speed sensor to the steering knuckle, make sure that there is no clearance between the front speed sensor stay and steering knuckle. Also make sure that no foreign matter is stuck between the parts.
- Do not twist the front speed sensor when installing it.

(4) Engage the clamp.



**NOTICE:**

Do not twist the front speed sensor when installing it.

**16. STAKE FRONT AXLE SHAFT NUT**

(1) Using a chisel and hammer, stake the front axle shaft nut.

**17. INSTALL FRONT WHEEL**

Click here [INFO](#)

**18. CONNECT CABLE TO NEGATIVE AUXILIARY BATTERY TERMINAL**

(a) Connect the cable to the negative (-) auxiliary battery terminal.

**HINT:**

for M20A-FXS: Click here [INFO](#)

for 2ZR-FXE: Click here [INFO](#)

(b) Turn the ignition switch to ON (READY).

(c) Depress the brake pedal and release it.

(d) Clear the DTCs.

**Chassis > Brake/EPB > Clear DTCs**

**Chassis > Brake Booster > Clear DTCs**

**19. INSPECT AND ADJUST FRONT WHEEL ALIGNMENT**

Click here [INFO](#)

**20. CHECK FOR SPEED SENSOR SIGNAL**

Click here [INFO](#)

**21. INITIALIZATION AFTER RECONNECTING AUXILIARY BATTERY TERMINAL****HINT:**

When disconnecting and reconnecting the auxiliary battery, there is an automatic learning function that completes learning when the respective system is used.

Click here [INFO](#)

